

July 20, 2022

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Regarding: Notice of Exempt Modification – AT&T Site CT2133 / FA# 10034995
Address: 144 Old Boston Rd (a/k/a Moses Mountain), Danbury, CT 06810

Dear Ms. Bachman:

New Cingular Wireless, PCS, LLC (“AT&T”) currently maintains a wireless telecommunications facility on an existing +/- 70’ lattice tower at the above-referenced address, latitude 41.3595200, longitude -73.4654711. Said lattice tower is operated by AT&T Towers, LLC.

AT&T desires to modify its existing telecommunications facility by swapping six (6) antennas, adding three (3) antennas, swapping three (3) Remote Radio Units (RRUS), removing three (3) remote radio units (RRUS), and mount modifications as more particularly detailed and described on the enclosed Construction Drawings prepared by Hudson Design Group, last revised July 15, 2022. The centerline height of the existing antennas is and will remain at 60 feet and new antennas will be installed at 52 feet. This modification may include B2, B5, B17, B14, B29, B30, B66, & n77 hardware that is 4G(LTE) and/or 5GNR capable through remote software configuration and either or both services may be turned off at various times.

Please accept this letter as notification pursuant to R.C.S.A §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the following individuals: The Honorable Dean Esposito, Mayor of the City of Danbury, as elected official, Sean Hearty, Zoning Enforcement Officer of the City of Danbury, Sharon Calitro, City Planner of the City of Danbury, AT&T Towers, LLC., as tower operator, and the State of Connecticut as property owner. We have reached out to the Building and Zoning Departments for the City of Danbury who conducted a search and could not locate the original tower approval.

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

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require an 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 modified facility will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard. *Please see the RF emissions calculation for AT&T's modified facility enclosed herewith.*
5. The proposed modifications will not cause an ineligible change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading. *Please see the structural analysis dated May 20, 2022, and prepared by GPD Engineering and Architecture Professional Corporation, enclosed herewith.*

For the foregoing reasons, AT&T 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,

Evan Renwick

Evan Renwick
Site Acquisition Specialist
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
erenwick@clinellc.com

Enclosures: Exhibit 1 – Construction Drawings
Exhibit 2 – Property Card and GIS
Exhibit 3 – Structural Analysis
Exhibit 4 – Mount Analysis
Exhibit 5 – RF Emissions Analysis Report Evaluation
Exhibit 6 – Notice Delivery Confirmations

cc: The Honorable Dean Esposito, Mayor, City of Danbury, as elected official
Sean Hearty, Zoning Enforcement Officer, City of Danbury
Sharon Calitro, City Planner, City of Danbury,
AT&T Towers, LLC, as tower operator
The State of Connecticut as property owner

EXHIBIT 1

PROJECT INFORMATION

SCOPE OF WORK: **ITEMS TO BE MOUNTED ON THE EXISTING SELF SUPPORT TOWER:**

- PROPOSED AT&T AIR ANTENNAS: AIR6449 B77D @ POS. 3 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- PROPOSED AT&T AIR ANTENNAS: AIR6419 B77G @ POS. 3 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T LTE ANTENNA (EPBQ-654L8H6-L2) @ POS. 4 (TYP. OF 1 PER ALPHA & BETA SECTORS, TOTAL OF 2) (TO BE RELOCATED TO POS. 2)
- PROPOSED AT&T LTE ANTENNA (OPA65R-BU6DA) @ POS. 4 (TYP. OF 1 PER ALPHA & BETA SECTOR, TOTAL OF 2).
- PROPOSED AT&T LTE ANTENNA (OPA65R-BU6DA) @ POS. 1 (TOTAL OF 1 FOR GAMMA SECTOR).
- PROPOSED AT&T RRUS: 4449 B5/B12 (850/700) (TOTAL OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRUS: 4478 B14 (700) (TOTAL OF 1 PER SECTOR, TOTAL OF 3) (TO BE RELOCATED TO POS. 2).
- EXISTING AT&T RRUS: RRUS-32 (WCS) (TOTAL OF 1 PER SECTOR, TOTAL OF 3)
- EXISTING AT&T RRUS: RRUS-32 B2 (TOTAL OF 1 PER SECTOR, TOTAL OF 3)
- EXISTING AT&T RRUS: 4426 B66 (TOTAL OF 1 PER SECTOR, TOTAL OF 3)
- PROPOSED AT&T (3) Y-CABLES.
- INSTALL MOUNT MODIFICATIONS (SEE "S" SHEETS).

ITEMS TO BE MOUNTED IN EQUIPMENT LOCATION:

- INSTALL (1) NEW 6648 + XCEDE CABLE BELOW 6630 IN LTE RACK
FINAL: 1x6601/1x5216/1xXMU03/xxxxx/1x6630MIXED-MODE/xxxxx+//1x6648+IDLE XCEDE
- INSTALL (4) NEW -48V RECTIFIERS FOR A TOTAL OF (9).
- INSTALL (2) NEW BATTERY STRINGS FOR A TOTAL OF (5).
- INSTALL (1) NEW FIBER BOX ON EXISTING ICE BRIDGE.
- INSTALL (1) NEW FIBER TRAY INSIDE EXISTING FIF RACK.

ITEMS TO BE REMOVED:

- EXISTING AT&T ANTENNA: 7770 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T ANTENNAS: HPA-65R-BUU-H6 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRUS: 4478 B5 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T RRUS: RRUS-11 B12 (TYP. OF 1 PER SECTOR, TOTAL OF 3).
- EXISTING AT&T SURGE ARRESTOR: DC6-48-60-18 (TOTAL OF 1).
- EXISTING AT&T TMA'S: LGP 17201 (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- EXISTING AT&T DIPLEXERS: DBCT108F1V92-1 (TYP. OF 2 PER SECTOR, TOTAL OF 6).
- EXISTING AT&T DIPLEXERS: LGP 21901 (TYP. OF 2 PER SECTOR, TOTAL OF 6).

ITEMS TO REMAIN:

- (9) RRU'S, (2) SURGE ARRESTOR, (6) COAX CABLES, (6) DC POWER & (2) FIBER.

SITE ADDRESS: MOSES MOUNTAIN DANBURY, CT 06810
 LATITUDE: 41.3595200° N, 41° 21' 34.27" N
 LONGITUDE: 73.4654711° W, 73° 27' 55.69" W
 TYPE OF SITE: SELF SUPPORT TOWER / INDOOR EQUIPMENT
 STRUCTURE HEIGHT: 70'-0"±
 RAD CENTER: 60'-0"±, 52'-0"±
 CURRENT USE: TELECOMMUNICATIONS FACILITY
 PROPOSED USE: TELECOMMUNICATIONS FACILITY

DRAWING INDEX

SHEET NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	B
GN-1	GENERAL NOTES	B
A-1	COMPOUND & EQUIPMENT PLANS	B
A-2	ANTENNA LAYOUT PLANS	B
A-3	ELEVATION	B
A-4	DETAILS	B
SN-1	STRUCTURAL NOTES	B
S-1	STRUCTURAL DETAILS	B
G-1	GROUNDING DETAILS	B
RF-1	RF PLUMBING DIAGRAM	B



SITE NUMBER: CTL02133

SITE NAME: DANBURY- MOSES MTN.

FA CODE: 10034995

PACE ID: MRCTB054542, MRCTB054876, MRCTB060993, MRCTB060969

PROJECT: 5G NR RADIO, 5G NR 1SR CBAND, 4T4R ANTENNA RETROFIT 2022 UPGRADE

VICINITY MAP

DIRECTIONS TO SITE:

START OUT GOING EAST ON ENTERPRISE DR TOWARD CAPITAL BLVD.TURN LEFT ONTO CAPITAL BLVD.TURN LEFT ONTO WEST ST.MERGE ONTO I-91 S VIA THE RAMP ON THE LEFT TOWARD NEW HAVEN.MERGE ONTO I-691 W VIA EXIT 18 TOWARD WATERBURY/MERIDEN.TAKE THE I-84 W EXIT, EXIT 1, ON THE LEFT TOWARD DANBURY/WATERBURY.STAY STRAIGHT TO GO ONTO I 691.STAY STRAIGHT TO GO ONTO I-84 W.MERGE ONTO US-7 S VIA EXIT 3 ON THE LEFT TOWARD NORWALK.WOOSTER MOUNTAIN STATE PARK, 30 SUGAR HOLLOW RD, DANBURY, CT, 30 SUGAR HOLLOW RD IS ON THE LEFT.



GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES 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 AT&T MOBILITY REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.
4. CONSTRUCTION DRAWINGS ARE VALID FOR SIX MONTHS AFTER ENGINEER OF RECORD'S STAMPED AND SIGNED SUBMITTAL DATE LISTED HEREIN.

72 HOURS



CALL BEFORE YOU DIG



CALL TOLL FREE 1-800-922-4455

OR CALL 811



HGD HUDSON Design Group LLC
 45 BEECHWOOD DRIVE NORTH ANDOVER, MA 01845
 TEL: (978) 557-5553 FAX: (978) 336-5586

CENTERLINE COMMUNICATIONS
 750 WEST CENTER STREET, SUITE #301 WEST BRIDGEWATER, MA 02379

SITE NUMBER: CTL02133
 SITE NAME: DANBURY- MOSES MTN.
 MOSES MOUNTAIN DANBURY, CT 06810 FAIRFIELD COUNTY

at&t
 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067

NO.	DATE	REVISIONS	BY	CHK	APP'D
B	07/15/22	ISSUED FOR PERMITTING	SS	AT	
A	03/10/22	ISSUED FOR REVIEW	SS	AT	

SCALE: AS SHOWN DESIGNED BY: AT DRAWN BY: SS

AT&T
 TITLE SHEET 5G NR RADIO, 5G NR 1SR CBAND 2022 UPGRADE
 SITE NUMBER: CTL02133 DRAWING NUMBER: T-1 REV: B

ISSUED FOR PERMITTING

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTNING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81 STANDARDS) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL GROUND WIRES, #6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS AND #2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
 CONTRACTOR – CENTERLINE
 SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
 OWNER – AT&T 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. TOUCH UP 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 AT&T 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 WITH 2018 CT STATE BUILDING CODE AMENDMENTS
 ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL 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-H, STRUCTURAL STANDARDS FOR STEEL

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	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	REF	REFERENCE	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING				

45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

750 WEST CENTER STREET, SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: CTL02133
SITE NAME: DANBURY- MOSES MTN.

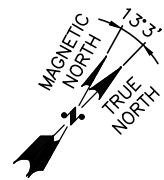
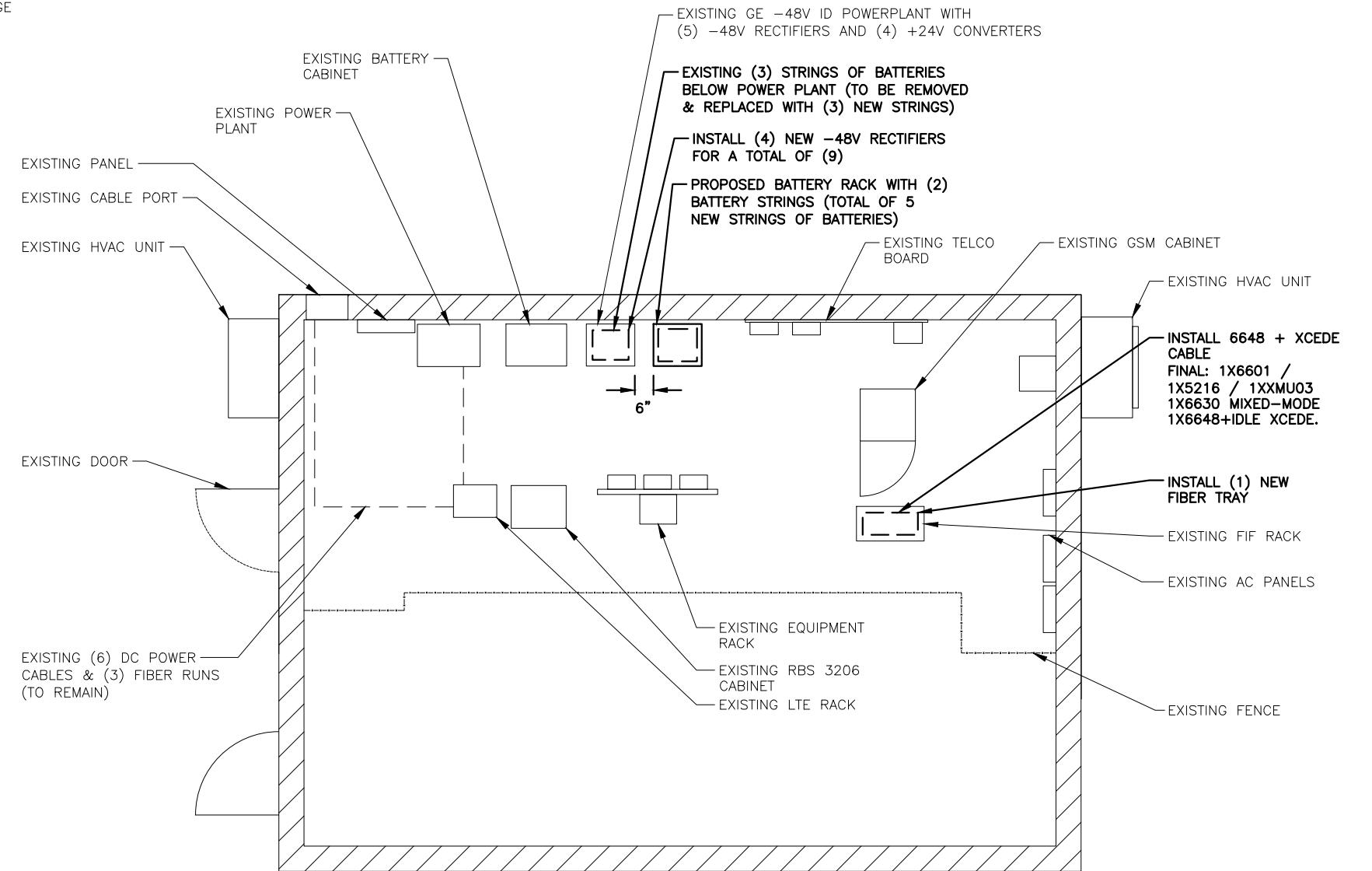
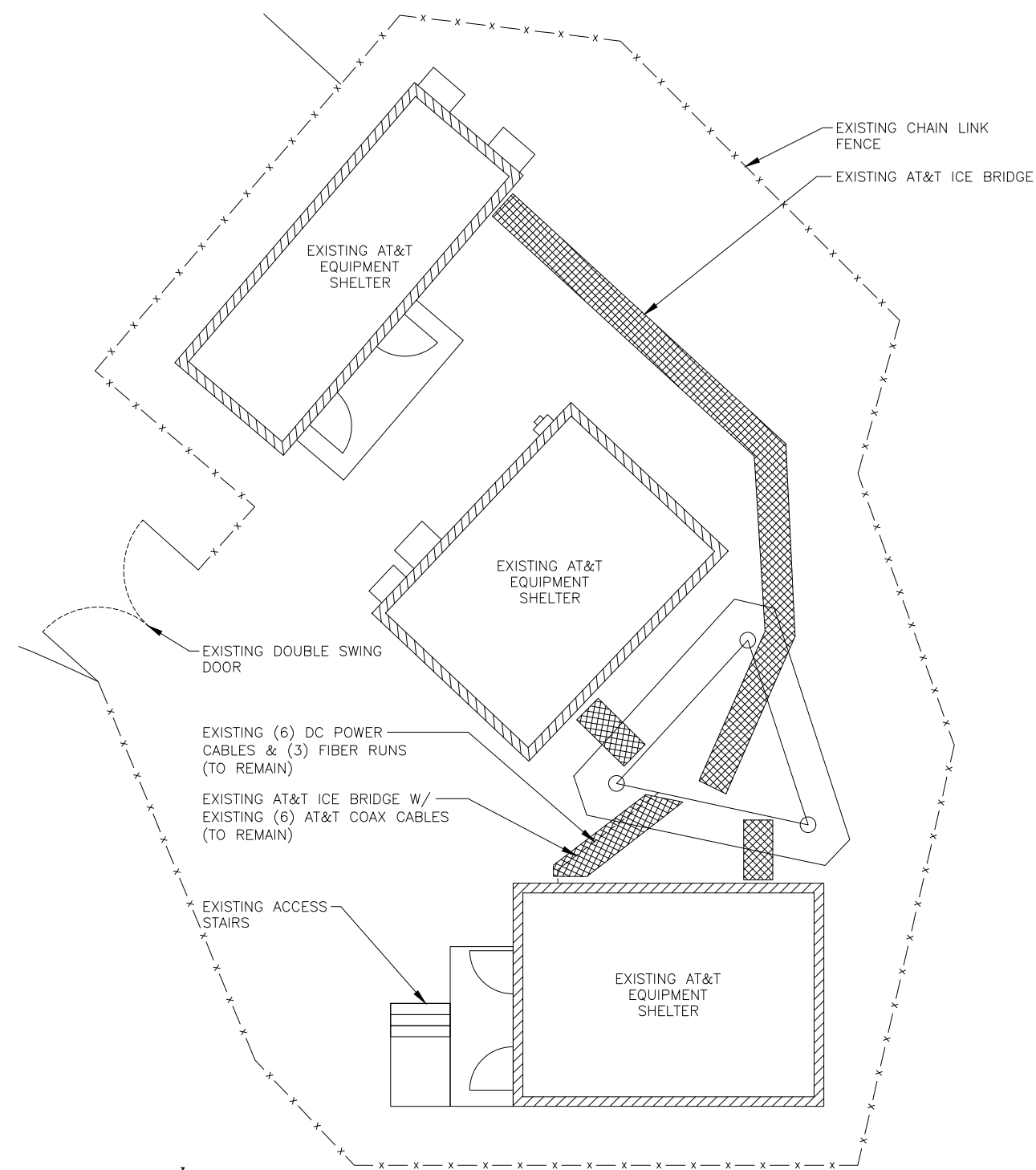
MOSES MOUNTAIN
DANBURY, CT 06810
FAIRFIELD COUNTY

500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

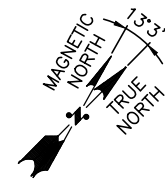
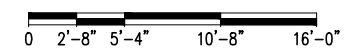
B 07/15/22 ISSUED FOR PERMITTING		SS		AT		APP'D		AT&T	
A 03/10/22 ISSUED FOR REVIEW		SS		AT		APP'D		GENERAL NOTES 5G NR RADIO, 5G NR 15R CBAND 2022 UPGRADE	
NO.	DATE	REVISIONS	BY	CHK	APP'D	SITE NUMBER		DRAWING NUMBER	
						CTL02133		GN-1	
SCALE: AS SHOWN						DESIGNED BY: AT		DRAWN BY: SS	
								B	

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT HAS BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DATED: 07/08/2022



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



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



HGD HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
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MOSES MOUNTAIN DANBURY, CT 06810 FAIRFIELD COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

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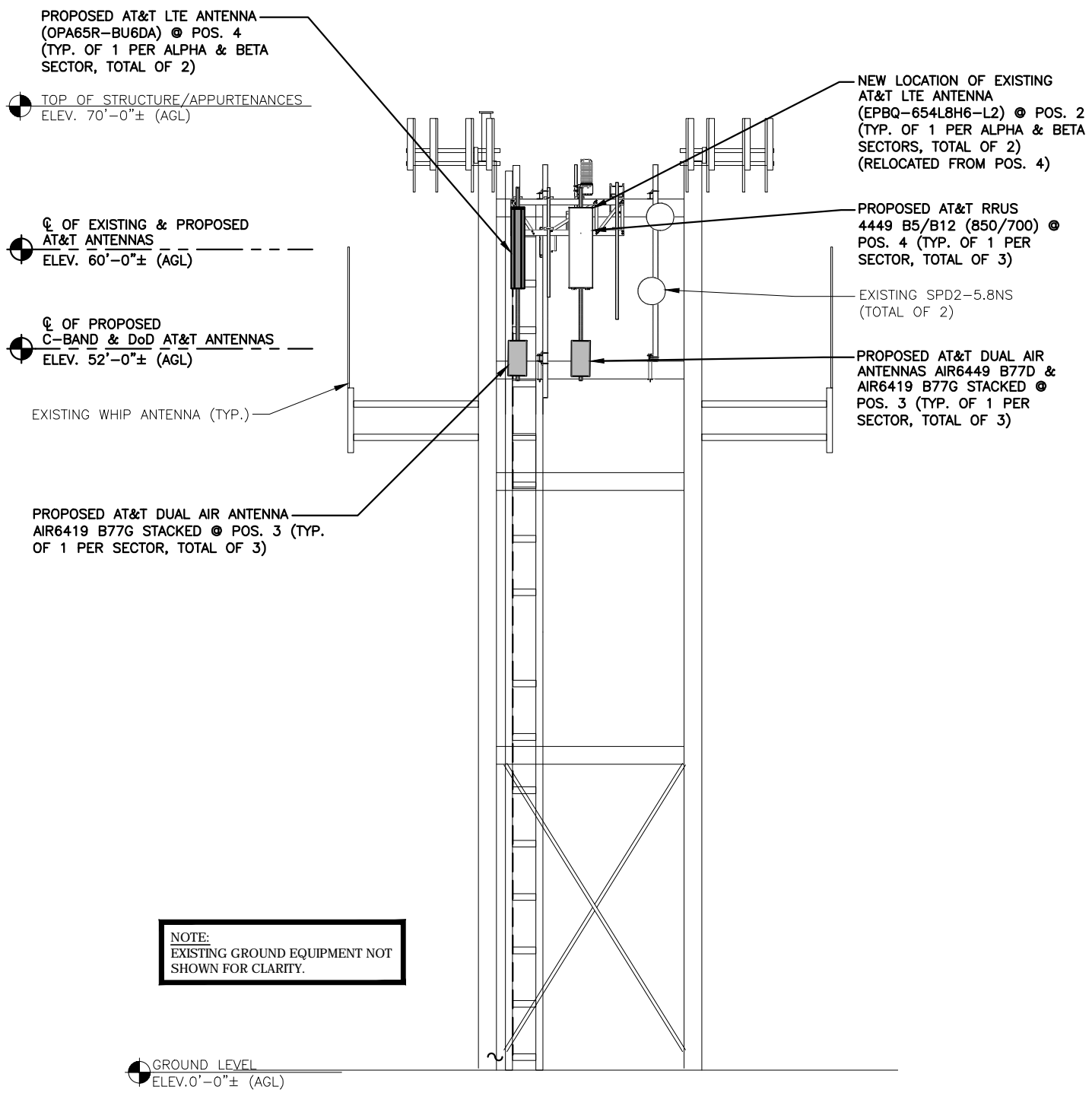


AT&T
COMPOUND & EQUIPMENT PLANS
5G NR RADIO, 5G NR 1SR CBAND
2022 UPGRADE
SITE NUMBER: CTL02133
DRAWING NUMBER: A-1
REV: B

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

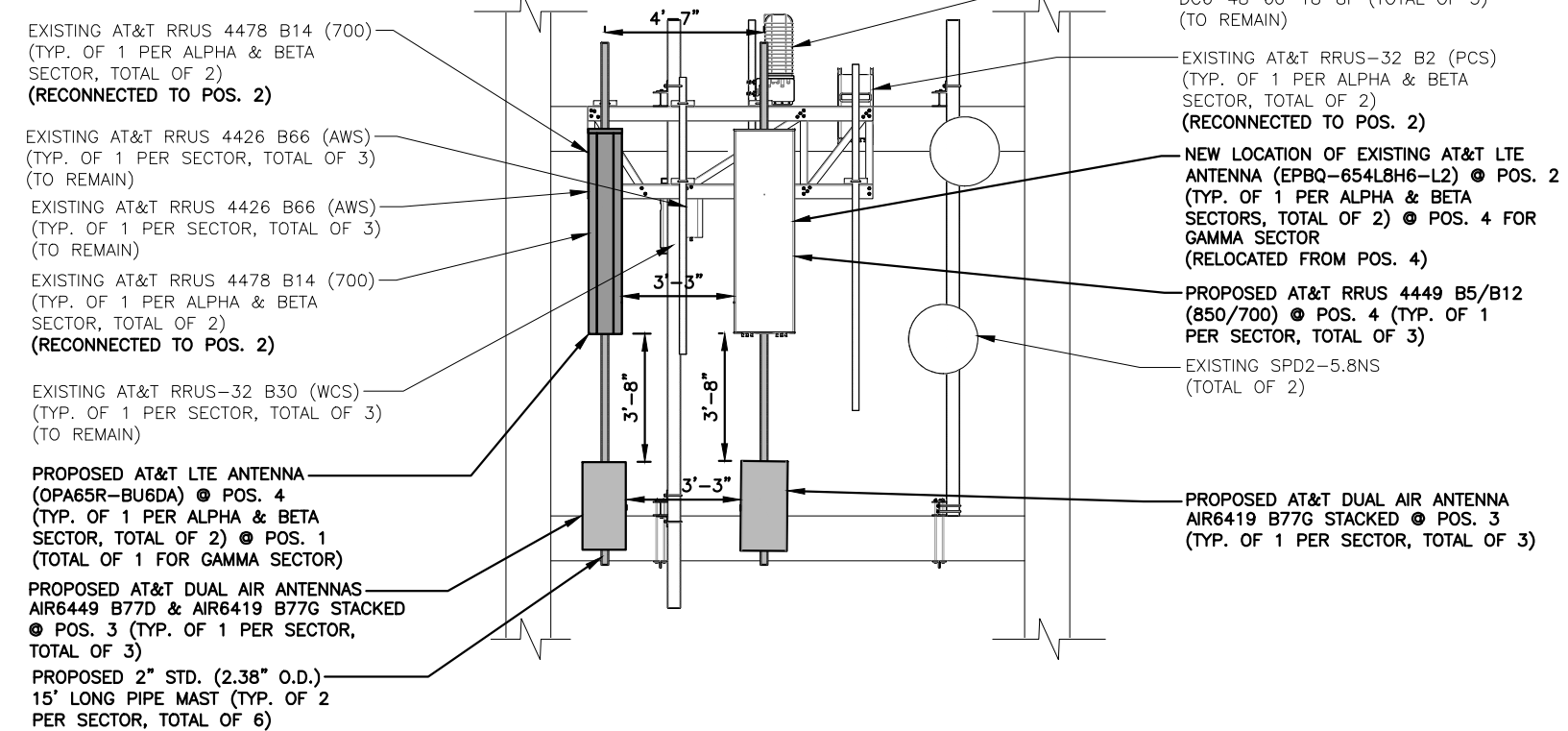
NOTE:
ANTENNAS AND MOUNTS TO BE ADJUSTED AS REQUIRED TO ACHIEVE A 3'-0" MINIMUM SEPARATION BETWEEN ANTENNAS

NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT HAS BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DATED: 07/08/2022



NOTE:
EXISTING GROUND EQUIPMENT NOT SHOWN FOR CLARITY.

ELEVATION
22x34 SCALE: 3/16"=1'-0"
11x17 SCALE: 3/32"=1'-0"
0 2'-8" 5'-4" 10'-8" 16'-0"



PARTIAL ELEVATION
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"
0 1'-4" 2'-8" 5'-4" 8'-0"

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SITE NAME: DANBURY- MOSES MTN.
MOSES MOUNTAIN
DANBURY, CT 06810
FAIRFIELD COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

B	07/15/22	ISSUED FOR PERMITTING	SS	CHK	APP'D
A	03/10/22	ISSUED FOR REVIEW	SS	CHK	APP'D
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: SS		



AT&T
ELEVATION
5G NR RADIO, 5G NR 1SR CBAND
2022 UPGRADE
SITE NUMBER: CTL02133
DRAWING NUMBER: A-3
REV: B

ANTENNA SCHEDULE

SECTOR	EXISTING/ PROPOSED	BAND	ANTENNA	SIZE (INCHES) (L x W x D)	ANTENNA CL HEIGHT	AZIMUTH	TMA/ DIPLEXER	RRU	SIZE (INCHES) (L x W x D)	FEEDER	RAYCAP
A1	-	-	-	-	-	-	-	-	-	-	-
A2	EXISTING	LTE B14 /PCS /AWS	EPBQ-654L8H6-L2	73"X21"X6.3"	60'-0"±	20°	-	(E)(1)RRUS-4478 B14 (700) (E)(1)RRUS-32 B2 (PCS) (E)(1)RRUS-4426 B66 (AWS)	-	(E)(2) DC POWER (1) FIBER	(E) (1) RAYCAP DC6-48-60-18-8F
A3	PROPOSED	DoD CBAND	AIR6419 B77G AIR6449 B77D	31.1"X16.1"X7.3" 30.4"X15.9"X8.1"	52'-0"±	20°	-	-	-	-	(E) (1) RAYCAP DC6-48-60-18-8F
A4	PROPOSED	LTE 700 BC /850 /WCS	OPA65R-BU6DA	71.2"X20.7"X7.7"	60'-0"±	20°	-	(P)(1)RRUS-4449 B5/B12 (850/700) (E)(1)RRUS-32 B30 (WCS)	-	(P)(1)(Y-CABLE)	(E) (1) RAYCAP DC6-48-60-18-8F
B1	-	-	-	-	-	-	-	-	-	-	-
B2	EXISTING	LTE B14 /PCS /AWS	EPBQ-654L8H6-L2	73"X21"X6.3"	60'-0"±	140°	-	(E)(1)RRUS-4478 B14 (700) (E)(1)RRUS-32 B2 (PCS) (E)(1)RRUS-4426 B66 (AWS)	-	(E)(2) DC POWER (1) FIBER	(E) (1) RAYCAP DC6-48-60-18-8F
B3	PROPOSED	DoD CBAND	AIR6419 B77G AIR6449 B77D	31.1"X16.1"X7.3" 30.4"X15.9"X8.1"	52'-0"±	140°	-	-	-	-	(E) (1) RAYCAP DC6-48-60-18-8F
B4	PROPOSED	LTE 700 BC /850 /WCS	OPA65R-BU6DA	71.2"X20.7"X7.7"	60'-0"±	140°	-	(P)(1)RRUS-4449 B5/B12 (850/700) (E)(1)RRUS-32 B30 (WCS)	-	(P)(1)(Y-CABLE)	(E) (1) RAYCAP DC6-48-60-18-8F
C1	-	-	-	-	-	-	-	-	-	-	-
C2	PROPOSED	LTE 700 BC /850 /WCS	OPA65R-BU6DA	71.2"X20.7"X7.7"	60'-0"±	270°	-	(E)(1)RRUS-4478 B14 (700) (E)(1)RRUS-32 B2 (PCS) (E)(1)RRUS-4426 B66 (AWS)	-	(E)(2) DC POWER (1) FIBER (P)(1) (Y-CABLE)	(E) (1) RAYCAP DC6-48-60-18-8F
C3	PROPOSED	DoD CBAND	AIR6419 B77G AIR6449 B77D	31.1"X16.1"X7.3" 30.4"X15.9"X8.1"	52'-0"±	270°	-	-	-	-	(E) (1) RAYCAP DC6-48-60-18-8F
C4	EXISTING	LTE B14 /PCS /AWS	EPBQ-654L8H6-L2	73"X21"X6.3"	60'-0"±	270°	-	(P)(1)RRUS-4449 B5/B12 (850/700) (E)(1)RRUS-32 B30 (WCS)	-	(P)(1)(Y-CABLE)	(E) (1) RAYCAP DC6-48-60-18-8F

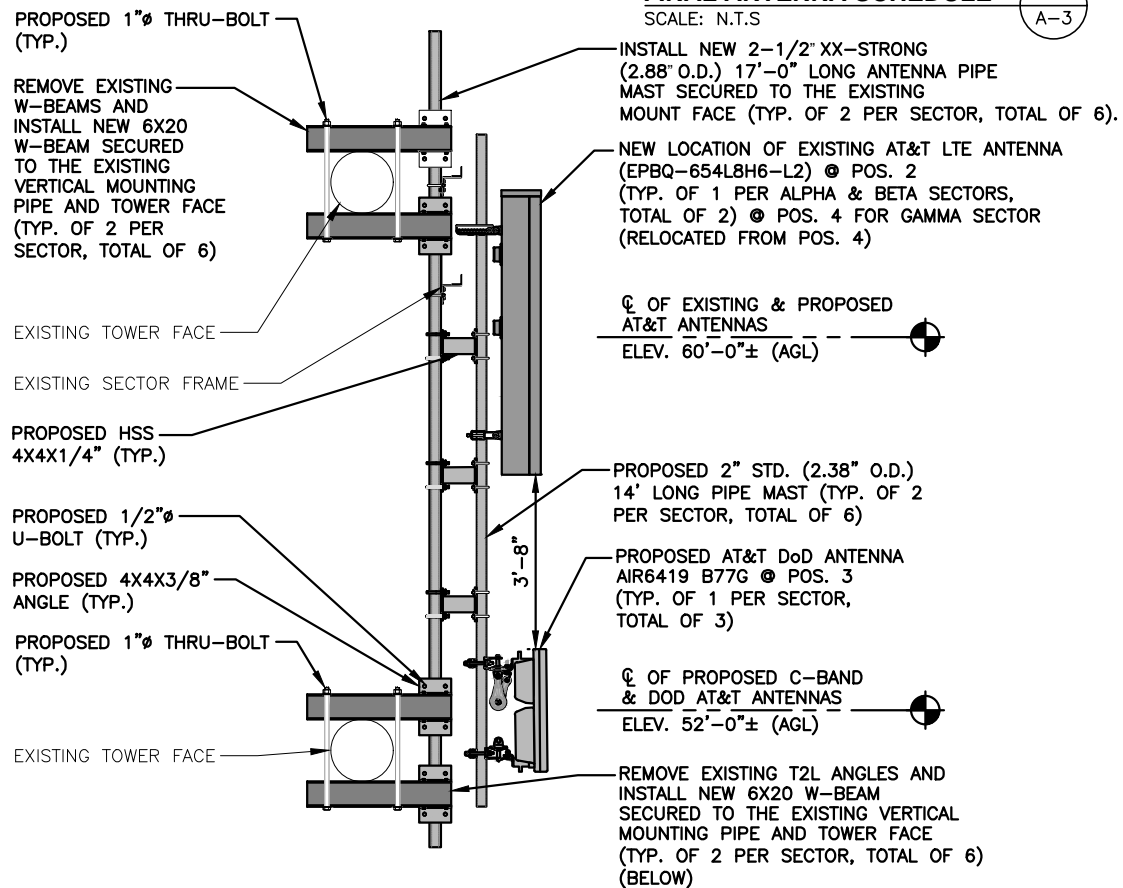
NOTE:
REFER TO THE FINAL RF DATA SHEET
FOR FINAL ANTENNA SETTINGS.

NOTE:
AN ANALYSIS FOR THE CAPACITY OF
THE EXISTING STRUCTURES TO
SUPPORT THE PROPOSED EQUIPMENT
HAS BEEN COMPLETED BY HUDSON
DESIGN GROUP, LLC. DATED:
07/08/2022

FINAL ANTENNA SCHEDULE

SCALE: N.T.S.

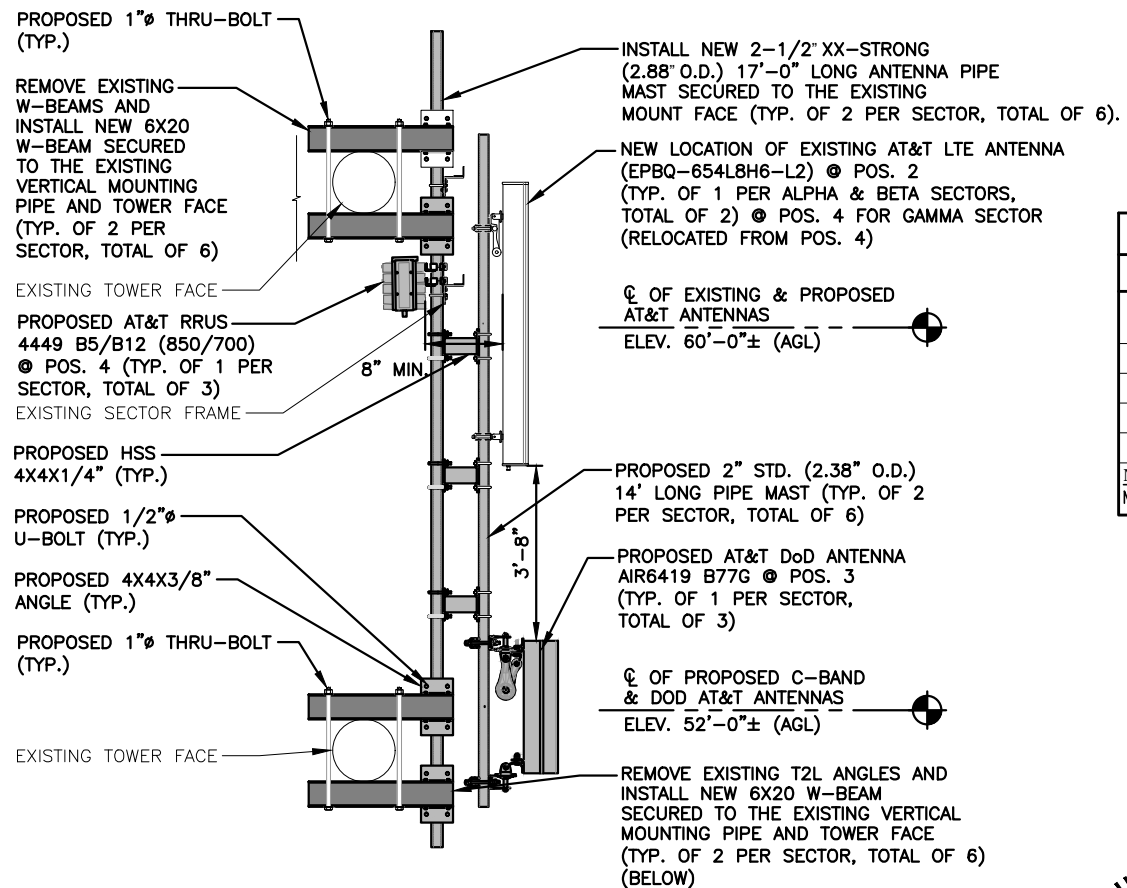
1
A-3



PROPOSED ANTENNA @ POS. 2 & 3

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

2
A-4



PROPOSED ANTENNA @ POS. 3 & 4

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

3
A-4

RRU CHART		
QUANTITY	MODEL	SIZE (L x W x D)
P(3)	4449 B5/B12 (850/700)	17.9"x13.2"x10.4"
E(3)	4478 B14 (700)	18.1"x13.4"x8.3"
E(3)	RRUS-32 B2 (PCS)	27.2"x12.1"x7.0"
E(3)	4426 B66 (AWS)	14.9"x13.2"x5.8"
E(3)	RRUS-32 B30 (WCS)	27.2"x12.1"x7.0"

NOTE:
MOUNT PER MANUFACTURER'S SPECIFICATIONS

NOTE:
SEE RFDS FOR RRH
FREQUENCY AND
MODEL NUMBER

PROPOSED RRU REFER TO THE
FINAL RFDS AND CHART FOR
QUANTITY, MODEL AND DIMENSIONS

NOTE:
MOUNT PER MANUFACTURER'S
SPECIFICATIONS.

PROPOSED RRU DETAIL

4
A-4

HUDSON Design Group LLC
45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

CENTERLINE COMMUNICATIONS
750 WEST CENTER STREET, SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: CTL02133
SITE NAME: DANBURY- MOSES MTN.

MOSES MOUNTAIN
DANBURY, CT 06810
FAIRFIELD COUNTY

at&t
500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

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A	03/10/22	ISSUED FOR REVIEW	SS	AT	AP
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: SS		

AT&T

DETAILS
5G NR RADIO, 5G NR 1SR CBAND
2022 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CTL02133	A-4	B

STRUCTURAL NOTES:

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

SPECIAL INSPECTIONS (REFERENCE IBC CHAPTER 17):

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

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

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

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

SPECIAL INSPECTION CHECKLIST	
BEFORE CONSTRUCTION	
CONSTRUCTION/INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY ENGINEER OF RECORD)	REPORT ITEM
REQUIRED	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
REQUIRED	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:

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

NOTES:

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

45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

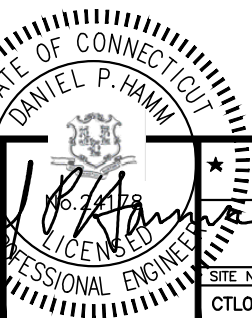
750 WEST CENTER STREET, SUITE #301
WEST BRIDGEWATER, MA 02379

SITE NUMBER: CTL02133
SITE NAME: DANBURY- MOSES MTN.

MOSES MOUNTAIN
DANBURY, CT 06810
FAIRFIELD COUNTY

500 ENTERPRISE DRIVE, SUITE 3A
ROCKY HILL, CT 06067

B	07/15/22	ISSUED FOR PERMITTING	SS	AT	APP'D
A	03/10/22	ISSUED FOR REVIEW	SS	AT	APP'D
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: AT	DRAWN BY: SS		



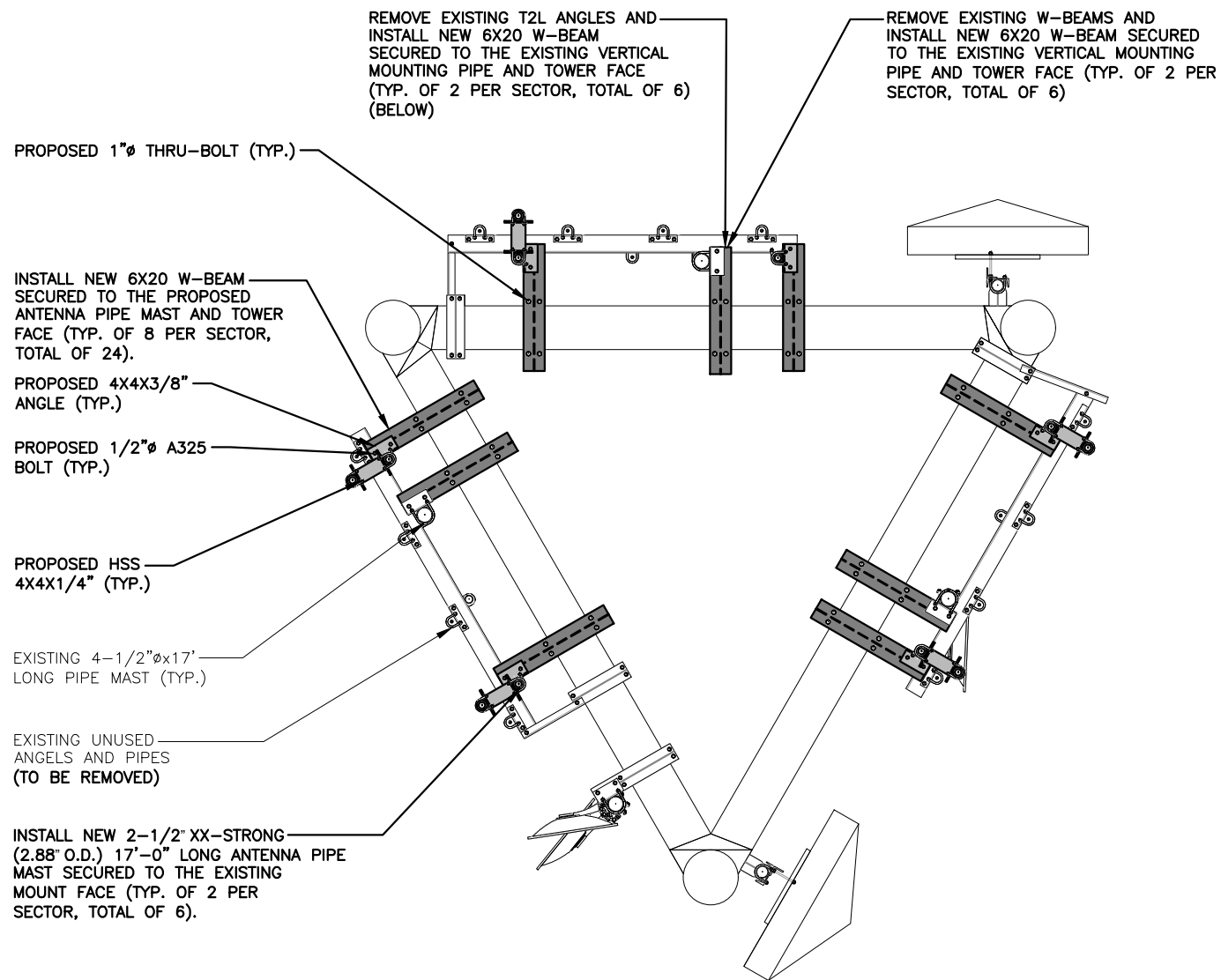
AT&T

STRUCTURAL NOTES
5G NR RADIO, 5G NR 15R CBAND
2022 UPGRADE

SITE NUMBER	DRAWING NUMBER	REV
CTL02133	SN-1	B

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

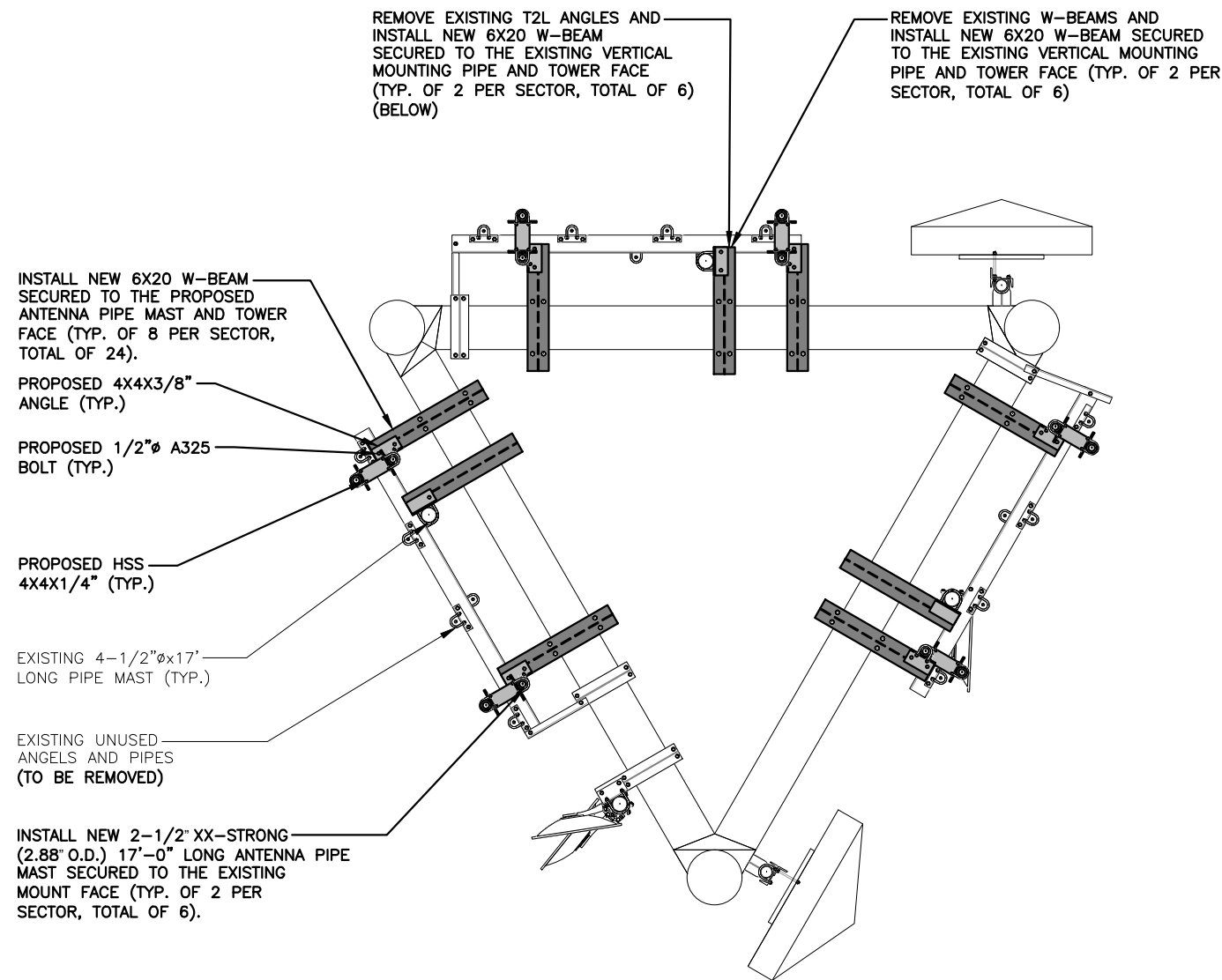
NOTE:
AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT HAS BEEN COMPLETED BY HUDSON DESIGN GROUP, LLC. DATED: 07/08/2022



PROPOSED MOUNT MODIFICATION PLAN @ 60'-0" RAD

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

1
S-1



PROPOSED MOUNT MODIFICATION PLAN @ 52'-0" RAD

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

2
S-1



45 BEECHWOOD DRIVE
NORTH ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586



750 WEST CENTER STREET, SUITE #301
WEST BRIDGEWATER, MA 02379

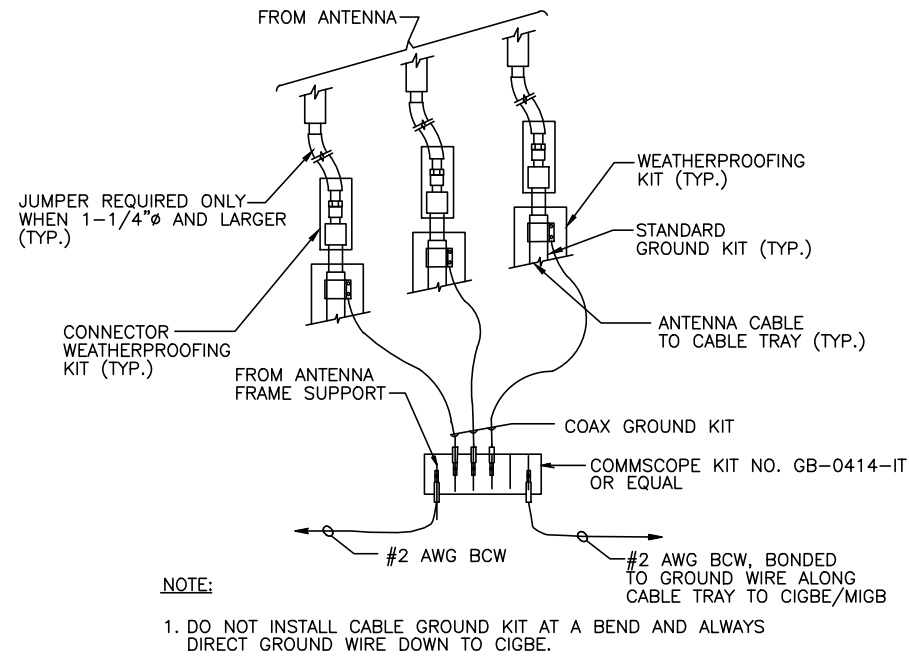
SITE NUMBER: CTL02133
SITE NAME: DANBURY- MOSES MTN.

MOSES MOUNTAIN
DANBURY, CT 06810
FAIRFIELD COUNTY

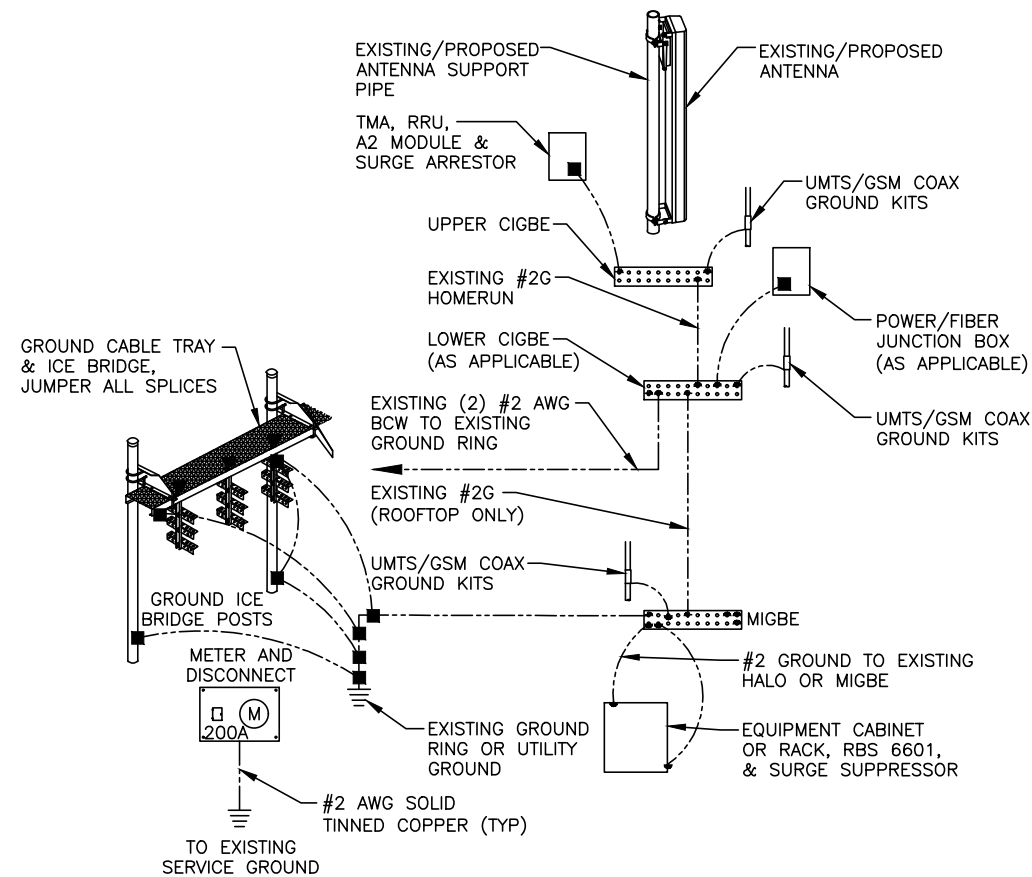


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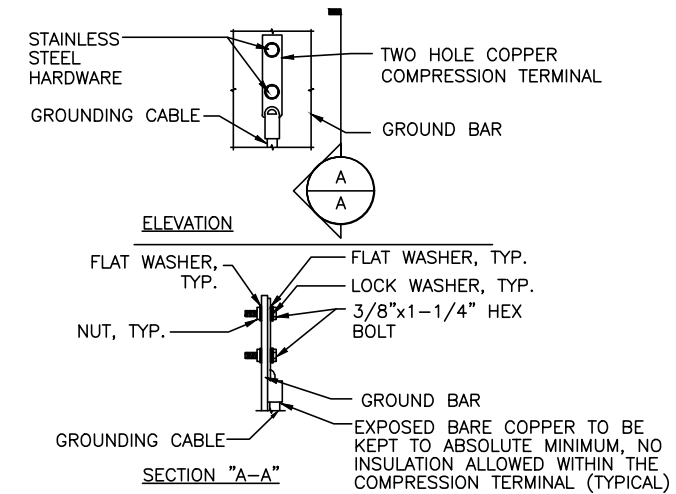
B		07/15/22	ISSUED FOR PERMITTING	SS	AT	APP'D		AT&T
A		03/10/22	ISSUED FOR REVIEW	SS	AT	APP'D		STRUCTURAL DETAILS 5G NR RADIO, 5G NR 1SR CBAND 2022 UPGRADE
NO.	DATE	REVISIONS		BY	CHK	APP'D		
SCALE: AS SHOWN		DESIGNED BY: AT		DRAWN BY: SS				
SITE NUMBER		DRAWING NUMBER		REV				
CTL02133		S-1		B				



GROUND WIRE TO GROUND BAR CONNECTION DETAIL 1
SCALE: N.T.S. G-1



GROUNDING RISER DIAGRAM 2
SCALE: N.T.S. G-1



- NOTES:**
1. "DOUBLING UP" OR "STACKING" OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATION.
3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB

TYPICAL GROUND BAR CONNECTION DETAIL 3
SCALE: N.T.S. G-1

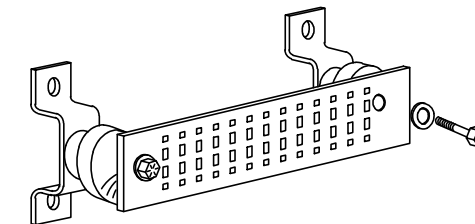
EACH GROUND CONDUCTOR TERMINATING ON ANY GROUND BAR SHALL HAVE AN IDENTIFICATION TAG ATTACHED AT EACH END THAT WILL IDENTIFY ITS ORIGIN AND DESTINATION.

SECTION "P" - SURGE PRODUCERS

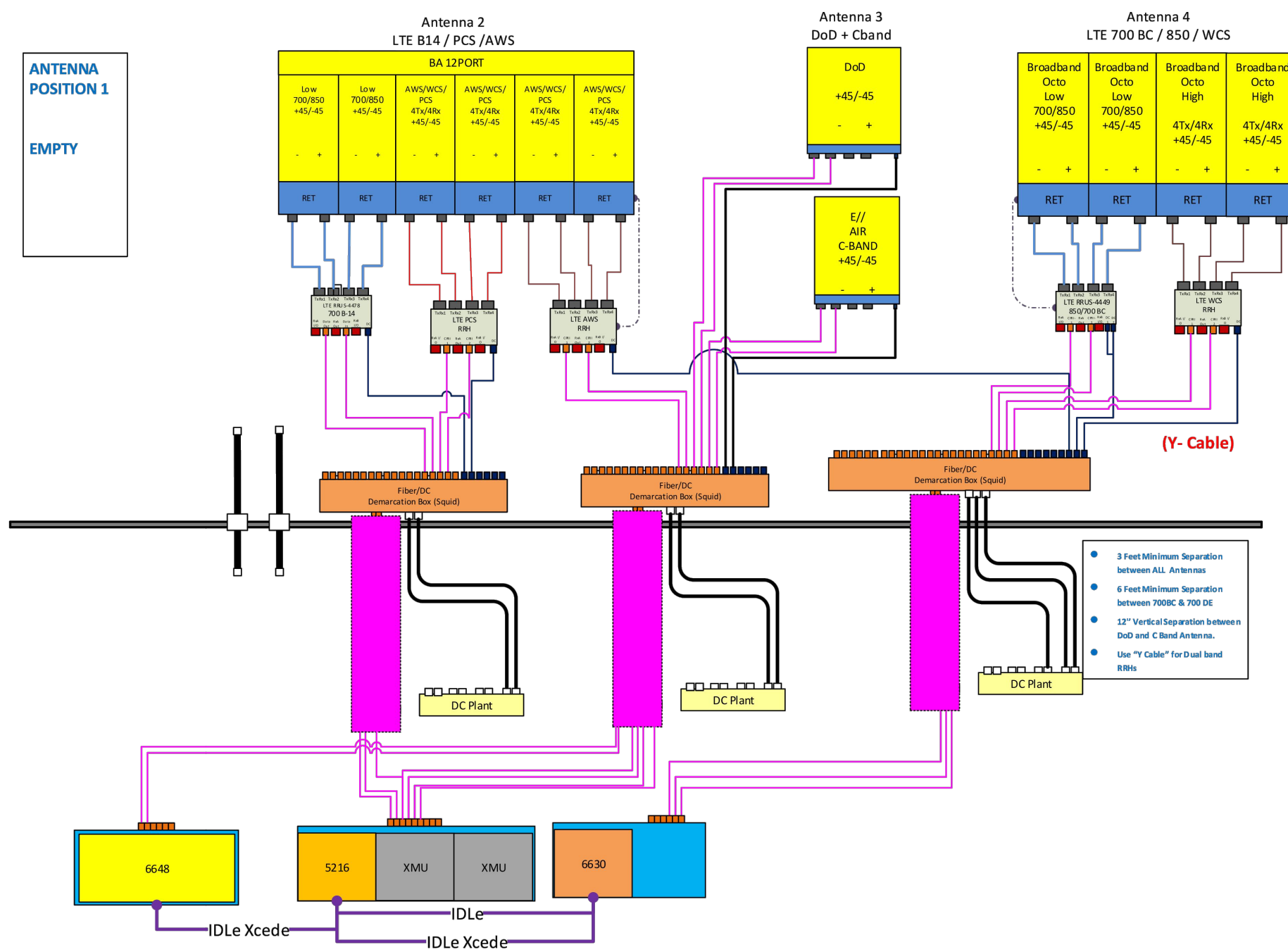
- CABLE ENTRY PORTS (HATCH PLATES) (#2 AWG)
- GENERATOR FRAMEWORK (IF AVAILABLE) (#2 AWG)
- TELCO GROUND BAR
- COMMERCIAL POWER COMMON NEUTRAL/GROUND BOND (#2 AWG)
- +24V POWER SUPPLY RETURN BAR (#2 AWG)
- 48V POWER SUPPLY RETURN BAR (#2 AWG)
- RECTIFIER FRAMES.

SECTION "A" - SURGE ABSORBERS

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



GROUND BAR - DETAIL (AS REQUIRED)
SCALE: N.T.S.



ANTENNA POSITION 1
EMPTY

- 3 Feet Minimum Separation between ALL Antennas
- 6 Feet Minimum Separation between 700BC & 700 DE
- 12" Vertical Separation between DoD and C Band Antenna.
- Use "Y Cable" for Dual band RRHs

NOTE:
1. CONTRACTOR TO CONFIRM ALL PARTS.
2. INSTALL ALL EQUIPMENT TO MANUFACTURER'S RECOMMENDATIONS

NOTE:
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.

RF PLUMBING DIAGRAM 1
SCALE: N.T.S. RF-1

B	07/15/22	ISSUED FOR PERMITTING	SG	AT	DPH
A	03/10/22	ISSUED FOR REVIEW	SS	AT	DPH
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN			DESIGNED BY: AT	DRAWN BY: SS	

AT&T		
RF PLUMBING DIAGRAM 5G NR RADIO, 5G NR 1SR CBAND 2022 UPGRADE		
SITE NUMBER	DRAWING NUMBER	REV
CTL02133	RF-1	B

EXHIBIT 2

144 OLD BOSTON POST RD

Location 144 OLD BOSTON POST RD

Mblu G20 / / 9 / 1 /

Acct#

Owner STATE OF CONNECTICUT

Assessment \$6,300

Appraisal \$9,000

PID 24537

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$0	\$9,000	\$9,000

Assessment			
Valuation Year	Improvements	Land	Total
2020	\$0	\$6,300	\$6,300

Owner of Record

Owner STATE OF CONNECTICUT
Co-Owner PARK
Address 210 CAPITOL AVE STE 1
HARTFORD, CT 06106

Sale Price \$0
Book & Page
Sale Date

Ownership History

Ownership History			
Owner	Sale Price	Book & Page	Sale Date
STATE OF CONNECTICUT	\$0		

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: \$0
Building Percent Good:
Replacement Cost
Less Depreciation: \$0

Building Attributes

Field	Description
Style	Vacant Land
Model	
Grade:	
Stories:	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure:	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Total Bthrms:	
Total Half Baths:	
Total Xtra Fixtrs:	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Fireplaces	
Whirlpool	
Addn'l Kitchen	
Bsm Gar	
Fin Bsm Area	
Fin Bsm Qual	
Nhbd	
MH Park	

Building Photo



(<http://images.vgsi.com/photos2/DanburyCTPhotos/default.jpg>)

Building Layout

(http://images.vgsi.com/photos2/DanburyCTPhotos/Sketches/24537_2453)

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Land Line Valuation

Use Code	700	Size (Acres)	91.3
Description	Forest MDL-00	Frontage	0
Zone	RA80	Depth	0
Neighborhood	101	Assessed Value	\$6,300
Alt Land Appr Category	No	Appraised Value	\$9,000

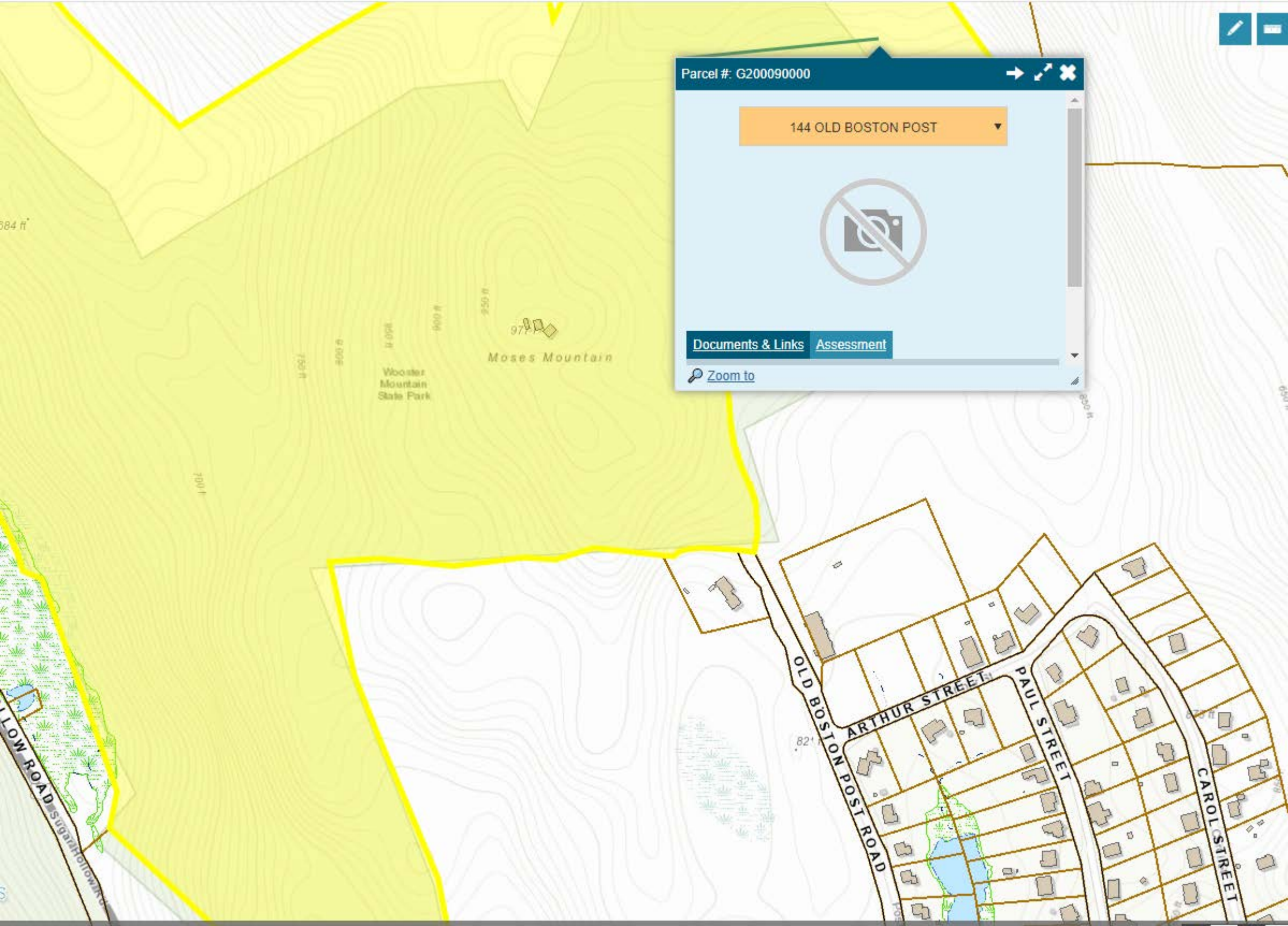
Outbuildings

Outbuildings	<u>Legend</u>
No Data for Outbuildings	

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2019	\$0	\$9,000	\$9,000
2018	\$0	\$9,000	\$9,000
2017	\$0	\$9,000	\$9,000

Assessment			
Valuation Year	Improvements	Land	Total
2019	\$0	\$6,300	\$6,300
2018	\$0	\$6,300	\$6,300
2017	\$0	\$6,300	\$6,300



Parcel #: G200090000



144 OLD BOSTON POST



Documents & Links Assessment

Zoom to

EXHIBIT 3

SUMMARY & RESULTS

The purpose of this analysis was to verify whether the existing structure is capable of carrying the proposed loading configuration as specified by AT&T Mobility and commissioned by Centerline Communications LLC.

This analysis has been performed in accordance with the TIA-222-H Standard based upon a 3-second gust wind speed of 115 mph. Applicable Standard references and design criteria are listed in Appendices A & B.

Modifications by GPD (Project #: 2016723.01.SNET005.03, dated 10/28/2016) were considered in this analysis.

Seismic loads were determined from spreadsheet calculations. It was concluded from these calculations that the wind loads control the maximum loading on the structure. The seismic loading case will not control.

The proposed feedlines shall be installed as shown in Appendices A & B for the analysis results to be valid.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Legs	48.7%	Pass
Bracing	56.3%	Pass
Bolt Checks	60.8%	Pass
Anchor Rods	32.5%	Pass
Foundation	23.0%	Pass

RECOMMENDATIONS

The tower and its foundation(s) have sufficient capacity to carry the proposed loading configuration. No modifications are required at this time.

ANALYSIS METHOD

tnxTower (Version 8.1.1.0), a commercially available software program, was used to create a three-dimensional model of the tower and calculate primary member stresses for various load cases. Selected output from the analysis is included the report appendices. The following table details the information provided to complete this structural analysis. This analysis is solely based on this information.

DOCUMENTS PROVIDED

Document	Remarks	Source
RF Data Sheet	RFDS Name: CTL02133 Version 1, updated 3/1/2022	Centerline Communications LLC
Tower Design	Not Provided	N/A
Foundation Design	Not Provided	N/A
Geotechnical Report	GPD Project #: 2016712.71, dated 9/7/2016	GPD
Foundation Mapping	GPD Project #: 2016712.71, dated 9/7/2016	GPD
Tower Mapping	GPD Project #: 2016712.71, dated 9/12/2016	GPD
Modification Design	GPD Project #: 2016723.01.SNET005.03, dated 10/28/2016	GPD
Post Modification Inspection	GPD Project #: 2017506.02, dated 5/9/2017	GPD
Mount Mapping	TEP Project #: 145551.185295, dated 10/8/2018	AT&T
Previous Tower Analysis	GPD Project #: 2019701.02, dated 11/16/2018	GPD

ASSUMPTIONS

This structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the tower. This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. GPD has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1. The tower member sizes and shapes are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
2. The appurtenance configuration is as supplied, determined from available photos, and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
3. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
4. The soil parameters are as per data supplied or as assumed and stated in the calculations.
5. Foundations are properly designed and constructed to resist the original design loads indicated in the documents provided.
6. The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
7. All welds and connections are assumed to develop at least the member capacity unless determined otherwise and explicitly stated in this report.
8. All prior structural modifications, if applicable, are assumed to be as per data supplied/available and to have been properly installed.
9. Loading interpreted from photos is accurate to $\pm 5'$ AGL, antenna size accurate to ± 3.3 sf, and coax equal to the number of existing antennas without reserve.
10. All existing and proposed loading has been taken from the available site photos as well as documents supplied to GPD at the time of generating this report. All such documents are listed in the Documents Provided Table and are assumed to be accurate. GPD is not responsible for loading scenarios outside those conveyed in the supplied documentation.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and GPD should be allowed to review any new information to determine its effect on the structural integrity of the tower.

DISCLAIMER OF WARRANTIES

GPD has not performed a recent site visit to the tower to verify the member sizes or antenna/coax loading. If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by GPD in connection with this Comprehensive Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. No allowance was made for any damaged, bent, missing, loose, or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

This analysis is limited to the designated maximum wind and seismic conditions per the governing tower standards and code. Wind forces resulting in tower vibrations near the structure's resonant frequencies were not considered in this analysis and are outside the scope of this analysis. Lateral loading from any dynamic response was not evaluated under a time-domain based fatigue analysis.

GPD does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. GPD provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to assess the capability of adding appurtenances usually accompanied by transmission lines to the structure.

It is the owner's responsibility to determine the amount of ice accumulation in excess of the code specified amount, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from GPD, but are beyond the scope of this report.

Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

Towers are designed to carry gravity, wind, and ice loads. All members, legs, diagonals, struts, and redundant members provide structural stability to the tower with little redundancy. Absence or removal of a member can trigger catastrophic failure unless a substitute is provided before any removal. Legs carry axial loads and derive their strength from shorter unbraced lengths by the presence of redundant members and their connection to the diagonals with bolts or welds. If the bolts or welds are removed without providing any substitute to the frame, the leg is subjected to a higher unbraced length that immediately reduces its load carrying capacity. If a diagonal is also removed in addition to the connection, the unbraced length of the leg is greatly increased, jeopardizing its load carrying capacity. Failure of one leg can result in a tower collapse because there is no redundancy. Redundant members and diagonals are critical to the stability of the tower.

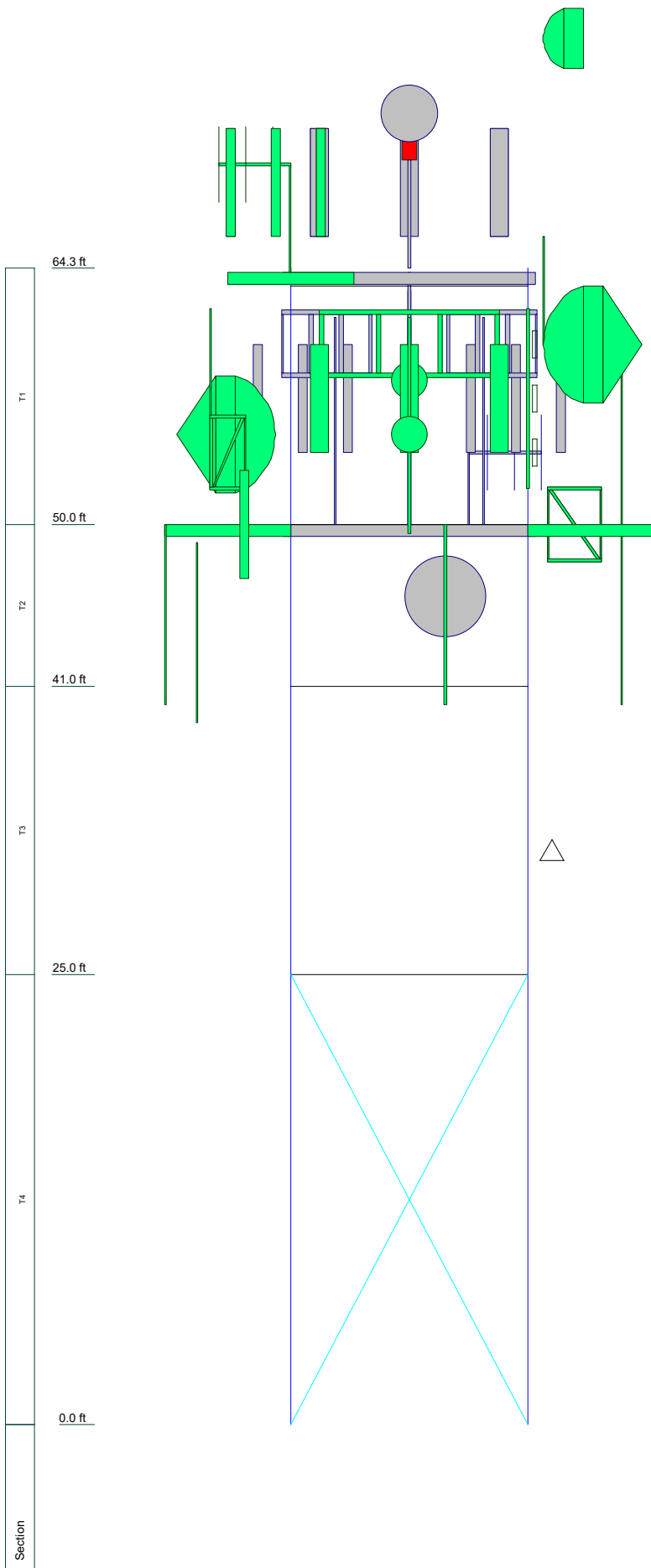
GPD makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. GPD will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of GPD pursuant to this report will be limited to the total fee received for preparation of this report.

APPENDIX A

Tower Analysis Summary Form

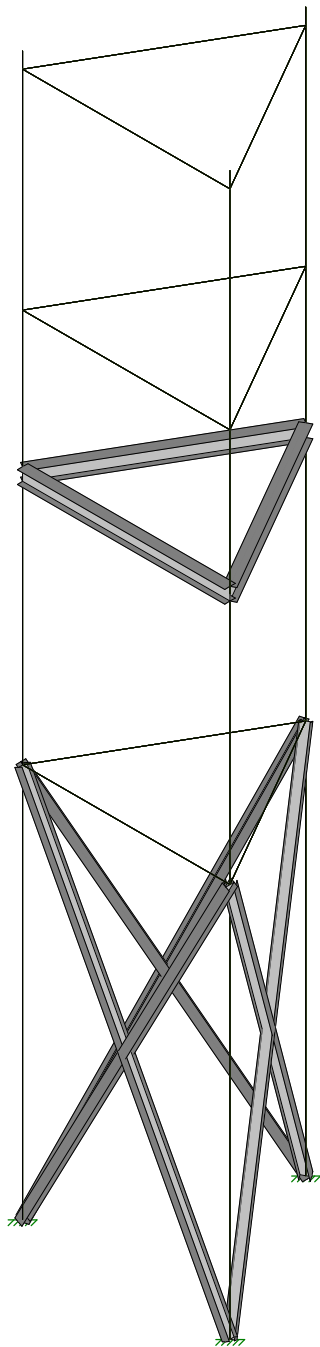
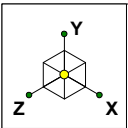
APPENDIX B

Tower Analysis Output File



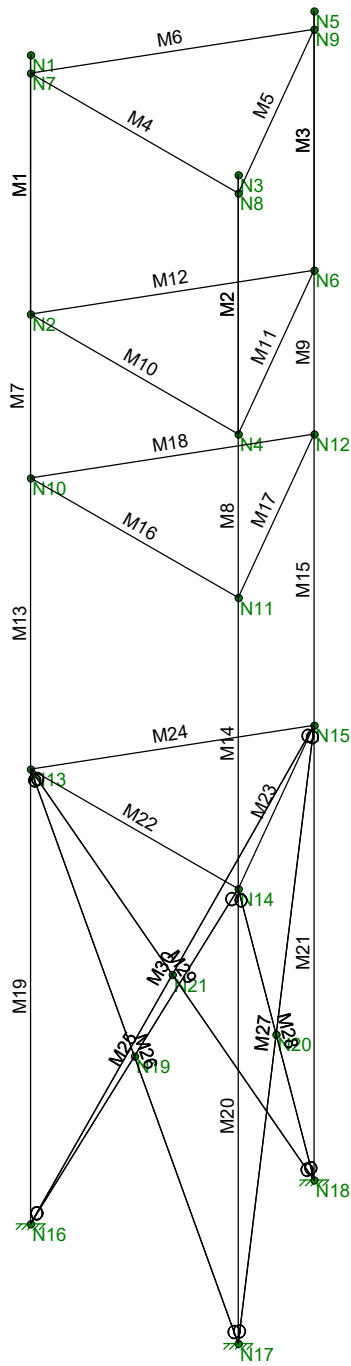
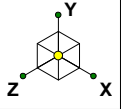
GPD
 520 South Main Street Suite 2531
 Akron, Ohio 44311
 Phone: (330) 572-2100
 FAX: (330) 572-2101

Job: 60417_CT2133_DANBURY-MOSES MTN.		
Project: 2022702.65		
Client: Centerline Communications LLC	Drawn by: bfranczkowski	App'd:
Code: TIA-222-H	Date: 05/20/22	Scale: NTS
Path:		Dwg No. E-1



Envelope Only Solution

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bfranczkowski		May 20, 2022 at 5:38 PM
2022702.65		2022702.65_60417_CT2133_DAN...



Envelope Only Solution

GPD

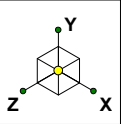
bfranczkowski

2022702.65

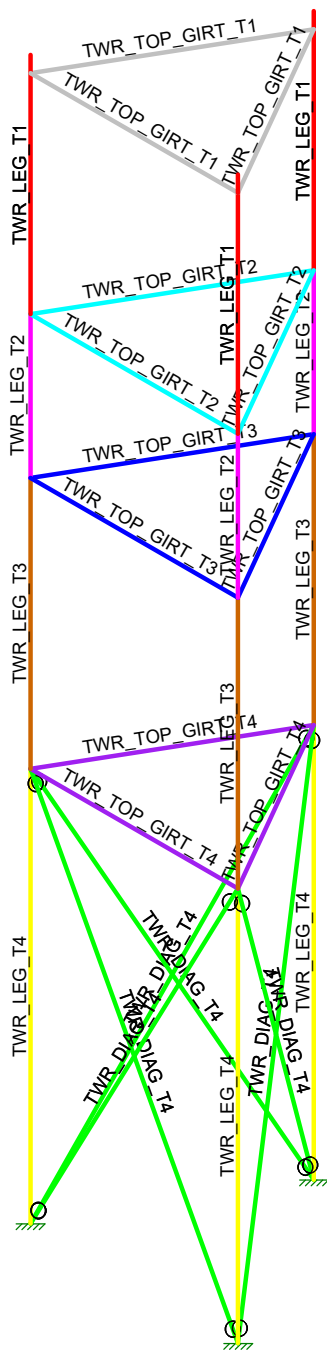
60417_CT2133_DANBURY-MOSES MTN.

May 20, 2022 at 5:40 PM

2022702.65_60417_CT2133_DAN...



- Section Sets
- TWR_TOP_GIRT_T3
 - TWR_DIAG_T4
 - TWR_LEG_T1
 - TWR_TOP_GIRT_T1
 - TWR_LEG_T2
 - TWR_TOP_GIRT_T2
 - TWR_LEG_T3
 - TWR_LEG_T4
 - TWR_TOP_GIRT_T4

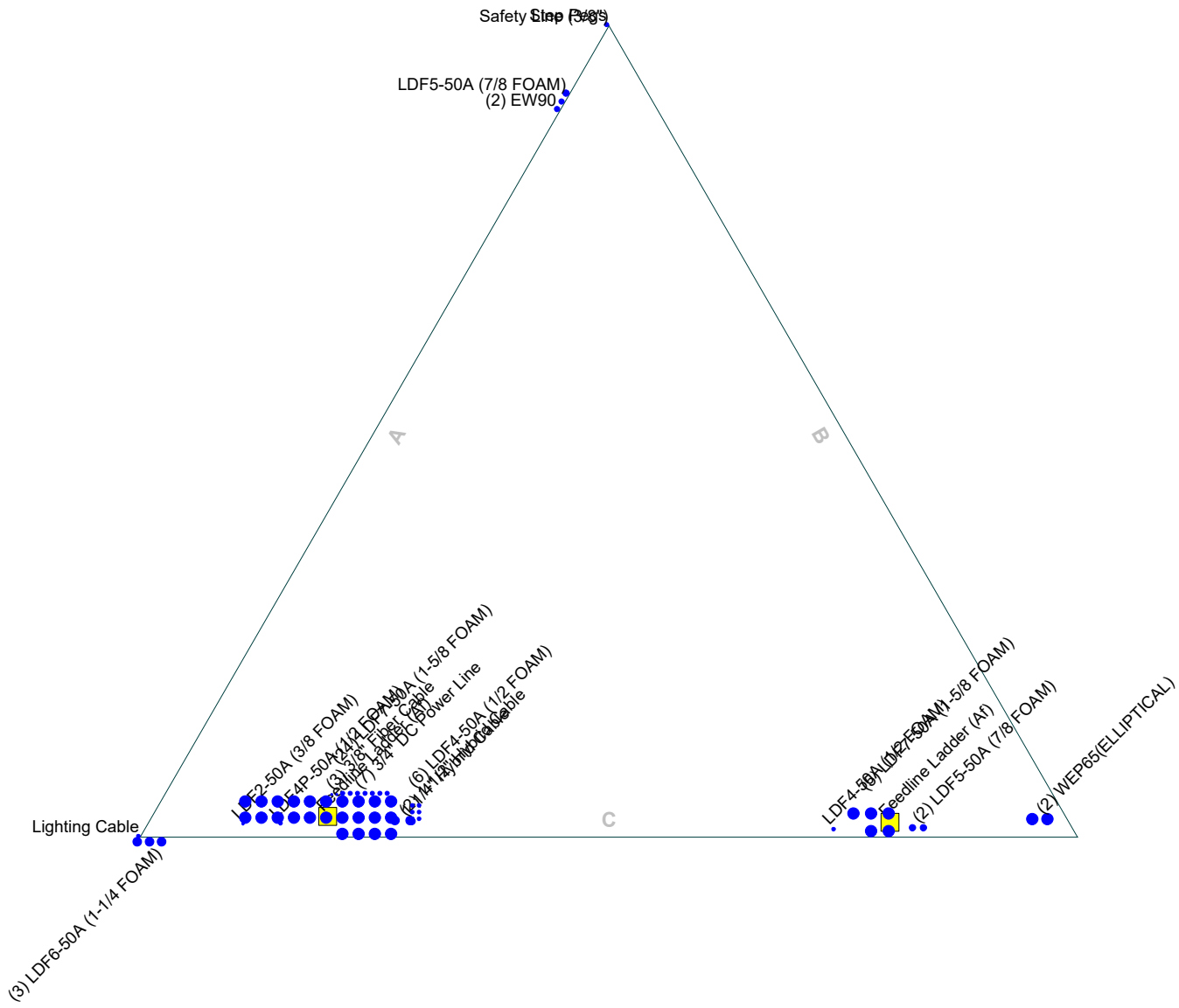


Envelope Only Solution

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bfranczkowski	60417_CT2133_DANBURY-MOSES MTN.	May 20, 2022 at 5:39 PM
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Feed Line Plan

— Round
 — Flat
 — App In Face
 — App Out Face



<p>GPD 520 South Main Street Suite 2531 Akron, Ohio 44311 Phone: (330) 572-2100 FAX: (330) 572-2101</p>	Job: 60417_CT2133_DANBURY-MOSES MTN.		
	Project: 2022702.65		
	Client: Centerline Communications LLC	Drawn by: bfranczkowski	App'd:
	Code: TIA-222-H	Date: 05/20/22	Scale: NTS
	Path:		Dwg No. E-7

tnxTower GPD 520 South Main Street Suite 2531 Akron, Ohio 44311 Phone: (330) 572-2100 FAX: (330) 572-2101	Job 60417_CT2133_DANBURY-MOSES MTN.	Page 1 of 8
	Project 2022702.65	Date 17:31:57 05/20/22
	Client Centerline Communications LLC	Designed by bfranczkowski

Tower Input Data

The main tower is a 3x free standing tower with an overall height of 64.25 ft above the ground line.

The base of the tower is set at an elevation of 0.00 ft above the ground line.

The face width of the tower is 13.17 ft at the top and 13.17 ft at the base.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower is located in Fairfield County, Connecticut.

Tower base elevation above sea level: 980.00 ft.

Basic wind speed of 115 mph.

Risk Category II.

Exposure Category B.

Crest Height: 521.00 ft.

Rigorous Topographic Factor Procedure for wind speed-up calculations is used.

Topographic Feature: Hill.

Slope Distance L: 1580.00 ft.

Distance from Crest x: 0.00 ft.

Horizontal Distance Downwind: No.

Nominal ice thickness of 1.0000 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in tower member design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf

Step Pegs	A	No	No	Ar (CaAa)	64.25 - 8.00	0.0000	0.5	1	1	0.8000	0.8000		0.003
Safety Line (3/8")	A	No	No	Ar (CaAa)	64.25 - 8.00	0.0000	0.5	1	1	0.3750	0.3750		0.000
Lighting Cable	A	No	No	Ar (CaAa)	64.25 - 8.00	0.0000	-0.5	1	1	0.5000 0.6300	0.6300		0.000

EW90	A	No	No	Ar (CaAa)	63.00 - 60.00	0.0000	0.4	1	1	0.5000	0.9869		0.000
EW90	A	No	No	Ar (CaAa)	60.00 - 8.00	0.0000	0.4	2	2	0.5000	0.9869		0.000
LDF5-50A (7/8 FOAM)	A	No	No	Ar (CaAa)	50.00 - 8.00	0.0000	0.415	1	1	1.0000	1.0900		0.000

Feedline Ladder (Af)	C	No	No	Af (CaAa)	64.25 - 8.00	-2.0000	0.3	1	1	3.0000	3.0000		0.008
LDF2-50A (3/8 FOAM)	C	No	No	Ar (CaAa)	64.00 - 60.00	-2.0000	0.39	1	1	0.4400	0.4400		0.000

Job	60417_CT2133_DANBURY-MOSES MTN.	Page	2 of 8
Project	2022702.65	Date	17:31:57 05/20/22
Client	Centerline Communications LLC	Designed by	bfranczkowski

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
LDF2-50A (3/8 FOAM)	C	No	No	Ar (CaAa)	62.00 - 8.00	-2.0000	0.39	1	1	0.4400	0.4400		0.000
1-1/2" Hybrid Cable	C	No	No	Ar (CaAa)	64.00 - 8.00	-2.0000	0.22	2	2	1.0000	1.5400		0.001
1-1/4" Hybrid Cable	C	No	No	Ar (CaAa)	64.00 - 8.00	-2.0000	0.21	1	1	1.0000	1.2500		0.001
3/4" DC Power Line	C	No	No	Ar (CaAa)	62.00 - 8.00	-7.0000	0.26	7	7	0.5000	0.7500		0.000
3/8" Fiber Cable	C	No	No	Ar (CaAa)	62.00 - 8.00	-7.0000	0.29	3	3	0.5000	0.3750		0.000
LDF4-50A (1/2 FOAM)	C	No	No	Ar (CaAa)	58.00 - 53.00	-5.0000	0.206	1	1	0.5000	0.6300		0.000
LDF4-50A (1/2 FOAM)	C	No	No	Ar (CaAa)	53.00 - 50.00	-5.0000	0.206	2	2	0.5000	0.6300		0.000
LDF4-50A (1/2 FOAM)	C	No	No	Ar (CaAa)	50.00 - 46.00	-5.0000	0.206	5	2	0.5000	0.6300		0.000
LDF4-50A (1/2 FOAM)	C	No	No	Ar (CaAa)	46.00 - 8.00	-5.0000	0.206	6	2	0.5000	0.6300		0.000

Feedline Ladder (Af)	C	No	No	Af (CaAa)	64.25 - 8.00	-1.0000	-0.3	1	1	3.0000	3.0000		0.008
LDF7-50A (1-5/8 FOAM)	C	No	No	Ar (CaAa)	50.00 - 8.00	-3.0000	-0.28	5	3	1.0000	1.9800		0.001
LDF5-50A (7/8 FOAM)	C	No	No	Ar (CaAa)	50.00 - 8.00	-1.0000	-0.33	2	2	0.7500	1.0900		0.000
LDF4-50A (1/2 FOAM)	C	No	No	Ar (CaAa)	50.00 - 8.00	-1.0000	-0.24	1	1	0.6300	0.6300		0.000

LDF6-50A (1-1/4 FOAM)	C	No	No	Ar (CaAa)	57.00 - 50.00	0.0000	0.49	1	1	0.5000	1.5500		0.001
LDF6-50A (1-1/4 FOAM)	C	No	No	Ar (CaAa)	50.00 - 8.00	0.0000	0.49	3	3	0.5000	1.5500		0.001

WEP65(ELLIPTICAL)	C	No	No	Ar (CaAa)	60.00 - 55.00	-2.0000	-0.46	1	1	0.5000	2.0300		0.001
WEP65(ELLIPTICAL)	C	No	No	Ar (CaAa)	55.00 - 8.00	-2.0000	-0.46	2	2	0.5000	2.0300		0.001

LDF4P-50A (1/2 FOAM)	C	No	No	Ar (CaAa)	64.25 - 8.00	-2.0000	0.35	1	1	0.6300	0.6300		0.000

LDF7-50A (1-5/8 FOAM)	C	No	No	Ar (CaAa)	64.00 - 60.00	-2.0000	0.32	12	8	0.7500	1.9800		0.001
LDF7-50A (1-5/8 FOAM)	C	No	No	Ar (CaAa)	60.00 - 8.00	-5.0000	0.31	24	10	0.7500	1.9800		0.001

tnxTower GPD 520 South Main Street Suite 2531 Akron, Ohio 44311 Phone: (330) 572-2100 FAX: (330) 572-2101	Job	60417_CT2133_DANBURY-MOSES MTN.	Page	3 of 8
	Project	2022702.65	Date	17:31:57 05/20/22
	Client	Centerline Communications LLC	Designed by	bfranczkowski

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	C _{AA} Front	C _{AA} Side	Weight	
			Horz	Lateral Vert						
			ft	ft	°	ft	ft ²	ft ²	lb	
Pipe Mount 7'x4.5"	A	From Leg	0.00	0.00	0.000	64.25	No Ice	2.11	2.11	83.000
			0.000				1/2" Ice	3.21	3.21	105.150
			3.000				1" Ice	3.64	3.64	132.187
(2) Flash Beacon	A	From Leg	0.00	0.00	0.000	64.25	No Ice	3.00	3.00	100.000
			0.000				1/2" Ice	4.50	4.50	150.000
			6.000				1" Ice	6.00	6.00	200.000
14' I-Beam Mount	A	From Leg	0.00	0.00	0.000	64.00	No Ice	7.44	0.98	349.700
			0.000				1/2" Ice	10.60	1.54	568.100
			0.000				1" Ice	13.75	2.10	786.500
14' I-Beam Mount	C	From Leg	0.00	0.00	0.000	64.00	No Ice	7.44	0.98	349.700
			0.000				1/2" Ice	10.60	1.54	568.100
			0.000				1" Ice	13.75	2.10	786.500
Pipe Mount 6'x2.375"	C	From Leg	0.00	0.00	0.000	64.00	No Ice	1.43	1.43	26.100
			0.000				1/2" Ice	1.92	1.92	36.927
			3.000				1" Ice	2.29	2.29	51.814
GPS	C	From Leg	0.00	0.00	0.000	64.00	No Ice	0.11	0.11	0.870
			0.000				1/2" Ice	0.21	0.21	3.845
			9.500				1" Ice	0.28	0.28	7.851
2' Yagi	C	From Leg	0.00	0.00	0.000	64.00	No Ice	0.30	0.30	5.000
			0.000				1/2" Ice	0.43	0.43	8.283
			6.000				1" Ice	0.58	0.58	13.145
800 10734V01 w/ Mount Pipe	A	From Leg	1.00	0.00	0.000	64.00	No Ice	6.12	4.07	63.440
			0.000				1/2" Ice	6.57	4.76	113.237
			5.000				1" Ice	7.03	5.47	170.184
800 10734V01 w/ Mount Pipe	C	From Leg	1.00	0.00	0.000	64.00	No Ice	6.12	4.07	63.440
			0.000				1/2" Ice	6.57	4.76	113.237
			5.000				1" Ice	7.03	5.47	170.184
(2) HBXX-6516DS-A2M w/ Mount Pipe	A	From Leg	1.00	0.00	0.000	64.00	No Ice	5.66	4.53	49.732
			0.000				1/2" Ice	6.06	5.20	98.969
			5.000				1" Ice	6.47	5.86	154.423
(2) HBXX-6516DS-A2M w/ Mount Pipe	C	From Leg	1.00	0.00	0.000	64.00	No Ice	5.66	4.53	49.732
			0.000				1/2" Ice	6.06	5.20	98.969
			5.000				1" Ice	6.47	5.86	154.423
(2) DB846F65ZAXY w/ Mount Pipe	A	From Leg	1.00	0.00	0.000	64.00	No Ice	7.27	7.82	46.550
			0.000				1/2" Ice	7.83	9.01	113.929
			5.000				1" Ice	8.35	9.91	189.249
(2) DB846F65ZAXY w/ Mount Pipe	C	From Leg	1.00	0.00	0.000	64.00	No Ice	7.27	7.82	46.550
			0.000				1/2" Ice	7.83	9.01	113.929
			5.000				1" Ice	8.35	9.91	189.249
RRH4X45-AWS4 B66	A	From Leg	1.00	0.00	0.000	64.00	No Ice	2.66	1.59	64.000
			0.000				1/2" Ice	2.88	1.77	84.354
			5.000				1" Ice	3.10	1.96	107.846
RRH4X45-AWS4 B66	C	From Leg	1.00	0.00	0.000	64.00	No Ice	2.66	1.59	64.000
			0.000				1/2" Ice	2.88	1.77	84.354
			5.000				1" Ice	3.10	1.96	107.846
RRH 2x60-PCS	A	From Leg	1.00	0.00	0.000	64.00	No Ice	2.66	1.12	55.000
			0.000				1/2" Ice	2.86	1.27	74.108
			5.000				1" Ice	3.07	1.42	96.158
RRH 2x60-PCS	C	From Leg	1.00	0.00	0.000	64.00	No Ice	2.66	1.12	55.000
			0.000				1/2" Ice	2.86	1.27	74.108
			5.000				1" Ice	3.07	1.42	96.158
RC2DC-3315-PF-48	A	From Leg	1.00	0.00	0.000	64.00	No Ice	3.79	2.51	32.000
			0.000				1/2" Ice	4.04	2.72	63.468
			5.000				1" Ice	4.30	2.94	98.694

tnxTower GPD 520 South Main Street Suite 2531 Akron, Ohio 44311 Phone: (330) 572-2100 FAX: (330) 572-2101	Job	60417_CT2133_DANBURY-MOSES MTN.	Page	4 of 8
	Project	2022702.65	Date	17:31:57 05/20/22
	Client	Centerline Communications LLC	Designed by	bfranczkowski

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight	
			Horz	Vert						ft
RC2DC-3315-PF-48	C	From Leg	1.00	0.000	0.000	64.00	No Ice	3.79	2.51	32.000
			0.000				1/2" Ice	4.04	2.72	63.468
			5.000				1" Ice	4.30	2.94	98.694

Pipe Mount 6'x2.375"	B	From Leg	1.00	0.000	0.000	63.00	No Ice	1.43	1.43	26.100
			0.000				1/2" Ice	1.92	1.92	36.927
			0.000				1" Ice	2.29	2.29	51.814

10' T-Boom [SM 601-1]	A	From Face	1.50	-10.000	0.000	60.00	No Ice	17.48	8.53	474.300
			0.000				1/2" Ice	21.12	11.09	651.510
			0.000				1" Ice	24.94	13.63	871.250
10' T-Boom [SM 601-1]	B	From Face	1.50	-10.000	0.000	60.00	No Ice	17.48	8.53	474.300
			0.000				1/2" Ice	21.12	11.09	651.510
			0.000				1" Ice	24.94	13.63	871.250
10' T-Boom [SM 601-1]	C	From Face	1.50	0.000	0.000	60.00	No Ice	17.48	8.53	474.300
			0.000				1/2" Ice	21.12	11.09	651.510
			0.000				1" Ice	24.94	13.63	871.250
EPBQ-654L8H6 w/ Mount Pipe	A	From Face	3.00	-10.000	-3.000	60.00	No Ice	9.18	8.94	117.200
			0.000				1/2" Ice	9.83	10.26	197.630
			-3.000				1" Ice	10.45	11.43	286.688
EPBQ-654L8H6 w/ Mount Pipe	B	From Face	3.00	-10.000	-3.000	60.00	No Ice	9.18	8.94	117.200
			0.000				1/2" Ice	9.83	10.26	197.630
			-3.000				1" Ice	10.45	11.43	286.688
EPBQ-654L8H6 w/ Mount Pipe	C	From Face	3.00	0.000	-3.000	60.00	No Ice	9.18	8.94	117.200
			0.000				1/2" Ice	9.83	10.26	197.630
			-3.000				1" Ice	10.45	11.43	286.688
AIR6449 B77D+AIR6419 B77G STACKED w/ Mount Pipe	A	From Face	3.00	-10.000	-3.000	60.00	No Ice	11.76	9.94	229.200
			0.000				1/2" Ice	12.47	11.21	331.208
			-3.000				1" Ice	13.14	12.34	441.992
AIR6449 B77D+AIR6419 B77G STACKED w/ Mount Pipe	B	From Face	3.00	-10.000	-3.000	60.00	No Ice	11.76	9.94	229.200
			0.000				1/2" Ice	12.47	11.21	331.208
			-3.000				1" Ice	13.14	12.34	441.992
AIR6449 B77D+AIR6419 B77G STACKED w/ Mount Pipe	C	From Face	3.00	0.000	-3.000	60.00	No Ice	11.76	9.94	229.200
			0.000				1/2" Ice	12.47	11.21	331.208
			-3.000				1" Ice	13.14	12.34	441.992
OPA65R-BU6DA w/ Mount Pipe	A	From Face	3.00	-10.000	-3.000	60.00	No Ice	12.89	7.10	82.100
			0.000				1/2" Ice	13.39	8.05	173.022
			-3.000				1" Ice	13.90	8.88	272.298
OPA65R-BU6DA w/ Mount Pipe	B	From Face	3.00	-10.000	-3.000	60.00	No Ice	12.89	7.10	82.100
			0.000				1/2" Ice	13.39	8.05	173.022
			-3.000				1" Ice	13.90	8.88	272.298
OPA65R-BU6DA w/ Mount Pipe	C	From Face	3.00	0.000	-3.000	60.00	No Ice	12.89	7.10	82.100
			0.000				1/2" Ice	13.39	8.05	173.022
			-3.000				1" Ice	13.90	8.88	272.298
4478 B14	A	From Face	3.00	-10.000	-3.000	60.00	No Ice	1.96	1.25	59.400
			0.000				1/2" Ice	2.14	1.40	76.658
			-3.000				1" Ice	2.32	1.55	96.662
4478 B14	B	From Face	3.00	-10.000	-3.000	60.00	No Ice	1.96	1.25	59.400
			0.000				1/2" Ice	2.14	1.40	76.658
			-3.000				1" Ice	2.32	1.55	96.662
4478 B14	C	From Face	3.00	0.000	-3.000	60.00	No Ice	1.96	1.25	59.400
			0.000				1/2" Ice	2.14	1.40	76.658
			-3.000				1" Ice	2.32	1.55	96.662
RRUS-32 B2	A	From Face	3.00	-10.000	-3.000	60.00	No Ice	2.73	1.67	52.900
			0.000				1/2" Ice	2.95	1.86	73.957
			-3.000				1" Ice	3.18	2.05	98.206
RRUS-32 B2	B	From Face	3.00	-10.000	-3.000	60.00	No Ice	2.73	1.67	52.900

tnxTower GPD 520 South Main Street Suite 2531 Akron, Ohio 44311 Phone: (330) 572-2100 FAX: (330) 572-2101	Job	60417_CT2133_DANBURY-MOSES MTN.	Page	5 of 8
	Project	2022702.65	Date	17:31:57 05/20/22
	Client	Centerline Communications LLC	Designed by	bfranczkowski

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight	
			Horz	Vert						
			ft	ft	°	ft	ft ²	ft ²	lb	
			0.000				1/2" Ice	2.95	1.86	73.957
			-3.000				1" Ice	3.18	2.05	98.206
RRUS-32 B2	C	From Face	3.00		0.000	60.00	No Ice	2.73	1.67	52.900
			0.000				1/2" Ice	2.95	1.86	73.957
			-3.000				1" Ice	3.18	2.05	98.206
4426 B66	A	From Face	3.00		-10.000	60.00	No Ice	2.74	1.67	53.000
			0.000				1/2" Ice	2.96	1.86	74.114
			-3.000				1" Ice	3.19	2.05	98.424
4426 B66	B	From Face	3.00		-10.000	60.00	No Ice	2.74	1.67	53.000
			0.000				1/2" Ice	2.96	1.86	74.114
			-3.000				1" Ice	3.19	2.05	98.424
4426 B66	C	From Face	3.00		0.000	60.00	No Ice	2.74	1.67	53.000
			0.000				1/2" Ice	2.96	1.86	74.114
			-3.000				1" Ice	3.19	2.05	98.424
RRUS-32 B30	A	From Face	3.00		-10.000	60.00	No Ice	3.31	2.42	77.000
			0.000				1/2" Ice	3.56	2.64	104.928
			-3.000				1" Ice	3.81	2.86	136.466
RRUS-32 B30	B	From Face	3.00		-10.000	60.00	No Ice	3.31	2.42	77.000
			0.000				1/2" Ice	3.56	2.64	104.928
			-3.000				1" Ice	3.81	2.86	136.466
RRUS-32 B30	C	From Face	3.00		0.000	60.00	No Ice	3.31	2.42	77.000
			0.000				1/2" Ice	3.56	2.64	104.928
			-3.000				1" Ice	3.81	2.86	136.466
4449 B5/B12	A	From Face	3.00		-10.000	60.00	No Ice	1.97	1.41	71.000
			0.000				1/2" Ice	2.14	1.56	89.509
			-3.000				1" Ice	2.33	1.73	110.838
4449 B5/B12	B	From Face	3.00		-10.000	60.00	No Ice	1.97	1.41	71.000
			0.000				1/2" Ice	2.14	1.56	89.509
			-3.000				1" Ice	2.33	1.73	110.838
4449 B5/B12	C	From Face	3.00		0.000	60.00	No Ice	1.97	1.41	71.000
			0.000				1/2" Ice	2.14	1.56	89.509
			-3.000				1" Ice	2.33	1.73	110.838
DC6-48-60-18-8F Surge Suppression Unit	B	From Face	3.00		-10.000	60.00	No Ice	0.92	0.92	18.900
			0.000				1/2" Ice	1.46	1.46	36.615
			-3.000				1" Ice	1.64	1.64	56.825
DC6-48-60-18-8F Surge Suppression Unit	C	From Face	3.00		0.000	60.00	No Ice	0.92	0.92	18.900
			0.000				1/2" Ice	1.46	1.46	36.615
			-3.000				1" Ice	1.64	1.64	56.825
DC9-48-60-24-8C-EV	A	From Face	3.00		-10.000	60.00	No Ice	2.74	4.78	26.200
			0.000				1/2" Ice	2.96	5.06	63.272
			-3.000				1" Ice	3.20	5.35	104.422

Pipe Mount 6"x2.375"	B	From Leg	0.50		0.000	60.00	No Ice	1.43	1.43	26.100
			0.000				1/2" Ice	1.92	1.92	36.927
			0.000				1" Ice	2.29	2.29	51.814

Pipe Mount 6"x2.375"	A	From Leg	1.00		0.000	60.00	No Ice	1.43	1.43	26.100
			0.000				1/2" Ice	1.92	1.92	36.927
			0.000				1" Ice	2.29	2.29	51.814

12"x10"x4" ODU	C	From Face	0.50		0.000	58.00	No Ice	1.17	0.47	50.000
			0.000				1/2" Ice	1.31	0.57	57.616
			0.000				1" Ice	1.47	0.69	67.111

Andrew Collar Mount	B	From Leg	0.50		0.000	57.00	No Ice	2.14	2.14	190.300
			0.000				1/2" Ice	2.35	2.35	247.390
			0.000				1" Ice	2.57	2.57	304.480

tnxTower GPD 520 South Main Street Suite 2531 Akron, Ohio 44311 Phone: (330) 572-2100 FAX: (330) 572-2101	Job	60417_CT2133_DANBURY-MOSES MTN.	Page	6 of 8
	Project	2022702.65	Date	17:31:57 05/20/22
	Client	Centerline Communications LLC	Designed by	bfranczkowski

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Vert					
			ft	ft	°	ft	ft ²	ft ²	lb
12' Omni	B	From Leg	1.00	0.000	0.000	57.00	No Ice 5.09	5.09	70.000
			0.000				1/2" Ice 7.09	7.09	108.796
			6.000				1" Ice 8.71	8.71	157.672

Pipe Mount 6'x2.375"	C	From Leg	0.50	0.000	0.000	55.00	No Ice 1.43	1.43	26.100
			0.000				1/2" Ice 1.92	1.92	36.927
			0.000				1" Ice 2.29	2.29	51.814

Pipe Mount 4'x2.375"	B	From Leg	0.00	0.000	0.000	53.00	No Ice 0.87	0.87	18.500
			0.000				1/2" Ice 1.11	1.11	25.815
			0.000				1" Ice 1.36	1.36	35.968
8' Dipole	B	From Leg	0.00	0.000	0.000	53.00	No Ice 1.60	1.60	15.000
			0.000				1/2" Ice 2.42	2.42	27.446
			4.000				1" Ice 3.24	3.24	45.136

14' I-Beam Mount	B	From Leg	4.00	0.000	0.000	50.00	No Ice 7.44	0.98	349.700
			0.000				1/2" Ice 10.60	1.54	568.100
			0.000				1" Ice 13.75	2.10	786.500
DB806D	C	From Leg	4.00	0.000	0.000	50.00	No Ice 1.14	1.14	21.000
			0.000				1/2" Ice 1.68	1.68	29.934
			7.000				1" Ice 2.03	2.03	42.706
BA80-41-DIN	B	From Leg	8.00	0.000	0.000	50.00	No Ice 6.81	6.81	68.000
			0.000				1/2" Ice 10.38	10.38	125.447
			10.000				1" Ice 12.50	12.50	196.078

MTS 72" Standoff	B	From Leg	3.00	0.000	0.000	50.00	No Ice 0.98	3.03	53.000
			0.000				1/2" Ice 1.70	5.22	78.750
			0.000				1" Ice 2.42	7.41	104.500
10' Omni	B	From Leg	6.00	0.000	0.000	50.00	No Ice 2.00	2.00	25.000
			0.000				1/2" Ice 3.02	3.02	40.501
			5.000				1" Ice 4.07	4.07	62.466

Pipe Mount 6'x2.375"	A	From Leg	0.50	0.000	0.000	50.00	No Ice 1.43	1.43	26.100
			0.000				1/2" Ice 1.92	1.92	36.927
			3.000				1" Ice 2.29	2.29	51.814
6' Omni	A	From Leg	0.50	0.000	0.000	50.00	No Ice 1.77	1.77	25.000
			0.000				1/2" Ice 2.13	2.13	38.235
			7.000				1" Ice 2.50	2.50	55.594

Pipe Mount 12'x2.375"	A	From Leg	1.00	0.000	0.000	50.00	No Ice 2.85	2.85	45.600
			0.000				1/2" Ice 4.08	4.08	66.965
			5.500				1" Ice 5.32	5.32	96.054
8' Dipole	A	From Leg	1.00	0.000	0.000	50.00	No Ice 1.60	1.60	15.000
			0.000				1/2" Ice 2.42	2.42	27.446
			4.000				1" Ice 3.24	3.24	45.136

Pipe Mount 12'x2.375"	C	From Face	1.00	0.000	0.000	50.00	No Ice 2.85	2.85	45.600
			0.000				1/2" Ice 4.08	4.08	66.965
			5.500				1" Ice 5.32	5.32	96.054
LeBlanc 18" Standoff	C	From Face	2.00	0.000	0.000	50.00	No Ice 2.96	2.11	96.000
			0.000				1/2" Ice 4.10	2.93	117.100
			0.000				1" Ice 5.24	3.75	138.200
10' Omni	C	From Face	3.00	0.000	0.000	50.00	No Ice 2.00	2.00	25.000
			0.000				1/2" Ice 3.02	3.02	40.501
			-5.000				1" Ice 4.07	4.07	62.466
20"x8"x6" TMA	C	From Face	1.50	0.000	0.000	50.00	No Ice 1.33	1.03	30.000
			0.000				1/2" Ice 1.49	1.17	41.764

tnxTower GPD 520 South Main Street Suite 2531 Akron, Ohio 44311 Phone: (330) 572-2100 FAX: (330) 572-2101	Job	60417_CT2133_DANBURY-MOSES MTN.	Page	7 of 8
	Project	2022702.65	Date	17:31:57 05/20/22
	Client	Centerline Communications LLC	Designed by	bfranczkowski

Description	Face or Leg	Offset Type	Offsets:		Azimuth Adjustment	Placement	CAAA Front	CAAA Side	Weight
			Horz	Vert					
***				2.000					1" Ice 1.66 1.32 55.926
Pipe Mount 4'x2.375"	B	From Face	0.00	0.000	0.000	50.00	No Ice 0.87	0.87	18.500
			0.000				1/2" Ice 1.11	1.11	25.815
			2.000				1" Ice 1.36	1.36	35.968
UHF450 Antenna	B	From Face	0.00	0.000	0.000	50.00	No Ice 5.59	5.59	30.000
			0.000				1/2" Ice 7.66	7.66	70.726
			4.000				1" Ice 9.74	9.74	124.306

14' I-Beam Mount	A	From Leg	4.00	0.000	0.000	50.00	No Ice 7.44	0.98	349.700
			0.000				1/2" Ice 10.60	1.54	568.100
			0.000				1" Ice 13.75	2.10	786.500
14' I-Beam Mount	C	From Leg	4.00	0.000	0.000	50.00	No Ice 7.44	0.98	349.700
			0.000				1/2" Ice 10.60	1.54	568.100
			0.000				1" Ice 13.75	2.10	786.500
LeBlanc 18" Standoff	C	From Leg	4.00	0.000	0.000	50.00	No Ice 2.96	2.11	96.000
			0.000				1/2" Ice 4.10	2.93	117.100
			2.000				1" Ice 5.24	3.75	138.200
MTS 72" Standoff	B	From Leg	3.00	0.000	0.000	50.00	No Ice 0.98	3.03	53.000
			0.000				1/2" Ice 1.70	5.22	78.750
			0.000				1" Ice 2.42	7.41	104.500
Pipe Mount 12'x2.375"	B	From Face	1.00	0.000	0.000	50.00	No Ice 2.85	2.85	45.600
			0.000				1/2" Ice 4.08	4.08	66.965
			5.500				1" Ice 5.32	5.32	96.054
LeBlanc 18" Standoff	B	From Face	2.00	0.000	0.000	50.00	No Ice 2.96	2.11	96.000
			0.000				1/2" Ice 4.10	2.93	117.100
			0.000				1" Ice 5.24	3.75	138.200
DB264-A	A	From Leg	8.00	0.000	0.000	50.00	No Ice 3.16	3.16	36.000
			0.000				1/2" Ice 5.69	5.69	46.800
			-6.000				1" Ice 8.22	8.22	57.600
VHF150	A	From Leg	8.00	0.000	0.000	50.00	No Ice 1.29	1.29	12.000
			0.000				1/2" Ice 1.60	1.60	22.284
			9.000				1" Ice 1.91	1.91	36.056
WPA-700120-4CF-EDIN-0 w/ Mount Pipe	C	From Leg	3.00	0.000	0.000	50.00	No Ice 3.81	3.97	29.998
			0.000				1/2" Ice 4.17	4.58	68.119
			0.000				1" Ice 4.54	5.19	111.883
432E-831-01T	C	From Leg	6.00	0.000	0.000	50.00	No Ice 1.20	0.75	25.000
			0.000				1/2" Ice 1.34	0.86	36.553
			0.000				1" Ice 1.48	0.98	50.343
SC479-HF1LDF	C	From Leg	8.00	0.000	0.000	50.00	No Ice 4.76	4.76	34.000
			0.000				1/2" Ice 6.54	6.54	69.823
			-5.000				1" Ice 8.04	8.04	114.983
SC479-HF1LDF	B	From Leg	6.00	0.000	0.000	50.00	No Ice 4.76	4.76	34.000
			0.000				1/2" Ice 6.54	6.54	69.823
			-5.000				1" Ice 8.04	8.04	114.983

Pipe Mount 12'x2.375"	A	From Face	1.00	0.000	0.000	50.00	No Ice 2.85	2.85	45.600
			0.000				1/2" Ice 4.08	4.08	66.965
			5.500				1" Ice 5.32	5.32	96.054

Pipe Mount 12'x2.375"	A	From Face	1.00	0.000	0.000	50.00	No Ice 2.85	2.85	45.600
			0.000				1/2" Ice 4.08	4.08	66.965
			5.500				1" Ice 5.32	5.32	96.054

MTS 72" Standoff	C	From Leg	3.00	0.000	0.000	50.00	No Ice 0.98	3.03	53.000
			0.000				1/2" Ice 1.70	5.22	78.750
			0.000				1" Ice 2.42	7.41	104.500

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	CAAA Front ft ²	CAAA Side ft ²	Weight lb
12' Omni	C	From Leg	6.00 0.000 -6.000	0.000	50.00	No Ice 3.00 1/2" Ice 4.23 1" Ice 5.47	3.00 4.23 5.47	20.000 42.303 72.344

4' Standoff	A	From Leg	0.50 0.000 0.000	90.000	46.00	No Ice 1.67 1/2" Ice 2.43 1" Ice 3.21	5.15 7.24 9.38	62.000 103.460 158.970

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft	Aperture Area ft ²	Weight lb
VHLP3-11W-6GR	B	Paraboloid w/Shroud (HP)	From Leg	1.00 0.000 14.000	0.000		63.00	3.28	No Ice 8.47 1/2" Ice 8.90 1" Ice 9.34	53.000 100.000 140.000
VHLP3-11W-6GR	A	Paraboloid w/Shroud (HP)	From Leg	1.00 0.000 12.900	0.000		60.00	3.28	No Ice 8.47 1/2" Ice 8.90 1" Ice 9.34	53.000 100.000 140.000
PA6-65	B	Paraboloid w/Radome	From Leg	1.00 0.000 0.000	0.000		60.00	6.58	No Ice 34.04 1/2" Ice 34.91 1" Ice 35.77	140.000 320.000 500.000
SPD2-5.8NS	C	Paraboloid w/Radome	From Face	1.00 0.000 0.000	0.000		58.00	2.00	No Ice 3.14 1/2" Ice 3.41 1" Ice 3.68	22.000 40.000 60.000
PA6-65	C	Paraboloid w/Radome	From Leg	1.00 0.000 0.000	0.000		55.00	6.58	No Ice 34.04 1/2" Ice 34.91 1" Ice 35.77	140.000 320.000 500.000
PRFTV 48/75	A	Grid	From Leg	2.00 2.000 0.000	0.000		46.00	4.65	No Ice 6.35 1/2" Ice 17.60 1" Ice 18.21	40.000 90.000 140.000
SPD2-5.8NS	C	Paraboloid w/Radome	From Face	3.00 0.000 -5.000	0.000		60.00	2.00	No Ice 3.14 1/2" Ice 3.41 1" Ice 3.68	22.000 40.000 60.000



Company : GPD
 Designer : bfranczkowski
 Job Number : 2022702.65
 Model Name : 60417_CT2133_DANBURY-MOSES MTN.

May 20, 2022
 5:27 PM
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Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A572-50	29000	11200	.295	.65	.49	50	1.1	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_TOP_GIRT_T3	W10X33	Beam	Wide Flange	A572-50	Typical	9.71	36.6	171	.583
2	TWR_DIAG_T4	W6X25	Column	Wide Flange	A572-50	Typical	7.34	17.1	53.4	.461

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me...	Surface(...
1	Dead	None		-1		24	271	12	
2	No Ice Wind 0 deg	None				24	681	32	
3	No Ice Wind 30 deg	None				48	759	44	
4	No Ice Wind 60 deg	None				48	786	44	
5	No Ice Wind 90 deg	None				24	690	32	
6	No Ice Wind 120 deg	None				48	785	44	
7	No Ice Wind 150 deg	None				48	744	44	
8	No Ice Wind 180 deg	None				24	681	32	
9	No Ice Wind 210 deg	None				48	759	44	
10	No Ice Wind 240 deg	None				48	786	44	
11	No Ice Wind 270 deg	None				24	690	32	
12	No Ice Wind 300 deg	None				48	785	44	
13	No Ice Wind 330 deg	None				48	742	44	
14	Ice	None				24	271	42	
15	Temperature Drop	None						30	
16	Ice Wind 0 deg	None				24	679	32	
17	Ice Wind 30 deg	None				48	755	44	
18	Ice Wind 60 deg	None				48	785	44	
19	Ice Wind 90 deg	None				24	689	32	
20	Ice Wind 120 deg	None				48	783	44	
21	Ice Wind 150 deg	None				48	742	44	
22	Ice Wind 180 deg	None				24	679	32	
23	Ice Wind 210 deg	None				48	755	44	
24	Ice Wind 240 deg	None				48	784	44	
25	Ice Wind 270 deg	None				24	689	32	
26	Ice Wind 300 deg	None				48	784	44	
27	Ice Wind 330 deg	None				48	742	44	
28	Service Wind 0 deg	None				24	680	32	
29	Service Wind 30 deg	None				48	753	44	
30	Service Wind 60 deg	None				48	781	44	
31	Service Wind 90 deg	None				24	688	32	
32	Service Wind 120 deg	None				48	779	44	
33	Service Wind 150 deg	None				48	740	44	
34	Service Wind 180 deg	None				24	680	32	
35	Service Wind 210 deg	None				48	753	44	
36	Service Wind 240 deg	None				48	781	44	
37	Service Wind 270 deg	None				24	688	32	
38	Service Wind 300 deg	None				48	780	44	
39	Service Wind 330 deg	None				48	738	44	



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May 20, 2022
 5:27 PM
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Load Combinations

	Description	S...	P...	S...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	
1	Dead Only	Yes	Y		1	1	40	1	41	1	0		0		0		0		0		0		0
2	1.2 Dead+1.0 Wind 0 deg...	Yes	Y		1	1.2	2	1	40	1.2	41	1	0		0		0		0		0		0
3	0.9 Dead+1.0 Wind 0 deg...	Yes	Y		1	.9	2	1	40	.9	41	1	0		0		0		0		0		0
4	1.2 Dead+1.0 Wind 30 de...	Yes	Y		1	1.2	3	1	40	1.2	41	1	0		0		0		0		0		0
5	0.9 Dead+1.0 Wind 30 de...	Yes	Y		1	.9	3	1	40	.9	41	1	0		0		0		0		0		0
6	1.2 Dead+1.0 Wind 60 de...	Yes	Y		1	1.2	4	1	40	1.2	41	1	0		0		0		0		0		0
7	0.9 Dead+1.0 Wind 60 de...	Yes	Y		1	.9	4	1	40	.9	41	1	0		0		0		0		0		0
8	1.2 Dead+1.0 Wind 90 de...	Yes	Y		1	1.2	5	1	40	1.2	41	1	0		0		0		0		0		0
9	0.9 Dead+1.0 Wind 90 de...	Yes	Y		1	.9	5	1	40	.9	41	1	0		0		0		0		0		0
10	1.2 Dead+1.0 Wind 120 d...	Yes	Y		1	1.2	6	1	40	1.2	41	1	0		0		0		0		0		0
11	0.9 Dead+1.0 Wind 120 d...	Yes	Y		1	.9	6	1	40	.9	41	1	0		0		0		0		0		0
12	1.2 Dead+1.0 Wind 150 d...	Yes	Y		1	1.2	7	1	40	1.2	41	1	0		0		0		0		0		0
13	0.9 Dead+1.0 Wind 150 d...	Yes	Y		1	.9	7	1	40	.9	41	1	0		0		0		0		0		0
14	1.2 Dead+1.0 Wind 180 d...	Yes	Y		1	1.2	8	1	40	1.2	41	1	0		0		0		0		0		0
15	0.9 Dead+1.0 Wind 180 d...	Yes	Y		1	.9	8	1	40	.9	41	1	0		0		0		0		0		0
16	1.2 Dead+1.0 Wind 210 d...	Yes	Y		1	1.2	9	1	40	1.2	41	1	0		0		0		0		0		0
17	0.9 Dead+1.0 Wind 210 d...	Yes	Y		1	.9	9	1	40	.9	41	1	0		0		0		0		0		0
18	1.2 Dead+1.0 Wind 240 d...	Yes	Y		1	1.2	10	1	40	1.2	41	1	0		0		0		0		0		0
19	0.9 Dead+1.0 Wind 240 d...	Yes	Y		1	.9	10	1	40	.9	41	1	0		0		0		0		0		0
20	1.2 Dead+1.0 Wind 270 d...	Yes	Y		1	1.2	11	1	40	1.2	41	1	0		0		0		0		0		0
21	0.9 Dead+1.0 Wind 270 d...	Yes	Y		1	.9	11	1	40	.9	41	1	0		0		0		0		0		0
22	1.2 Dead+1.0 Wind 300 d...	Yes	Y		1	1.2	12	1	40	1.2	41	1	0		0		0		0		0		0
23	0.9 Dead+1.0 Wind 300 d...	Yes	Y		1	.9	12	1	40	.9	41	1	0		0		0		0		0		0
24	1.2 Dead+1.0 Wind 330 d...	Yes	Y		1	1.2	13	1	40	1.2	41	1	0		0		0		0		0		0
25	0.9 Dead+1.0 Wind 330 d...	Yes	Y		1	.9	13	1	40	.9	41	1	0		0		0		0		0		0
26	1.2 Dead+1.0 Ice+1.0 Temp	Yes	Y		1	1.2	14	1	15	1	40	1.2	41	1	0		0		0		0		0
27	1.2 Dead+1.0 Wind 0 deg...	Yes	Y		1	1.2	16	1	14	1	15	1	40	1.2	41	1	0		0		0		0
28	1.2 Dead+1.0 Wind 30 de...	Yes	Y		1	1.2	17	1	14	1	15	1	40	1.2	41	1	0		0		0		0
29	1.2 Dead+1.0 Wind 60 de...	Yes	Y		1	1.2	18	1	14	1	15	1	40	1.2	41	1	0		0		0		0
30	1.2 Dead+1.0 Wind 90 de...	Yes	Y		1	1.2	19	1	14	1	15	1	40	1.2	41	1	0		0		0		0
31	1.2 Dead+1.0 Wind 120 d...	Yes	Y		1	1.2	20	1	14	1	15	1	40	1.2	41	1	0		0		0		0
32	1.2 Dead+1.0 Wind 150 d...	Yes	Y		1	1.2	21	1	14	1	15	1	40	1.2	41	1	0		0		0		0
33	1.2 Dead+1.0 Wind 180 d...	Yes	Y		1	1.2	22	1	14	1	15	1	40	1.2	41	1	0		0		0		0
34	1.2 Dead+1.0 Wind 210 d...	Yes	Y		1	1.2	23	1	14	1	15	1	40	1.2	41	1	0		0		0		0
35	1.2 Dead+1.0 Wind 240 d...	Yes	Y		1	1.2	24	1	14	1	15	1	40	1.2	41	1	0		0		0		0
36	1.2 Dead+1.0 Wind 270 d...	Yes	Y		1	1.2	25	1	14	1	15	1	40	1.2	41	1	0		0		0		0
37	1.2 Dead+1.0 Wind 300 d...	Yes	Y		1	1.2	26	1	14	1	15	1	40	1.2	41	1	0		0		0		0
38	1.2 Dead+1.0 Wind 330 d...	Yes	Y		1	1.2	27	1	14	1	15	1	40	1.2	41	1	0		0		0		0
39	Dead+Wind 0 deg - Service	Yes	Y		1	1	28	1	40	1	41	1	0		0		0		0		0		0
40	Dead+Wind 30 deg - Serv...	Yes	Y		1	1	29	1	40	1	41	1	0		0		0		0		0		0
41	Dead+Wind 60 deg - Serv...	Yes	Y		1	1	30	1	40	1	41	1	0		0		0		0		0		0
42	Dead+Wind 90 deg - Serv...	Yes	Y		1	1	31	1	40	1	41	1	0		0		0		0		0		0
43	Dead+Wind 120 deg - Ser...	Yes	Y		1	1	32	1	40	1	41	1	0		0		0		0		0		0
44	Dead+Wind 150 deg - Ser...	Yes	Y		1	1	33	1	40	1	41	1	0		0		0		0		0		0
45	Dead+Wind 180 deg - Ser...	Yes	Y		1	1	34	1	40	1	41	1	0		0		0		0		0		0
46	Dead+Wind 210 deg - Ser...	Yes	Y		1	1	35	1	40	1	41	1	0		0		0		0		0		0
47	Dead+Wind 240 deg - Ser...	Yes	Y		1	1	36	1	40	1	41	1	0		0		0		0		0		0
48	Dead+Wind 270 deg - Ser...	Yes	Y		1	1	37	1	40	1	41	1	0		0		0		0		0		0
49	Dead+Wind 300 deg - Ser...	Yes	Y		1	1	38	1	40	1	41	1	0		0		0		0		0		0
50	Dead+Wind 330 deg - Ser...	Yes	Y		1	1	39	1	40	1	41	1	0		0		0		0		0		0



Envelope AISC 15th(360-16): LRFD Steel Code Checks

Member	Shape	Code Check	Loc[ft]	LC	Shear	CheckLo	phi*Pnc	phi*Pnt	phi*	phi*	Eqn
1	M16	W10X33	.525	0	20	.117	1... y	269.23	436.95	52.5	122... 1 H1...
2	M17	W10X33	.507	13.167	24	.114	13... y	269.23	436.95	52.5	122... 1 H1...
3	M18	W10X33	.563	0	4	.126	.96 y 4	269.23	436.95	52.5	122... 1 H1...
4	M25	W6X25	.251	5.887	18	.001	14... z	134.017	330.3	32.1	58.036 1 H1...
5	M26	W6X25	.255	5.887	10	.001	14... z	134.017	330.3	32.1	58.036 1 H1...
6	M27	W6X25	.225	6.181	10	.001	14... z	134.017	330.3	32.1	58.036 1 H1...
7	M28	W6X25	.246	6.181	2	.001	14... z	134.017	330.3	32.1	58.036 1 H1...
8	M29	W6X25	.275	6.181	2	.001	14... z	134.017	330.3	32.1	58.036 1 H1...
9	M30	W6X25	.239	5.887	18	.001	14... z	134.017	330.3	32.1	58.036 1 H1...

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	N16	max	22.433	18	146.867	18	10.254	7	8.683	12	.007	24	5.3	23
2		min	-18.667	7	-120.317	7	-12.443	18	-9.153	24	-.007	12	-5.489	10
3	N17	max	18.563	23	142.075	10	9.763	23	8.204	16	.007	24	5.4	18
4		min	-22.171	10	-118.963	23	-11.739	10	-8.6	4	-.007	12	-5.257	7
5	N18	max	1.448	9	153.792	2	27.311	2	3.342	14	.007	24	9.066	20
6		min	-1.652	22	-127.596	15	-22.693	15	-3.042	3	-.007	12	-9.048	8
7	Totals:	max	31.818	21	69.937	33	36.937	3						
8		min	-31.728	8	26.603	3	-34.996	14						



Member Stress Results
DANBURY-MOSES MTN. (CT2133)
 2022702.65

Section Number	Elevation (ft)	Component Type	Size	Pu (k)	ΦPn (K)	% Capacity	Pass/Fail
T1	50 - 64.3	LEG	POLY15.50x1/4 (GPD)	14.268	569.588	16.9%	Pass
T1	50 - 64.3	TOP GIRT	POLY12.45x1/4 (GPD)	2.49	455.67	22.2%	Pass
T2	41 - 50	LEG	POLY15.50x1/4 (GPD)	34.58	569.588	32.0%	Pass
T2	41 - 50	TOP GIRT	POLY12.45x1/4 (GPD)	2.191	455.67	42.2%	Pass
T3	25 - 41	LEG	POLY15.50x1/4 (GPD)	53.992	569.588	48.7%	Pass
T4	0 - 25	LEG	POLY15.50x1/4 (GPD)	93.487	569.588	27.4%	Pass
T4	0 - 25	TOP GIRT	POLY12.45x1/4 (GPD)	4.307	455.67	30.2%	Pass
T3	25 - 41	TOP GIRT	W10x33	151.576	269.23	56.3%	Pass
T4	0 - 25	DIAG	W6x25	36.856	134.02	27.5%	Pass
Summary							
Leg (T3)						48.7%	Pass
Diagonal (T4)						27.5%	Pass
Top Girt (T3)						56.3%	Pass
Rating =						56.3%	Pass

APPENDIX C

Additional Calculations



**Existing Flange Connection @
DANBURY-MOSES MTN. (CT2133)
2022702.65**

GIRT CONNECTIONS

Moment =	69.8	k-ft
Axial =	0.089	k
Shear =	10.791	k

Maximum Capacity	100%
Apply TIA-222-H Section 15.5?	No

Flange Bolts	
# Bolts =	4
Bolt Type =	A325
Threads Included? =	Yes
Bolt Diameter =	1.25 in
Bolt Circle =	18 in
ϕ_t =	0.75
ϕ_v =	0.75
F_{ub} =	105 ksi
A_b =	1.227 in ²
A_n =	0.969 in ²
ϕR_{nv} =	48.32 k
ϕR_{nt} =	76.31 k
ϕR_{nt} (adjusted) =	76.19 k
V_{ub} =	2.70 k
T_{ub} =	46.40 k
Max Comp. on Bolt =	46.44 k
<i>Prying Action Check</i>	
N/A, top flange thickness > tc	
Shear Capacity =	5.6%
Tensile Capacity =	60.8%
Interaction Capacity =	37.3%
Bolt Capacity =	60.8% OK

Pole Information	
Shaft Diam. (Upper) =	12.45 in
Thickness (Upper) =	0.25 in
# of Sides (Upper) =	8
F_y (Upper) =	50 ksi
Shaft Diam. (Lower) =	12.45 in
Thickness (Lower) =	0.25 in
# of Sides (Lower) =	8
F_y (Lower) =	50 ksi



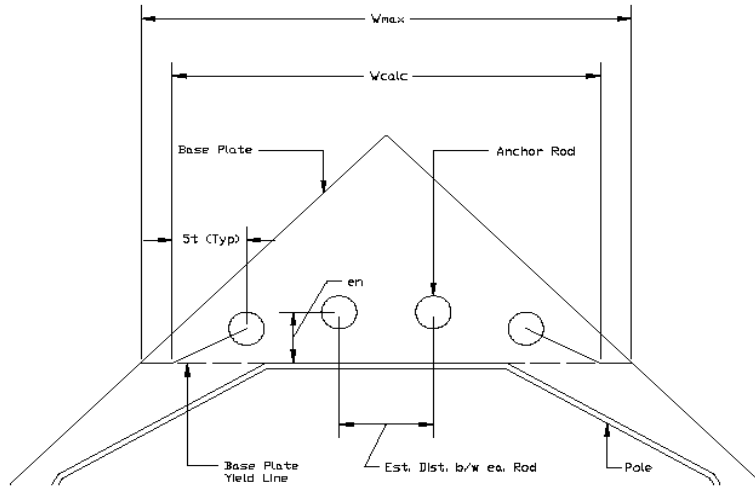
**Anchor Rod and Base Plate Stresses, TIA-222-H-1
DANBURY-MOSES MTN. (CT2133)
2022702.65**

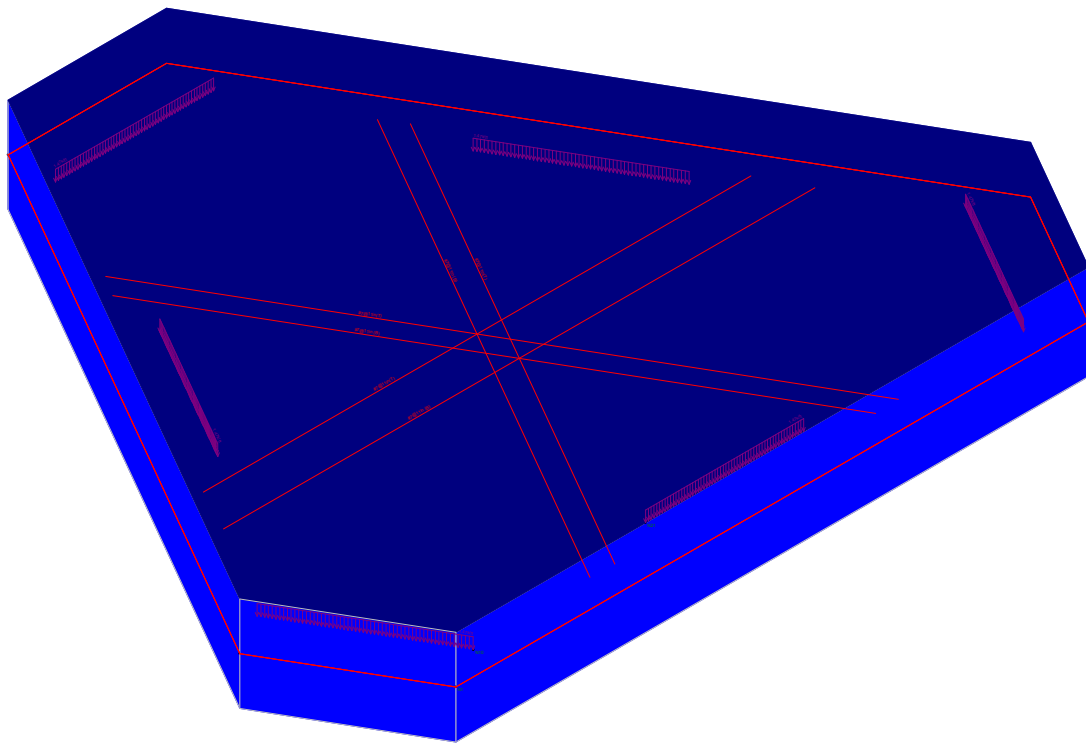
Overturing Moment =	3.11	k*ft
Axial Force =	153.79	k
Shear Force =	27.32	k

Maximum Capacity	100%
Apply TIA-222-H Section 15.5?	No

Anchor Rods		
Pole Diameter =	15.5	in
Number of Rods =	4	
Rod Yield Strength, F_y =	36	ksi
Rod Ultimate Strength, F_u =	58	ksi
Rod Circle =	22.6	in
Rod Diameter =	2.25	in
Rod Projection, l_{ar} =	2.25	in
Is grout present?	No	
Max Tension on Rod, P_{ut} =	-36.81	k
Max Compression on Rod, P_{uc} =	40.09	k
Shear on Rod, V_u =	6.83	k
Moment on Rod, M_u =	0.00	k-in
Tension Interaction =	7.4%	OK
Compression Interaction =	32.5%	OK

Base Plate		
Plate Yield Strength, F_y =	36	ksi
ϕ =	0.9	
Plate Thickness =	2.5	in
Plate Width =	22	in
Est. Dist. b/w ea. Rod =		in
W_{calc} =	16.45	in
W_{max} =	15.61	in
w =	15.61	in
Z =	24.39	in ³
M_u =	142.32	k-in
ϕM_n =	790.39	k-in
Base Plate Capacity =	18.0%	OK





GPD		
BF	60417_CT2133_DANBURY-MOSES MTN.	May 20, 2022 at 6:17 PM
2022702.65		RISA FOUNDATION_60417_CT21...



Company : GPD
 Designer : BF
 Job Number : 2022702.65
 Model Name : 60417_CT2133_DANBURY-MOSES MTN.

May 20, 2022
 6:15 PM
 Checked By: _____

Slabs

	Label	Thickness [in]	Material	Local Axis Angle...	Analysis Offset [in]	Passive Pressur...	Soil Overburden ...	lcr Factor
1	S1	36	Conc3000NW	0	0	0	0	1

General Design Parameters

	Label	Max Bending Chk	Max Shear Chk	Top Cover[in]	Bottom Cover[in]
1	Typical	2	2	3	3

Slab Rebar Parameters

	Label	Top Bar	Bottom Bar	Max Top Bar S...	Min Top Bar S...	Max Bot Bar S...	Min Bot Bar S...	Spacing In...	Rebar Options
1	Typical	#7	#7	11	11	11	11	11	Force Top and Bottom

Envelope Slab Soil Pressures (By Combination)

	Label	UC	LC	Soil Pressure[ksf]	Allowable Bearing[ksf]	Point
1	S1	0.23	40	5.257	22.83	N6

Slab Overturning Safety Factors

	LC	Slab	Angle[deg]	Mo-xx[k-ft]	Ms-xx[k-ft]	Mo-zz[k-ft]	Ms-zz[k-ft]	Ms-xx/Mo-xx	Ms-zz/Mo-zz
1	26	S1	0	0	3946.702	0	2732.999	9.99+	9.99+
2	27	S1	0	0	3627.85	1158.681	3193.221	9.99+	2.756
3	28	S1	0	0	2751.114	1274.513	2394.916	9.99+	1.879
4	29	S1	0	412.271	3072.769	956.508	3193.221	7.453	3.338
5	30	S1	0	524.781	2304.577	1072.539	2394.916	4.392	2.233
6	31	S1	0	865.639	3072.769	386.56	3193.221	3.55	8.261
7	32	S1	0	977.747	2304.577	503.086	2394.916	2.357	4.76
8	33	S1	0	988.273	3072.769	0	2546.894	3.109	9.99+
9	34	S1	0	1100.233	2304.577	0	1939.843	2.095	9.99+
10	35	S1	0	781.739	3072.769	366.71	2128.814	3.931	5.805
11	36	S1	0	893.818	2304.577	440.899	1596.611	2.578	3.621
12	37	S1	0	203.362	3072.769	978.499	2128.814	9.99+	2.176
13	38	S1	0	315.897	2304.577	1052.243	1596.611	7.295	1.517
14	39	S1	0	0	3386.724	1252.973	2128.814	9.99+	1.699
15	40	S1	0	0	2509.98	1326.537	1596.611	9.99+	1.204
16	41	S1	0	431.733	3072.769	1103.98	2128.814	7.117	1.928
17	42	S1	0	539.644	2304.577	1177.695	1596.611	4.271	1.356
18	43	S1	0	931.548	3072.769	569.56	2128.814	3.299	3.738
19	44	S1	0	1039.014	2304.577	643.734	1596.611	2.218	2.48
20	45	S1	0	1014.844	3072.769	0	2322.707	3.028	9.99+
21	46	S1	0	1122.176	2304.577	0	1715.709	2.054	9.99+
22	47	S1	0	768.337	3072.769	191.632	3193.221	3.999	9.99+
23	48	S1	0	875.843	2304.577	308.167	2394.916	2.631	7.771
24	49	S1	0	217.793	3072.769	841.352	3193.221	9.99+	3.795
25	50	S1	0	325.739	2304.577	957.405	2394.916	7.075	2.501

Strip Reinforcing (Envelope)

	Label	UC Top	LC	Top Bars	Governin...	UC Bot	LC	Bot Bars/...	Governin...	UC Shear	LC	Governin...
1	DS1	0.158	15	#7@11in	DS1-X24	0.152	7	#7@11in	DS1-X24	0.183	23	DS1-X37
2	DS2	0.147	7	#7@11in	DS2-X25	0.174	15	#7@11in	DS2-X25	0.202	25	DS2-X9
3	DS3	0.142	23	#7@11in	DS3-X24	0.176	17	#7@11in	DS3-X37	0.223	17	DS3-X38