

Centerline Communications
Ryan Clark
750 West Center Street, Floor 3
West Bridgewater, MA 02379
203-300-7310
rclark@clinellc.com

November 4, 2021

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

Notice of Exempt Modification
21 East Main Street Clinton, CT 06413
Latitude: 41.278949
Longitude: -72.525976
T-Mobile Site#: CT11031B_L600

Dear Ms. Bachman,

T-Mobile currently maintains six (6) antennas at the 60-foot level of the existing 68-foot monopole tower at 21 East Main Street Clinton, CT 06413. The 68-foot tower is owned by CTI Towers and property is owned by Comcast of Connecticut, Inc. T-Mobile now intends to replace three (3) of its existing antennas with three (3) new 600/700 MHz antenna. The new antennas would be installed at the 60-foot level of the tower. A mount assembly kit is to be installed as recommended in the attached Mount Analysis. The proposed modifications will make the site available for 5G at some point in the future.

Planned Modifications:

Remove and Replace:

(3) LNX-6515DS-A1M Antennas **(Remove)** - (3) APXVAALL24_43-U-NA20 600/700 MHz Antennas **(Replace)**
(3) RRUS11 B12 **(Remove)** - (3) RRU 4449 B12/B71 **(Replace)**

Remove:

(12) 1-5/8" Coax

Install New:

(3) Fiber Hybrid Lines

Existing to Remain:

(6) TMA
(3) RFS- APX16DWV-16DWV

Ground:

Add (1) Generator

This facility was approved by the Town of Clinton. The only available documents per the town have been attached.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Town Manager Karl Kilduff, Chief Elected Official, Kathleen King, Zoning Enforcement for the Town of Clinton, CTI Towers as the tower owner and Comcast of Connecticut, Inc. as the property 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,

Ryan Clark

Mobile: 203-300-7310

Fax: 508-819-3017

Office: 750 West Center Street, Floor 3 West Bridgewater, MA 02379

Email: rclark@clinellc.com

Attachments

cc: Town Manager Karl Kilduff Town of Clinton -chief elected official
Kathleen King, Zoning Enforcement, Town of Clinton
CTI Towers - tower owner
Comcast of Connecticut, Inc. - property owner

Exhibit A

Original Facility Approval

CERTIFICATE ISSUED

DATE 3/12/98

BUILDING PERMIT - CERTIFICATE OF OCCUPANCY

DATE Oct. 24 19 97

PERMIT NO. 97-468

APPLICANT Conti Enterprises, Inc.

ADDRESS 3001 South Clinton Ave.,
(NO.) S. Plainfield, NJ 07080

(CONTR'S LICENSE)

PERMIT TO Install equip. on tower STORY NO.

NUMBER OF DWELLING UNITS 0

AT (LOCATION) 21 East Main St.
(NO.)

(STREET)

ZONING DISTRICT B-3

BETWEEN Post Office Square
(CROSS STREET)

AND

Indian River

(CROSS STREET)

SUBDIVISION Map 156

LOT 8

BLOCK 60

LOT SIZE N/A

BUILDING IS TO BE FT. WIDE BY FT. LONG BY FT. IN HEIGHT AND SHALL CONFORM IN CONSTRUCTION

TO TYPE USE GROUP BASEMENT WALLS OR FOUNDATION (TYPE)

REMARKS: Installation of telecommunications equipment and associated devices onto an existing tower and at the base of existing tower.

AREA OR VOLUME (CUBIC/SQUARE FEET)

Comcast Cablevision of Clinton

OWNER 21 East Main St., Clinton, CR 06413

ADDRESS

TO BE POSTED ON PREMISES
SEE REVERSE SIDE OF CERTIFICATE

Exhibit B

Property Card

21 EAST MAIN ST

Location 21 EAST MAIN ST

Mblu 56/ 60/ 8/ /

Acct# S0553900

Owner COMCAST OF CONNECTICUT
INC

Assessment \$1,217,500

Appraisal \$1,739,300

PID 3528

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$1,492,500	\$246,800	\$1,739,300
Assessment			
Valuation Year	Improvements	Land	Total
2020	\$1,044,800	\$172,700	\$1,217,500

Owner of Record

Owner COMCAST OF CONNECTICUT INC
Co-Owner
Address 1701 JOHN F KENNEDY BLVD
PHILADELPHIA, PA 19103

Sale Price \$0
Certificate
Book & Page 0505/0736
Sale Date 02/08/2018
Instrument 25

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
COMCAST OF CONNECTICUT INC	\$0		0505/0736	25	02/08/2018
STORER COMMUNICATIONS OF CLINTON	\$0		0124/0522		07/15/1981

Building Information

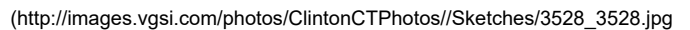
Building 1 : Section 1

Year Built: 1900
Living Area: 5,494
Replacement Cost: \$1,105,073
Building Percent Good: 78

Less Depreciation: \$862,000

Building Attributes

Building Layout



Building Sub-Areas (sq ft)

Extra Features		Legend
No Data for Extra Features		

Land

Land Use

Use Code 3400
Description OFFICE BLD M94
Zone B-3
Neighborhood 3000
Alt Land Appr Category No

Land Line Valuation

Size (Acres) 0.28
Frontage 0
Depth 0
Assessed Value \$172,700
Appraised Value \$246,800

Outbuildings

Outbuildings						<u>Legend</u>
Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
PAV1	PAVING-ASPHALT			6000.00 S.F.	\$11,300	1
FN3	FENCE-6' CHAIN			32.00 L.F.	\$400	1
MSC51	TOWER			200.00 UNIT	\$112,500	1
MSC1				3.00 UNIT	\$506,300	1

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$1,492,500	\$246,800	\$1,739,300
2019	\$892,300	\$664,200	\$1,556,500
2018	\$892,300	\$664,200	\$1,556,500

Assessment			
Valuation Year	Improvements	Land	Total
2020	\$1,044,800	\$172,700	\$1,217,500
2019	\$624,700	\$464,900	\$1,089,600
2018	\$624,700	\$464,900	\$1,089,600

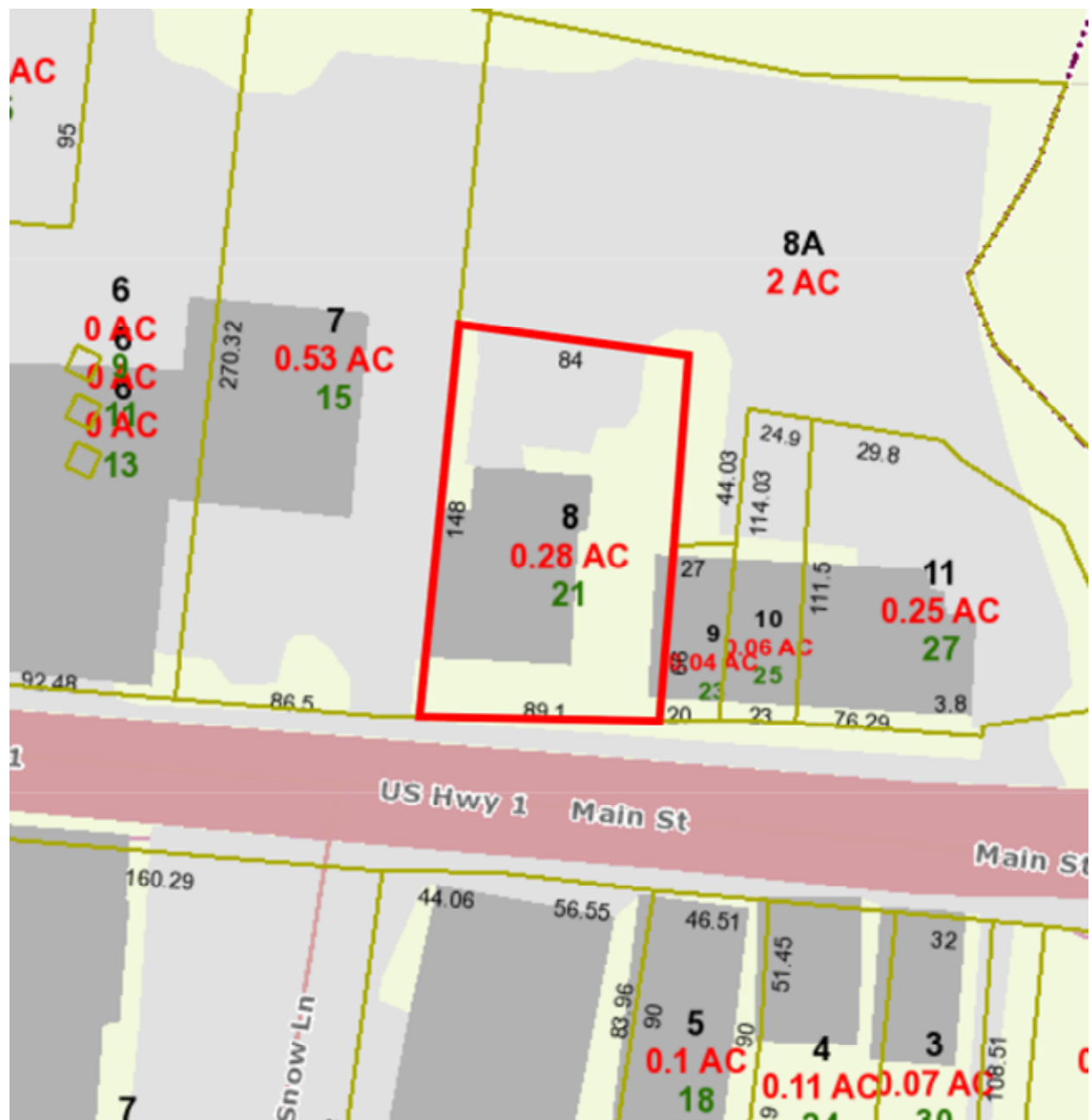


Exhibit C

Construction Drawings

PROJECT INFORMATION

SITE NAME:	CLINTON/I-95/X63/AT_1
SITE NUMBER:	CT11031B
SITE ADDRESS:	21 EAST MAIN STREET CLINTON, CT 06413
COUNTY	MIDDLESEX
MUNICIPALITY:	TOWN OF CLINTON
ZONING:	B3
LATITUDE:	N 41°16'44.22" (41.278949°) (NAD83)
LONGITUDE:	W -72°31'33.51" (-72.525976°) (NAD83)
TYPE OF SITE:	SELF SUPPORT TOWER
STRUCTURE HEIGHT:	67'-5" AGL
ANTENNA CENTER:	60'-0" AGL
GROUND ELEVATION:	16.4' (NAVD 88)
BUILDING OWNER NAME:	CTI TOWERS INC. C/O MIKALA MANN
BUILDING OWNER ADDRESS:	38 POND STREET SUITE 305 FRANKLIN, MA 02038
APPLICANT:	T-MOBILE NORTHEAST, LLC. 35 GRIFFIN RD S BLOOMFIELD, CONNECTICUT 06002
APPLICANT PHONE:	(860) 692-7100

PROJECT DIRECTORY

ENGINEERING FIRM:
CENTERLINE COMMUNICATIONS
750 WEST CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
DEREK CREASER (617) 306-3034

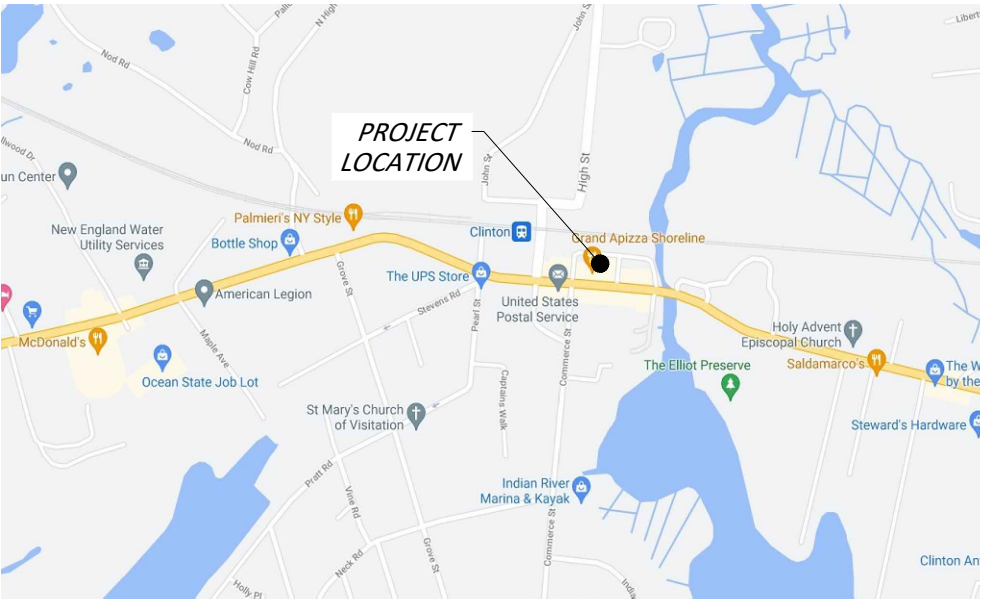
CARRIER:
T-MOBILE NORTHEAST, LLC.
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
PHONE: (860) 692-1700



Know what's below.
Call before you dig.



T - Mobile
NORTHEAST LLC



VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

SITE NAME: CLINTON/I-95/X63/AT_1
SITE ID: CT11031B
ADDRESS: 21 EAST MAIN STREET
CLINTON, CT 06413

TECHNOLOGY: 67D94B_LATTICE TOWER OUTDOOR
MODIFICATION: L600_5G POPS AND HARDENING

GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T-MOBILE. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSE OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE T-MOBILE REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SCOPE OF WORK

1. REMOVE THREE EXISTING ANTENNAS AND THREE EXISTING RRUS
2. INSTALL THREE NEW ANTENNAS
3. INSTALL THREE NEW RRUS
4. INSTALL THREE NEW 6x24 HYBRID CABLES
5. INSTALL UPGRADES TO EXISTING 6102 EQUIPMENT CABINET
6. INSTALL ONE MINI PPC CABINET
7. INSTALL ONE NEW H-FRAME
8. INSTALL ONE 400A 2 GANG POWER METER
9. REMOVE ALL UNUSED EQUIPMENT AND CABLES
10. INSTALL TOWER ATTACHMENT UPGRADES

DRAWING INDEX

NO.	DESCRIPTION
T-1	TITLE SHEET
GN-1	GENERAL NOTES, RF NOTES, CABLING NOTES
A-1	COMPOUND PLAN
A-2	EQUIPMENT LAYOUT
A-3	EQUIPMENT & MOUNTING DETAILS
A-4	WEST ELEVATION
A-5	ANTENNA LAYOUTS & SCHEDULE
A-6	GENERAL DETAILS
A-7	GENERAL DETAILS
A-8	MINI PPC SPEC
SN-1	STRUCTURAL NOTES & SPECIAL INSPECTIONS
S-1	STRUCTURAL MODIFICATION DETAILS
G-1	GROUNDING & ONE LINE DIAGRAM
G-2	GROUNDING PLAN
E-1	ELECTRICAL PLAN

DRAWING SCALE NOTES:

THESE DRAWINGS ARE FORMATTED TO BE FULL SIZE AT 22"x34". CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

T - Mobile
NORTHEAST LLC

T-MOBILE NORTHEAST, LLC.
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
PHONE: (860) 629-1700

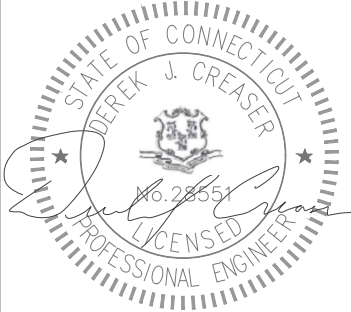


750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS

REV	DATE	DESCRIPTION	BY
1	11/04/21	STRUCTURAL UPDATE	MP
0	07/23/21	ISSUED FOR CONSTRUCTION	SS
B	06/15/21	ISSUED FOR PERMITTING	RL
A	06/08/21	ISSUED FOR REVIEW	RL

DESIGNED BY: RL	APPROVED BY: WRD
--------------------	---------------------



DATE: 11/04/21

IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER TO ALTER THIS DOCUMENT. UNLESS EXPLICITLY AGREED TO BY THE ENGINEER IN WRITING, THE ENGINEER DISCLAIMS ALL LIABILITY ASSOCIATED WITH THE REUSE, ALTERATION OR MODIFICATION OF THE CONTENTS HEREIN.

SITE NAME: CLINTON/I-95/X63/AT_1
SITE ID: CT11031B
SITE ADDRESS: 21 EAST MAIN STREET CLINTON, CT 06413 MIDDLESEX

SHEET TITLE: TITLE SHEET
DRAWING: T-1

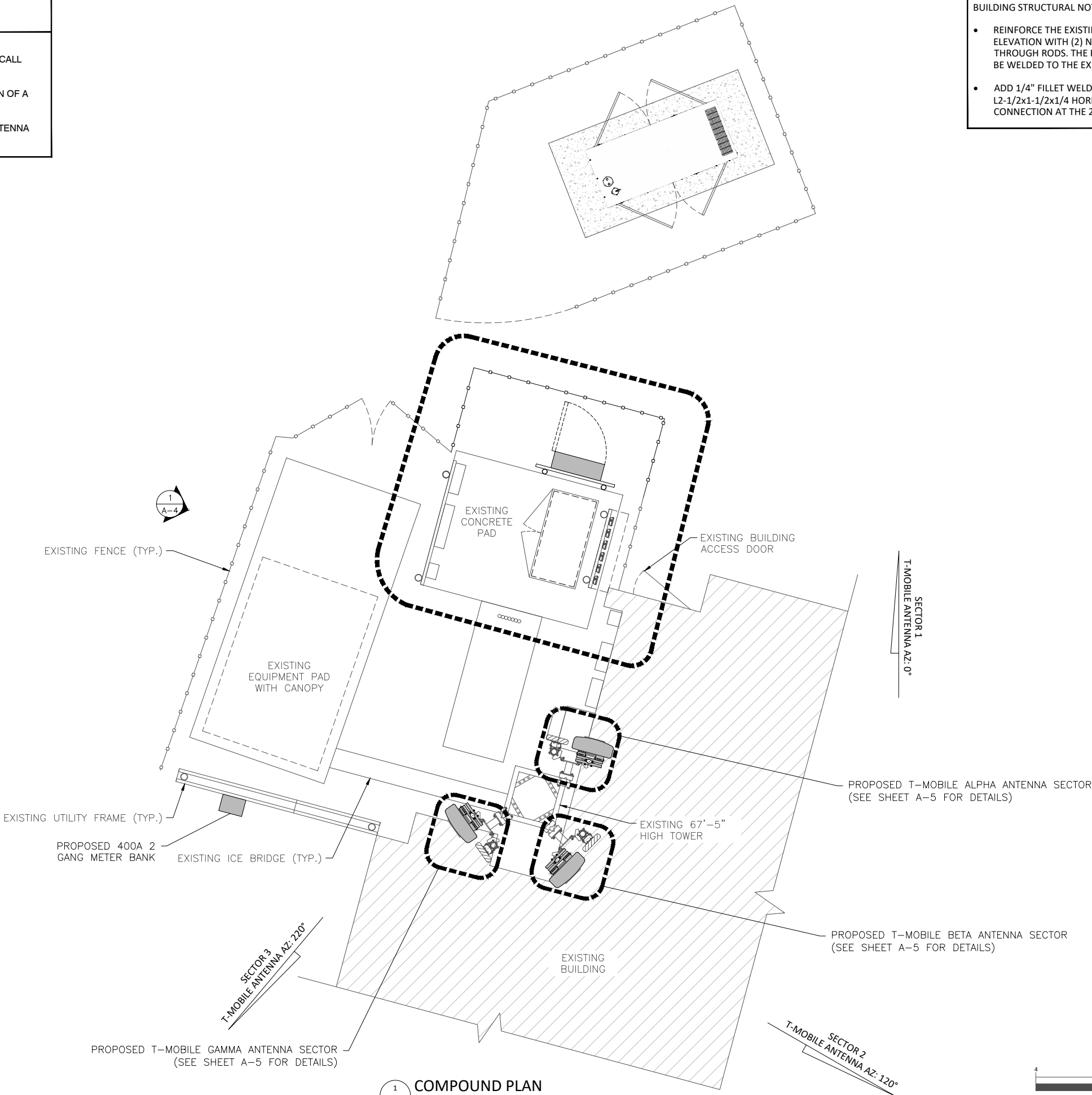
RF NOTES		ANTENNA CABLE & SCHEDULING NOTES		GENERAL NOTES							
1. ACTUAL LENGTHS SHALL BE DETERMINED PER SITE CONDITION BY SUBCONTRACTOR 2. THE DESIGN IS BASED ON RF DATA SHEETS, SIGNED AND APPROVED. 3. RADIO SIGNAL CABLE AND RACEWAY SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC, NFPA 70), CHAPTER 8. 4. ALL SPECIFIED MATERIAL FOR EACH LOCATION (E.G. OUT DOORS-OCCUPIED, INDOORS-UNOCCUPIED, PLENUMS, RISER SHAFTS, ETC.) SHALL BE APPROVED, LISTED, OR LABELED AS REQUIRED BY THE NEC. 5. RADIO SIGNAL CABLE SHALL BE SUPPORTED AT MINIMUM OF EVERY THREE (3) FEET EXCEPT INSIDE MONOPOLES OR MONOPOLES WHERE CABLE AND CONNECTOR MANUFACTURERS SUPPORT RECOMMENDATIONS SHALL BE FOLLOWED. MANUFACTURER RECOMMENDATION CABLES SUPPORT ACCESSORIES SHALL BE USED. 6. THE OUTDOOR CABLE SUPPORT SYSTEM SHALL BE PROVIDED WITH AN ICE SHIELD TO SUPPORT AND PROTECT ANTENNA CABLE RUNS. 7. DRIP LOOPS SHALL BE REQUIRED ON ALL OUTSIDE CABLES. CABLES SHALL BE SLOPED AWAY FROM BUILDING OR OUTDOOR BTS CABINETS TO PREVENT WATER FROM ENTERING THROUGH THE COAXIAL CABLE PORT. 8. ALL FEEDER LINE AND JUMPER CONNECTORS SHALL BE 7/16 DIN CABLE CONNECTORS THAT MEET IP68 STANDARDS. 9. 7/16 DIN CONNECTORS REQUIRE NO ADDITIONAL WEATHER PROOFING IN INDOOR APPLICATIONS IF INSTALLED AND TORQUED PROPERLY. IN OUTDOOR APPLICATIONS WEATHER PROOFING IS REQUIRED AND THE FOLLOWING PROCEDURE SHOULD BE FOLLOWED. 10. USING WEATHERPROOFING KIT APPROVED BY CABLE MANUFACTURER AND CONTRACTOR START TAPE APPROXIMATELY 5 INCHES FROM THE CONNECTOR, AND WRAP 2 INCHES TOWARD THE CONNECTOR, THEN REVERSE THE TAPE SO THAT THE STICKY SIDE IS UP. TAPE OVER THE CONNECTOR OR SURGE ARRESTOR UNTIL THREE (3) TO FOUR (4) INCHES BEYOND THE CONNECTOR AND REVERSE AGAIN WITH THE STICKY SIDE DOWN FOR ANOTHER INCH OR TWO. PASS THE BUTYL RUBBER AND FINISH WITH A FINAL LAYER OF TAPE. 11. ANTENNAS SHALL BE PAINTED,WHEN REQUIRED, BY THE LANDLORD OR AUTHORITY OF HAVING JURISDICTION IN ACCORDANCE WITH ANTENNA MANUFACTURERS' SURFACES PREPARATION AND PAINTING REQUIREMENTS. 12. CABLE SHIELDS AND TOWER CONDUITS SHALL BE GROUNDED AT THE TOP OF THE TOWER WITHIN 10 FEET OF THEIR CONNECTORS, AND AT THE BOTTOM OF THE TOWER ABOUT 6 INCHES BEFORE THEY TURN TOWARD THE FACILITY. THEY SHALL BE GROUNDED AT THE MIDPOINT OF THE TOWERS THAT ARE BETWEEN 60 FEET AND 200 FEET HIGH, AND AT INTERVALS OF 60 FEET OR LESS ON TOWERS THAT ARE HIGHER THAN 200 FEET.		1. SUBCONTRACTOR SHALL VERIFY THE ACTUAL LENGTH IN THE FIELD BEFORE INSTALLATION. 2. TAG AND COLOR CODE ALL MAIN CABLES AT LOCATIONS PER T-MOBILE ANTENNA CABLE MARKING STANDARD: • TOP OF TOWER END OF MAIN COAX • BOTTOM OF TOWER END OF MAIN COAX • DIRECTLY BEFORE AND AFTER RF EQUIPMENT • END OF JUMPERS AT BTS EQUIPMENT 3. ANTENNAS SHALL BE PROCURED AND INSTALLED WITH DOWN TILT MOUNTING BRACKETS SUPPLIED BY ANTENNA MANUFACTURER. 4. PRIOR APPROVAL IS REQUIRED BEFORE PERFORMING ANY WORK ON EXISTING CELL SITE EQUIPMENT.		1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY: CONTRACTOR - CENTERLINE COMMUNICATIONS SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION) OWNER - T-MOBILE MOBILITY 2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR. 3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS. 4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY. 5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS. 6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR. 7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE. 8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR. 9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR. 10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER. 11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION. 12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. 13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301. 14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.				15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT. 16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF T-MOBILE MOBILITY SITES." 17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION. 18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT. 19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS. 20. APPLICABLE BUILDING CODES: SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN. BUILDING CODE: IBC 2015 & CONNECTICUT STATE BUILDING CODE 2018 ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE LIGHTNING CODE: NFPA 70-2017 SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS: AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE; AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION; TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS. FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.			
				ABBREVIATIONS							
AGL	ABOVE GRADE LEVEL	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY						
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS								
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED						
BTS	BASE TRANSCEIVER STATION	PROPOSED	NEW	TBR	TO BE REMOVED						
EXISTING	EXISTING	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED AND REPLACED						
EG	EQUIPMENT GROUND	REF	REFERENCE								
EGR	EQUIPMENT GROUND RING	REQ	REQUIRED	TYP	TYPICAL						

NOTES

1.
- CONTRACTOR SHALL MAKE A UTILITY 811 DIG SAFE CALL TO LOCATE ALL UTILITIES PRIOR TO EXCAVATING.

2.
- CONSTRUCTION TO COMMENCE UPON COMPLETION OF A PASSING MOUNT ANALYSIS.

3.
- REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA MODELS AND SETTINGS.



BUILDING STRUCTURAL NOTES:

- REINFORCE THE EXISTING WALL CONNECTION AT THE 25FT ELEVATION WITH (2) NEW L8x6x5/8 WALL ANGLES WITH (3) 5/8" THROUGH RODS. THE PROPOSED EXTERIOR WALL ANGLE SHOULD BE WELDED TO THE EXISTING WALL BRACKET.
- ADD 1/4" FILLET WELDS TO THE END CONNECTIONS OF THE L2-1/2x1-1/2x1/4 HORIZONTAL ANGLES AT THE EXISTING ALL CONNECTION AT THE 25FT ELEVATION

T - Mobile
NORTHEAST LLC

T-MOBILE NORTHEAST, LLC.
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
PHONE: (860) 629-1700



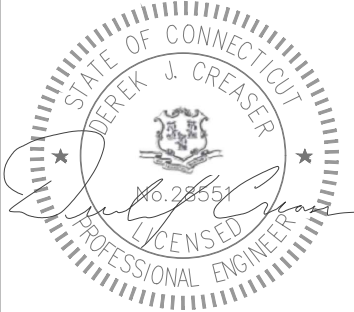
750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS

REV	DATE	DESCRIPTION	BY
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0	07/23/21	ISSUED FOR CONSTRUCTION	SS
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DESIGNED BY:
RL

APPROVED BY:
WRD



DATE: 11/04/21

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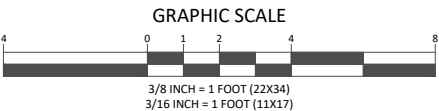
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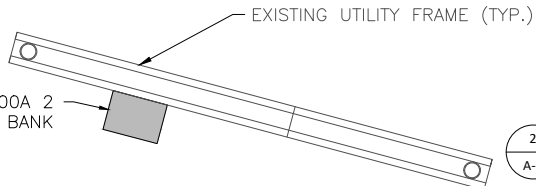
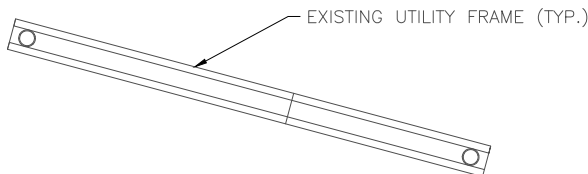
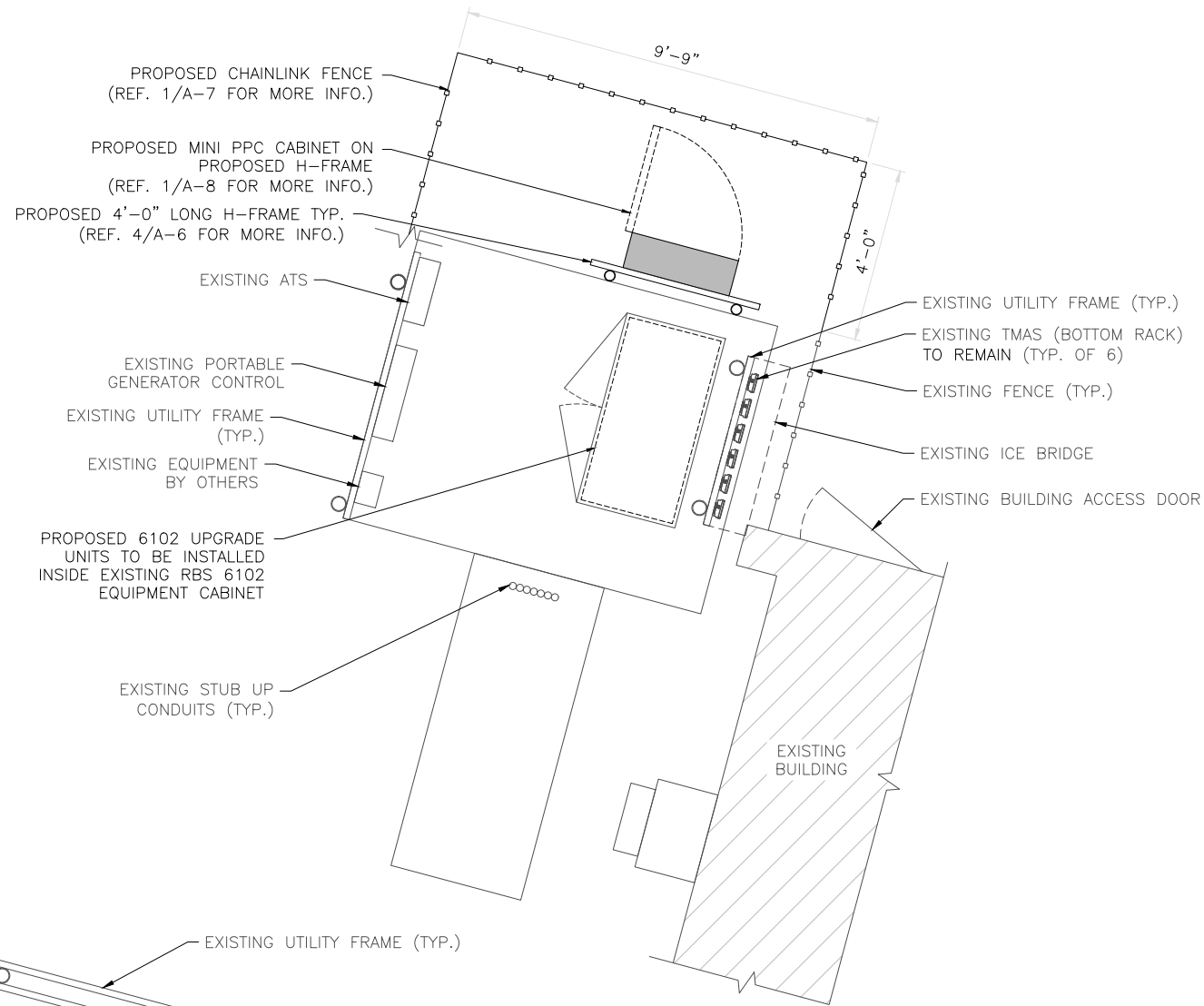
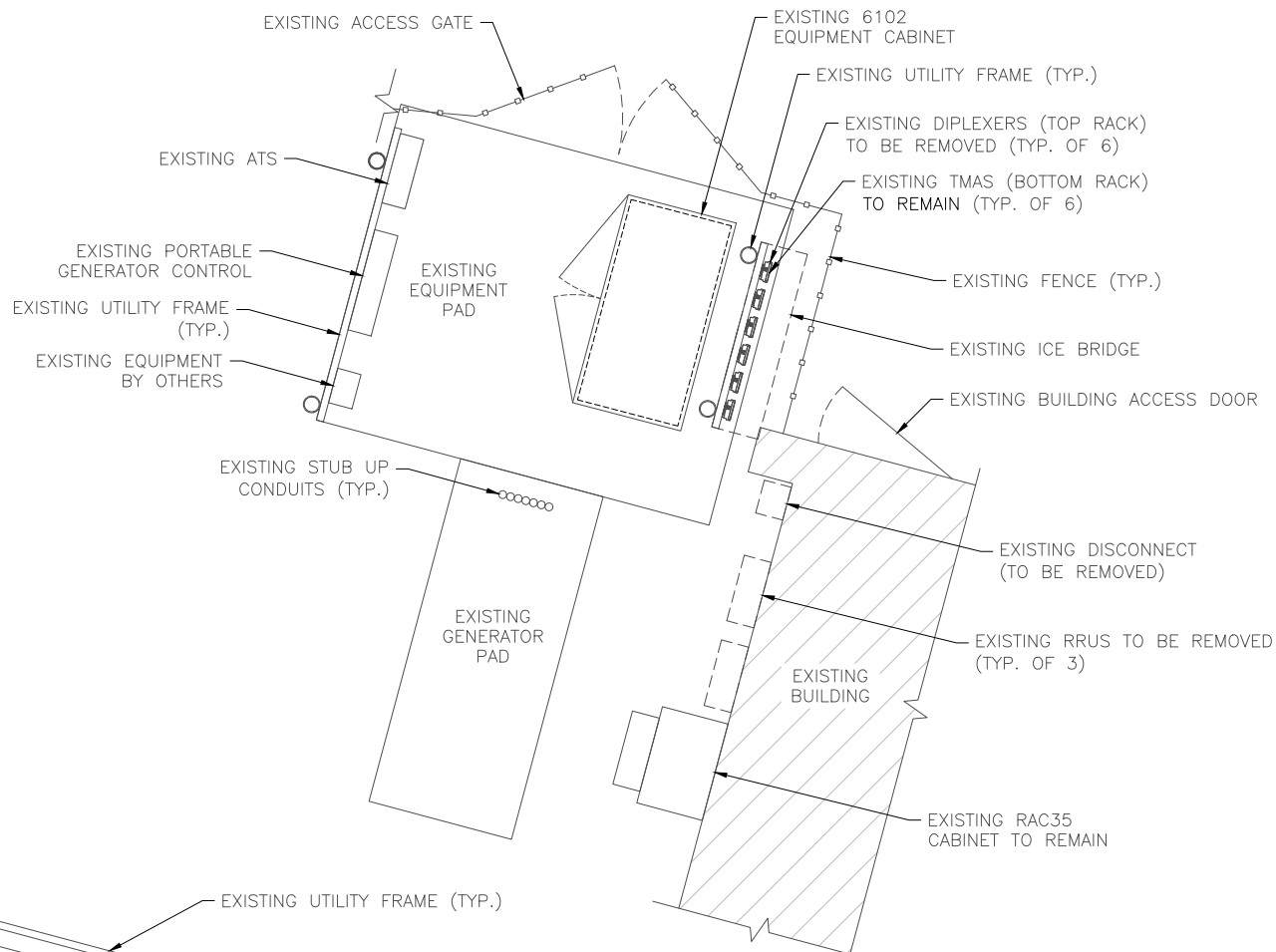
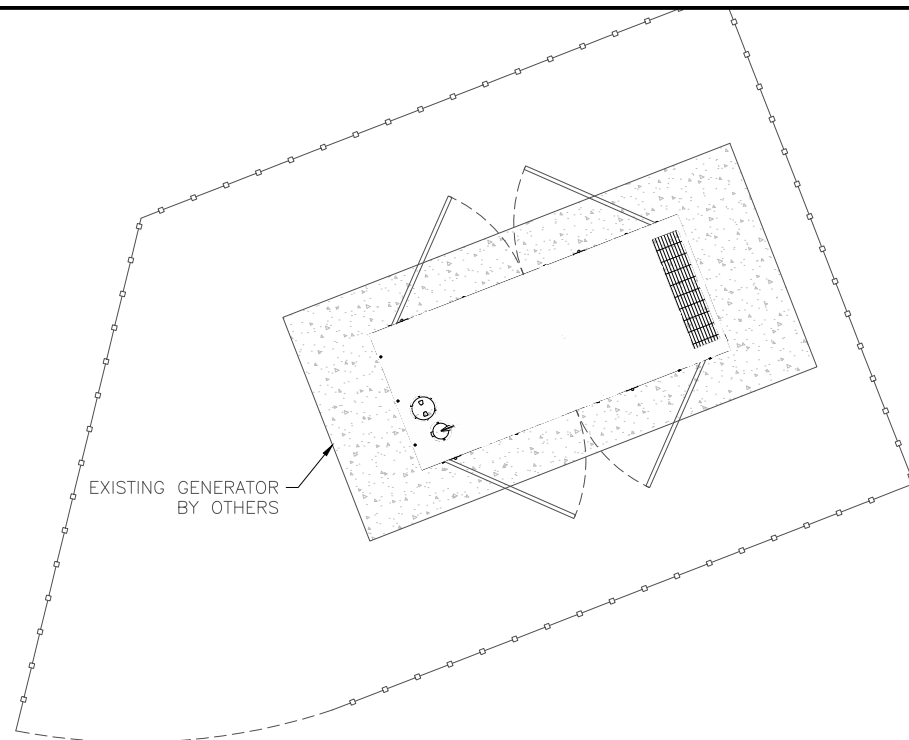
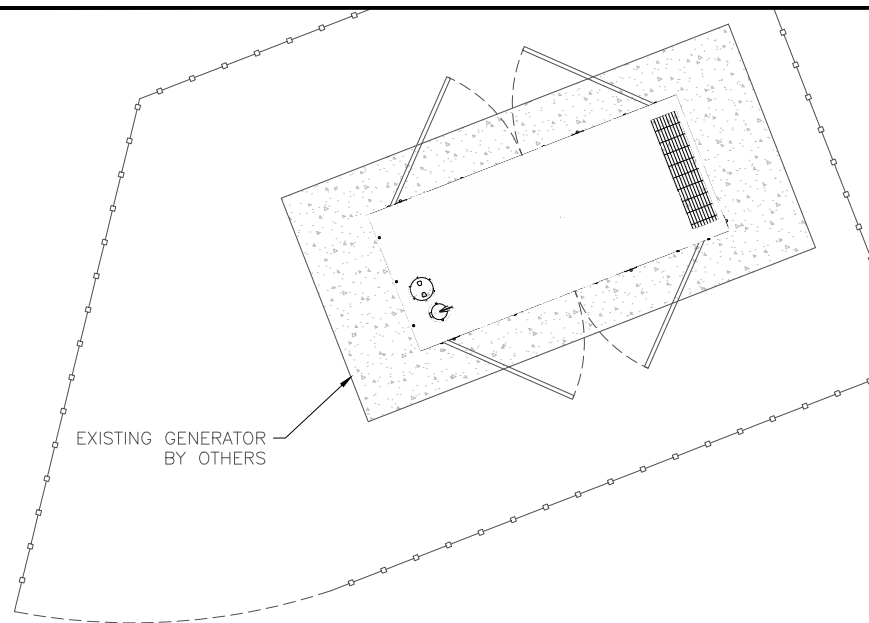
SITE ID:
CT11031B

SITE ADDRESS:
21 EAST MAIN STREET
CLINTON, CT 06413
MIDDLESEX

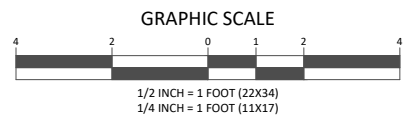
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COMPOUND PLAN

DRAWING:
A-1

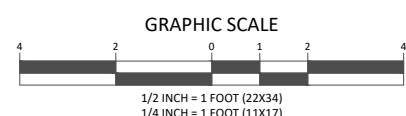




1
A-2
EXISTING EQUIPMENT PLAN



2
A-2
PROPOSED EQUIPMENT PLAN



T - Mobile NORTHEAST LLC

T-MOBILE NORTHEAST, LLC.
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
PHONE: (860) 629-1700

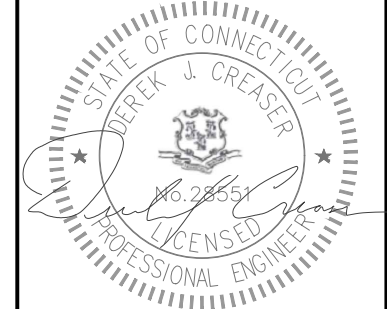


750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS

REV	DATE	DESCRIPTION	BY
1	11/04/21	STRUCTURAL UPDATE	MP
0	07/23/21	ISSUED FOR CONSTRUCTION	SS
B	06/15/21	ISSUED FOR PERMITTING	RL
A	06/08/21	ISSUED FOR REVIEW	RL

DESIGNED BY:	APPROVED BY:
RL	WRD

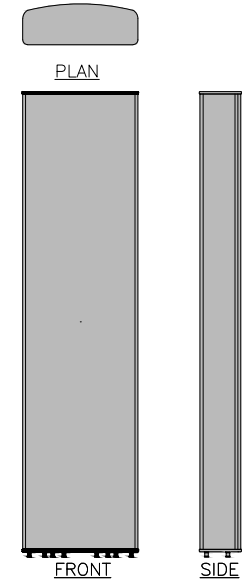


DATE: 11/04/21

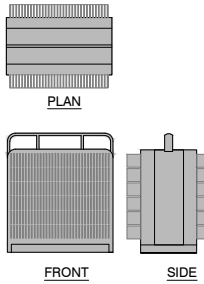
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SHEET TITLE:	EQUIPMENT LAYOUT
DRAWING:	A-2

RFS APXVAALL24_43-U-NA20	
MODEL #	APXVAALL24_43-U-NA20
MANUF.	RFS
HEIGHT	95.9"
WIDTH	24.0"
DEPTH	8.5"
WEIGHT	128 LBS/153.3 LBS with Mounting Hardware



1 ANTENNA DETAILS
A-3

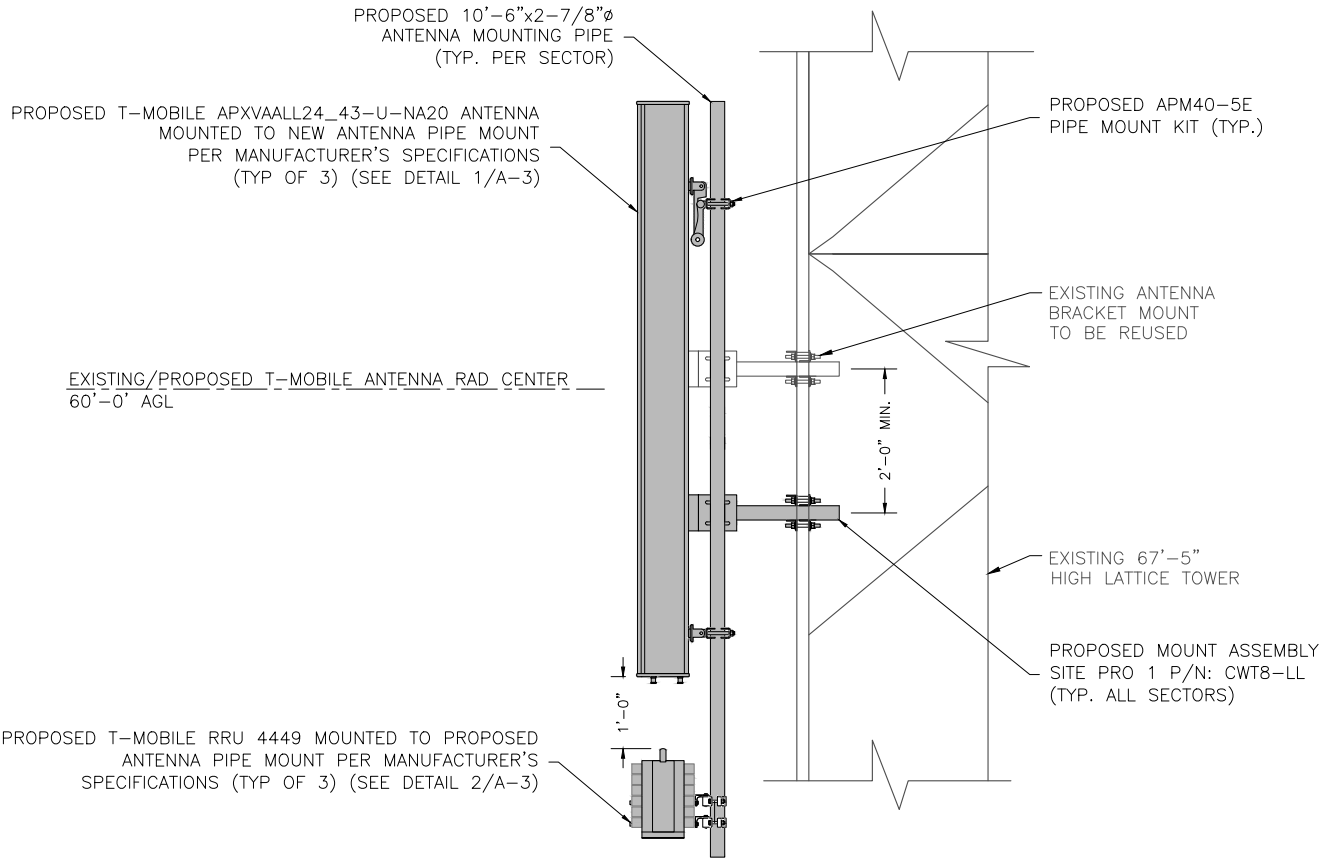


2 RADIO DETAILS
A-3

RADIO DIMENSIONS	
MODEL #	RADIO 4449 B71+B85
MANUF.	ERICSSON
HEIGHT	15.0"
WIDTH	13.2"
DEPTH	10.4"
WEIGHT	75 LBS

NOTES FOR ANTENNA MOUNTS:

- AIR32_B66A_B2A: KATHREID DOWN TILT PIPE MOUNT KIT
- AIR6449: ERICSSON R2A PIPE MOUNT KIT
- APXVAALL24-43-U-NA20: APM40-5E PIPE MOUNT KIT



AT POSITION A2, B2 & C2

3 ANTENNA & RRU MOUNTING DETAIL
A-3

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35 GRIFFIN RD S
BLOOMFIELD, CT 06002
PHONE: (860) 629-1700

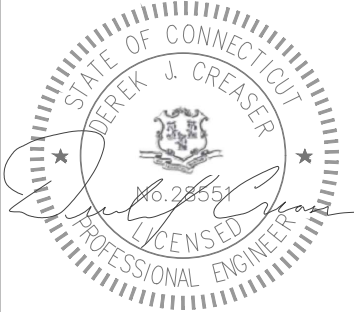


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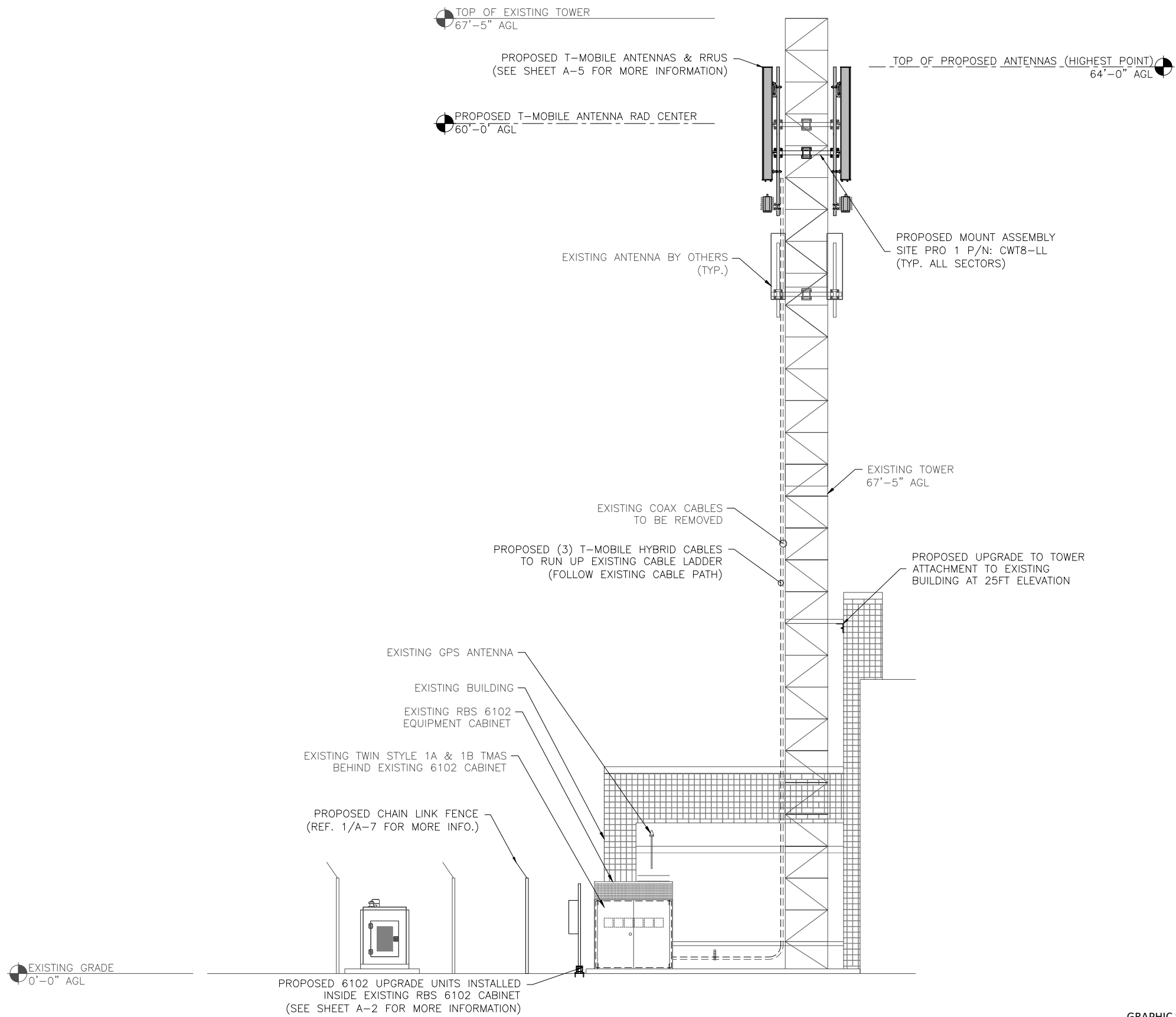
DESIGNED BY: RL	APPROVED BY: WRD
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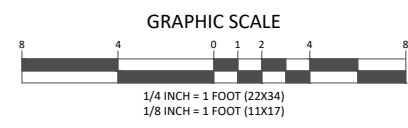
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SHEET TITLE:	EQUIPMENT & MOUNTING DETAILS
DRAWING:	A-3



1 WEST ELEVATION
A-4



BUILDING STRUCTURAL ANALYSIS CONDUCTED BY CENTERLINE COMMUNICATIONS DATED 10/26/2021 CONCLUDED THAT THE PROPOSED BUILDING IS ADEQUATE TO SUPPORT THE EXISTING AND PROPOSED T-MOBILE EQUIPMENT WITH THE FOLLOWING MODIFICATIONS:

- REINFORCE THE EXISTING WALL CONNECTION AT THE 25FT ELEVATION WITH (2) NEW L8x6x5/8 WALL ANGLES WITH (3) 5/8" THROUGH RODS. THE PROPOSED EXTERIOR WALL ANGLE SHOULD BE WELDED TO THE EXISTING WALL BRACKET.
- ADD 1/4" FILLET WELDS TO THE END CONNECTIONS OF THE L2-1/2x1-1/2x1/4 HORIZONTAL ANGLES AT THE EXISTING ALL CONNECTION AT THE 25FT ELEVATION

T - Mobile
NORTHEAST LLC

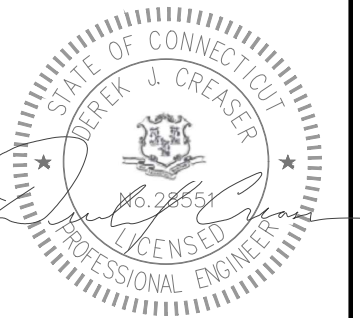
T-MOBILE NORTHEAST, LLC.
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
PHONE: (860) 629-1700

CENTERLINE
COMMUNICATIONS

750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

REVISIONS				
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REV	DATE	DESCRIPTION	BY	

DESIGNED BY: RL	APPROVED BY: WRD
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CLINTON, CT 06413
MIDDLESEX

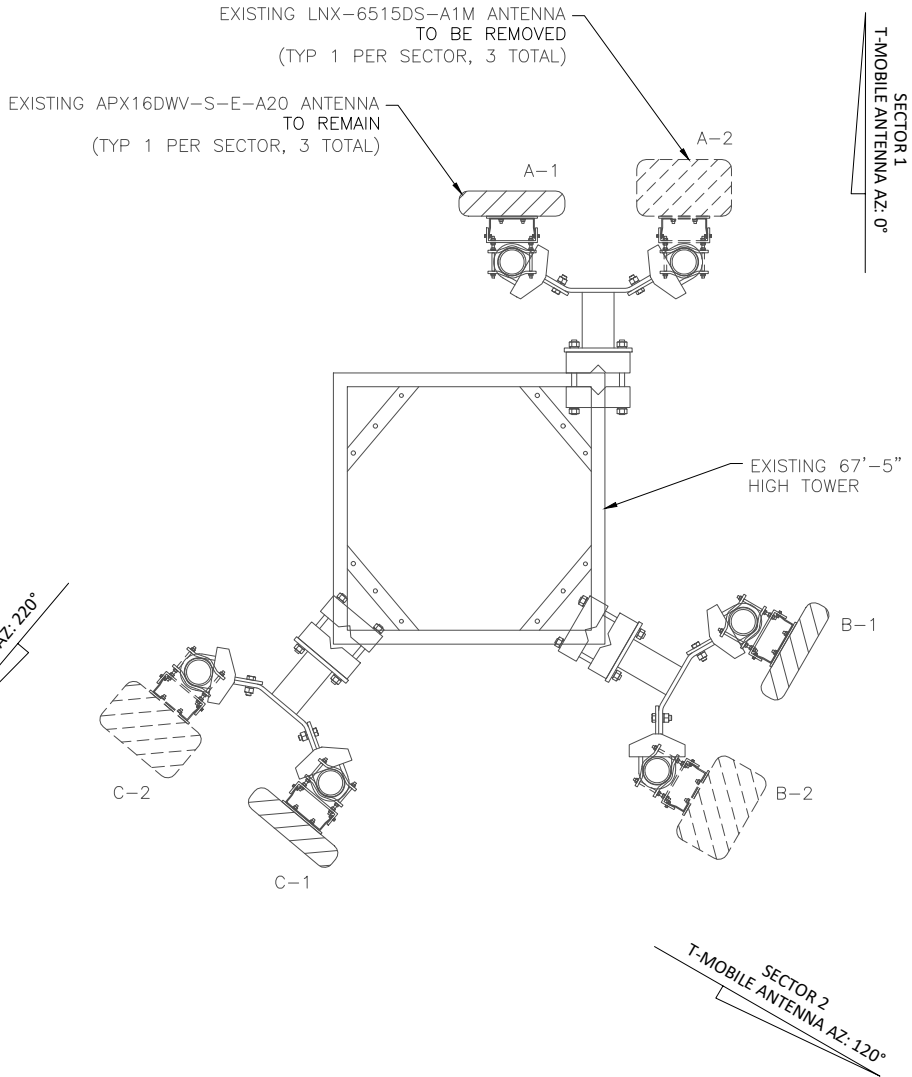
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WEST ELEVATION

DRAWING:
A-4

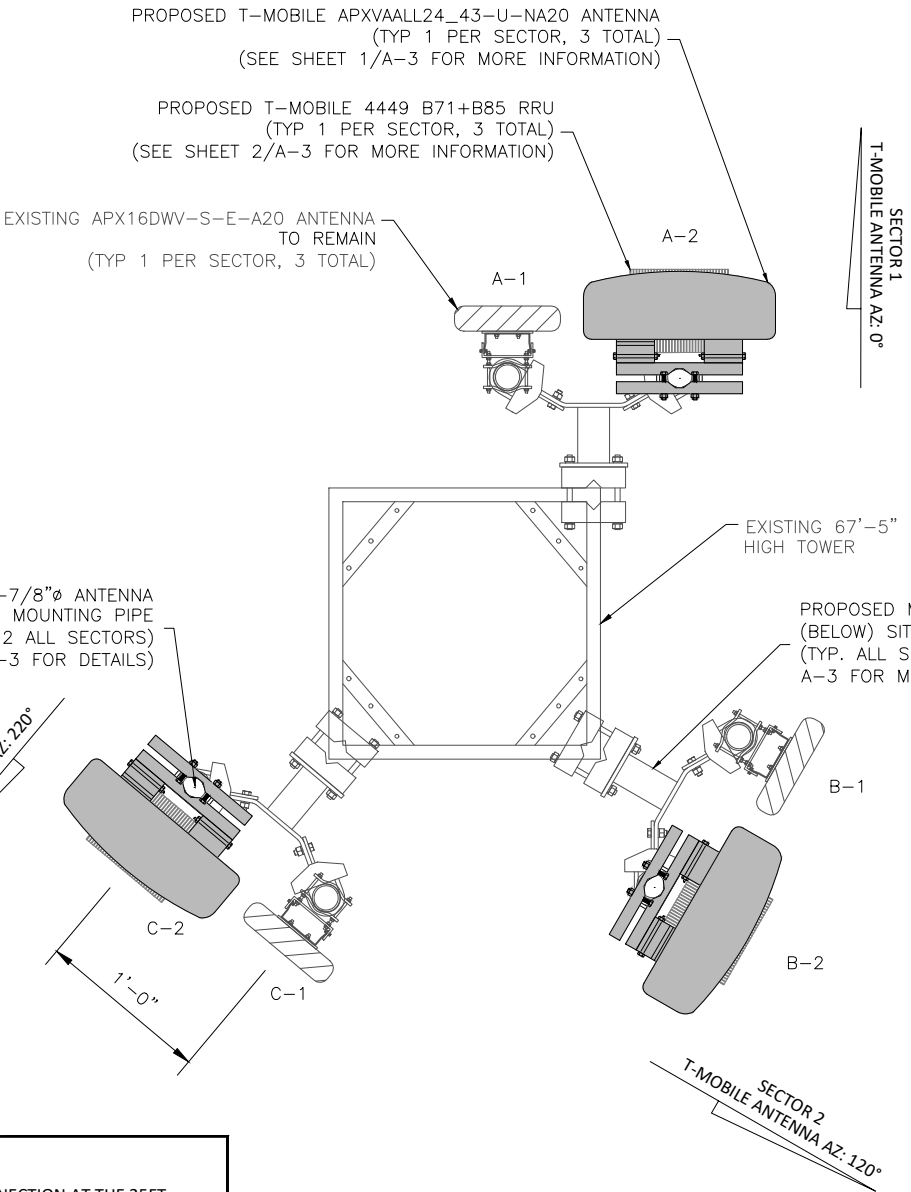
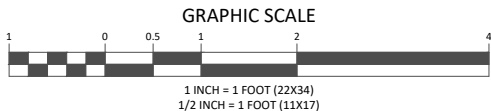
ANTENNA & CABLE NOTES:

- MOUNT ANALYSIS CONDUCTED BY CENTERLINE COMMUNICATIONS DATED 06/28/2021 CONCLUDED THAT THE PROPOSED MOUNTS ARE ADEQUATE TO SUPPORT THE EXISTING AND PROPOSED T-MOBILE EQUIPMENT WITH THE FOLLOWING MODIFICATIONS:
 - REPLACE EXISTING MOUNT PIPES W/(1) 2.5" STD x 10'-6" MOUNT PIPE FOR POSITIONS A-2, B-2, & C-2.
 - INSTALL (1) NEW SITEPRO 1 1 CWT8-LL MOUNT ASSEMBLY AT 24" (MIN.) BELOW EXISTING MOUNT ASSEMBLY TYP. FOR ALL SECTORS. CONTRACTOR TO VERIFY THAT PROPOSED MOUNT ASSEMBLY MATCHES THE EXISTING MOUNT ASSEMBLY.
- STRUCTURAL ANALYSIS CONDUCTED BY CENTERLINE COMMUNICATIONS DATED 06/28/2021 CONCLUDED THAT THE PROPOSED TOWER IS ADEQUATE TO SUPPORT THE EXISTING AND PROPOSED T-MOBILE EQUIPMENT
- REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.
- REMOVE ALL UNUSED CABLE, RRU's AND TMAs.
- PAINT ANTENNAS AND EQUIP. TO MATCH EXISTING.
- STRUCTURAL ANALYSIS BY OTHERS.

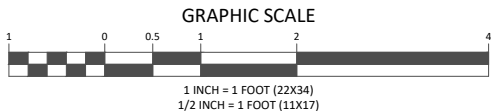
LOCATION		AZIMUTH	RAD CENTER	STATUS	TECHNOLOGY	ANTENNA MODEL NO.	MECH DOWNTILT	ELEC DOWNTILT	CABLES	DIPLEXERS	TMA/RRU	CABLE SIZE	CABLE LENGTH
ALPHA	A-1	0°	60'-0'	EXISTING	G1900,L1900,L2100	APX16DWV-16DWVS-E-A20	0°	2°/2°	(2)7/8" COAX 80'(X4)	N/A	GENERIC TWIN STYLE 1A PCS & 1B AWS	SHARED	N/A
	A-2	0°	60'-0'	PROPOSED	L600,L700,N600	APXVAALL24_43-U-NA20	0°	2°/2°/2°	(2)COAX JUMPER(X4) FIBER JUMPER	N/A	RRUS 4449 B71+B85	6x24 HYBRID	75'
BETA	B-1	120°	60'-0'	EXISTING	G1900,L1900,L2100	APX16DWV-16DWVS-E-A20	0°	2°/2°	(2)7/8" COAX 80'(X4)	N/A	GENERIC TWIN STYLE 1A PCS & 1B AWS	6x24 HYBRID	N/A
	B-2	120°	60'-0'	PROPOSED	L600,L700,N600	APXVAALL24_43-U-NA20	0°	2°/2°/2°	(2)COAX JUMPER(X4) FIBER JUMPER	N/A	RRUS 4449 B71+B85	6x24 HYBRID	80'
GAMMA	C-1	220°	60'-0'	EXISTING	G1900,L1900,L2100	APX16DWV-16DWVS-E-A20	0°	2°/2°	(2)7/8" COAX 80'(X4)	N/A	GENERIC TWIN STYLE 1A PCS & 1B AWS	6x24 HYBRID	N/A
	C-2	220°	60'-0'	PROPOSED	L600,L700,N600	APXVAALL24_43-U-NA20	0°	2°/2°/2°	(2)COAX JUMPER(X4) FIBER JUMPER	N/A	RRUS 4449 B71+B85	6x24 HYBRID	85'
NOTE: DARK TEXT IN TABLE ABOVE DENOTES PROPOSED EQUIPMENT											(3) TOTAL 6x24 HYBRID CABLES	240'	



1
A-5
EXISTING ANTENNA PLAN



2
A-5
PROPOSED ANTENNA PLAN



BUILDING STRUCTURAL NOTES:

- REINFORCE THE EXISTING WALL CONNECTION AT THE 25FT ELEVATION WITH (2) NEW L8x6x5/8 WALL ANGLES WITH (3) 5/8" THROUGH RODS. THE PROPOSED EXTERIOR WALL ANGLE SHOULD BE WELDED TO THE EXISTING WALL BRACKET.
- ADD 1/4" FILLET WELDS TO THE END CONNECTIONS OF THE L2-1/2x1-1/2x1/4 HORIZONTAL ANGLES AT THE EXISTING ALL CONNECTION AT THE 25FT ELEVATION

T - Mobile NORTHEAST LLC

T-MOBILE NORTHEAST, LLC.
35 GRIFFIN RD S
BLOOMFIELD, CT 06002
PHONE: (860) 629-1700

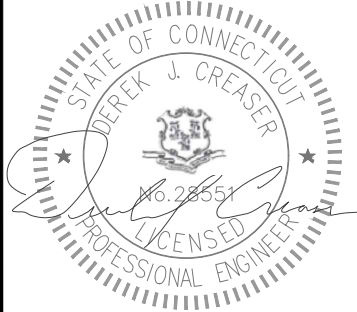


750 W CENTER ST, SUITE 301
WEST BRIDGEWATER, MA 02379
PHONE: 781.713.4725

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REV	DATE	DESCRIPTION	BY
1	11/04/21	STRUCTURAL UPDATE	MP
0	07/23/21	ISSUED FOR CONSTRUCTION	SS
B	06/15/21	ISSUED FOR PERMITTING	RL
A	06/08/21	ISSUED FOR REVIEW	RL

DESIGNED BY: RL	APPROVED BY: WRD
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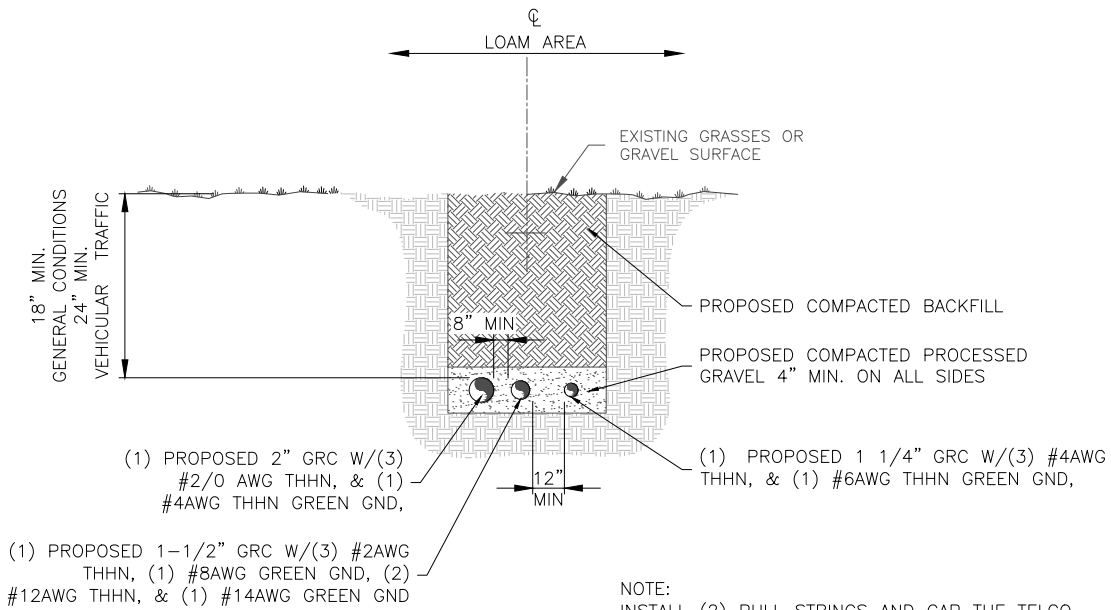
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CLINTON/I-95/X63/AT_1

SITE ID:
CT11031B

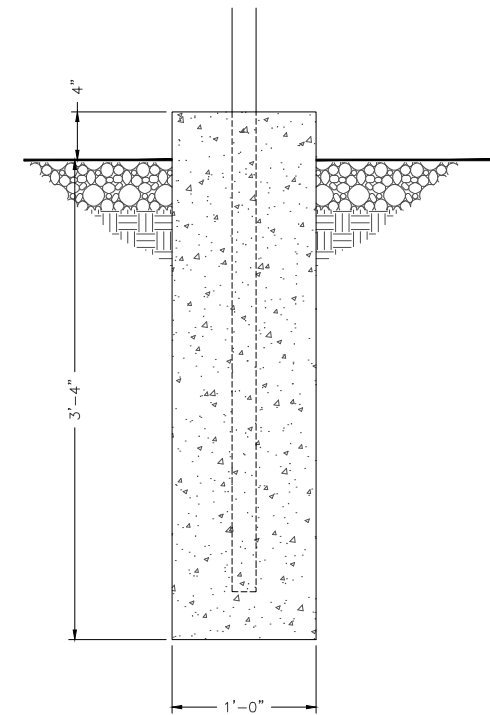
SITE ADDRESS:
21 EAST MAIN STREET
CLINTON, CT 06413
MIDDLESEX

SHEET TITLE:
ANTENNA PLANS &
SCHEDULE

DRAWING:
A-5



1
A-6
TELCO AND POWER JOINT TRENCH CONDUIT

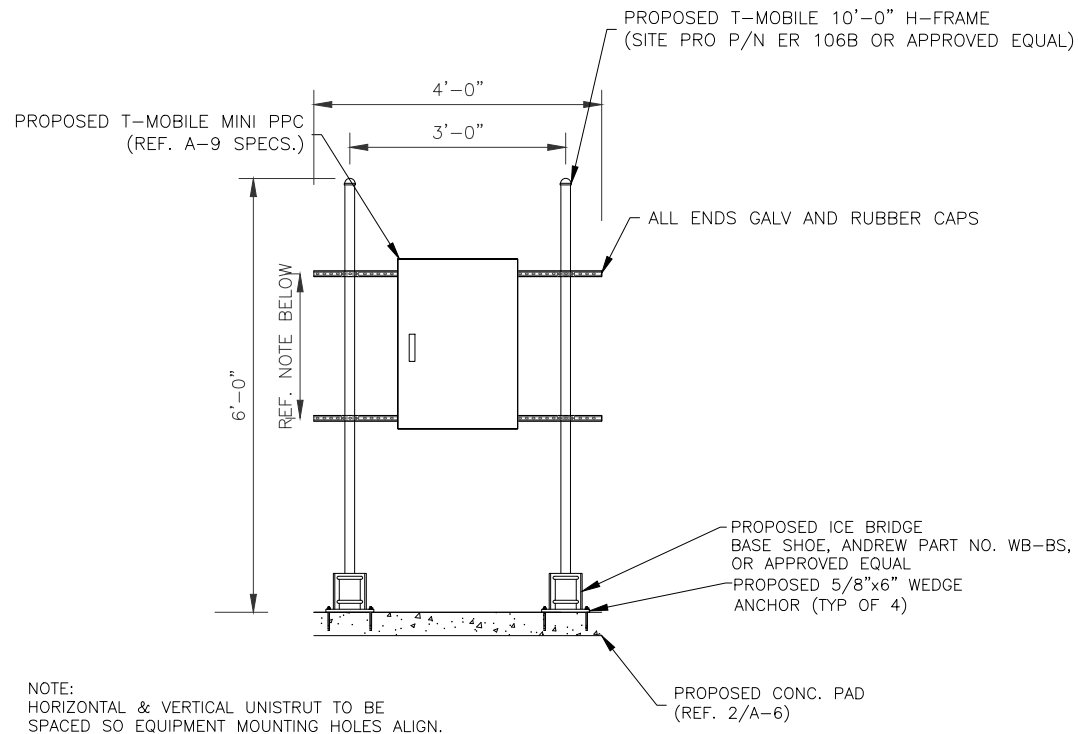


NOTE:
SEE FOUNDATION NOTES AND CONCRETE SPECIFICATIONS ABOVE FOR MORE INFO.

2
A-6
DIRECT BURIAL FOOTING FOR ICE BRIDGE

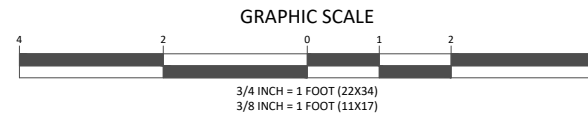
SITELINE PRO 1 Product Info			
Pxxx: Bulk Pipe			
Features: • Factory cut ends, hot-dip galvanized pipe			
Construction: • ASTM A33 Grade B • Schedule 40			
Design Criteria: • ASTM A33 Grade B (Yield $F_y = 35$ ksi [240 MPa] / Tensile $F_u = 60$ ksi [415 MPa]) • Hot-dip galvanized in accordance with ASTM A33 requirements			
Part #	Length	OD x Length (in)	Weight
P296	8'-0"	2-3/8" x 96"	30 lb
P2126	10'-6"	2-3/8" x 126"	39 lb

3
A-6
ANTENNA MOUNTING PIPE SPECS.



NOTE:
HORIZONTAL & VERTICAL UNISTRUT TO BE SPACED SO EQUIPMENT MOUNTING HOLES ALIGN.

4
A-6
H-FRAME DETAIL



T - Mobile
NORTHEAST LLC

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35 GRIFFIN RD S
BLOOMFIELD, CT 06002
PHONE: (860) 629-1700

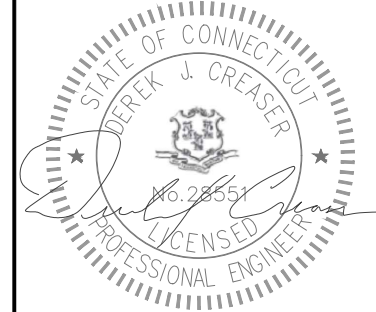


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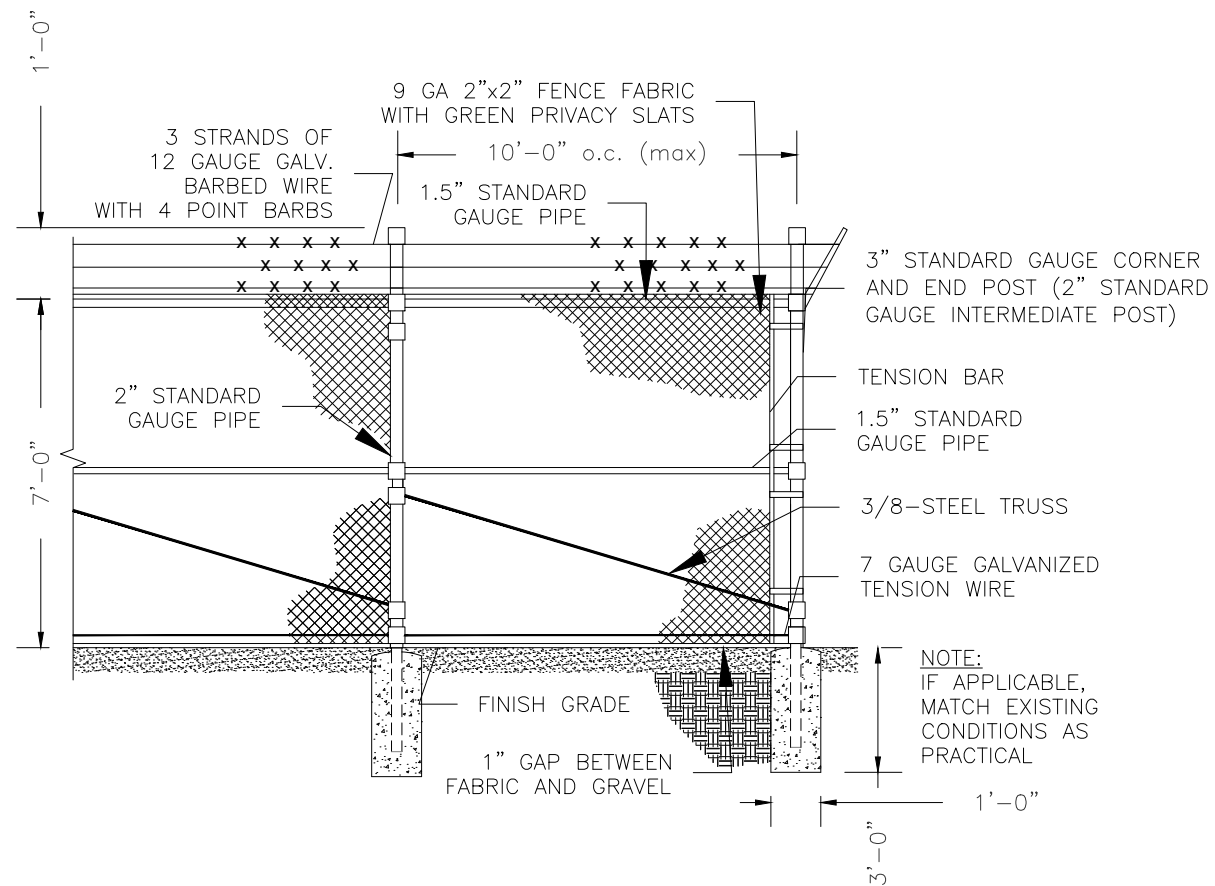


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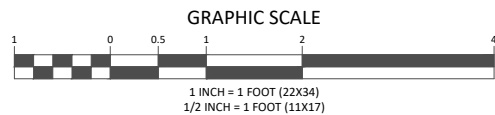
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SITE ADDRESS:
21 EAST MAIN STREET CLINTON, CT 06413 MIDDLESEX

SHEET TITLE:
GENERAL DETAILS
DRAWING:
A-6



1 FENCE DETAIL
A-7



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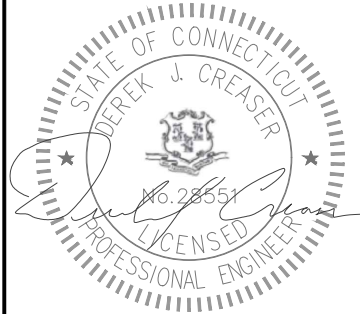
T-MOBILE NORTHEAST, LLC.
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BLOOMFIELD, CT 06002
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SHEET TITLE:	GENERAL DETAILS
DRAWING:	A-7

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NORTHEAST LLC

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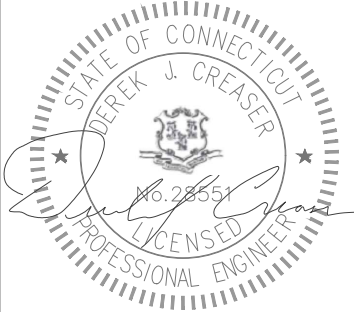


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21 EAST MAIN STREET
CLINTON, CT 06413
MIDDLESEX

SHEET TITLE:
MINI PPC SPEC

DRAWING:
A-8

PPC SPECIFICATIONS ON THIS PAGE ARE NOT AVAILABLE AT TIME OF ISSUANCE OF THESE CD'S.

STRUCTURAL NOTES:

1. DESIGN REQUIREMENTS ARE PER STATE BUILDING CODE AND APPLICABLE SUPPLEMENTS, INTERNATIONAL BUILDING CODE, ASCE 7-16 TIA-222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA, TOWERS AND ANTENNA SUPPORTING STRUCTURES.
2. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND ENGINEER OF RECORD.
3. DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
4. STRUCTURAL STEEL SHALL CONFORM TO ASTM A992 (Fy=50 ksi), MISCELLANEOUS STEEL SHALL CONFORM TO ASTM A36 UNLESS OTHERWISE INDICATED.
5. STEEL PIPE SHALL CONFORM TO ASTM A500 "COLD-FORMED WELDED & SEAMLESS CARBON STEEL STRUCTURAL TUBING", GRADE B, OR ASTM A53 PIPE STEEL BLACK AND HOT-DIPPED ZINC-COATED WELDED AND SEAMLESS TYPE E OR S, GRADE B. PIPE SIZES INDICATED ARE NOMINAL. ACTUAL OUTSIDE DIAMETER IS LARGER.
6. STRUCTURAL CONNECTION BOLTS SHALL BE HIGH STRENGTH BOLTS (BEARING TYPE) AND CONFORM TO ASTM A325 TYPE-X "HIGH STRENGTH BOLTS FOR STRUCTURAL JOINTS, INCLUDING SUITABLE NUTS AND PLAIN HARDENED WASHERS". ALL BOLTS SHALL BE 3/4" DIA UON.
7. ALL STEEL MATERIALS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIP GALVANIZED) COATINGS ON IRON AND STEEL PRODUCTS", UNLESS OTHERWISE NOTED.
8. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC-COATING (HOT-DIP) ON IRON AND STEEL HARDWARE", UNLESS OTHERWISE NOTED.
9. FIELD WELDS, DRILL HOLES, SAW CUTS AND ALL DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED WITH AN ORGANIC ZINC REPAIR PAINT COMPLYING WITH REQUIREMENTS OF ASTM A780. GALVANIZING REPAIR PAINT SHALL HAVE 65 PERCENT ZINC BY WEIGHT, ZIRP BY DUNCAN GALVANIZING, GALVA BRIGHT PREMIUM BY CROWN OR EQUAL. THICKNESS OF APPLIED GALVANIZING REPAIR PAINT SHALL BE NOT NOT LESS THAN 4 COATS (ALLOW TIME TO DRY BETWEEN COATS) WITH A RESULTING COATING THICKNESS REQUIRED BY ASTM A123 OR A153 AS APPLICABLE.
10. CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND FOR METHODS USED IN CORRECTING WELDING. ALL WELDERS AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS "STANDARD QUALIFICATION PROCEDURES". ALL WELDING SHALL BE DONE USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC AND D.I.I. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "STEEL CONSTRUCTION MANUAL". 14TH EDITION.
11. INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON-CONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE CONSTRUCTION MANAGER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE CONSTRUCTION MANAGER APPROVAL.
12. UNISTRUT SHALL BE FORMED STEEL CHANNEL STRUT FRAMING AS MANUFACTURED BY UNISTRUT CORP., WAYNE, MI OR EQUAL. STRUT MEMBERS SHALL BE 1 5/8"x1 5/8"x12GA, UNLESS OTHERWISE NOTED, AND SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION.
13. EPOXY ANCHOR ASSEMBLY SHALL CONSIST OF STAINLESS STEEL ANCHOR ROD WITH NUTS & WASHERS. AN INTERNALLY THREADED INSERT, A SCREEN TUBE AND A EPOXY ADHESIVE. THE ANCHORING SYSTEM SHALL BE THE HILTI-HIT HY-270 AND OR HY-200 SYSTEMS (AS SPECIFIED IN DWG.) OR ENGINEERS APPROVED EQUAL.
14. EXPANSION BOLTS SHALL CONFORM TO FEDERAL SPECIFICATION FF-S-325, GROUP II, TYPE 4, CLASS I, HILTI KWIK BOLT III OR APPROVED EQUAL. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
15. LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION AND THE NATIONAL FOREST PRODUCTS ASSOCIATION'S NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION. ALL LUMBER SHALL BE PRESSURE TREATED AND SHALL BE STRUCTURAL GRADE NO. 2 OR BETTER.
16. WHERE ROOF PENETRATIONS ARE REQUIRED, THE CONTRACTOR SHALL CONTACT AND COORDINATE RELATED WORK WITH THE BUILDING OWNER AND THE EXISTING ROOF INSTALLER. WORK SHALL BE PERFORMED IN SUCH A MANNER AS TO NOT VOID THE EXISTING ROOF WARRANTY. ROOF SHALL BE WATERTIGHT.
17. ALL FIBERGLASS MEMBERS USED ARE AS MANUFACTURED BY STRONGWELL COMPANY OF BRISTOL, VA 24203. ALL DESIGN CRITERIA FOR THESE MEMBERS IS BASED ON INFORMATION PROVIDED IN THE DESIGN MANUAL. ALL REQUIREMENTS PUBLISHED IN SAID MANUAL MUST BE STRICTLY ADHERED TO.
18. NO MATERIALS TO BE ORDERED AND NO WORK TO BE COMPLETED UNTIL SHOP DRAWINGS HAVE BEEN REVIEWED AND APPROVED IN WRITING.
19. SUBCONTRACTOR SHALL FIREPROOF ALL STEEL TO PRE-EXISTING CONDITIONS.

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

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

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

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

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

SPECIAL INSPECTION CHECKLIST	
BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
N/A	ENGINEER OF RECORD APPROVED SHOP DRAWINGS ¹
N/A	MATERIAL SPECIFICATIONS REPORT ²
N/A	FABRICATOR NDE INSPECTION
N/A	PACKING SLIPS ³
ADDITIONAL TESTING AND INSPECTIONS:	
DURING CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	STEEL INSPECTIONS
N/A	HIGH STRENGTH BOLT INSPECTIONS
N/A	HIGH WIND ZONE INSPECTIONS ⁴
N/A	FOUNDATION INSPECTIONS
N/A	CONCRETE COMP. STRENGTH, SLUMP TESTS AND PLACEMENT
N/A	POST INSTALLED ANCHOR VERIFICATION ⁵
N/A	GROUT VERIFICATION
N/A	CERTIFIED WELD INSPECTION
N/A	EARTHWORK: LIFT AND DENSITY
N/A	ON SITE COLD GALVANIZING VERIFICATION
N/A	GUY WIRE TENSION REPORT
ADDITIONAL TESTING AND INSPECTIONS:	
AFTER CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	MODIFICATION INSPECTOR REDLINE OR RECORD DRAWINGS ⁶
N/A	POST INSTALLED ANCHOR PULL-OUT TESTING
REQUIRED	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTES:

1. REQUIRED FOR ANY NEW SHOP FABRICATED FRP OR STEEL.
2. PROVIDED BY MANUFACTURER, REQUIRED IF HIGH STRENGTH BOLTS OR STEEL.
3. PROVIDED BY GENERAL CONTRACTOR; PROOF OF MATERIALS.
4. HIGH WIND ZONE INSPECTION CATB 120MPH OR CAT C,D 110MPH INSPECT FRAMING OF WALLS, ANCHORING, FASTENING SCHEDULE.
5. ADHESIVE FOR REBAR AND ANCHORS SHALL HAVE BEEN TESTED IN ACCORDANCE WITH ACI 355.4 AND ICC-ES AC308 FOR CRACKED CONCRETE AND SEISMIC APPLICATIONS. DESIGN ADHESIVE BOND STRENGTH HAS BEEN BASED ON ACI 355.4 TEMPERATURE CATEGORY B WITH INSTALLATIONS INTO DRY HOLES DRILLED USING A CARBIDE BIT INTO CRACKED CONCRETE THAT HAS CURED FOR AT LEAST 21 DAYS. ADHESIVE ANCHORS REQUIRING CERTIFIED INSTALLATIONS SHALL BE INSTALLED BY A CERTIFIED ADHESIVE ANCHOR INSTALLER PER ACI 318-11 D.9.2.2. INSTALLATIONS REQUIRING CERTIFIED INSTALLERS SHALL BE INSPECTED PER ACI 318-11 D.8.2.4.
6. AS REQUIRED; FOR ANY FIELD CHANGES TO THE ITEMS IN THIS TABLE.

NOTES:

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

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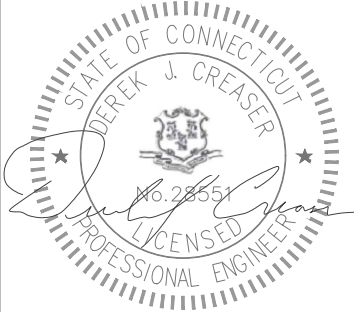


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REVISIONS

1	11/04/21	STRUCTURAL UPDATE	MP
0	07/23/21	ISSUED FOR CONSTRUCTION	SS
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REV	DATE	DESCRIPTION	BY

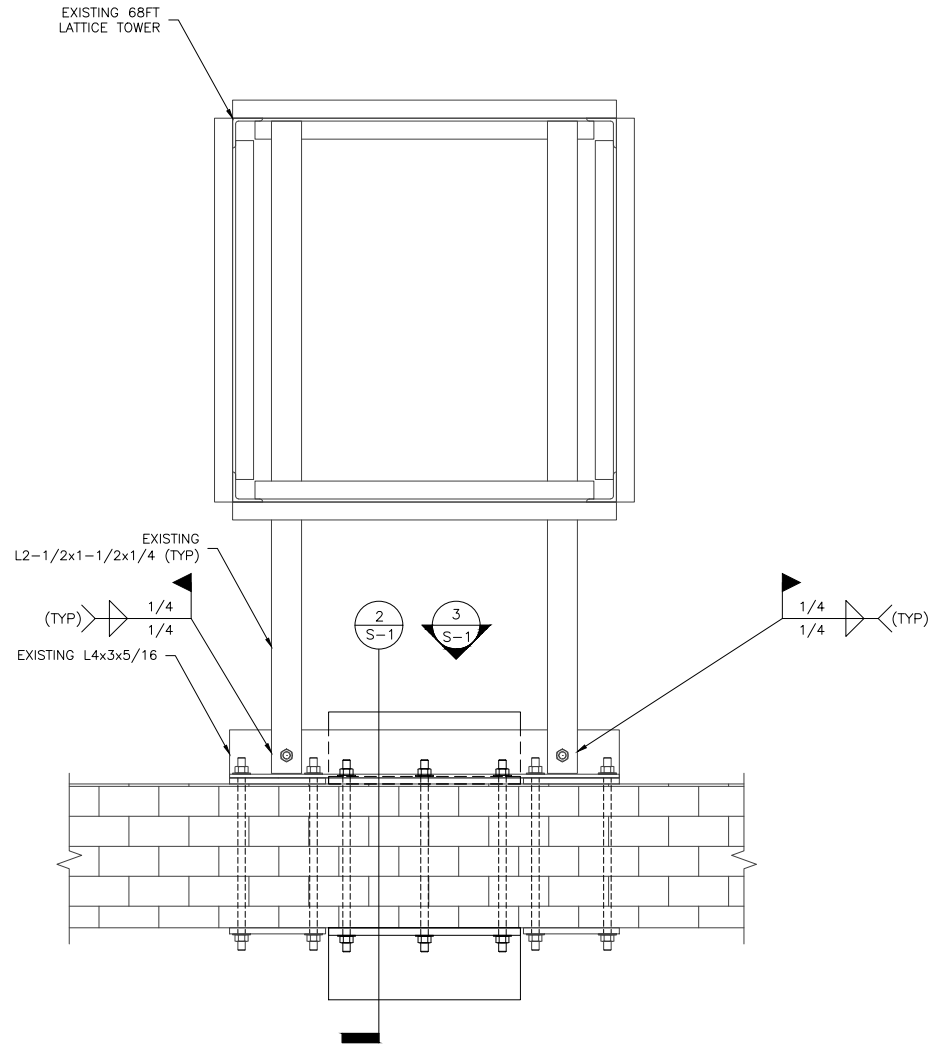
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SITE ID:	CT11031B
SITE ADDRESS:	21 EAST MAIN STREET CLINTON, CT 06413 MIDDLESEX
SHEET TITLE:	STRUCTURAL NOTES & SPECIAL INSPECTIONS
DRAWING:	SN-1



BUILDING STRUCTURAL ANALYSIS CONDUCTED BY CENTERLINE COMMUNICATIONS DATED 10/26/2021 CONCLUDED THAT THE PROPOSED BUILDING IS ADEQUATE TO SUPPORT THE EXISTING AND PROPOSED T-MOBILE EQUIPMENT WITH THE FOLLOWING MODIFICATIONS:

- REINFORCE THE EXISTING WALL CONNECTION AT THE 25FT ELEVATION WITH (2) NEW L8x6x5/8 WALL ANGLES WITH (3) 5/8" THROUGH RODS. THE PROPOSED EXTERIOR WALL ANGLE SHOULD BE WELDED TO THE EXISTING WALL BRACKET.
- ADD 1/4" FILLET WELDS TO THE END CONNECTIONS OF THE L2-1/2x1-1/2x1/4 HORIZONTAL ANGLES AT THE EXISTING ALL CONNECTION AT THE 25FT ELEVATION

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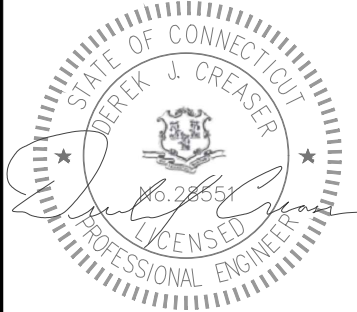


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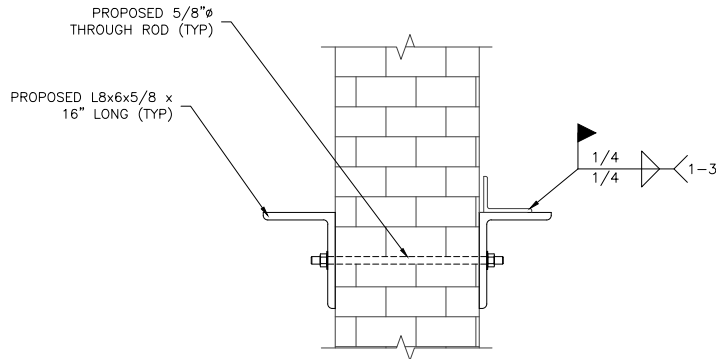
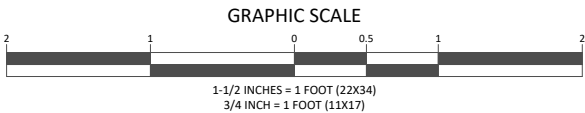


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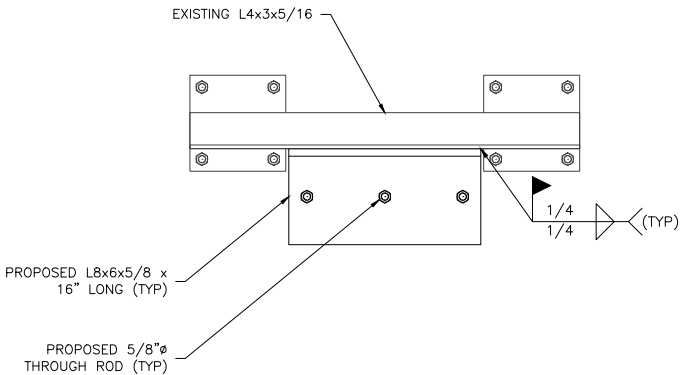
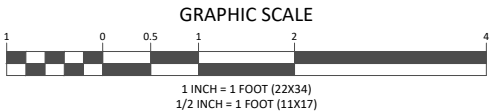
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SITE ID:	CT11031B
SITE ADDRESS:	21 EAST MAIN STREET CLINTON, CT 06413 MIDDLESEX
SHEET TITLE:	STRUCTURAL MODIFICATION DETAILS
DRAWING:	S-1

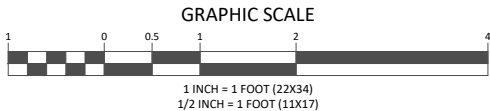
2 WALL REINFORCEMENT DETAIL

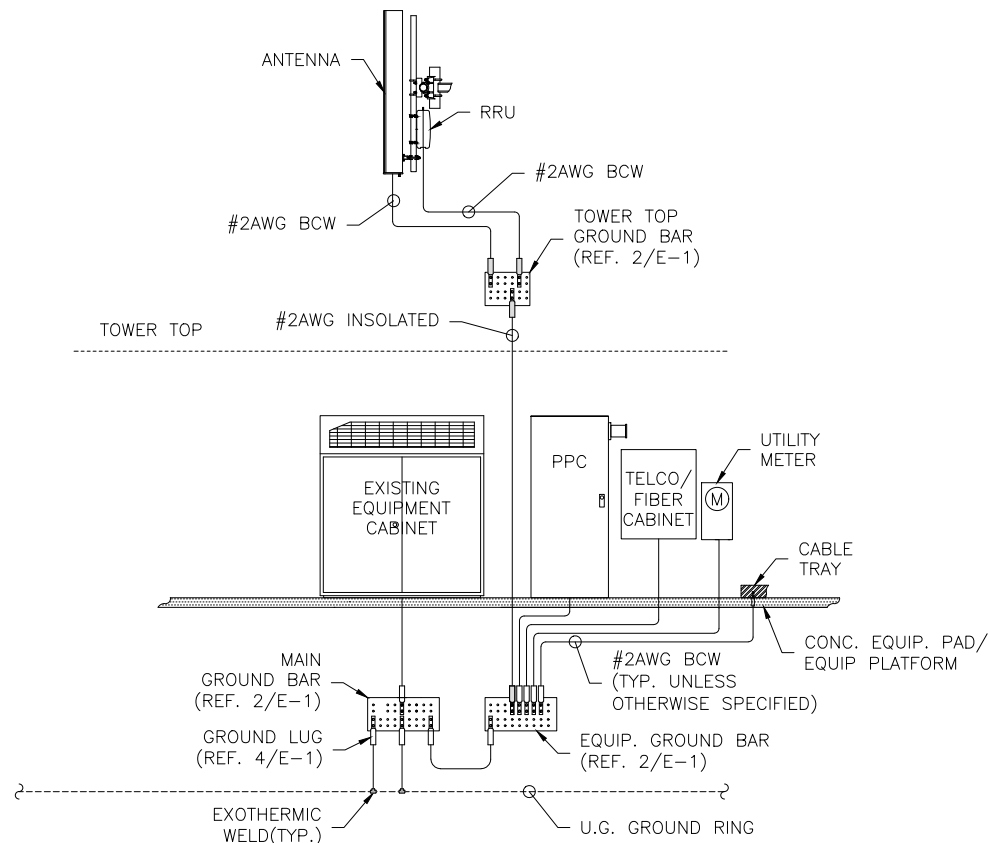


2 SECTIONAL VIEW



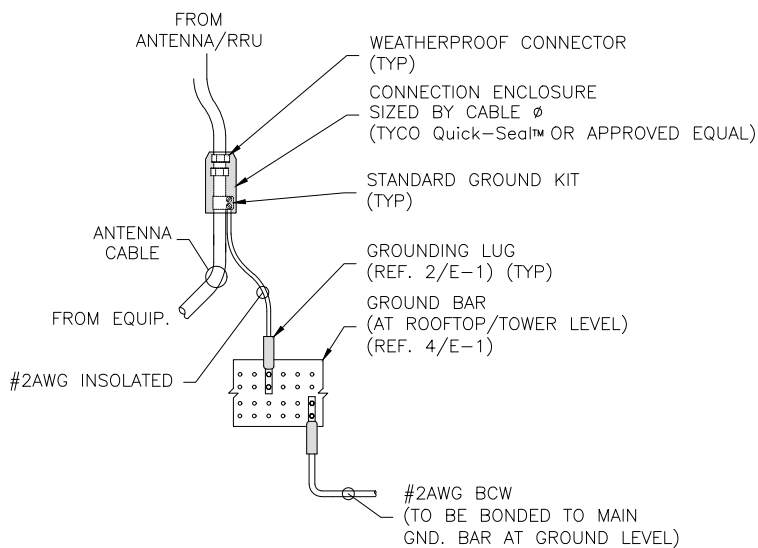
3 SECTIONAL VIEW





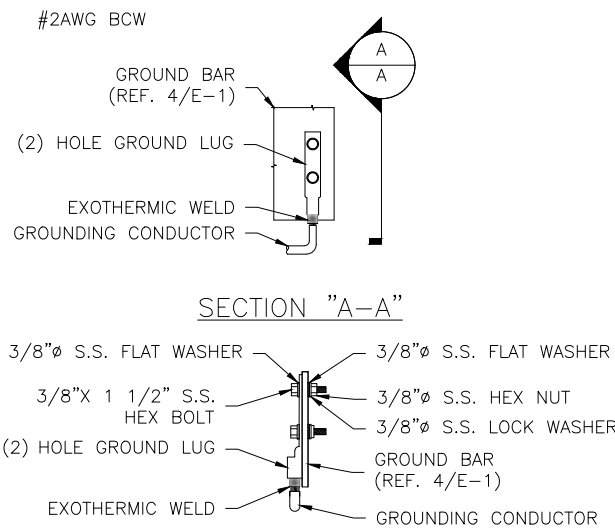
GROUNDING RISER NOTE:
UNLESS OTHERWISE SPECIFIED ALL GROUNDING CONDUCTORS ARE TO BE #2AWG BCW

1
G-1
GROUNDING RISER DIAGRAM



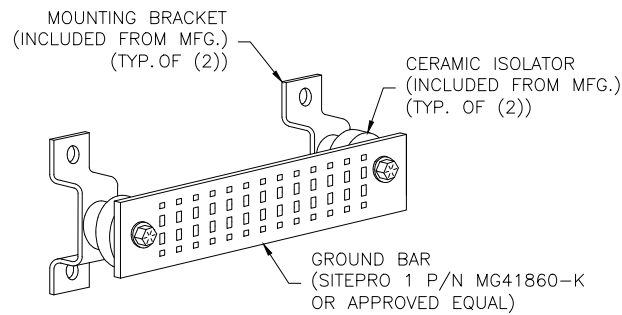
- NOTES:
- DO NOT INSTALL CABLE GROUND KIT AT BEND IN CABLE.
 - GROUND CABLES DIRECTLY TO CIGBE
 - JUMPER REQUIRED ONLY WHEN CABLE IS 1 1/4" OR LARGER

4
G-1
ANTENNA/RRU GROUNDING DETAIL



- GROUNDING LUG NOTES:
- DO NOT DOUBLE UP OR STACK LUGS.
 - OXIDE INHIBITING COMPOUND TO BE APPLIED TO ALL LUGS.
 - ALL LUGS ARE TO BE EXOTHERMIC WELDED TO GROUNDING CONDUCTORS.
 - FOR INSULATED GROUNDING CONDUCTORS, EXPOSED BARE COPPER TO BE KEPT TO ABSOLUTE MINIMUM.
 - NO INSULATION IS ALLOWED WITHIN THE BARREL OF THE COMPRESSION TERMINAL.

5
G-1
GROUND LUG DETAIL



2
G-1
GROUND BAR DETAIL

EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

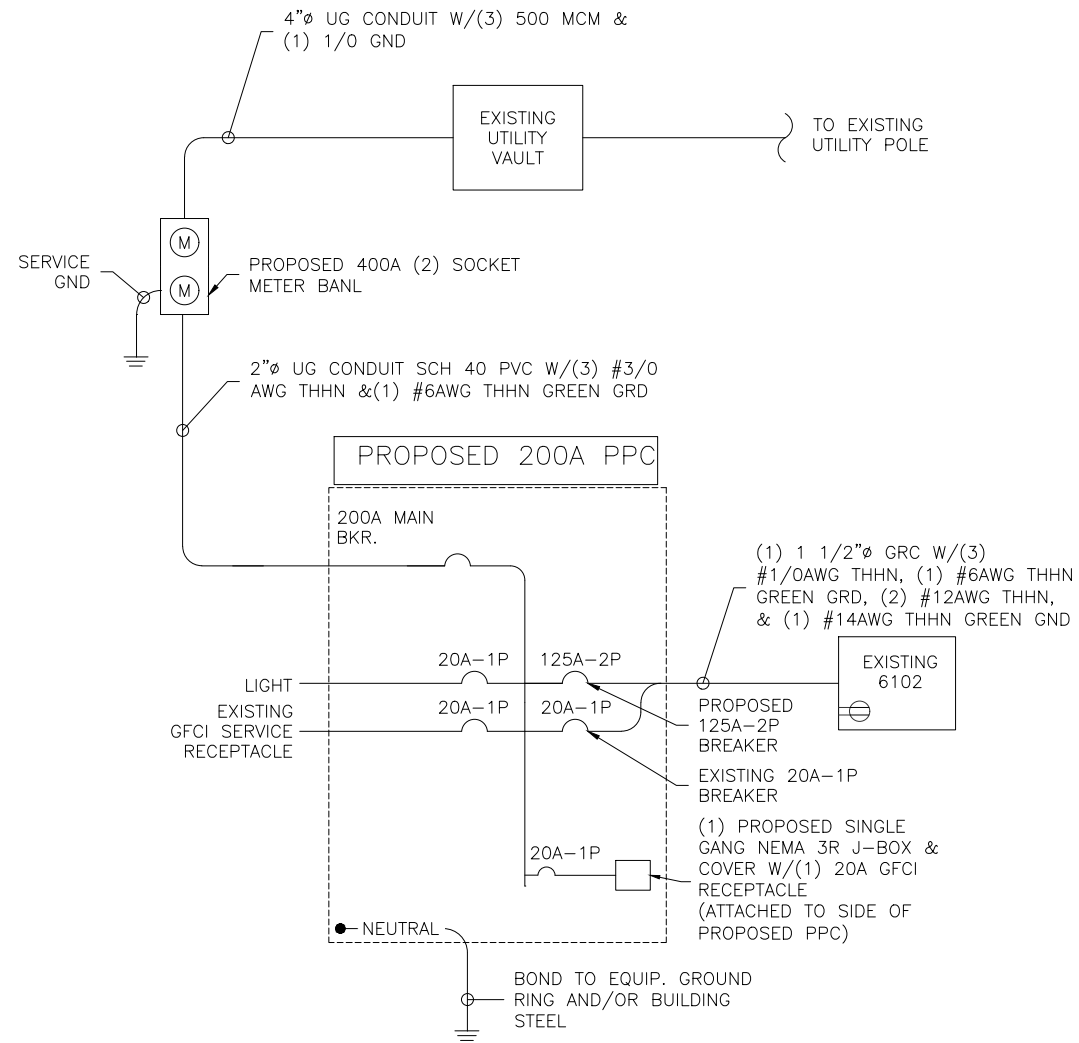
SECTION "P" - SURGE PRODUCERS

CABLE ENTRY PORTS (HATCH PLATES) (#2)
GENERATOR FRAMEWORK (IF AVAILABLE) (#2)
TELCO GROUND BAR
COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2)
+24V POWER SUPPLY RETURN BAR (#2)
-48V POWER SUPPLY RETURN BAR (#2)
RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

INTERIOR GROUND RING (#2)
EXTERNAL EARTH GROUND FIELD (BURIED GROUND RING) (#2)
METALLIC COLD WATER PIPE (IF AVAILABLE) (#2)
BUILDING STEEL (IF AVAILABLE) (#2)

3
G-1
GROUND WIRE SCHEDULE



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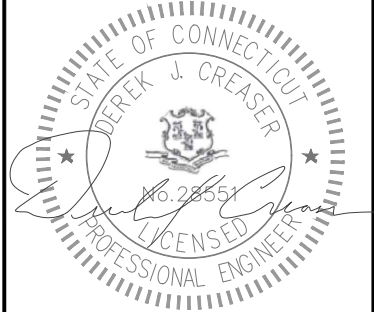


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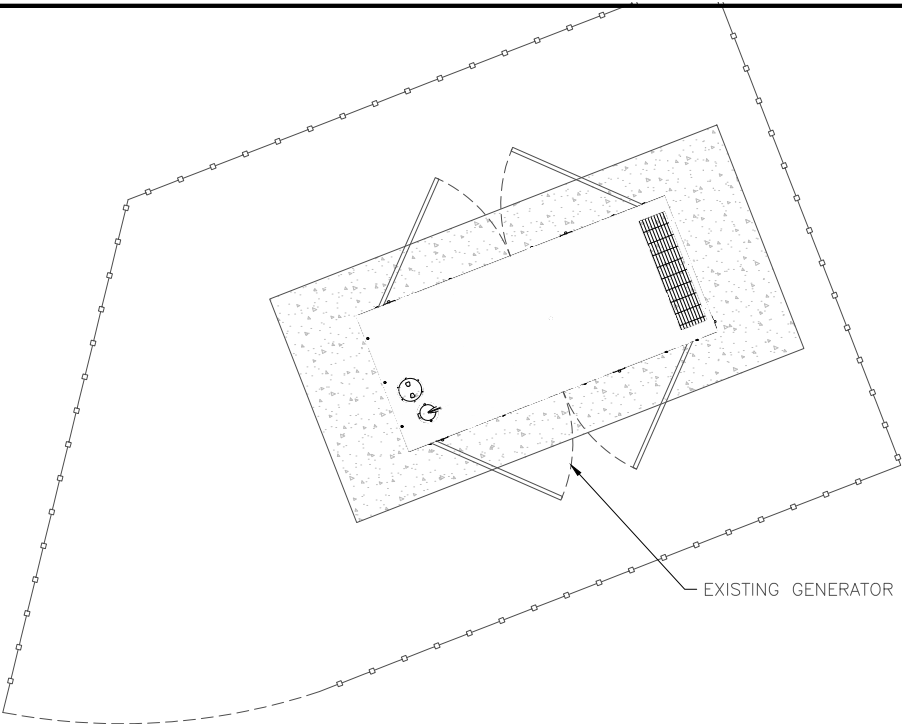
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SITE ID: CT11031B
SITE ADDRESS: 21 EAST MAIN STREET CLINTON, CT 06413 MIDDLESEX
SHEET TITLE: GROUNDING & ONE LINE DIAGRAM
DRAWING: G-1

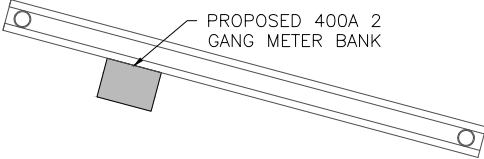
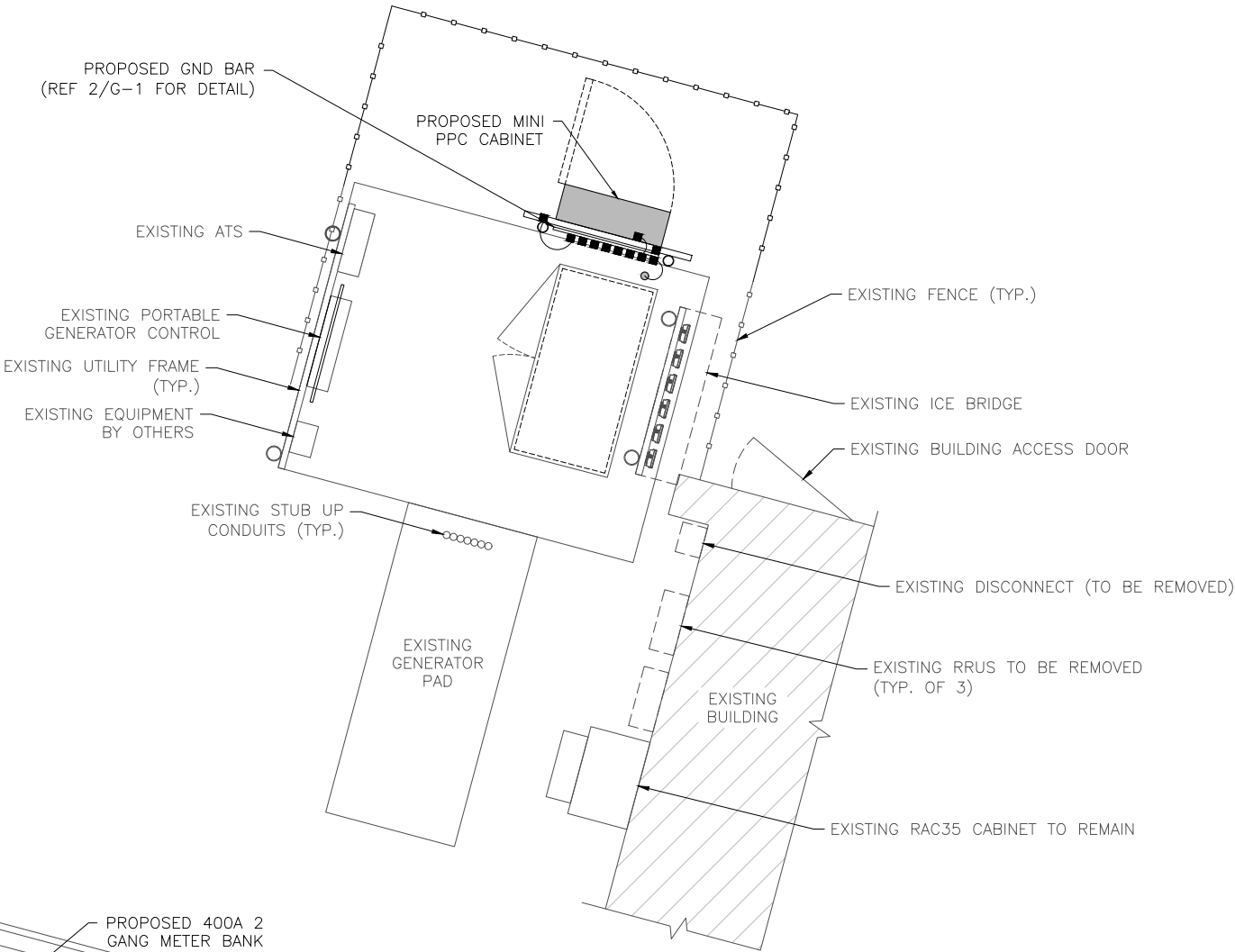
GROUNDING SYMBOLS	
	EQUIP. GND LUG*
	EXOTHERMIC WELD**
	GND ROD**

* REF. 4/G-2 FOR DETAIL
** REF. 3/G-1 FOR DETAIL

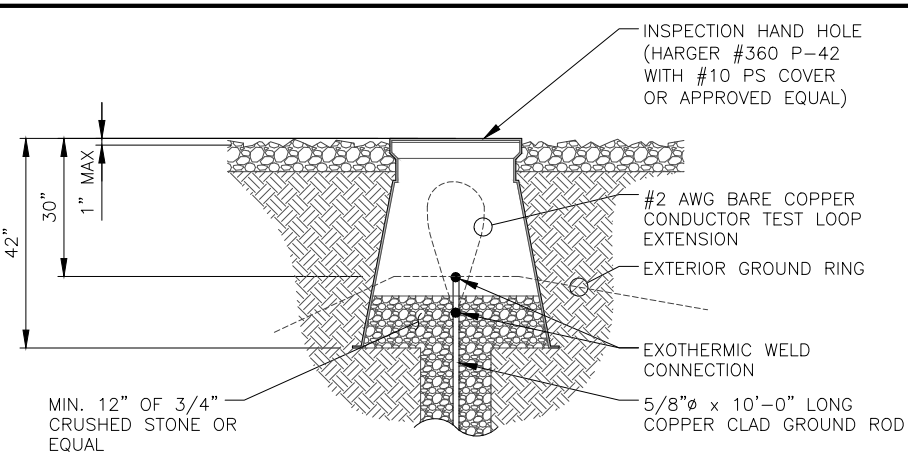
NOTE:
UNLESS OTHERWISE NOTED, ALL
GROUNDING CONDUCTORS ARE
AWG2 BCW



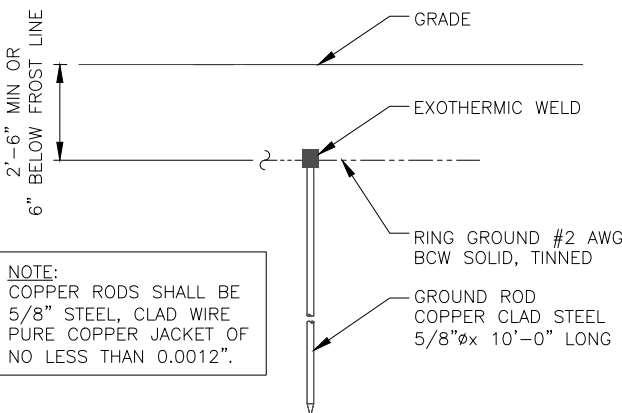
EXISTING GENERATOR



1 GROUNDING PLAN
G-2



2 GROUND WELL DETAIL
G-2 NOT TO SCALE



NOTE:
COPPER RODS SHALL BE
5/8" STEEL, CLAD WIRE
PURE COPPER JACKET OF
NO LESS THAN 0.0012".

3 TYPICAL GROUND ROD DETAIL
G-2 NOT TO SCALE

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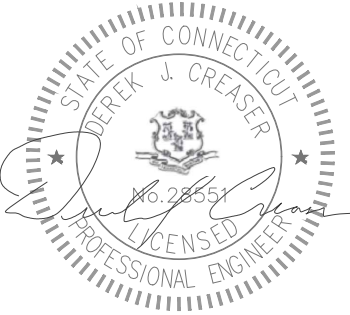


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DESIGNED BY: RL	APPROVED BY: WRD
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SITE ID: CT11031B
SITE ADDRESS: 21 EAST MAIN STREET CLINTON, CT 06413 MIDDLESEX
SHEET TITLE: GROUNDING PLAN
DRAWING: G-2

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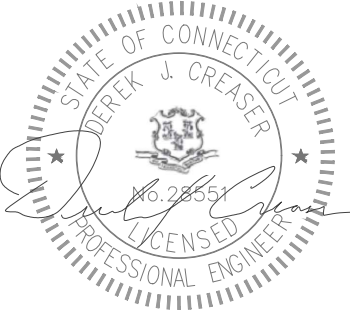


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SITE ADDRESS: 21 EAST MAIN STREET CLINTON, CT 06413 MIDDLESEX
SHEET TITLE: ELECTRICAL PLAN
DRAWING: E-1

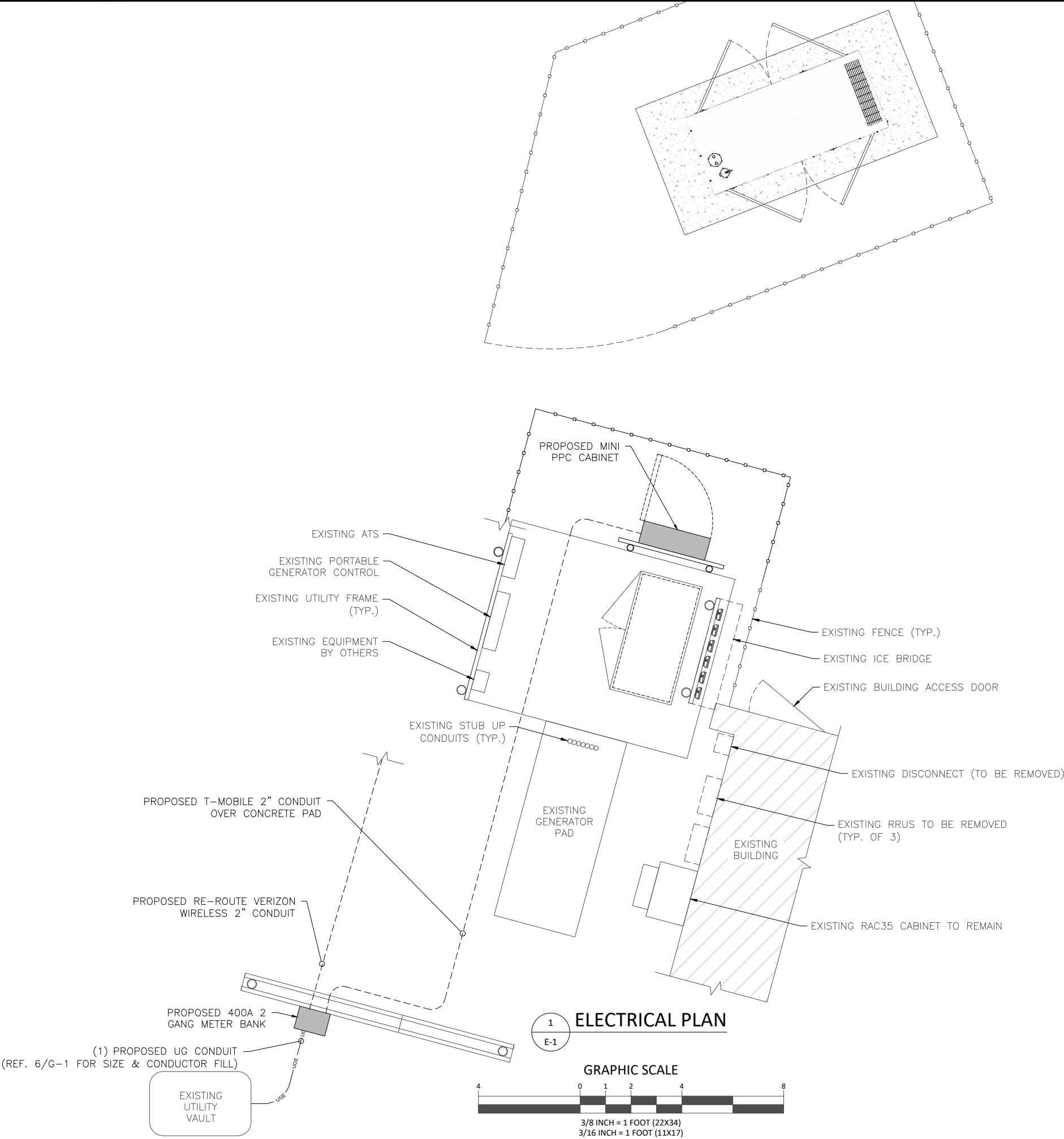


Exhibit D

Structural Analysis Report

Structural Analysis Report

Site ID: CT11031B

Site Name: Clinton/I-95/X63/At_1

Project Name: L600

Address: Comcast Tower/21 East Main Street
Clinton, CT 06413

Client:

T - Mobile
NORTHEAST, LLC
35 Griffin Rd S
Bloomfield, CT 06002

Date: 10/26/2021



Digitally signed by: Derek J.
Creaser, P.E.

DN: CN = Derek J. Creaser, P.E.
email = dcreaser@clinellc.com C
= US O = Centerline

Communications OU = Director -
A&E Services

Date: 2021.10.26 20:06:46 -04'00'

Scope of Work:

Centerline Communications was authorized by T-Mobile Northeast LLC to perform an analysis of the existing structure to determine its capacity to support the proposed and existing T-Mobile equipment/appurtenances listed in this report.

Existing & Proposed Equipment:

Carrier	Mounting Level (ft)	Center Line Elevation (ft)	Number of Appurtenances	Antenna Manufacturer	Appurtenance Model	Feed Lines (in)
T-Mobile	60.0	60.0	3	RFS	APX16DWV-16DWV-S-E-A20	(3) 6x24 Hybrid
		60.0	3	RFS	APXVAALL24_43-U-NA20	
		60.0	3	Ericsson	Radio 4449 B71+B85	
		60.0	3	-	Twin Style 1A-PCS	
		60.0	3	-	Twin Style 1B-AWS	
		60.0	3	Site Pro 1	CWT8-LL T-Arm Mount	
Verizon	47.5	54.2	2	Raycap	RRFDC-3315-PF-48	(2) 1-1/4
		47.75	1	Alcatel Lucent	RRH 4x45 B66A	
		47.75	2	Nokia	UHIE RRH 4x45 B66A	
		47.75	3	-	3JR53386AAAV 03	
		47.5	6	Commscope	SBNHH-1D65B	
		47.5	3	Alcatel Lucent	RRH 4x30 B25	
		47.5	3	-	T-Arm Mount	

Note: Proposed equipment shown in **bold**.

Design Criteria:

Design Codes:

2018 Connecticut State Building Code

2015 International Building Code

ASCE 7-16

TIA-222-H Standards

Ultimate Design Wind Speed (V_{ult})	135 mph
Wind Speed with Ice	50 mph
Ice Thickness	1.00 in.
Exposure Category	C
Topographic Category	1
Risk Category	II
Site Soil Class (Assumed)	D – Stiff Soil
Seismic Design Category	B
Spectral Response Acceleration Parameter at a Short Periods, S_s	0.169 g
Spectral Response Acceleration Parameter at a Period of 1 Second, S_1	0.059 g
Short Period Site Coefficient, F_a	1.60
Long Period Site Coefficient, F_v	2.40

*Refer to calculations for additional design criteria.

Conclusion:

Based on the results of the analysis, we have determined that the existing structure is adequate to support the existing and proposed loading upon completion of modifications. Centerline Communications recommends the following:

- Reinforce the existing wall connection at the 25ft elevation with (2) new L8x6x5/8 wall angles with (3) 5/8" through rods. The proposed exterior wall angle should be welded to the existing wall bracket.
- Add ¼" fillet welds to the end connections of the L2-1/2x1-1/2x1/4 horizontal angles at the existing wall connection at the 25ft elevation.

Component	Stress Ratio	Overall Result
Through Rods	77.4%	PASS
Masonry Wall	81.1%	PASS

Reference Documents:

- T-Mobile RFDS CT11031B_L600_6, dated May 19, 2021
- Site Photos and Notes by Centerline Communications, dated May 20, 2021 and October 20, 2021
- Construction Drawings by B+T Group, dated September 5, 2019
- Construction Drawings by CTI Towers, dated September 26, 2014
- Structural Analysis by FDH, dated December 19, 2014
- Construction Drawings by Atlantis Group, dated May 7, 2014
- Tower Mapping Report by CTI Towers, dated April 4, 2014
- Structural Analysis by Centek Engineering, dated June 29, 2011
- Construction Drawings by Techstar, dated October 17, 1997

Assumptions and Limitations:

- The tower and structures were built and maintained with the manufacturer's specifications.
- The calculations performed by Centerline Communications are limited to the structural members in these calculations only.
- The existing structure is assumed to have been correctly designed and installed.
- The calculation assumes all structural members are in good condition i.e. no damage, rust, or other defects.

Design Calculations

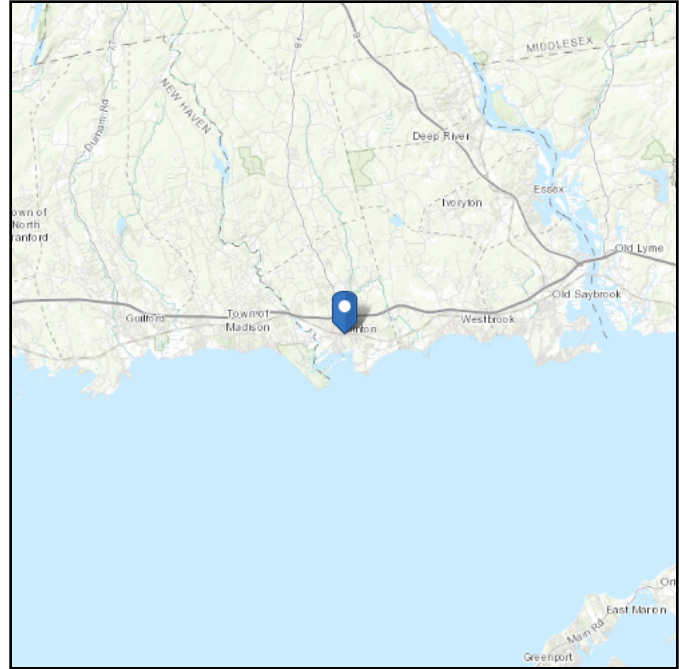
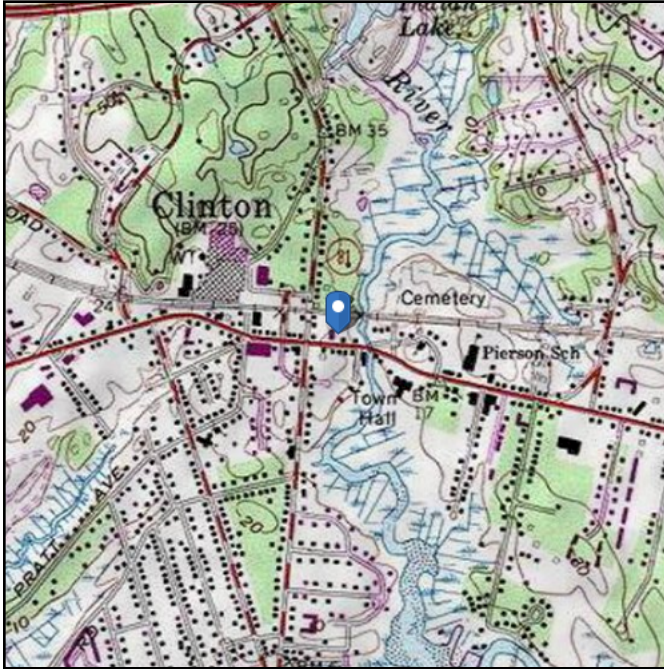


ASCE 7 Hazards Report

Address:
No Address at This
Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see
Section 11.4.3)

Elevation: 12.57 ft (NAVD 88)
Latitude: 41.278785
Longitude: -72.525901



Wind

Results:

Wind Speed:	124 Vmph
10-year MRI	75 Vmph
25-year MRI	85 Vmph
50-year MRI	95 Vmph
100-year MRI	101 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2

Date Accessed: Tue Oct 26 2021

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

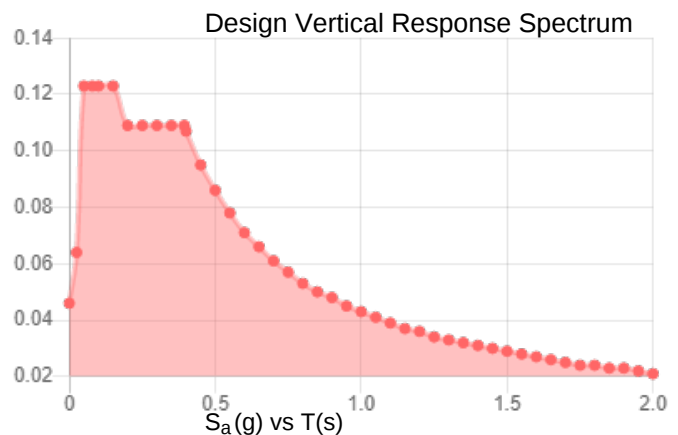
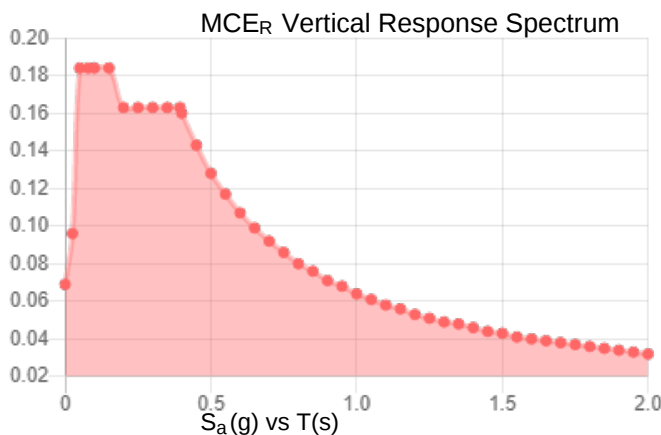
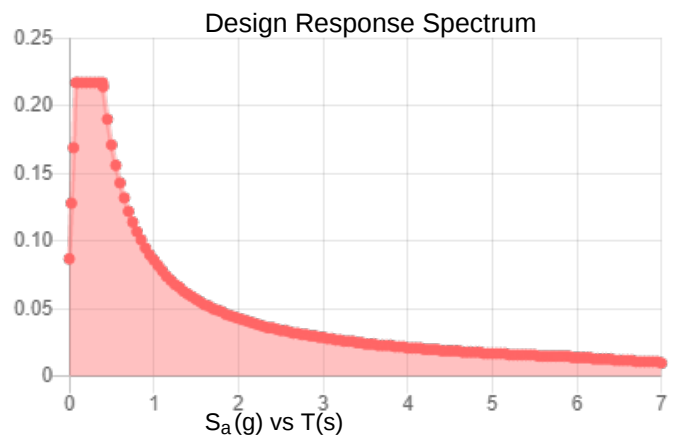
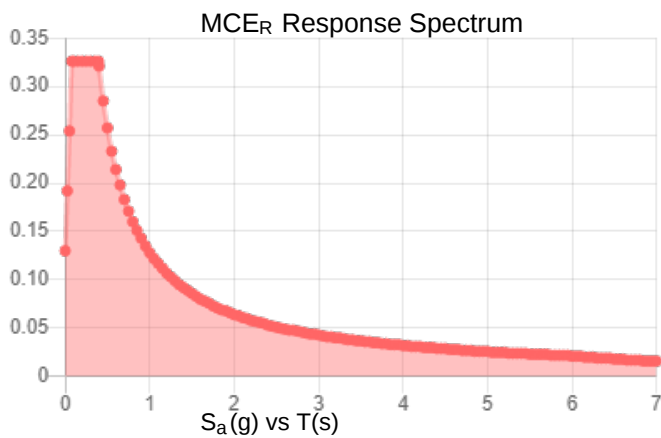
Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Site Soil Class: D - Default (see Section 11.4.3)

Results:

S_S :	0.204	S_{D1} :	0.086
S_1 :	0.053	T_L :	6
F_a :	1.6	PGA :	0.114
F_v :	2.4	PGA _M :	0.179
S_{MS} :	0.326	F_{PGA} :	1.573
S_{M1} :	0.128	I_e :	1
S_{DS} :	0.217	C_v :	0.707

Seismic Design Category B



Data Accessed:

Tue Oct 26 2021

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Results:

Ice Thickness: 1.00 in.
Concurrent Temperature: 15 F
Gust Speed: 50 mph

Data Source: Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8

Date Accessed: Tue Oct 26 2021

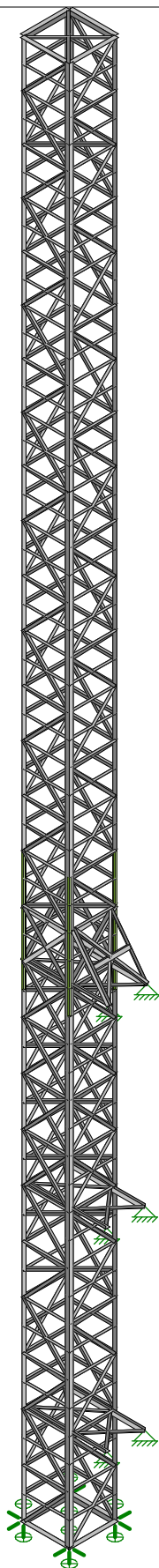
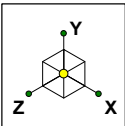
Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

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Envelope Only Solution

Centerline Communications	CT11031B	SK - 1
Arielle Novak		Oct 26, 2021 at 12:44 PM
L600		CT11031B.rt3

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E5 F)	Density[k/ft^3]	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A572-50	29000	11200	.295	.65	.49	50	1.1	58	1.2
2	A36	29000	11200	.295	.65	.49	36	1.5	58	1.2

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	TWR_LEG_T1	L2 1/2x2 1/2x1/4	Column	Single Angle	A572-50	Typical	1.19	.703	.703	.025
2	TWR_TOP_GIRT...	L2 1/2x2 1/2x1/4	Beam	Single Angle	A36	Typical	1.19	.703	.703	.025
3	TWR_DIAG_T1	L1 1/2x1 1/2x1/4	Column	Single Angle	A36	Typical	.688	.139	.139	.014
4	TWR_HORZ_T1	L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical	.688	.139	.139	.014
5	TWR_LEG_T2	L2 1/2x2 1/2x1/4	Column	Single Angle	A572-50	Typical	1.19	.703	.703	.025
6	TWR_HORZ_T2	L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical	.688	.139	.139	.014
7	TWR_DIAG_T2	L1 1/2x1 1/2x1/4	Column	Single Angle	A36	Typical	.688	.139	.139	.014
8	TWR_LEG_T3	L2 1/2x2 1/2x1/4	Column	Single Angle	A572-50	Typical	1.19	.703	.703	.025
9	TWR_HORZ_T3	L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical	.688	.139	.139	.014
10	TWR_BOT_GIRT...	L2 1/2x2 1/2x1/4	Beam	Single Angle	A36	Typical	1.19	.703	.703	.025
11	TWR_DIAG_T3	L1 1/2x1 1/2x1/4	Column	Single Angle	A36	Typical	.688	.139	.139	.014
12	L2X2X4	L2x2x4	Beam	Single Angle	A36	Typical	.944	.346	.346	.021
13	L2.5X1.5X4	L2.5x1.5x4	Beam	Single Angle	A36	Typical	.947	.16	.594	.021
14	L1 1/2x1 1/2x1/4	L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical	.688	.139	.139	.014
15	TWR_SEC_HORZ...	L1 1/2x1 1/2x1/4	Column	Single Angle	A36	Typical	.688	.139	.139	.014
16	TWR_SEC_HORZ...	L1 1/2x1 1/2x1/4	Column	Single Angle	A36	Typical	.688	.139	.139	.014
17	TWR_SEC_HORZ...	L1 1/2x1 1/2x1/4	Column	Single Angle	A36	Typical	.688	.139	.139	.014

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N69	max	.285	12	4.845	14	11.176	20	0	34	0	9	0	34
2		min	-11.475	20	-1.961	7	-.021	12	0	1	0	16	0	1
3	N70	max	11.175	25	5.373	14	11.521	19	0	34	0	7	0	34
4		min	-.016	4	-2.459	7	-.228	10	0	1	0	14	0	1
5	N71	max	11.513	26	5.214	14	.023	2	0	34	0	7	0	34
6		min	-.303	8	-2.336	7	-11.177	22	0	1	0	16	0	1
7	N72	max	.027	14	4.683	14	.06	10	0	34	0	9	0	34
8		min	-11.177	21	-1.84	7	-11.388	25	0	1	0	16	0	1
9	N121	max	1.21	11	.028	25	.293	10	0	34	0	34	0	34
10		min	-1.302	2	.002	9	-.94	19	0	1	0	1	0	1
11	N122	max	1.282	2	.019	24	.778	23	0	34	0	34	0	34
12		min	-1.198	11	-.001	5	-.345	2	0	1	0	1	0	1
13	N129	max	15.455	9	.06	23	6.191	11	0	34	0	34	0	34
14		min	-15.227	16	-.009	7	-6.451	2	0	1	0	1	0	1
15	N130	max	15.075	4	.054	19	6.05	11	0	34	0	34	0	34
16		min	-13.915	13	-.021	7	-6.467	2	0	1	0	1	0	1
17	N143	max	28.179	16	14.51	8	15.659	2	0	34	0	34	0	34
18		min	-28.698	9	-19.548	17	-6.341	9	0	1	0	1	0	1
19	N144	max	29.366	13	15.573	4	6.528	2	0	34	0	34	0	34
20		min	-31.392	4	-19.45	13	-14.911	11	0	1	0	1	0	1
21	Totals:	max	9.458	15	21.924	26	8.818	3						
22		min	-9.458	6	5.987	3	-8.522	10						

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N69	Reaction	Reaction	Reaction		Reaction	
2	N70	Reaction	Reaction	Reaction		Reaction	
3	N71	Reaction	Reaction	Reaction		Reaction	
4	N72	Reaction	Reaction	Reaction		Reaction	
5	N121	Reaction	Reaction	Reaction			
6	N122	Reaction	Reaction	Reaction			
7	N129	Reaction	Reaction	Reaction			
8	N130	Reaction	Reaction	Reaction			
9	N143	Reaction	Reaction	Reaction			
10	N144	Reaction	Reaction	Reaction			

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N1		180	TWR_LEG_T1	Column	Single Angle	A572-50	Typical
2	M2	N4	N3		270	TWR_LEG_T1	Column	Single Angle	A572-50	Typical
3	M3	N6	N5			TWR_LEG_T1	Column	Single Angle	A572-50	Typical
4	M4	N8	N7		90	TWR_LEG_T1	Column	Single Angle	A572-50	Typical
5	M5	N1	N3		90	TWR_TOP_GIR...	Beam	Single Angle	A36	Typical
6	M6	N3	N5		90	TWR_TOP_GIR...	Beam	Single Angle	A36	Typical
7	M7	N5	N7		90	TWR_TOP_GIR...	Beam	Single Angle	A36	Typical
8	M8	N7	N1		90	TWR_TOP_GIR...	Beam	Single Angle	A36	Typical
9	M9	N4	N9		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
10	M10	N6	N10		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
11	M11	N8	N11		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
12	M12	N2	N12		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
13	M13	N9	N10		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
14	M14	N10	N11		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
15	M15	N11	N12		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
16	M16	N12	N9		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
17	M17	N9	N13		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
18	M18	N10	N14		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
19	M19	N11	N15		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
20	M20	N12	N16		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
21	M21	N16	N13		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
22	M22	N13	N14		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
23	M23	N14	N15		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
24	M24	N15	N16		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
25	M25	N13	N17		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
26	M26	N14	N18		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
27	M27	N15	N19		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
28	M28	N16	N20		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
29	M29	N17	N18		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
30	M30	N18	N19		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
31	M31	N19	N20		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
32	M32	N20	N17		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
33	M33	N17	N21		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
34	M34	N18	N22		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
35	M35	N19	N23		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
36	M36	N20	N24		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
37	M37	N24	N21		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
38	M38	N21	N22		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
39	M39	N22	N23		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
40	M40	N23	N24		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
41	M41	N21	N25		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
42	M42	N22	N26		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
43	M43	N23	N27		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
44	M44	N24	N28		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
45	M45	N25	N26		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
46	M46	N26	N27		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
47	M47	N27	N28		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
48	M48	N28	N25		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
49	M49	N25	N29		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
50	M50	N26	N30		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
51	M51	N27	N31		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
52	M52	N28	N32		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
53	M53	N32	N29		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
54	M54	N29	N30		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
55	M55	N30	N31		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
56	M56	N31	N32		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
57	M57	N29	N33		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
58	M58	N30	N34		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
59	M59	N31	N35		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
60	M60	N32	N36		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
61	M61	N33	N34		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
62	M62	N34	N35		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
63	M63	N35	N36		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
64	M64	N36	N33		90	TWR_HORZ_T1	Beam	Single Angle	A36	Typical
65	M65	N33	N3		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
66	M66	N34	N5		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
67	M67	N35	N7		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
68	M68	N36	N1		90	TWR_DIAG_T1	Column	Single Angle	A36	Typical
69	M69	N37	N2		180	TWR_LEG_T2	Column	Single Angle	A572-50	Typical
70	M70	N38	N4		270	TWR_LEG_T2	Column	Single Angle	A572-50	Typical
71	M71	N39	N6			TWR_LEG_T2	Column	Single Angle	A572-50	Typical
72	M72	N40	N8		90	TWR_LEG_T2	Column	Single Angle	A572-50	Typical
73	M73	N2	N4		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
74	M74	N4	N6		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
75	M75	N6	N8		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
76	M76	N8	N2		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
77	M77	N38	N41		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
78	M78	N39	N42		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
79	M79	N40	N43		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
80	M80	N37	N44		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
81	M81	N41	N42		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
82	M82	N42	N43		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
83	M83	N43	N44		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
84	M84	N44	N41		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
85	M85	N41	N45		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
86	M86	N42	N46		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
87	M87	N43	N47		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
88	M88	N44	N48		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
89	M89	N48	N45		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
90	M90	N45	N46		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
91	M91	N46	N47		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
92	M92	N47	N48		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
93	M93	N45	N49		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
94	M94	N46	N50		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
95	M95	N47	N51		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
96	M96	N48	N52		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
97	M97	N49	N50		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
98	M98	N50	N51		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
99	M99	N51	N52		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
100	M100	N52	N49		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
101	M101	N49	N53		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
102	M102	N50	N54		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
103	M103	N51	N55		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
104	M104	N52	N56		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
105	M105	N56	N53		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
106	M106	N53	N54		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
107	M107	N54	N55		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
108	M108	N55	N56		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
109	M109	N53	N57		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
110	M110	N54	N58		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
111	M111	N55	N59		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
112	M112	N56	N60		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
113	M113	N57	N58		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
114	M114	N58	N59		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
115	M115	N59	N60		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
116	M116	N60	N57		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
117	M117	N57	N61		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
118	M118	N58	N62		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
119	M119	N59	N63		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
120	M120	N60	N64		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
121	M121	N64	N61		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
122	M122	N61	N62		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
123	M123	N62	N63		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
124	M124	N63	N64		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
125	M125	N61	N65		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
126	M126	N62	N66		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
127	M127	N63	N67		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
128	M128	N64	N68		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
129	M129	N65	N66		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
130	M130	N66	N67		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
131	M131	N67	N68		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
132	M132	N68	N65		90	TWR_HORZ_T2	Beam	Single Angle	A36	Typical
133	M133	N65	N4		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
134	M134	N66	N6		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
135	M135	N67	N8		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
136	M136	N68	N2		90	TWR_DIAG_T2	Column	Single Angle	A36	Typical
137	M137	N69	N37		180	TWR_LEG_T3	Column	Single Angle	A572-50	Typical
138	M138	N70	N38		270	TWR_LEG_T3	Column	Single Angle	A572-50	Typical
139	M139	N71	N39			TWR_LEG_T3	Column	Single Angle	A572-50	Typical
140	M140	N72	N40		90	TWR_LEG_T3	Column	Single Angle	A572-50	Typical
141	M141	N37	N38		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
142	M142	N38	N39		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
143	M143	N39	N40		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
144	M144	N40	N37		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
145	M145	N69	N70		90	TWR_BOT_GIR...	Beam	Single Angle	A36	Typical
146	M146	N70	N71		90	TWR_BOT_GIR...	Beam	Single Angle	A36	Typical
147	M147	N71	N72		90	TWR_BOT_GIR...	Beam	Single Angle	A36	Typical
148	M148	N72	N69		90	TWR_BOT_GIR...	Beam	Single Angle	A36	Typical
149	M149	N69	N73		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
150	M150	N70	N74		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
151	M151	N71	N75		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
152	M152	N72	N76		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
153	M153	N76	N73		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
154	M154	N73	N74		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
155	M155	N74	N75		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
156	M156	N75	N76		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
157	M157	N73	N77		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
158	M158	N74	N78		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
159	M159	N75	N79		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
160	M160	N76	N80		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
161	M161	N77	N78		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
162	M162	N78	N79		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
163	M163	N79	N80		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
164	M164	N80	N77		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
165	M165	N77	N81		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
166	M166	N78	N82		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
167	M167	N79	N83		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
168	M168	N80	N84		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
169	M169	N84	N81		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
170	M170	N81	N82		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
171	M171	N82	N83		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
172	M172	N83	N84		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
173	M173	N81	N85		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
174	M174	N82	N86		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
175	M175	N83	N87		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
176	M176	N84	N88		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
177	M177	N85	N86		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
178	M178	N86	N87		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
179	M179	N87	N88		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
180	M180	N88	N85		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
181	M181	N85	N89		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
182	M182	N86	N90		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
183	M183	N87	N91		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
184	M184	N88	N92		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
185	M185	N92	N89		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
186	M186	N89	N90		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
187	M187	N90	N91		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
188	M188	N91	N92		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
189	M189	N89	N93		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
190	M190	N90	N94		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
191	M191	N91	N95		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
192	M192	N92	N96		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
193	M193	N93	N94		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
194	M194	N94	N95		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
195	M195	N95	N96		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
196	M196	N96	N93		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
197	M197	N93	N97		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
198	M198	N94	N98		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
199	M199	N95	N99		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
200	M200	N96	N100		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
201	M201	N100	N97		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
202	M202	N97	N98		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
203	M203	N98	N99		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
204	M204	N99	N100		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
205	M205	N97	N101		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
206	M206	N98	N102		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
207	M207	N99	N103		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
208	M208	N100	N104		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
209	M209	N101	N102		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
210	M210	N102	N103		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
211	M211	N103	N104		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
212	M212	N104	N101		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
213	M213	N101	N105		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
214	M214	N102	N106		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
215	M215	N103	N107		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
216	M216	N104	N108		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
217	M217	N108	N105		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
218	M218	N105	N106		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
219	M219	N106	N107		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
220	M220	N107	N108		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
221	M221	N105	N109		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
222	M222	N106	N110		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
223	M223	N107	N111		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
224	M224	N108	N112		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
225	M225	N109	N110		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
226	M226	N110	N111		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
227	M227	N111	N112		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
228	M228	N112	N109		90	TWR_HORZ_T3	Beam	Single Angle	A36	Typical
229	M229	N109	N38		180	L2X2X4	Beam	Single Angle	A36	Typical
230	M230	N110	N39		180	L2X2X4	Beam	Single Angle	A36	Typical
231	M231	N111	N40		180	L2X2X4	Beam	Single Angle	A36	Typical
232	M232	N112	N37		180	L2X2X4	Beam	Single Angle	A36	Typical
233	M233	N113	N121		270	L2.5X1.5X4	Beam	Single Angle	A36	Typical
234	M234	N122	N116		270	L2.5X1.5X4	Beam	Single Angle	A36	Typical
235	M235	N113	N115		90	L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
236	M236	N116	N114			L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
237	M237	N114	N122		90	L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
238	M238	N115	N121			L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
239	M240	N130	N124		270	L2.5X1.5X4	Beam	Single Angle	A36	Typical
240	M241	N123	N132		90	L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
241	M242	N124	N131			L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
242	M243	N131	N130		90	L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
243	M244	N132	N129			L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
244	M245	N133	N143		270	L2.5X1.5X4	Beam	Single Angle	A36	Typical
245	M246	N144	N134		270	L2.5X1.5X4	Beam	Single Angle	A36	Typical
246	M247	N133	N142		90	L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
247	M248	N134	N141			L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
248	M249	N141	N144		90	L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
249	M250	N142	N143			L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
250	M251	N145	N143		180	L2.5X1.5X4	Beam	Single Angle	A36	Typical
251	M252	N144	N146		180	L2.5X1.5X4	Beam	Single Angle	A36	Typical
252	M253	N38	N40			L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
253	M254	N39	N37		90	L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
254	M255	N146	N143		65	L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
255	M257	N147	N148		150	L2X2X4	Beam	Single Angle	A36	Typical
256	M258	N1	N5		90	L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
257	M259	N7	N3			L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
258	M260	N29	N31			L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
259	M261	N30	N32		90	L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
260	M262	N152	N149		90	TWR_SEC_HOR..	Column	Single Angle	A36	Typical
261	M263	N149	N150		90	TWR_SEC_HOR..	Column	Single Angle	A36	Typical
262	M264	N150	N151		90	TWR_SEC_HOR..	Column	Single Angle	A36	Typical
263	M265	N151	N152		90	TWR_SEC_HOR..	Column	Single Angle	A36	Typical
264	M266	N156	N153		90	TWR_SEC_HOR..	Column	Single Angle	A36	Typical
265	M267	N153	N154		90	TWR_SEC_HOR..	Column	Single Angle	A36	Typical
266	M268	N154	N155		90	TWR_SEC_HOR..	Column	Single Angle	A36	Typical
267	M269	N155	N156		90	TWR_SEC_HOR..	Column	Single Angle	A36	Typical
268	M270	N160	N157		90	TWR_SEC_HOR..	Column	Single Angle	A36	Typical
269	M271	N157	N158		90	TWR_SEC_HOR..	Column	Single Angle	A36	Typical
270	M272	N158	N159		90	TWR_SEC_HOR..	Column	Single Angle	A36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
271	M273	N159	N160		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
272	M274	N164	N161		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
273	M275	N161	N162		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
274	M276	N162	N163		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
275	M277	N163	N164		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
276	M278	N168	N165		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
277	M279	N165	N166		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
278	M280	N166	N167		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
279	M281	N167	N168		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
280	M282	N172	N169		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
281	M283	N169	N170		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
282	M284	N170	N171		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
283	M285	N171	N172		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
284	M286	N176	N173		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
285	M287	N173	N174		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
286	M288	N174	N175		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
287	M289	N175	N176		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
288	M290	N180	N177		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
289	M291	N177	N178		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
290	M292	N178	N179		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
291	M293	N179	N180		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
292	M294	N184	N181		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
293	M295	N181	N182		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
294	M296	N182	N183		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
295	M297	N183	N184		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
296	M298	N188	N185		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
297	M299	N185	N186		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
298	M300	N186	N187		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
299	M301	N187	N188		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
300	M302	N192	N189		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
301	M303	N189	N190		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
302	M304	N190	N191		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
303	M305	N191	N192		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
304	M306	N193	N194		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
305	M307	N194	N195		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
306	M308	N195	N196		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
307	M309	N196	N197		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
308	M310	N197	N198		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
309	M311	N198	N199		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
310	M312	N199	N200		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
311	M313	N200	N197		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
312	M314	N201	N202		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
313	M315	N202	N203		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
314	M316	N203	N204		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
315	M317	N204	N201		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
316	M318	N205	N206		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
317	M319	N206	N207		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
318	M320	N207	N208		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
319	M321	N208	N205		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
320	M322	N209	N210		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
321	M323	N210	N211		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
322	M324	N211	N212		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
323	M325	N212	N209		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
324	M326	N213	N214		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
325	M327	N214	N215		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
326	M328	N215	N216		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
327	M329	N216	N213		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
328	M330	N217	N218		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
329	M331	N218	N219		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
330	M332	N219	N220		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
331	M333	N220	N217		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
332	M334	N221	N222		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
333	M335	N222	N223		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
334	M336	N223	N224		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
335	M337	N224	N221		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
336	M338	N225	N226		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
337	M339	N226	N227		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
338	M340	N227	N228		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
339	M341	N228	N225		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
340	M342	N229	N230		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
341	M343	N230	N231		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
342	M344	N232	N229		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
343	M346	N233	N234		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
344	M347	N234	N235		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
345	M348	N235	N236		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
346	M349	N236	N233		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
347	M350	N237	N238		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
348	M351	N239	N240		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
349	M352	N240	N237		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
350	M353	N241	N242		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
351	M354	N242	N243		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
352	M355	N243	N244		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
353	M356	N244	N241		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
354	M357	N245	N246		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
355	M358	N246	N247		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
356	M359	N247	N248		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
357	M360	N248	N245		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
358	M361	N249	N250		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
359	M362	N250	N251		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
360	M363	N251	N252		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
361	M364	N252	N249		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
362	M365	N253	N254		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
363	M366	N254	N255		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
364	M367	N255	N256		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
365	M368	N256	N253		90	TWR_SEC_HOR...	Column	Single Angle	A36	Typical
366	M239	N123	N129		270	L2.5X1.5X4	Beam	Single Angle	A36	Typical
367	M256	N145	N144			L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
368	M368A	N96	N98		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
369	M369	N94	N100		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
370	M370	N98	N104		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
371	M371	N100	N102		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
372	M372	N104	N106		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
373	M373	N102	N108		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
374	M374	N106	N112		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
375	M375	N108	N110		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
376	M376	N93	N99		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
377	M377	N95	N97		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
378	M378	N99	N101		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
379	M379	N97	N103		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
380	M380	N101	N107		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
381	M381	N103	N105		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
382	M382	N107	N109		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
383	M383	N105	N111		90	TWR_DIAG_T3	Column	Single Angle	A36	Typical
384	M386	N110	N37		180	L2X2X4	Beam	Single Angle	A36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
385	M387	N112	N39		180	L2X2X4	Beam	Single Angle	A36	Typical
386	M386A	N109	N40		180	L2X2X4	Beam	Single Angle	A36	Typical
387	M387A	N111	N38		180	L2X2X4	Beam	Single Angle	A36	Typical
388	M388	N196	N193			L1 1/2x1 1/2x1/4	Beam	Single Angle	A36	Typical
389	M389	N185	N42			RIGID	None	None	RIGID	DR1
390	M390	N186	N43			RIGID	None	None	RIGID	DR1
391	M391	N44	N188			RIGID	None	None	RIGID	DR1
392	M392	N41	N187			RIGID	None	None	RIGID	DR1

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ra...	Analysis Offs...	Inactive	Seismi...
1	M1						Yes	** NA **			None
2	M2						Yes	** NA **			None
3	M3						Yes	** NA **			None
4	M4						Yes	** NA **			None
5	M5	BenPIN	BenPIN				Yes				None
6	M6	BenPIN	BenPIN				Yes				None
7	M7	BenPIN	BenPIN				Yes				None
8	M8	BenPIN	BenPIN				Yes				None
9	M9	BenPIN	BenPIN				Yes	** NA **			None
10	M10	BenPIN	BenPIN				Yes	** NA **			None
11	M11	BenPIN	BenPIN				Yes	** NA **			None
12	M12	BenPIN	BenPIN				Yes	** NA **			None
13	M13	BenPIN	BenPIN				Yes				None
14	M14	BenPIN	BenPIN				Yes				None
15	M15	BenPIN	BenPIN				Yes				None
16	M16	BenPIN	BenPIN				Yes				None
17	M17	BenPIN	BenPIN				Yes	** NA **			None
18	M18	BenPIN	BenPIN				Yes	** NA **			None
19	M19	BenPIN	BenPIN				Yes	** NA **			None
20	M20	BenPIN	BenPIN				Yes	** NA **			None
21	M21	BenPIN	BenPIN				Yes				None
22	M22	BenPIN	BenPIN				Yes				None
23	M23	BenPIN	BenPIN				Yes				None
24	M24	BenPIN	BenPIN				Yes				None
25	M25	BenPIN	BenPIN				Yes	** NA **			None
26	M26	BenPIN	BenPIN				Yes	** NA **			None
27	M27	BenPIN	BenPIN				Yes	** NA **			None
28	M28	BenPIN	BenPIN				Yes	** NA **			None
29	M29	BenPIN	BenPIN				Yes				None
30	M30	BenPIN	BenPIN				Yes				None
31	M31	BenPIN	BenPIN				Yes				None
32	M32	BenPIN	BenPIN				Yes				None
33	M33	BenPIN	BenPIN				Yes	** NA **			None
34	M34	BenPIN	BenPIN				Yes	** NA **			None
35	M35	BenPIN	BenPIN				Yes	** NA **			None
36	M36	BenPIN	BenPIN				Yes	** NA **			None
37	M37	BenPIN	BenPIN				Yes				None
38	M38	BenPIN	BenPIN				Yes				None
39	M39	BenPIN	BenPIN				Yes				None
40	M40	BenPIN	BenPIN				Yes				None
41	M41	BenPIN	BenPIN				Yes	** NA **			None
42	M42	BenPIN	BenPIN				Yes	** NA **			None
43	M43	BenPIN	BenPIN				Yes	** NA **			None
44	M44	BenPIN	BenPIN				Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ra...	Analysis Offs...	Inactive	Seismi...
45	M45	BenPIN	BenPIN				Yes				None
46	M46	BenPIN	BenPIN				Yes				None
47	M47	BenPIN	BenPIN				Yes				None
48	M48	BenPIN	BenPIN				Yes				None
49	M49	BenPIN	BenPIN				Yes	** NA **			None
50	M50	BenPIN	BenPIN				Yes	** NA **			None
51	M51	BenPIN	BenPIN				Yes	** NA **			None
52	M52	BenPIN	BenPIN				Yes	** NA **			None
53	M53	BenPIN	BenPIN				Yes				None
54	M54	BenPIN	BenPIN				Yes				None
55	M55	BenPIN	BenPIN				Yes				None
56	M56	BenPIN	BenPIN				Yes				None
57	M57	BenPIN	BenPIN				Yes	** NA **			None
58	M58	BenPIN	BenPIN				Yes	** NA **			None
59	M59	BenPIN	BenPIN				Yes	** NA **			None
60	M60	BenPIN	BenPIN				Yes	** NA **			None
61	M61	BenPIN	BenPIN				Yes				None
62	M62	BenPIN	BenPIN				Yes				None
63	M63	BenPIN	BenPIN				Yes				None
64	M64	BenPIN	BenPIN				Yes				None
65	M65	BenPIN	BenPIN				Yes	** NA **			None
66	M66	BenPIN	BenPIN				Yes	** NA **			None
67	M67	BenPIN	BenPIN				Yes	** NA **			None
68	M68	BenPIN	BenPIN				Yes	** NA **			None
69	M69						Yes	** NA **			None
70	M70						Yes	** NA **			None
71	M71						Yes	** NA **			None
72	M72						Yes	** NA **			None
73	M73	BenPIN	BenPIN				Yes				None
74	M74	BenPIN	BenPIN				Yes				None
75	M75	BenPIN	BenPIN				Yes				None
76	M76	BenPIN	BenPIN				Yes				None
77	M77	BenPIN	BenPIN				Yes	** NA **			None
78	M78	BenPIN	BenPIN				Yes	** NA **			None
79	M79	BenPIN	BenPIN				Yes	** NA **			None
80	M80	BenPIN	BenPIN				Yes	** NA **			None
81	M81	BenPIN	BenPIN				Yes				None
82	M82	BenPIN	BenPIN				Yes				None
83	M83	BenPIN	BenPIN				Yes				None
84	M84	BenPIN	BenPIN				Yes				None
85	M85	BenPIN	BenPIN				Yes	** NA **			None
86	M86	BenPIN	BenPIN				Yes	** NA **			None
87	M87	BenPIN	BenPIN				Yes	** NA **			None
88	M88	BenPIN	BenPIN				Yes	** NA **			None
89	M89	BenPIN	BenPIN				Yes				None
90	M90	BenPIN	BenPIN				Yes				None
91	M91	BenPIN	BenPIN				Yes				None
92	M92	BenPIN	BenPIN				Yes				None
93	M93	BenPIN	BenPIN				Yes	** NA **			None
94	M94	BenPIN	BenPIN				Yes	** NA **			None
95	M95	BenPIN	BenPIN				Yes	** NA **			None
96	M96	BenPIN	BenPIN				Yes	** NA **			None
97	M97	BenPIN	BenPIN				Yes				None
98	M98	BenPIN	BenPIN				Yes				None
99	M99	BenPIN	BenPIN				Yes				None
100	M100	BenPIN	BenPIN				Yes				None
101	M101	BenPIN	BenPIN				Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ra...	Analysis Offs...	Inactive	Seismi...
102	M102	BenPIN	BenPIN				Yes	** NA **			None
103	M103	BenPIN	BenPIN				Yes	** NA **			None
104	M104	BenPIN	BenPIN				Yes	** NA **			None
105	M105	BenPIN	BenPIN				Yes				None
106	M106	BenPIN	BenPIN				Yes				None
107	M107	BenPIN	BenPIN				Yes				None
108	M108	BenPIN	BenPIN				Yes				None
109	M109	BenPIN	BenPIN				Yes	** NA **			None
110	M110	BenPIN	BenPIN				Yes	** NA **			None
111	M111	BenPIN	BenPIN				Yes	** NA **			None
112	M112	BenPIN	BenPIN				Yes	** NA **			None
113	M113	BenPIN	BenPIN				Yes				None
114	M114	BenPIN	BenPIN				Yes				None
115	M115	BenPIN	BenPIN				Yes				None
116	M116	BenPIN	BenPIN				Yes				None
117	M117	BenPIN	BenPIN				Yes	** NA **			None
118	M118	BenPIN	BenPIN				Yes	** NA **			None
119	M119	BenPIN	BenPIN				Yes	** NA **			None
120	M120	BenPIN	BenPIN				Yes	** NA **			None
121	M121	BenPIN	BenPIN				Yes				None
122	M122	BenPIN	BenPIN				Yes				None
123	M123	BenPIN	BenPIN				Yes				None
124	M124	BenPIN	BenPIN				Yes				None
125	M125	BenPIN	BenPIN				Yes	** NA **			None
126	M126	BenPIN	BenPIN				Yes	** NA **			None
127	M127	BenPIN	BenPIN				Yes	** NA **			None
128	M128	BenPIN	BenPIN				Yes	** NA **			None
129	M129	BenPIN	BenPIN				Yes				None
130	M130	BenPIN	BenPIN				Yes				None
131	M131	BenPIN	BenPIN				Yes				None
132	M132	BenPIN	BenPIN				Yes				None
133	M133	BenPIN	BenPIN				Yes	** NA **			None
134	M134	BenPIN	BenPIN				Yes	** NA **			None
135	M135	BenPIN	BenPIN				Yes	** NA **			None
136	M136	BenPIN	BenPIN				Yes	** NA **			None
137	M137						Yes	** NA **			None
138	M138						Yes	** NA **			None
139	M139						Yes	** NA **			None
140	M140						Yes	** NA **			None
141	M141	BenPIN	BenPIN				Yes				None
142	M142	BenPIN	BenPIN				Yes				None
143	M143	BenPIN	BenPIN				Yes				None
144	M144	BenPIN	BenPIN				Yes				None
145	M145	BenPIN	BenPIN				Yes				None
146	M146	BenPIN	BenPIN				Yes				None
147	M147	BenPIN	BenPIN				Yes				None
148	M148	BenPIN	BenPIN				Yes				None
149	M149	BenPIN	BenPIN				Yes	** NA **			None
150	M150	BenPIN	BenPIN				Yes	** NA **			None
151	M151	BenPIN	BenPIN				Yes	** NA **			None
152	M152	BenPIN	BenPIN				Yes	** NA **			None
153	M153	BenPIN	BenPIN				Yes				None
154	M154	BenPIN	BenPIN				Yes				None
155	M155	BenPIN	BenPIN				Yes				None
156	M156	BenPIN	BenPIN				Yes				None
157	M157	BenPIN	BenPIN				Yes	** NA **			None
158	M158	BenPIN	BenPIN				Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ra...	Analysis Offs...	Inactive	Seismi...
159	M159	BenPIN	BenPIN				Yes	** NA **			None
160	M160	BenPIN	BenPIN				Yes	** NA **			None
161	M161	BenPIN	BenPIN				Yes				None
162	M162	BenPIN	BenPIN				Yes				None
163	M163	BenPIN	BenPIN				Yes				None
164	M164	BenPIN	BenPIN				Yes				None
165	M165	BenPIN	BenPIN				Yes	** NA **			None
166	M166	BenPIN	BenPIN				Yes	** NA **			None
167	M167	BenPIN	BenPIN				Yes	** NA **			None
168	M168	BenPIN	BenPIN				Yes	** NA **			None
169	M169	BenPIN	BenPIN				Yes				None
170	M170	BenPIN	BenPIN				Yes				None
171	M171	BenPIN	BenPIN				Yes				None
172	M172	BenPIN	BenPIN				Yes				None
173	M173	BenPIN	BenPIN				Yes	** NA **			None
174	M174	BenPIN	BenPIN				Yes	** NA **			None
175	M175	BenPIN	BenPIN				Yes	** NA **			None
176	M176	BenPIN	BenPIN				Yes	** NA **			None
177	M177	BenPIN	BenPIN				Yes				None
178	M178	BenPIN	BenPIN				Yes				None
179	M179	BenPIN	BenPIN				Yes				None
180	M180	BenPIN	BenPIN				Yes				None
181	M181	BenPIN	BenPIN				Yes	** NA **			None
182	M182	BenPIN	BenPIN				Yes	** NA **			None
183	M183	BenPIN	BenPIN				Yes	** NA **			None
184	M184	BenPIN	BenPIN				Yes	** NA **			None
185	M185	BenPIN	BenPIN				Yes				None
186	M186	BenPIN	BenPIN				Yes				None
187	M187	BenPIN	BenPIN				Yes				None
188	M188	BenPIN	BenPIN				Yes				None
189	M189	BenPIN	BenPIN				Yes	** NA **			None
190	M190	BenPIN	BenPIN				Yes	** NA **			None
191	M191	BenPIN	BenPIN				Yes	** NA **			None
192	M192	BenPIN	BenPIN				Yes	** NA **			None
193	M193	BenPIN	BenPIN				Yes				None
194	M194	BenPIN	BenPIN				Yes				None
195	M195	BenPIN	BenPIN				Yes				None
196	M196	BenPIN	BenPIN				Yes				None
197	M197	BenPIN	BenPIN				Yes	** NA **			None
198	M198	BenPIN	BenPIN				Yes	** NA **			None
199	M199	BenPIN	BenPIN				Yes	** NA **			None
200	M200	BenPIN	BenPIN				Yes	** NA **			None
201	M201	BenPIN	BenPIN				Yes				None
202	M202	BenPIN	BenPIN				Yes				None
203	M203	BenPIN	BenPIN				Yes				None
204	M204	BenPIN	BenPIN				Yes				None
205	M205	BenPIN	BenPIN				Yes	** NA **			None
206	M206	BenPIN	BenPIN				Yes	** NA **			None
207	M207	BenPIN	BenPIN				Yes	** NA **			None
208	M208	BenPIN	BenPIN				Yes	** NA **			None
209	M209	BenPIN	BenPIN				Yes				None
210	M210	BenPIN	BenPIN				Yes				None
211	M211	BenPIN	BenPIN				Yes				None
212	M212	BenPIN	BenPIN				Yes				None
213	M213	BenPIN	BenPIN				Yes	** NA **			None
214	M214	BenPIN	BenPIN				Yes	** NA **			None
215	M215	BenPIN	BenPIN				Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ra...	Analysis Offs...	Inactive	Seismi...
216	M216	BenPIN	BenPIN				Yes	** NA **			None
217	M217	BenPIN	BenPIN				Yes				None
218	M218	BenPIN	BenPIN				Yes				None
219	M219	BenPIN	BenPIN				Yes				None
220	M220	BenPIN	BenPIN				Yes				None
221	M221	BenPIN	BenPIN				Yes	** NA **			None
222	M222	BenPIN	BenPIN				Yes	** NA **			None
223	M223	BenPIN	BenPIN				Yes	** NA **			None
224	M224	BenPIN	BenPIN				Yes	** NA **			None
225	M225	BenPIN	BenPIN				Yes				None
226	M226	BenPIN	BenPIN				Yes				None
227	M227	BenPIN	BenPIN				Yes				None
228	M228	BenPIN	BenPIN				Yes				None
229	M229	BenPIN	BenPIN				Yes				None
230	M230	BenPIN	BenPIN				Yes	Default			None
231	M231	BenPIN	BenPIN				Yes				None
232	M232	BenPIN	BenPIN				Yes				None
233	M233						Yes	Default			None
234	M234						Yes	Default			None
235	M235	BenPIN	BenPIN				Yes				None
236	M236	BenPIN	BenPIN				Yes				None
237	M237						Yes	Default			None
238	M238						Yes	Default			None
239	M240						Yes	Default			None
240	M241	BenPIN	BenPIN				Yes				None
241	M242	BenPIN	BenPIN				Yes				None
242	M243						Yes	Default			None
243	M244						Yes	Default			None
244	M245						Yes	Default			None
245	M246						Yes	Default			None
246	M247	BenPIN	BenPIN				Yes				None
247	M248	BenPIN	BenPIN				Yes				None
248	M249						Yes	Default			None
249	M250						Yes	Default			None
250	M251					Euler Buckling	Yes	Default			None
251	M252					Euler Buckling	Yes	Default			None
252	M253	BenPIN	BenPIN				Yes				None
253	M254	BenPIN	BenPIN				Yes				None
254	M255					Euler Buckling	Yes	Default			None
255	M257						Yes	Default			None
256	M258	BenPIN	BenPIN				Yes				None
257	M259	BenPIN	BenPIN				Yes				None
258	M260	BenPIN	BenPIN				Yes				None
259	M261	BenPIN	BenPIN				Yes				None
260	M262	BenPIN	BenPIN				Yes	** NA **			None
261	M263	BenPIN	BenPIN				Yes	** NA **			None
262	M264	BenPIN	BenPIN				Yes	** NA **			None
263	M265	BenPIN	BenPIN				Yes	** NA **			None
264	M266	BenPIN	BenPIN				Yes	** NA **			None
265	M267	BenPIN	BenPIN				Yes	** NA **			None
266	M268	BenPIN	BenPIN				Yes	** NA **			None
267	M269	BenPIN	BenPIN				Yes	** NA **			None
268	M270	BenPIN	BenPIN				Yes	** NA **			None
269	M271	BenPIN	BenPIN				Yes	** NA **			None
270	M272	BenPIN	BenPIN				Yes	** NA **			None
271	M273	BenPIN	BenPIN				Yes	** NA **			None
272	M274	BenPIN	BenPIN				Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ra...	Analysis Offs...	Inactive	Seismi...
273	M275	BenPIN	BenPIN				Yes	** NA **			None
274	M276	BenPIN	BenPIN				Yes	** NA **			None
275	M277	BenPIN	BenPIN				Yes	** NA **			None
276	M278	BenPIN	BenPIN				Yes	** NA **			None
277	M279	BenPIN	BenPIN				Yes	** NA **			None
278	M280	BenPIN	BenPIN				Yes	** NA **			None
279	M281	BenPIN	BenPIN				Yes	** NA **			None
280	M282	BenPIN	BenPIN				Yes	** NA **			None
281	M283	BenPIN	BenPIN				Yes	** NA **			None
282	M284	BenPIN	BenPIN				Yes	** NA **			None
283	M285	BenPIN	BenPIN				Yes	** NA **			None
284	M286	BenPIN	BenPIN				Yes	** NA **			None
285	M287	BenPIN	BenPIN				Yes	** NA **			None
286	M288	BenPIN	BenPIN				Yes	** NA **			None
287	M289	BenPIN	BenPIN				Yes	** NA **			None
288	M290	BenPIN	BenPIN				Yes	** NA **			None
289	M291	BenPIN	BenPIN				Yes	** NA **			None
290	M292	BenPIN	BenPIN				Yes	** NA **			None
291	M293	BenPIN	BenPIN				Yes	** NA **			None
292	M294	BenPIN	BenPIN				Yes	** NA **			None
293	M295	BenPIN	BenPIN				Yes	** NA **			None
294	M296	BenPIN	BenPIN				Yes	** NA **			None
295	M297	BenPIN	BenPIN				Yes	** NA **			None
296	M298	BenPIN	BenPIN				Yes	** NA **			None
297	M299	BenPIN	BenPIN				Yes	** NA **			None
298	M300	BenPIN	BenPIN				Yes	** NA **			None
299	M301	BenPIN	BenPIN				Yes	** NA **			None
300	M302	BenPIN	BenPIN				Yes	** NA **			None
301	M303	BenPIN	BenPIN				Yes	** NA **			None
302	M304	BenPIN	BenPIN				Yes	** NA **			None
303	M305	BenPIN	BenPIN				Yes	** NA **			None
304	M306	BenPIN	BenPIN				Yes	** NA **			None
305	M307	BenPIN	BenPIN				Yes	** NA **			None
306	M308	BenPIN	BenPIN				Yes	** NA **			None
307	M309	BenPIN	BenPIN				Yes	** NA **			None
308	M310	BenPIN	BenPIN				Yes	** NA **			None
309	M311	BenPIN	BenPIN				Yes	** NA **			None
310	M312	BenPIN	BenPIN				Yes	** NA **			None
311	M313	BenPIN	BenPIN				Yes	** NA **			None
312	M314	BenPIN	BenPIN				Yes	** NA **			None
313	M315	BenPIN	BenPIN				Yes	** NA **			None
314	M316	BenPIN	BenPIN				Yes	** NA **			None
315	M317	BenPIN	BenPIN				Yes	** NA **			None
316	M318	BenPIN	BenPIN				Yes	** NA **			None
317	M319	BenPIN	BenPIN				Yes	** NA **			None
318	M320	BenPIN	BenPIN				Yes	** NA **			None
319	M321	BenPIN	BenPIN				Yes	** NA **			None
320	M322	BenPIN	BenPIN				Yes	** NA **			None
321	M323	BenPIN	BenPIN				Yes	** NA **			None
322	M324	BenPIN	BenPIN				Yes	** NA **			None
323	M325	BenPIN	BenPIN				Yes	** NA **			None
324	M326	BenPIN	BenPIN				Yes	** NA **			None
325	M327	BenPIN	BenPIN				Yes	** NA **			None
326	M328	BenPIN	BenPIN				Yes	** NA **			None
327	M329	BenPIN	BenPIN				Yes	** NA **			None
328	M330	BenPIN	BenPIN				Yes	** NA **			None
329	M331	BenPIN	BenPIN				Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ra...	Analysis Offs...	Inactive	Seismi...
330	M332	BenPIN	BenPIN				Yes	** NA **			None
331	M333	BenPIN	BenPIN				Yes	** NA **			None
332	M334	BenPIN	BenPIN				Yes	** NA **			None
333	M335	BenPIN	BenPIN				Yes	** NA **			None
334	M336	BenPIN	BenPIN				Yes	** NA **			None
335	M337	BenPIN	BenPIN				Yes	** NA **			None
336	M338	BenPIN	BenPIN				Yes	** NA **			None
337	M339	BenPIN	BenPIN				Yes	** NA **			None
338	M340	BenPIN	BenPIN				Yes	** NA **			None
339	M341	BenPIN	BenPIN				Yes	** NA **			None
340	M342	BenPIN	BenPIN				Yes	** NA **			None
341	M343	BenPIN	BenPIN				Yes	** NA **			None
342	M344	BenPIN	BenPIN				Yes	** NA **			None
343	M346	BenPIN	BenPIN				Yes	** NA **			None
344	M347	BenPIN	BenPIN				Yes	** NA **			None
345	M348	BenPIN	BenPIN				Yes	** NA **			None
346	M349	BenPIN	BenPIN				Yes	** NA **			None
347	M350	BenPIN	BenPIN				Yes	** NA **			None
348	M351	BenPIN	BenPIN				Yes	** NA **			None
349	M352	BenPIN	BenPIN				Yes	** NA **			None
350	M353	BenPIN	BenPIN				Yes	** NA **			None
351	M354	BenPIN	BenPIN				Yes	** NA **			None
352	M355	BenPIN	BenPIN				Yes	** NA **			None
353	M356	BenPIN	BenPIN				Yes	** NA **			None
354	M357	BenPIN	BenPIN				Yes	** NA **			None
355	M358	BenPIN	BenPIN				Yes	** NA **			None
356	M359	BenPIN	BenPIN				Yes	** NA **			None
357	M360	BenPIN	BenPIN				Yes	** NA **			None
358	M361	BenPIN	BenPIN				Yes	** NA **			None
359	M362	BenPIN	BenPIN				Yes	** NA **			None
360	M363	BenPIN	BenPIN				Yes	** NA **			None
361	M364	BenPIN	BenPIN				Yes	** NA **			None
362	M365	BenPIN	BenPIN				Yes	** NA **			None
363	M366	BenPIN	BenPIN				Yes	** NA **			None
364	M367	BenPIN	BenPIN				Yes	** NA **			None
365	M368	BenPIN	BenPIN				Yes	** NA **			None
366	M239						Yes	Default			None
367	M256					Euler Buckling	Yes	Default			None
368	M368A	BenPIN	BenPIN				Yes	** NA **			None
369	M369	BenPIN	BenPIN				Yes	** NA **			None
370	M370	BenPIN	BenPIN				Yes	** NA **			None
371	M371	BenPIN	BenPIN				Yes	** NA **			None
372	M372	BenPIN	BenPIN				Yes	** NA **			None
373	M373	BenPIN	BenPIN				Yes	** NA **			None
374	M374	BenPIN	BenPIN				Yes	** NA **			None
375	M375	BenPIN	BenPIN				Yes	** NA **			None
376	M376	BenPIN	BenPIN				Yes	** NA **			None
377	M377	BenPIN	BenPIN				Yes	** NA **			None
378	M378	BenPIN	BenPIN				Yes	** NA **			None
379	M379	BenPIN	BenPIN				Yes	** NA **			None
380	M380	BenPIN	BenPIN				Yes	** NA **			None
381	M381	BenPIN	BenPIN				Yes	** NA **			None
382	M382	BenPIN	BenPIN				Yes	** NA **			None
383	M383	BenPIN	BenPIN				Yes	** NA **			None
384	M386	BenPIN	BenPIN				Yes				None
385	M387	BenPIN	BenPIN				Yes				None
386	M386A	BenPIN	BenPIN				Yes	Default			None

Member Advanced Data (Continued)

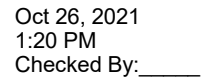
	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ra...	Analysis Offs...	Inactive	Seismi...
387	M387A	BenPIN	BenPIN				Yes				None
388	M388						Yes				None
389	M389						Yes	** NA **			None
390	M390						Yes	** NA **			None
391	M391						Yes	** NA **			None
392	M392						Yes	** NA **			None

Basic Load Cases

	BLC Description	Category	X Grav...	Y Grav...	Z Grav...	Joint	Point	Distrib...	Area(M...	Surfac...
1	Dead	DL		-1		120	152	12		
2	No Ice Wind 0 d...	WLX				120	336	36		
3	No Ice Wind 45 ...	None				240	320	48		
4	No Ice Wind 90 ...	WLZ				120	336	36		
5	No Ice Wind 13...	None				240	320	48		
6	No Ice Wind 18...	None				120	336	36		
7	No Ice Wind 22...	None				240	320	48		
8	No Ice Wind 27...	None				120	336	36		
9	No Ice Wind 31...	None				240	320	48		
10	Ice	None				120	152	264		
11	Temperature Dr...	None						252		
12	Ice Wind 0 deg	None				120	336	20		
13	Ice Wind 45 deg	None				240	320	48		
14	Ice Wind 90 deg	None				120	336	36		
15	Ice Wind 135 deg	None				240	320	48		
16	Ice Wind 180 deg	None				120	336	20		
17	Ice Wind 225 deg	None				240	320	48		
18	Ice Wind 270 deg	None				120	336	36		
19	Ice Wind 315 deg	None				240	320	48		
20	Service Wind 0 ...	None				120	336	20		
21	Service Wind 4...	None				240	318	40		
22	Service Wind 9...	None				120	336	36		
23	Service Wind 1...	None				240	320	48		
24	Service Wind 1...	None				120	336	20		
25	Service Wind 2...	None				240	318	40		
26	Service Wind 2...	None				120	336	36		
27	Service Wind 3...	None				240	320	48		

Load Combinations

	Description	S...	PDelta	SRSS	B...	Fa...	BLC Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	Dead Only	Y...	Y		1	1	28	1	29	1											
2	1.2 Dead+1.0 Wind 0 ...	Y...	Y		1	1.2	2	1	28	1.2	29	1									
3	0.9 Dead+1.0 Wind 0 ...	Y...	Y		1	.9	2	1	28	.9	29	1									
4	1.2 Dead+1.0 Wind 4...	Y...	Y		1	1.2	3	1	28	1.2	29	1									
5	0.9 Dead+1.0 Wind 4...	Y...	Y		1	.9	3	1	28	.9	29	1									
6	1.2 Dead+1.0 Wind 9...	Y...	Y		1	1.2	4	1	28	1.2	29	1									
7	0.9 Dead+1.0 Wind 9...	Y...	Y		1	.9	4	1	28	.9	29	1									
8	1.2 Dead+1.0 Wind 1...	Y...	Y		1	1.2	5	1	28	1.2	29	1									
9	0.9 Dead+1.0 Wind 1...	Y...	Y		1	.9	5	1	28	.9	29	1									
10	1.2 Dead+1.0 Wind 1...	Y...	Y		1	1.2	6	1	28	1.2	29	1									
11	0.9 Dead+1.0 Wind 1...	Y...	Y		1	.9	6	1	28	.9	29	1									
12	1.2 Dead+1.0 Wind 2...	Y...	Y		1	1.2	7	1	28	1.2	29	1									
13	0.9 Dead+1.0 Wind 2...	Y...	Y		1	.9	7	1	28	.9	29	1									
14	1.2 Dead+1.0 Wind 2...	Y...	Y		1	1.2	8	1	28	1.2	29	1									
15	0.9 Dead+1.0 Wind 2...	Y...	Y		1	.9	8	1	28	.9	29	1									



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Envelope AISC 3rd: LRFD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	...	phi*Pnc [k]	phi*Pnt [k]	... phi*...	Cb	Eqn
17	M254	L1 1/2x1 1...	.796	20.365	19	.002	0	z 24 7.097	22.275	...		
18	M119	L1 1/2x1 1...	.794	0	6	.005	41.587	z 8 7.232	22.275	...		
19	M139	L2 1/2x2 1...	.790	276.5	4	.064	287	y 14 49.138	53.55	...		
20	M138	L2 1/2x2 1...	.788	276.5	8	.052	287	y 10 49.138	53.55	...		
21	M306	L1 1/2x1 1...	.786	0	21	.001	14.4	y 13 7.097	22.275	...		
22	M127	L1 1/2x1 1...	.782	0	14	.006	20.793	y 8 7.232	22.275	...		
23	M371	L1 1/2x1 1...	.778	0	6	.002	41.982	z 19 7.097	22.275	...		
24	M255	L1 1/2x1 1...	.775	0	2	.165	0	y 6 13.284	22.275	...		
25	M207	L1 1/2x1 1...	.750	0	6	.002	0	z 23 7.097	22.275	...		
26	M94	L1 1/2x1 1...	.750	0	2	.005	41.587	z 16 7.232	22.275	...		
27	M256	L1 1/2x1 1...	.747	0	11	.103	0	y 21 13.284	22.275	...		
28	M252	L2.5x1.5x4	.747	18.969	4	.135	19.364	z 6 26.347	30.683	...		
29	M197	L1 1/2x1 1...	.736	0	6	.002	41.982	z 22 7.097	22.275	...		
30	M253	L1 1/2x1 1...	.717	20.365	23	.003	40.729	y 24 7.097	22.275	...		
31	M86	L1 1/2x1 1...	.716	0	10	.008	0	y 17 7.232	22.275	...		
32	M368A	L1 1/2x1 1...	.713	0	6	.002	41.982	z 24 7.097	22.275	...		
33	M135	L1 1/2x1 1...	.709	0	6	.003	20.793	z 8 7.232	22.275	...		
34	M102	L1 1/2x1 1...	.704	0	10	.005	0	y 16 7.232	22.275	...		
35	M110	L1 1/2x1 1...	.704	0	2	.004	41.587	z 16 7.232	22.275	...		
36	M208	L1 1/2x1 1...	.701	20.991	16	.003	20.991	z 16 7.097	22.275	...		
37	M375	L1 1/2x1 1...	.698	0	6	.003	0	z 2 7.097	22.275	...		
38	M251	L2.5x1.5x4	.690	18.574	8	.127	.395	z 21 26.347	30.683	...		
39	M307	L1 1/2x1 1...	.688	0	26	.001	28.8	z 24 7.097	22.275	...		
40	M308	L1 1/2x1 1...	.686	0	26	.002	14.7	y 13 7.097	22.275	...		
41	M304	L1 1/2x1 1...	.679	14.4	22	.002	14.4	z 24 7.097	22.275	...		
42	M223	L1 1/2x1 1...	.673	0	6	.003	41.982	z 2 7.097	22.275	...		
43	M126	L1 1/2x1 1...	.672	0	2	.004	41.587	z 16 7.232	22.275	...		
44	M118	L1 1/2x1 1...	.666	0	10	.004	0	y 16 7.232	22.275	...		
45	M382	L1 1/2x1 1...	.653	0	12	.009	0	y 16 7.097	22.275	...		
46	M259	L1 1/2x1 1...	.646	20.365	20	.004	0	y 24 7.097	22.275	...		
47	M258	L1 1/2x1 1...	.645	0	23	.004	0	z 22 7.097	22.275	...		
48	M378	L1 1/2x1 1...	.624	20.991	12	.003	20.991	z 12 7.097	22.275	...		
49	M246	L2.5x1.5x4	.595	0	5	.047	25.65	y 25 23.137	30.683	...		
50	M134	L1 1/2x1 1...	.589	0	10	.002	20.793	z 4 7.232	22.275	...		
51	M88	L1 1/2x1 1...	.589	0	2	.009	20.793	z 8 7.232	22.275	...		
52	M249	L1 1/2x1 1...	.574	0	4	.062	0	y 25 16.027	22.275	...		
53	M93	L1 1/2x1 1...	.569	0	6	.007	41.587	z 4 7.232	22.275	...		
54	M303	L1 1/2x1 1...	.569	0	26	.001	14.7	y 24 7.097	22.275	...		
55	M85	L1 1/2x1 1...	.561	0	14	.011	20.793	z 4 7.232	22.275	...		
56	M96	L1 1/2x1 1...	.559	0	12	.006	20.793	y 8 7.232	22.275	...		
57	M250	L1 1/2x1 1...	.554	16.376	9	.046	0	z 25 16.027	22.275	...		
58	M305	L1 1/2x1 1...	.551	0	22	.002	14.7	y 23 7.097	22.275	...		
59	M104	L1 1/2x1 1...	.551	0	2	.006	41.587	z 4 7.232	22.275	...		
60	M101	L1 1/2x1 1...	.547	0	14	.007	20.793	z 4 7.232	22.275	...		
61	M215	L1 1/2x1 1...	.546	0	16	.002	0	z 19 16.027	22.275	...		
62	M373	L1 1/2x1 1...	.545	0	12	.002	0	z 19 16.027	22.275	...		
63	M244	L1 1/2x1 1...	.534	15.87	2	.024	0	z 14 16.027	22.275	...		
64	M109	L1 1/2x1 1...	.532	0	6	.006	41.587	z 4 7.232	22.275	...		
65	M112	L1 1/2x1 1...	.526	0	12	.006	0	y 4 7.232	22.275	...		
66	M299	L1 1/2x1 1...	.524	14.4	26	.015	14.4	y 14 7.097	22.275	...		
67	M245	L2.5x1.5x4	.524	28.856	9	.044	5.878	y 25 23.137	30.683	...		
68	M381	L1 1/2x1 1...	.522	20.991	8	.004	20.991	z 5 16.027	22.275	...		
69	M214	L1 1/2x1 1...	.519	20.991	4	.005	20.991	z 9 16.027	22.275	...		
70	M298	L1 1/2x1 1...	.518	0	22	.003	0	z 24 7.097	22.275	...		
71	M261	L1 1/2x1 1...	.517	20.365	20	.001	0	z 8 7.097	22.275	...		
72	M260	L1 1/2x1 1...	.516	20.365	22	.001	40.729	y 4 7.097	22.275	...		
73	M117	L1 1/2x1 1...	.513	0	14	.006	0	y 4 7.232	22.275	...		

Envelope AISC 3rd: LRFD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	...	phi*Pnc [k]	phi*Pnt [k]	... phi*...	Cb	Eqn
74	M120	L1 1/2x1 1...	.511	0	2	.005	20.793	z 8	7.232	22.275	...	
75	M376	L1 1/2x1 1...	.511	20.991	2	.002	20.991	y 8	7.097	22.275	...	
76	M125	L1 1/2x1 1...	.504	0	6	.005	41.587	z 4	7.232	22.275	...	
77	M200	L1 1/2x1 1...	.502	20.991	10	.002	20.991	y 4	7.097	22.275	...	
78	M243	L1 1/2x1 1...	.500	15.87	11	.040	0	y 4	16.027	22.275	...	
79	M128	L1 1/2x1 1...	.491	0	12	.006	0	y 4	7.232	22.275	...	
80	M300	L1 1/2x1 1...	.472	0	20	.002	0	z 24	7.097	22.275	...	
81	M370	L1 1/2x1 1...	.470	0	16	.002	41.982	z 19	16.027	22.275	...	
82	M198	L1 1/2x1 1...	.469	20.991	2	.002	20.991	y 16	16.027	22.275	...	
83	M379	L1 1/2x1 1...	.466	20.991	2	.003	20.991	y 4	16.027	22.275	...	
84	M205	L1 1/2x1 1...	.464	0	12	.002	41.982	z 19	16.027	22.275	...	
85	M11	L1 1/2x1 1...	.460	0	14	.005	20.524	y 8	7.423	22.275	...	
86	M19	L1 1/2x1 1...	.457	0	6	.002	0	z 24	7.423	22.275	...	
87	M133	L1 1/2x1 1...	.455	0	14	.004	0	z 4	7.232	22.275	...	
88	M301	L1 1/2x1 1...	.449	0	22	.014	14.4	y 14	7.097	22.275	...	
89	M239	L2.5x1.5x4	.448	29.05	16	.033	28.531	y 6	23.137	30.683	...	
90	M377	L1 1/2x1 1...	.448	20.991	10	.002	20.991	y 5	16.027	22.275	...	
91	M206	L1 1/2x1 1...	.448	20.991	10	.003	20.991	y 8	16.027	22.275	...	
92	M136	L1 1/2x1 1...	.447	0	2	.004	0	y 9	7.232	22.275	...	
93	M221	L1 1/2x1 1...	.445	0	12	.003	41.982	z 2	16.027	22.275	...	
94	M383	L1 1/2x1 1...	.442	0	4	.009	0	y 14	16.027	22.275	...	
95	M374	L1 1/2x1 1...	.439	0	16	.004	0	z 2	16.027	22.275	...	
96	M27	L1 1/2x1 1...	.434	0	14	.003	20.524	z 20	7.423	22.275	...	
97	M222	L1 1/2x1 1...	.426	0	8	.008	0	y 14	16.027	22.275	...	
98	M226	L1 1/2x1 1...	.425	0	2	.859	26.4	y 14	12.607	22.275	...	
99	M369	L1 1/2x1 1...	.424	0	14	.001	41.982	z 25	16.027	22.275	...	
100	M142	L1 1/2x1 1...	.422	0	16	1.265	26.4	z 6	12.607	22.275	...	
101	M35	L1 1/2x1 1...	.421	0	6	.003	20.524	z 19	7.423	22.275	...	
102	M240	L2.5x1.5x4	.403	0	12	.035	21.269	y 6	23.137	30.683	...	
103	M388	L1 1/2x1 1...	.398	0	23	.003	28.8	y 25	12.607	22.275	...	
104	M194	L1 1/2x1 1...	.390	26.4	3	.839	0	y 14	12.607	22.275	...	
105	M247	L1 1/2x1 1...	.380	18.681	5	.020	18.681	y 6	7.097	22.275	...	
106	M43	L1 1/2x1 1...	.374	0	14	.002	20.524	z 26	7.423	22.275	...	
107	M220	L1 1/2x1 1...	.366	0	7	.004	28.8	z 2	12.607	22.275	...	
108	M10	L1 1/2x1 1...	.359	0	2	.004	20.524	z 8	7.423	22.275	...	
109	M18	L1 1/2x1 1...	.351	0	8	.002	20.524	z 4	7.423	22.275	...	
110	M242	L1 1/2x1 1...	.338	18.681	19	.012	37.361	y 25	7.097	22.275	...	
111	M248	L1 1/2x1 1...	.337	18.681	11	.020	37.361	y 8	7.097	22.275	...	
112	M26	L1 1/2x1 1...	.336	0	2	.002	20.524	z 24	7.423	22.275	...	
113	M217	L1 1/2x1 1...	.323	0	3	.003	28.8	z 2	12.607	22.275	...	
114	M212	L1 1/2x1 1...	.319	0	7	.002	28.8	z 2	12.607	22.275	...	
115	M219	L1 1/2x1 1...	.317	0	11	.003	28.8	z 2	12.607	22.275	...	
116	M34	L1 1/2x1 1...	.314	0	10	.002	0	z 25	7.423	22.275	...	
117	M231	L2x2x4	.308	20.991	24	.002	20.991	y 8	15.547	30.586	...	
118	M224	L1 1/2x1 1...	.303	0	16	.008	0	y 12	16.027	22.275	...	
119	M241	L1 1/2x1 1...	.299	18.681	23	.013	18.681	y 25	7.097	22.275	...	
120	M12	L1 1/2x1 1...	.291	0	12	.005	0	y 4	7.423	22.275	...	
121	M145	L2 1/2x2 1...	.291	0	26	.003	28.8	z 25	30.381	38.556	...	
122	M146	L2 1/2x2 1...	.291	0	26	.003	28.8	z 25	30.381	38.556	...	
123	M147	L2 1/2x2 1...	.291	0	26	.003	28.8	z 25	30.381	38.556	...	
124	M148	L2 1/2x2 1...	.291	0	26	.003	28.8	z 25	30.381	38.556	...	
125	M9	L1 1/2x1 1...	.288	0	6	.004	20.524	z 16	7.423	22.275	...	
126	M209	L1 1/2x1 1...	.288	0	3	.002	28.8	z 2	12.607	22.275	...	
127	M234	L2.5x1.5x4	.285	0	11	.008	24.381	y 19	3.179	30.683	...	
128	M42	L1 1/2x1 1...	.284	0	2	.003	20.524	y 6	7.423	22.275	...	
129	M17	L1 1/2x1 1...	.283	0	14	.003	20.524	y 4	7.423	22.275	...	
130	M218	L1 1/2x1 1...	.280	0	15	.002	28.8	z 20	12.607	22.275	...	

Envelope AISC 3rd: LRFD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	...	phi*Pnc [k]	phi*Pnt [k]	... phi*...	Cb	Eqn
131	M20	L1 1/2x1 1...	.274	0	2	.003	20.524	z 24	7.423	22.275	...	
132	M211	L1 1/2x1 1...	.272	0	11	.002	28.8	z 2	12.607	22.275	...	
133	M3	L2 1/2x2 1...	.271	0	4	.049	146.25	y 14	49.138	53.55	...	
134	M235	L1 1/2x1 1...	.268	18.681	23	.007	0	y 21	7.097	22.275	...	
135	M302	L1 1/2x1 1...	.264	0	20	.001	14.4	y 23	18.752	22.275	...	
136	M25	L1 1/2x1 1...	.263	0	6	.002	41.049	z 4	7.423	22.275	...	
137	M28	L1 1/2x1 1...	.261	0	12	.003	20.524	y 4	7.423	22.275	...	
138	M2	L2 1/2x2 1...	.260	0	8	.036	146.25	y 2	49.138	53.55	...	
139	M192	L1 1/2x1 1...	.259	20.991	2	.002	20.991	z 12	7.097	22.275	...	
140	M230	L2x2x4	.257	41.982	23	.002	41.982	y 26	15.547	30.586	...	
141	M232	L2x2x4	.248	41.982	26	.002	20.991	z 24	15.547	30.586	...	
142	M33	L1 1/2x1 1...	.248	0	14	.002	20.524	z 4	7.423	22.275	...	
143	M4	L2 1/2x2 1...	.241	0	16	.045	146.25	z 14	49.138	53.55	...	
144	M1	L2 1/2x2 1...	.240	0	12	.026	146.25	y 14	49.138	53.55	...	
145	M36	L1 1/2x1 1...	.240	0	2	.002	0	y 19	7.423	22.275	...	
146	M236	L1 1/2x1 1...	.234	0	19	.008	0	y 20	7.097	22.275	...	
147	M386	L2x2x4	.228	20.991	26	.002	20.991	y 20	15.547	30.586	...	
148	M210	L1 1/2x1 1...	.220	0	15	.003	28.8	z 2	12.607	22.275	...	
149	M78	L1 1/2x1 1...	.219	0	13	.002	20.793	z 24	7.232	22.275	...	
150	M41	L1 1/2x1 1...	.218	0	6	.002	20.524	y 10	7.423	22.275	...	
151	M44	L1 1/2x1 1...	.214	0	12	.002	20.524	z 14	7.423	22.275	...	
152	M77	L1 1/2x1 1...	.208	41.587	19	.002	20.793	z 4	7.232	22.275	...	
153	M387A	L2x2x4	.188	41.982	19	.002	20.991	y 25	15.547	30.586	...	
154	M228	L1 1/2x1 1...	.180	26.4	5	.529	0	y 14	12.607	22.275	...	
155	M184	L1 1/2x1 1...	.180	0	10	.001	20.991	y 26	7.097	22.275	...	
156	M176	L1 1/2x1 1...	.164	0	2	.001	20.991	z 24	7.097	22.275	...	
157	M204	L1 1/2x1 1...	.157	0	7	.002	28.8	z 2	12.607	22.275	...	
158	M386A	L2x2x4	.156	20.991	20	.002	20.991	z 23	15.547	30.586	...	
159	M229	L2x2x4	.154	41.982	23	.003	20.991	y 4	15.547	30.586	...	
160	M201	L1 1/2x1 1...	.150	0	5	.002	28.8	z 2	12.607	22.275	...	
161	M82	L1 1/2x1 1...	.145	0	3	.002	28.8	z 24	12.607	22.275	...	
162	M196	L1 1/2x1 1...	.143	26.4	9	.515	0	y 6	12.607	22.275	...	
163	M168	L1 1/2x1 1...	.141	0	10	.001	20.991	y 25	7.097	22.275	...	
164	M387	L2x2x4	.140	0	12	.003	20.991	y 8	15.547	30.586	...	
165	M79	L1 1/2x1 1...	.138	0	12	.003	20.793	z 2	7.232	22.275	...	
166	M203	L1 1/2x1 1...	.137	0	9	.002	28.8	z 2	12.607	22.275	...	
167	M80	L1 1/2x1 1...	.132	31.19	21	.003	31.19	z 22	7.232	22.275	...	
168	M55	L1 1/2x1 1...	.127	0	20	.002	28.8	z 22	12.607	22.275	...	
169	M54	L1 1/2x1 1...	.127	0	22	.002	28.8	z 20	12.607	22.275	...	
170	M53	L1 1/2x1 1...	.127	0	25	.002	28.8	z 22	12.607	22.275	...	
171	M56	L1 1/2x1 1...	.127	0	26	.002	28.8	z 20	12.607	22.275	...	
172	M297	L1 1/2x1 1...	.115	14.4	9	.004	14.4	y 25	7.097	22.275	...	
173	M295	L1 1/2x1 1...	.107	0	16	.003	14.4	z 16	7.097	22.275	...	
174	M309	L1 1/2x1 1...	.105	0	23	.007	20.793	y 17	7.097	22.275	...	
175	M162	L1 1/2x1 1...	.099	2.7	19	.146	0	y 24	12.607	22.275	...	
176	M225	L1 1/2x1 1...	.098	0	24	.002	28.8	z 23	12.607	22.275	...	
177	M227	L1 1/2x1 1...	.096	0	9	.002	28.8	z 23	12.607	22.275	...	
178	M144	L1 1/2x1 1...	.095	0	26	.002	28.8	z 24	12.607	22.275	...	
179	M81	L1 1/2x1 1...	.087	0	6	.002	28.8	z 23	12.607	22.275	...	
180	M8	L2 1/2x2 1...	.086	0	19	.005	28.8	z 25	30.381	38.556	...	
181	M7	L2 1/2x2 1...	.085	0	22	.005	28.8	z 26	30.381	38.556	...	
182	M6	L2 1/2x2 1...	.085	0	24	.005	28.8	z 22	30.381	38.556	...	
183	M5	L2 1/2x2 1...	.085	0	24	.005	0	z 24	30.381	38.556	...	
184	M296	L1 1/2x1 1...	.084	20.365	26	.005	20.365	y 9	7.097	22.275	...	
185	M288	L1 1/2x1 1...	.080	0	23	.006	0	z 8	7.097	22.275	...	
186	M292	L1 1/2x1 1...	.075	0	23	.006	0	y 9	7.097	22.275	...	
187	M238	L1 1/2x1 1...	.075	15.87	19	.010	0	z 25	16.027	22.275	...	

Envelope AISC 3rd: LRFD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[in]	LC	Shear	Loc[in]	...	phi*Pnc [k]	phi*Pnt [k]	...	phi*...	Cb	Eqn
188	M143	L1 1/2x1 1...	.075	0	25	.002	28.8	z 23	12.607	22.275	...		
189	M83	L1 1/2x1 1...	.075	0	22	.003	28.8	z 23	12.607	22.275	...		
190	M159	L1 1/2x1 1...	.074	0	26	.001	20.991	z 25	7.097	22.275	...		
191	M293	L1 1/2x1 1...	.073	14.4	9	.002	14.4	y 12	7.097	22.275	...		
192	M158	L1 1/2x1 1...	.073	0	19	.002	20.991	z 25	7.097	22.275	...		
193	M164	L1 1/2x1 1...	.070	2.7	23	.184	0	y 21	12.607	22.275	...		
194	M141	L1 1/2x1 1...	.070	0	6	.002	28.8	z 23	12.607	22.275	...		
195	M291	L1 1/2x1 1...	.070	0	26	.003	0	y 24	7.097	22.275	...		
196	M202	L1 1/2x1 1...	.069	0	15	.003	28.8	z 2	12.607	22.275	...		
197	M165	L1 1/2x1 1...	.068	0	12	.001	0	y 26	7.097	22.275	...		
198	M280	L1 1/2x1 1...	.066	20.365	23	.003	40.729	z 16	7.097	22.275	...		
199	M278	L1 1/2x1 1...	.065	20.365	19	.002	40.729	z 14	7.097	22.275	...		
200	M47	L1 1/2x1 1...	.064	0	6	.002	28.8	z 26	12.607	22.275	...		
201	M284	L1 1/2x1 1...	.064	0	23	.002	40.729	z 12	7.097	22.275	...		
202	M157	L1 1/2x1 1...	.064	0	20	.001	20.991	z 24	7.097	22.275	...		
203	M282	L1 1/2x1 1...	.063	0	19	.002	0	z 12	7.097	22.275	...		
204	M173	L1 1/2x1 1...	.062	0	2	.001	20.991	z 19	7.097	22.275	...		
205	M167	L1 1/2x1 1...	.062	0	8	.001	0	z 24	7.097	22.275	...		
206	M290	L1 1/2x1 1...	.062	20.365	20	.006	20.365	y 4	7.097	22.275	...		
207	M182	L1 1/2x1 1...	.061	0	2	.001	20.991	y 26	7.097	22.275	...		
208	M286	L1 1/2x1 1...	.061	20.365	19	.006	40.729	z 4	7.097	22.275	...		
209	M161	L1 1/2x1 1...	.060	0	23	.002	28.8	z 19	12.607	22.275	...		
210	M151	L1 1/2x1 1...	.059	0	8	.002	0	z 26	7.097	22.275	...		
211	M149	L1 1/2x1 1...	.059	0	12	.002	0	z 22	7.097	22.275	...		
212	M355	L1 1/2x1 1...	.059	0	21	.004	0	z 8	7.097	22.275	...		
213	M163	L1 1/2x1 1...	.059	0	24	.002	28.8	z 19	12.607	22.275	...		
214	M353	L1 1/2x1 1...	.058	0	25	.002	14.4	y 22	7.097	22.275	...		
215	M356	L1 1/2x1 1...	.058	0	20	.004	0	z 6	7.097	22.275	...		
216	M175	L1 1/2x1 1...	.058	0	16	.001	20.991	z 26	7.097	22.275	...		
217	M339	L1 1/2x1 1...	.058	0	19	.003	14.4	z 21	7.097	22.275	...		
218	M193	L1 1/2x1 1...	.058	0	22	.002	28.8	z 25	12.607	22.275	...		
219	M338	L1 1/2x1 1...	.058	0	20	.003	14.4	z 8	7.097	22.275	...		
220	M341	L1 1/2x1 1...	.058	0	23	.003	0	y 4	7.097	22.275	...		
221	M349	L1 1/2x1 1...	.057	0	20	.003	14.4	y 21	7.097	22.275	...		
222	M346	L1 1/2x1 1...	.057	0	26	.003	14.4	y 22	7.097	22.275	...		
223	M160	L1 1/2x1 1...	.056	0	19	.002	20.991	z 24	7.097	22.275	...		
224	M84	L1 1/2x1 1...	.056	14.4	11	.007	14.4	y 8	12.607	22.275	...		
225	M317	L1 1/2x1 1...	.056	0	20	.006	14.4	z 8	7.097	22.275	...		
226	M325	L1 1/2x1 1...	.055	0	20	.004	14.4	z 8	7.097	22.275	...		
227	M333	L1 1/2x1 1...	.055	0	20	.004	14.4	y 22	7.097	22.275	...		
228	M335	L1 1/2x1 1...	.055	14.4	23	.006	28.8	z 16	7.097	22.275	...		
229	M314	L1 1/2x1 1...	.054	0	26	.006	14.4	z 6	7.097	22.275	...		
230	M332	L1 1/2x1 1...	.054	0	22	.004	0	z 6	7.097	22.275	...		
231	M322	L1 1/2x1 1...	.054	0	26	.005	14.4	z 6	7.097	22.275	...		
232	M324	L1 1/2x1 1...	.054	0	22	.006	0	z 6	7.097	22.275	...		
233	M316	L1 1/2x1 1...	.054	0	22	.008	0	z 6	7.097	22.275	...		
234	M330	L1 1/2x1 1...	.054	0	26	.004	14.4	z 6	7.097	22.275	...		
235	M336	L1 1/2x1 1...	.054	14.4	21	.005	28.8	z 14	7.097	22.275	...		
236	M195	L1 1/2x1 1...	.054	0	20	.002	28.8	z 26	12.607	22.275	...		
237	M315	L1 1/2x1 1...	.054	0	24	.007	0	z 8	7.097	22.275	...		
238	M323	L1 1/2x1 1...	.054	0	24	.005	0	z 8	7.097	22.275	...		
239	M331	L1 1/2x1 1...	.054	0	24	.004	0	z 8	7.097	22.275	...		
240	M344	L1 1/2x1 1...	.054	14.4	20	.003	0	z 19	7.097	22.275	...		
241	M352	L1 1/2x1 1...	.054	14.4	20	.003	14.4	y 25	7.097	22.275	...		
242	M337	L1 1/2x1 1...	.054	14.4	19	.005	14.4	z 16	7.097	22.275	...		
243	M174	L1 1/2x1 1...	.054	0	10	.001	20.991	z 26	7.097	22.275	...		
244	M334	L1 1/2x1 1...	.054	14.4	25	.004	14.4	z 12	7.097	22.275	...		

Envelope AISC 3rd: LRFD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	...	phi*Pnc [k]	phi*Pnt [k]	... phi*...	Cb	Eqn
245	M294	L1 1/2x1 1...	.054	20.365	21	.005	20.365	y 4	7.097	22.275	...	
246	M342	L1 1/2x1 1...	.053	14.4	26	.003	14.4	y 19	7.097	22.275	...	
247	M350	L1 1/2x1 1...	.053	14.4	26	.003	14.4	y 19	7.097	22.275	...	
248	M351	L1 1/2x1 1...	.053	14.4	22	.003	0	z 20	7.097	22.275	...	
249	M343	L1 1/2x1 1...	.052	14.4	24	.004	28.8	z 26	7.097	22.275	...	
250	M257	L2x2x4	.052	0	21	.059	11.9	y 4	15.547	30.586	...	
251	M321	L1 1/2x1 1...	.052	14.4	20	.005	14.4	z 16	7.097	22.275	...	
252	M329	L1 1/2x1 1...	.051	14.4	20	.004	14.4	z 16	7.097	22.275	...	
253	M318	L1 1/2x1 1...	.051	14.4	26	.006	14.4	z 14	7.097	22.275	...	
254	M275	L1 1/2x1 1...	.051	0	22	.003	14.4	y 24	7.097	22.275	...	
255	M277	L1 1/2x1 1...	.051	0	20	.003	14.4	y 24	7.097	22.275	...	
256	M189	L1 1/2x1 1...	.051	0	14	.002	0	z 23	7.097	22.275	...	
257	M320	L1 1/2x1 1...	.051	14.4	22	.006	28.8	z 14	7.097	22.275	...	
258	M326	L1 1/2x1 1...	.051	14.4	26	.005	14.4	z 14	7.097	22.275	...	
259	M328	L1 1/2x1 1...	.051	14.4	22	.005	28.8	z 14	7.097	22.275	...	
260	M319	L1 1/2x1 1...	.051	14.4	24	.005	28.8	z 2	7.097	22.275	...	
261	M310	L1 1/2x1 1...	.051	14.4	19	.007	14.4	z 14	7.097	22.275	...	
262	M183	L1 1/2x1 1...	.051	0	12	.002	41.982	z 24	7.097	22.275	...	
263	M327	L1 1/2x1 1...	.051	14.4	24	.004	14.4	y 26	7.097	22.275	...	
264	M276	L1 1/2x1 1...	.050	0	21	.003	14.4	y 24	7.097	22.275	...	
265	M74	L1 1/2x1 1...	.050	0	17	.002	28.8	z 20	12.607	22.275	...	
266	M274	L1 1/2x1 1...	.050	0	21	.003	14.4	y 24	7.097	22.275	...	
267	M92	L1 1/2x1 1...	.050	0	7	.002	28.8	z 8	12.607	22.275	...	
268	M311	L1 1/2x1 1...	.049	14.4	26	.006	14.7	y 16	7.097	22.275	...	
269	M181	L1 1/2x1 1...	.048	0	10	.002	41.982	z 19	7.097	22.275	...	
270	M90	L1 1/2x1 1...	.047	0	15	.003	28.8	z 8	12.607	22.275	...	
271	M289	L1 1/2x1 1...	.047	0	2	.002	14.4	y 19	7.097	22.275	...	
272	M312	L1 1/2x1 1...	.047	14.4	22	.006	28.8	z 14	7.097	22.275	...	
273	M46	L1 1/2x1 1...	.047	0	10	.002	28.8	z 20	12.607	22.275	...	
274	M268	L1 1/2x1 1...	.046	0	21	.002	0	z 14	7.097	22.275	...	
275	M269	L1 1/2x1 1...	.046	0	19	.002	14.4	y 14	7.097	22.275	...	
276	M266	L1 1/2x1 1...	.046	0	20	.002	0	z 14	7.097	22.275	...	
277	M287	L1 1/2x1 1...	.046	0	19	.003	0	y 5	7.097	22.275	...	
278	M364	L1 1/2x1 1...	.046	0	19	.002	0	y 24	7.097	22.275	...	
279	M363	L1 1/2x1 1...	.046	0	21	.002	0	y 26	7.097	22.275	...	
280	M362	L1 1/2x1 1...	.046	0	23	.002	0	y 25	7.097	22.275	...	
281	M361	L1 1/2x1 1...	.046	0	25	.002	0	y 20	7.097	22.275	...	
282	M190	L1 1/2x1 1...	.045	0	10	.002	20.991	z 16	7.097	22.275	...	
283	M75	L1 1/2x1 1...	.045	0	15	.002	28.8	z 2	12.607	22.275	...	
284	M50	L1 1/2x1 1...	.045	0	8	.001	20.524	z 4	7.423	22.275	...	
285	M273	L1 1/2x1 1...	.045	14.4	19	.003	14.4	y 26	7.097	22.275	...	
286	M150	L1 1/2x1 1...	.045	0	10	.002	0	z 20	7.097	22.275	...	
287	M51	L1 1/2x1 1...	.044	0	4	.002	20.524	z 16	7.423	22.275	...	
288	M270	L1 1/2x1 1...	.044	14.4	19	.003	14.4	y 26	7.097	22.275	...	
289	M359	L1 1/2x1 1...	.044	14.4	25	.002	0	y 23	7.097	22.275	...	
290	M354	L1 1/2x1 1...	.044	0	23	.003	14.4	z 20	7.097	22.275	...	
291	M272	L1 1/2x1 1...	.044	14.4	21	.003	28.8	z 25	7.097	22.275	...	
292	M233	L2.5x1.5x4	.044	29.05	2	.007	25.419	y 26	23.137	30.683	...	
293	M360	L1 1/2x1 1...	.044	14.4	24	.002	0	y 21	7.097	22.275	...	
294	M357	L1 1/2x1 1...	.044	14.4	21	.002	0	y 20	7.097	22.275	...	
295	M267	L1 1/2x1 1...	.044	0	22	.002	0	z 14	7.097	22.275	...	
296	M358	L1 1/2x1 1...	.044	14.4	19	.002	0	y 25	7.097	22.275	...	
297	M340	L1 1/2x1 1...	.044	0	25	.004	0	y 8	7.097	22.275	...	
298	M91	L1 1/2x1 1...	.043	0	11	.003	28.8	z 22	12.607	22.275	...	
299	M348	L1 1/2x1 1...	.043	0	22	.003	0	y 25	7.097	22.275	...	
300	M347	L1 1/2x1 1...	.043	0	24	.002	14.4	y 21	7.097	22.275	...	
301	M89	L1 1/2x1 1...	.043	0	3	.003	28.8	z 22	12.607	22.275	...	

Envelope AISC 3rd: LRFD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	...	phi*Pnc [k]	phi*Pnt [k]	... phi*...	Cb	Eqn
302	M271	L1 1/2x1 1...	.043	14.4	22	.003	28.8	z 25 7.097	22.275	...		
303	M49	L1 1/2x1 1...	.040	0	14	.002	20.524	z 4 7.423	22.275	...		
304	M52	L1 1/2x1 1...	.040	0	2	.002	20.524	z 14 7.423	22.275	...		
305	M166	L1 1/2x1 1...	.040	0	2	.001	0	y 26 7.097	22.275	...		
306	M106	L1 1/2x1 1...	.038	0	15	.002	28.8	z 22 12.607	22.275	...		
307	M108	L1 1/2x1 1...	.038	0	7	.002	28.8	z 22 12.607	22.275	...		
308	M73	L1 1/2x1 1...	.038	0	5	.002	28.8	z 19 12.607	22.275	...		
309	M57	L1 1/2x1 1...	.036	0	4	.001	20.524	z 20 7.423	22.275	...		
310	M45	L1 1/2x1 1...	.035	0	14	.002	28.8	z 24 12.607	22.275	...		
311	M48	L1 1/2x1 1...	.034	0	5	.003	28.8	z 25 12.607	22.275	...		
312	M105	L1 1/2x1 1...	.034	0	3	.002	28.8	z 22 12.607	22.275	...		
313	M60	L1 1/2x1 1...	.033	0	8	.001	20.524	z 21 7.423	22.275	...		
314	M59	L1 1/2x1 1...	.032	0	14	.001	20.524	z 22 7.423	22.275	...		
315	M107	L1 1/2x1 1...	.032	0	11	.002	28.8	z 22 12.607	22.275	...		
316	M367	L1 1/2x1 1...	.032	14.4	21	.001	28.8	z 24 7.097	22.275	...		
317	M368	L1 1/2x1 1...	.031	14.4	19	.001	28.8	z 22 7.097	22.275	...		
318	M366	L1 1/2x1 1...	.031	14.4	23	.002	28.8	z 26 7.097	22.275	...		
319	M365	L1 1/2x1 1...	.031	14.4	25	.001	28.8	z 20 7.097	22.275	...		
320	M58	L1 1/2x1 1...	.031	0	16	.001	20.524	z 23 7.423	22.275	...		
321	M76	L1 1/2x1 1...	.031	0	11	.002	28.8	z 26 12.607	22.275	...		
322	M313	L1 1/2x1 1...	.029	14.4	2	.008	14.4	z 16 7.097	22.275	...		
323	M124	L1 1/2x1 1...	.026	0	7	.002	28.8	z 22 12.607	22.275	...		
324	M122	L1 1/2x1 1...	.025	0	15	.002	28.8	z 22 12.607	22.275	...		
325	M191	L1 1/2x1 1...	.023	0	8	.002	41.982	z 19 7.097	22.275	...		
326	M123	L1 1/2x1 1...	.023	0	19	.002	28.8	z 22 12.607	22.275	...		
327	M121	L1 1/2x1 1...	.023	0	3	.002	28.8	z 22 12.607	22.275	...		
328	M264	L1 1/2x1 1...	.022	14.4	21	.003	0	z 21 7.097	22.275	...		
329	M265	L1 1/2x1 1...	.022	14.4	20	.003	0	z 21 7.097	22.275	...		
330	M262	L1 1/2x1 1...	.022	14.4	24	.003	0	z 22 7.097	22.275	...		
331	M263	L1 1/2x1 1...	.022	14.4	22	.003	0	z 22 7.097	22.275	...		
332	M68	L1 1/2x1 1...	.020	0	4	.001	41.049	z 24 7.423	22.275	...		
333	M39	L1 1/2x1 1...	.020	0	21	.004	28.8	z 26 12.607	22.275	...		
334	M22	L1 1/2x1 1...	.020	0	22	.003	28.8	z 21 12.607	22.275	...		
335	M67	L1 1/2x1 1...	.020	0	8	.001	41.049	z 26 7.423	22.275	...		
336	M24	L1 1/2x1 1...	.019	0	26	.004	28.8	z 25 12.607	22.275	...		
337	M152	L1 1/2x1 1...	.019	0	10	.002	0	z 24 7.097	22.275	...		
338	M21	L1 1/2x1 1...	.019	0	24	.002	28.8	z 22 12.607	22.275	...		
339	M283	L1 1/2x1 1...	.019	0	4	.003	14.4	z 26 7.097	22.275	...		
340	M285	L1 1/2x1 1...	.018	0	5	.003	14.4	z 25 7.097	22.275	...		
341	M37	L1 1/2x1 1...	.018	0	24	.003	28.8	z 22 12.607	22.275	...		
342	M40	L1 1/2x1 1...	.018	0	19	.002	28.8	z 21 12.607	22.275	...		
343	M188	L1 1/2x1 1...	.018	0	19	.002	28.8	z 19 12.607	22.275	...		
344	M99	L1 1/2x1 1...	.018	0	19	.002	28.8	z 26 12.607	22.275	...		
345	M98	L1 1/2x1 1...	.018	0	21	.002	28.8	z 26 12.607	22.275	...		
346	M16	L1 1/2x1 1...	.018	0	24	.004	28.8	z 21 12.607	22.275	...		
347	M115	L1 1/2x1 1...	.018	0	19	.002	28.8	z 26 12.607	22.275	...		
348	M14	L1 1/2x1 1...	.018	0	20	.003	28.8	z 25 12.607	22.275	...		
349	M131	L1 1/2x1 1...	.018	0	26	.002	28.8	z 8 12.607	22.275	...		
350	M100	L1 1/2x1 1...	.018	0	25	.002	28.8	z 26 12.607	22.275	...		
351	M114	L1 1/2x1 1...	.018	0	20	.002	28.8	z 26 12.607	22.275	...		
352	M130	L1 1/2x1 1...	.018	0	20	.002	28.8	z 16 12.607	22.275	...		
353	M13	L1 1/2x1 1...	.018	0	22	.002	28.8	z 26 12.607	22.275	...		
354	M32	L1 1/2x1 1...	.018	0	24	.002	28.8	z 25 12.607	22.275	...		
355	M169	L1 1/2x1 1...	.018	0	25	.002	28.8	z 23 12.607	22.275	...		
356	M116	L1 1/2x1 1...	.018	0	25	.002	28.8	z 26 12.607	22.275	...		
357	M97	L1 1/2x1 1...	.017	0	23	.002	28.8	z 26 12.607	22.275	...		
358	M185	L1 1/2x1 1...	.017	0	5	.002	28.8	z 19 12.607	22.275	...		

Envelope AISC 3rd: LRFD Steel Code Checks (Continued)

Member	Shape	Code Check	Loc[in]	LC	Shear ...	Loc[in]	...	phi*Pnc [k]	phi*Pnt [k]	...	phi*...	Cb	Eqn
359	M132	L1 1/2x1 1...	.017	0	24 .002	28.8	z 16	12.607	22.275	-..			
360	M29	L1 1/2x1 1...	.017	0	22 .003	28.8	z 26	12.607	22.275	-..			
361	M172	L1 1/2x1 1...	.017	0	26 .002	28.8	z 23	12.607	22.275	-..			
362	M113	L1 1/2x1 1...	.017	0	23 .002	28.8	z 26	12.607	22.275	-..			
363	M170	L1 1/2x1 1...	.017	0	24 .002	28.8	z 23	12.607	22.275	-..			
364	M129	L1 1/2x1 1...	.017	0	22 .002	28.8	z 8	12.607	22.275	-..			
365	M31	L1 1/2x1 1...	.017	0	26 .004	28.8	z 22	12.607	22.275	-..			
366	M171	L1 1/2x1 1...	.016	0	25 .002	28.8	z 23	12.607	22.275	-..			
367	M180	L1 1/2x1 1...	.016	0	24 .002	28.8	z 19	12.607	22.275	-..			
368	M186	L1 1/2x1 1...	.016	0	26 .002	28.8	z 19	12.607	22.275	-..			
369	M178	L1 1/2x1 1...	.016	0	26 .002	28.8	z 19	12.607	22.275	-..			
370	M179	L1 1/2x1 1...	.016	0	25 .002	28.8	z 19	12.607	22.275	-..			
371	M177	L1 1/2x1 1...	.015	0	20 .002	28.8	z 19	12.607	22.275	-..			
372	M187	L1 1/2x1 1...	.015	0	23 .002	28.8	z 19	12.607	22.275	-..			
373	M62	L1 1/2x1 1...	.014	0	19 .002	28.8	z 20	12.607	22.275	-..			
374	M63	L1 1/2x1 1...	.014	0	25 .002	28.8	z 23	12.607	22.275	-..			
375	M61	L1 1/2x1 1...	.014	0	21 .002	28.8	z 23	12.607	22.275	-..			
376	M64	L1 1/2x1 1...	.014	0	23 .002	28.8	z 20	12.607	22.275	-..			
377	M153	L1 1/2x1 1...	.014	0	25 .002	28.8	z 20	12.607	22.275	-..			
378	M156	L1 1/2x1 1...	.014	0	26 .002	28.8	z 20	12.607	22.275	-..			
379	M154	L1 1/2x1 1...	.013	0	24 .002	28.8	z 20	12.607	22.275	-..			
380	M155	L1 1/2x1 1...	.013	0	22 .002	28.8	z 20	12.607	22.275	-..			
381	M65	L1 1/2x1 1...	.012	0	16 .001	41.049	z 22	7.423	22.275	-..			
382	M38	L1 1/2x1 1...	.012	0	17 .002	28.8	z 21	12.607	22.275	-..			
383	M66	L1 1/2x1 1...	.011	0	12 .001	41.049	z 19	7.423	22.275	-..			
384	M23	L1 1/2x1 1...	.009	0	13 .002	28.8	z 22	12.607	22.275	-..			
385	M281	L1 1/2x1 1...	.008	0	2 .003	0	y 26	7.097	22.275	-..			
386	M279	L1 1/2x1 1...	.008	14.4	2 .003	14.4	y 26	7.097	22.275	-..			
387	M15	L1 1/2x1 1...	.006	0	26 .002	28.8	z 26	12.607	22.275	-..			
388	M30	L1 1/2x1 1...	.006	0	20 .002	28.8	z 25	12.607	22.275	-..			

SITE NUMBER: Clinton/I-95/X63/At 1

SITE NAME: CT11031B

DATE: 10/25/2021

BY: AN CHECKED BY: DC



Calculate Threaded Rod Capacity (AISC 15th Edition)

Threaded Rod Properties	
Nominal Diameter, d	0.625 in.
Nominal Area, Ab	0.307 in ²
Steel Grade	A36
Yield Strength, Fy	36 ksi
Tensile Strength, Fu	58 ksi
Nominal Tensile Strength, Fnt	43.5 ksi
Nominal Shear Strength, Fnv	26.1 ksi

Threaded Rod Capacity (ASD)					
	Ultimate Load	Factored Load ($\phi=0.75$)	Safety Factor	# of Rods	Total Factored Capacity
<u>Tension, Tn (lbs.)</u>	13345.7	10009.2	2	11	55050.9
<u>Shear, Vn (lbs.)</u>	8007.4	6005.5	2	11	33030.5

Enveloped Forces From Antenna Supports:

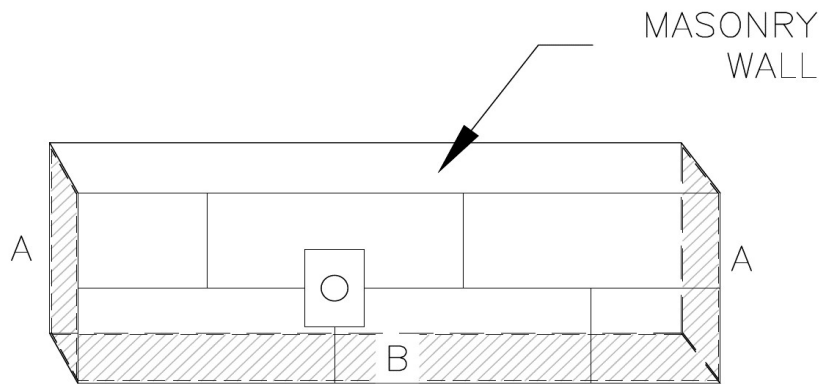
Tension, t (lbs.) 14604 $\leq$ 55050.9 OK

Shear, v (lbs.) 16816 $\leq$ 33030.5 OK

Interaction Check:

$$\begin{aligned} t/\phi T_n + v/\phi V_n &\leq 1.0 \\ &= 0.774 \quad \underline{\text{OK}} \end{aligned}$$

Masonry Connections



RESISTING SHEAR

AREA "A"	192	(in ²)
AREA "B"	768	(in ²)
Grout Shear	25	(Psi)
Shear resistance	18000	(lb)
Max Pullout force	14604	(lb)

check	81%
-------	-----

Exhibit E

Mount Analysis

Mount Analysis Report

Site Address	21 East Main Street Clinton, CT 06413
Site Name	Clinton/I-95/X63/AT_1
Site ID	
Project Name	
Design Codes	2015 International Building Code TIA-222-G Standards 2018 CT State Building Code

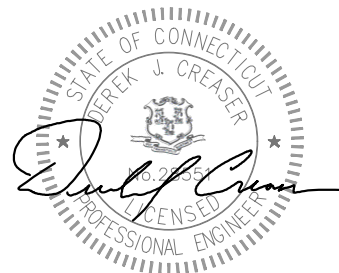
	Stress Ratio	Overall Result
Existing Mounts with Modifications		

Client:



35 Griffin Rd S
Bloomfield, CT 06002

Date: 06/28/2021



CN = Derek J. Creaser, P.E.
email = dcreaser@clinellc.com
C = US O = Centerline
Communications OU = Director
- A&E Services
2021.06.29 14:41:18 -04'00'

Scope of Work:

Centerline Communications was authorized by T-Mobile Northeast LLC to perform an analysis of the existing antenna mounts to determine their capacity to support the existing and proposed T-Mobile equipment listed in this report. These mounts were analyzed using RISA 3D v17.0.4.

Final Appurtenances Configuration:

Elevation (ft)	Position ¹	Azimuth (degrees)	Quantity	Appurtenance	Sector
60	MP1	0	1	APX16DWV-16DWV-S-E-A20 Antenna	Sector 1
60	MP2	0	1	APXVAALL24_43-U-NA20 Antenna	
60	MP2	0	1	4449 B71+B85 RRH	
60	MP1	0	1	Twin Style 1A PCS TMA	
60	MP1	0	1	Twin Style 1B AWS TMA	
60	-	120	1	APX16DWV-16DWV-S-E-A20 Antenna	Sector 2
60	-	120	1	APXVAALL24_43-U-NA20 Antenna	
60	-	120	1	4449 B71+B85 RRH	
60	-	120	1	Twin Style 1A PCS TMA	
60	-	120	1	Twin Style 1B AWS TMA	
60	-	220	1	APX16DWV-16DWV-S-E-A20 Antenna	Sector 3
60	-	220	1	APXVAALL24_43-U-NA20 Antenna	
60	-	220	1	4449 B71+B85 RRH	
60	-	220	1	Twin Style 1A PCS TMA	
60	-	220	1	Twin Style 1B AWS TMA	

Notes:

1. MP represent Mount Pipe.
2. Existing Appurtenance
3. **Proposed Appurtenance**

Design Criteria:

Design Codes:

2015 International Building Code
 ASCE 7-10
 TIA-222-G Standards
 2018 CT State Building Code

Ultimate Wind Speed	135 mph
Nominal Wind Speed	105 mph
Wind Speed with Ice	50 mph
Ice Thickness	0.75 in.
Exposure Category	C
Topographic Category	1
Structure Class	II
Site Soil Class (Assumed)	D – Stiff Soil
Seismic Design Category	B
Spectral Response Acceleration Parameter at a Short Periods, S_s	0.169 g
Spectral Response Acceleration Parameter at a Period of 1 Second, S_1	0.059 g
Short Period Site Coefficient, F_a	1.6
Long Period Site Coefficient, F_v	2.4

*Refer to calculations for additional design criteria.

Conclusion:

The results of the analysis concluded that the proposed T-Mobile mounts are adequate to support the existing and proposed T-Mobile equipment loading upon completion of the modifications. Centerline Communications recommends the following:

- Replace existing pipe with (1) 2.5" STD x 10.5ft pipe in Positions A-2, B-2, & C-2.
- Install a new Site Pro 1 CWT8-LL Mount Assembly 24" minimum below the existing mount in all sectors. Field verify that the proposed mount matches the existing mount.

	Stress Ratio	Overall Result
Existing Mounts with Modifications	51.2%	PASS

Reference Documents:

- T-Mobile RFDS CT11031B_L600_draft, dated 05/19/2021
- Lease Exhibit by Atlantis Group, dated 12/12/2014
- Structural Analysis by FDH, dated 12/19/2014

Assumptions and Limitations:

- The calculations performed by Centerline Communications are limited to the structural members in these calculations only.
- Structural calculations in this report do not check the adequacy of the supporting structure, other mounts, or coax mounting attachments.
- The calculation assumes all structural members to be in good condition i.e. no damage, rust, or other defects.

Photos:



Existing Alpha Sector



Existing Gamma & Beta Sector



Overall

Design Calculations

Site Details	
Site Name	CLINTON/I-95/X63/AT_1
Carrier	T-Mobile
City, State	Clinton, CT
Project	CT1191B

Mount Details	
Mount Type	T-Arm
Mount Height, z	60 ft
Number of Sectors	3
Structure Type	SST
Structure Height, h	67.42 ft

Topographic Factors	
Topographic Category	1
Feature	Flat
Crest Height, H	N/A ft
Distance from Crest, x	N/A ft
Slope (H/L)	N/A
Topographic Factor, K_{zt}	1.00

Seismic Factors	
Importance Factor, I_E	1
Short Period Spectral Acceleration, S_s	0.169 g
1 Second Period Spectral Acceleration, S_1	0.059 g
Long-Period Transition Period, T_L	6
Design Category	B
Short Period Site Coefficient, F_a	1.60
Long-Period Site Coefficient, F_v	2.4

Site Parameters		
Ultimate Wind Speed, V_{ULT}	135	mph
Nominal Wind Speed, V	105	mph
Wind Speed with Ice, V_i	50	mph
Design Ice Thickness, t_i	0.75	in
Structural Class	II	
Exposure Category	C	
Site Soil Class	D-Stiff Soil (Assumed)	

Code	
Building Code	IBC 2015
TIA Code	TIA-222-G
ASCE Code	7-10

Site Constants		
Importance Factor, I (Wind no Ice)	1.00	
Importance Factor, I (Ice Thickness)	1.00	
Importance Factor, I (wind with Ice)	1.00	
Wind Direction Prob. Factor, K_d	0.95	
Velocity Pressure Coefficient, K_z	1.14	
Gust Effect Factor, G_h	1.00	
Design Ice Thickness, t_{iz}	1.59	in
Velocity Pressure, q_z	30.47	psf
Velocity Pressure with Ice, q_{zi}	6.91	psf
Shielding Factor, K_a	1.00	
Flat Velocity Pressure ($Ca = 2.0$)	60.95	psf
Round Velocity Pressure ($Ca = 1.2$)	36.57	psf
Round Velocity Pressure with Ice ($Ca = 1.2$)	8.29	psf
Engineer Initials	LP	

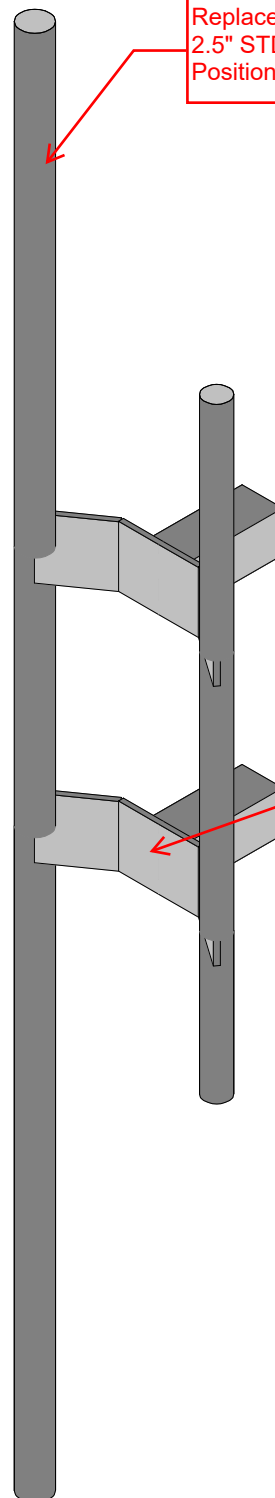
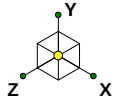
[illegible]



*Dish force coefficient is calculated per Annex C.2 of TIA-222-G, if available.

[illegible]

Existing Mounts with
Modifications Results



Replace existing pipe with (1)
2.5" STD x 10.5FT pipe in
Positions A-2, B-2, & C-2.

Install a new Site Pro 1 CWT8-LL
Mount Assembly 24" minimum
below the existing mount in all
sectors. Field verify that the
proposed mount matches the
existing mount.

Centerline Communication...

LP

CT11031B

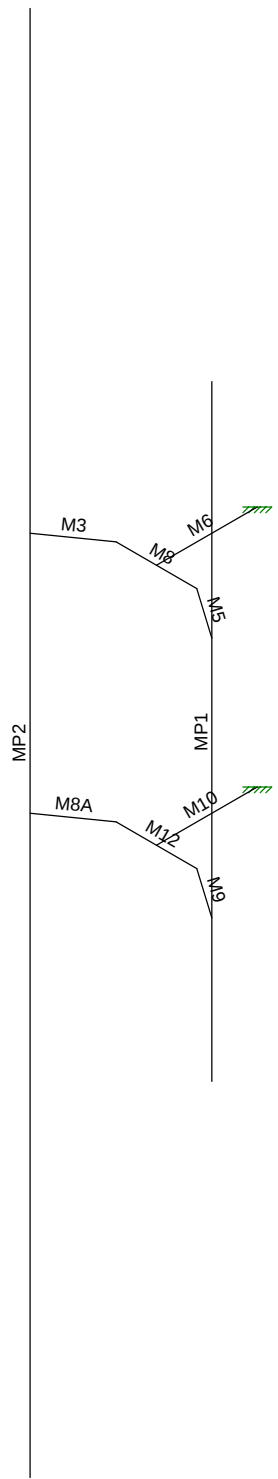
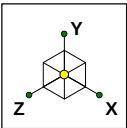
CT11031B Mount Analysis

RENDER

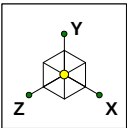
SK - 1

June 28, 2021 at 1:34 PM

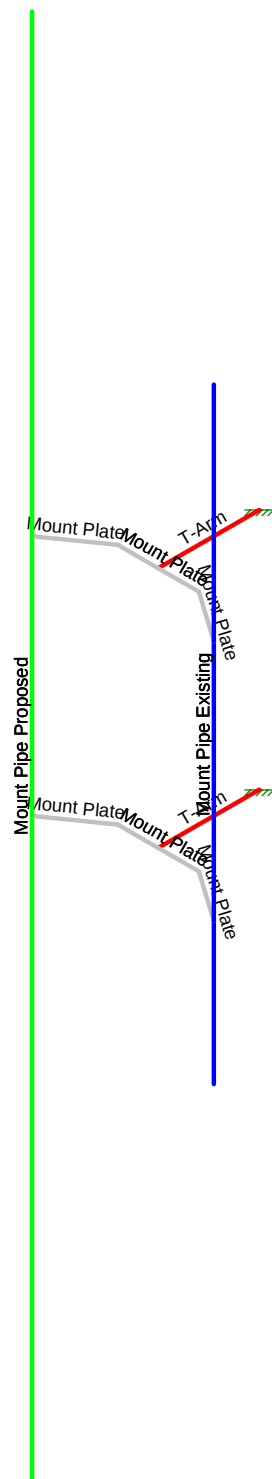
CT1131B Mount Analysis.r3d



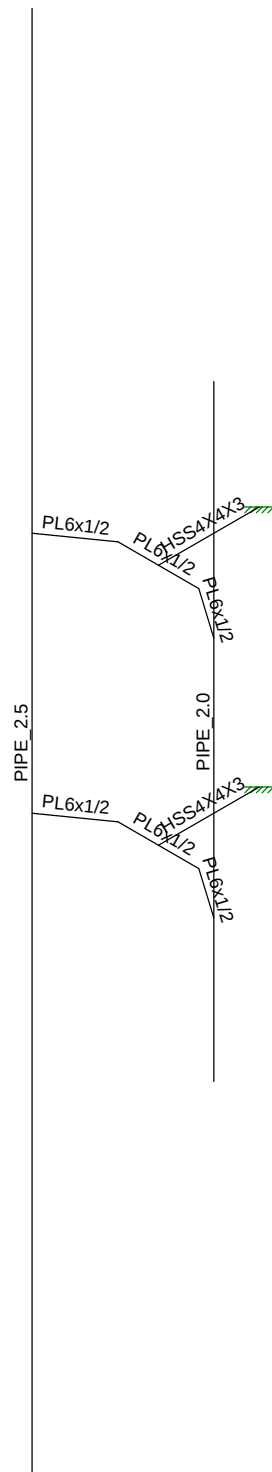
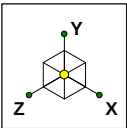
Centerline Communication...	CT11031B Mount Analysis WIREFRAME	SK - 2
LP		June 28, 2021 at 1:35 PM
CT11031B		CT1131B Mount Analysis.r3d



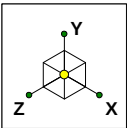
Section Sets	
	Mount Pipe Existing
	Mount Pipe Proposed
	T-Arm
	Mount Plate



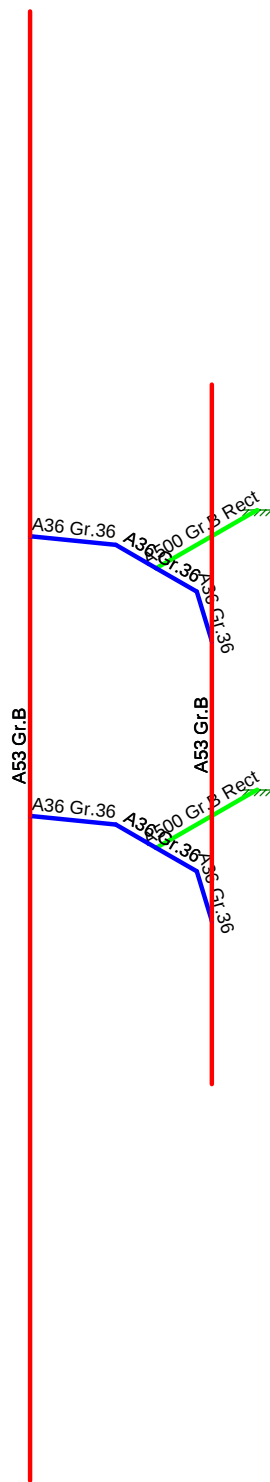
Centerline Communication...	CT11031B Mount Analysis SECTION SETS	SK - 3
LP		June 28, 2021 at 1:35 PM
CT11031B		CT1131B Mount Analysis.r3d



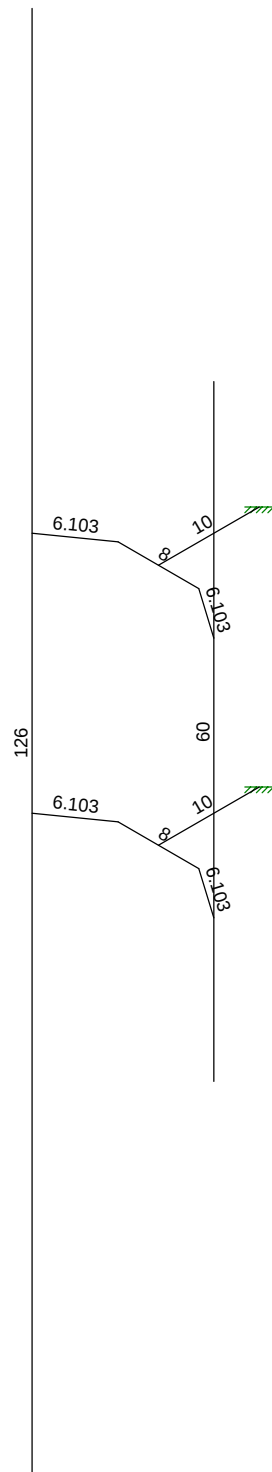
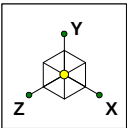
Centerline Communication...	CT11031B Mount Analysis MEMBER SHAPE	SK - 4
LP		June 28, 2021 at 1:35 PM
CT11031B		CT1131B Mount Analysis.r3d



Material Sets	
■	A36 Gr.36
■	A500 Gr.B Rect
■	A53 Gr.B

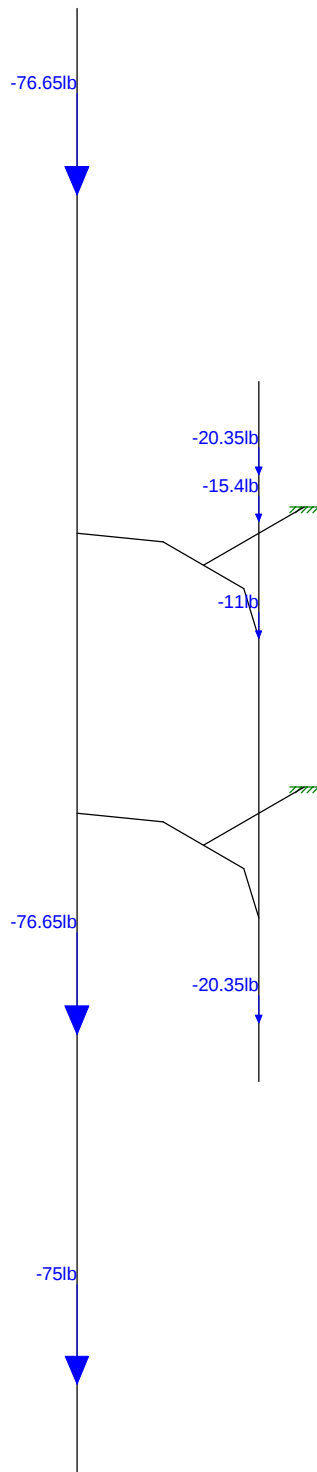
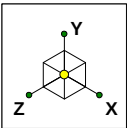


Centerline Communication...	CT11031B Mount Analysis MATERIAL SETS	SK - 5
LP		June 28, 2021 at 1:35 PM
CT11031B		CT1131B Mount Analysis.r3d



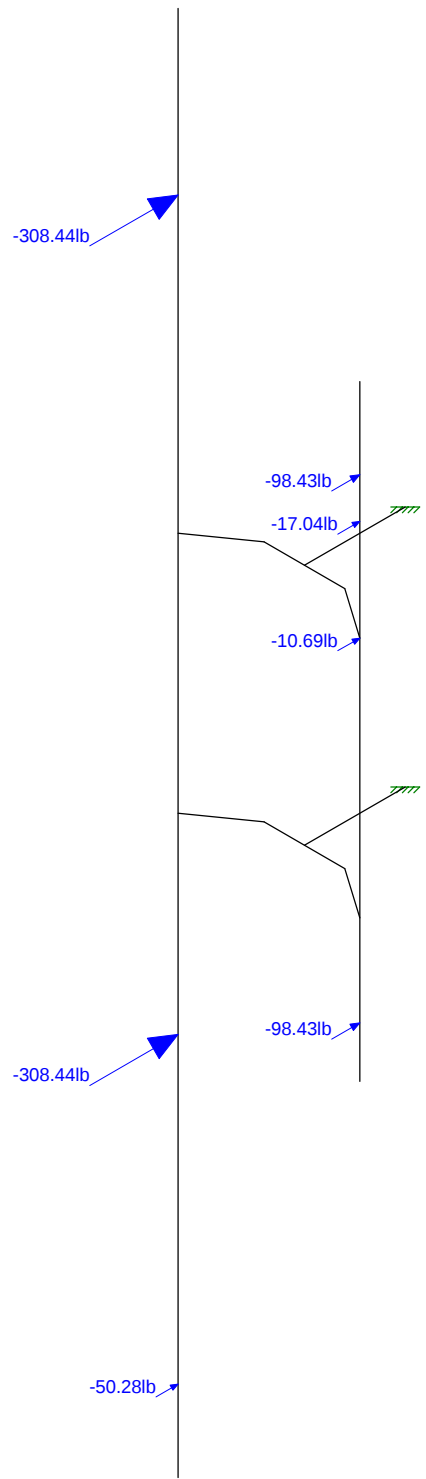
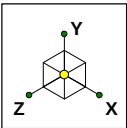
Member Length (in) Displayed

Centerline Communication...	CT11031B Mount Analysis MEMBER LENGTH	SK - 6
LP		June 28, 2021 at 1:36 PM
CT11031B		CT1131B Mount Analysis.r3d



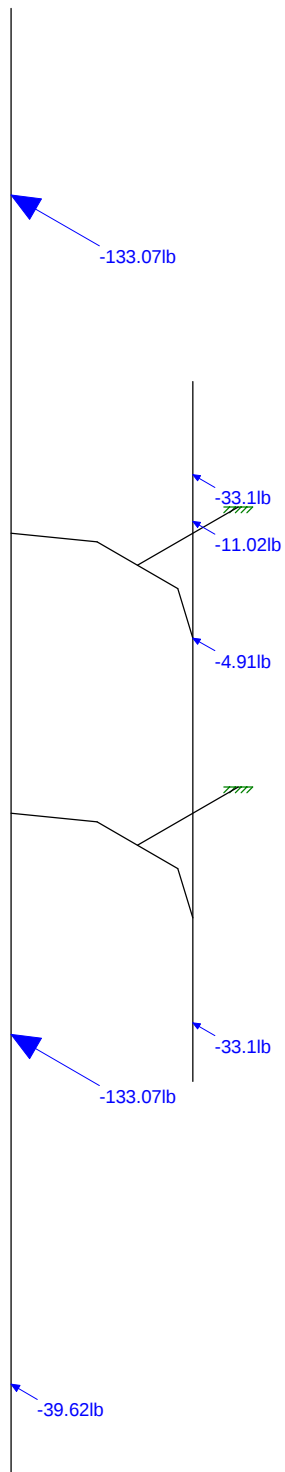
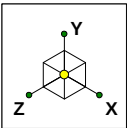
Loads: BLC 1, Dead Load

Centerline Communication...	CT11031B Mount Analysis DEAD LOAD	SK - 7
LP		June 28, 2021 at 1:36 PM
CT11031B		CT1131B Mount Analysis.r3d



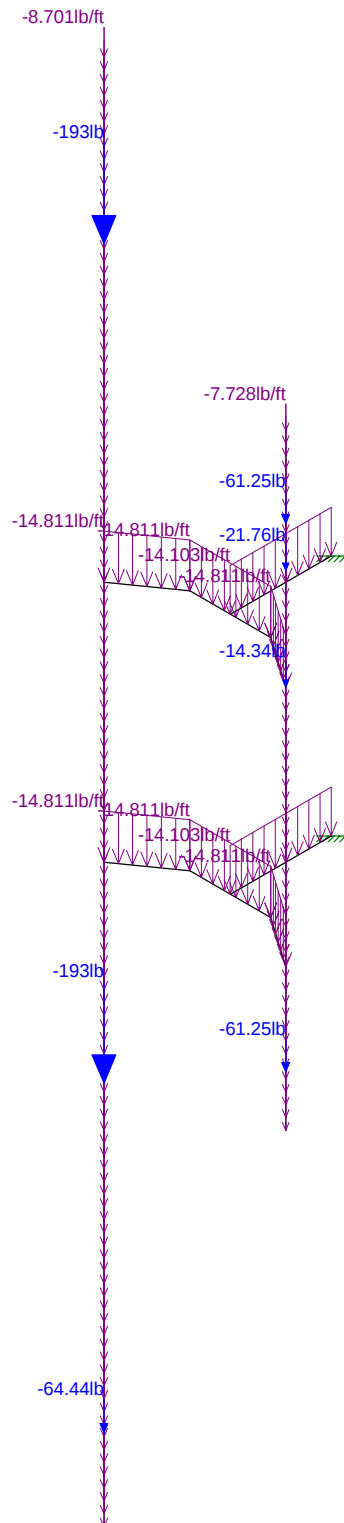
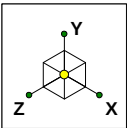
Loads: BLC 2, Wind 0

Centerline Communication...	CT11031B Mount Analysis WIND 0	SK - 8
LP		June 28, 2021 at 1:36 PM
CT11031B		CT1131B Mount Analysis.r3d



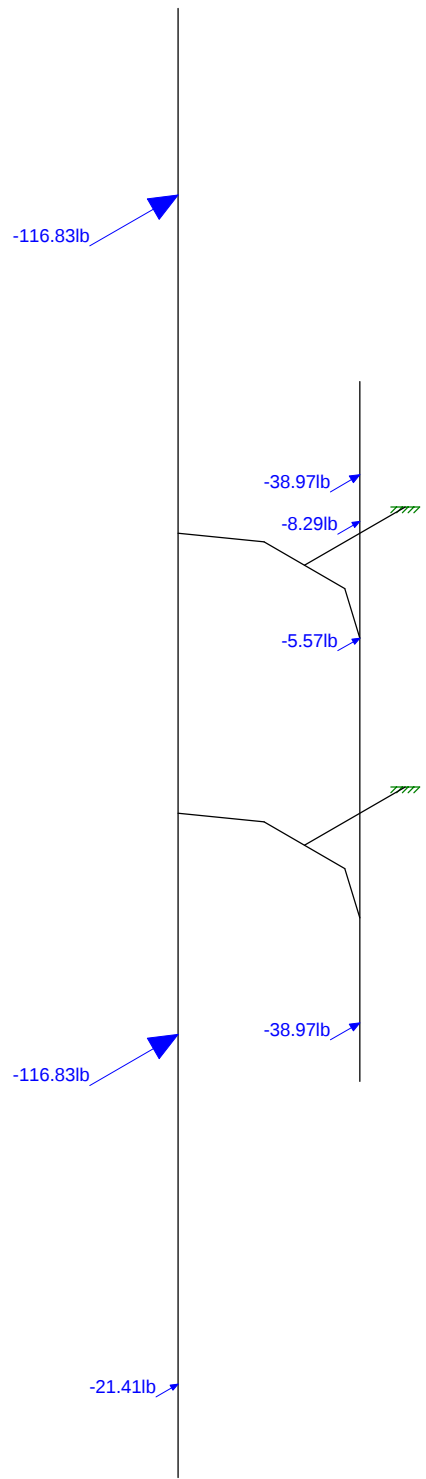
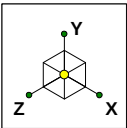
Loads: BLC 5, Wind 90

Centerline Communication...	CT11031B Mount Analysis WIND 90	SK - 9
LP		June 28, 2021 at 1:36 PM
CT11031B		CT1131B Mount Analysis.r3d



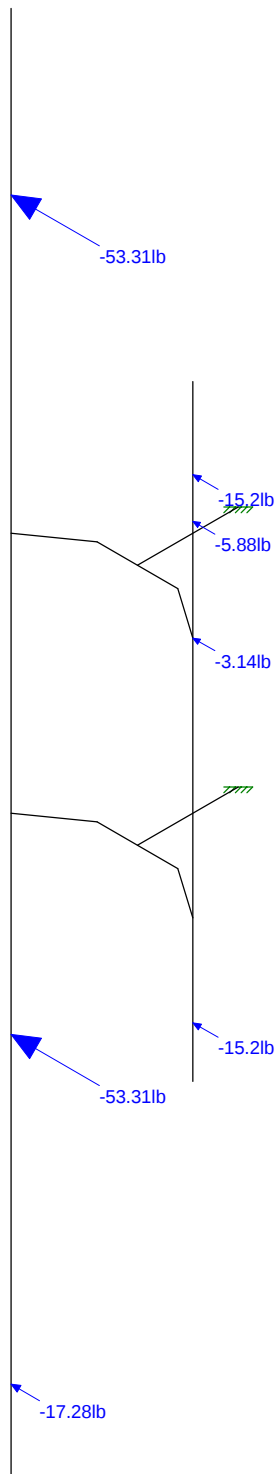
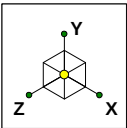
Loads: BLC 9, Ice Weight

Centerline Communication...	CT11031B Mount Analysis ICE WEIGHT	SK - 10
LP		June 28, 2021 at 1:37 PM
CT11031B		CT1131B Mount Analysis.r3d



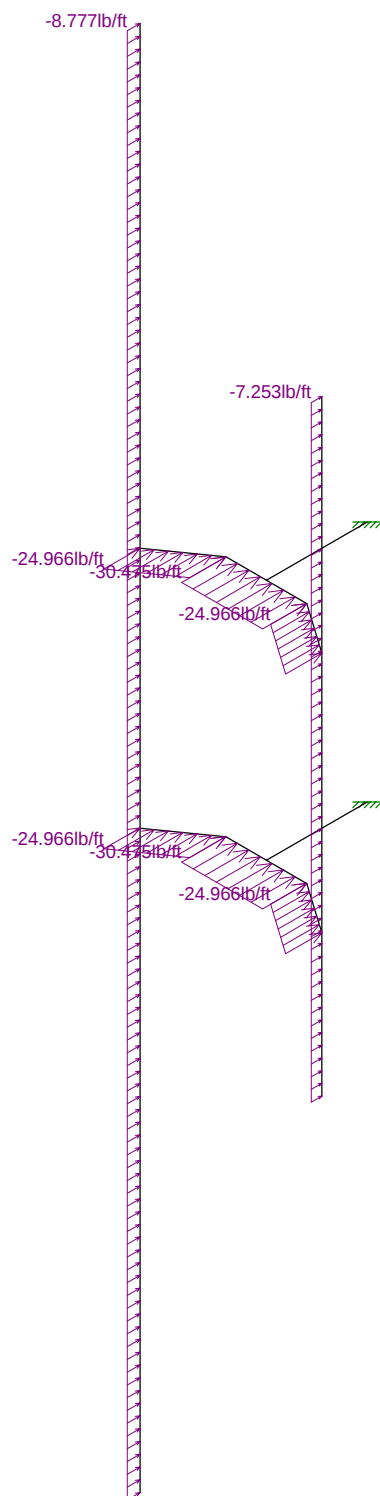
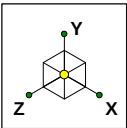
Loads: BLC 10, Ice + Wind 0

Centerline Communication...	CT11031B Mount Analysis ICE + WIND 0	SK - 11
LP		June 28, 2021 at 1:37 PM
CT11031B		CT1131B Mount Analysis.r3d



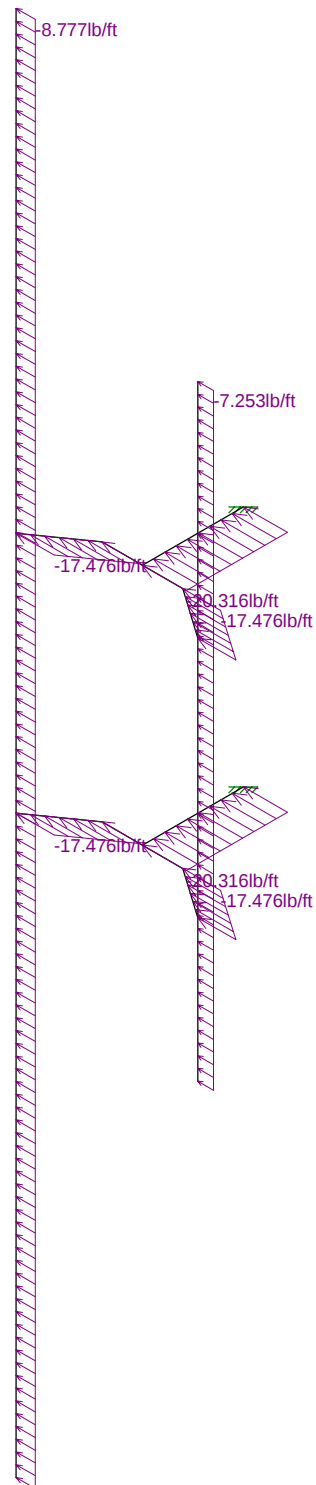
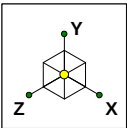
Loads: BLC 13, Ice + Wind 90

Centerline Communication...	CT11031B Mount Analysis ICE + WIND 90	SK - 12
LP		June 28, 2021 at 1:37 PM
CT11031B		CT1131B Mount Analysis.r3d



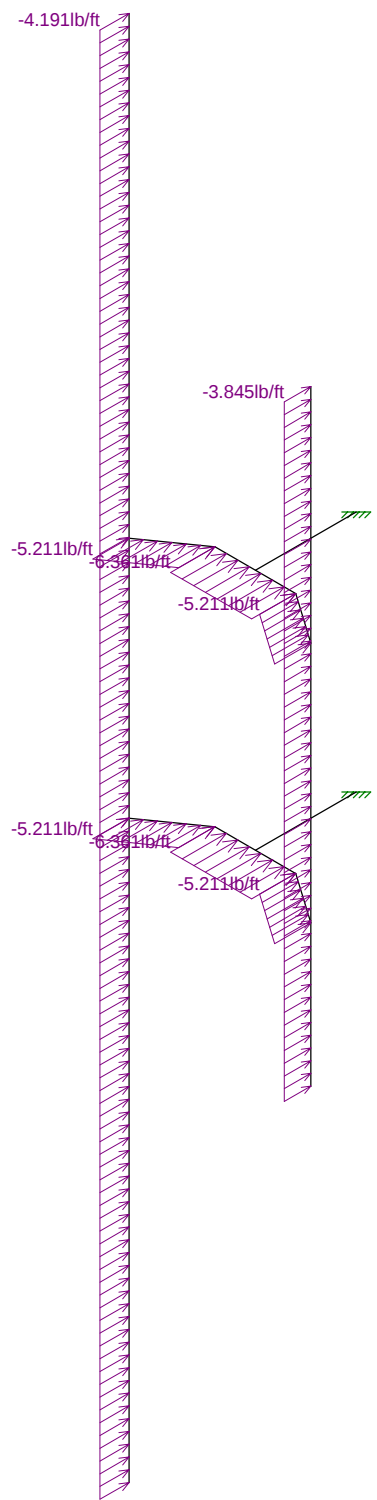
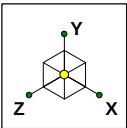
Loads: BLC 17, Distri. Wind Z

Centerline Communication...	CT11031B Mount Analysis DISTR. WIND Z	SK - 13
LP		June 28, 2021 at 1:37 PM
CT11031B		CT1131B Mount Analysis.r3d



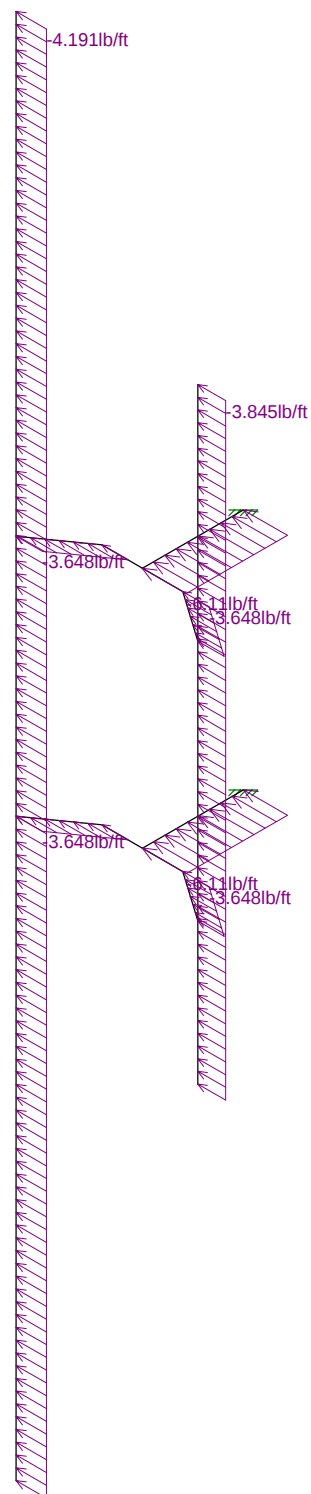
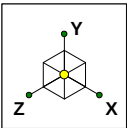
Loads: BLC 18, Distri. Wind X

Centerline Communication...	CT11031B Mount Analysis DISTR. WIND X	SK - 14
LP		June 28, 2021 at 1:38 PM
CT11031B		CT1131B Mount Analysis.r3d



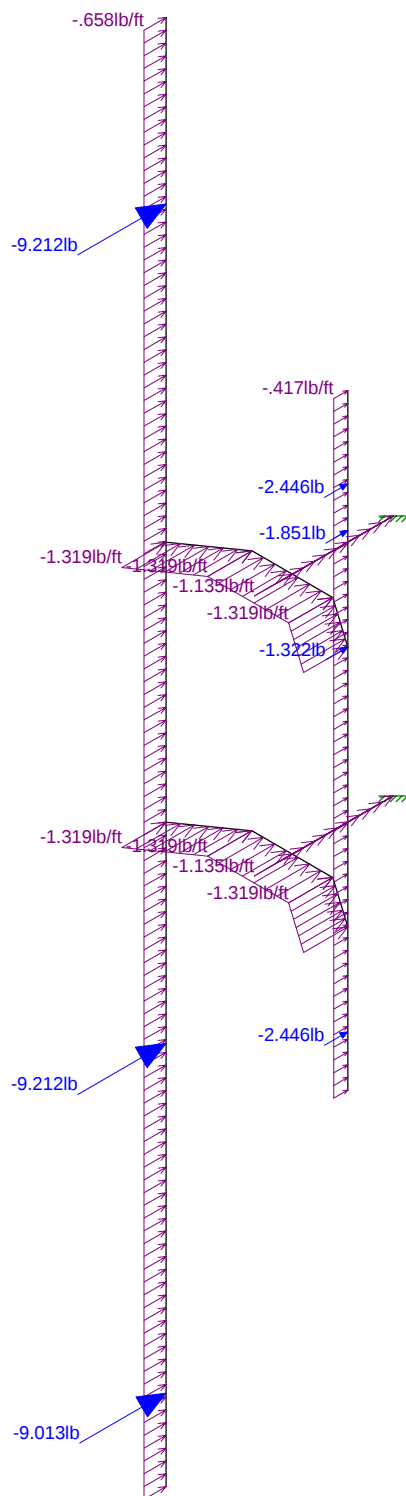
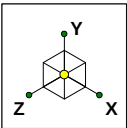
Loads: BLC 19, Distri. Ice + Wind Z

Centerline Communication...	CT11031B Mount Analysis DISTR. ICE + WIND 0	SK - 15
LP		June 28, 2021 at 1:38 PM
CT11031B		CT1131B Mount Analysis.r3d



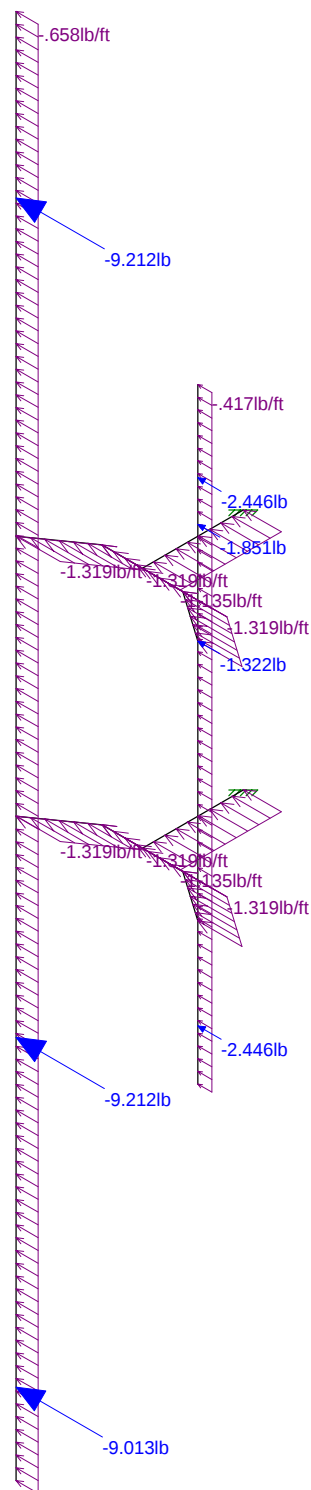
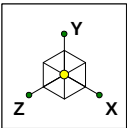
Loads: BLC 20, Distr. Ice + Wind X

Centerline Communication...	CT11031B Mount Analysis DISTR. ICE + WIND 90	SK - 16
LP		June 28, 2021 at 1:38 PM
CT11031B		CT1131B Mount Analysis.r3d



Loads: BLC 21, Seismic Load Z

Centerline Communication...	CT11031B Mount Analysis SEISMIC Z	SK - 17
LP		June 28, 2021 at 1:39 PM
CT11031B		CT1131B Mount Analysis.r3d



Loads: BLC 22, Seismic Load X

Centerline Communication...	CT11031B Mount Analysis SEISMIC X	SK - 18
LP		June 28, 2021 at 1:39 PM
CT11031B		CT1131B Mount Analysis.r3d

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[lb/f...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	490	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	490	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	490	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	490	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	490	50	1.25	65	1.15
8	A913 Gr.65	29000	11154	.3	.65	490	65	1.1	80	1.1

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design R...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipe Existing	PIPE_2.0	None	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
2	Mount Pipe Propos...	PIPE_2.5	None	None	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
3	T-Arm	HSS4X4X3	None	None	A500 Gr....	Typical	2.58	6.21	6.21	10
4	Mount Plate	PL6x1/2	None	None	A36 Gr.36	Typical	3	.063	9	.237

Joint Coordinates and Temperatures

	Label	X [in]	Y [in]	Z [in]	Temp [F]	Detach From Diap...
1	N1	-2	-38	1.5	0	
2	N2	-2	22	1.5	0	
3	N3	-2	0	1.5	0	
4	N4	-20	-81	1.5	0	
5	N5	-20	45	1.5	0	
6	N6	-20	0	1.5	0	
7	N7	-7	0	-2	0	
8	N8	-15	0	-2	0	
9	N9	-11	0	-2	0	
10	N10	-11	0	-12	0	
11	N11	-2	-24	1.5	0	
12	N12	-20	-24	1.5	0	
13	N13	-7	-24	-2	0	
14	N14	-15	-24	-2	0	
15	N15	-11	-24	-2	0	
16	N16	-11	-24	-12	0	

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N10	max	461.225	5	1348.3	2	879.234	9	674.392	14	554.607	4	221.694	14
2		min	33.488	15	-989.786	14	-979.718	8	-986.76	2	-235.711	15	-281.056	2
3	N16	max	488.631	12	1431.156	7	912.821	2	629.822	9	624.022	11	216.317	9
4		min	-123.412	16	-907.239	9	-813.866	15	-1066.185	7	-364.919	8	-289.18	7
5	Totals:	max	937.16	12	1316.903	22	1778.552	9						
6		min	0	1	378.355	9	-1778.552	8						

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N10	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	N16	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Hot Rolled Steel Design Parameters

	Label	Shape	Length[in]	Lbyy[in]	Lbzz[in]	Lcomp top[in]	Lcomp bot[in]	L-torq...	Kyy	Kzz	Cb	Function
1	MP1	Mount Pipe ...	60									Lateral
2	MP2	Mount Pipe ...	126									Lateral
3	M3	Mount Plate	6.103									Lateral
4	M5	Mount Plate	6.103									Lateral
5	M6	T-Arm	10									Lateral
6	M8	Mount Plate	8	11								Lateral
7	M8A	Mount Plate	6.103									Lateral
8	M9	Mount Plate	6.103									Lateral
9	M10	T-Arm	10									Lateral
10	M12	Mount Plate	8	11								Lateral

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	MP1	N2	N1			Mount Pipe Ex...	None	None	A53 Gr.B	Typical
2	MP2	N5	N4			Mount Pipe Pr...	None	None	A53 Gr.B	Typical
3	M3	N6	N8			Mount Plate	None	None	A36 Gr.36	Typical
4	M5	N7	N3			Mount Plate	None	None	A36 Gr.36	Typical
5	M6	N9	N10			T-Arm	None	None	A500 Gr.B...	Typical
6	M8	N8	N7			Mount Plate	None	None	A36 Gr.36	Typical
7	M8A	N12	N14			Mount Plate	None	None	A36 Gr.36	Typical
8	M9	N13	N11			Mount Plate	None	None	A36 Gr.36	Typical



Company : Centerline Communications, LLC
Designer : LP
Job Number : CT11031B
Model Name : CT11031B Mount Analysis

June 28, 2021
1:39 PM
Checked By: DC, JG

Member Primary Data (Continued)

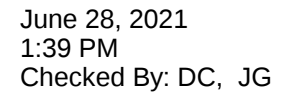
	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
9	M10	N15	N16			T-Arm	None	None	A500 Gr.B...	Typical
10	M12	N14	N13			Mount Plate	None	None	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	MP1						Yes	** NA **			None
2	MP2						Yes	** NA **			None
3	M3						Yes	** NA **			None
4	M5						Yes	** NA **			None
5	M6						Yes	** NA **			None
6	M8						Yes	** NA **			None
7	M8A						Yes	** NA **			None
8	M9						Yes	** NA **			None
9	M10						Yes	** NA **			None
10	M12						Yes	** NA **			None

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(P...
1	Dead Load	DL		-1			7		
2	Wind 0	WLZ					14		
3	Wind 30	None					14		
4	Wind 60	None					14		
5	Wind 90	WLX					14		
6	Wind 120	None					14		
7	Wind 150	None					14		
8	Wind 180	WLZ					14		
9	Ice Weight	DL					7	10	
10	Ice + Wind 0	WLZ					14		
11	Ice + Wind 30	None					14		
12	Ice + Wind 60	None					14		
13	Ice + Wind 90	WLX					14		
14	Ice + Wind 120	None					14		
15	Ice + Wind 150	None					14		
16	Ice + Wind 180	WLZ					14		
17	Distri. Wind Z	WLZ						10	
18	Distri. Wind X	WLX						10	
19	Distri. Ice + Wind Z	WLZ						10	

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Company : Centerline Communications, LLC
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Model Name : CT11031B Mount Analysis

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Load Combinations (Continued)

Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
31 0.9D + 1.0Eh 30°	Yes	Y		1	.9	21	.866	22	.5														
32 0.9D + 1.0Eh 60°	Yes	Y		1	.9	21	.5	22	.866														
33 0.9D + 1.0Eh 90°	Yes	Y		1	.9	21		22	1														
34 0.9D + 1.0Eh 120°	Yes	Y		1	.9	21	-.5	22	.866														
35 0.9D + 1.0Eh 150°	Yes	Y		1	.9	21	-.866	22	.5														
36 0.9D + 1.0Eh 180°	Yes	Y		1	.9	21	-1	22															
37 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	23	1.5	2	.292	17	.292	18											
38 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	23	1.5	3	.292	17	.253	18	.146										
39 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	23	1.5	4	.292	17	.146	18	.253										
40 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	23	1.5	5	.292	17		18	.292										
41 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	23	1.5	6	.292	17	-.146	18	.253										
42 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	23	1.5	7	.292	17	-.253	18	.146										
43 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	23	1.5	8	.292	17	-.292	18											
44 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	24	1.5	2	.292	17	.292	18											
45 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	24	1.5	3	.292	17	.253	18	.146										
46 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	24	1.5	4	.292	17	.146	18	.253										
47 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	24	1.5	5	.292	17		18	.292										
48 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	24	1.5	6	.292	17	-.146	18	.253										
49 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	24	1.5	7	.292	17	-.253	18	.146										
50 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	24	1.5	8	.292	17	-.292	18											
51 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	25	1.5	2	.292	17	.292	18											
52 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	25	1.5	3	.292	17	.253	18	.146										
53 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	25	1.5	4	.292	17	.146	18	.253										
54 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	25	1.5	5	.292	17		18	.292										
55 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	25	1.5	6	.292	17	-.146	18	.253										
56 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	25	1.5	7	.292	17	-.253	18	.146										
57 1.0D + 1.5Lv + 1.0W (60 m...	Yes	Y		1	1	25	1.5	8	.292	17	-.292	18											
58 1.2D + 1.0Lv + 1.0W (30 m...	Yes	Y		1	1.2	23	1	2	.082	17	.082	18											
59 1.2D + 1.0Lv + 1.0W (30 m...	Yes	Y		1	1.2	23	1	3	.082	17	.071	18	.041										
60 1.2D + 1.0Lv + 1.0W (30 m...	Yes	Y		1	1.2	23	1	4	.082	17	.041	18	.071										
61 1.2D + 1.0Lv + 1.0W (30 m...	Yes	Y		1	1.2	23	1	5	.082	17		18	.082										
62 1.2D + 1.0Lv + 1.0W (30 m...	Yes	Y		1	1.2	23	1	6	.082	17	-.041	18	.071										
63 1.2D + 1.0Lv + 1.0W (30 m...	Yes	Y		1	1.2	23	1	7	.082	17	-.071	18	.041										
64 1.2D + 1.0Lv + 1.0W (30 m...	Yes	Y		1	1.2	23	1	8	.082	17	-.082	18											
65 1.2D + 1.0Lv + 1.0W (30 m...	Yes	Y		1	1.2	24	1	2	.082	17	.082	18											
66 1.2D + 1.0Lv + 1.0W (30 m...	Yes	Y		1	1.2	24	1	3	.082	17	.071	18	.041										
67 1.2D + 1.0Lv + 1.0W (30 m...	Yes	Y		1	1.2	24	1	4	.082	17	.041	18	.071										
68 1.2D + 1.0Lv + 1.0W (30 m...	Yes	Y		1	1.2	24	1	5	.082	17		18	.082										
69 1.2D + 1.0Lv + 1.0W (30 m...	Yes	Y		1	1.2	24	1	6	.082	17	-.041	18	.071										
70 1.2D + 1.0Lv + 1.0W (30 m...	Yes	Y		1	1.2	24	1	7	.082	17	-.071	18	.041										

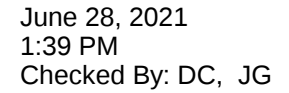
Page 6

Exhibit F

Power Density/RF Emissions Report



EBI Consulting

environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: CT11031B

Clinton/I-95/X63/AT_I
21 East Main Street
Clinton, Connecticut 06413

September 23, 2021

EBI Project Number: 6221002668

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	40.85%



September 23, 2021

T-Mobile

Attn: Jason Overbey, RF Manager

35 Griffin Road South

Bloomfield, Connecticut 06002

Emissions Analysis for Site: CT11031B - Clinton/I-95/X63/AT_I

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **21 East Main Street** in **Clinton, 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 21 East Main Street in Clinton, 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 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 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.
- 6) 2 UMTS channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 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) 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.
- 9) 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.
- 10) The antennas used in this modeling are the Ericsson AIR 32 for the 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s) in Sector A, the Ericsson AIR 32 for the 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz channel(s) in Sector B, the Ericsson AIR 32 for the 1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 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.
- 11) The antenna mounting height centerline of the proposed antennas is 60 feet above ground level (AGL).
- 12) 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.
- 13) 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 #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Ericsson AIR 32	Make / Model:	Ericsson AIR 32	Make / Model:	Ericsson AIR 32
Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz / 2100 MHz
Gain:	15.35 dBd / 15.35 dBd / 15.85 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.35 dBd / 15.85 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.35 dBd / 15.85 dBd / 15.85 dBd
Height (AGL):	60 feet	Height (AGL):	60 feet	Height (AGL):	60 feet
Channel Count:	10	Channel Count:	10	Channel Count:	10
Total TX Power (W):	420 Watts	Total TX Power (W):	420 Watts	Total TX Power (W):	420 Watts
ERP (W):	15,149.08	ERP (W):	15,149.08	ERP (W):	15,149.08
Antenna A1 MPE %:	18.68%	Antenna B1 MPE %:	18.68%	Antenna C1 MPE %:	18.68%
Antenna #:	2	Antenna #:	2	Antenna #:	2
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	Frequency Bands:	600 MHz / 600 MHz / 700 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.65 dBd
Height (AGL):	60 feet	Height (AGL):	60 feet	Height (AGL):	60 feet
Channel Count:	5	Channel Count:	5	Channel Count:	5
Total TX Power (W):	200 Watts	Total TX Power (W):	200 Watts	Total TX Power (W):	200 Watts
ERP (W):	4,151.83	ERP (W):	4,151.83	ERP (W):	4,151.83
Antenna A2 MPE %:	12.18%	Antenna B2 MPE %:	12.18%	Antenna C2 MPE %:	12.18%



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Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	30.86%
Verizon	9.99%
Site Total MPE % :	40.85%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	30.86%
T-Mobile Sector B Total:	30.86%
T-Mobile Sector C Total:	30.86%
Site Total MPE % :	40.85%

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 1900 MHz GSM	4	1028.30	60.0	50.71	1900 MHz GSM	1000	5.07%
T-Mobile 1900 MHz LTE	2	2056.61	60.0	50.71	1900 MHz LTE	1000	5.07%
T-Mobile 2100 MHz UTMS	2	1153.78	60.0	28.45	2100 MHz UTMS	1000	2.84%
T-Mobile 2100 MHz LTE	2	2307.55	60.0	56.90	2100 MHz LTE	1000	5.69%
T-Mobile 600 MHz LTE	2	591.73	60.0	14.59	600 MHz LTE	400	3.65%
T-Mobile 600 MHz NR	1	1577.94	60.0	19.45	600 MHz NR	400	4.86%
T-Mobile 700 MHz LTE	2	695.22	60.0	17.14	700 MHz LTE	467	3.67%
						Total:	30.86%

• 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:	30.86%
Sector B:	30.86%
Sector C:	30.86%
T-Mobile Maximum MPE % (Sector A):	30.86%
Site Total:	40.85%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **40.85%** 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

Mailing Receipts/Proof of Notice

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1 LBS DWT: 12.12.9		1 OF 1	
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117 CAROL STREET
DANBURY CT 06810-8312

SHIP TO:
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TOWN OF CLINTON
54 E MAIN STREET
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1 LBS
DWT: 12.12.8

1 OF 1

CT 065 2-01

UPS GROUND

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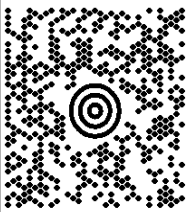
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CARY NC 27513-5817

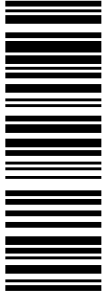
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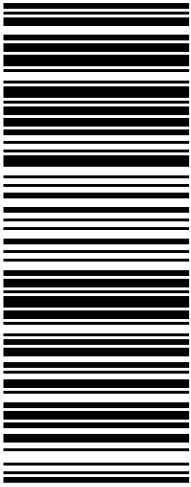


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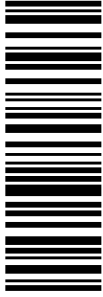
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REAL ESTATE COUNSEL
COMCAST CABLE COMMUNICATIONS, LLC
1701 JOHN F. KENNEDY BOULEVARD
PHILADELPHIA PA 19103-2833

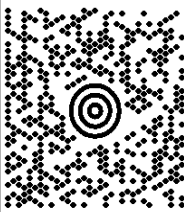
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PA 191 9-10





UPS GROUND

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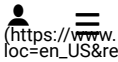
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