

September 8, 2020

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

Regarding: Notice of Exempt Modification – T-Mobile Site #: CT11020D_Anchor
Address: 185 (aka 181) Research Drive, Milford, CT

Dear Ms. Bachman:

T-Mobile currently maintains six (6) antennae at the 145-foot level of the existing +/- 183-foot monopole tower at the above-referenced address, latitude 41.240400, longitude -73.011900. The tower is operated by American Tower Corporation.

T-Mobile now intends to modify its existing telecommunications facility by adding six (6) antennae, adding three (3) remote radio units (RRU) and adding two (2) hybrid cables as more particularly detailed and described in the enclosed Construction Drawings prepared by A.T. Engineering Service, PLLC, last revised September 2, 2020. The centerline height of the existing and proposed antennas is and will remain at 145 feet.

Planned Modifications:

Add:

- (3) AIR 211.3, B2A, B4 Antennae
- (3) AIR6449 B41 Antennae
- (3) 4415 B25 RRU
- (2) 1-1/4" Hybrid Cables

Remove:

- (3) TMA
- (9) 1-5/8" Coax

Existing to Remain:

- (6) Antennae
- (3) RRU
- (3) TMA
- (6) 1-5/8" Coax
- (2) 1-1/4" Hybrid Cables

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 American Tower Corporation as tower operator and owner, The Honorable Benjamin G. Blake, Mayor of the City of Milford as chief elected official and David B. Sulkis, City Planner of the City of Milford.

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 T-Mobile's modified facility dated August 18, 2020 and prepared by EBI Consulting 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 July 17, 2020 and prepared by American Tower Corporation enclosed herewith.*

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).

Respectfully submitted,



Jennifer Iliades
Site Acquisition Consultant
Centerline Communications, LLC
750 West Center Street, Suite 301
West Bridgewater, MA 02379
jiliades@clinellc.com

Enclosures: Exhibit A – Original Facility Approval
 Exhibit B – Property Card and GIS
 Exhibit C – Construction Drawings
 Exhibit D – Structural Analysis Report
 Exhibit E – Mount Analysis
 Exhibit F – Power Density/RF Emissions Report

cc: American Tower Corporation, as tower operator and property owner
 The Honorable Benjamin G. Blake, Mayor of the City of Milford as chief elected official
 David B. Sulkis, City Planner of the City of Milford

Exhibit A

Original Facility Approval



City of Milford, Connecticut

APPLICATION FOR ZONING PERMIT

INSTRUCTIONS: Fill out this application in ball point pen. A scaled plot plan in duplicate, based on a certified surveyor's plot plan must be submitted with this application showing the proposed or existing lot and building dimensions and the location of all buildings in relation to the street lines, side lot lines and rear lot lines.

ADDRESS OF PROPERTY 185 Research Drive ZONE G.I.

MAP _____ BLOCK _____ PARCEL _____ LOT NO. 607 ADDRESS MAP NO. _____ LOT SIZE _____
WIDTH OF STREET RIGHT OF WAY LESS THAN 50 FT.? YES _____ NO CORNER LOT? YES NO _____

IS ANY PORTION OF THE LOT BELOW REGULATORY FLOOD ELEVATION? YES _____ NO

CITY WATER NA PRIVATE WELL* _____ SEWER** NA SEPTIC*** _____ ENG. O.S. PERMIT NO. NA

OWNER John C. D'Amato Jr. Trustee leased to Smart SMR of New York Inc

ADDRESS OF OWNER 147 Research Dr. Milford 575 Corporate Dr. Suite 402
Street City Mahwah, NJ State 07430

PRESENT USE OF PROPERTY 4 Industrial buildings

PROPOSED CONSTRUCTION: NEW ADDITION _____ ALTERATION _____ REPAIR _____

SIZE/USE OF PROPOSED CONSTRUCTION install mobile radio transmission cellular tower facility
tower base 4' tapers to 0'. 185' monopole with antenna array which will not
extend more than 14' additional height

NO. OF STORIES _____ HEIGHT _____ REQUIRED PARKING SPACES _____ LOT COVERAGE _____ %

DATE OF: ZBA APPROVAL Oct 12, 93 CASPR APPROVAL _____ EXEMPTION ISSUED _____

SITE PLAN APPROVAL _____ SPECIAL PERMIT APPROVAL _____ SUBD. REQUIRED YES _____ NO _____

CERTIFICATION: (WARNING) I hereby certify that I am making this application on behalf of and with full authority of the owner of the property and that I am aware of the Zoning Regulations pertinent in this case and that the statements made herein are true and correct. APPROVAL SHALL BE VALID FOR PLANS AS SUBMITTED.

THE OCCUPANCY AND USE OF LAND AND BUILDINGS OR STRUCTURES PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY IS PROHIBITED.

APPROVED BY:
Richard Vaccaro
Zoning Enforcement Officer
Date Issued 10/26/94

APPLICANTS'S NAME PETER FILATOV
(Please print)
APPLICANT'S SIGNATURE _____
ADDRESS ONE N BROADWAY 2ND FL.
CITY MILFORD Street STATE N.J.
TEL. NO. 914-998-4316

*Permit required from State Health Dept. for apartments, subdivisions, shopping centers and public buildings.
** Permits for sewer connections are granted by Sewer Commission.
*** Septic system approvals are granted by Health Department.

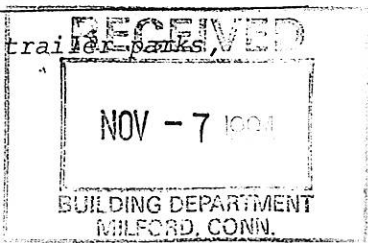


Exhibit B

Property Card



Property Information

Property Location	181-1 RESEARCH DR #CELL
Owner	AMERICAN TOWER
Co-Owner	C/O PROPERTY TAX DEPT
Mailing Address	P O BOX 723597 ATLANTA GA 31139
Land Use	434V CELL TOWER MDL-00
Land Class	I
Zoning Code	
Census Tract	

Neighborhood	F
Acreage	0
Utilities	All Public,Public Sewer
Lot Setting/Desc	UNKNOWN UNKNOWN
Book / Page	03366/0163
Fire District	3

Primary Construction Details

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

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

Photo



Sketch



(*Industrial / Commercial Details)	
Building Use	Vacant
Building Condition	
Sprinkler %	NA
Heat / AC	NA
Frame Type	NA
Baths / Plumbing	NA
Ceiling / Wall	NA
Rooms / Prtns	NA
Wall Height	NA
First Floor Use	NA
Foundation	NA



City of Milford, CT

Property Listing Report

Map Block Lot

091 807

Bldg #

1

Sec #

1

PID

100283

Account

023046

Valuation Summary (Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	0	0
Extras	0	0
Improvements		
Outbuildings	461050	322730
Land	0	0
Total	461050	322730

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	0	0

Outbuilding and Extra Features

Type	Description
CEL TWR SITE	1 UNITS
PATIO-GOOD	943 S.F.
W/O TOP RL-6'	182 L.F.

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
AMERICAN TOWER	03366/0163	2010-06-29	425000
DAMATO INVESTMENTS LLC	02289/0578	1998-07-08	0
DAMATO JOHN C JR &	01942/0499	1992-12-31	587500

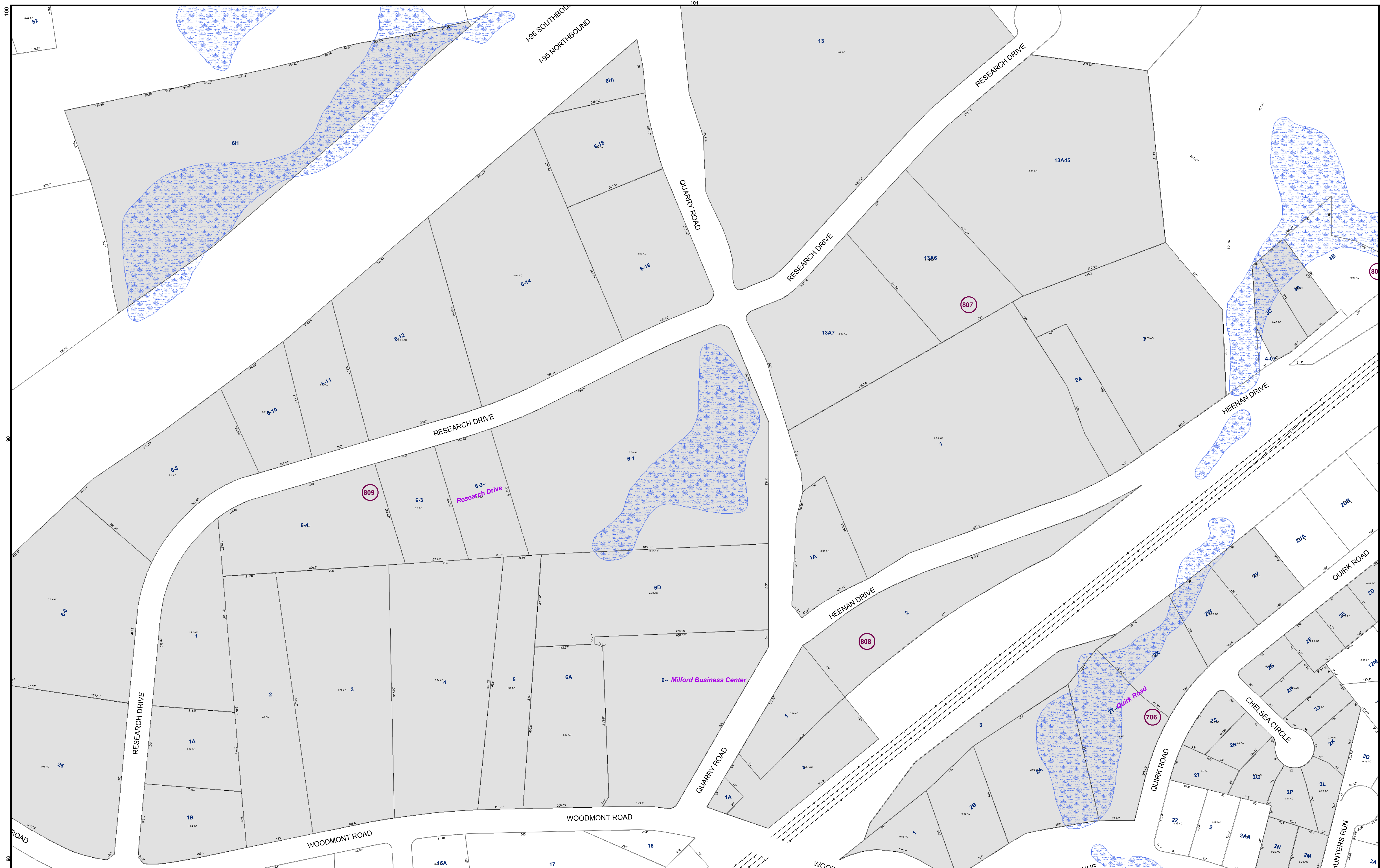
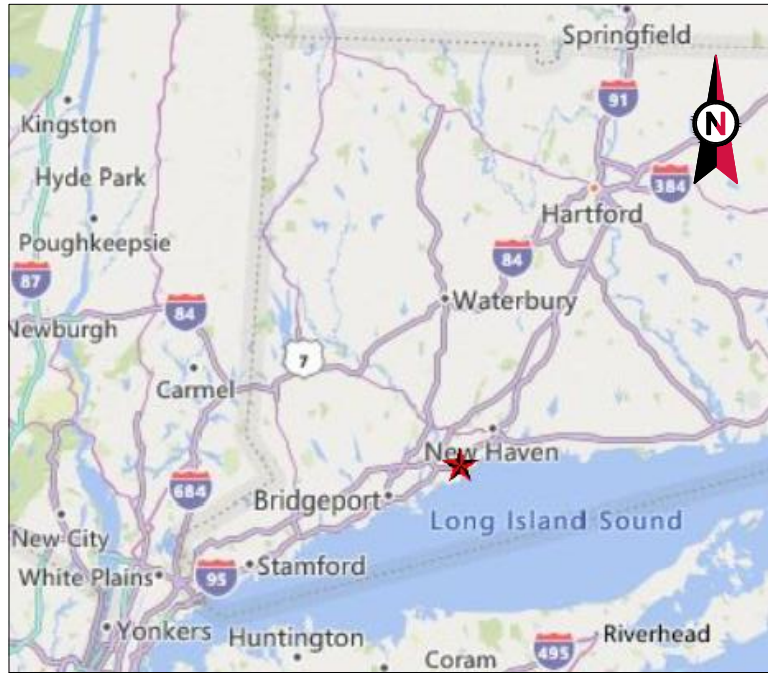


Exhibit C

Construction Drawings

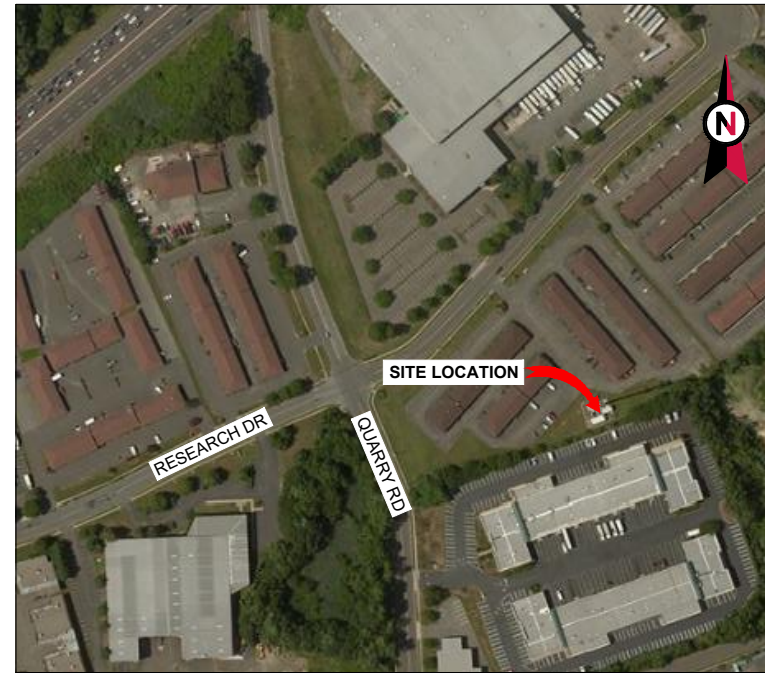


VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: MILFORD CT 2
 ATC SITE NUMBER: 302535
 T-MOBILE SITE NAME: MILFORD/ I-95/ X40/ QUA_1
 T-MOBILE SITE NUMBER: CT11020D
 SITE ADDRESS: 185 RESEARCH DRIVE
 MILFORD, CT 06460



LOCATION MAP

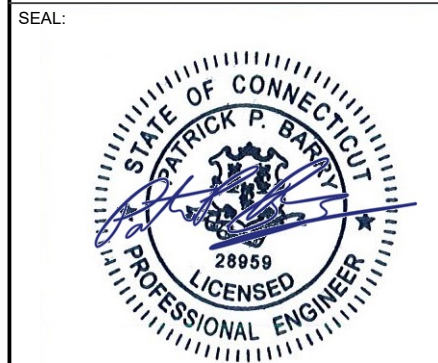
**T-MOBILE ANCHOR ANTENNA AMENDMENT PLAN
 67D5992DB_3XAIR+1OP CONFIGURATION**

AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
 3500 REGENCY PARKWAY
 SUITE 100
 CARY, NC 27518
 PHONE: (919) 468-0112
 COA: PEC.0001553

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
①	FOR CONSTRUCTION	NG	09/02/20
②	GROUND CHANGE	NG	09/02/20
△			
△			
△			

ATC SITE NUMBER:
302535
 ATC SITE NAME:
MILFORD CT 2
 T-MOBILE SITE NAME:
MILFORD/ I-95/ X40/ QUA_1
 SITE ADDRESS:
 185 RESEARCH DRIVE
 MILFORD, CT 06460



DATE DRAWN:	09/02/20
ATC JOB NO:	13251808
CUSTOMER ID:	MILFORD/ I-95/ X40/ QUA_1
CUSTOMER #:	CT11020D

TITLE SHEET

SHEET NUMBER:
G-001
 REVISION:
2

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. INTERNATIONAL BUILDING CODE (IBC) 2. NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 185 RESEARCH DRIVE MILFORD, CT 06460 COUNTY: NEW HAVEN <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.24041944 LONGITUDE: -73.0119 GROUND ELEVATION: 94' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> REMOVE (3) TTA(s), AND (12) 1-5/8" COAX CABLE(s) INSTALL (6) ANTENNA(s), (3) RRH(s), AND (2) 1-1/4" HYBRID CABLE(s) EXISTING (6) ANTENNA(s), (3) RRH(s), (3) TTA(s), (6) 1-5/8" COAX CABLES, (2) 1-1/4" TO REMAIN <u>GROUND WORK:</u> INSTALL (1) 6160 CABINET, (1) B160 BATTERY CABINET, (1) XTE401 2416 CABINET, (4) BB6630, AND (1) IXRE ROUTER EXISTING (1) 6102 CABINET TO REMAIN	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u> <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> ATC TOWER SERVICES, LLC 3500 REGENCY PKWY STE 100 CARY, NC 27518 <u>PROPERTY OWNER:</u> DAMATO INVESTMENTS LLC 205 RESEARCH DRIVE #215 MILFORD CT, 06460	<u>PROJECT NOTES</u> 1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED.					
<u>UTILITY COMPANIES</u> POWER COMPANY: C. L. & P. PHONE: (800) 286-2000 TELEPHONE COMPANY: FRONTIER COMMUNICATIONS PHONE: (800) 921-8102		<u>PROJECT LOCATION DIRECTIONS</u> FROM NEW HAVEN - TRAVEL ON I 95 SOUTH TO EXIT 40. TAKE LEFT AT OFF RAMP AND PROCEED TO FIRST SET OF LIGHTS AND TURN LEFT ON RESEARCH DRIVE. FOLLOW TO # 185					



Know what's below.
 Call before you dig.

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, T-MOBILE "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
 - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
 - B. AC/TELCO INTERFACE BOX (PPC)
 - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
 - D. TOWERS, MONOPOLES
 - E. TOWER LIGHTING
 - F. GENERATORS & LIQUID PROPANE TANK
 - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
 - H. ANTENNAS (INSTALLED BY OTHERS)
 - I. TRANSMISSION LINE
 - J. TRANSMISSION LINE JUMPERS
 - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
 - L. TRANSMISSION LINE GROUND KITS
 - M. HANGERS
 - N. HOISTING GRIPS
 - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF T-MOBILE TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSIEIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH T-MOBILE AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.

22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY T-MOBILE REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE REP. ANY WORK FOUND BY THE T-MOBILE REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. T-MOBILE FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE T-MOBILE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. T-MOBILE OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO T-MOBILE OR THEIR ARCHITECT/ENGINEER.

COAXIAL CABLE (NOT WITHIN BENDS)

SPECIAL CONSTRUCTION

ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
 - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY T-MOBILE UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND
 - B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND T-MOBILE SPECIFICATIONS.
 - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
 - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.
 - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
 - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
 - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.



AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
 3500 REGENCY PARKWAY
 SUITE 100
 CARY, NC 27518
 PHONE: (919) 468-0112
 COA: PEC.0001553

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NG	09/02/20

ATC SITE NUMBER:
302535
 ATC SITE NAME:
MILFORD CT 2
 T-MOBILE SITE NAME:
MILFORD/ I-95/ X40/ QUA_1
 SITE ADDRESS:
 185 RESEARCH DRIVE
 MILFORD, CT 06460

SEAL:



DATE DRAWN:	09/02/20
ATC JOB NO:	13251808
CUSTOMER ID:	MILFORD/ I-95/ X40/ QUA_1
CUSTOMER #:	CT11020D

GENERAL NOTES

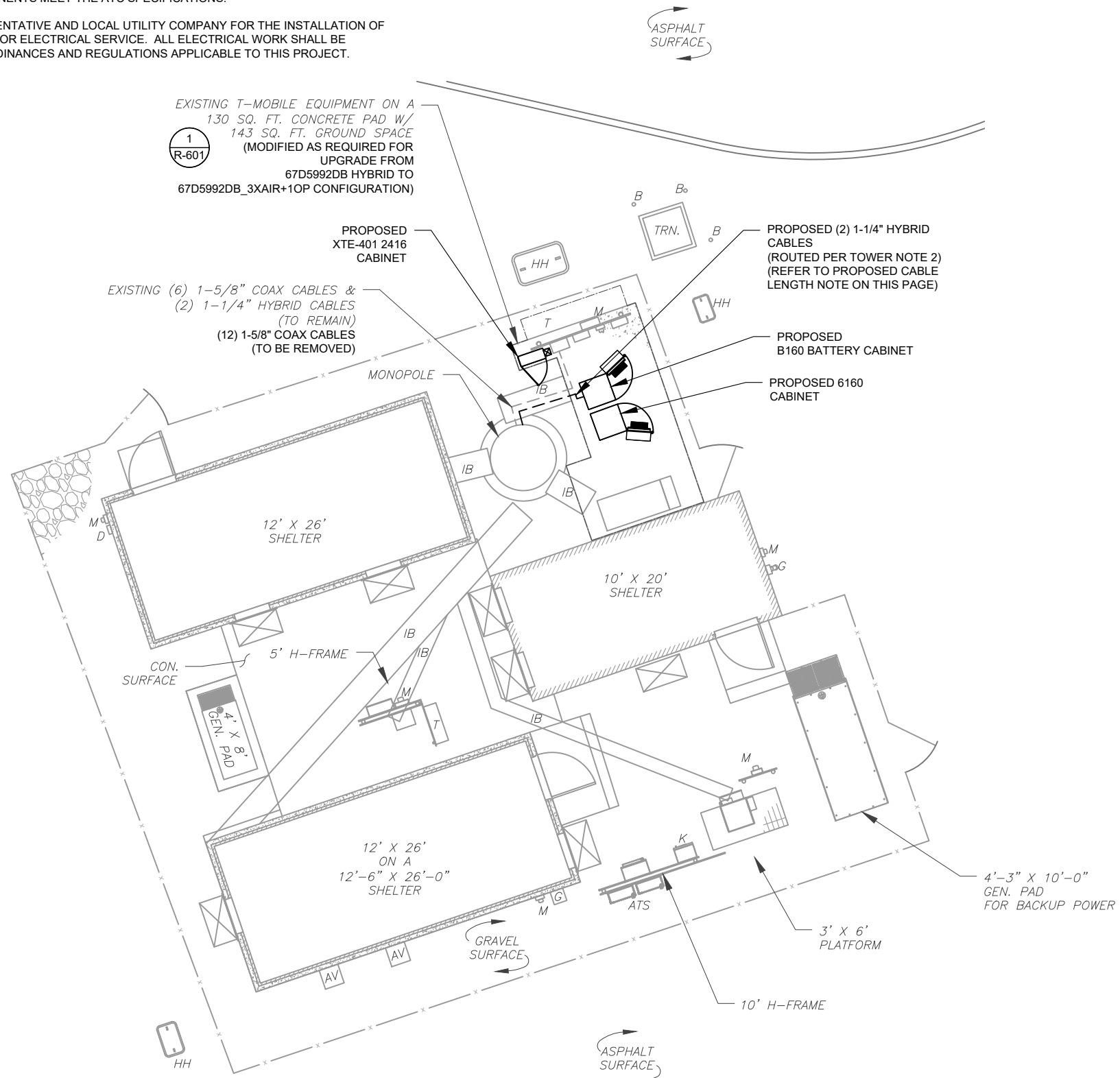
SHEET NUMBER: G-002	REVISION: 0
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SITE PLAN NOTES:

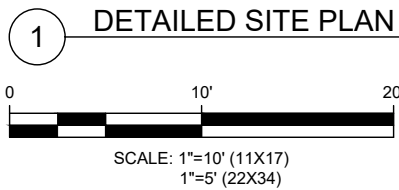
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.

LEGEND	
⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
x	CHAINLINK FENCE



PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS **190'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES). CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.




AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
 3500 REGENCY PARKWAY
 SUITE 100
 CARY, NC 27518
 PHONE: (919) 468-0112
 COA: PEC.0001553

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REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NG	09/02/20
2	GROUND CHANGE	NG	09/02/20

ATC SITE NUMBER:
302535
 ATC SITE NAME:
MILFORD CT 2
 T-MOBILE SITE NAME:
MILFORD/ I-95/ X40/ QUA_1
 SITE ADDRESS:
 185 RESEARCH DRIVE
 MILFORD, CT 06460



DATE DRAWN:	09/02/20
ATC JOB NO:	13251808
CUSTOMER ID:	MILFORD/ I-95/ X40/ QUA_1
CUSTOMER #:	CT11020D

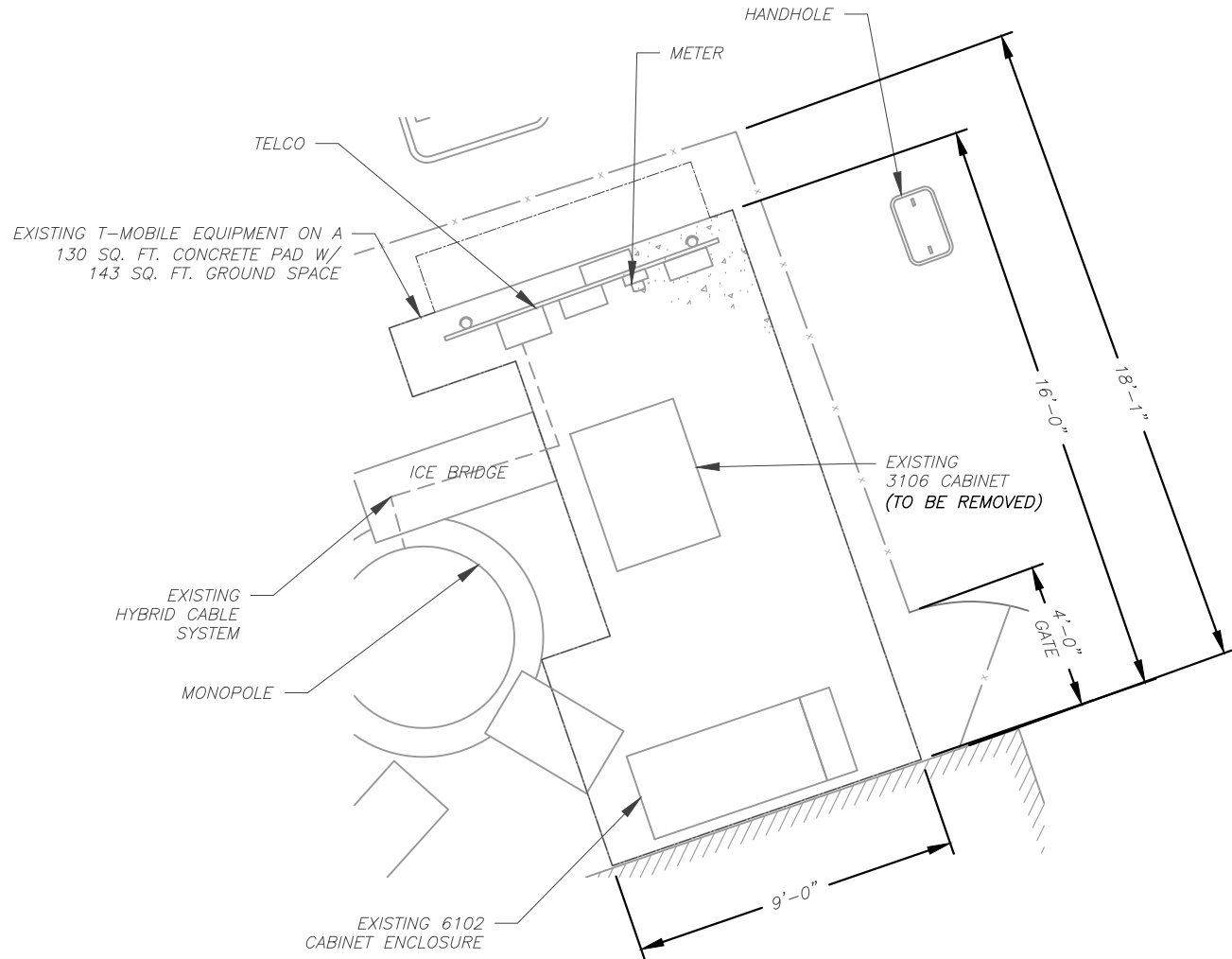
DETAILED SITE PLAN

SHEET NUMBER: C-101	REVISION: 2
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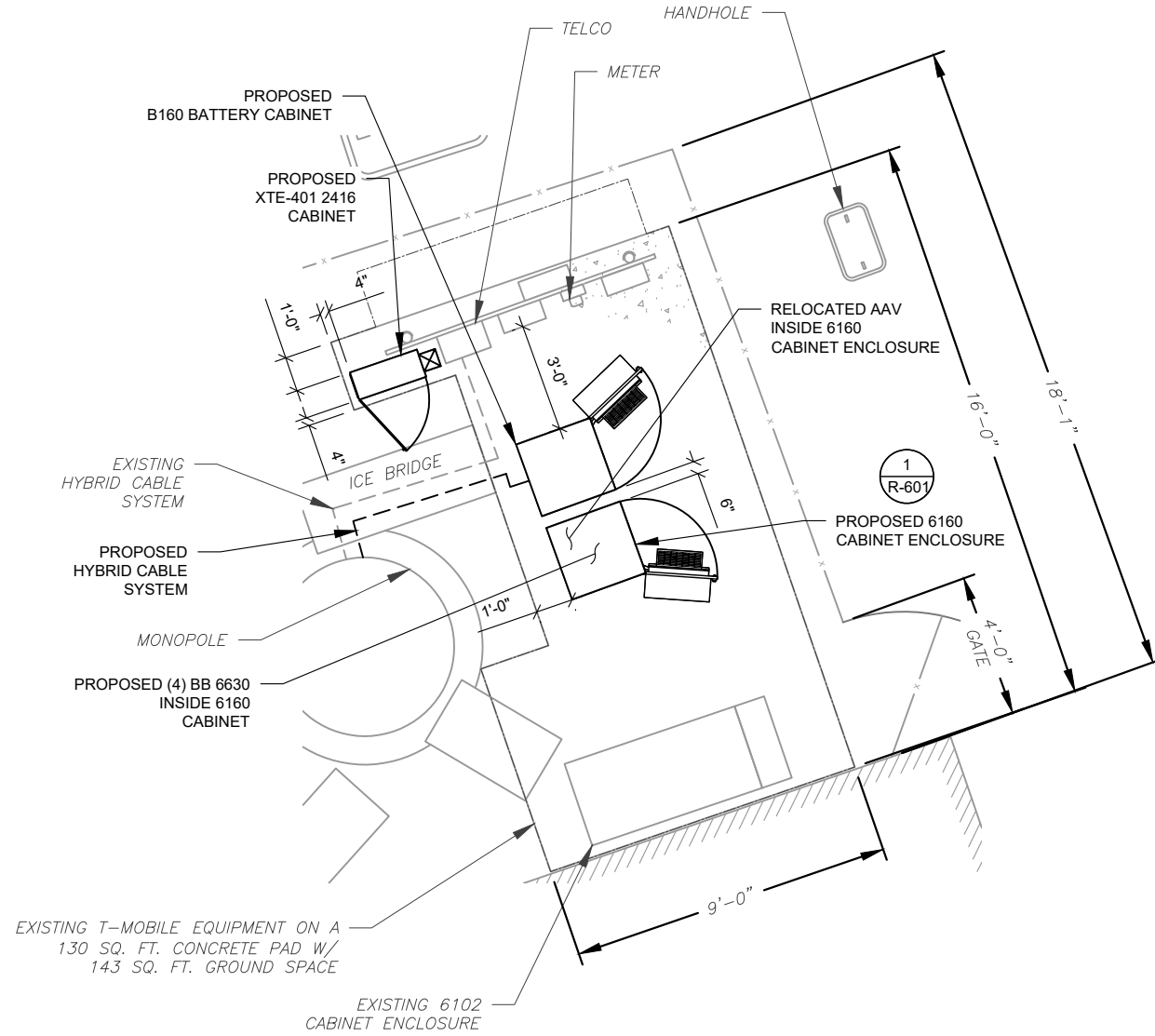
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SITE PLAN NOTES:

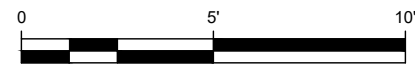
1. CONTRACTOR TO VERIFY THERE IS NO LIVE AAV FIBER RUNNING THROUGH EXISTING DEAD EQUIPMENT. IF SO, THIS WILL NEED TO BE RERUN THROUGH CONDUIT PRIOR TO REMOVING DEAD 2G (6201 CABS) EQUIPMENT.
2. REMOVE EXISTING 2G CABINETS, AND POWER / TELCO WHIPS ASSOCIATED WITH THE DEAD EQUIPMENT IF APPLICABLE.
3. ALL OPEN PORTS NEED TO BE SEALED / WEATHERPROOFED PROPERLY
4. ALL UNNEEDED / EXCESS EQUIPMENT AND GARBAGE TO BE REMOVED FROM EQUIPMENT AREA. DISPOSE OF MATERIALS PROPERLY OFF SITE.



T-MOBILE CM APPROVAL REQUIRED BEFORE INSTALLING CABINETS



1 EXISTING GROUND EQUIPMENT LAYOUT



SCALE: 1"=5' (11X17)
1"=2.5' (22X34)



2 PROPOSED GROUND EQUIPMENT LAYOUT



SCALE: 1"=5' (11X17)
1"=2.5' (22X34)



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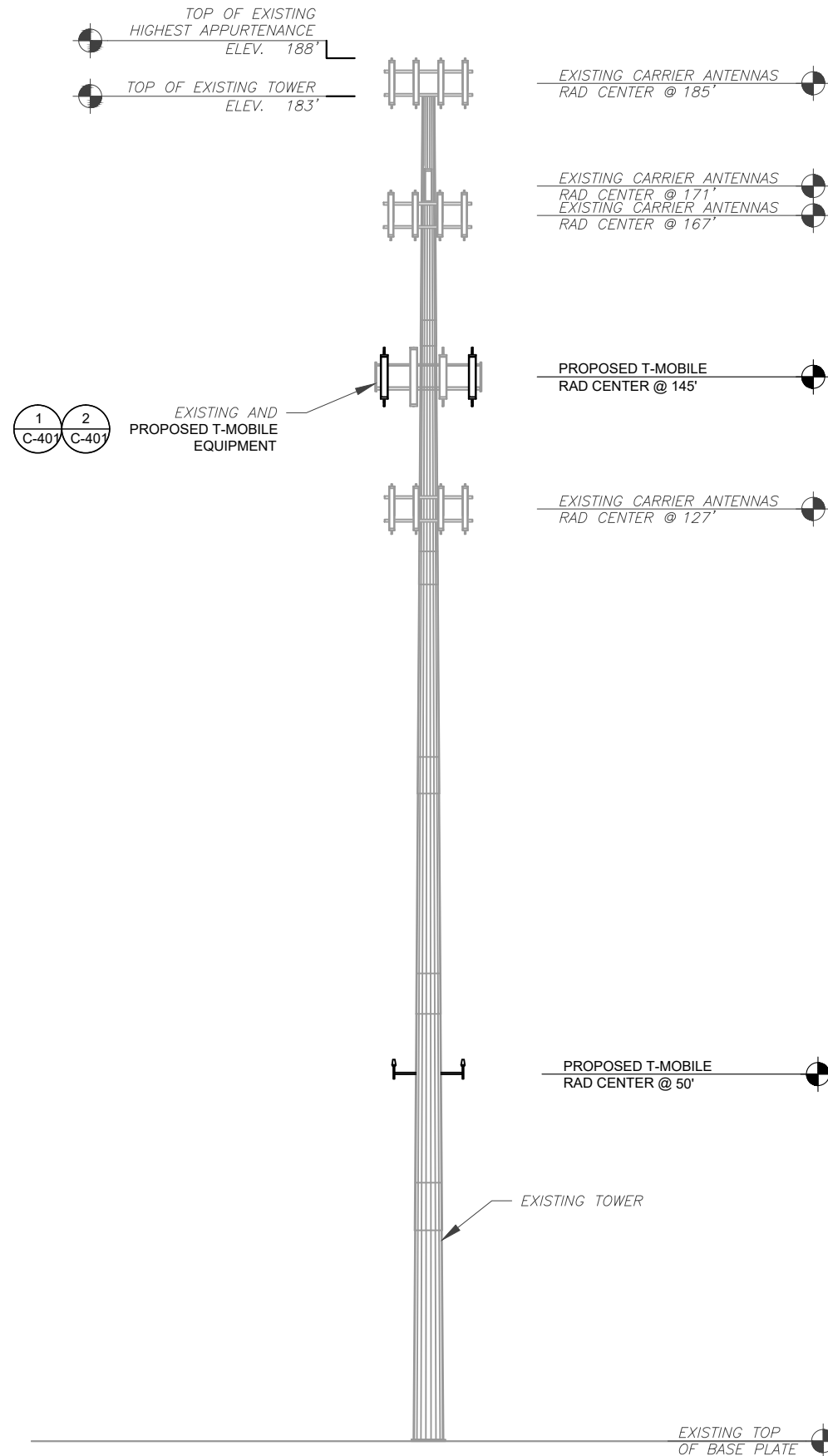


DATE DRAWN:	09/02/20
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CUSTOMER ID:	MILFORD/ I-95/ X40/ QUA_1
CUSTOMER #:	CT11020D

DETAILED GROUND PLAN

SHEET NUMBER:	REVISION:
C-102	2

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1 TOWER ELEVATION
SCALE: N.T.S.

TOWER NOTE:

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE AMERICAN TOWER CONSTRUCTION MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
- ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
- TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)



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MILFORD CT 2
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 SITE ADDRESS:
 185 RESEARCH DRIVE
 MILFORD, CT 06460

SEAL:



DATE DRAWN:	09/02/20
ATC JOB NO:	13251808
CUSTOMER ID:	MILFORD/ I-95/ X40/ QUA_1
CUSTOMER #:	CT11020D

TOWER ELEVATION

SHEET NUMBER: C-201	REVISION: 0
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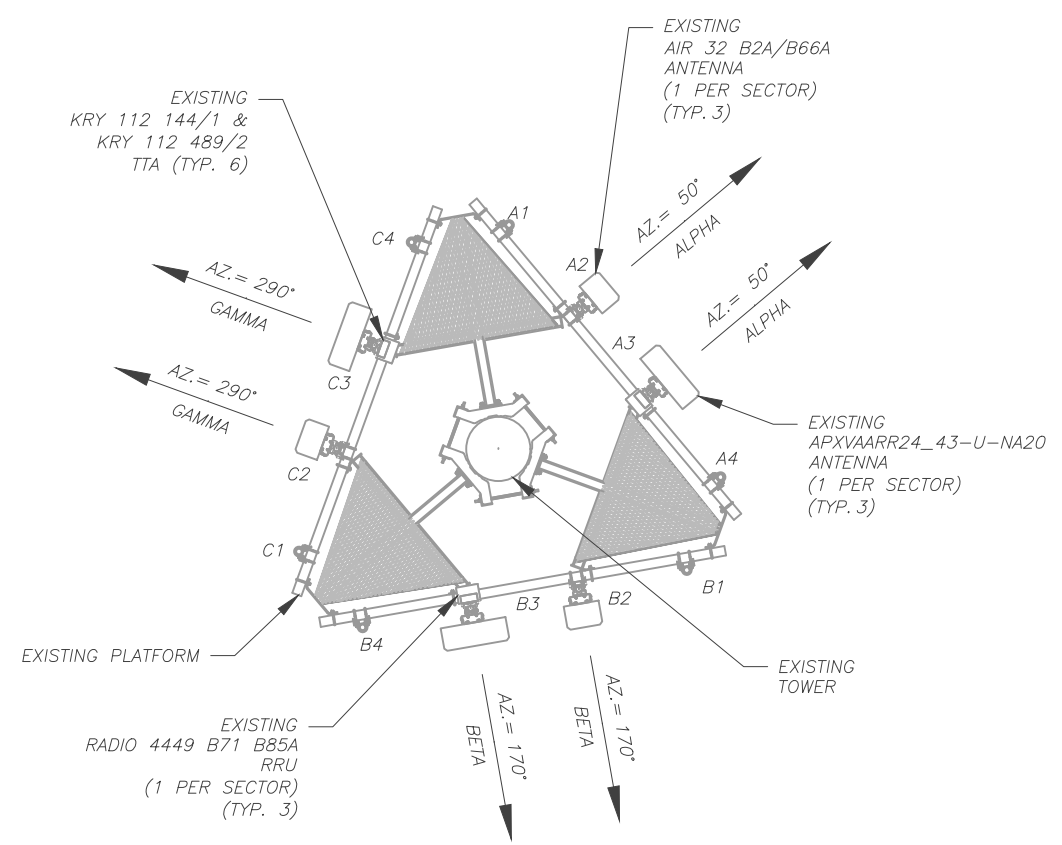
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302535
 ATC SITE NAME:
MILFORD CT 2
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MILFORD/ I-95/ X40/ QUA_1
 SITE ADDRESS:
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 MILFORD, CT 06460



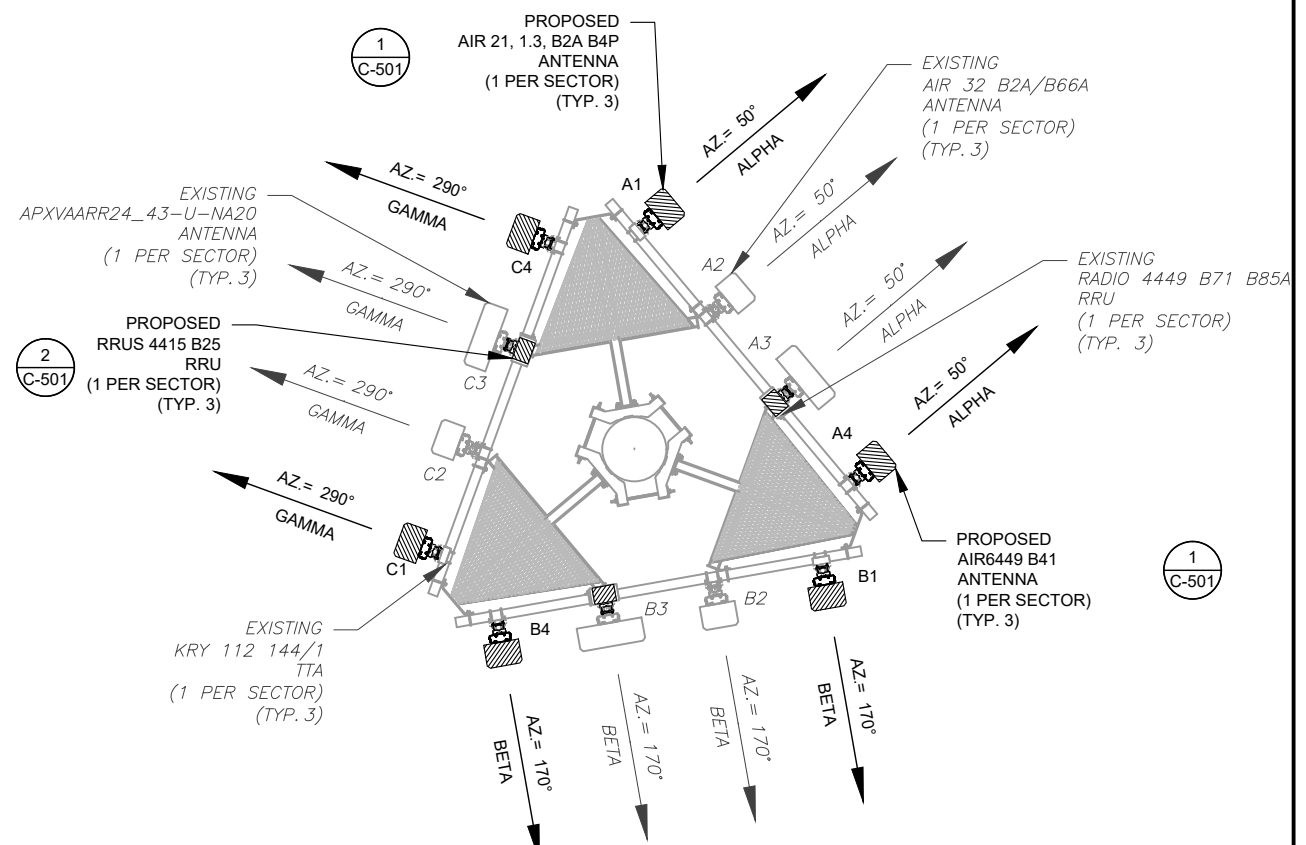
DATE DRAWN:	09/02/20
ATC JOB NO:	13251808
CUSTOMER ID:	MILFORD/ I-95/ X40/ QUA_1
CUSTOMER #:	CT11020D

ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	0



1 EXISTING ANTENNA PLAN
 SCALE: N.T.S.



2 FINAL ANTENNA PLAN
 SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE									
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	145'	50°	A1	-	-	-	-	-	-
			A2	AIR 32 B2A/B66A	L190/L210	-	RMN	-	-
			A3	APXVAARR24_43-U-NA 20	N600/L600/L700/U1900/U2100	-	RMN	KRY 112 144/1 REL KRY 112 489/2 RMV RADIO 4449 B71 B85A RMN	
			A4	-	-	-	-	-	
BETA	145'	170°	B1	-	-	-	-	-	-
			B2	AIR 32 B2A/B66A	L190/L210	-	RMN	-	-
			B3	APXVAARR24_43-U-NA 20	N600/L600/L700/U1900/U2100	-	RMN	KRY 112 144/1 REL KRY 112 489/2 RMV RADIO 4449 B71 B85A RMN	
			B4	-	-	-	-	-	
GAMMA	145'	290°	C1	-	-	-	-	-	-
			C2	AIR 32 B2A/B66A	L190/L210	-	RMN	-	-
			C3	APXVAARR24_43-U-NA 20	N600/L600/L700/U1900/U2100	-	RMN	KRY 112 144/1 REL KRY 112 489/2 RMV RADIO 4449 B71 B85A RMN	
			C4	-	-	-	-	-	

NOTES

- CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
 RMN: TO REMAIN
 REL: TO BE RELOCATED
 ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
 RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE									
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	145'	50°	A1	AIR 21, 1.3, B2A B4P	G1900/U1900/U2100	0°	ADD	KRY 112 144/1	REL
			A2	AIR 32 B2A/B66A	L190/L210	0°	RMN	-	-
			A3	APXVAARR24_43-U-NA 20	N600/L600/L700/U1900/U2100	0°	RMN	RRUS 4415 B25 ADD RADIO 4449 B71 B85A RMN	
			A4	AIR6449 B41	L2500/N2500	0°	ADD	-	-
BETA	145'	170°	B1	AIR 21, 1.3, B2A B4P	G1900/U1900/U2100	0°	ADD	KRY 112 144/1	REL
			B2	AIR 32 B2A/B66A	L190/L210	0°	RMN	-	-
			B3	APXVAARR24_43-U-NA 20	N600/L600/L700/U1900/U2100	0°	RMN	RRUS 4415 B25 ADD RADIO 4449 B71 B85A RMN	
			B4	AIR6449 B41	L2500/N2500	0°	ADD	-	-
GAMMA	145'	290°	C1	AIR 21, 1.3, B2A B4P	G1900/U1900/U2100	0°	ADD	KRY 112 144/1	REL
			C2	AIR 32 B2A/B66A	L190/L210	0°	RMN	-	-
			C3	APXVAARR24_43-U-NA 20	N600/L600/L700/U1900/U2100	0°	RMN	RRUS 4415 B25 ADD RADIO 4449 B71 B85A RMN	
			C4	AIR6449 B41	L2500/N2500	0°	ADD	-	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	(6) 1-5/8"	(2) 1-1/4"	RMN
-	-	(9) 1-5/8"	-	RMV

3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
-	-	(6) 1-5/8"	(2) 1-1/4"	RMN
-	-	-	(2) 1-1/4"	ADD

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302535
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 MILFORD, CT 06460

SEAL:

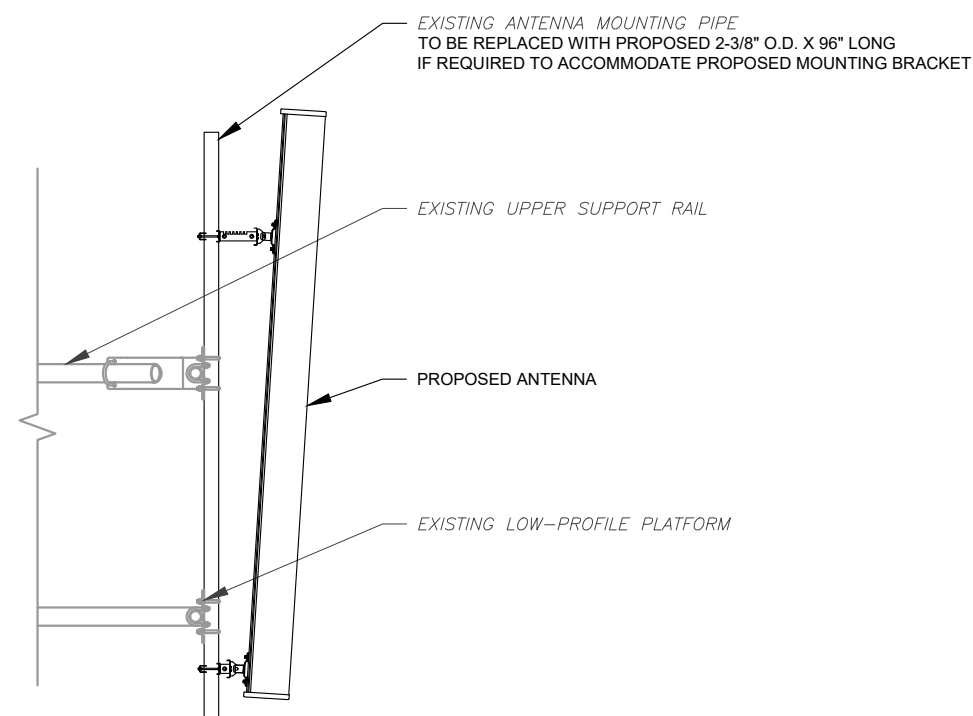


DATE DRAWN:	09/02/20
ATC JOB NO:	13251808
CUSTOMER ID:	MILFORD/ I-95/ X40/ QUA_1
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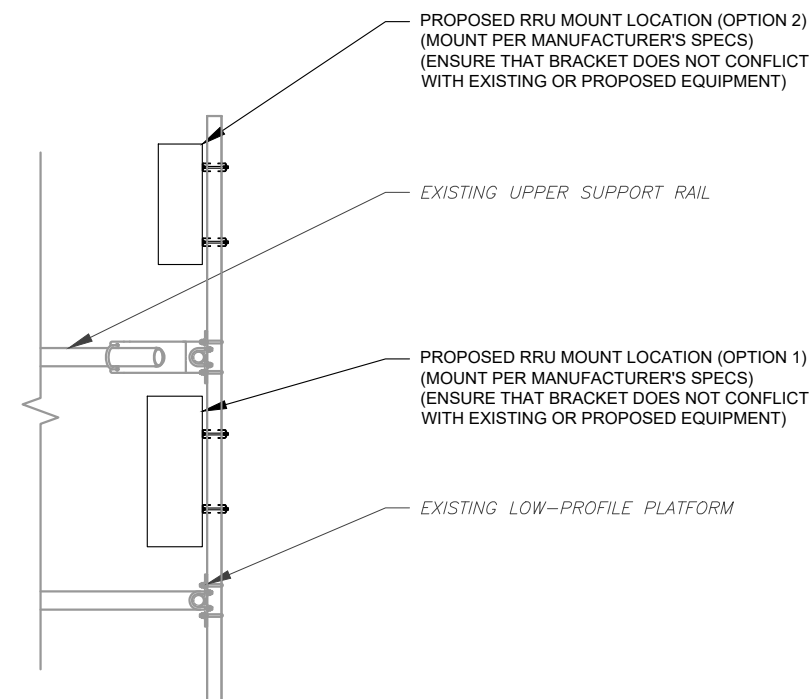
**CONSTRUCTION
 DETAILS**

SHEET NUMBER:
C-501

REVISION:
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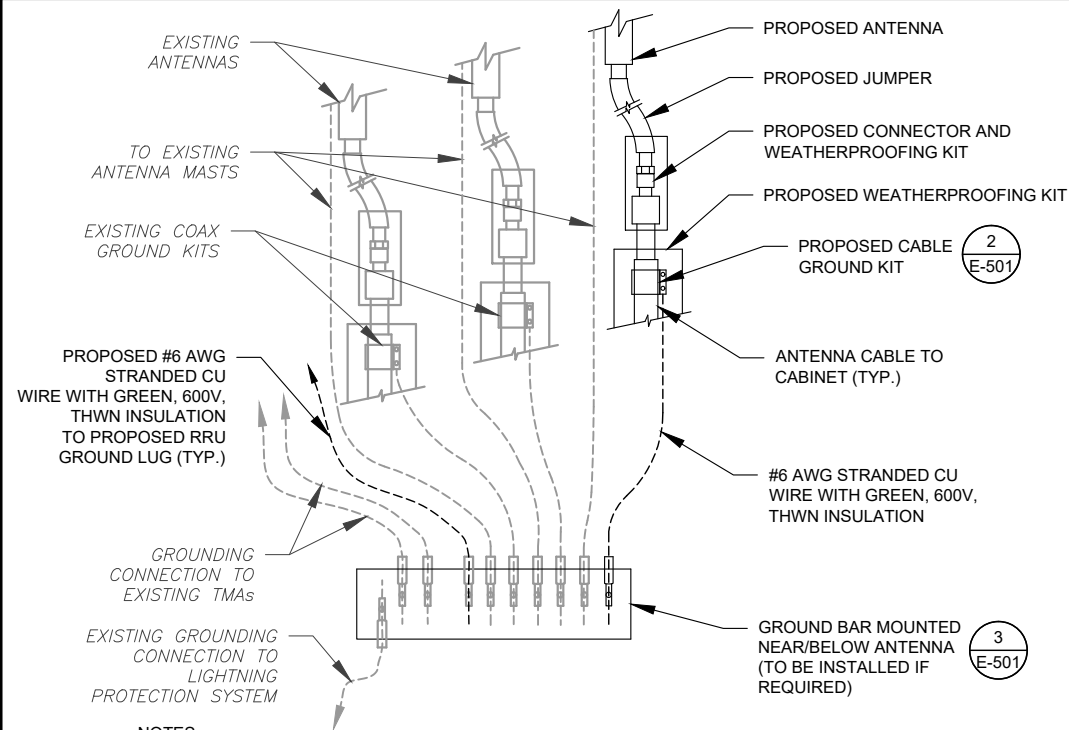


1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL
 SCALE: N.T.S.



2 PROPOSED RRU MOUNTING DETAIL - TYPICAL
 SCALE: N.T.S.

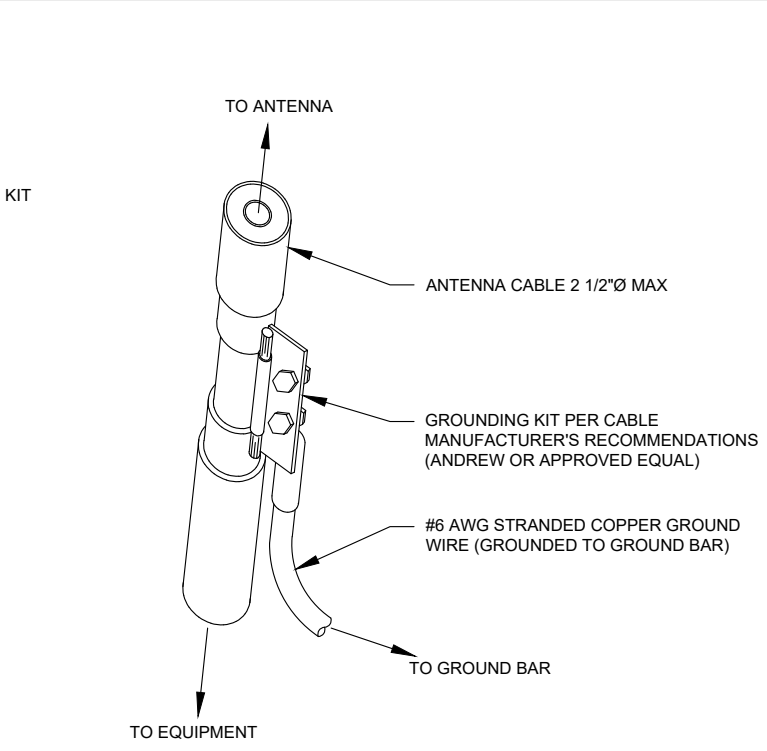
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NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

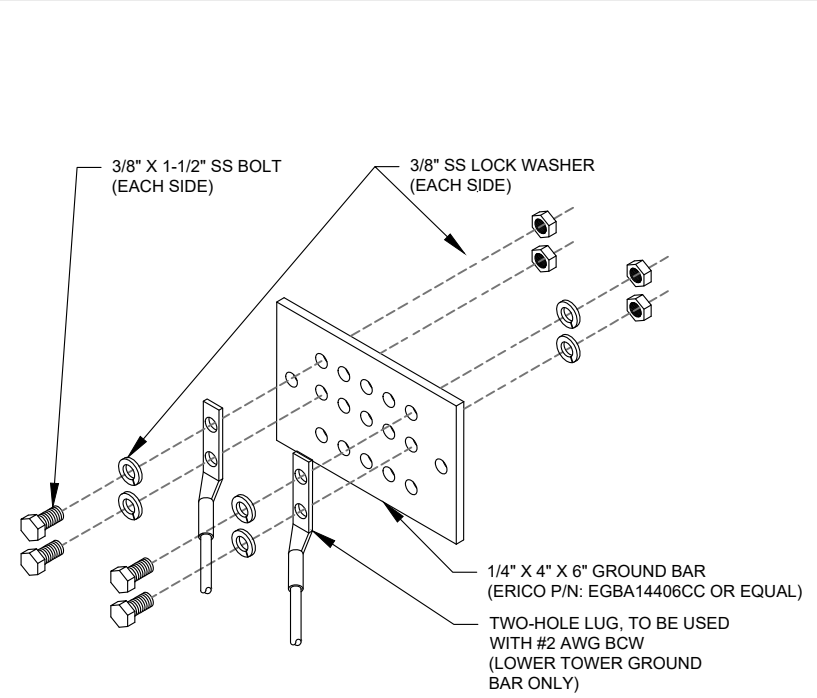
1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: N.T.S.



GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: N.T.S.



GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL
SCALE: N.T.S.

ELECTRICAL NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
2. ATC HAS NOT VERIFIED ANY EXISTING T-MOBILE GROUND EQUIPMENT OR ELECTRICAL LOADING. PROPOSED WORK BASED ON INSTALLATION CONFIGURATION PROVIDED BY T-MOBILE. CONTRACTOR TO VERIFY EXISTING T-MOBILE PANEL HAS SUFFICIENT SPACE FOR PROPOSED BREAKER. PROPOSED CABLE AND CONDUIT SHALL BE MINIMUM SIZE PER BELOW:

OCPD SIZE	WIRE SIZE	GROUND SIZE	CONDUIT SIZE
80A/2P	2#3 AWG	#8 AWG	1-1/4"
100/2P	2#2 AWG	#8 AWG	1-1/4"
125A/2P	2#1 AWG	#8 AWG	1-1/2"
150A/2P	2#1/0 AWG	#8 AWG	1-1/2"

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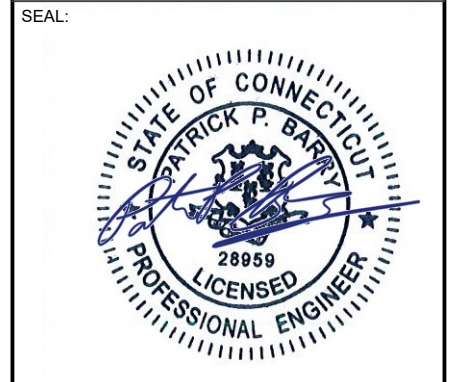
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ATC SITE NUMBER:
302535

ATC SITE NAME:
MILFORD CT 2

T-MOBILE SITE NAME:
MILFORD/ I-95/ X40/ QUA_1

SITE ADDRESS:
185 RESEARCH DRIVE
MILFORD, CT 06460



DATE DRAWN:	09/02/20
ATC JOB NO:	13251808
CUSTOMER ID:	MILFORD/ I-95/ X40/ QUA_1
CUSTOMER #:	CT11020D

GROUNDING DETAILS

SHEET NUMBER: E-501	REVISION: 0
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RAN Template: 67D5992DB Hybrid	A&L Template: 67D5992DB_3xAIR+1OP
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CT11020D_Anchor_3_draft
Print Name: Standard (2)

Section 5 - RAN Equipment

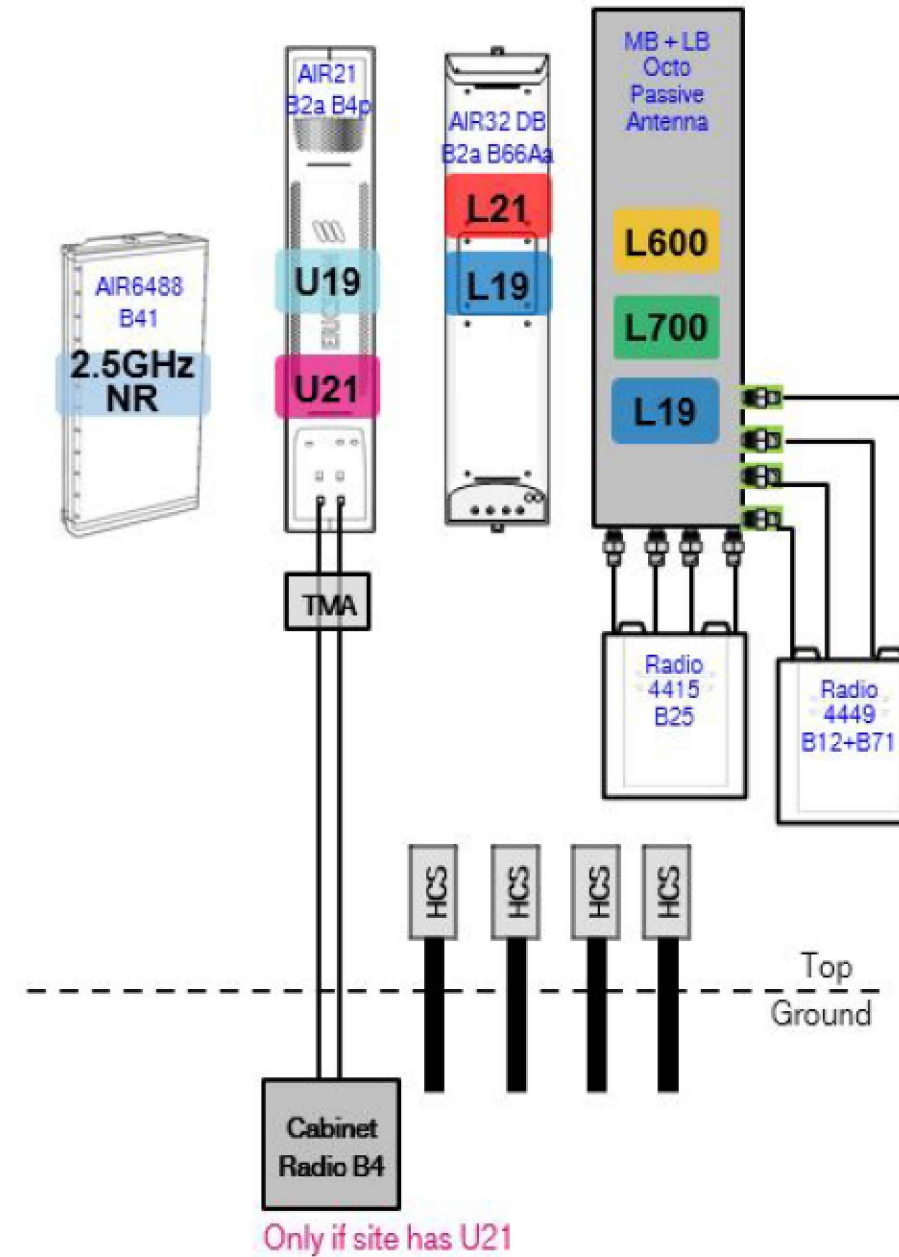
Existing RAN Equipment																					
Template: 67D94DB Hybrid (evolved from 4B)																					
Enclosure	1																				
Enclosure Type	RBS 6102																				
Baseband	<table border="0"> <tr> <td>DUW30 U2100</td> <td>DUW30 U1900</td> <td>DUG20 G1900</td> <td>BB 6630 L2100</td> <td>BB 6630 N800</td> </tr> <tr> <td></td> <td></td> <td></td> <td>L1900</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>L700</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>L600</td> <td></td> </tr> </table>	DUW30 U2100	DUW30 U1900	DUG20 G1900	BB 6630 L2100	BB 6630 N800				L1900					L700					L600	
DUW30 U2100	DUW30 U1900	DUG20 G1900	BB 6630 L2100	BB 6630 N800																	
			L1900																		
			L700																		
			L600																		
Hybrid Cable System	Ericsson 6x12 HCS *Select Length & AWG*																				
Radio	<table border="0"> <tr> <td>RUS01 B2 (x 3) G1900</td> <td>RUS01 B2 (x 3) U1900</td> <td>RUS01 B4 (x 3) U2100</td> <td>RUS01 B4 (x 3) L2100</td> </tr> </table>	RUS01 B2 (x 3) G1900	RUS01 B2 (x 3) U1900	RUS01 B4 (x 3) U2100	RUS01 B4 (x 3) L2100																
RUS01 B2 (x 3) G1900	RUS01 B2 (x 3) U1900	RUS01 B4 (x 3) U2100	RUS01 B4 (x 3) L2100																		

Proposed RAN Equipment																									
Template: 67D5992DB Hybrid																									
Enclosure	1	2	3																						
Enclosure Type	RBS 6102	Enclosure 6160	B160																						
Baseband	<table border="0"> <tr> <td>DUW30 U2100</td> <td>DUW30 U1900</td> <td>DUG20 G1900</td> <td>BB 6630 L2100</td> <td>BB 6630 N800</td> </tr> <tr> <td></td> <td></td> <td></td> <td>L1900</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>L700</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>L600</td> <td></td> </tr> </table>	DUW30 U2100	DUW30 U1900	DUG20 G1900	BB 6630 L2100	BB 6630 N800				L1900					L700					L600		<table border="0"> <tr> <td>BB 6630 (x 3) L2500</td> <td>BB 6630 N2500</td> </tr> </table>	BB 6630 (x 3) L2500	BB 6630 N2500	
DUW30 U2100	DUW30 U1900	DUG20 G1900	BB 6630 L2100	BB 6630 N800																					
			L1900																						
			L700																						
			L600																						
BB 6630 (x 3) L2500	BB 6630 N2500																								
Hybrid Cable System	Ericsson 6x12 HCS *Select Length & AWG*	Ericsson 6x12 HCS *Select AWG & Length* (x 2)																							
Radio	<table border="0"> <tr> <td>RUS01 B2 (x 6) U2100</td> <td>RUS01 B4 (x 3)</td> </tr> <tr> <td></td> <td>RUS01 B4 (x 3)</td> </tr> </table>	RUS01 B2 (x 6) U2100	RUS01 B4 (x 3)		RUS01 B4 (x 3)																				
RUS01 B2 (x 6) U2100	RUS01 B4 (x 3)																								
	RUS01 B4 (x 3)																								

RAN Scope of Work:

- Upgrade AC Service.
- Remove RBS3106. Relocate AAV to Emerson Cabinet.
- All (6) RUS 01 B2 in existing cabinet will become unused.
- Add (1) Enclosure 6160.
- Add (1) Battery Cabinet B160.
- Add (1) iXRe Router to new Enclosure 6160.
- Add (3) BB6630 for L2500 to new Enclosure 6160.
- Add (1) BB6630 for N2500 to new Enclosure 6160.
- Remove (12) Coaxial Lines for new total of (6).
- Add (2) 6X12 HCS.

1 CABINET CONFIGURATION
SCALE: NOT TO SCALE



Notes:

2 ANTENNA CONFIGURATION
SCALE: NOT TO SCALE

Only if site has U21

SUPPLEMENTAL

SHEET NUMBER: R-601
REVISION: 0

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

PRODUCT DESCRIPTION

Frequency Range	LTE TDD B41: 2496 – 2690 MHz
Instantaneous BW	DL 194 MHz
Antenna Ports	64T64R
Technology	NR, LTE and NR+LTE MSMM
Antenna Elements	192
Output RF Power	300 W (=64 TRX x 4.6875W)
Data Ports	4 x 25Gb/s CPRI
5G NR Support	YES
DC Feed	-48V DC power connector
Cooling	Passive cooling (vs. active cooling on AIR32 DB)
Dimensions (H x W x D)	33.1" x 20.6" x 8.6" inches (=841 x 524 x 217 mm)
Weight	104 lbs (=47 kg)
Electrical downtilt	-3 to 11 degrees
Horizontal beamwidth	+/- 65 degrees
HW/SW Availability	July 2020
Material SAP #	34105 – AIR 6449 B41



WARRANTY: 1 Year

SPARES: 2% of install base. Additional units can be requested as per need.

Baseband Requirements

For a typical 3-sector site,

- LTE: one dedicated BB6630 per site
- NR: one dedicated BB6648 (see [its NPI](#)) per site

Supplementary/Ancillary Materials

SKU	Description	Qty
34106	AIR6449 Mandatory Install KIT	1 per AIR6449
34110	AIR6449 25G SFP	8 per AIR6449

LINKS

- [Ericsson New T-Mobile Anchor Network Playbook](#)
- [AIR 6488 vs. AIR 6449 Comparison](#)

CONTACTS

Jacob Madian	Assoc. Engineer, RAN Architecture
Weston Berry	Engineer, RAN Architecture

TECHNICAL SPECIFICATIONS AIR 21, 1.3M, B2A B4P

RADIO

Active frequency band:	Band 2 (1850-1910 / 1930-1990 MHz)
Passive frequency band (optional):	Band 4 (1710-1755 / 2110-2155 MHz)
Downlink EIRP in bore-sight direction for the active band:	2 x 62,5 dBm
Uplink sensitivity:	TBD*
Remote electrical tilt:	-2° to -12°, independently controlled per frequency band
MIMO:	2 x 2 for DL 4 RX branches to be used for diversity/ beam-steering /MIMO
Instantaneous bandwidth:	20 MHz
Capacity (single standard per sector):	Up to 8 carriers GSM Up to 4 carriers WCDMA with 2 x 2 DL MIMO Up to 20 MHz LTE with 2 x 2 DL MIMO
Multi-RAT capability:	Single standard or two simultaneous standards (Capacity above is reduced for multi-RAT)
Bore-sight antenna gain for passive antenna option:	17.5 dBi
Nominal beam-width, azimuth:	65°
Nominal beam-width, elevation:	7°
Additional antenna parameters:	See Antenna characteristics, page 3

MECHANICAL SPECIFICATION

Weight (excl. mounting brackets):	37,5 kg for active only 41,5 kg for active and passive
Size (H x W x D)	1422 mm x 307 mm x 200 mm
Wind load:	580 N / 300 N / 720 N (frontal/lateral/rear-side) @ 42 m/s wind speed

INTERFACES

AIR – DU:	DATA 1, Data 2: CPRI links (SFP modules with LC socket + flanges that match protective cover TYCO C20611458)
Power:	- 48V DC (TYCO/Ericsson RPT 447 04)
Passive antenna (option).	TX/RX 1, TX/RX 2: RF connectors (7-16 female)
LMU RX sharing	RX1, RX2:, RF connectors (N female)

SUPPORTING BASE-BAND

RBS 6601:	One or two units depending on configuration.
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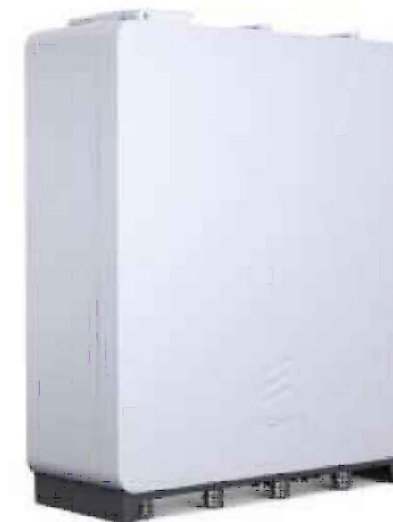
* 1 dB better than best-in-class RRU connected to same size best-in-class antenna

** Other base-band configurations are available

RRUS 4415 B25



- › B25
 - TX = 1930 – 1995 MHz
 - RX = 1850 – 1915 MHz
- › CPRI 2 ports x 2.5/4.9/9.8/10.1 Gbps. Install 2 SFPs and connect 2 fiber pair to the RRUS 4415 during initial install.
- › Only use Ericsson supplied and approved SFPs RDH10265/25
 - Exception: SFP7 RDH 10265/3 for CPRI 1.4km to 10km
 - Exception: SFP7 (pair): RDH 102 70/1 and RDH 102 70/2 for CPRI > 10km
- › 2 external alarm inputs
- › Max wind load @ 50m/sec = 260N
- › Breaker size = 25A, DC Power Consumption = 670 W (for dimensioning)
- › 200mm horizontal separation required for side by side mounting
- › 200mm separation required from antenna backplane to radio
- › 400mm vertical outdoor/indoor separation required between 2 radios
- › 500mm vertical separation below antenna
- › Min, Max DC cable size from squid to radio = 10,8 AWG
 - Adapter is required for 2-wire connection
 - Shielded DC cable is required
- › Ground cable size = 2AWG
- › Dimensions (incl. handles, feet and sunshield, w/o fan unit)
 - Height: 16.5" (420 mm)
 - Width: 13.4" (342 mm)
 - Depth: 5.9" (149 mm)
- › Weight, excl. mounting hardware = 46 lbs (21 kg)





Enclosure 6160 AC

The Enclosure 6160 is a multi-purpose site cabinet designed to support a multitude of equipment such as ERS Baseband, Transport, Li-Ion battery and 3PP vendor equipment. It also provides a highly capable power system and battery back-up - all in a streamlined design and minimized footprint to support cost efficient expansion of mobile broadband.

Being an all-in-one enclosure, the Enclosure 6160 is a very fitting choice for all types of sites where the capacity need is large or room for future expansion is needed. It is ideally used for modernizing existing sites or in greenfield scenarios to match both current and future needs.

With a robust design, IP65 compliance and a sealed Heat Exchanger (HEX) climate system the Enclosure 6160 ensures optimal environmental protection of the active equipment - enabling them for a long-lasting service. The complete system is also integrated and verified for the entire Ericsson Radio System and ensures best-in-class service.

The power system offers 31,5kW of power in total and provides 24kW of -48V DC power for both internal and external consumers.

The equipment space allows 19U of rack space ensuring well enough capacity for existing need and future expansion.

One of the main advantages of the Enclosure 6160 is its default integration with ENM - allowing for advanced remote monitoring and control such a fault management (alarms), inventory management and performance measurements. The cabinet also provides an open O&M interface for integration to 3PP O&M systems.



Preliminary technical specification for Enclosure 6160 AC

CAPACITY

Rack space user equipment	19U (19" rack)
Hardware capabilities	Power and CPRI support for multi-standard remote radios (RRU or AIR) ERS Baseband and Transport units Li-Ion batteries 3PP equipment Additional power feed available as option

MECHANICAL SPECIFICATION

Weight	145 kg (excluding active equipment) 320 lbs (excluding active equipment)
Dimension (H x W x D)	1600 x 650 x 650 mm (incl. Base frame) 63 x 26 x 26 in. (incl. Base frame)
Base frame height	150 mm 6 in.
Mounting position	Ground
Enclosure material	Aluminum
Color	Power paint NCS 2002-B
Door	Front access
Rack type	19" (IEC 60297-3-100)
Locking type	Pad lock or Cylinder

POWER SYSTEM

Input voltage	3P+N+PE: 346/200-415/240 VAC 2P+N+PE: 208/120-220/127 VAC 1P+N+PE: 200-250 VAC
Input power	<33kW
Output load (-48VDC)	24kW
Total capacity (-48VDC)	31.5kW
AC SPD	Class 2/Type 2
DC SPD	Class 2/Type 2
PSU Slots	9x
Service outlet	Optional
Priority load	8x Circuit Breaker
LLVD 1	6x Circuit Breaker
LLVD 2	6x Circuit Breaker
CB ratings	3A / 5A / 10A / 15A / 20A / 25A / 30A / 40A / 50A / 60A / 80A / 100A
Battery Interface	2x Circuit Breaker
Battery Circuit Breaker rating	125A 2pol (200A)
PSU capacity	3500W

SUPPLEMENTAL

SHEET NUMBER:

R-605

REVISION:

0

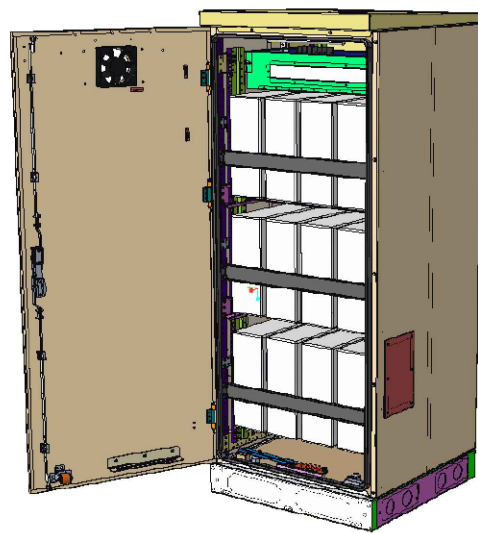
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EQUIPMENT SPECIFICATIONS

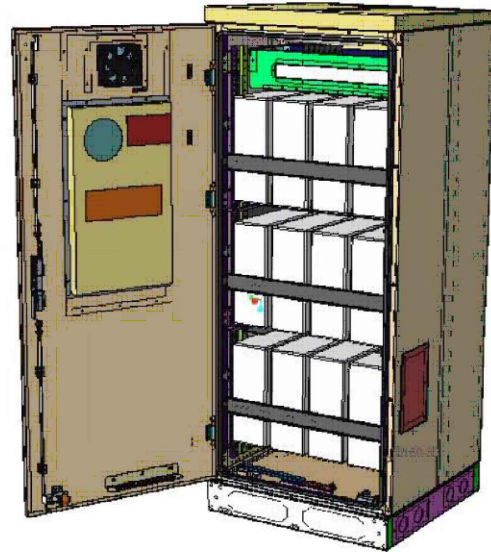
SCALE: N.T.S.

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

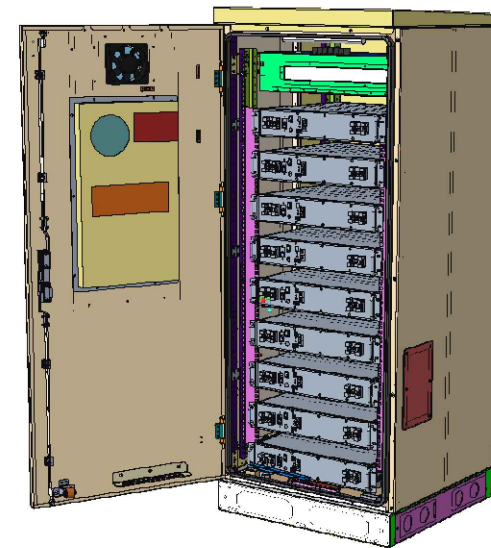
Enclosure B160



Enclosure B160
AirCon + VRLA



Enclosure B160
AirCon + Li-Ion



Enclosure B160
Convection Cooling
+ VRLA

Enclosure B160

Capacity

- VRLA 12V: 100Ah / 150Ah / 170Ah / 190Ah / 210Ah
- Li-Ion: 24U 19" / 23"
- Sodium-Nickel: 3x FIAMM

Electrical specification

- DC Output: -48VDC/200A
- Battery breakers: 2x 125/2p
- Alarms: Door open, Climate failure, MCB Connection

Mechanical specification

- Weight: 134kg
- Dimensions: 63 x 26 x 26 in. (incl. Base frame)
- Base frame height: 6 in.
- Material: Galvanized steel (180g/m²)
- Color: Powder paint NCS 2002-B
- Door: Front access
- Locking type: Pad lock / cylinder

Environmental specification

- Ingress protection: VRLA/Sodium IP44
Li-Ion IP55
- Relative humidity: 15-100%

Climate system

- Air Conditioner
 - Fan type: DC
 - Cooling capacity: 500W @L35/L35
- Convection cooling
 - Emergency fan

VERTIV™ XTE 401 SERIES

Equipment Enclosures



KEY FEATURES

- NEMA 3R design protects equipment from water and dust, while maintaining a cool operating environment.
- UL and cUL listing ensures documented performance.
- GR-487-CORE Issue 3 design ensures system reliability and durability.
- Aluminum construction provides superior protection for panels, cables and splices, offering a long, corrosion resistant, problem-free service life.
- Multiple climate control solutions satisfy your specific equipment heat loads and environmental demands.
- More customization available for diverse configuration, cooling and mounting.
- Standard enclosure platform for multiple applications simplifies specification, installation and maintenance.

The Vertiv™ XTE 401 Series equipment enclosures are an economical solution for housing a wide variety of wireline or wireless access electronics.

Description

The Vertiv XTE 401 Series is a family of three small single sided low-cost indoor or outdoor rated aluminum enclosures. These enclosures can be equipped with a variety of inexpensive cooling, power, protection and battery options.



Vertiv XTE 401 Series, 2410 Enclosure

Application

The Vertiv XTE 401 Series economically houses a wide variety of environmentally hardened wireline or wireless access electronics. Because of their small size, these enclosures are ideal for inconspicuous deployment of mobile 2G/3G/4G cellular base stations, DAS nodes, mobile backhaul, remote power solutions, fiber (FTTx) nodes, advanced metering management (AMM) nodes or hybrid controller systems (solar, wind, etc.).

Ordering Information

PART NUMBER	DESCRIPTION
NXC2410	Vertiv™ XTE 401 Series, 2410 enclosure
NXC2416	Vertiv™ XTE 401 Series, 2416 enclosure
NXC3816	Vertiv™ XTE 401 Series, 3816 enclosure
F1010410	Kit, 24" W x 10" D, pad mount base assembly
F1010411	Kit, 24" W x 16" D, pad mount base assembly
F1010505	Kit, 24" W x 10" D, stake mount base assembly, e/w (2) 42" stakes
F1010506	Kit, 24" W x 16" D, stake mount base assembly, e/w (2) 42" stakes
F1010408	Kit, wall mount assembly
F1010409	Kit, pole mount assembly
F1010459	24" W x 10" D pad mount template assembly
F1010460	24" W x 16" D pad mount template assembly

VERTIV™ XTE 401 SERIES



Technical Specifications

PHYSICAL CHARACTERISTICS	NXC2410 AND NXC2416	NXC3816
Enclosure Dimensions (H x W x D)	24" x 24" x 10" (NxC2410) 24" x 24" x 16" (NxC2416)	38" x 24" x 16"
Rack Options and Dimensions	19" W, (1) x 1.75" RU (standard) 19" W, (6) x 1.75" RU (optional, used with battery tray)	19" W, (18) x 1.75" RU (standard) 19" W, (13) x 1.75" RU (optional, used with battery tray) 23" W, (10) x 1.75" RU vertical mount
Backboard Options and Dimensions	Full height, .625" thick, plywood backboard 20" W x 20" H Half height, .625" thick, plywood backboard 20" W x 12" H	Full height, .625" thick, plywood backboard 20" W x 32" H Half height, .625" thick, plywood backboard 20" W x 22" H
Battery Tray Options* and Dimensions	22" W x 7" D battery tray assy 22" W x 13" D battery tray assy (NxC2416 only)	22" W x 7" D battery tray assy 22" W x 13" D battery tray assy
Weight	35 lbs. (NxC2410) 45 lbs. (NxC2416)	55 lbs. (NxC3816)
Color	Off white	

* All battery trays can be equipped with an optional 120VAC battery heater pad

ELECTRICAL	
Duplex Convenience Receptacle	120 VAC, GFI protected (optional)
Duplex Receptacle	120 VAC, equipment (optional)
Load Center	4 position, 30 amp, 120/240 VAC (optional)
DIN Rail Mounted Load Center	2 position, 30 amp, 120/240 VAC (optional)

CABLE ENTRANCE	
Cable Entry	(3) 1.375" cable entry ports
Ground Cable Entry	(1) 1.375" cable entry port
AC Entry	(1) 1.375" conduit entry port
Miscellaneous Cable Entry	(2) .625" cable entry port

SECURITY	
Equipment Chamber Front Door	(2) 1/2 turn latch, padlockable Optional door actuators include hex/pin and 7/8" hex nut styles
Alarm Options	High temperature alarm Low temperature alarm Front door intrusion alarm
	49°C (122°F) 5°C (40°F)

ENVIRONMENTAL	
Operating Temperature	-40°C to +46°C (-40°F to +115°F)
Humidity	0 to 95% non-condensing
Elevation	0 to 10,000 ft.
Cooling	Free air, convection cooled with sealed or vented side plates (optional) 24 VDC, 48 VDC, 500 watt fan cooled (optional) 24 VDC, 48 VDC, 500 watt heat exchanger (optional)
Safety Compliance	UL Listed, cUL, GR-487 (as applicable)

VertivCo.com | Vertiv Headquarters, 1050 Dearborn Drive, Columbus, OH, 43085, USA

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OE-1610 (10/31/18)



Vertiv™ XTE 401 Series, 2410 Enclosure



Vertiv™ XTE 401 Series, 2416 Enclosure



Vertiv™ XTE 401 Series, 3816 Enclosure

Exhibit D

Structural Analysis Report



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 183 ft Monopole
ATC Site Name : Milford CT 2, CT
ATC Asset Number : 302535
Engineering Number : 13251808_C3_04
Proposed Carrier : T-MOBILE
Carrier Site Name : Milford/ I-95/ X40/ Qua_1
Carrier Site Number : CT11020D
Site Location : 185 Research Drive
Milford, CT 06460-7733
41.240400,-73.011900
County : New Haven
Date : July 17, 2020
Max Usage : 99%
Result : Pass



Prepared By:
Hansol Shin
Structural Engineer I

Reviewed By:

COA: PEC.0001553



Table of Contents

Introduction	1
Supporting Documents	1
Analysis	1
Conclusion.....	1
Existing and Reserved Equipment.....	2
Equipment to be Removed.....	3
Proposed Equipment	3
Structure Usages	4
Foundations	4
Deflection and Sway	4
Standard Conditions	5
Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 183 ft monopole to reflect the change in loading by T-MOBILE.

Supporting Documents

Tower Drawings	Summit Manufacturing Drawing #1237-D1, dated September 9, 1994
Foundation Drawing	Summit Manufacturing Drawing #1237-F1 dated October 10, 1994
Geotechnical Report	French & Parrello Project #93N035CR1, dated November 2, 1993
Modifications	ATC Job #42659834, dated January 16, 2009 ATC Job #43915332, dated September 2, 2009 ATC Job #56682734, dated April 16, 2014
Mount Analysis	Infinigy Job #1009-Z0003-B, dated June 24, 2020

Analysis

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

Basic Wind Speed:	117 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	48.75 mph (3-Second Gust) w/ 0.85" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Crest Height (H):	0 ft
Spectral Response:	$S_s = 0.20, S_1 = 0.05$
Site Class:	D - Stiff Soil

**Wind load and Ice thickness have been reduced by applicable existing structure load modification factors in accordance with TIA-222-H, Annex S.

Conclusion

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

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



Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
185.0	3	Nokia 2.5G MAA - AAHC(64T64R)	Platform with Handrails	(3) 1 1/4" Hybriflex Cable (3) 1 5/8" Hybriflex (1) 1.7" (43.2mm) Hybrid (2) 1/2" Coax (2) 2" conduit (6) 5/16" (0.31"-7.9mm) Coax	CLEARWIRE CORPORATION
	2	DragonWave Horizon Compact			
	6	Alcatel-Lucent RRH2x50-08			
	3	Commscope NNVV-65B-R4			
	2	DragonWave A-ANT-18G-2-C			
	3	Argus LLPX310R			
	3	Alcatel-Lucent 1900 MHz 4X45 RRH		(12) 1 5/8" Coax	SPRINT NEXTEL
	3	Andrew 844G65VTZASX			
	6	Decibel DB844H90E-XY			
175.0	3	RFS APXV18-206517S-C	Flush	(6) 1 5/8" Coax	METRO PCS INC
167.0	3	Ericsson RRUS 4478 B14	Site Pro 1 12' Fortress Tri-Platform Mount with Handrail Kit	(3) 0.39" (10mm) Fiber Trunk (6) 0.78" (19.7mm) 8 AWG 6 (12) 1 1/4" Coax (2) 2" conduit (2) 3" conduit	AT&T MOBILITY
	3	Ericsson RRUS 4426 B66			
	1	Raycap DC6-48-60-18-8F ("Squid")			
	2	Raycap DC6-48-60-18-8F (23.5" Height)			
	6	Powerwave Allgon LGP21401			
	1	Commscope WCS-IMFQ-AMT			
	6	Kaelus DBCT108F1V92-1			
	6	CCI TPX-070821			
	3	Ericsson RRUS 4478 B5			
	3	Kathrein Scala 80010964			
	3	Quintel QS66512-2			
	3	CCI OPA-65R-LCUU-H4			
	3	Powerwave Allgon 7770.00			
	3	Ericsson RRUS-32 (77 lbs)			
	3	Ericsson RRUS 32 B2			
3	Ericsson RRUS 11 (Band 4)				
145.0	3	RFS APXVAARR24_43-U-NA20	Platform with Handrails	(2) 1 5/8" (1.63"-41.3mm) Fiber (6) 1 5/8" Coax	T-MOBILE
	3	Ericsson KRY 112 489/2			
126.0	6	Commscope JAHH-45B-R3B	Platform with Handrails	(12) 7/8" Coax (2) 1 5/8" (1.63"-41.3mm) Fiber (6) 1 5/8" Coax	VERIZON WIRELESS
	3	RFS FDJ85020Q4-S1			
	3	Andrew HBXX-6517DS-A2M (43 lbs)			
	3	Antel BXA-80063/6CF			
	2	RFS DB-T1-6Z-8AB-OZ			
	3	Samsung B2/B66A RRH-BR049			
	3	Samsung B5/B13 RRH-BR04C			
50.0	2	Thales PCS VP/360/2 Type 8100	Stand-Off	-	T-MOBILE



Equipment to be Removed

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
145.0	3	Kathrein Scala Smart Bias Tee	-	(12) 1 5/8" Coax	T-MOBILE
	3	Ericsson AIR 32 B2A/B66A			
	3	Ericsson Radio 4449 B12,B71			
	3	Ericsson KRY 112 144/2			

Proposed Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
145.0	3	Ericsson RRUS 4415 B25	Platform with Handrails	(2) 1 1/4" Hybriflex Cable	T-MOBILE
	3	Ericsson Radio 4449 B71 B85A			
	3	Ericsson Air6449 B41			
	3	Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs)			
	3	Ericsson AIR32 B66Aa/B2a			

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

Install proposed lines inside the pole shaft.



Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	66%	Pass
Shaft	90%	Pass
Base Plate	72%	Pass
Reinforcement	97%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	4,747.6	99%
Axial (Kips)	78.5	5%

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

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
185.0	DragonWave A-ANT-18G-2-C	CLEARWIRE CORPORATION	0.000	0.000
	DragonWave A-ANT-18G-2-C			
145.0	Ericsson RRUS 4415 B25	T-MOBILE	1.920	1.700
	Ericsson Radio 4449 B71 B85A			
	Ericsson Air6449 B41			
	Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs)			
	Ericsson AIR32 B66Aa/B2a			

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



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

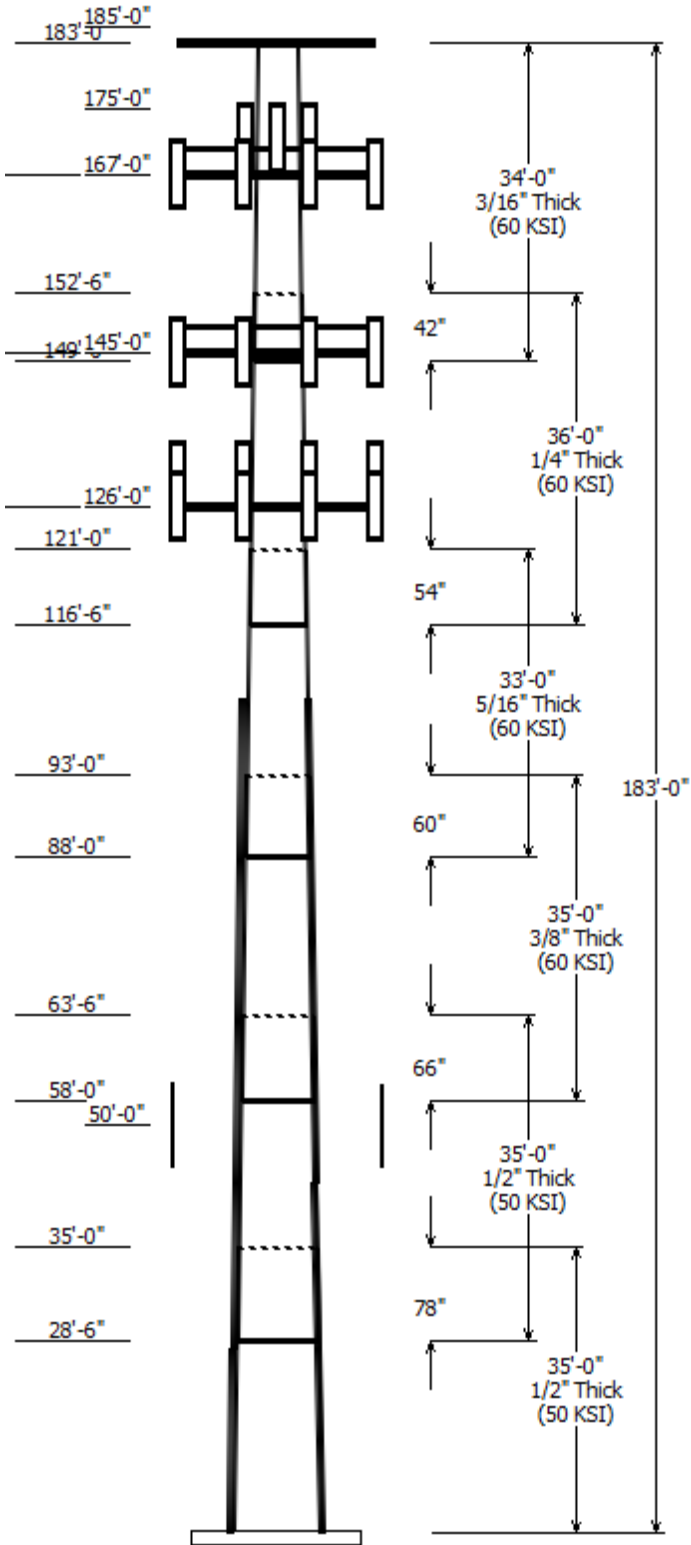
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

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

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

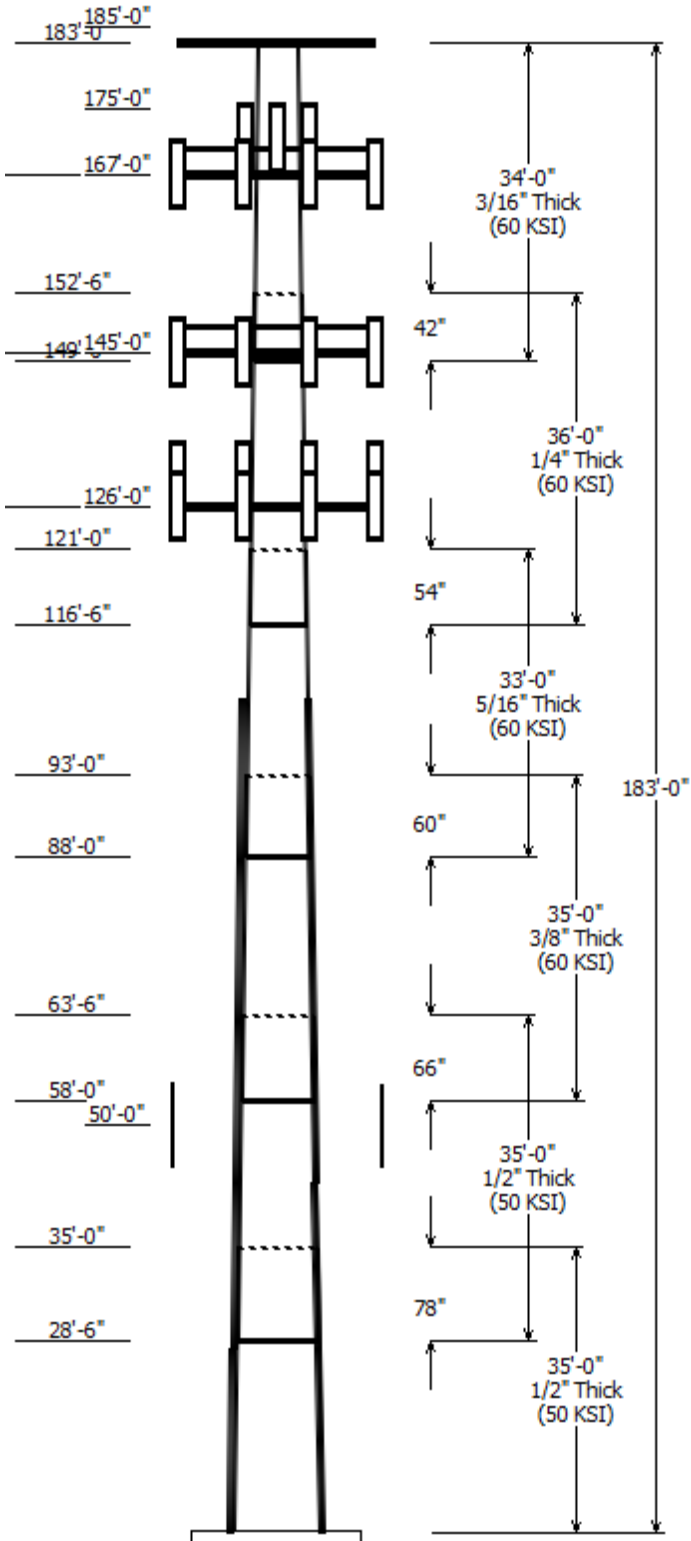
Job Information	
Client : T-MOBILE	Code: ANSI/TIA-222-H
Pole : 302535	
Location : Milford CT 2, CT	
Description : 183 ft Summit Monopole	Risk Category : II
Shape : 18 Sides	Exposure : B
Height : 183.00 (ft)	Topo Method : Method 1
Base Elev (ft): 0.00	Topographic Category : 1
Taper: 0.174917(in/ft)	



Sections Properties							
Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)	Steel Grade (ksi)
		Across Flats Top	Across Flats Bottom				
1	35.000	42.49	48.62	0.500		0.000	18 Sides 50
2	35.000	38.51	44.63	0.500	Slip Joint	78.000	18 Sides 50
3	35.000	34.10	40.22	0.375	Slip Joint	66.000	18 Sides 60
4	33.000	29.83	35.60	0.313	Slip Joint	60.000	18 Sides 60
5	36.000	24.82	31.11	0.250	Slip Joint	54.000	18 Sides 60
6	34.000	19.86	25.80	0.188	Slip Joint	42.000	18 Sides 60

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
185.000	185.000	1	DragonWave A-ANT-18G-2-C
185.000	185.000	3	Andrew 844G65VTZASX
185.000	185.000	6	Decibel DB844H90E-XY
185.000	185.000	3	Commscope NNVV-65B-R4
185.000	185.000	1	DragonWave A-ANT-18G-2-C
185.000	185.000	3	Argus LLPX310R
185.000	185.000	3	Nokia 2.5G MAA -
185.000	185.000	3	Alcatel-Lucent 1900 MHz 4X45
185.000	185.000	6	Alcatel-Lucent RRH2x50-08
185.000	185.000	2	DragonWave Horizon Compact
183.000	183.000	1	Flat Platform w/ Handrails
175.000	171.000	3	RFS APXV18-206517S-C
167.000	167.000	1	Generic Round Platform with
167.000	167.000	3	Kathrein Scala 80010964
167.000	167.000	3	Quintel QS66512-2
167.000	167.000	3	CCI OPA-65R-LCUU-H4
167.000	167.000	3	Powerwave Allgon 7770.00
167.000	167.000	3	Ericsson RRUS-32 (77 lbs)
167.000	167.000	3	Ericsson RRUS 32 B2
167.000	167.000	3	Ericsson RRUS 11 (Band 4)
167.000	167.000	3	Ericsson RRUS 4478 B5
167.000	167.000	3	Ericsson RRUS 4478 B14
167.000	167.000	3	Ericsson RRUS 4426 B66
167.000	167.000	1	Raycap DC6-48-60-18-8F
167.000	167.000	2	Raycap DC6-48-60-18-8F (23.5"
167.000	167.000	6	Powerwave Allgon LGP21401
167.000	167.000	1	Commscope WCS-IMFQ-AMT
167.000	167.000	6	Kaelus DBCT108F1V92-1
167.000	167.000	6	CCI TPX-070821
145.000	145.000	1	Round Platform w/ Handrails
145.000	145.000	3	RFS APXVAARR24_43-U-NA20
145.000	145.000	3	Ericsson AIR32 B66Aa/B2a
145.000	145.000	3	Ericsson AIR 21, 1.3M, B2A B4P
145.000	145.000	3	Ericsson Air6449 B41
145.000	145.000	3	Ericsson Radio 4449 B71 B85A
145.000	145.000	3	Ericsson RRUS 4415 B25
145.000	145.000	3	Ericsson KRY 112 489/2
126.000	126.000	1	Flat Platform w/ Handrails
126.000	126.000	6	Commscope JAHH-45B-R3B
126.000	127.000	3	Andrew HBXX-6517DS-A2M (43
126.000	127.000	3	Antel BXA-80063/6CF

126.000	127.000	2	RFS DB-T1-6Z-8AB-0Z
126.000	126.000	3	Samsung B2/B66A RRH-BR049
126.000	126.000	3	Samsung B5/B13 RRH-BR04C
126.000	126.000	3	RFS FDJ85020Q4-S1
50.000	50.000	2	Thales PCS VP/360/2 Type 8100



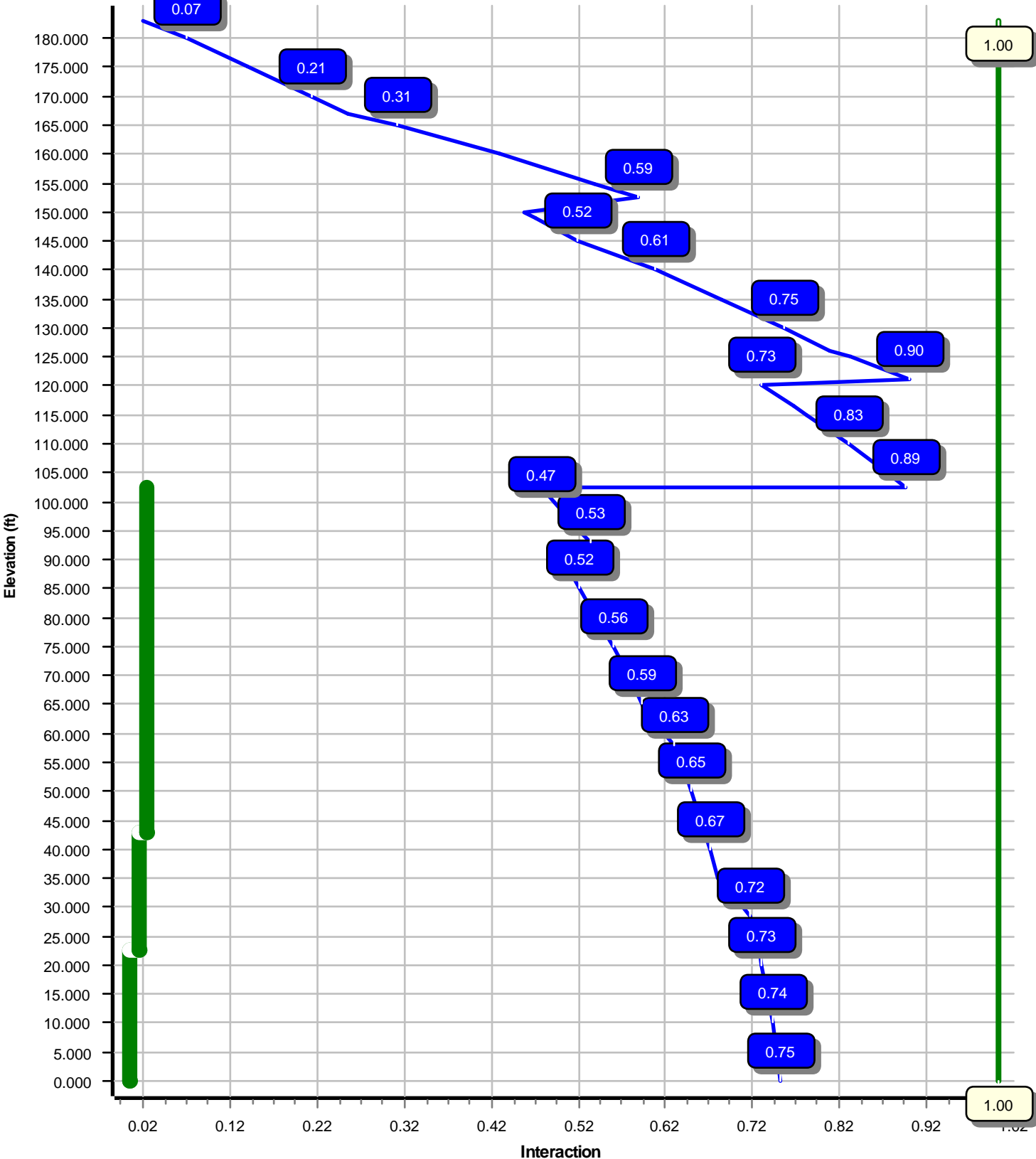
Linear Appurtenance			
Elev (ft)		Description	Exposed To Wind
From	To		
5.000	126.0	1 5/8" (1.63"-	Yes
5.000	126.0	1 5/8" Coax	No
5.000	127.0	7/8" Coax	No
5.000	167.0	0.39" (10mm)	Yes
5.000	167.0	0.39" (10mm)	Yes
5.000	167.0	0.78" (19.7mm) 8	Yes
5.000	167.0	1 1/4" Coax	No
5.000	167.0	2" conduit	No
5.000	175.0	1 5/8" Coax	Yes
5.000	185.0	1 1/4" Hybriflex	Yes
5.000	185.0	1 5/8" Coax	No
5.000	185.0	1.7" (43.2mm)	Yes
5.000	185.0	1/2" Coax	Yes
5.000	185.0	2" conduit	Yes
0.000	185.0	1 5/8" Hybriflex	No
0.000	185.0	5/16" (0.31"-	Yes
0.000	145.0	1 1/4" Hybriflex	No
0.000	145.0	1 5/8" (1.63"-	No
0.000	145.0	1 5/8" Coax	No
0.000	167.0	3" conduit	No
0.000	110.8	#20 Dywidag Bars	Yes
0.000	110.8	#20 Dywidag Bars	Yes
0.000	110.8	#20 Dywidag Bars	Yes
0.000	110.8	#20 Dywidag Bars	Yes

Load Cases	
1.2D + 1.0W	117 mph with No Ice
0.9D + 1.0W	117 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	49 mph with 0.85 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.0W	4247.57	30.68	78.46
0.9D + 1.0W	4156.42	30.64	58.83
1.2D + 1.0Di + 1.0Wi	1017.39	7.43	100.30
1.2D + 1.0Ev + 1.0Eh	298.89	1.97	79.11
0.9D - 1.0Ev + 1.0Eh	290.82	1.97	54.58
1.0D + 1.0W	987.41	7.21	65.42

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	183.00	38.040	2.041
1.0D + 1.0W	183.00	38.040	2.041

Load Case : 1.2D + 1.0W
Max Ratio 89.65% at 121.0 ft



Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

7/17/2020 6:01:52 AM

Customer: T-MOBILE

Analysis Parameters

Location :	New Haven County, CT	Height (ft) :	183
Code :	ANSI/TIA-222-H	Base Diameter (in) :	48.62
Shape :	18 Sides	Top Diameter (in) :	19.86
Pole Type :	Taper	Taper (in/ft) :	0.175
Pole Manufacturer :	Summit Manufacturing	Rotation (deg) :	0.00
Kd (non-service) :	0.95	Ke :	1.00

Ice & Wind Parameters

Exposure Category:	B	Design Wind Speed Without Ice:	117 mph
Risk Category:	II	Design Wind Speed With Ice:	49 mph
Topographic Factor Procedure:	Method 1	Operational Wind Speed:	60 mph
Topographic Category:	1	Design Ice Thickness:	0.85 in
Crest Height:	0 ft	HMSL:	102.00 ft

Seismic Parameters

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	3.37		
T_L (sec):	6	p :	1
S_s :	0.200	S_1 :	0.053
F_a :	1.600	F_v :	2.400
S_{ds} :	0.213	S_{d1} :	0.085
		C_s :	0.030
		C_s Max:	0.030
		C_s Min:	0.030

Load Cases

1.2D + 1.0W	117 mph with No Ice
0.9D + 1.0W	117 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	49 mph with 0.85 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

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Customer: T-MOBILE

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom						Top						
							Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Taper (in/ft)
1-18	35.000	0.5000	50		0.00	8,516	48.62	0.00	76.36	22340.1	15.38	97.24	42.49	35.00	66.65	14852.2	13.22	85.00	0.174917
2-18	35.000	0.5000	50	Slip	78.00	7,763	44.63	28.50	70.04	17236.7	13.98	89.27	38.51	63.50	60.32	11012.7	11.82	77.03	0.174917
3-18	35.000	0.3750	60	Slip	66.00	5,215	40.22	58.00	47.43	9515.8	17.15	107.27	34.10	93.00	40.14	5769.4	14.27	90.94	0.174917
4-18	33.000	0.3125	60	Slip	60.00	3,609	35.60	88.00	35.00	5507.2	18.33	113.93	29.83	121.00	29.28	3222.7	15.07	95.46	0.174917
5-18	36.000	0.2500	60	Slip	54.00	2,694	31.11	116.50	24.49	2948.2	20.18	124.47	24.82	152.50	19.50	1486.9	15.74	99.28	0.174917
6-18	34.000	0.1875	60	Slip	42.00	1,559	25.80	149.00	15.25	1264.3	22.51	137.64	19.86	183.00	11.71	572.4	16.91	105.92	0.174917
Shaft Weight						29,356													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	Weight (lb)	No Ice EPAa (sf)	Orientation Factor	Weight (lb)	Ice EPAa (sf)	Orientation Factor
185.00	DragonWave Horizon Compact	2	0.75	0.000	10.60	0.721	0.50	23.61	1.050	0.50
185.00	Alcatel-Lucent RRH2x50-08	6	0.75	0.000	52.90	1.701	0.50	87.20	2.200	0.50
185.00	Alcatel-Lucent 1900 MHz 4X45	3	0.75	0.000	60.00	2.322	0.50	106.64	2.947	0.50
185.00	Decibel DB844H90E-XY	6	0.75	0.000	14.00	3.615	0.66	71.37	3.538	0.66
185.00	Nokia 2.5G MAA - AAHC(64T64R)	3	0.75	0.000	103.60	4.203	0.63	168.85	4.979	0.63
185.00	Argus LLPX310R	3	0.75	0.000	28.60	4.292	0.60	80.76	5.249	0.60
185.00	DragonWave A-ANT-18G-2-C	1	1.00	0.000	27.10	4.688	0.99	83.58	5.425	0.99
185.00	DragonWave A-ANT-18G-2-C	1	1.00	0.000	27.10	4.690	0.78	83.58	5.427	0.78
185.00	Andrew 844G65VTZASX	3	0.75	0.000	16.00	5.310	0.66	98.90	5.872	0.66
185.00	Commscope NNVV-65B-R4	3	0.75	0.000	77.40	12.271	0.63	222.83	13.894	0.63
183.00	Flat Platform w/ Handrails	1	1.00	0.000	2,000.00	42.400	1.00	2,822.52	54.538	1.00
175.00	RFS APXV18-206517S-C	3	1.00	-4.000	26.40	5.160	0.68	79.75	6.522	0.68
167.00	CCI TPX-070821	6	0.75	0.000	7.50	0.469	0.50	14.46	0.744	0.50
167.00	Kaelus DBCT108F1V92-1	6	0.75	0.000	13.90	0.633	0.50	28.34	0.946	0.50
167.00	Commscope WCS-IMFQ-AMT	1	0.75	0.000	29.50	0.989	0.50	48.82	1.368	0.50
167.00	Powerwave Allgon LGP21401	6	0.75	0.000	14.10	1.104	0.50	28.41	1.513	0.50
167.00	Raycap DC6-48-60-18-8F (23.5"	2	0.75	0.000	20.00	1.260	1.00	50.20	1.638	1.00
167.00	Raycap DC6-48-60-18-8F	1	0.75	0.000	31.80	1.470	1.00	67.19	1.871	1.00
167.00	Ericsson RRUS 4426 B66	3	0.75	0.000	48.40	1.650	0.50	74.01	2.137	0.50
167.00	Ericsson RRUS 4478 B14	3	0.75	0.000	59.90	1.842	0.50	91.62	2.357	0.50
167.00	Ericsson RRUS 4478 B5	3	0.75	0.000	59.90	1.842	0.50	91.62	2.357	0.50
167.00	Ericsson RRUS 11 (Band 4)	3	0.75	0.000	44.00	2.566	0.50	83.10	3.167	0.50
167.00	Ericsson RRUS 32 B2	3	0.75	0.000	53.00	2.743	0.50	95.19	3.414	0.50
167.00	Ericsson RRUS-32 (77 lbs)	3	0.75	0.000	77.00	3.314	0.50	132.79	4.050	0.50
167.00	Powerwave Allgon 7770.00	3	0.75	0.000	35.00	5.508	0.65	104.99	6.094	0.65
167.00	CCI OPA-65R-LCUU-H4	3	0.75	0.000	57.00	6.083	0.66	137.70	7.174	0.66
167.00	Quintel QS66512-2	3	0.75	0.000	111.00	8.133	0.67	225.31	9.732	0.67
167.00	Kathrein Scala 80010964	3	0.75	0.000	81.60	9.997	0.62	198.92	11.351	0.62
167.00	Generic Round Platform with	1	1.00	0.000	2,500.00	27.200	1.00	3,429.10	41.222	1.00
145.00	Ericsson KRY 112 489/2	3	0.75	0.000	15.40	0.559	0.50	25.38	0.855	0.50
145.00	Ericsson RRUS 4415 B25	3	0.75	0.000	46.00	1.650	0.50	70.46	2.130	0.50
145.00	Ericsson Radio 4449 B71 B85A	3	0.75	0.000	75.00	1.650	0.50	108.97	2.130	0.50
145.00	Ericsson Air6449 B41	3	0.75	0.000	104.00	5.682	0.63	180.99	6.579	0.63
145.00	Ericsson AIR 21, 1.3M, B2A B4P	3	0.75	0.000	91.50	6.037	0.67	173.75	7.249	0.67
145.00	Ericsson AIR32 B66Aa/B2a	3	0.75	0.000	132.20	6.510	0.67	222.37	7.747	0.67
145.00	RFS APXVAARR24_43-U-NA20	3	0.75	0.000	127.90	20.243	0.63	349.68	22.338	0.63
145.00	Round Platform w/ Handrails	1	1.00	0.000	2,000.00	27.200	1.00	2,732.02	41.009	1.00
126.00	RFS FDJ85020Q4-S1	3	0.75	0.000	23.60	0.958	0.50	42.19	1.358	0.50
126.00	Samsung B5/B13 RRH-BR04C	3	0.75	0.000	70.30	1.875	0.50	102.21	2.378	0.50
126.00	Samsung B2/B66A RRH-BR049	3	0.75	0.000	84.40	1.875	0.50	119.98	2.378	0.50
126.00	RFS DB-T1-6Z-8AB-0Z	2	0.75	1.000	44.00	4.800	0.50	114.20	5.593	0.50
126.00	Antel BXA-80063/6CF	3	0.75	1.000	14.90	7.582	0.65	99.22	8.260	0.65
126.00	Andrew HBXX-6517DS-A2M (43	3	0.75	1.000	43.00	8.528	0.67	141.10	10.148	0.67
126.00	Commscope JAHH-45B-R3B	6	0.75	0.000	83.80	11.400	0.63	211.25	12.955	0.63
126.00	Flat Platform w/ Handrails	1	1.00	0.000	2,000.00	42.400	1.00	2,792.72	54.098	1.00

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

7/17/2020 6:01:52 AM

Customer: T-MOBILE

50.00	Thales PCS VP/360/2 Type 8100	2	1.00	0.000	0.30	0.030	1.00	1.31	0.114	1.00
Totals	Num Loadings:46	136			15,183.50			25,972.11		

Linear Appurtenance Properties Load Case Azimuth (deg) : 310

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Max Coax / Flat Row	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind Carrier
0.00	185.00	3	1 5/8" Hybriflex	1.98	1.30	N 0	0.00	0.00	0	0.00	N CLEARWIRE
0.00	185.00	6	5/16" (0.31"-7.9mm)	0.31	0.05	N 6	0.00	0.00	130	0.00	Y CLEARWIRE
5.00	185.00	3	1 1/4" Hybriflex Cable	1.54	1.00	N 3	0.00	0.00	140	0.00	Y CLEARWIRE
5.00	185.00	12	1 5/8" Coax	1.98	0.82	N 0	0.00	0.00	0	0.00	N SPRINT NEXTEL
5.00	185.00	1	1.7" (43.2mm) Hybrid	1.70	1.78	N 1	0.00	0.00	170	0.00	Y CLEARWIRE
5.00	185.00	2	1/2" Coax	0.63	0.15	N 2	0.00	0.00	160	0.00	Y CLEARWIRE
5.00	185.00	2	2" conduit	2.38	3.65	N 2	0.00	0.00	160	0.00	Y CLEARWIRE
5.00	175.00	6	1 5/8" Coax	1.98	0.82	N 4	0.00	0.00	150	0.00	Y METRO PCS INC
0.00	167.00	2	3" conduit	3.50	7.58	N 0	0.00	0.00	0	0.00	N AT&T MOBILITY
5.00	167.00	2	0.39" (10mm) Fiber	0.39	0.06	N 1	0.00	0.00	240	0.00	Y AT&T MOBILITY
5.00	167.00	1	0.39" (10mm) Fiber	0.39	0.06	N 1	0.00	0.00	240	0.00	Y AT&T MOBILITY
5.00	167.00	6	0.78" (19.7mm) 8 AWG	0.78	0.59	N 4	0.00	0.00	210	0.00	Y AT&T MOBILITY
5.00	167.00	12	1 1/4" Coax	1.55	0.63	N 0	0.00	0.00	0	0.00	N AT&T MOBILITY
5.00	167.00	2	2" conduit	2.38	3.65	N 0	0.00	0.00	0	0.00	N AT&T MOBILITY
0.00	145.00	2	1 1/4" Hybriflex Cable	1.54	1.00	N 0	0.00	0.00	0	0.00	N T-MOBILE
0.00	145.00	2	1 5/8" (1.63"-41.3mm)	1.63	1.61	N 0	0.00	0.00	0	0.00	N T-MOBILE
0.00	145.00	6	1 5/8" Coax	1.98	0.82	N 0	0.00	0.00	0	0.00	N T-MOBILE
5.00	127.00	12	7/8" Coax	1.09	0.33	N 0	0.00	0.00	0	0.00	N VERIZON WIRELESS
5.00	126.00	2	1 5/8" (1.63"-41.3mm)	1.63	1.61	N 1	0.00	0.00	240	0.00	Y VERIZON WIRELESS
5.00	126.00	6	1 5/8" Coax	1.98	0.82	N 0	0.00	0.00	0	0.00	N VERIZON WIRELESS
0.00	110.80	1	#20 Dywidag Bars	4.00	0.00	N 1	0.00	0.00	0	0.00	Y
0.00	110.80	1	#20 Dywidag Bars	4.00	0.00	N 1	0.00	0.00	90	0.00	Y
0.00	110.80	1	#20 Dywidag Bars	4.00	0.00	N 1	0.00	0.00	180	0.00	Y
0.00	110.80	1	#20 Dywidag Bars	4.00	0.00	N 1	0.00	0.00	270	0.00	Y

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	Intermediate Connections		Connectors	Continuation?	
					Description	Spacing (in)	Len (in)			
0.00	22.50	4	SOL #20 All Thread	80	2.19	6" Angle Bracket	20.0	3.31	5/8" A36 U-Bolt	No
22.50	43.00	4	SOL #20 All Thread	80	2.19	6" Angle Bracket	18.0	3.31	5/8" A36 U-Bolt	Yes
43.00	102.5	4	SOL #20 All Thread	80	2.19	6" Angle Bracket	30.0	3.31	5/8" A36 U-Bolt	Yes

Segment Properties (Max Len : 5.ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in ³)	Z (in ³)	Weight (lb)	Additional Reinforcing		
												Area (in ²)	Ix (in ⁴)	Weight (lb)
0.00		0.5000	48.620	76.363	22,340.1	15.38	97.24	63.5	905.0	0.0	0.0	19.64	7,654	0.0
5.00		0.5000	47.745	74.975	21,144.0	15.07	95.49	63.5	872.2	0.0	1,287.4	19.64	7,412	334.0
10.00		0.5000	46.871	73.588	19,991.4	14.77	93.74	63.5	840.1	0.0	1,263.8	19.64	7,175	334.0
15.00		0.5000	45.996	72.200	18,881.4	14.46	91.99	63.5	808.5	0.0	1,240.2	19.64	6,941	334.0
20.00		0.5000	45.121	70.812	17,813.3	14.15	90.24	63.5	777.6	0.0	1,216.6	19.64	6,711	334.0
22.50	Reinf. Top Reinf	0.5000	44.684	70.118	17,294.7	13.99	89.37	63.5	762.3	0.0	599.4	19.64	6,598	167.0
25.00		0.5000	44.247	69.424	16,786.3	13.84	88.49	63.5	747.2	0.0	593.5	19.64	6,485	167.0
28.50	Bot - Section 2	0.5000	43.635	68.452	16,091.4	13.62	87.27	63.5	726.3	0.0	821.0	19.64	6,329	233.8
30.00		0.5000	43.372	68.036	15,799.5	13.53	86.74	63.5	717.5	0.0	704.8	19.64	6,517	100.2
35.00	Top - Section 1	0.5000	43.498	68.235	15,938.6	13.58	87.00	63.5	721.7	0.0	2,318.5	19.64	6,295	334.0
40.00		0.5000	42.623	66.847	14,985.6	13.27	85.25	63.5	692.5	0.0	1,149.1	19.64	6,076	334.0
43.00	Reinf. Top Reinf	0.5000	42.098	66.014	14,432.5	13.08	84.20	63.5	675.2	0.0	678.1	19.64	5,947	200.4
45.00		0.5000	41.749	65.459	14,071.5	12.96	83.50	63.5	663.9	0.0	447.4	19.64	5,861	133.6
50.00		0.5000	40.874	64.071	13,195.2	12.65	81.75	63.5	635.8	0.0	1,101.9	19.64	5,650	334.0
55.00		0.5000	39.999	62.683	12,356.2	12.34	80.00	63.5	608.4	0.0	1,078.3	19.64	5,443	334.0
58.00	Bot - Section 3	0.5000	39.475	61.850	11,870.2	12.16	78.95	63.5	592.3	0.0	635.6	19.64	5,321	200.4
60.00		0.5000	39.125	61.295	11,553.4	12.03	78.25	63.5	581.6	0.0	740.4	19.64	5,414	133.6
63.50	Top - Section 2	0.3750	39.263	46.284	8,843.2	16.70	104.70	76.2	443.6	0.0	1,279.8	19.64	5,272	233.8
65.00		0.3750	39.000	45.972	8,665.4	16.57	104.00	76.2	437.6	0.0	235.4	19.64	5,211	100.2
70.00		0.3750	38.126	44.931	8,090.0	16.16	101.67	76.2	417.9	0.0	773.3	19.64	5,012	334.0
75.00		0.3750	37.251	43.890	7,540.6	15.75	99.34	76.2	398.7	0.0	755.6	19.64	4,817	334.0
80.00		0.3750	36.376	42.849	7,016.7	15.34	97.00	76.2	379.9	0.0	737.9	19.64	4,626	334.0
85.00		0.3750	35.502	41.808	6,517.7	14.93	94.67	76.2	361.6	0.0	720.2	19.64	4,439	334.0
88.00	Bot - Section 4	0.3750	34.977	41.184	6,229.9	14.68	93.27	76.2	350.8	0.0	423.6	19.64	4,329	200.4
90.00		0.3750	34.627	40.767	6,042.9	14.52	92.34	76.2	343.7	0.0	515.9	19.64	4,386	133.6
93.00	Top - Section 3	0.3125	34.727	34.134	5,107.8	17.83	111.13	75.0	289.7	0.0	764.1	19.64	4,277	200.4
95.00		0.3125	34.378	33.787	4,953.6	17.63	110.01	75.2	283.8	0.0	231.1	19.64	4,204	133.6
100.00		0.3125	33.503	32.920	4,581.8	17.14	107.21	75.7	269.4	0.0	567.5	19.64	4,026	334.0
102.5	Reinf. Top	0.3125	33.066	32.486	4,403.1	16.89	105.81	76.0	262.3	0.0	278.2	19.64	3,938	167.0
105.0		0.3125	32.628	32.052	4,229.1	16.65	104.41	76.2	255.3	0.0	274.5			
110.00		0.3125	31.754	31.185	3,894.9	16.15	101.61	76.2	241.6	0.0	538.0			
115.00		0.3125	30.879	30.317	3,578.9	15.66	98.81	76.2	228.3	0.0	523.2			
116.5	Bot - Section 5	0.3125	30.617	30.057	3,487.5	15.51	97.97	76.2	224.4	0.0	154.1			
120.00		0.3125	30.005	29.450	3,280.4	15.17	96.02	76.2	215.3	0.0	643.2			
121.0	Top - Section 4	0.2500	30.330	23.867	2,728.4	19.63	121.32	73.1	177.2	0.0	181.4			
125.00		0.2500	29.630	23.312	2,542.4	19.14	118.52	73.6	169.0	0.0	321.1			
126.0		0.2500	29.455	23.173	2,497.3	19.01	117.82	73.8	167.0	0.0	79.1			
130.00		0.2500	28.756	22.618	2,322.1	18.52	115.02	74.3	159.0	0.0	311.6			
135.00		0.2500	27.881	21.924	2,114.8	17.90	111.52	74.9	149.4	0.0	378.9			
140.00		0.2500	27.006	21.230	1,920.3	17.28	108.03	75.6	140.0	0.0	367.1			
145.00		0.2500	26.132	20.536	1,738.1	16.67	104.53	76.2	131.0	0.0	355.3			
149.0	Bot - Section 6	0.2500	25.432	19.981	1,600.9	16.17	101.73	76.2	124.0	0.0	275.7			
150.00		0.2500	25.257	19.842	1,567.8	16.05	101.03	76.2	122.3	0.0	119.5			
152.5	Top - Section 5	0.1875	25.195	14.882	1,175.8	21.93	134.37	70.7	91.9	0.0	295.0			
155.00		0.1875	24.758	14.622	1,115.2	21.52	132.04	71.2	88.7	0.0	125.5			
160.00		0.1875	23.883	14.101	1,000.3	20.70	127.38	72.0	82.5	0.0	244.3			
165.00		0.1875	23.008	13.581	893.6	19.87	122.71	72.9	76.5	0.0	235.5			
167.00		0.1875	22.659	13.373	853.1	19.55	120.85	73.2	74.2	0.0	91.7			
170.00		0.1875	22.134	13.060	794.8	19.05	118.05	73.7	70.7	0.0	134.9			
175.00		0.1875	21.259	12.540	703.5	18.23	113.38	74.6	65.2	0.0	217.8			
180.00		0.1875	20.385	12.019	619.5	17.41	108.72	75.4	59.9	0.0	208.9			
183.00		0.1875	19.860	11.707	572.4	16.91	105.92	76.0	56.8	0.0	121.1			
											29,356.2			6,847.0

Load Case: 1.2D + 1.0W	117 mph with No Ice	28 Iterations
Gust Response Factor :1.10		
Dead Load Factor :1.20		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		190.0	0.0					0.0	0.0	190.0	0.0	0.0	0.0
5.00		376.6	1,544.9					0.0	577.8	376.6	2,122.7	0.0	0.0
10.00		369.7	1,516.6					0.0	924.7	369.7	2,441.3	0.0	0.0
15.00		362.8	1,488.2					0.0	924.7	362.8	2,413.0	0.0	0.0
20.00		268.2	1,459.9					0.0	924.7	268.2	2,384.6	0.0	0.0
22.50	Reinf. Top Reinf	176.2	719.3					0.0	462.4	176.2	1,181.7	0.0	0.0
25.00		209.0	712.2					0.0	462.4	209.0	1,174.6	0.0	0.0
28.50	Bot - Section 2	174.0	985.2					0.0	647.3	174.0	1,632.5	0.0	0.0
30.00		230.1	845.7					0.0	277.4	230.1	1,123.1	0.0	0.0
35.00	Top - Section 1	358.6	2,782.2					0.0	924.7	358.6	3,706.9	0.0	0.0
40.00		291.2	1,379.0					0.0	924.7	291.2	2,303.7	0.0	0.0
43.00	Reinf. Top Reinf	183.9	813.8					0.0	554.8	183.9	1,368.6	0.0	0.0
45.00		259.8	536.8					0.0	369.9	259.8	906.7	0.0	0.0
50.00	Appurtenance(s)	373.3	1,322.3	1.8	0.0	0.0	0.7	0.0	924.7	375.0	2,247.7	0.0	0.0
55.00		300.1	1,294.0					0.0	924.7	300.1	2,218.7	0.0	0.0
58.00	Bot - Section 3	189.5	762.8					0.0	554.8	189.5	1,317.6	0.0	0.0
60.00		211.1	888.5					0.0	369.9	211.1	1,258.4	0.0	0.0
63.50	Top - Section 2	192.0	1,535.8					0.0	647.3	192.0	2,183.1	0.0	0.0
65.00		249.5	282.5					0.0	277.4	249.5	559.9	0.0	0.0
70.00		383.3	928.0					0.0	924.7	383.3	1,852.7	0.0	0.0
75.00		383.3	906.7					0.0	924.7	383.3	1,831.4	0.0	0.0
80.00		385.6	885.5					0.0	924.7	385.6	1,810.2	0.0	0.0
85.00		310.7	864.2					0.0	924.7	310.7	1,788.9	0.0	0.0
88.00	Bot - Section 4	196.8	508.3					0.0	554.8	196.8	1,063.2	0.0	0.0
90.00		199.8	619.1					0.0	369.9	199.8	988.9	0.0	0.0
93.00	Top - Section 3	199.5	916.9					0.0	554.8	199.5	1,471.7	0.0	0.0
95.00		278.8	277.3					0.0	369.9	278.8	647.2	0.0	0.0
100.00		299.5	681.0					0.0	924.7	299.5	1,605.7	0.0	0.0
102.50	Reinf. Top	200.6	333.8					0.0	462.4	200.6	796.2	0.0	0.0
105.00		302.2	329.4					0.0	262.0	302.2	591.4	0.0	0.0
110.00		404.5	645.5					0.0	523.9	404.5	1,169.5	0.0	0.0
115.00		263.8	627.8					0.0	523.9	263.8	1,151.8	0.0	0.0
116.50	Bot - Section 5	206.1	184.9					0.0	157.2	206.1	342.1	0.0	0.0
120.00		186.6	771.8					0.0	366.7	186.6	1,138.5	0.0	0.0
121.00	Top - Section 4	206.0	217.6					0.0	104.8	206.0	322.4	0.0	0.0
125.00		205.6	385.3					0.0	419.1	205.6	804.4	0.0	0.0
126.00	Appurtenance(s)	206.3	94.9	4,145.4	0.0	1,063.4	3,959.3	0.0	104.8	4,351.6	4,159.0	0.0	0.0
130.00		372.1	374.0					0.0	365.8	372.1	739.8	0.0	0.0
135.00		414.8	454.7					0.0	451.3	414.8	906.0	0.0	0.0
140.00		416.2	440.5					0.0	451.3	416.2	891.9	0.0	0.0
145.00	Appurtenance(s)	375.7	426.4	3,496.5	0.0	0.0	4,531.2	0.0	451.3	3,872.1	5,408.9	0.0	0.0
149.00	Bot - Section 6	209.7	330.9					0.0	312.4	209.7	643.3	0.0	0.0
150.00		148.9	143.4					0.0	78.1	148.9	221.4	0.0	0.0
152.50	Top - Section 5	211.6	354.0					0.0	195.2	211.6	549.3	0.0	0.0
155.00		316.3	150.6					0.0	195.2	316.3	345.8	0.0	0.0
160.00		422.7	293.2					0.0	390.5	422.7	683.7	0.0	0.0
165.00		296.6	282.6					0.0	390.5	296.6	673.1	0.0	0.0
167.00	Appurtenance(s)	212.4	110.1	3,946.0	0.0	0.0	5,633.6	0.0	156.2	4,158.4	5,899.9	0.0	0.0

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

7/17/2020 6:02:00 AM

Customer: T-MOBILE

Load Case: 1.2D + 1.0W

117 mph with No Ice

28 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.20

Wind Load Factor :1.00

170.00		340.8	161.9					0.0	112.8	340.8	274.7	0.0	0.0
175.00	Appurtenance(s)	349.8	261.3	442.4	0.0	-1,769.7	95.0	0.0	188.0	792.2	544.4	0.0	0.0
180.00		216.3	250.7					0.0	158.5	216.3	409.2	0.0	0.0
183.00	Appurtenance(s)	79.7	145.3	1,816.9	0.0	0.0	2,400.0	0.0	95.1	1,896.6	2,640.4	0.0	0.0
									Totals:	28,017.2	76,911.9	0.00	0.00

Load Case: 1.2D + 1.0W

117 mph with No Ice

28 Iterations

Gust Response Factor :1.10
 Dead Load Factor :1.20
 Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-78.46	-30.68	0.00	-4,247.57	0.00	4,247.57	4,364.17	1,030.91	4,480.97	4,310.12	0.00	0.00	0.749
5.00	-76.23	-30.56	0.00	-4,094.20	0.00	4,094.20	4,284.85	1,012.17	4,319.59	4,154.08	0.11	-0.20	0.745
10.00	-73.68	-30.44	0.00	-3,941.41	0.00	3,941.41	4,205.53	993.43	4,161.17	4,000.91	0.42	-0.40	0.740
15.00	-71.17	-30.31	0.00	-3,789.23	0.00	3,789.23	4,126.21	974.69	4,005.71	3,850.62	0.95	-0.60	0.734
20.00	-68.71	-30.19	0.00	-3,637.70	0.00	3,637.70	4,046.89	955.96	3,853.21	3,703.21	1.68	-0.80	0.728
22.50	-67.47	-30.12	0.00	-3,562.22	0.00	3,562.22	4,007.23	946.59	3,778.07	3,630.59	2.13	-0.91	0.724
22.50	-67.47	-30.12	0.00	-3,562.22	0.00	3,562.22	4,007.23	946.59	3,778.07	3,630.59	2.13	-0.91	0.724
25.00	-66.23	-30.04	0.00	-3,486.92	0.00	3,486.92	3,967.57	937.22	3,703.67	3,558.68	2.64	-1.01	0.721
28.50	-64.55	-29.95	0.00	-3,381.78	0.00	3,381.78	3,912.04	924.10	3,600.75	3,459.22	3.44	-1.16	0.715
30.00	-63.36	-29.85	0.00	-3,336.86	0.00	3,336.86	3,888.25	918.48	3,557.09	3,417.03	3.81	-1.23	0.705
35.00	-59.56	-29.62	0.00	-3,187.61	0.00	3,187.61	3,899.62	921.17	3,577.93	3,437.16	5.21	-1.43	0.678
40.00	-57.18	-29.43	0.00	-3,039.49	0.00	3,039.49	3,820.30	902.43	3,433.88	3,297.97	6.82	-1.64	0.668
43.00	-55.76	-29.31	0.00	-2,951.19	0.00	2,951.19	3,772.71	891.19	3,348.87	3,215.84	7.89	-1.76	0.662
43.00	-55.76	-29.31	0.00	-2,951.19	0.00	2,951.19	3,772.71	891.19	3,348.87	3,215.84	7.89	-1.76	0.662
45.00	-54.79	-29.16	0.00	-2,892.57	0.00	2,892.57	3,740.98	883.70	3,292.79	3,161.66	8.65	-1.85	0.658
50.00	-52.46	-28.89	0.00	-2,746.79	0.00	2,746.79	3,661.66	864.96	3,154.66	3,028.22	10.69	-2.05	0.647
55.00	-50.17	-28.65	0.00	-2,602.35	0.00	2,602.35	3,582.34	846.22	3,019.50	2,897.66	12.94	-2.25	0.635
58.00	-48.81	-28.49	0.00	-2,516.40	0.00	2,516.40	3,534.75	834.98	2,939.82	2,820.71	14.39	-2.37	0.628
60.00	-47.51	-28.32	0.00	-2,459.42	0.00	2,459.42	3,503.02	827.49	2,887.29	2,769.98	15.40	-2.45	0.616
63.50	-45.29	-28.11	0.00	-2,360.29	0.00	2,360.29	3,173.44	749.80	2,633.77	2,534.70	17.25	-2.60	0.595
65.00	-44.67	-27.95	0.00	-2,318.12	0.00	2,318.12	3,152.76	744.75	2,598.36	2,501.02	18.08	-2.66	0.590
70.00	-42.72	-27.65	0.00	-2,178.35	0.00	2,178.35	3,081.37	727.88	2,482.04	2,388.51	20.98	-2.89	0.574
75.00	-40.81	-27.34	0.00	-2,040.08	0.00	2,040.08	3,009.98	711.02	2,368.38	2,278.59	24.13	-3.12	0.557
80.00	-38.91	-27.00	0.00	-1,903.40	0.00	1,903.40	2,938.59	694.16	2,257.39	2,171.26	27.51	-3.34	0.539
85.00	-37.06	-26.70	0.00	-1,768.38	0.00	1,768.38	2,867.21	677.29	2,149.06	2,066.52	31.13	-3.57	0.519
88.00	-35.96	-26.51	0.00	-1,688.28	0.00	1,688.28	2,824.37	667.17	2,085.34	2,004.91	33.42	-3.70	0.507
90.00	-34.94	-26.31	0.00	-1,635.26	0.00	1,635.26	2,795.82	660.43	2,043.40	1,964.36	34.99	-3.79	0.492
93.00	-33.44	-26.08	0.00	-1,556.33	0.00	1,556.33	2,304.06	552.97	1,718.95	1,629.55	37.41	-3.92	0.531
95.00	-32.74	-25.84	0.00	-1,504.18	0.00	1,504.18	2,286.90	547.35	1,684.19	1,600.83	39.07	-4.01	0.520
100.00	-31.09	-25.52	0.00	-1,374.96	0.00	1,374.96	2,243.44	533.30	1,598.83	1,529.72	43.39	-4.23	0.489
102.50	-30.26	-25.32	0.00	-1,311.16	0.00	1,311.16	2,221.40	526.27	1,556.98	1,494.55	45.63	-4.34	0.474
102.50	-30.26	-25.32	0.00	-1,311.16	0.00	1,311.16	2,221.40	526.27	1,556.98	1,494.55	45.63	-4.34	0.893
105.00	-29.58	-25.10	0.00	-1,247.87	0.00	1,247.87	2,198.14	519.25	1,515.69	1,458.97	47.93	-4.45	0.871
110.00	-28.28	-24.80	0.00	-1,122.35	0.00	1,122.35	2,138.65	505.19	1,434.77	1,380.70	52.80	-4.85	0.829
115.00	-27.05	-24.55	0.00	-998.35	0.00	998.35	2,079.16	491.14	1,356.07	1,304.59	58.09	-5.24	0.781
116.50	-26.64	-24.41	0.00	-961.52	0.00	961.52	2,061.32	486.93	1,332.90	1,282.18	59.75	-5.35	0.765
120.00	-25.46	-24.19	0.00	-876.10	0.00	876.10	2,019.67	477.09	1,279.60	1,230.64	63.77	-5.62	0.727
121.00	-25.08	-24.03	0.00	-851.92	0.00	851.92	1,570.79	386.65	1,050.51	971.75	64.95	-5.69	0.897
125.00	-24.23	-23.82	0.00	-755.80	0.00	755.80	1,545.06	377.66	1,002.21	933.41	69.84	-5.98	0.829
126.00	-20.48	-19.13	0.00	-730.92	0.00	730.92	1,538.54	375.41	990.31	923.89	71.09	-6.06	0.807
130.00	-19.67	-18.80	0.00	-654.41	0.00	654.41	1,512.16	366.42	943.44	886.11	76.30	-6.37	0.754
135.00	-18.70	-18.40	0.00	-560.43	0.00	560.43	1,478.46	355.17	886.44	839.55	83.16	-6.75	0.683
140.00	-17.77	-17.98	0.00	-468.44	0.00	468.44	1,443.96	343.93	831.22	793.77	90.40	-7.09	0.605

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

7/17/2020 6:02:01 AM

Customer: T-MOBILE

Load Case: 1.2D + 1.0W

117 mph with No Ice

28 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.20

Wind Load Factor :1.00

145.00	-12.83	-13.52	0.00	-378.54	0.00	378.54	1,408.39	332.69	777.78	748.68	97.98	-7.41	0.516
149.00	-12.18	-13.25	0.00	-324.47	0.00	324.47	1,370.32	323.70	736.30	708.56	104.27	-7.64	0.469
150.00	-11.96	-13.10	0.00	-311.22	0.00	311.22	1,360.80	321.45	726.11	698.70	105.87	-7.69	0.456
152.50	-11.42	-12.84	0.00	-278.48	0.00	278.48	947.27	241.09	544.55	487.59	109.92	-7.83	0.586
155.00	-11.07	-12.52	0.00	-246.38	0.00	246.38	936.35	236.87	525.67	473.48	114.04	-7.95	0.535
160.00	-10.40	-12.05	0.00	-183.79	0.00	183.79	913.91	228.44	488.92	445.55	122.50	-8.23	0.427
165.00	-9.75	-11.68	0.00	-123.54	0.00	123.54	890.67	220.01	453.50	418.07	131.21	-8.45	0.309
167.00	-4.52	-6.70	0.00	-100.18	0.00	100.18	881.14	216.64	439.70	407.21	134.75	-8.52	0.252
170.00	-4.29	-6.33	0.00	-80.07	0.00	80.07	866.62	211.58	419.41	391.06	140.11	-8.61	0.211
175.00	-3.86	-5.48	0.00	-48.40	0.00	48.40	841.76	203.15	386.65	364.58	149.15	-8.72	0.138
180.00	-3.49	-5.20	0.00	-21.02	0.00	21.02	816.11	194.71	355.22	338.67	158.30	-8.79	0.067
183.00	0.00	-4.61	0.00	-5.42	0.00	5.42	800.33	189.66	337.01	323.41	163.81	-8.81	0.017

Load Case: 0.9D + 1.0W	117 mph with No Ice (Reduced DL)	27 Iterations
Gust Response Factor :1.10		
Dead Load Factor :0.90		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		190.0	0.0					0.0	0.0	190.0	0.0	0.0	0.0
5.00		376.6	1,158.7					0.0	433.3	376.6	1,592.0	0.0	0.0
10.00		369.7	1,137.4					0.0	693.5	369.7	1,831.0	0.0	0.0
15.00		362.8	1,116.2					0.0	693.5	362.8	1,809.7	0.0	0.0
20.00		268.2	1,094.9					0.0	693.5	268.2	1,788.5	0.0	0.0
22.50	Reinf. Top Reinf	176.2	539.5					0.0	346.8	176.2	886.3	0.0	0.0
25.00		209.0	534.2					0.0	346.8	209.0	881.0	0.0	0.0
28.50	Bot - Section 2	174.0	738.9					0.0	485.5	174.0	1,224.4	0.0	0.0
30.00		230.1	634.3					0.0	208.1	230.1	842.3	0.0	0.0
35.00	Top - Section 1	358.6	2,086.6					0.0	693.5	358.6	2,780.2	0.0	0.0
40.00		291.2	1,034.2					0.0	693.5	291.2	1,727.8	0.0	0.0
43.00	Reinf. Top Reinf	183.9	610.3					0.0	416.1	183.9	1,026.5	0.0	0.0
45.00		259.8	402.6					0.0	277.4	259.8	680.1	0.0	0.0
50.00	Appurtenance(s)	373.3	991.7	1.8	0.0	0.0	0.5	0.0	693.5	375.0	1,685.8	0.0	0.0
55.00		300.1	970.5					0.0	693.5	300.1	1,664.0	0.0	0.0
58.00	Bot - Section 3	189.5	572.1					0.0	416.1	189.5	988.2	0.0	0.0
60.00		211.1	666.4					0.0	277.4	211.1	943.8	0.0	0.0
63.50	Top - Section 2	192.0	1,151.8					0.0	485.5	192.0	1,637.3	0.0	0.0
65.00		249.5	211.9					0.0	208.1	249.5	420.0	0.0	0.0
70.00		383.3	696.0					0.0	693.5	383.3	1,389.5	0.0	0.0
75.00		383.3	680.0					0.0	693.5	383.3	1,373.6	0.0	0.0
80.00		385.6	664.1					0.0	693.5	385.6	1,357.6	0.0	0.0
85.00		310.7	648.2					0.0	693.5	310.7	1,341.7	0.0	0.0
88.00	Bot - Section 4	196.8	381.2					0.0	416.1	196.8	797.4	0.0	0.0
90.00		199.8	464.3					0.0	277.4	199.8	741.7	0.0	0.0
93.00	Top - Section 3	199.5	687.7					0.0	416.1	199.5	1,103.8	0.0	0.0
95.00		278.8	208.0					0.0	277.4	278.8	485.4	0.0	0.0
100.00		299.5	510.7					0.0	693.5	299.5	1,204.3	0.0	0.0
102.50	Reinf. Top	200.6	250.4					0.0	346.8	200.6	597.2	0.0	0.0
105.00		302.2	247.1					0.0	196.5	302.2	443.5	0.0	0.0
110.00		404.5	484.2					0.0	392.9	404.5	877.1	0.0	0.0
115.00		263.8	470.9					0.0	392.9	263.8	863.8	0.0	0.0
116.50	Bot - Section 5	206.1	138.7					0.0	117.9	206.1	256.6	0.0	0.0
120.00		186.6	578.8					0.0	275.1	186.6	853.9	0.0	0.0
121.00	Top - Section 4	206.0	163.2					0.0	78.6	206.0	241.8	0.0	0.0
125.00		205.6	289.0					0.0	314.4	205.6	603.3	0.0	0.0
126.00	Appurtenance(s)	206.3	71.2	4,145.4	0.0	1,063.4	2,969.5	0.0	78.6	4,351.6	3,119.2	0.0	0.0
130.00		372.1	280.5					0.0	274.4	372.1	554.8	0.0	0.0
135.00		414.8	341.0					0.0	338.5	414.8	679.5	0.0	0.0
140.00		416.2	330.4					0.0	338.5	416.2	668.9	0.0	0.0
145.00	Appurtenance(s)	375.7	319.8	3,496.5	0.0	0.0	3,398.4	0.0	338.5	3,872.1	4,056.7	0.0	0.0
149.00	Bot - Section 6	209.7	248.2					0.0	234.3	209.7	482.5	0.0	0.0
150.00		148.9	107.5					0.0	58.6	148.9	166.1	0.0	0.0
152.50	Top - Section 5	211.6	265.5					0.0	146.4	211.6	412.0	0.0	0.0
155.00		316.3	112.9					0.0	146.4	316.3	259.4	0.0	0.0
160.00		422.7	219.9					0.0	292.9	422.7	512.8	0.0	0.0
165.00		296.6	211.9					0.0	292.9	296.6	504.8	0.0	0.0
167.00	Appurtenance(s)	212.4	82.5	3,946.0	0.0	0.0	4,225.2	0.0	117.1	4,158.4	4,424.9	0.0	0.0

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

7/17/2020 6:02:09 AM

Customer: T-MOBILE

Load Case: 0.9D + 1.0W

117 mph with No Ice (Reduced DL)

27 Iterations

Gust Response Factor :1.10

Dead Load Factor :0.90

Wind Load Factor :1.00

170.00		340.8	121.4					0.0	84.6	340.8	206.0	0.0	0.0
175.00	Appurtenance(s)	349.8	196.0	442.4	0.0	-1,769.7	71.3	0.0	141.0	792.2	408.3	0.0	0.0
180.00		216.3	188.0					0.0	118.9	216.3	306.9	0.0	0.0
183.00	Appurtenance(s)	79.7	109.0	1,816.9	0.0	0.0	1,800.0	0.0	71.3	1,896.6	1,980.3	0.0	0.0
									Totals:	28,017.2	57,683.9	0.00	0.00

Load Case: 0.9D + 1.0W	117 mph with No Ice (Reduced DL)	27 Iterations
Gust Response Factor :1.10		
Dead Load Factor :0.90		
Wind Load Factor :1.00		

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-58.83	-30.64	0.00	-4,156.42	0.00	4,156.42	4,364.17	1,030.91	4,480.97	4,310.12	0.00	0.00	0.730
5.00	-57.14	-30.45	0.00	-4,003.23	0.00	4,003.23	4,284.85	1,012.17	4,319.59	4,154.08	0.10	-0.19	0.725
10.00	-55.20	-30.26	0.00	-3,850.97	0.00	3,850.97	4,205.53	993.43	4,161.17	4,000.91	0.41	-0.39	0.720
15.00	-53.29	-30.07	0.00	-3,699.66	0.00	3,699.66	4,126.21	974.69	4,005.71	3,850.62	0.92	-0.59	0.714
20.00	-51.43	-29.92	0.00	-3,549.31	0.00	3,549.31	4,046.89	955.96	3,853.21	3,703.21	1.65	-0.79	0.707
22.50	-50.49	-29.82	0.00	-3,474.52	0.00	3,474.52	4,007.23	946.59	3,778.07	3,630.59	2.09	-0.89	0.704
22.50	-50.49	-29.82	0.00	-3,474.52	0.00	3,474.52	4,007.23	946.59	3,778.07	3,630.59	2.09	-0.89	0.704
25.00	-49.55	-29.70	0.00	-3,399.99	0.00	3,399.99	3,967.57	937.22	3,703.67	3,558.68	2.58	-0.99	0.700
28.50	-48.28	-29.59	0.00	-3,296.04	0.00	3,296.04	3,912.04	924.10	3,600.75	3,459.22	3.36	-1.13	0.694
30.00	-47.37	-29.45	0.00	-3,251.66	0.00	3,251.66	3,888.25	918.48	3,557.09	3,417.03	3.72	-1.20	0.684
35.00	-44.50	-29.19	0.00	-3,104.40	0.00	3,104.40	3,899.62	921.17	3,577.93	3,437.16	5.09	-1.40	0.657
40.00	-42.70	-28.97	0.00	-2,958.47	0.00	2,958.47	3,820.30	902.43	3,433.88	3,297.97	6.66	-1.60	0.648
43.00	-41.63	-28.83	0.00	-2,871.55	0.00	2,871.55	3,772.71	891.19	3,348.87	3,215.84	7.71	-1.72	0.642
43.00	-41.63	-28.83	0.00	-2,871.55	0.00	2,871.55	3,772.71	891.19	3,348.87	3,215.84	7.71	-1.72	0.642
45.00	-40.89	-28.65	0.00	-2,813.89	0.00	2,813.89	3,740.98	883.70	3,292.79	3,161.66	8.44	-1.80	0.638
50.00	-39.12	-28.35	0.00	-2,670.66	0.00	2,670.66	3,661.66	864.96	3,154.66	3,028.22	10.43	-2.00	0.627
55.00	-37.39	-28.09	0.00	-2,528.91	0.00	2,528.91	3,582.34	846.22	3,019.50	2,897.66	12.63	-2.19	0.615
58.00	-36.36	-27.93	0.00	-2,444.63	0.00	2,444.63	3,534.75	834.98	2,939.82	2,820.71	14.04	-2.31	0.607
60.00	-35.37	-27.75	0.00	-2,388.78	0.00	2,388.78	3,503.02	827.49	2,887.29	2,769.98	15.03	-2.39	0.596
63.50	-33.70	-27.54	0.00	-2,291.67	0.00	2,291.67	3,173.44	749.80	2,633.77	2,534.70	16.83	-2.53	0.575
65.00	-33.22	-27.36	0.00	-2,250.36	0.00	2,250.36	3,152.76	744.75	2,598.36	2,501.02	17.64	-2.59	0.571
70.00	-31.75	-27.03	0.00	-2,113.58	0.00	2,113.58	3,081.37	727.88	2,482.04	2,388.51	20.47	-2.81	0.555
75.00	-30.29	-26.70	0.00	-1,978.42	0.00	1,978.42	3,009.98	711.02	2,368.38	2,278.59	23.53	-3.03	0.538
80.00	-28.86	-26.35	0.00	-1,844.95	0.00	1,844.95	2,938.59	694.16	2,257.39	2,171.26	26.83	-3.25	0.520
85.00	-27.46	-26.04	0.00	-1,713.22	0.00	1,713.22	2,867.21	677.29	2,149.06	2,066.52	30.35	-3.47	0.501
88.00	-26.63	-25.85	0.00	-1,635.10	0.00	1,635.10	2,824.37	667.17	2,085.34	2,004.91	32.57	-3.60	0.489
90.00	-25.85	-25.65	0.00	-1,583.41	0.00	1,583.41	2,795.82	660.43	2,043.40	1,964.36	34.10	-3.69	0.475
93.00	-24.72	-25.42	0.00	-1,506.47	0.00	1,506.47	2,304.06	552.97	1,718.95	1,629.55	36.46	-3.81	0.512
95.00	-24.18	-25.17	0.00	-1,455.63	0.00	1,455.63	2,286.90	547.35	1,684.19	1,600.83	38.07	-3.90	0.501
100.00	-22.93	-24.86	0.00	-1,329.76	0.00	1,329.76	2,243.44	533.30	1,598.83	1,529.72	42.27	-4.12	0.471
102.50	-22.31	-24.65	0.00	-1,267.62	0.00	1,267.62	2,221.40	526.27	1,556.98	1,494.55	44.45	-4.22	0.456
102.50	-22.31	-24.65	0.00	-1,267.62	0.00	1,267.62	2,221.40	526.27	1,556.98	1,494.55	44.45	-4.22	0.860
105.00	-21.78	-24.41	0.00	-1,205.99	0.00	1,205.99	2,198.14	519.25	1,515.69	1,458.97	46.69	-4.33	0.839
110.00	-20.78	-24.08	0.00	-1,083.92	0.00	1,083.92	2,138.65	505.19	1,434.77	1,380.70	51.43	-4.71	0.797
115.00	-19.84	-23.83	0.00	-963.53	0.00	963.53	2,079.16	491.14	1,356.07	1,304.59	56.56	-5.09	0.750
116.50	-19.53	-23.66	0.00	-927.79	0.00	927.79	2,061.32	486.93	1,332.90	1,282.18	58.17	-5.20	0.735
120.00	-18.63	-23.45	0.00	-844.97	0.00	844.97	2,019.67	477.09	1,279.60	1,230.64	62.07	-5.45	0.698
121.00	-18.34	-23.28	0.00	-821.53	0.00	821.53	1,570.79	386.65	1,050.51	971.75	63.22	-5.53	0.861
125.00	-17.69	-23.07	0.00	-728.42	0.00	728.42	1,545.06	377.66	1,002.21	933.41	67.96	-5.80	0.796
126.00	-14.96	-18.47	0.00	-704.29	0.00	704.29	1,538.54	375.41	990.31	923.89	69.18	-5.88	0.774
130.00	-14.35	-18.13	0.00	-630.41	0.00	630.41	1,512.16	366.42	943.44	886.11	74.23	-6.18	0.723
135.00	-13.61	-17.72	0.00	-539.78	0.00	539.78	1,478.46	355.17	886.44	839.55	80.89	-6.54	0.655
140.00	-12.90	-17.30	0.00	-451.18	0.00	451.18	1,443.96	343.93	831.22	793.77	87.91	-6.87	0.580

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

7/17/2020 6:02:09 AM

Customer: T-MOBILE

Load Case: 0.9D + 1.0W

117 mph with No Ice (Reduced DL)

27 Iterations

Gust Response Factor :1.10

Dead Load Factor :0.90

Wind Load Factor :1.00

145.00	-9.29	-13.00	0.00	-364.67	0.00	364.67	1,408.39	332.69	777.78	748.68	95.25	-7.18	0.495
149.00	-8.81	-12.76	0.00	-312.66	0.00	312.66	1,370.32	323.70	736.30	708.56	101.35	-7.40	0.449
150.00	-8.64	-12.60	0.00	-299.90	0.00	299.90	1,360.80	321.45	726.11	698.70	102.90	-7.45	0.437
152.50	-8.23	-12.35	0.00	-268.40	0.00	268.40	947.27	241.09	544.55	487.59	106.83	-7.58	0.562
155.00	-7.98	-12.03	0.00	-237.51	0.00	237.51	936.35	236.87	525.67	473.48	110.82	-7.70	0.513
160.00	-7.48	-11.58	0.00	-177.34	0.00	177.34	913.91	228.44	488.92	445.55	119.01	-7.97	0.409
165.00	-6.99	-11.23	0.00	-119.46	0.00	119.46	890.67	220.01	453.50	418.07	127.44	-8.18	0.296
167.00	-3.20	-6.49	0.00	-97.00	0.00	97.00	881.14	216.64	439.70	407.21	130.87	-8.25	0.243
170.00	-3.03	-6.12	0.00	-77.54	0.00	77.54	866.62	211.58	419.41	391.06	136.07	-8.33	0.203
175.00	-2.74	-5.28	0.00	-46.93	0.00	46.93	841.76	203.15	386.65	364.58	144.83	-8.45	0.133
180.00	-2.46	-5.03	0.00	-20.50	0.00	20.50	816.11	194.71	355.22	338.67	153.68	-8.51	0.064
183.00	0.00	-4.61	0.00	-5.42	0.00	5.42	800.33	189.66	337.01	323.41	159.02	-8.53	0.017

Load Case: 1.2D + 1.0Di + 1.0Wi	49 mph with 0.85 in Radial Ice	27 Iterations
Gust Response Factor :1.10	Ice Dead Load Factor :1.00	
Dead Load Factor :1.20		Ice Importance Factor :1.00
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		55.7	0.0					0.0	0.0	55.7	0.0	0.0	0.0
5.00		110.6	1,744.1					0.0	617.6	110.6	2,361.7	0.0	0.0
10.00		108.9	1,735.2					0.0	1,086.3	108.9	2,821.5	0.0	0.0
15.00		107.0	1,714.3					0.0	1,094.8	107.0	2,809.1	0.0	0.0
20.00		79.2	1,689.4					0.0	1,100.8	79.2	2,790.2	0.0	0.0
22.50	Reinf. Top Reinf	52.1	835.3					0.0	552.1	52.1	1,387.4	0.0	0.0
25.00		61.9	828.4					0.0	553.2	61.9	1,381.5	0.0	0.0
28.50	Bot - Section 2	51.5	1,147.5					0.0	776.0	51.5	1,923.6	0.0	0.0
30.00		68.2	917.1					0.0	333.1	68.2	1,250.2	0.0	0.0
35.00	Top - Section 1	106.3	3,018.0					0.0	1,112.3	106.3	4,130.3	0.0	0.0
40.00		86.4	1,613.5					0.0	1,115.2	86.4	2,728.7	0.0	0.0
43.00	Reinf. Top Reinf	54.6	954.2					0.0	670.3	54.6	1,624.5	0.0	0.0
45.00		77.2	630.3					0.0	447.3	77.2	1,077.6	0.0	0.0
50.00	Appurtenance(s)	111.1	1,552.9	1.2	0.0	0.0	2.2	0.0	1,119.9	112.2	2,675.0	0.0	0.0
55.00		89.4	1,522.0					0.0	1,122.0	89.4	2,644.0	0.0	0.0
58.00	Bot - Section 3	56.5	898.9					0.0	674.1	56.5	1,573.0	0.0	0.0
60.00		62.9	980.5					0.0	449.8	62.9	1,430.3	0.0	0.0
63.50	Top - Section 2	57.3	1,695.2					0.0	787.8	57.3	2,482.9	0.0	0.0
65.00		74.5	350.7					0.0	337.9	74.5	688.5	0.0	0.0
70.00		114.6	1,151.3					0.0	1,127.3	114.6	2,278.5	0.0	0.0
75.00		114.3	1,126.6					0.0	1,128.8	114.3	2,255.4	0.0	0.0
80.00		113.9	1,101.8					0.0	1,130.3	113.9	2,232.0	0.0	0.0
85.00		90.7	1,076.8					0.0	1,131.6	90.7	2,208.4	0.0	0.0
88.00	Bot - Section 4	56.8	634.7					0.0	679.6	56.8	1,314.3	0.0	0.0
90.00		57.2	704.2					0.0	453.3	57.2	1,157.5	0.0	0.0
93.00	Top - Section 3	57.0	1,043.1					0.0	680.4	57.0	1,723.4	0.0	0.0
95.00		79.2	360.9					0.0	453.8	79.2	814.7	0.0	0.0
100.00		84.5	885.4					0.0	1,135.3	84.5	2,020.7	0.0	0.0
102.50	Reinf. Top	55.9	435.1					0.0	568.1	55.9	1,003.2	0.0	0.0
105.00		83.2	429.7					0.0	368.0	83.2	797.6	0.0	0.0
110.00		109.9	841.5					0.0	736.8	109.9	1,578.3	0.0	0.0
115.00		70.8	819.5					0.0	693.6	70.8	1,513.1	0.0	0.0
116.50	Bot - Section 5	54.4	242.1					0.0	205.7	54.4	447.8	0.0	0.0
120.00		49.0	905.0					0.0	480.2	49.0	1,385.3	0.0	0.0
121.00	Top - Section 4	53.8	255.6					0.0	137.3	53.8	392.9	0.0	0.0
125.00		53.7	534.0					0.0	549.4	53.7	1,083.3	0.0	0.0
126.00	Appurtenance(s)	53.0	131.9	865.0	0.0	211.6	5,883.5	0.0	137.4	918.0	6,152.9	0.0	0.0
130.00		94.4	519.0					0.0	479.5	94.4	998.5	0.0	0.0
135.00		103.2	631.3					0.0	594.0	103.2	1,225.3	0.0	0.0
140.00		101.2	612.4					0.0	594.6	101.2	1,207.0	0.0	0.0
145.00	Appurtenance(s)	89.5	593.5	768.2	0.0	0.0	6,284.7	0.0	595.1	857.7	7,473.3	0.0	0.0
149.00	Bot - Section 6	49.2	461.5					0.0	427.8	49.2	889.4	0.0	0.0
150.00		34.3	176.3					0.0	107.0	34.3	283.3	0.0	0.0
152.50	Top - Section 5	48.7	435.2					0.0	267.6	48.7	702.8	0.0	0.0
155.00		71.7	230.5					0.0	267.7	71.7	498.3	0.0	0.0
160.00		93.9	448.0					1.4	535.8	95.3	983.9	0.0	0.0
165.00		64.6	432.5					2.2	536.3	66.8	968.8	0.0	0.0
167.00	Appurtenance(s)	45.2	169.3	888.1	0.0	0.0	7,998.3	1.1	214.7	934.4	8,382.2	0.0	0.0

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

7/17/2020 6:02:17 AM

Customer: T-MOBILE

Load Case: 1.2D + 1.0Di + 1.0Wi

49 mph with 0.85 in Radial Ice

27 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

170.00		70.9	248.9					1.9	183.8	72.8	432.7	0.0	0.0
175.00	Appurtenance(s)	86.6	401.1	97.1	0.0	-388.3	215.2	3.8	306.6	187.6	923.0	0.0	0.0
180.00		67.7	385.4					0.0	232.7	67.7	618.2	0.0	0.0
183.00	Appurtenance(s)	25.0	224.4	405.7	0.0	0.0	3,018.5	0.0	139.8	430.7	3,382.6	0.0	0.0
									Totals:	6,905.20	97,108.5	0.00	0.00

Site Number: 302535

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Site Name: Milford CT 2, CT

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7/17/2020 6:02:17 AM

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Load Case: 1.2D + 1.0Di + 1.0Wi

49 mph with 0.85 in Radial Ice

27 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-100.30	-7.43	0.00	-1,017.39	0.00	1,017.39	4,364.17	1,030.91	4,480.97	4,310.12	0.00	0.00	0.194
5.00	-97.93	-7.40	0.00	-980.26	0.00	980.26	4,284.85	1,012.17	4,319.59	4,154.08	0.03	-0.05	0.193
10.00	-95.10	-7.36	0.00	-943.28	0.00	943.28	4,205.53	993.43	4,161.17	4,000.91	0.10	-0.10	0.191
15.00	-92.29	-7.33	0.00	-906.46	0.00	906.46	4,126.21	974.69	4,005.71	3,850.62	0.23	-0.14	0.190
20.00	-89.49	-7.30	0.00	-869.81	0.00	869.81	4,046.89	955.96	3,853.21	3,703.21	0.40	-0.19	0.188
22.50	-88.10	-7.28	0.00	-851.56	0.00	851.56	4,007.23	946.59	3,778.07	3,630.59	0.51	-0.22	0.187
22.50	-88.10	-7.28	0.00	-851.56	0.00	851.56	4,007.23	946.59	3,778.07	3,630.59	0.51	-0.22	0.187
25.00	-86.72	-7.26	0.00	-833.36	0.00	833.36	3,967.57	937.22	3,703.67	3,558.68	0.63	-0.24	0.186
28.50	-84.79	-7.24	0.00	-807.95	0.00	807.95	3,912.04	924.10	3,600.75	3,459.22	0.82	-0.28	0.185
30.00	-83.54	-7.21	0.00	-797.10	0.00	797.10	3,888.25	918.48	3,557.09	3,417.03	0.91	-0.29	0.182
35.00	-79.40	-7.15	0.00	-761.05	0.00	761.05	3,899.62	921.17	3,577.93	3,437.16	1.25	-0.34	0.175
40.00	-76.67	-7.10	0.00	-725.31	0.00	725.31	3,820.30	902.43	3,433.88	3,297.97	1.63	-0.39	0.172
43.00	-75.04	-7.06	0.00	-704.01	0.00	704.01	3,772.71	891.19	3,348.87	3,215.84	1.89	-0.42	0.170
43.00	-75.04	-7.06	0.00	-704.01	0.00	704.01	3,772.71	891.19	3,348.87	3,215.84	1.89	-0.42	0.170
45.00	-73.96	-7.02	0.00	-689.89	0.00	689.89	3,740.98	883.70	3,292.79	3,161.66	2.07	-0.44	0.169
50.00	-71.28	-6.95	0.00	-654.78	0.00	654.78	3,661.66	864.96	3,154.66	3,028.22	2.56	-0.49	0.166
55.00	-68.63	-6.88	0.00	-620.04	0.00	620.04	3,582.34	846.22	3,019.50	2,897.66	3.09	-0.54	0.163
58.00	-67.06	-6.84	0.00	-599.40	0.00	599.40	3,534.75	834.98	2,939.82	2,820.71	3.44	-0.57	0.161
60.00	-65.62	-6.79	0.00	-585.72	0.00	585.72	3,503.02	827.49	2,887.29	2,769.98	3.68	-0.59	0.158
63.50	-63.14	-6.73	0.00	-561.96	0.00	561.96	3,173.44	749.80	2,633.77	2,534.70	4.13	-0.62	0.153
65.00	-62.45	-6.69	0.00	-551.86	0.00	551.86	3,152.76	744.75	2,598.36	2,501.02	4.32	-0.63	0.152
70.00	-60.16	-6.61	0.00	-518.41	0.00	518.41	3,081.37	727.88	2,482.04	2,388.51	5.02	-0.69	0.148
75.00	-57.90	-6.52	0.00	-485.37	0.00	485.37	3,009.98	711.02	2,368.38	2,278.59	5.77	-0.74	0.143
80.00	-55.67	-6.43	0.00	-452.78	0.00	452.78	2,938.59	694.16	2,257.39	2,171.26	6.58	-0.80	0.139
85.00	-53.46	-6.34	0.00	-420.64	0.00	420.64	2,867.21	677.29	2,149.06	2,066.52	7.44	-0.85	0.134
88.00	-52.14	-6.29	0.00	-401.61	0.00	401.61	2,824.37	667.17	2,085.34	2,004.91	7.98	-0.88	0.131
90.00	-50.98	-6.24	0.00	-389.03	0.00	389.03	2,795.82	660.43	2,043.40	1,964.36	8.36	-0.90	0.127
93.00	-49.26	-6.18	0.00	-370.31	0.00	370.31	2,304.06	552.97	1,718.95	1,629.55	8.94	-0.94	0.137
95.00	-48.44	-6.12	0.00	-357.95	0.00	357.95	2,286.90	547.35	1,684.19	1,600.83	9.33	-0.96	0.134
100.00	-46.41	-6.03	0.00	-327.37	0.00	327.37	2,243.44	533.30	1,598.83	1,529.72	10.36	-1.01	0.127
102.50	-45.41	-5.98	0.00	-312.30	0.00	312.30	2,221.40	526.27	1,556.98	1,494.55	10.90	-1.04	0.123
102.50	-45.41	-5.98	0.00	-312.30	0.00	312.30	2,221.40	526.27	1,556.98	1,494.55	10.90	-1.04	0.230
105.00	-44.61	-5.93	0.00	-297.36	0.00	297.36	2,198.14	519.25	1,515.69	1,458.97	11.45	-1.06	0.224
110.00	-43.02	-5.86	0.00	-267.73	0.00	267.73	2,138.65	505.19	1,434.77	1,380.70	12.61	-1.16	0.214
115.00	-41.51	-5.80	0.00	-238.45	0.00	238.45	2,079.16	491.14	1,356.07	1,304.59	13.87	-1.25	0.203
116.50	-41.05	-5.77	0.00	-229.76	0.00	229.76	2,061.32	486.93	1,332.90	1,282.18	14.27	-1.28	0.199
120.00	-39.67	-5.71	0.00	-209.58	0.00	209.58	2,019.67	477.09	1,279.60	1,230.64	15.23	-1.34	0.190
121.00	-39.27	-5.68	0.00	-203.87	0.00	203.87	1,570.79	386.65	1,050.51	971.75	15.51	-1.36	0.235
125.00	-38.18	-5.63	0.00	-181.15	0.00	181.15	1,545.06	377.66	1,002.21	933.41	16.68	-1.43	0.219
126.00	-32.05	-4.58	0.00	-175.31	0.00	175.31	1,538.54	375.41	990.31	923.89	16.98	-1.45	0.211
130.00	-31.05	-4.51	0.00	-156.98	0.00	156.98	1,512.16	366.42	943.44	886.11	18.23	-1.52	0.198
135.00	-29.82	-4.42	0.00	-134.45	0.00	134.45	1,478.46	355.17	886.44	839.55	19.87	-1.61	0.180
140.00	-28.61	-4.32	0.00	-112.37	0.00	112.37	1,443.96	343.93	831.22	793.77	21.60	-1.69	0.162

Site Number: 302535

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Site Name: Milford CT 2, CT

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Customer: T-MOBILE

Load Case: 1.2D + 1.0Di + 1.0Wi

49 mph with 0.85 in Radial Ice

27 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

145.00	-21.16	-3.26	0.00	-90.77	0.00	90.77	1,408.39	332.69	777.78	748.68	23.41	-1.77	0.136
149.00	-20.28	-3.19	0.00	-77.73	0.00	77.73	1,370.32	323.70	736.30	708.56	24.92	-1.82	0.125
150.00	-19.99	-3.16	0.00	-74.54	0.00	74.54	1,360.80	321.45	726.11	698.70	25.30	-1.84	0.121
152.50	-19.29	-3.10	0.00	-66.64	0.00	66.64	947.27	241.09	544.55	487.59	26.27	-1.87	0.157
155.00	-18.79	-3.03	0.00	-58.89	0.00	58.89	936.35	236.87	525.67	473.48	27.26	-1.90	0.145
160.00	-17.81	-2.92	0.00	-43.76	0.00	43.76	913.91	228.44	488.92	445.55	29.29	-1.97	0.118
165.00	-16.84	-2.83	0.00	-29.18	0.00	29.18	890.67	220.01	453.50	418.07	31.37	-2.02	0.089
167.00	-8.50	-1.60	0.00	-23.53	0.00	23.53	881.14	216.64	439.70	407.21	32.22	-2.03	0.067
170.00	-8.07	-1.51	0.00	-18.73	0.00	18.73	866.62	211.58	419.41	391.06	33.51	-2.05	0.057
175.00	-7.15	-1.30	0.00	-11.17	0.00	11.17	841.76	203.15	386.65	364.58	35.67	-2.08	0.039
180.00	-6.53	-1.21	0.00	-4.69	0.00	4.69	816.11	194.71	355.22	338.67	37.86	-2.10	0.022
183.00	0.00	-0.97	0.00	-1.07	0.00	1.07	800.33	189.66	337.01	323.41	39.18	-2.10	0.003

Load Case: 1.0D + 1.0W	Serviceability 60 mph	26 Iterations
Gust Response Factor :1.10		
Dead Load Factor :1.00		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		44.7	0.0					0.0	0.0	44.7	0.0	0.0	0.0
5.00		88.6	1,287.4					0.0	481.5	88.6	1,768.9	0.0	0.0
10.00		87.0	1,263.8					0.0	770.6	87.0	2,034.4	0.0	0.0
15.00		85.4	1,240.2					0.0	770.6	85.4	2,010.8	0.0	0.0
20.00		63.1	1,216.6					0.0	770.6	63.1	1,987.2	0.0	0.0
22.50	Reinf. Top Reinf	41.5	599.4					0.0	385.3	41.5	984.7	0.0	0.0
25.00		49.2	593.5					0.0	385.3	49.2	978.8	0.0	0.0
28.50	Bot - Section 2	40.9	821.0					0.0	539.4	40.9	1,360.5	0.0	0.0
30.00		54.1	704.8					0.0	231.2	54.1	935.9	0.0	0.0
35.00	Top - Section 1	84.4	2,318.5					0.0	770.6	84.4	3,089.1	0.0	0.0
40.00		68.5	1,149.1					0.0	770.6	68.5	1,919.7	0.0	0.0
43.00	Reinf. Top Reinf	43.3	678.1					0.0	462.4	43.3	1,140.5	0.0	0.0
45.00		61.1	447.4					0.0	308.2	61.1	755.6	0.0	0.0
50.00	Appurtenance(s)	87.8	1,101.9	0.4	0.0	0.0	0.6	0.0	770.6	88.2	1,873.1	0.0	0.0
55.00		70.6	1,078.3					0.0	770.6	70.6	1,848.9	0.0	0.0
58.00	Bot - Section 3	44.6	635.6					0.0	462.4	44.6	1,098.0	0.0	0.0
60.00		49.7	740.4					0.0	308.2	49.7	1,048.6	0.0	0.0
63.50	Top - Section 2	45.2	1,279.8					0.0	539.4	45.2	1,819.2	0.0	0.0
65.00		58.7	235.4					0.0	231.2	58.7	466.6	0.0	0.0
70.00		90.2	773.3					0.0	770.6	90.2	1,543.9	0.0	0.0
75.00		90.2	755.6					0.0	770.6	90.2	1,526.2	0.0	0.0
80.00		90.7	737.9					0.0	770.6	90.7	1,508.5	0.0	0.0
85.00		73.1	720.2					0.0	770.6	73.1	1,490.8	0.0	0.0
88.00	Bot - Section 4	46.3	423.6					0.0	462.4	46.3	886.0	0.0	0.0
90.00		47.0	515.9					0.0	308.2	47.0	824.1	0.0	0.0
93.00	Top - Section 3	46.9	764.1					0.0	462.4	46.9	1,226.4	0.0	0.0
95.00		65.6	231.1					0.0	308.2	65.6	539.4	0.0	0.0
100.00		70.5	567.5					0.0	770.6	70.5	1,338.1	0.0	0.0
102.50	Reinf. Top	47.2	278.2					0.0	385.3	47.2	663.5	0.0	0.0
105.00		71.1	274.5					0.0	218.3	71.1	492.8	0.0	0.0
110.00		95.2	538.0					0.0	436.6	95.2	974.6	0.0	0.0
115.00		62.1	523.2					0.0	436.6	62.1	959.8	0.0	0.0
116.50	Bot - Section 5	48.5	154.1					0.0	131.0	48.5	285.1	0.0	0.0
120.00		43.9	643.2					0.0	305.6	43.9	948.8	0.0	0.0
121.00	Top - Section 4	48.5	181.4					0.0	87.3	48.5	268.7	0.0	0.0
125.00		48.4	321.1					0.0	349.3	48.4	670.4	0.0	0.0
126.00	Appurtenance(s)	48.5	79.1	975.4	0.0	250.2	3,299.4	0.0	87.3	1,024.0	3,465.8	0.0	0.0
130.00		87.6	311.6					0.0	304.8	87.6	616.5	0.0	0.0
135.00		97.6	378.9					0.0	376.1	97.6	755.0	0.0	0.0
140.00		97.9	367.1					0.0	376.1	97.9	743.2	0.0	0.0
145.00	Appurtenance(s)	88.4	355.3	822.7	0.0	0.0	3,776.0	0.0	376.1	911.1	4,507.4	0.0	0.0
149.00	Bot - Section 6	49.3	275.7					0.0	260.3	49.3	536.1	0.0	0.0
150.00		35.0	119.5					0.0	65.1	35.0	184.5	0.0	0.0
152.50	Top - Section 5	49.8	295.0					0.0	162.7	49.8	457.7	0.0	0.0
155.00		74.4	125.5					0.0	162.7	74.4	288.2	0.0	0.0
160.00		99.5	244.3					0.0	325.4	99.5	569.7	0.0	0.0
165.00		69.8	235.5					0.0	325.4	69.8	560.9	0.0	0.0
167.00	Appurtenance(s)	50.0	91.7	928.5	0.0	0.0	4,694.7	0.0	130.2	978.5	4,916.6	0.0	0.0

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

7/17/2020 6:02:25 AM

Customer: T-MOBILE

Load Case: 1.0D + 1.0W

Serviceability 60 mph

26 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.00

Wind Load Factor :1.00

170.00		80.2	134.9					0.0	94.0	80.2	228.9	0.0	0.0
175.00	Appurtenance(s)	82.3	217.8	104.1	0.0	-416.4	79.2	0.0	156.7	186.4	453.7	0.0	0.0
180.00		50.9	208.9					0.0	132.1	50.9	341.0	0.0	0.0
183.00	Appurtenance(s)	18.8	121.1	427.5	0.0	0.0	2,000.0	0.0	79.3	446.3	2,200.4	0.0	0.0
									Totals:	6,592.53	64,093.2	0.00	0.00

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

7/17/2020 6:02:25 AM

Customer: T-MOBILE

Load Case: 1.0D + 1.0W

Serviceability 60 mph

26 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-65.42	-7.21	0.00	-987.41	0.00	987.41	4,364.17	1,030.91	4,480.97	4,310.12	0.00	0.00	0.183
5.00	-63.65	-7.17	0.00	-951.35	0.00	951.35	4,284.85	1,012.17	4,319.59	4,154.08	0.02	-0.05	0.181
10.00	-61.61	-7.13	0.00	-915.48	0.00	915.48	4,205.53	993.43	4,161.17	4,000.91	0.10	-0.09	0.180
15.00	-59.59	-7.09	0.00	-879.81	0.00	879.81	4,126.21	974.69	4,005.71	3,850.62	0.22	-0.14	0.178
20.00	-57.60	-7.06	0.00	-844.34	0.00	844.34	4,046.89	955.96	3,853.21	3,703.21	0.39	-0.19	0.177
22.50	-56.61	-7.04	0.00	-826.69	0.00	826.69	4,007.23	946.59	3,778.07	3,630.59	0.50	-0.21	0.176
22.50	-56.61	-7.04	0.00	-826.69	0.00	826.69	4,007.23	946.59	3,778.07	3,630.59	0.50	-0.21	0.176
25.00	-55.63	-7.02	0.00	-809.09	0.00	809.09	3,967.57	937.22	3,703.67	3,558.68	0.61	-0.24	0.175
28.50	-54.27	-6.99	0.00	-784.54	0.00	784.54	3,912.04	924.10	3,600.75	3,459.22	0.80	-0.27	0.174
30.00	-53.33	-6.96	0.00	-774.05	0.00	774.05	3,888.25	918.48	3,557.09	3,417.03	0.89	-0.28	0.171
35.00	-50.23	-6.90	0.00	-739.24	0.00	739.24	3,899.62	921.17	3,577.93	3,437.16	1.21	-0.33	0.164
40.00	-48.31	-6.86	0.00	-704.72	0.00	704.72	3,820.30	902.43	3,433.88	3,297.97	1.58	-0.38	0.162
43.00	-47.17	-6.82	0.00	-684.15	0.00	684.15	3,772.71	891.19	3,348.87	3,215.84	1.83	-0.41	0.160
43.00	-47.17	-6.82	0.00	-684.15	0.00	684.15	3,772.71	891.19	3,348.87	3,215.84	1.83	-0.41	0.160
45.00	-46.41	-6.78	0.00	-670.50	0.00	670.50	3,740.98	883.70	3,292.79	3,161.66	2.01	-0.43	0.159
50.00	-44.53	-6.72	0.00	-636.58	0.00	636.58	3,661.66	864.96	3,154.66	3,028.22	2.48	-0.47	0.157
55.00	-42.68	-6.66	0.00	-603.00	0.00	603.00	3,582.34	846.22	3,019.50	2,897.66	3.00	-0.52	0.154
58.00	-41.58	-6.62	0.00	-583.02	0.00	583.02	3,534.75	834.98	2,939.82	2,820.71	3.34	-0.55	0.152
60.00	-40.53	-6.58	0.00	-569.78	0.00	569.78	3,503.02	827.49	2,887.29	2,769.98	3.58	-0.57	0.149
63.50	-38.71	-6.53	0.00	-546.75	0.00	546.75	3,173.44	749.80	2,633.77	2,534.70	4.01	-0.60	0.144
65.00	-38.24	-6.49	0.00	-536.96	0.00	536.96	3,152.76	744.75	2,598.36	2,501.02	4.20	-0.62	0.143
70.00	-36.69	-6.42	0.00	-504.50	0.00	504.50	3,081.37	727.88	2,482.04	2,388.51	4.87	-0.67	0.139
75.00	-35.16	-6.34	0.00	-472.42	0.00	472.42	3,009.98	711.02	2,368.38	2,278.59	5.60	-0.72	0.135
80.00	-33.64	-6.26	0.00	-440.72	0.00	440.72	2,938.59	694.16	2,257.39	2,171.26	6.39	-0.78	0.130
85.00	-32.15	-6.19	0.00	-409.41	0.00	409.41	2,867.21	677.29	2,149.06	2,066.52	7.23	-0.83	0.126
88.00	-31.26	-6.15	0.00	-390.84	0.00	390.84	2,824.37	667.17	2,085.34	2,004.91	7.76	-0.86	0.123
90.00	-30.44	-6.10	0.00	-378.55	0.00	378.55	2,795.82	660.43	2,043.40	1,964.36	8.12	-0.88	0.119
93.00	-29.21	-6.05	0.00	-360.26	0.00	360.26	2,304.06	552.97	1,718.95	1,629.55	8.68	-0.91	0.128
95.00	-28.66	-5.99	0.00	-348.17	0.00	348.17	2,286.90	547.35	1,684.19	1,600.83	9.07	-0.93	0.126
100.00	-27.32	-5.92	0.00	-318.22	0.00	318.22	2,243.44	533.30	1,598.83	1,529.72	10.07	-0.98	0.118
102.50	-26.66	-5.87	0.00	-303.43	0.00	303.43	2,221.40	526.27	1,556.98	1,494.55	10.59	-1.01	0.115
102.50	-26.66	-5.87	0.00	-303.43	0.00	303.43	2,221.40	526.27	1,556.98	1,494.55	10.59	-1.01	0.215
105.00	-26.16	-5.82	0.00	-288.76	0.00	288.76	2,198.14	519.25	1,515.69	1,458.97	11.12	-1.03	0.210
110.00	-25.18	-5.74	0.00	-259.68	0.00	259.68	2,138.65	505.19	1,434.77	1,380.70	12.25	-1.12	0.200
115.00	-24.22	-5.68	0.00	-230.97	0.00	230.97	2,079.16	491.14	1,356.07	1,304.59	13.48	-1.21	0.189
116.50	-23.93	-5.65	0.00	-222.44	0.00	222.44	2,061.32	486.93	1,332.90	1,282.18	13.87	-1.24	0.185
120.00	-22.98	-5.60	0.00	-202.67	0.00	202.67	2,019.67	477.09	1,279.60	1,230.64	14.80	-1.30	0.176
121.00	-22.70	-5.56	0.00	-197.07	0.00	197.07	1,570.79	386.65	1,050.51	971.75	15.07	-1.32	0.217
125.00	-22.03	-5.51	0.00	-174.83	0.00	174.83	1,545.06	377.66	1,002.21	933.41	16.21	-1.38	0.202
126.00	-18.59	-4.42	0.00	-169.07	0.00	169.07	1,538.54	375.41	990.31	923.89	16.50	-1.40	0.195
130.00	-17.97	-4.34	0.00	-151.38	0.00	151.38	1,512.16	366.42	943.44	886.11	17.71	-1.48	0.183
135.00	-17.21	-4.25	0.00	-129.67	0.00	129.67	1,478.46	355.17	886.44	839.55	19.30	-1.56	0.166
140.00	-16.46	-4.15	0.00	-108.42	0.00	108.42	1,443.96	343.93	831.22	793.77	20.98	-1.64	0.148

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

7/17/2020 6:02:25 AM

Customer: T-MOBILE

Load Case: 1.0D + 1.0W

Serviceability 60 mph

26 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.00

Wind Load Factor :1.00

145.00	-11.98	-3.12	0.00	-87.66	0.00	87.66	1,408.39	332.69	777.78	748.68	22.74	-1.72	0.126
149.00	-11.45	-3.06	0.00	-75.16	0.00	75.16	1,370.32	323.70	736.30	708.56	24.20	-1.77	0.115
150.00	-11.26	-3.03	0.00	-72.10	0.00	72.10	1,360.80	321.45	726.11	698.70	24.57	-1.78	0.112
152.50	-10.80	-2.97	0.00	-64.53	0.00	64.53	947.27	241.09	544.55	487.59	25.51	-1.81	0.144
155.00	-10.52	-2.89	0.00	-57.11	0.00	57.11	936.35	236.87	525.67	473.48	26.47	-1.84	0.132
160.00	-9.95	-2.79	0.00	-42.63	0.00	42.63	913.91	228.44	488.92	445.55	28.44	-1.91	0.107
165.00	-9.39	-2.70	0.00	-28.70	0.00	28.70	890.67	220.01	453.50	418.07	30.46	-1.96	0.079
167.00	-4.51	-1.56	0.00	-23.29	0.00	23.29	881.14	216.64	439.70	407.21	31.28	-1.97	0.062
170.00	-4.28	-1.47	0.00	-18.62	0.00	18.62	866.62	211.58	419.41	391.06	32.53	-1.99	0.053
175.00	-3.83	-1.27	0.00	-11.26	0.00	11.26	841.76	203.15	386.65	364.58	34.63	-2.02	0.035
180.00	-3.49	-1.21	0.00	-4.90	0.00	4.90	816.11	194.71	355.22	338.67	36.76	-2.04	0.019
183.00	0.00	-1.08	0.00	-1.28	0.00	1.28	800.33	189.66	337.01	323.41	38.04	-2.04	0.004

Equivalent Lateral Forces Method Analysis

Spectral Response Acceleration for Short Period (S_s):	0.20
Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.05
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.60
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.21
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.08
Seismic Response Coefficient (C_s):	0.03
Upper Limit C_s	0.03
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	3.37
Redundancy Factor (ρ):	1.00
Seismic Force Distribution Exponent (k):	2.00
Total Unfactored Dead Load:	65.43 k
Seismic Base Shear (E):	1.96 k

Load Case 1.2D + 1.0Ev + 1.0Eh

Seismic

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
51	181.50	200	6,600	0.009	18	249
50	177.50	341	10,744	0.015	29	424
49	172.50	374	11,143	0.016	31	465
48	168.50	229	6,500	0.009	18	284
47	166.00	222	6,114	0.009	17	276
46	162.50	561	14,811	0.021	41	697
45	157.50	570	14,133	0.020	39	708
44	153.75	288	6,813	0.010	19	358
43	151.25	458	10,471	0.015	29	569
42	149.50	185	4,124	0.006	11	229
41	147.00	536	11,584	0.016	32	666
40	142.50	731	14,852	0.021	41	909
39	137.50	743	14,051	0.020	39	924
38	132.50	755	13,255	0.019	36	938
37	128.00	616	10,100	0.014	28	766
36	125.50	166	2,621	0.004	7	207
35	123.00	670	10,142	0.014	28	833
34	120.50	269	3,901	0.005	11	334
33	118.25	949	13,267	0.019	36	1,179
32	115.75	285	3,819	0.005	10	354
31	112.50	960	12,147	0.017	33	1,193
30	107.50	975	11,262	0.016	31	1,211
29	103.75	493	5,305	0.007	15	612
28	101.25	664	6,802	0.010	19	825
27	97.50	1,338	12,720	0.018	35	1,663

26	94.00	539	4,766	0.007	13	670
25	91.50	1,226	10,268	0.014	28	1,524
24	89.00	824	6,528	0.009	18	1,024
23	86.50	886	6,629	0.009	18	1,101
22	82.50	1,491	10,147	0.014	28	1,853
21	77.50	1,508	9,060	0.013	25	1,875
20	72.50	1,526	8,022	0.011	22	1,897
19	67.50	1,544	7,034	0.010	19	1,919
18	64.25	467	1,926	0.003	5	580
17	61.75	1,819	6,937	0.010	19	2,261
16	59.00	1,049	3,650	0.005	10	1,303
15	56.50	1,098	3,505	0.005	10	1,364
14	52.50	1,849	5,096	0.007	14	2,298
13	47.50	1,873	4,225	0.006	12	2,327
12	44.00	756	1,463	0.002	4	939
11	41.50	1,141	1,964	0.003	5	1,417
10	37.50	1,920	2,700	0.004	7	2,386
9	32.50	3,089	3,263	0.005	9	3,839
8	29.25	936	801	0.001	2	1,163
7	26.75	1,360	973	0.001	3	1,691
6	23.75	979	552	0.001	2	1,216
5	21.25	985	445	0.001	1	1,224
4	17.50	1,987	609	0.001	2	2,469
3	12.50	2,011	314	0.000	1	2,499
2	7.50	2,034	114	0.000	0	2,528
1	2.50	1,769	11	0.000	0	2,198
DragonWave Horizon C	183.00	21	710	0.001	2	26
Alcatel-Lucent RRH2x	183.00	317	10,629	0.015	29	394
Alcatel-Lucent 1900	183.00	180	6,028	0.008	17	224
Decibel DB844H90E-XY	183.00	84	2,813	0.004	8	104
Nokia 2.5G MAA - AAH	183.00	311	10,408	0.015	29	386
Argus LLPX310R	183.00	86	2,873	0.004	8	107
DragonWave A-ANT-18G	183.00	27	908	0.001	2	34
DragonWave A-ANT-18G	183.00	27	908	0.001	2	34
Andrew 844G65VTZASX	183.00	48	1,607	0.002	4	60
Commscope NNVV-65B-R	183.00	232	7,776	0.011	21	289
Flat Platform w/ Han	183.00	2,000	66,978	0.094	184	2,485
RFS APXV18-206517S-C	175.00	79	2,426	0.003	7	98
CCI TPX-070821	167.00	45	1,255	0.002	3	56
Kaelus DBCT108F1V92-	167.00	83	2,326	0.003	6	104
Commscope WCS-IMFQ-A	167.00	30	823	0.001	2	37
Powerwave Allgon LGP	167.00	85	2,359	0.003	6	105
Raycap DC6-48-60-18-	167.00	40	1,116	0.002	3	50
Raycap DC6-48-60-18-	167.00	32	887	0.001	2	40
Ericsson RRUS 4426 B	167.00	145	4,049	0.006	11	180
Ericsson RRUS 4478 B	167.00	180	5,012	0.007	14	223
Ericsson RRUS 4478 B	167.00	180	5,012	0.007	14	223
Ericsson RRUS 11 (Ba	167.00	132	3,681	0.005	10	164
Ericsson RRUS 32 B2	167.00	159	4,434	0.006	12	198
Ericsson RRUS-32 (77	167.00	231	6,442	0.009	18	287
Powerwave Allgon 777	167.00	105	2,928	0.004	8	130
CCI OPA-65R-LCUU-H4	167.00	171	4,769	0.007	13	212
Quintel QS66512-2	167.00	333	9,287	0.013	25	414
Kathrein Scala 80010	167.00	245	6,827	0.010	19	304
Generic Round Platfo	167.00	2,500	69,723	0.098	191	3,107
Ericsson KRY 112 489	145.00	46	971	0.001	3	57
Ericsson RRUS 4415 B	145.00	138	2,901	0.004	8	171
Ericsson Radio 4449	145.00	225	4,731	0.007	13	280
Ericsson Air6449 B41	145.00	312	6,560	0.009	18	388
Ericsson AIR 21, 1.3	145.00	275	5,771	0.008	16	341
Ericsson AIR32 B66Aa	145.00	397	8,339	0.012	23	493
RFS APXVAARR24_43-U-	145.00	384	8,067	0.011	22	477
Round Platform w/ Ha	145.00	2,000	42,050	0.059	115	2,485
RFS FDJ85020Q4-S1	126.00	71	1,124	0.002	3	88

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

7/17/2020 6:02:25 AM

Customer: T-MOBILE

Samsung B5/B13 RRH-B	126.00	211	3,348	0.005	9	262
Samsung B2/B66A RRH-	126.00	253	4,020	0.006	11	315
RFS DB-T1-6Z-8AB-0Z	126.00	88	1,397	0.002	4	109
Antel BXA-80063/6CF	126.00	45	710	0.001	2	56
Andrew HBXX-6517DS-A	126.00	129	2,048	0.003	6	160
Commscope JAHH-45B-R	126.00	503	7,982	0.011	22	625
Flat Platform w/ Han	126.00	2,000	31,752	0.044	87	2,485
Thales PCS VP/360/2	50.00	1	2	0.000	0	1
		65,427	715,055	1.000	1,963	81,304

Load Case 0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Segment	Height Above Base (ft)	Weight (lb)	W _z (lb-ft)	C _{vx}	Horizontal Force (lb)	Vertical Force (lb)
51	181.50	200	6,600	0.009	18	172
50	177.50	341	10,744	0.015	29	292
49	172.50	374	11,143	0.016	31	321
48	168.50	229	6,500	0.009	18	196
47	166.00	222	6,114	0.009	17	190
46	162.50	561	14,811	0.021	41	481
45	157.50	570	14,133	0.020	39	488
44	153.75	288	6,813	0.010	19	247
43	151.25	458	10,471	0.015	29	392
42	149.50	185	4,124	0.006	11	158
41	147.00	536	11,584	0.016	32	460
40	142.50	731	14,852	0.021	41	627
39	137.50	743	14,051	0.020	39	637
38	132.50	755	13,255	0.019	36	647
37	128.00	616	10,100	0.014	28	529
36	125.50	166	2,621	0.004	7	143
35	123.00	670	10,142	0.014	28	575
34	120.50	269	3,901	0.005	11	230
33	118.25	949	13,267	0.019	36	813
32	115.75	285	3,819	0.005	10	244
31	112.50	960	12,147	0.017	33	823
30	107.50	975	11,262	0.016	31	836
29	103.75	493	5,305	0.007	15	423
28	101.25	664	6,802	0.010	19	569
27	97.50	1,338	12,720	0.018	35	1,147
26	94.00	539	4,766	0.007	13	462
25	91.50	1,226	10,268	0.014	28	1,051
24	89.00	824	6,528	0.009	18	707
23	86.50	886	6,629	0.009	18	760
22	82.50	1,491	10,147	0.014	28	1,278
21	77.50	1,508	9,060	0.013	25	1,293
20	72.50	1,526	8,022	0.011	22	1,308
19	67.50	1,544	7,034	0.010	19	1,324
18	64.25	467	1,926	0.003	5	400
17	61.75	1,819	6,937	0.010	19	1,560
16	59.00	1,049	3,650	0.005	10	899
15	56.50	1,098	3,505	0.005	10	941
14	52.50	1,849	5,096	0.007	14	1,585
13	47.50	1,873	4,225	0.006	12	1,605
12	44.00	756	1,463	0.002	4	648
11	41.50	1,141	1,964	0.003	5	978
10	37.50	1,920	2,700	0.004	7	1,646
9	32.50	3,089	3,263	0.005	9	2,648
8	29.25	936	801	0.001	2	802
7	26.75	1,360	973	0.001	3	1,166
6	23.75	979	552	0.001	2	839
5	21.25	985	445	0.001	1	844

4	17.50	1,987	609	0.001	2	1,704
3	12.50	2,011	314	0.000	1	1,724
2	7.50	2,034	114	0.000	0	1,744
1	2.50	1,769	11	0.000	0	1,517
DragonWave Horizon C	183.00	21	710	0.001	2	18
Alcatel-Lucent RRH2x	183.00	317	10,629	0.015	29	272
Alcatel-Lucent 1900	183.00	180	6,028	0.008	17	154
Decibel DB844H90E-XY	183.00	84	2,813	0.004	8	72
Nokia 2.5G MAA - AAH	183.00	311	10,408	0.015	29	266
Argus LLPX310R	183.00	86	2,873	0.004	8	74
DragonWave A-ANT-18G	183.00	27	908	0.001	2	23
DragonWave A-ANT-18G	183.00	27	908	0.001	2	23
Andrew 844G65VTZASX	183.00	48	1,607	0.002	4	41
Commscope NNVV-65B-R	183.00	232	7,776	0.011	21	199
Flat Platform w/ Han	183.00	2,000	66,978	0.094	184	1,715
RFS APXV18-206517S-C	175.00	79	2,426	0.003	7	68
CCI TPX-070821	167.00	45	1,255	0.002	3	39
Kaelus DBCT108F1V92-	167.00	83	2,326	0.003	6	72
Commscope WCS-IMFQ-A	167.00	30	823	0.001	2	25
Powerwave Allgon LGP	167.00	85	2,359	0.003	6	73
Raycap DC6-48-60-18-	167.00	40	1,116	0.002	3	34
Raycap DC6-48-60-18-	167.00	32	887	0.001	2	27
Ericsson RRUS 4426 B	167.00	145	4,049	0.006	11	124
Ericsson RRUS 4478 B	167.00	180	5,012	0.007	14	154
Ericsson RRUS 4478 B	167.00	180	5,012	0.007	14	154
Ericsson RRUS 11 (Ba	167.00	132	3,681	0.005	10	113
Ericsson RRUS 32 B2	167.00	159	4,434	0.006	12	136
Ericsson RRUS-32 (77	167.00	231	6,442	0.009	18	198
Powerwave Allgon 777	167.00	105	2,928	0.004	8	90
CCI OPA-65R-LCUU-H4	167.00	171	4,769	0.007	13	147
Quintel QS66512-2	167.00	333	9,287	0.013	25	285
Kathrein Scala 80010	167.00	245	6,827	0.010	19	210
Generic Round Platfo	167.00	2,500	69,723	0.098	191	2,143
Ericsson KRY 112 489	145.00	46	971	0.001	3	40
Ericsson RRUS 4415 B	145.00	138	2,901	0.004	8	118
Ericsson Radio 4449	145.00	225	4,731	0.007	13	193
Ericsson Air6449 B41	145.00	312	6,560	0.009	18	267
Ericsson AIR 21, 1.3	145.00	275	5,771	0.008	16	235
Ericsson AIR32 B66Aa	145.00	397	8,339	0.012	23	340
RFS APXVAARR24_43-U-	145.00	384	8,067	0.011	22	329
Round Platform w/ Ha	145.00	2,000	42,050	0.059	115	1,715
RFS FDJ85020Q4-S1	126.00	71	1,124	0.002	3	61
Samsung B5/B13 RRH-B	126.00	211	3,348	0.005	9	181
Samsung B2/B66A RRH-	126.00	253	4,020	0.006	11	217
RFS DB-T1-6Z-8AB-0Z	126.00	88	1,397	0.002	4	75
Antel BXA-80063/6CF	126.00	45	710	0.001	2	38
Andrew HBXX-6517DS-A	126.00	129	2,048	0.003	6	111
Commscope JAHH-45B-R	126.00	503	7,982	0.011	22	431
Flat Platform w/ Han	126.00	2,000	31,752	0.044	87	1,715
Thales PCS VP/360/2	50.00	1	2	0.000	0	1
		65,427	715,055	1.000	1,963	56,093

Load Case 1.2D + 1.0Ev + 1.0Eh

Seismic

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-79.11	-1.97	0.00	-298.89	0.00	298.89	4,364.17	1,030.91	4,480.97	4,310.12	0.00	0.00	0.066
5.00	-76.58	-1.99	0.00	-289.03	0.00	289.03	4,284.85	1,012.17	4,319.59	4,154.08	0.01	-0.01	0.066
10.00	-74.08	-2.01	0.00	-279.08	0.00	279.08	4,205.53	993.43	4,161.17	4,000.91	0.03	-0.03	0.065
15.00	-71.61	-2.02	0.00	-269.05	0.00	269.05	4,126.21	974.69	4,005.71	3,850.62	0.07	-0.04	0.065
20.00	-70.38	-2.03	0.00	-258.94	0.00	258.94	4,046.89	955.96	3,853.21	3,703.21	0.12	-0.06	0.064
22.50	-69.17	-2.04	0.00	-253.86	0.00	253.86	4,007.23	946.59	3,778.07	3,630.59	0.15	-0.06	0.064
22.50	-69.17	-2.04	0.00	-253.86	0.00	253.86	4,007.23	946.59	3,778.07	3,630.59	0.15	-0.06	0.064
25.00	-67.48	-2.04	0.00	-248.76	0.00	248.76	3,967.57	937.22	3,703.67	3,558.68	0.19	-0.07	0.064
28.50	-66.31	-2.05	0.00	-241.60	0.00	241.60	3,912.04	924.10	3,600.75	3,459.22	0.24	-0.08	0.063
30.00	-62.47	-2.05	0.00	-238.53	0.00	238.53	3,888.25	918.48	3,557.09	3,417.03	0.27	-0.09	0.062
35.00	-60.09	-2.05	0.00	-228.30	0.00	228.30	3,899.62	921.17	3,577.93	3,437.16	0.37	-0.10	0.060
40.00	-58.67	-2.05	0.00	-218.05	0.00	218.05	3,820.30	902.43	3,433.88	3,297.97	0.48	-0.12	0.059
43.00	-57.73	-2.06	0.00	-211.89	0.00	211.89	3,772.71	891.19	3,348.87	3,215.84	0.56	-0.13	0.058
43.00	-57.73	-2.06	0.00	-211.89	0.00	211.89	3,772.71	891.19	3,348.87	3,215.84	0.56	-0.13	0.058
45.00	-55.40	-2.05	0.00	-207.78	0.00	207.78	3,740.98	883.70	3,292.79	3,161.66	0.61	-0.13	0.058
50.00	-53.10	-2.04	0.00	-197.54	0.00	197.54	3,661.66	864.96	3,154.66	3,028.22	0.76	-0.15	0.057
55.00	-51.74	-2.04	0.00	-187.33	0.00	187.33	3,582.34	846.22	3,019.50	2,897.66	0.92	-0.16	0.056
58.00	-50.44	-2.03	0.00	-181.21	0.00	181.21	3,534.75	834.98	2,939.82	2,820.71	1.02	-0.17	0.055
60.00	-48.18	-2.01	0.00	-177.15	0.00	177.15	3,503.02	827.49	2,887.29	2,769.98	1.10	-0.18	0.054
63.50	-47.60	-2.01	0.00	-170.10	0.00	170.10	3,173.44	749.80	2,633.77	2,534.70	1.23	-0.19	0.053
65.00	-45.68	-1.99	0.00	-167.08	0.00	167.08	3,152.76	744.75	2,598.36	2,501.02	1.29	-0.19	0.052
70.00	-43.78	-1.98	0.00	-157.11	0.00	157.11	3,081.37	727.88	2,482.04	2,388.51	1.49	-0.21	0.051
75.00	-41.90	-1.96	0.00	-147.21	0.00	147.21	3,009.98	711.02	2,368.38	2,278.59	1.72	-0.22	0.049
80.00	-40.05	-1.94	0.00	-137.42	0.00	137.42	2,938.59	694.16	2,257.39	2,171.26	1.96	-0.24	0.047
85.00	-38.95	-1.92	0.00	-127.74	0.00	127.74	2,867.21	677.29	2,149.06	2,066.52	2.22	-0.26	0.046
88.00	-37.93	-1.90	0.00	-121.98	0.00	121.98	2,824.37	667.17	2,085.34	2,004.91	2.38	-0.27	0.045
90.00	-36.40	-1.87	0.00	-118.17	0.00	118.17	2,795.82	660.43	2,043.40	1,964.36	2.50	-0.27	0.044
93.00	-35.73	-1.86	0.00	-112.55	0.00	112.55	2,304.06	552.97	1,718.95	1,629.55	2.67	-0.28	0.047
95.00	-34.07	-1.83	0.00	-108.83	0.00	108.83	2,286.90	547.35	1,684.19	1,600.83	2.79	-0.29	0.046
100.00	-33.24	-1.81	0.00	-99.70	0.00	99.70	2,243.44	533.30	1,598.83	1,529.72	3.10	-0.30	0.044
102.50	-32.63	-1.80	0.00	-95.17	0.00	95.17	2,221.40	526.27	1,556.98	1,494.55	3.26	-0.31	0.043
102.50	-32.63	-1.80	0.00	-95.17	0.00	95.17	2,221.40	526.27	1,556.98	1,494.55	3.26	-0.31	0.078
105.00	-31.42	-1.77	0.00	-90.68	0.00	90.68	2,198.14	519.25	1,515.69	1,458.97	3.43	-0.32	0.076
110.00	-30.23	-1.74	0.00	-81.83	0.00	81.83	2,138.65	505.19	1,434.77	1,380.70	3.78	-0.35	0.073
115.00	-29.87	-1.74	0.00	-73.11	0.00	73.11	2,079.16	491.14	1,356.07	1,304.59	4.16	-0.38	0.070
116.50	-28.69	-1.70	0.00	-70.50	0.00	70.50	2,061.32	486.93	1,332.90	1,282.18	4.28	-0.39	0.069
120.00	-28.36	-1.70	0.00	-64.54	0.00	64.54	2,019.67	477.09	1,279.60	1,230.64	4.57	-0.40	0.066
121.00	-27.53	-1.67	0.00	-62.84	0.00	62.84	1,570.79	386.65	1,050.51	971.75	4.65	-0.41	0.082
125.00	-27.32	-1.67	0.00	-56.17	0.00	56.17	1,545.06	377.66	1,002.21	933.41	5.01	-0.43	0.078
126.00	-22.45	-1.46	0.00	-54.50	0.00	54.50	1,538.54	375.41	990.31	923.89	5.10	-0.44	0.074
130.00	-21.51	-1.43	0.00	-48.64	0.00	48.64	1,512.16	366.42	943.44	886.11	5.47	-0.46	0.069
135.00	-20.59	-1.39	0.00	-41.49	0.00	41.49	1,478.46	355.17	886.44	839.55	5.97	-0.49	0.063
140.00	-19.68	-1.35	0.00	-34.52	0.00	34.52	1,443.96	343.93	831.22	793.77	6.50	-0.51	0.057
145.00	-14.33	-1.06	0.00	-27.75	0.00	27.75	1,408.39	332.69	777.78	748.68	7.05	-0.54	0.047
149.00	-14.10	-1.05	0.00	-23.51	0.00	23.51	1,370.32	323.70	736.30	708.56	7.50	-0.55	0.043
150.00	-13.53	-1.02	0.00	-22.46	0.00	22.46	1,360.80	321.45	726.11	698.70	7.62	-0.56	0.042
152.50	-13.17	-1.00	0.00	-19.92	0.00	19.92	947.27	241.09	544.55	487.59	7.92	-0.57	0.055

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

7/17/2020 6:02:25 AM

Customer: T-MOBILE

155.00	-12.46	-0.95	0.00	-17.43	0.00	17.43	936.35	236.87	525.67	473.48	8.22	-0.58	0.050
160.00	-11.76	-0.91	0.00	-12.67	0.00	12.67	913.91	228.44	488.92	445.55	8.83	-0.60	0.041
165.00	-11.49	-0.89	0.00	-8.12	0.00	8.12	890.67	220.01	453.50	418.07	9.46	-0.61	0.032
167.00	-5.37	-0.45	0.00	-6.34	0.00	6.34	881.14	216.64	439.70	407.21	9.72	-0.62	0.022
170.00	-4.91	-0.41	0.00	-4.99	0.00	4.99	866.62	211.58	419.41	391.06	10.11	-0.62	0.018
175.00	-4.39	-0.37	0.00	-2.92	0.00	2.92	841.76	203.15	386.65	364.58	10.76	-0.63	0.013
180.00	-4.14	-0.35	0.00	-1.06	0.00	1.06	816.11	194.71	355.22	338.67	11.42	-0.63	0.008
183.00	0.00	-0.31	0.00	0.00	0.00	0.00	800.33	189.66	337.01	323.41	11.82	-0.63	0.000

Load Case 0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-54.58	-1.97	0.00	-290.82	0.00	290.82	4,364.17	1,030.91	4,480.97	4,310.12	0.00	0.00	0.060
5.00	-52.83	-1.98	0.00	-280.98	0.00	280.98	4,284.85	1,012.17	4,319.59	4,154.08	0.01	-0.01	0.060
10.00	-51.11	-1.99	0.00	-271.07	0.00	271.07	4,205.53	993.43	4,161.17	4,000.91	0.03	-0.03	0.059
15.00	-49.40	-2.00	0.00	-261.12	0.00	261.12	4,126.21	974.69	4,005.71	3,850.62	0.06	-0.04	0.059
20.00	-48.56	-2.01	0.00	-251.11	0.00	251.11	4,046.89	955.96	3,853.21	3,703.21	0.12	-0.06	0.059
22.50	-47.72	-2.01	0.00	-246.09	0.00	246.09	4,007.23	946.59	3,778.07	3,630.59	0.15	-0.06	0.058
22.50	-47.72	-2.01	0.00	-246.09	0.00	246.09	4,007.23	946.59	3,778.07	3,630.59	0.15	-0.06	0.058
25.00	-46.55	-2.01	0.00	-241.06	0.00	241.06	3,967.57	937.22	3,703.67	3,558.68	0.18	-0.07	0.058
28.50	-45.75	-2.02	0.00	-234.01	0.00	234.01	3,912.04	924.10	3,600.75	3,459.22	0.24	-0.08	0.058
30.00	-43.10	-2.01	0.00	-230.98	0.00	230.98	3,888.25	918.48	3,557.09	3,417.03	0.26	-0.08	0.056
35.00	-41.45	-2.01	0.00	-220.93	0.00	220.93	3,899.62	921.17	3,577.93	3,437.16	0.36	-0.10	0.054
40.00	-40.48	-2.01	0.00	-210.87	0.00	210.87	3,820.30	902.43	3,433.88	3,297.97	0.47	-0.11	0.054
43.00	-39.83	-2.01	0.00	-204.83	0.00	204.83	3,772.71	891.19	3,348.87	3,215.84	0.54	-0.12	0.053
43.00	-39.83	-2.01	0.00	-204.83	0.00	204.83	3,772.71	891.19	3,348.87	3,215.84	0.54	-0.12	0.053
45.00	-38.22	-2.00	0.00	-200.80	0.00	200.80	3,740.98	883.70	3,292.79	3,161.66	0.60	-0.13	0.053
50.00	-36.64	-2.00	0.00	-190.78	0.00	190.78	3,661.66	864.96	3,154.66	3,028.22	0.74	-0.14	0.052
55.00	-35.69	-1.99	0.00	-180.81	0.00	180.81	3,582.34	846.22	3,019.50	2,897.66	0.89	-0.16	0.051
58.00	-34.80	-1.98	0.00	-174.84	0.00	174.84	3,534.75	834.98	2,939.82	2,820.71	0.99	-0.16	0.050
60.00	-33.24	-1.96	0.00	-170.87	0.00	170.87	3,503.02	827.49	2,887.29	2,769.98	1.06	-0.17	0.049
63.50	-32.84	-1.96	0.00	-164.00	0.00	164.00	3,173.44	749.80	2,633.77	2,534.70	1.19	-0.18	0.048
65.00	-31.51	-1.94	0.00	-161.06	0.00	161.06	3,152.76	744.75	2,598.36	2,501.02	1.25	-0.18	0.047
70.00	-30.20	-1.92	0.00	-151.35	0.00	151.35	3,081.37	727.88	2,482.04	2,388.51	1.45	-0.20	0.046
75.00	-28.91	-1.90	0.00	-141.72	0.00	141.72	3,009.98	711.02	2,368.38	2,278.59	1.67	-0.22	0.045
80.00	-27.63	-1.88	0.00	-132.21	0.00	132.21	2,938.59	694.16	2,257.39	2,171.26	1.90	-0.23	0.043
85.00	-26.87	-1.86	0.00	-122.82	0.00	122.82	2,867.21	677.29	2,149.06	2,066.52	2.15	-0.25	0.042
88.00	-26.16	-1.84	0.00	-117.23	0.00	117.23	2,824.37	667.17	2,085.34	2,004.91	2.31	-0.26	0.041
90.00	-25.11	-1.82	0.00	-113.54	0.00	113.54	2,795.82	660.43	2,043.40	1,964.36	2.42	-0.26	0.040
93.00	-24.65	-1.80	0.00	-108.10	0.00	108.10	2,304.06	552.97	1,718.95	1,629.55	2.59	-0.27	0.043
95.00	-23.50	-1.77	0.00	-104.49	0.00	104.49	2,286.90	547.35	1,684.19	1,600.83	2.70	-0.28	0.042
100.00	-22.93	-1.75	0.00	-95.66	0.00	95.66	2,243.44	533.30	1,598.83	1,529.72	3.00	-0.29	0.040
102.50	-22.51	-1.74	0.00	-91.28	0.00	91.28	2,221.40	526.27	1,556.98	1,494.55	3.16	-0.30	0.039
102.50	-22.51	-1.74	0.00	-91.28	0.00	91.28	2,221.40	526.27	1,556.98	1,494.55	3.16	-0.30	0.071
105.00	-21.67	-1.71	0.00	-86.94	0.00	86.94	2,198.14	519.25	1,515.69	1,458.97	3.32	-0.31	0.069
110.00	-20.85	-1.68	0.00	-78.40	0.00	78.40	2,138.65	505.19	1,434.77	1,380.70	3.65	-0.34	0.067
115.00	-20.61	-1.67	0.00	-70.00	0.00	70.00	2,079.16	491.14	1,356.07	1,304.59	4.02	-0.36	0.064
116.50	-19.79	-1.64	0.00	-67.49	0.00	67.49	2,061.32	486.93	1,332.90	1,282.18	4.14	-0.37	0.062
120.00	-19.56	-1.63	0.00	-61.76	0.00	61.76	2,019.67	477.09	1,279.60	1,230.64	4.42	-0.39	0.060
121.00	-18.99	-1.60	0.00	-60.13	0.00	60.13	1,570.79	386.65	1,050.51	971.75	4.50	-0.40	0.074
125.00	-18.84	-1.60	0.00	-53.72	0.00	53.72	1,545.06	377.66	1,002.21	933.41	4.84	-0.42	0.070
126.00	-15.49	-1.41	0.00	-52.12	0.00	52.12	1,538.54	375.41	990.31	923.89	4.93	-0.42	0.066
130.00	-14.84	-1.37	0.00	-46.50	0.00	46.50	1,512.16	366.42	943.44	886.11	5.29	-0.44	0.062
135.00	-14.20	-1.33	0.00	-39.65	0.00	39.65	1,478.46	355.17	886.44	839.55	5.77	-0.47	0.057
140.00	-13.58	-1.29	0.00	-32.98	0.00	32.98	1,443.96	343.93	831.22	793.77	6.27	-0.49	0.051
145.00	-9.88	-1.01	0.00	-26.52	0.00	26.52	1,408.39	332.69	777.78	748.68	6.80	-0.52	0.042
149.00	-9.72	-1.00	0.00	-22.46	0.00	22.46	1,370.32	323.70	736.30	708.56	7.24	-0.53	0.039
150.00	-9.33	-0.97	0.00	-21.46	0.00	21.46	1,360.80	321.45	726.11	698.70	7.36	-0.54	0.038
152.50	-9.08	-0.95	0.00	-19.03	0.00	19.03	947.27	241.09	544.55	487.59	7.64	-0.55	0.049

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

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Customer: T-MOBILE

155.00	-8.59	-0.91	0.00	-16.65	0.00	16.65	936.35	236.87	525.67	473.48	7.93	-0.55	0.044
160.00	-8.11	-0.87	0.00	-12.10	0.00	12.10	913.91	228.44	488.92	445.55	8.52	-0.57	0.036
165.00	-7.92	-0.85	0.00	-7.76	0.00	7.76	890.67	220.01	453.50	418.07	9.13	-0.59	0.027
167.00	-3.71	-0.43	0.00	-6.06	0.00	6.06	881.14	216.64	439.70	407.21	9.37	-0.59	0.019
170.00	-3.39	-0.40	0.00	-4.77	0.00	4.77	866.62	211.58	419.41	391.06	9.75	-0.60	0.016
175.00	-3.03	-0.36	0.00	-2.79	0.00	2.79	841.76	203.15	386.65	364.58	10.38	-0.60	0.011
180.00	-2.85	-0.34	0.00	-1.01	0.00	1.01	816.11	194.71	355.22	338.67	11.01	-0.61	0.006
183.00	0.00	-0.31	0.00	0.00	0.00	0.00	800.33	189.66	337.01	323.41	11.39	-0.61	0.000

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

7/17/2020 6:02:25 AM

Customer: T-MOBILE

Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	30.68	0.00	78.46	0.00	0.00	4247.57	121.00	0.90
0.9D + 1.0W	30.64	0.00	58.83	0.00	0.00	4156.42	121.00	0.86
1.2D + 1.0Di + 1.0Wi	7.43	0.00	100.30	0.00	0.00	1017.39	121.00	0.24
1.2D + 1.0Ev + 1.0Eh	1.97	0.00	79.11	0.00	0.00	298.89	121.00	0.08
0.9D - 1.0Ev + 1.0Eh	1.97	0.00	54.58	0.00	0.00	290.82	121.00	0.07
1.0D + 1.0W	7.21	0.00	65.42	0.00	0.00	987.41	121.00	0.22

Site Number: 302535

Code: ANSI/TIA-222-H

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Site Name: Milford CT 2, CT

Engineering Number: 13251808_C3_04

7/17/2020 6:02:25 AM

Customer: T-MOBILE

Additional Steel Summary

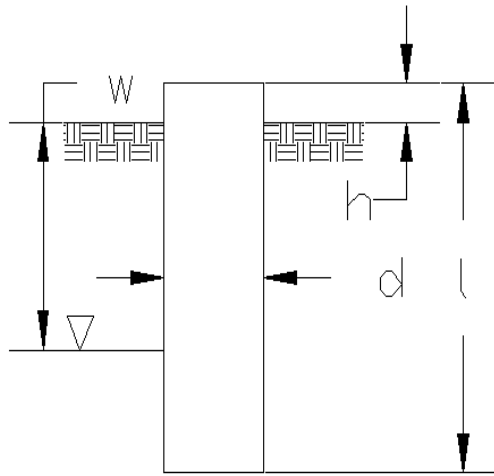
			Intermediate Connectors				Max Member		
Elev From (ft)	Elev To (ft)	Member	VQ/I (lb/in)	Shear Applied (kips)	Shear phiVn (kips)	Ratio	Pu (kip)	phiPn (kip)	Ratio
0.00	22.50	(4) SOL-#20 All Thread Bar	160.4	3.2	16.8	0.191	236.8	343.1	0.690
22.50	43.00	(4) SOL-#20 All Thread Bar	174.0	3.1	16.8	0.186	231.3	345.0	0.670
43.00	102.50	(4) SOL-#20 All Thread Bar	298.2	8.9	16.8	0.532	229.9	330.5	0.696

			Upper Termination Connectors				Lower Termination Connectors					
Elev From (ft)	Elev To (ft)	Member	MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Ratio	MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Ratio
0.00	22.50	(4) SOL-#20 All Thread Bar	0.0	12.0	0	0	0.000	0.0	12.0	0	0	0.000
22.50	43.00	(4) SOL-#20 All Thread Bar	0.0	12.0	0	0	0.000	0.0	12.0	0	0	0.000
43.00	102.50	(4) SOL-#20 All Thread Bar	185.3	12.0	16	16	0.965	0.0	12.0	0	0	0.000

Site Name: Milford CT2, CT
Site Number: 302535
Tower Type: MP
Design Base Loads (Factored) - Analysis per TIA-222-H Standards

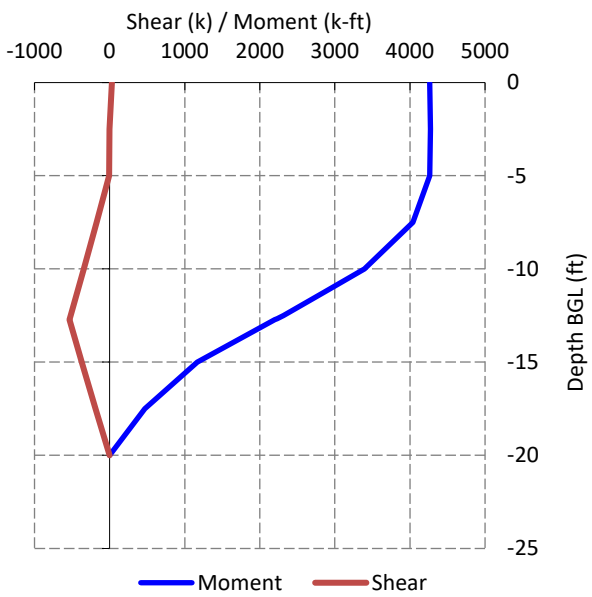
Pier Foundation Analysis

Foundation Analysis Parameters		
Analyze or Design a Foundation?	Analyze	-
Foundation Mapped:	N	-
Moment (M):	4,247.6	k-ft
Shear/Leg (V):	30.7	k
Axial Load (P):	78.5	k
Uplift/Leg (U):	0.0	k
Diameter of Caisson (d):	6	ft
Caisson Embedment (L-h):	20	ft
Caisson Height Above Ground (h):	0.5	ft
Depth Below Ground Surface to Water Table (w):	99	ft
Unit Weight of Concrete:	150	pcf
Unit Weight of Water:	62.4	pcf
Tension/Compression Skin Friction Factor:	1	-
Pullout Angle:	30	°



Depth (ft)		γ_{Soil} (pcf)	C_u (psf)	ϕ (degree)	Ultimate Skin Friction (psf)	Ultimate Bearing Pressure (psf)
Top	Bottom					
0	3.5	105	0	0	0	0
3.5	21	140	4,899	0	2,229	68,578

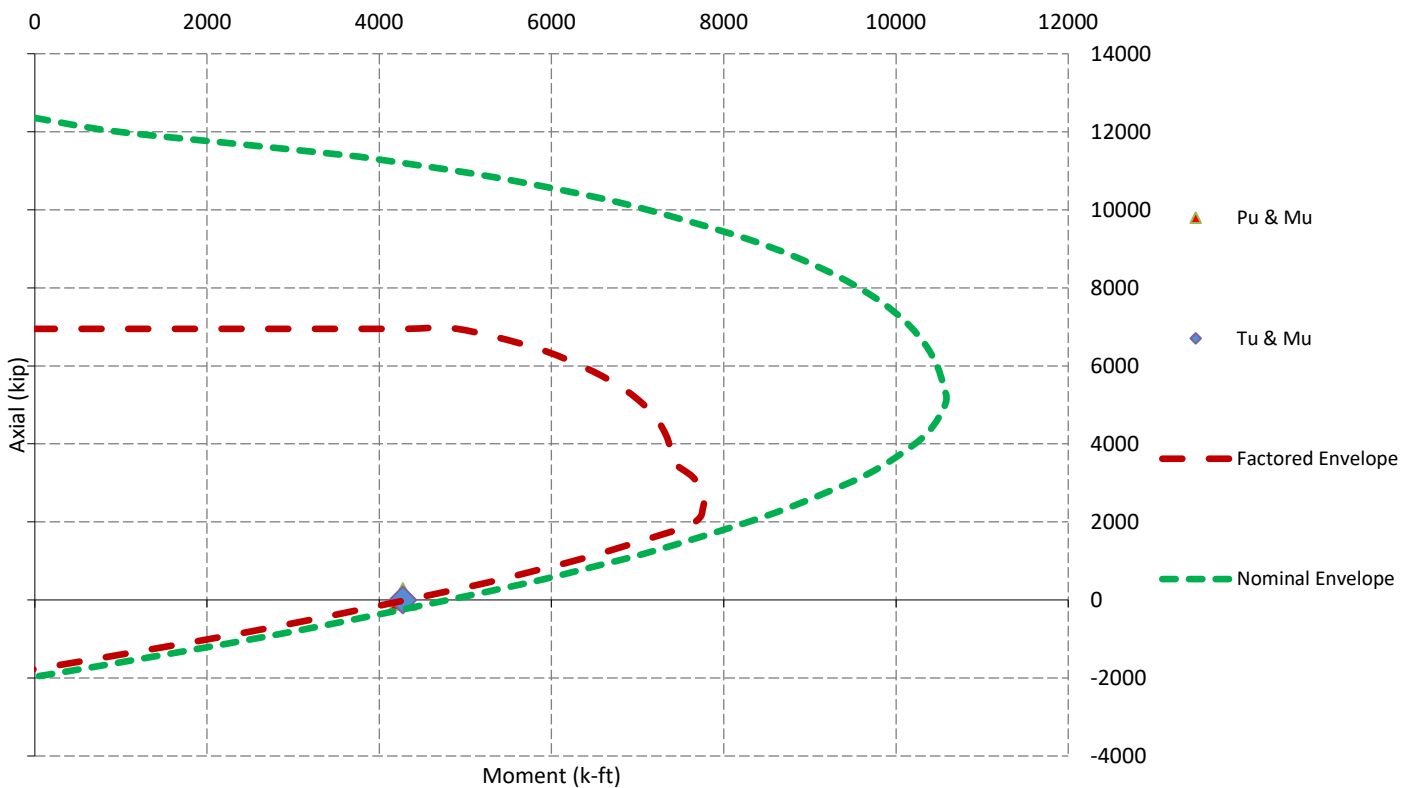
Soil Strength Capacities		
Required Embedment:	14.7	ft
Volume of Concrete:	579.6	ft ³
Buoyant Weight of Concrete:	86.9	k
Average Soil Unit Weight:	133.9	pcf
Skin Friction Resistance:	693.3	k
Compressive Bearing Resistance:	1939.0	k
Pullout Weight (Minus Concrete Weight):	665.2	k
Nominal Uplift Capacity per Leg ($f_s T_n$):	498.9	k
Nominal Compressive Capacity per Leg ($f_s P_n$):	1974.2	k
T_u :	0.00	k
$T_u/f_s T_n$:	0%	Pass
P_u :	89.4	k
$P_u/f_s P_n$:	5%	Pass
Total Lateral Resistance:	3392.9	k
Inflection Point (Below Ground Surface):	12.7	ft
Moment At Inflection Point (M_D):	4653.2	k-ft
Nominal Moment Capacity ($f_s M_n$):	9619.4	k-ft
f_s :	0.75	-
$M_D/f_s M_n$:	48%	Pass



Caisson Strength Capacities

Concrete Compressive Strength (f'_c):	3,000	psi	
Vertical Steel Rebar Size #:	11	-	
Vertical Steel Rebar Area:	1.56	in ²	
# of Vertical Steel Rebars:	21	-	
Vertical Steel Rebar Yield Strength (F_y):	60	ksi	
Horizontal Tie / Stirrup Size #:	4	-	
Horizontal Tie / Stirrup Area:	0.20	in ²	
Vertical Rebar Clear Cover:	3	in	
Design Horizontal Tie / Stirrup Spacing:	12	in	
Horizontal Tie / Stirrup Steel Yield Strength (F_y):	60	ksi	
Rebar Cage Diameter:	66.0	in	
Strength Bending/Tension Reduction Factor (f_b):	0.9	-	ACI 318-14 - 21.2.1 [Table 21.2.1 (a)]
Strength Shear Reduction Factor (f_v):	0.75	-	ACI 318-14 - 21.2.1 [Table 21.2.1 (b)]
Strength Compression Reduction Factor (f_c):	0.65	-	ACI 318-14 - 21.2.1 [Table 21.2.1 (a)]
Steel Elastic Modulus:	29000	ksi	
Design Moment (M_u):	4273.0	k-ft	
Nominal Moment Capacity ($f_b M_n$):	4310.3	k-ft	ACI 318-14 - 9.5.2/22.3
$M_u/f_b M_n$:	99%	Pass	
Design Tension (T_u):	0.0	k	
Nominal Tension Capacity ($f_T T_n$):	1769.0	k	
$T_u/f_T T_n$:	0%	Pass	
Design Compression (P_u):	89.4	k	
Nominal Compression Capacity ($f_p P_n$):	6377.5	k	ACI 318-14 - 22.4
$P_u/f_p P_n$:	1%	Pass	
Bending Reinforcement Ratio:	0.008	-	
$M_u/f_b M_n + T_u/f_T T_n$:	99%	Pass	ACI 318-14 - 10.6.1 & TIA-222-H - 9.4.1

Nominal and Factored Moment Capacity and Factored Design Loads





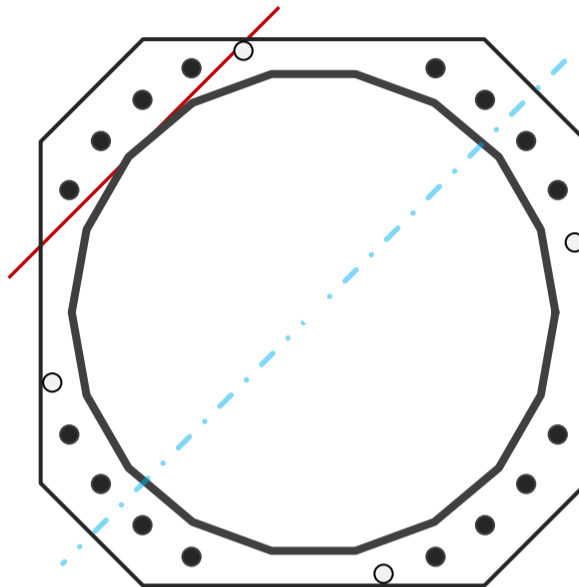
Base Plate & Anchor Rod Analysis

Pole Dimensions		
Number of Sides	18	-
Diameter	48.62	in
Thickness	1/2	in
Orientation Offset	0	°

Base Reactions		
Moment, Mu	4247.6	k-ft
Axial, Pu	78.5	k
Shear, Vu	30.7	k
Neutral Axis	45	°

Report Capacities		
Component	Capacity	Result
Base Plate	72%	Pass
Anchor Rods	66%	Pass
Dwyidag	53%	Pass

Base Plate		
Shape	Square	-
Width	56	in
Thickness	2 3/4	in
Grade	A572-50	
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Clip	10.5	in
Orientation Offset	0	°
Anchor Rod Detail	c	$\eta=0.55$
Clear Distance	N/A	in
Applied Moment, Mu	1865.0	k
Bending Stress, ϕMn	2580.1	k



Dwyidag Reinforcement		
Quantity	4	-
Bar Size	#20	in
Diameter, ϕ	2.5	in
Bracket Type	Angle	-
Circle	55.50	in
Orientation Offset	15	°
Applied Force, Pu	210.0	k
Dwyidag Bar, ϕPn	392.7	k

Cluster		
Arrangement	Cluster	-
Quantity	16	-
Diameter, ϕ	2 1/4	in
Bolt Circle	56	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	6.0	in
Orientation Offset	0	°
Applied Force, Pu	171.4	k
Anchor Rods, ϕPn	259.8	k

Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	30.7	3152.0	0.74
Anchor Rod Forces	30.7	3152.0	0.74
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	1095.5	0.26
Stiffener Forces	0.0	0.0	0.00

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in ²	in ²	in ⁴	#	in ⁴
Pole	75.2036	4.1780	0.3500		21773.35
Bolt	3.9761	3.2477	0.8393	4.5	20382.94
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	4.9087	4.9087	1.9175		7567.74
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate

Shape	Square	-
Width, W	56	in
Thickness, t	2.75	in
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Base Plate Chord	27.787	in
Detail Type	c	-
Detail Factor	0.55	-
Clear Distance	N/A	-

Anchor Rods

Anchor Rod Quantity, N	16	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	56	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	171.4	k
Applied Shear, Vu	0.3	k
Compressive Capacity, φPn	259.8	k
Tensile Capacity, φRnt	0.660	OK
Interaction Capacity	0.662	OK

External Base Plate

Chord Length AA	30.326	in
Additional AA	0.000	in
Section Modulus, Z	57.335	in ³
Applied Moment, Mu	1865.0	k-ft
Bending Capacity, φMn	2580.1	k-ft
Capacity, Mu/φMn	0.723	OK

Chord Length AB	29.572	in
Additional AB	0.000	in
Section Modulus, Z	55.910	in ³
Applied Moment, Mu	1612.4	k-ft
Bending Capacity, φMn	2515.9	k-ft
Capacity, Mu/φMn	0.641	OK

Bend Line Length	0.000	in
Additional Bend Line	0.000	in
Section Modulus, Z	0.000	in ³
Applied Moment, Mu	0.0	k-ft
Bending Capacity, φMn	0.0	k-ft
Capacity, Mu/φMn		

Internal Base Plate

Arc Length	0.000	in
Section Modulus, Z	0.000	in ³
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, φMn	0.0	k-ft
Capacity, Mu/φMn		

Dywidag Reinforcement

Dywidag Quantity, N	4	-
Dywidag Diameter, d	2.5	in
Bolt Circle, BC	55.5	in
Yield Strength, Fy	80	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	210.0	k
Compressive Capacity, φPn	392.7	k
Capacity, Pu/φPn	0.535	OK

Exhibit E

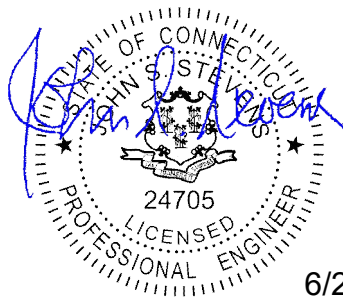
Mount Analysis

Mount Analysis Report

June 24, 2020

ATC Site Name	Milford CT 2, CT
ATC Site Number	302535
T-Mobile Site Name	Milford/ I-95/ X40/ Qua-1
T-Mobile Site Number	CT11020D
Infinigy Job Number	1009-Z0003-B
ATC Engineering Number	13251808-C8-02
Client	ATC
Carrier	T-Mobile
Site Location	185 Research Drive Milford, CT 06460 New Haven County 41° 14' 25.4" N NAD83 73° 00' 42.8" W NAD83
Mount Centerline EL.	145.0 ft
Mount Type	Platform w/ Handrails
Mount Usage Ratio	38.4%
Overall Result	Pass

Upon reviewing the results of this analysis, it is our opinion that the mount meets the specified TIA code requirements. The mounts and connections for the proposed carrier are therefore deemed adequate to support the final loading configuration as listed in this report.



6/24/2020

Brenden Archer
Project Engineer II

Contents

Introduction.....	3
Supporting Documentation.....	3
Analysis Code Requirements.....	3
Conclusion.....	3
Final Configuration Loading.....	4
Mount Usages.....	4
Mount Connection Usages.....	4
Assumptions and Limitations.....	5
Calculations.....	Appended

Introduction

Infinigy Engineering has been requested to perform a mount analysis on the existing T-Mobile mounts. All referenced supporting documents have been obtained from the client and are assumed to be accurate and applicable to this site. The mount was analyzed using RISA-3D Version 17.0.4 analysis software.

Supporting Documentation

Collocation Application	Coll App ID No. 13251808, dated June 12, 2020
Proposed Loading	T-Mobile RFDS Application ID No. CT11020D Anchor 3 draft 2020-05-05
Structural Analysis Report	ATC Engineering No. OAA735853-C3-04, dated April 25, 2019
Mount Specifications Drawings	Site Pro 1, Part No. RMQP-496-HK, dated July 14, 2014

Analysis Code Requirements

Wind Speed	120 mph (3-Second Gust)
Wind Speed w/ ice	50 mph (3-Second Gust) w/ 1" ice
TIA Revision	ANSI/TIA-222-H
Adopted IBC	2018 IBC
Risk Category	II
Exposure Category	B
Topographic Category	1
Calculated Crest Height	0.0 ft.
Spectral Response	$S_s = 0.200 \text{ g} / S_1 = 0.053 \text{ g}$
Site Class	D-Stiff Soil (Assumed)
HMSL	102.0 ft

Conclusion

Upon reviewing the results of this analysis, it is our opinion that the mount meets the specified TIA code requirements. The mounts and connections are therefore deemed adequate to support the final loading configuration as listed in this report.

If you have any questions, require additional information, or actual conditions differ from those as detailed in this report please contact me via the information below:

Brenden Archer
 Project Engineer II | **INFINIGY**
 1033 Watervliet Shaker Rd, Albany, NY 12205
 (518) 690-0790
barcher@infinigy.com | www.infinigy.com

Final Configuration Loading

Mount CL (ft)	Rad. HT (ft)	Horiz. O/S (ft)*	Qty	Appurtenance	Carrier
145.0	145.0	7.5	3	ERICSSON AIR 32 B2A/B66AA	T-Mobile
		10.5	3	ERICSSON AIR 21 B2A/B4P	
		1.5	3	ERICSSON AIR6449 B41	
		4.5	3	RFS APXVAARR24 43-U-NA20	
		7.5	3	ERICSSON KRY 112 489/2	
		10.5	3	ERICSSON RRUS 4415 B25	
		4.5	3	ERICSSON RRUS 4449 B71/B85A	

*Horizontal Offset is defined as the distance from the left most edge of the mount face horizontal when viewed facing the tower.

Mount Usages

Mount Pipe	38.4%	Pass
Horizontal	10.5%	Pass
Standoff	22.7%	Pass
Handrail	38.1%	Pass
RATING =	38.4%	Pass

Mount Connection Usages

Reaction Data	Design Capacity*	Analysis Reactions	Results
Max Tension (lbs.)	20,340.1	2,328.9	11.4%
Max Shear (lbs.)	13,805.8	456.7	3.3%
Combined Tension/Shear	--	--	1.0%

*Assumed (1) 5/8" A325 anchor bolt, (4) per mount to tower connection. Contractor to field verify anchor diameters prior to installation of proposed equipment.

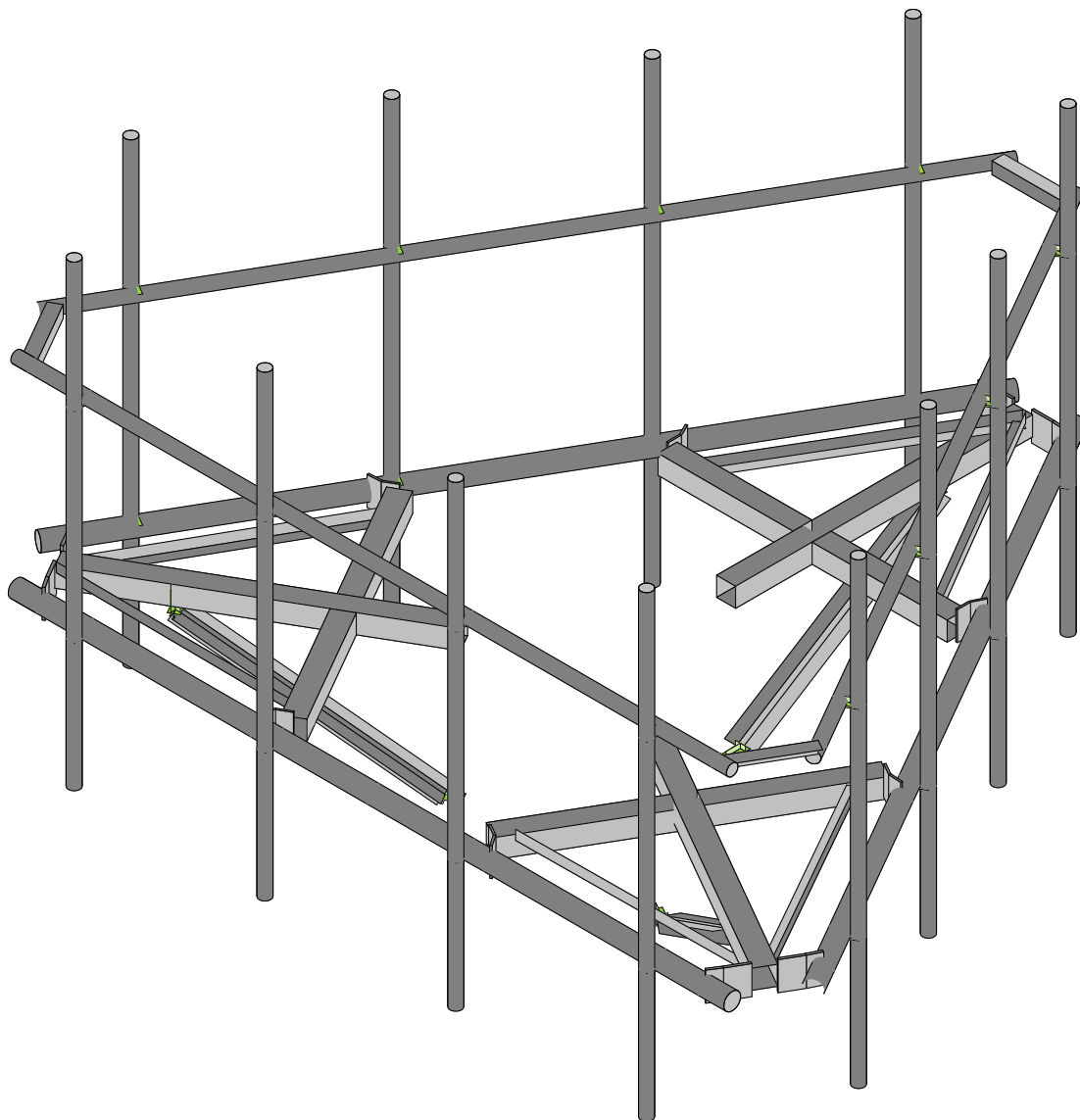
- Anchor reactions are acceptable per rigorous structural analysis.

Assumptions and Limitations

Our structural calculations are completed assuming all information provided to Infinigy Engineering is accurate and applicable to this site. For the purposes of calculations, we assume an overall structure condition of “like new” and all members and connections to be free of corrosion and/or structural defects. The structure owner and/or contractor shall verify the structure’s condition prior to installation of any proposed equipment. If actual conditions differ from those described in this report Infinigy Engineering should be notified immediately to complete a revised evaluation.

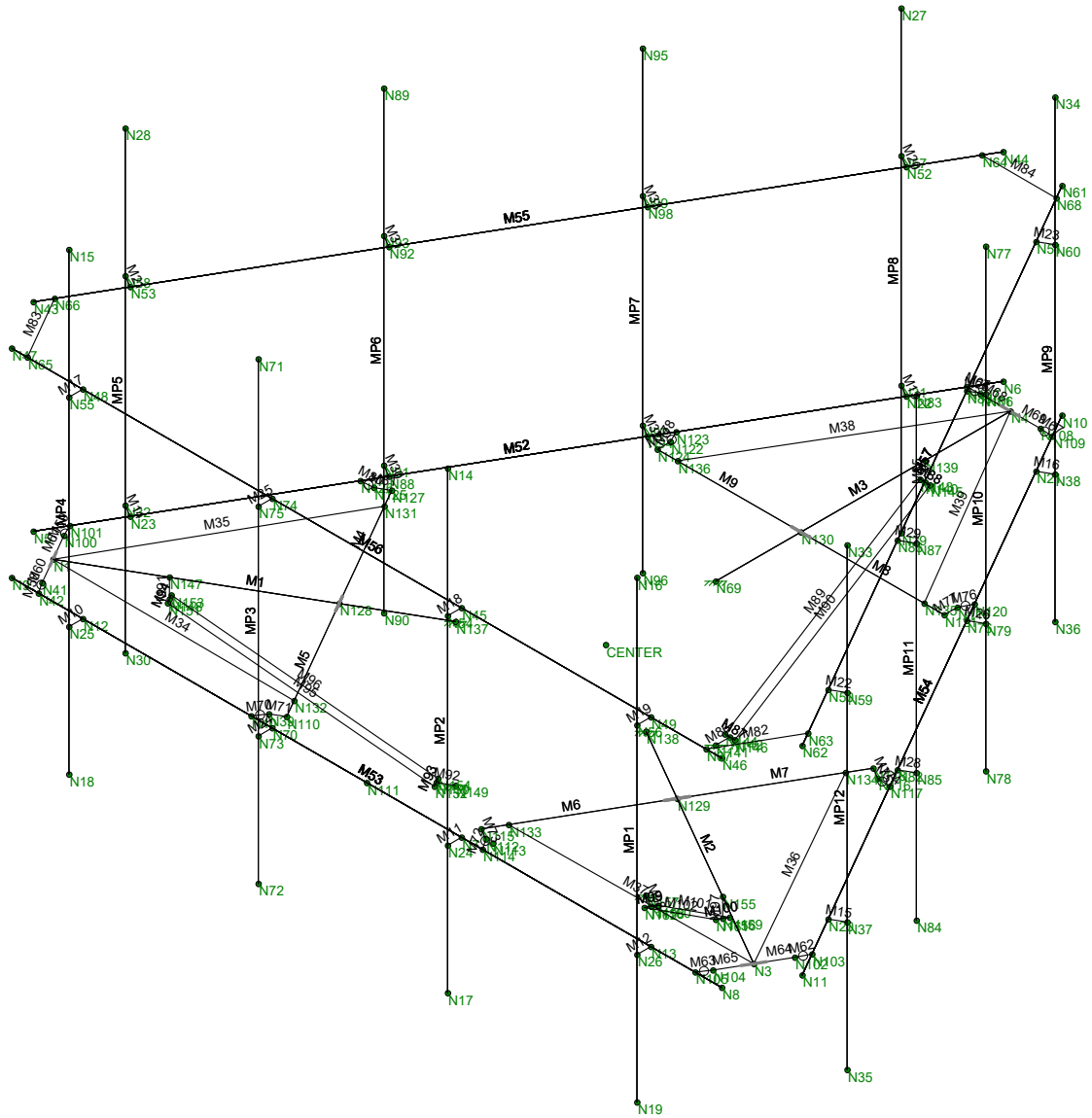
Our evaluation is completed using standard TIA, AISC, ACI, and ASCE methods and procedures. Our structural results are proprietary and should not be used by others as their own. Infinigy Engineering is not responsible for decisions made by others that are or are not based on our supplied assumptions and conclusions.

This report is an evaluation of the proposed carriers mount structure only and does not reflect adequacy of the existing tower, other mounts, or coax mounting attachments. These elements are assumed to be adequate for the purposes of this analysis and are assumed to have been installed per their manufacturer requirements.



Envelope Only Solution

Infinigy Engineering, LLP	Milford CT 2	Existing Configuration
BDA		June 24, 2020 at 11:31 AM
1009-Z0003-B		Milford CT 2_Existing_loaded.r3d



Envelope Only Solution

Infinigy Engineering, LLP

BDA

1009-Z0003-B

Milford CT 2

Existing Configuration

June 24, 2020 at 11:31 AM

Milford CT 2_Existing_loaded.r3d

Program Inputs

PROJECT INFORMATION		
Client:	ATC	
Carrier:	T-Mobile	
Engineer:	Brenden Archer	

SITE INFORMATION		
Risk Category:	II	
Exposure Category:	B	
Topo Factor Procedure:	Method 1, Category 1	
Site Class:	D - Stiff Soil	
Ground Elevation:	102	ft *Rev H

MOUNT INFORMATION		
Mount Type:	Platform	
Num Sectors:	3	
Centerline AGL:	145.0	ft
Tower Height AGL:	183.0	ft

TOPOGRAPHIC DATA		
Topo Feature:	N/A	
Slope Distance:	N/A	ft
Crest Distance:	N/A	ft
Crest Height:	N/A	ft

FACTORS		
Directionality Fact. (K_d):	0.95	
Ground Ele. Factor (K_e):	1.00	*Rev H Only
Rooftop Speed-Up (K_s):	1.00	*Rev H Only
Topographic Factor (K_{zt}):	1.00	
Gust Effect Factor (G_h):	1.0	

CODE STANDARDS		
Building Code:	2018 IBC	
TIA Standard:	TIA-222-H	
ASCE Standard:	ASCE 7-16	

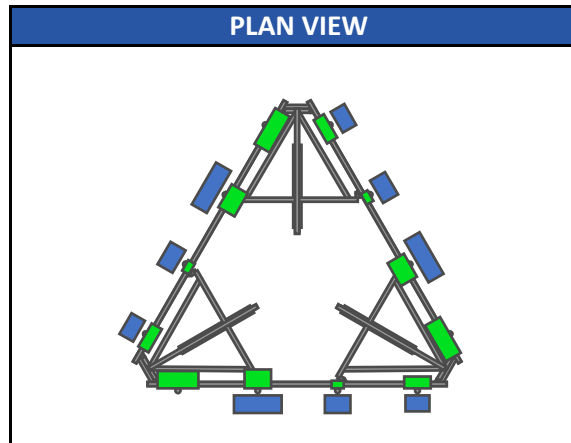
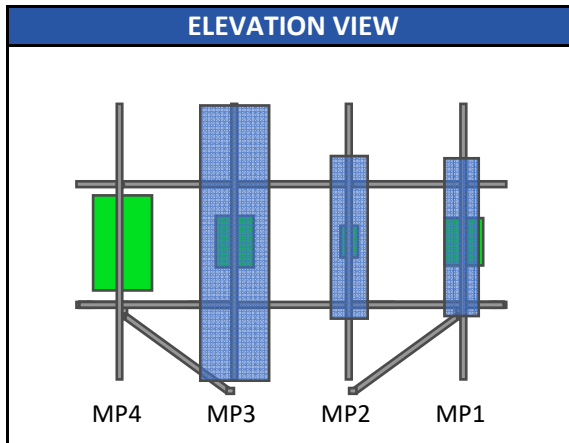
WIND AND ICE DATA		
Ultimate Wind (V_{ult}):	120	mph
Design Wind (V):	N/A	mph
Ice Wind (V_{ice}):	50	mph
Base Ice Thickness (t_i):	1	in
Flat Pressure:	76.69	psf
Round Pressure:	46.01	psf
Ice Wind Pressure:	7.99	psf

SEISMIC DATA		
Short-Period Accel. (S_s):	0.20	g
1-Second Accel. (S_1):	0.05	g
Short-Period Design (S_{DS}):	0.21	
1-Second Design (S_{D1}):	0.08	
Short-Period Coeff. (F_a):	1.60	
1-Second Coeff. (F_v):	2.40	
Amplification Factor (a_p):	1.00	
Response Mod. (R_p):	2.50	
Overstrength (Ω_o):	1.00	



Infinigy Load Calculator V2.1.4

Program Inputs



Infinigy Load Calculator V2.1.4

APPURTENANCE INFORMATION												
Appurtenance Name	Elevation	Qty.	K_a	q_z (psf)	EPA_N (ft ²)	EPA_T (ft ²)	Wind F_z (lbs)	Wind F_x (lbs)	Weight (lbs)	Seismic F (lbs)	Member (α sector)	
ERICSSON AIR -32 B2A/B66AA	145.0	3	0.90	38.34	6.51	4.71	224.65	162.62	132.20	14.10	MP2	
ERICSSON AIR 21 B2A/B4P	145.0	3	0.90	38.34	5.92	4.22	204.44	145.60	83.00	8.85	MP1	
ERICSSON AIR6449 B41	145.0	3	0.90	38.34	5.68	2.49	196.08	85.95	104.00	11.09	MP4	
RFS/CELWAVE APXVAARR24_43-U-NA2C	145.0	3	0.90	38.34	14.69	6.87	507.05	237.19	96.80	10.33	MP3	
ERICSSON TME-KRY 112 489/2	145.0	3	0.90	38.34	0.56	0.37	19.30	12.60	15.40	1.64	MP2	
ERICSSON TME-RRUS 4415 B25	145.0	3	0.90	38.34	1.84	0.82	63.58	28.30	46.00	4.91	MP1	
ERICSSON TME-RADIO 4449	145.0	3	0.90	38.34	1.98	1.41	68.33	48.66	70.00	7.47	MP3	

Material Takeoff (Continued)

	Material	Size	Pieces	Length[in]	Weight[LB]
7	Q235-GB	PIPE_2.0	15	1602	463.356
8	Q235-GB	PIPE_3.0	3	450	264.141
9	Q345	6"x1/2" Plate	12	42.3	35.943
10	Q345	L2.5x2.5x4	9	339.8	114.656
11	Q345	L2x2x3	6	308.1	63.082
12	Q345	PL6x.375	12	32.7	20.879
13	Total HR Steel		66	3131.4	1302.801

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed Area(Me... Surface(...
1	Self Weight	DL		-1			33	4
2	Wind Load AZI 0	WLZ					66	
3	Wind Load AZI 30	None					66	
4	Wind Load AZI 60	None					66	
5	Wind Load AZI 90	WLX					66	
6	Wind Load AZI 120	None					66	
7	Wind Load AZI 150	None					66	
8	Wind Load AZI 180	None					66	
9	Wind Load AZI 210	None					66	
10	Wind Load AZI 240	None					66	
11	Wind Load AZI 270	None					66	
12	Wind Load AZI 300	None					66	
13	Wind Load AZI 330	None					66	
14	Distr. Wind Load Z	WLZ						102
15	Distr. Wind Load X	WLX						102
16	Ice Weight	OL1					33	102 4
17	Ice Wind Load AZI 0	OL2					66	
18	Ice Wind Load AZI 30	None					66	
19	Ice Wind Load AZI 60	None					66	
20	Ice Wind Load AZI 90	OL3					66	
21	Ice Wind Load AZI 120	None					66	
22	Ice Wind Load AZI 150	None					66	
23	Ice Wind Load AZI 180	None					66	
24	Ice Wind Load AZI 210	None					66	
25	Ice Wind Load AZI 240	None					66	
26	Ice Wind Load AZI 270	None					66	
27	Ice Wind Load AZI 300	None					66	
28	Ice Wind Load AZI 330	None					66	
29	Distr. Ice Wind Load Z	OL2						102
30	Distr. Ice Wind Load X	OL3						102
31	Seismic Load Z	ELZ			-1.07		33	
32	Seismic Load X	ELX	-1.07				33	
33	Service Live Loads	LL						3
34	Maintenance Load 1	LL				1		
35	Maintenance Load 2	LL				1		
36	Maintenance Load 3	LL				1		
37	Maintenance Load 4	LL				1		
38	Maintenance Load 5	LL				1		
39	Maintenance Load 6	LL				1		
40	Maintenance Load 7	LL				1		
41	Maintenance Load 8	LL				1		
42	Maintenance Load 9	LL				1		
43	Maintenance Load 10	LL				1		
44	Maintenance Load 11	LL				1		
45	Maintenance Load 12	LL				1		

Bolt Calculation Tool, V1.4

PROJECT DATA	
Site Name:	Ridgrest GA
Site Number:	29300
Job Code:	1009-Z0003-B
Connection Description:	Standoff to Collar

APPLIED LOADS		
Bolt Tension:	2328.86	lbs
Bolt Shear:	456.65	lbs

BOLT PROPERTIES		
Bolt Type:	Bolt	-
Bolt Diameter:	0.625	in
Bolt Grade:	A325	-
# of Bolts:	4	-
Threads Excluded?	No	-

BOLT CHECK		
Tensile Strength	20340.15	
Shear Strength	13805.83	
Tensile Usage	11.4%	
Shear Usage	3.3%	
Interaction Check	0.01	≤1.05
Result	Pass	

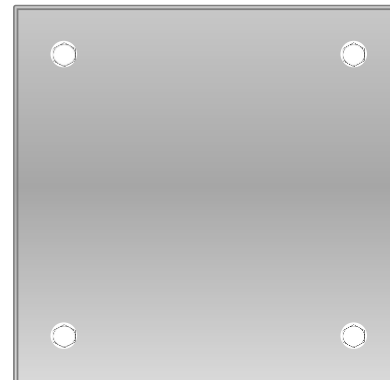


Exhibit F

Power Density/RF Emissions Report

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

T-Mobile Existing Facility

Site ID: CT11020D

Milford/ I-95/ X40/ Qua_I
185 Research Drive
Milford, Connecticut 06460

August 18, 2020

EBI Project Number: 6220004025

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	21.95%

August 18, 2020

T-Mobile

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

Emissions Analysis for Site: CT11020D - Milford/ I-95/ X40/ Qua_1

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **185 Research Drive in Milford, 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 185 Research Drive in Milford, 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 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

- 6) 4 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 7) 2 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.
- 8) 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.
- 9) 2 LTE channels (BRS Band - 2500 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 10) 2 NR channels (BRS Band - 2500 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 11) 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.
- 12) 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.
- 13) The antennas used in this modeling are the Ericsson AIR 32 for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz channel(s), the Ericsson AIR 21 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s) in Sector A, the Ericsson AIR 32 for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz channel(s), the Ericsson AIR 21 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 MHz channel(s) in Sector B, the Ericsson AIR 32 for the 1900 MHz / 2100 MHz channel(s), the RFS APXVAARR24_43-U-NA20 for the 600 MHz / 600 MHz / 700 MHz / 1900 MHz channel(s), the Ericsson AIR 21 for the 1900 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6449 for the 2500 MHz / 2500 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.

- 14) The antenna mounting height centerline of the proposed antennas is 145 feet above ground level (AGL).
- 15) 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.
- 16) 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 / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 2100 MHz
Gain:	15.35 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.85 dBd	Gain:	15.35 dBd / 15.85 dBd
Height (AGL):	145 feet	Height (AGL):	145 feet	Height (AGL):	145 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts
ERP (W):	8,728.31	ERP (W):	8,728.31	ERP (W):	8,728.31
Antenna A1 MPE %:	1.49%	Antenna B1 MPE %:	1.49%	Antenna C1 MPE %:	1.49%
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 / 1900 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz	Frequency Bands:	600 MHz / 600 MHz / 700 MHz / 1900 MHz
Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd	Gain:	12.95 dBd / 12.95 dBd / 13.35 dBd / 15.65 dBd
Height (AGL):	145 feet	Height (AGL):	145 feet	Height (AGL):	145 feet
Channel Count:	7	Channel Count:	7	Channel Count:	7
Total TX Power (W):	320 Watts	Total TX Power (W):	320 Watts	Total TX Power (W):	320 Watts
ERP (W):	8,466.41	ERP (W):	8,466.41	ERP (W):	8,466.41
Antenna A2 MPE %:	2.41%	Antenna B2 MPE %:	2.41%	Antenna C2 MPE %:	2.41%
Antenna #:	3	Antenna #:	3	Antenna #:	3
Make / Model:	Ericsson AIR 21	Make / Model:	Ericsson AIR 21	Make / Model:	Ericsson AIR 21
Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	1900 MHz / 1900 MHz / 2100 MHz
Gain:	15.35 dBd / 15.35 dBd / 15.35 dBd	Gain:	15.35 dBd / 15.35 dBd / 15.35 dBd	Gain:	15.35 dBd / 15.35 dBd / 15.35 dBd
Height (AGL):	145 feet	Height (AGL):	145 feet	Height (AGL):	145 feet
Channel Count:	8	Channel Count:	8	Channel Count:	8
Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts	Total TX Power (W):	240 Watts
ERP (W):	8,226.43	ERP (W):	8,226.43	ERP (W):	8,226.43
Antenna A3 MPE %:	1.41%	Antenna B3 MPE %:	1.41%	Antenna C3 MPE %:	1.41%
Antenna #:	4	Antenna #:	4	Antenna #:	4
Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449
Frequency Bands:	2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz	Frequency Bands:	2500 MHz / 2500 MHz
Gain:	22.05 dBd / 22.05 dBd	Gain:	22.05 dBd / 22.05 dBd	Gain:	22.05 dBd / 22.05 dBd
Height (AGL):	145 feet	Height (AGL):	145 feet	Height (AGL):	145 feet
Channel Count:	4	Channel Count:	4	Channel Count:	4
Total TX Power (W):	160 Watts	Total TX Power (W):	160 Watts	Total TX Power (W):	160 Watts
ERP (W):	25,651.93	ERP (W):	25,651.93	ERP (W):	25,651.93
Antenna A4 MPE %:	4.39%	Antenna B4 MPE %:	4.39%	Antenna C4 MPE %:	4.39%

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Max at Sector A):	9.69%
AT&T	3.14%
Computer Hospital	0.51%
Metro PCS	0.43%
Sprint	2.09%
Nextel	0.18%
Clearwire	0.06%
Verizon	5.85%
Site Total MPE % :	21.95%

T-Mobile MPE % Per Sector	
T-Mobile Sector A Total:	9.69%
T-Mobile Sector B Total:	9.69%
T-Mobile Sector C Total:	9.69%
Site Total MPE % :	21.95%

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 LTE	2	2056.61	145.0	7.03	1900 MHz LTE	1000	0.70%
T-Mobile 2100 MHz LTE	2	2307.55	145.0	7.89	2100 MHz LTE	1000	0.79%
T-Mobile 600 MHz LTE	2	591.73	145.0	2.02	600 MHz LTE	400	0.51%
T-Mobile 600 MHz NR	1	1577.94	145.0	2.70	600 MHz NR	400	0.67%
T-Mobile 700 MHz LTE	2	648.82	145.0	2.22	700 MHz LTE	467	0.48%
T-Mobile 1900 MHz LTE	2	2203.69	145.0	7.54	1900 MHz LTE	1000	0.75%
T-Mobile 1900 MHz GSM	4	1028.30	145.0	7.03	1900 MHz GSM	1000	0.70%
T-Mobile 1900 MHz UMTS	2	1028.30	145.0	3.52	1900 MHz UMTS	1000	0.35%
T-Mobile 2100 MHz UMTS	2	1028.30	145.0	3.52	2100 MHz UMTS	1000	0.35%
T-Mobile 2500 MHz LTE	2	6412.98	145.0	21.93	2500 MHz LTE	1000	2.19%
T-Mobile 2500 MHz LTE	2	6412.98	145.0	21.93	2500 MHz LTE	1000	2.19%
						Total:	9.69%

• 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:	9.69%
Sector B:	9.69%
Sector C:	9.69%
T-Mobile Maximum MPE % (Sector A):	9.69%
Site Total:	21.95%
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **21.95%** 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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- 2. Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
- 3. GETTING YOUR SHIPMENT TO UPS**
Customers with a Daily Pickup
 Your driver will pickup your shipment(s) as usual.

Customers without a Daily Pickup

Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.

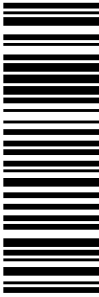
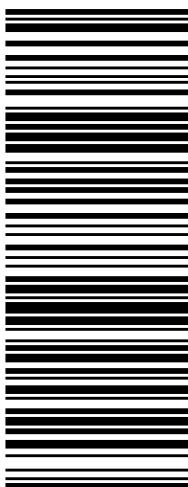

Schedule a same day or future day Pickup to have a UPS driver pickup all your CampusShip packages. Hand the package to any UPS driver in your area.

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<p style="text-align: right;">1 OF 1</p> <p>1 LBS</p> <p>CENTERLINE COMMUNICATIONS 5082655599 CENTERLINE CORPORATE 95 RYAN DR. RAYNHAM MA 02767</p> <p>SHIP TO: PATRICK MASSEY, PM, SITE DEVT. AMERICAN TOWER CORP 10 PRESIDENTIAL WAY WOBURN MA 01801-1053</p>	<p style="font-size: 2em;">MA 018 9-04</p> 	<p style="font-size: 1.5em;">UPS GROUND</p> <p>TRACKING #: 1Z 9Y4 503 03 0149 2374</p> 	<p style="text-align: center;">BILLING: P/P</p> <p>Reference # 1: CT11020D - CSC to ATC</p> <p style="font-size: 0.8em;">CS 22.0.12. WNTNV50 31.0A 07/2020*</p> 
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Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Thursday, September 10, 2020 10:33 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030301492374



Hello, your package has been delivered.

Delivery Date: Thursday, 09/10/2020

Delivery Time: 10:31 AM

Left At: FRONT DESK

Signed by: ANCRI

CENTERLINE SITE ACQUISITION

Tracking Number: [1Z9Y45030301492374](#)

Ship To: AMERICAN TOWER CORP
10 PRESIDENTIAL WAY
WOBURN, MA 018011053
US

Number of Packages: 1

UPS Service: UPS Ground

Package Weight: 0.2 LBS

Reference Number: CT11020D - CSC TO ATC



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Customers without a Daily Pickup

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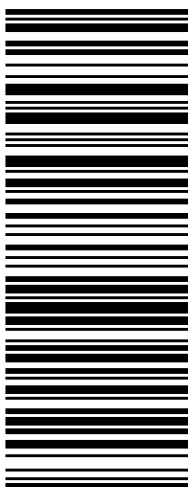

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<p style="text-align: right;">1 OF 1</p> <p style="text-align: center;">1 LBS</p> <p>CENTERLINE COMMUNICATIONS 5082655599 CENTERLINE CORPORATE 95 RYAN DR. RAYNHAM MA 02767</p> <p>SHIP TO: HON. BENJAMIN G. BLAKE, MAYOR CITY OF MILFORD 110 RIVER STREET MILFORD CT 06460-3318</p>	<p style="font-size: 2em;">CT 066 9-05</p> 	<p style="font-size: 1.5em;">UPS GROUND</p> <p>TRACKING #: 1Z 9Y4 503 03 1996 9380</p> 	<p style="text-align: center;">BILLING: P/P</p> <p>Reference # 1: CT11020D - CSC to City CS 22.0.12. WNTNV50 31.0A 07/2020*</p> 
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Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Thursday, September 10, 2020 1:35 PM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030319969380



Hello, your package has been delivered.

Delivery Date: Thursday, 09/10/2020

Delivery Time: 01:33 PM

Left At: FRONT DESK

Signed by: KENN

CENTERLINE SITE ACQUISITION

Tracking Number: [1Z9Y45030319969380](#)

Ship To: CITY OF MILFORD
110 RIVER STREET
MILFORD, CT 064603318
US

Number of Packages: 1

UPS Service: UPS Ground

Package Weight: 0.2 LBS

Reference Number: CT11020D - CSC TO CITY



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Customers without a Daily Pickup

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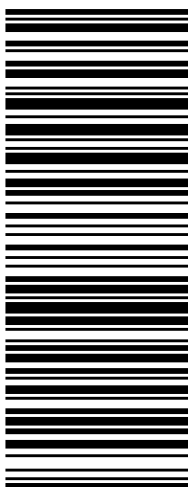
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<p style="text-align: right;">1 OF 1</p> <p style="text-align: center;">1 LBS</p> <p>CENTERLINE COMMUNICATIONS 5082655599 CENTERLINE CORPORATE 95 RYAN DR. RAYNHAM MA 02767</p> <p>SHIP TO: DAVID B. SULKIS, CITY PLANNER CITY OF MILFORD 70 WEST RIVER STREET MILFORD CT 06460-3317</p>	<p style="font-size: 2em;">CT 066 9-05</p> 	<p style="font-size: 1.5em;">UPS GROUND</p> <p>TRACKING #: 1Z 9Y4 503 03 1384 8397</p> 	<p style="text-align: center;">BILLING: P/P</p> <p style="text-align: center;">Reference # 1: CT11020D - CSC to P&Z</p> <p style="font-size: 0.8em;">CS 22.0.12. WNTNV50 31.0A 07/2020*</p>
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Jennifer Iliades

From: UPS Quantum View <pkginfo@ups.com>
Sent: Thursday, September 10, 2020 11:01 AM
To: Jennifer Iliades
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030313848397



Hello, your package has been delivered.

Delivery Date: Thursday, 09/10/2020

Delivery Time: 10:59 AM

Left At: FRONT DESK

Signed by: SIG ON FILE

CENTERLINE SITE ACQUISITION

Tracking Number: [1Z9Y45030313848397](#)

Ship To: CITY OF MILFORD
70 WEST RIVER STREET
MILFORD, CT 064603317
US

Number of Packages: 1

UPS Service: UPS Ground

Package Weight: 0.2 LBS

Reference Number: CT11020D - CSC TO P&Z



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