

August 20, 2021

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

Re: Notice of Exempt Modifications – AT&T Site S1175
AT&T Telecommunications Facility @ 32 Norfolk Road, Winsted, CT 06098

Dear Ms. Bachman,

New Cingular Wireless, PCS, LLC (“AT&T”) is proposing a wireless telecommunications facility on an existing +/- 150 feet monopine tower at the above referenced address (Latitude = 41.94019, Longitude = - 73.0959) and within the existing 50’ x 75’ fenced compound. Said monopine tower is owned and operated by American Tower Corporation.

AT&T desires to modify the existing telecommunications facility by: installing a WIC (Walk-In Cabinet) and a Generator on proposed concrete pads inside a 20’ x 10’ ground space within the existing compound and install (6) antennas, (9) RRUS Radios, (1) Squid and mounts/cabling on the existing tower at 137’ as more particularly detailed and described on the enclosed Construction Drawings prepared by Dewberry Engineers, Inc., dated August 5, 2021. The overall height of the existing tower is and will remain at 155 feet and no changes will be made to the compound dimensions.

Please accept this letter as notification pursuant to R.C.S.A §16-50j-73 for construction that constitutes an exempt modification pursuant to R.C.S.A §16-50j-72(b)(2). In accordance with R.C.S.A §16-50j-73, a copy of this letter is being sent to the following individuals: American Tower Corporation as Tower Operator/Owner; WIN 21 LLC as Property Owner; Joshua Kelly as Town Manager of the Town of Winchester and Pamela Colombie as ZEO for the Town of Winchester.

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 (FCC) safety standard. *Please see the RF emissions calculation for AT&T's modified facility enclosed herewith.*
5. The proposed modifications will NOT cause an ineligibile 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 April 6, 2021 prepared by American Tower Corporation enclosed herewith.

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

If you have any questions, please feel free to contact me.

Sincerely,

Kimberly Revak

Site Acquisition Consultant – Agent for AT&T
Centerline Communications, LLC
38 Treeline Court
Fishkill, NY 12524
Phone: (845) 242-6152
krevak@clinellc.com

Enclosures: Exhibit 1 – Property Card and GIS
 Exhibit 2 – Construction Drawings dated 08/05/21
 Exhibit 3 – Structural Analysis Report
 Exhibit 4 – Antenna Mount Analysis Report
 Exhibit 5 – NIER Study Report
 Exhibit 6 – Original Tower Approval
 Exhibit 7 – (4) Notice Confirmations

Cc: American Tower Corporation – Tower Operator/Owner
 WIN 21 LLC – Property Owner
 Joshua Kelly – Town Manager of the Town of Winchester
 Pamela Colombie – ZEO for the Town of Winchester

Exhibit 1

Property Card and GIS



32 NORFOLK RD

Property Detail

Current Owner

Name: WIN 21 LLC

Mailing Address: 156 ROOSEVELT DR
SEYMOUR, CT 6483

Physical Address: 32 NORFOLK RD

Property ID #: 016 152 026-1

Total Acres: 56

Zoning: RR

Deed Book No: 417

Deed Book Page: 888

Valuation and Sales

Land	Building	Total Value
\$116,210	\$13,790	\$130,000
Sale Price	Sale Date	
N/A	04/07/2014	

Building

Year Built: 2009

House Style: Warehse Prefab

Residential Area: 360

Story Height: 1

Number of Rooms: 0

Building Area: 720

32 NORFOLK RD

Location 32 NORFOLK RD

Mblu 016/ 152/ 026-1/ /

Acct# 005370

Owner WIN 21 LLC

Assessment \$130,000

Appraisal \$497,900

PID 4218

Building Count 1

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2018	\$19,700	\$478,200	\$497,900

Assessment			
Valuation Year	Improvements	Land	Total
2018	\$13,790	\$116,210	\$130,000

Owner of Record

Owner WIN 21 LLC

Sale Price \$0

Co-Owner

Certificate

Address 156 ROOSEVELT DR
SEYMOUR, CT 06483

Book & Page 0417/0888

Sale Date 04/07/2014

Instrument 03

Ownership History

Ownership History					
Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
WIN 21 LLC	\$0		0417/0888	03	04/07/2014
WIN 21 LLC	\$85,000		00324/0277	00	06/06/2003
HORNE JONATHAN A	\$0		00216/0006		06/29/1989

Building Information

Building 1 : Section 1

Year Built: 2009
Living Area: 360
Replacement Cost
Less Depreciation: \$19,700

Building Attributes

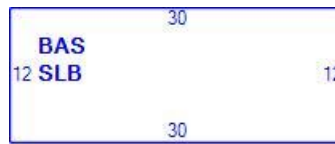
Field	Description
Style:	Warehse Prefab
Model	Comm/Ind
Grade	Good
Stories:	1
Occupancy	1.00
Exterior Wall 1	Pre-cast Concr
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Metal/Tin
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concrete Slab
Interior Floor 2	
Heating Fuel	Gas/Oil
Heating Type	Hot Air-no Duc
AC Type	None
Struct Class	
Bldg Use	Tele Tower
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	
Heat/AC	NONE
Frame Type	MASONRY
Baths/Plumbing	NONE
Ceiling/Wall	NONE
Rooms/Prtns	LIGHT
Wall Height	12.00
% Comn Wall	

Building Photo



(<http://images.vgsi.com/photos/WinchesterCTPhotos//default.jpg>)

Building Layout



(ParcelSketch.ashx?)

pid=4218&bid=5192)

Building Sub-Areas (sq ft)			<u>Legend</u>
Code	Description	Gross Area	Living Area
BAS	First Floor	360	360
SLB	Slab	360	0
		720	360

Extra Features

Extra Features	<u>Legend</u>
No Data for Extra Features	

Land

Land Use

Use Code 4310

Land Line Valuation

Size (Acres) 56

Description Tele Tower
Zone RR
Alt Land Appr No
Category

Depth
Assessed Value \$116,210
Appraised Value \$478,200

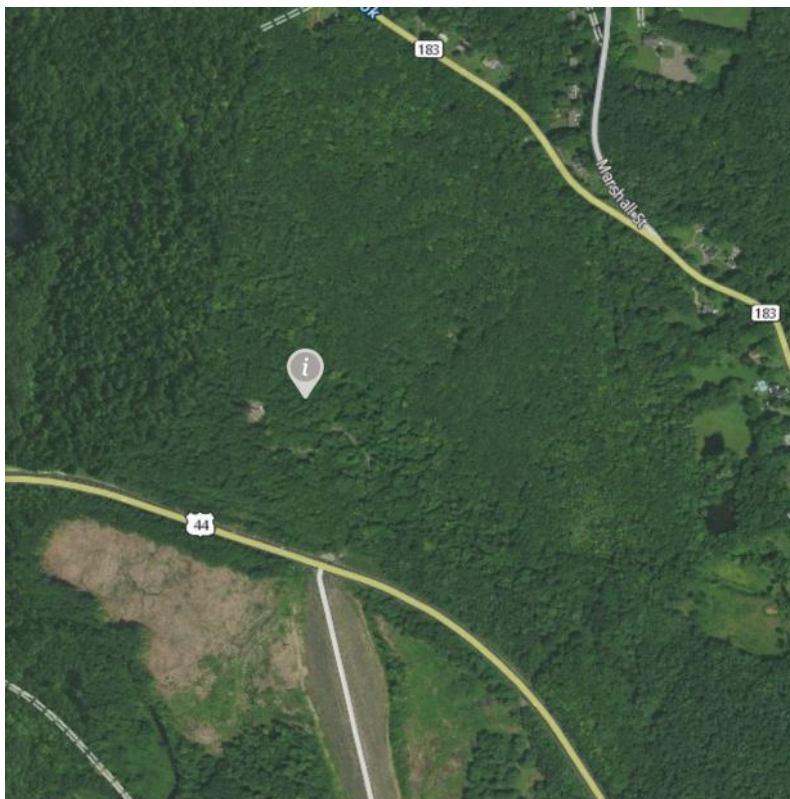
Outbuildings

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

Valuation History

Appraisal			
Valuation Year	Improvements	Land	Total
2020	\$19,700	\$478,200	\$497,900
2017	\$19,700	\$478,200	\$497,900
2016	\$19,800	\$408,700	\$428,500

Assessment			
Valuation Year	Improvements	Land	Total
2020	\$13,790	\$116,210	\$130,000
2017	\$13,790	\$116,210	\$130,000
2016	\$13,860	\$63,380	\$77,240



32 Norfolk Road, Winsted, Connecticut 06098, United States

Overview Range Radius

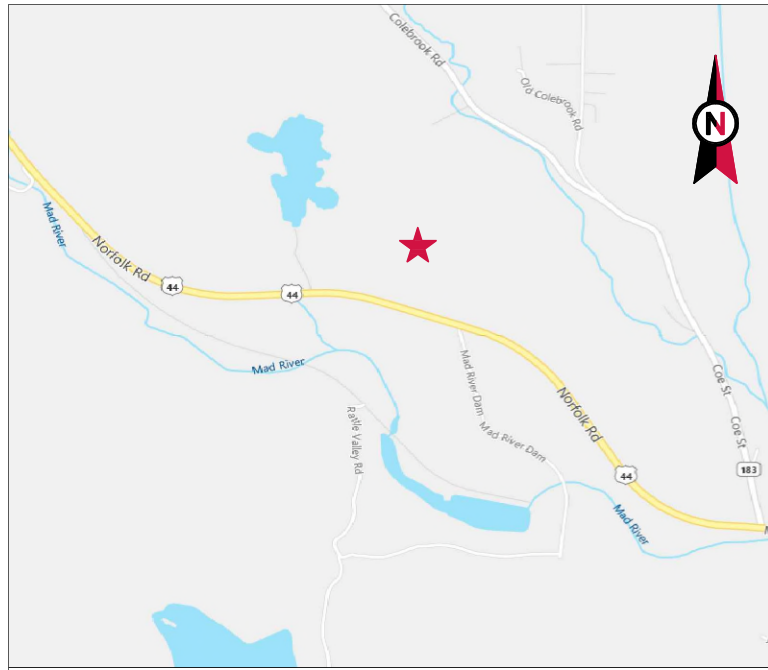
 **Lat/Long** 41.94036, -73.09510

[Copy](#)

 **Elevation** 1121 ft

Exhibit 2

Construction Drawings
(dated 08/05/21)



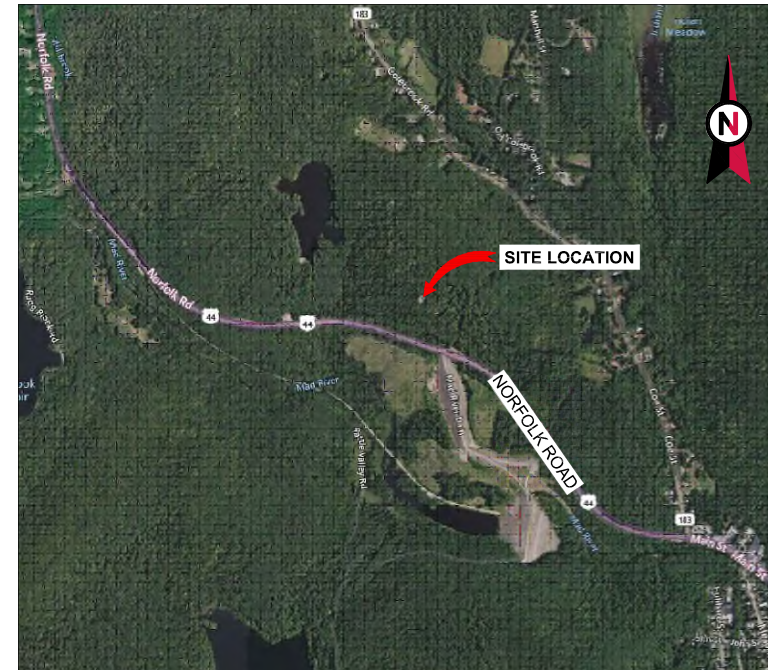
VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: WINCHESTER PCS CT
 ATC SITE NUMBER: 413849
 AT&T PACE NUMBER: MRCTB050163
 AT&T SITE ID: S1175
 AT&T FA CODE: 10577780
 AT&T SITE NAME: S1175
 SITE ADDRESS: 32 NORFOLK ROAD
 WINSTED, CT 06098

AT&T MOBILITY 13626831 COLOCATION PLAN
 5G NR RADIO/5G NR 1DR-1 CONFIGURATION



LOCATION MAP



Dewberry®
 Dewberry Engineers Inc.
 99 SUMMER STREET
 SUITE 700
 BOSTON, MA 02110
 PHONE: 617.531.0801
 FAX: 617.695.3310

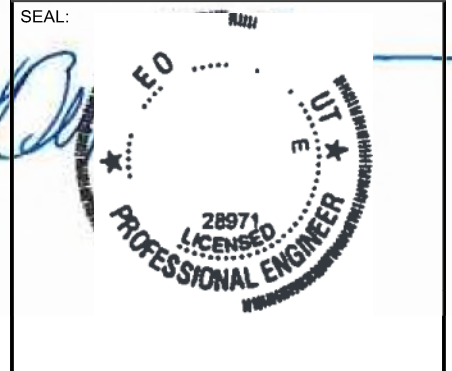
REV.	DESCRIPTION	BY	DATE
A	PRELIM	MR	04/27/21
0	FINAL	MR	06/01/21
1	FINAL	MR	08/05/21

ATC SITE NUMBER:
413849

ATC SITE NAME:
WINCHESTER PCS CT

AT&T MOBILITY SITE NAME:
MRCTB050163


SITE ADDRESS:
32 NORFOLK ROAD
WINSTED, CT 06098



DATE DRAWN:	04/23/21
ATC JOB NO:	13626831
CUSTOMER ID:	MRCTB050163
CUSTOMER #:	S1175

TITLE SHEET

SHEET NUMBER: G-001	REVISION: 1
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<p>COMPLIANCE CODE</p> <p>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.</p> <ol style="list-style-type: none"> 2018 CONNECTICUT STATE BUILDING CODE-AMENDMENTS TO IBC 2015 INTERNATIONAL BUILDING CODE 2015, INTERNATIONAL CODE COUNCIL TIA-222-G-4, STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES, AMERICAN SOCIETY OF CIVIL ENGINEERS STEEL CONSTRUCTION MANUAL 14TH EDITION, AMERICAN INSTITUTE OF STEEL CONSTRUCTION CITY/COUNTY ORDINANCES
<p>UTILITY COMPANIES</p> <p>POWER COMPANY: XXXXXXXX PHONE: (XXX) XXX-XXXX</p> <p>TELEPHONE COMPANY: N/A PHONE: N/A</p>


<p>PROJECT SUMMARY</p> <p><u>SITE ADDRESS:</u> 32 NORFOLK ROAD WINSTED, CT 06098 COUNTY: LITCHFIELD</p> <p><u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.94019 LONGITUDE: -73.0959 GROUND ELEVATION: 1143' AMSL</p>	<p>PROJECT TEAM</p> <table border="0"> <tr> <td><u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801</td> <td><u>APPLICANT:</u> AT&T MOBILITY 550 COCHITUATE ROAD SUITES 13 & 14 FRAMINGHAM, MA 01701</td> </tr> <tr> <td><u>ENGINEER:</u> DEWBERRY ENGINEERS INC. 99 SUMMER STREET SUITE 700 BOSTON, MA 02110 PHONE: 617.695.3400 FAX: 617.695.3310</td> <td><u>PROPERTY OWNER:</u> WIN 21 LLC 156 ROOSEVELT DR. SEYMOUR, CT 06483</td> </tr> </table>	<u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801	<u>APPLICANT:</u> AT&T MOBILITY 550 COCHITUATE ROAD SUITES 13 & 14 FRAMINGHAM, MA 01701	<u>ENGINEER:</u> DEWBERRY ENGINEERS INC. 99 SUMMER STREET SUITE 700 BOSTON, MA 02110 PHONE: 617.695.3400 FAX: 617.695.3310	<u>PROPERTY OWNER:</u> WIN 21 LLC 156 ROOSEVELT DR. SEYMOUR, CT 06483
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<p>PROJECT DESCRIPTION</p> <p>THE PROPOSED PROJECT INCLUDES INSTALLING A WIC (WALK-IN CABINET) AND A GENERATOR ON PROPOSED CONCRETE PADS INSIDE A 20' X 10' GROUND SPACE WITHIN THE EXISTING COMPOUND, AND INSTALLING NEW EQUIPMENT AND MOUNTS ON THE EXISTING TOWER.</p>	<p>PROJECT NOTES</p> <ol style="list-style-type: none"> THE FACILITY IS UNMANNED. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. HANDICAP ACCESS IS NOT REQUIRED. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLOCATION REMOVAL AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR 1.61000 (B)(7).
<p>PROJECT LOCATION DIRECTIONS</p> <p>FROM EAST HARTFORD TAKE 84 WEST. MERGE ONTO ROUTE 8 NORTH AND HEAD TO THE END. TAKE THE EXIT TOWARDS U.S. 44 W. AND MAKE A RIGHT. TAKE U.S. 44 WEST FOR ROUGHLY 4 MILES, YOU WILL SEE A TALL TREE POLE ON THE RIGHT DRIVEWAY, IS RIGHT AFTER RIGHT LANE ENDS 700 FT. YELLOW SIGN METAL GATE TO ACCESS ROAD. FOLLOW DRIVEWAY UP THE HILL GATE COMBO IS 4467.</p>	

PROJECT DESCRIPTION		SHEET INDEX				
SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:		
G-001	TITLE SHEET	1	08/05/21	MR		
G-002	GENERAL NOTES	1	08/05/21	MR		
C-001	OVERALL SITE PLAN	1	08/05/21	MR		
C-101	DETAILED SITE PLAN	1	08/05/21	MR		
C-201	TOWER ELEVATION	1	08/05/21	MR		
C-401	ANTENNA INFORMATION & SCHEDULE	1	08/05/21	MR		
C-501	MOUNT DETAILS	1	08/05/21	MR		
C-502	CONSTRUCTION DETAILS	1	08/05/21	MR		
C-503	CONSTRUCTION DETAILS	1	08/05/21	MR		
S-501	CONSTRUCTION DETAILS	1	08/05/21	MR		
E-101	GROUNDING DETAILS & ELECTRICAL SCHEMATIC	1	08/05/21	MR		
E-501	GROUNDING DETAILS	1	08/05/21	MR		
E-601	PANEL SCHEDULE	1	08/05/21	MR		
R-601	SUPPLEMENTAL					
R-602	SUPPLEMENTAL					
R-603	SUPPLEMENTAL					
R-604	SUPPLEMENTAL					

GENERAL CONSTRUCTION NOTES:

- OWNER FURNISHED MATERIALS, AT&T MOBILITY "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
 - BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
 - AC/TELCO INTERFACE BOX (PPC)
 - ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
 - TOWERS, MONOPOLES
 - TOWER LIGHTING
 - GENERATORS & LIQUID PROPANE TANK
 - ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
 - ANTENNAS (INSTALLED BY OTHERS)
 - TRANSMISSION LINE
 - TRANSMISSION LINE JUMPERS
 - TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
 - TRANSMISSION LINE GROUND KITS
 - HANGERS
 - HOISTING GRIPS
 - BTS EQUIPMENT
- 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 AT&T MOBILITY TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
- ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSIEIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
- CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
- 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.
- DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
- DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
- CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
- INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE AT&T MOBILITY REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE AT&T MOBILITY REP PRIOR TO PROCEEDING.
- EACH CONTRACTOR SHALL COOPERATE WITH THE AT&T MOBILITY REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
- CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE AT&T MOBILITY CONSTRUCTION MANAGER.
- ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
- WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE AT&T MOBILITY REP AND ENGINEER OF RECORD IMMEDIATELY.
- CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
- CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
- CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
- CONTRACTOR SHALL FURNISH AT&T MOBILITY AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
- PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T MOBILITY 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.

- PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH AT&T MOBILITY REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY AT&T MOBILITY MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
- CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH AT&T MOBILITY SPECIFICATIONS AND REQUIREMENTS.
- CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO AT&T MOBILITY FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO AT&T MOBILITY SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
- 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.
- CONTRACTOR SHALL NOTIFY AT&T MOBILITY 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.
- 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.
- 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.
- 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 AT&T MOBILITY REP. ANY WORK FOUND BY THE AT&T MOBILITY REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
- 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.
- AT&T MOBILITY FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE AT&T MOBILITY 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.
- AT&T MOBILITY 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 AT&T MOBILITY OR THEIR ARCHITECT/ENGINEER.

STRUCTURAL STEEL NOTES:

- STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
- STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
 - ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
 - ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
 - ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
 - ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
 - ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
- ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
- ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVALITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
- DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
- CONNECTIONS:

- ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
- ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
- INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
- IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
- ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
- MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
- PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVALITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE REQUIRED DURING CONSTRUCTION UNTIL ALL CONNECTIONS ARE COMPLETE.
- ANY FIELD CHANGES OR SUBSTITUTIONS SHALL HAVE PRIOR APPROVAL FROM THE ENGINEER, AND T- MOBILE PROJECT MANAGER IN WRITING

SPECIAL CONSTRUCTION

ANTENNA INSTALLATION NOTES:

- WORK INCLUDED:
 - ANTENNA AND COAXIAL CABLES ARE FURNISHED BY AT&T MOBILITY 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
 - INSTALL ANTENNA AS INDICATE ON DRAWINGS AND AT&T MOBILITY SPECIFICATIONS.
 - INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
 - INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.
 - 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.
 - 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.
 - ANTENNA AND COAXIAL CABLE GROUNDING:

CONCRETE AND REINFORCING STEEL NOTES:

- DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
- MIX DESIGN SHALL BE APPROVED BY AT&T MOBILITY REP PRIOR TO PLACING CONCRETE.
- CONCRETE SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINED (+/- 1.5%) WITH A SLUMP RANGE OF 3-6" AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED.
- THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT: ASTM C150, TYPE 2

REINFORCEMENT: ASTM A185, PLAIN STEEL WELDED WIRE FABRIC

REINFORCEMENT BARS: ASTM A615, GRADE 60, DEFORMED

NORMAL WEIGHT AGGREGATE: ASTM C33

WATER: ASTM C 94/C 94M

WELDED WIRE FABRIC: ASTM A185

ADMIXTURES:

-WATER-REDUCING AGENT: ASTM C 494/C 494M, TYPE A
-AIR-ENTERING AGENT: ASTM C 260/C 260M
-SUPERPLASTICIZER: ASTM C494, TYPE F OR TYPE G
-RETARDING: ASTM C 494/C 494M, TYPE B

- MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE NO LESS THAN 3".
- A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR APPROVAL FROM AN ATC ENGINEER WHEN DRILLING HOLES IN CONCRETE.
- ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN "METHOD 1" OF ACI 301.
- DO NOT WELD OR TACK WELD REINFORCING STEEL.
- ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
- REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
- DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
- FOR COLD-WEATHER (ACI 306) AND HOT-WEATHER (ACI 301M) CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.
- ALL CONCRETE SHALL HAVE A "SMOOTH FORM FINISH."
- SPLICING OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPLICED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.
- DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
- ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.
- LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS.
- SPLICES OF WWF, AT ALL SPLICED EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 6".
- BAR SUPPORTS SHALL BE ALL-GALVANIZED METAL WITH PLASTIC TIPS.
- ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE OF SUFFICIENT STRENGTH FOR INTENDED PURPOSE, BUT NOT LESS THAN NO. 18 GAUGE.
- SLAB ON GROUND: COMPACT STRUCTURAL FILL TO 95% DENSITY AND THEN PLACE 6" GRAVEL BENEATH SLAB.

ELECTRICAL NOTES:

- ELECTRICAL DESIGN SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR. STRUCTURAL DESIGN SHALL BE PERFORMED BY GENERAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH ALL APPLICABLE LOCAL AND STATE CODES AND NATIONAL ELECTRICAL CODE.
- ALL SUGGESTED ELECTRICAL ELEMENTS (SUCH AS BREAKER SIZES, WIRE SIZES, CONDUITS SIZES ARE FOR ZONING PURPOSES ONLY. IT IS THE RESPONSIBILITY TO OF THE ELECTRICAL CONTRACTOR TO CONFIRM COMPLIANCE WITH LOCAL ELECTRICAL CODES AND PASS ALL APPLICABLE AND NECESSARY INSPECTIONS. IN SOME EVENTS, IT MAY BE NECESSARY TO PERFORM AN ELECTRICAL LOAD STUDY TO VERIFY THE CAPACITY OF THE EXISTING SERVICE. THIS IS NOT THE RESPONSIBILITY OF CONCORDIA. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
- CONTRACTOR SHALL FIELD LOCATE ALL BELOW GRADE GROUND LINES AND UTILITY LINES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR RELOCATION OF ALL UTILITIES AND GROUND LINES THAT MAY BECOME DISTURBED OR CONFLICTING IN THE COURSE OF CONSTRUCTION.

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.



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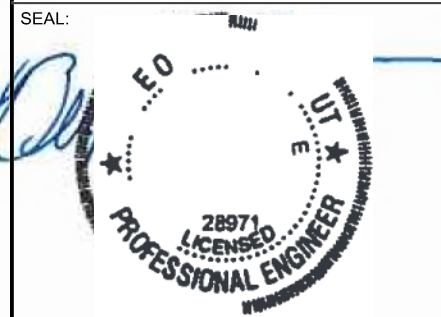
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0	FINAL	MR	06/01/21
1	FINAL	MR	08/05/21

ATC SITE NUMBER:
413849

ATC SITE NAME:
WINCHESTER PCS CT

AT&T MOBILITY SITE NAME:
MRCTB050163

SITE ADDRESS:
32 NORFOLK ROAD
WINSTED, CT 06098



DATE DRAWN:	04/23/21
ATC JOB NO:	13626831
CUSTOMER ID:	MRCTB050163
CUSTOMER #:	S1175

GENERAL NOTES

SHEET NUMBER:
G-002

REVISION:
1

NOTES:

- BOUNDARY LINES OBTAINED FROM TOWN OF WINSTED, CT ONLINE GIS.



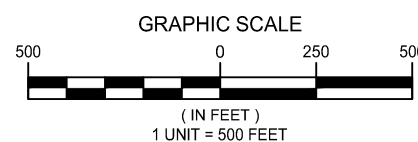
LEGEND

- EXISTING PROPERTY LINE
- - - EXISTING ADJACENT PROPERTY LINE
- - - EXISTING LEASE AREA
- - - EXISTING EASEMENT
- ○ ○ EXISTING WOOD FENCE
- ○ ○ EXISTING WIRE FENCE
- ○ ○ EXISTING METAL FENCE
- +— EXISTING GUARD RAIL
- x- EXISTING CHAINLINK FENCE
- x— EXISTING ROAD (DIRT)
- +— EXISTING ROAD (STONE)
- +— EXISTING ROAD (PAVED)

NOTES:

- DEWBERRY WAS NOT CONTRACTED TO PERFORM ANY BOUNDARY AND TOPOGRAPHIC SURVEY ON THIS SITE.

1 OVERALL SITE PLAN



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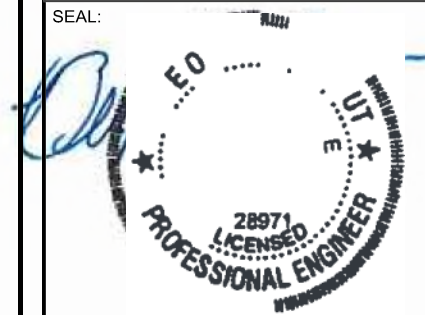
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MRCTB050163

SITE ADDRESS:
32 NORFOLK ROAD
WINSTED, CT 06098

SEAL:



DATE DRAWN:	04/23/21
ATC JOB NO:	13626831
CUSTOMER ID:	MRCTB050163
CUSTOMER #:	S1175

OVERALL SITE PLAN

SHEET NUMBER: C-001	REVISION: 1
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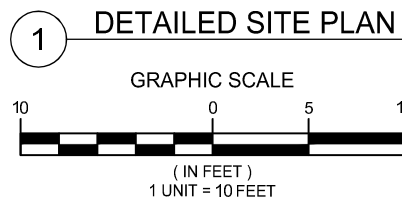
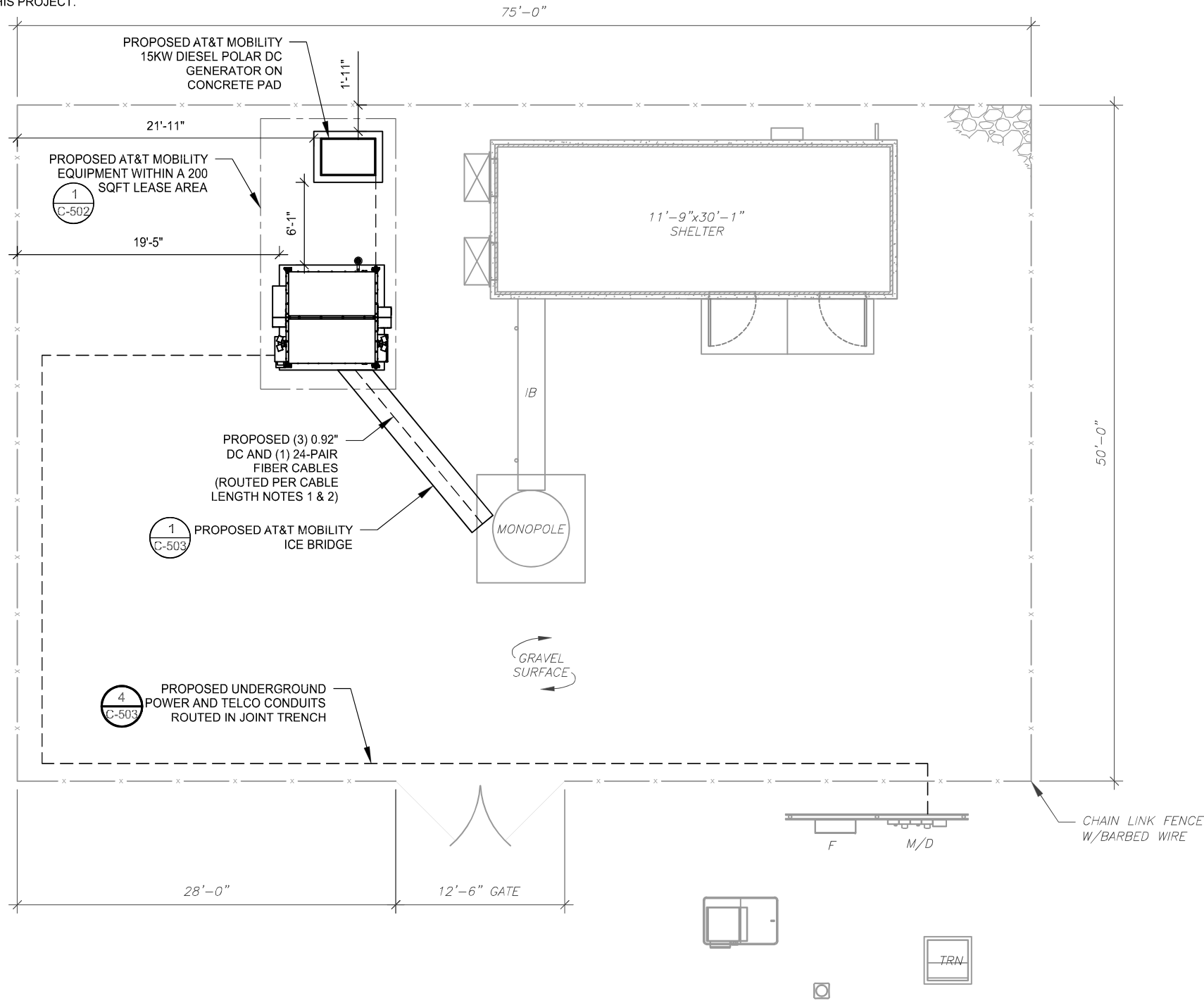
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SITE PLAN NOTES:

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 AT&T MOBILITY 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 130'. 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®

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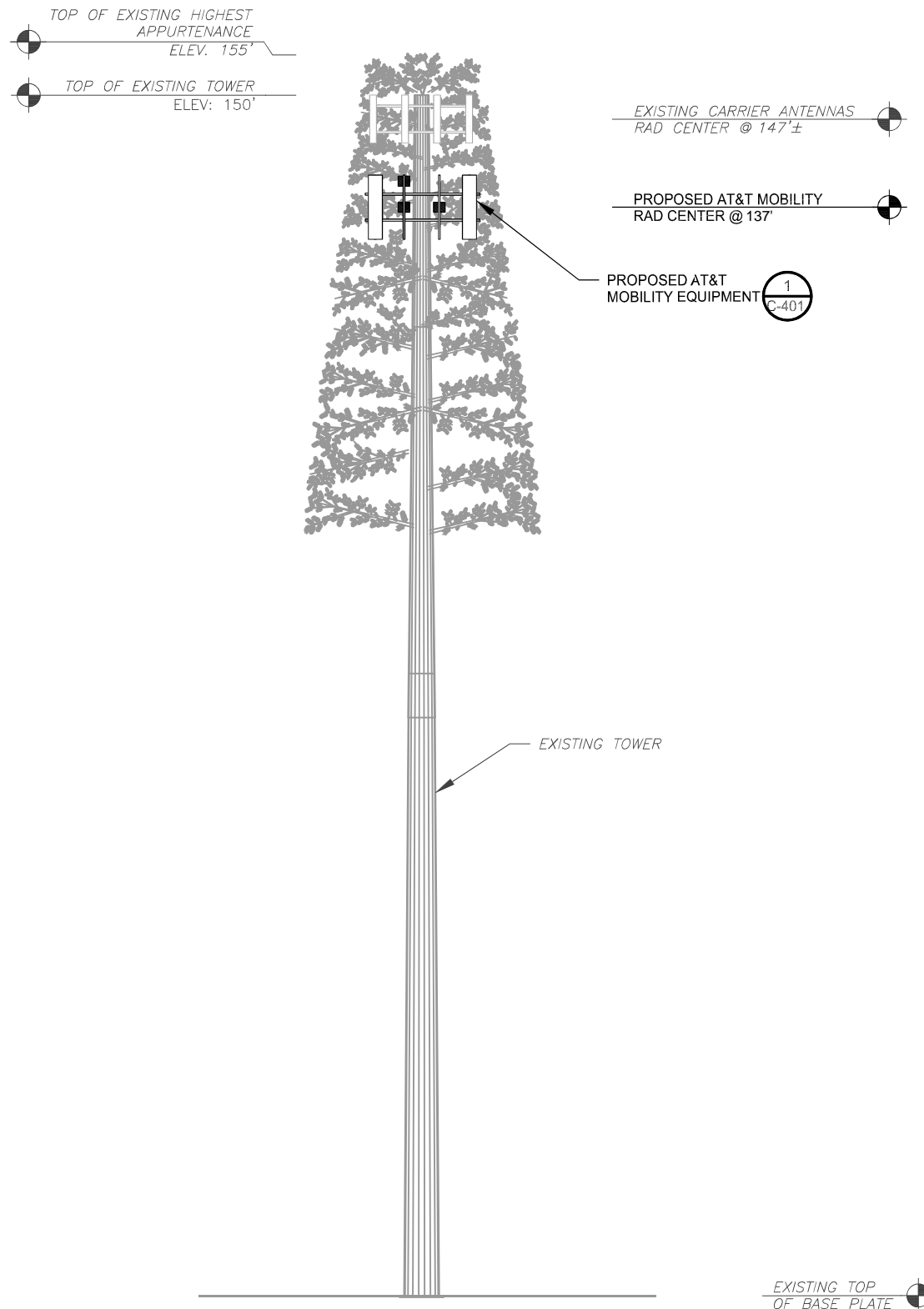
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DATE DRAWN: 04/23/21
ATC JOB NO: 13626831
CUSTOMER ID: MRCTB050163
CUSTOMER #: S1175

DETAILED SITE PLAN	
SHEET NUMBER: C-101	REVISION: 1

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1 TOWER ELEVATION
SCALE: N.T.S.

ATC HAS NOT ANALYZED THE PROPOSED ANTENNA MOUNT(S) TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR PROPOSED CARRIER LOADING AS SHOWN. CONSTRUCTION IS NOT TO PROCEED WITHOUT A PASSING MOUNT ANALYSIS REPORT.

EXISTING RAD CENTER SHOWN AS APPROXIMATE. AT&T REQUIRES 3'-0" MIN. VERTICAL SEPARATION FROM BOTTOM/TOP OF ADJACENT CARRIER ANTENNAS. CONTRACTOR TO VERIFY EXISTING RAD HEIGHT TO ENSURE SPACING REQUIREMENTS ARE MET PRIOR TO CONSTRUCTION

- TOWER NOTE:**
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT 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.
 - WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
 - 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.)
 - DEWBERRY HAS NOT BEEN CONTRACTED TO PERFORM A MOUNT ANALYSIS AT THIS SITE. CONSTRUCTION IS NOT TO PROCEED WITHOUT A PASSING MOUNT ANALYSIS REPORT FOR THE PROPOSED CARRIER LOADING.



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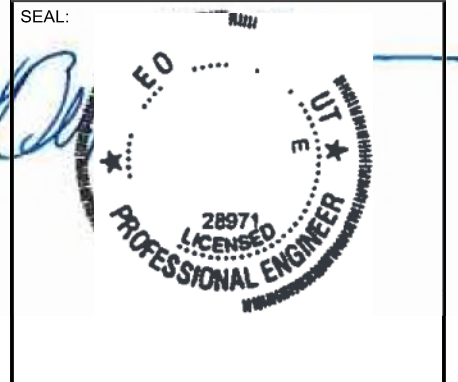
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CUSTOMER #:	S1175

TOWER ELEVATION

SHEET NUMBER: C-201	REVISION: 1
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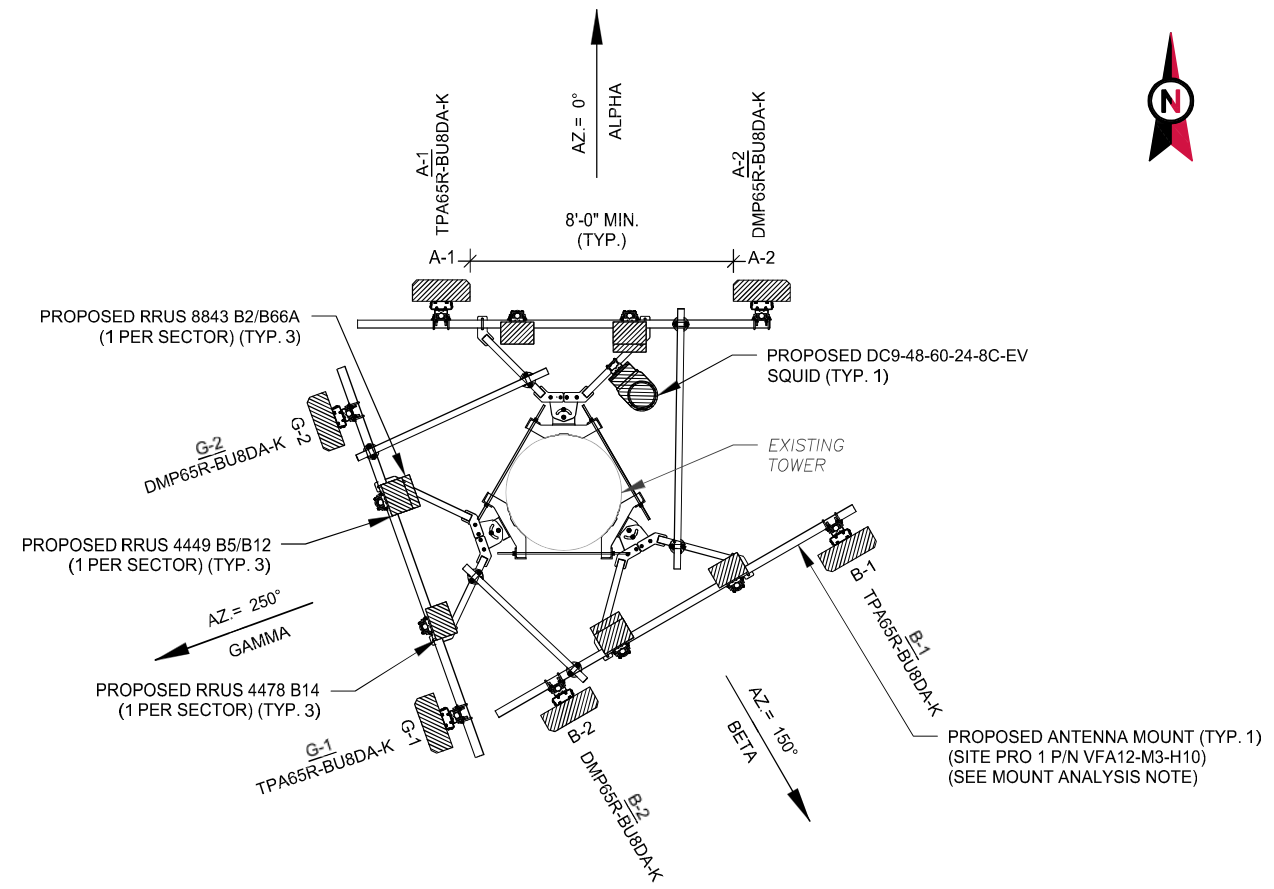
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ATC HAS NOT ANALYZED THE PROPOSED ANTENNA MOUNT(S) TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR PROPOSED CARRIER LOADING AS SHOWN. CONSTRUCTION IS NOT TO PROCEED WITHOUT A PASSING MOUNT ANALYSIS REPORT.



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

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	137'	0°	A1	TPA-65R-BU8DA-K	AWS/WCS	0/2	ADD	RRUS 4478 B14	ADD
			A2	DMP65R-BU8DA-K	700/850/PCS	0/2	ADD	RRUS 4449 B5/B12 RRUS 8843 B2/B66A	ADD
BETA	137'	150°	B1	TPA-65R-BU8DA-K	AWS/WCS	0/2	ADD	RRUS 4478 B14	ADD
			B2	DMP65R-BU8DA-K	700/850/PCS	0/2	ADD	RRUS 4449 B5/B12 RRUS 8843 B2/B66A	ADD
GAMMA	137'	250°	C1	TPA-65R-BU8DA-K	AWS/WCS	0/2	ADD	RRUS 4478 B14	ADD
			C2	DMP65R-BU8DA-K	700/850/PCS	0/2	ADD	RRUS 4449 B5/B12 RRUS 8843 B2/B66A	ADD

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

2 ANTENNA SCHEDULE

CABLE LENGTHS FOR JUMPERS
 FIBER DISTRIBUTION/OVP TO RRU: 15'
 RRU TO ANTENNA: 10'

PROPOSED FIBER DISTRIBUTION/OVP BOX		PROPOSED CABLING SUMMARY		
MODEL NUMBER	STATUS	DC	FIBER	STATUS
(1) DC9-48-60-24-8C-EV	ADD	(3) 0.92"	(1) 24-PAIR	ADD

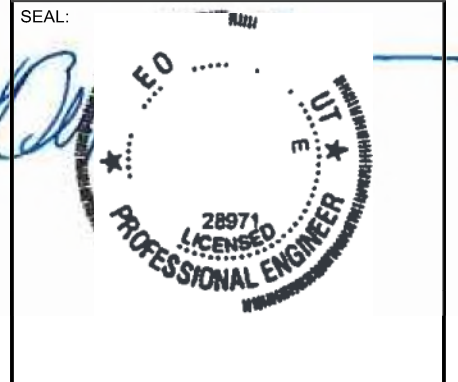
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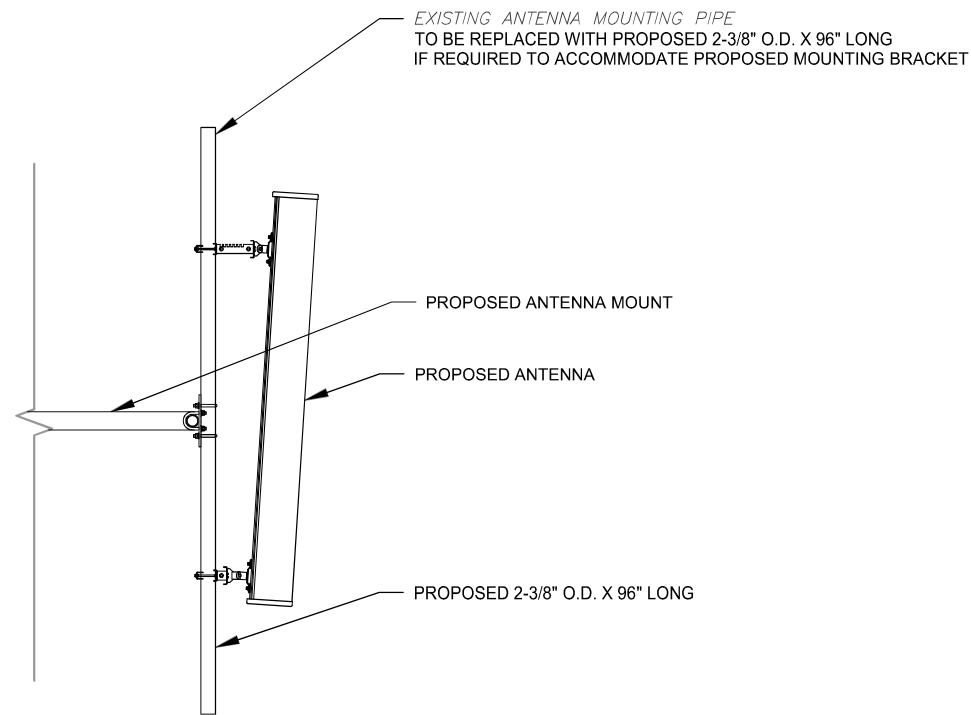
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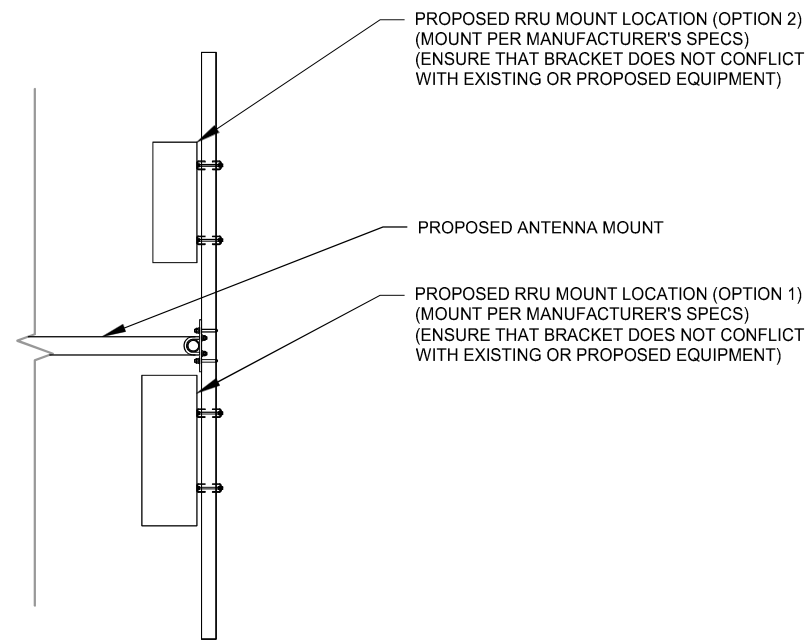
DATE DRAWN:	04/23/21
ATC JOB NO:	13626831
CUSTOMER ID:	MRCTB050163
CUSTOMER #:	S1175

ANTENNA INFORMATION & SCHEDULE

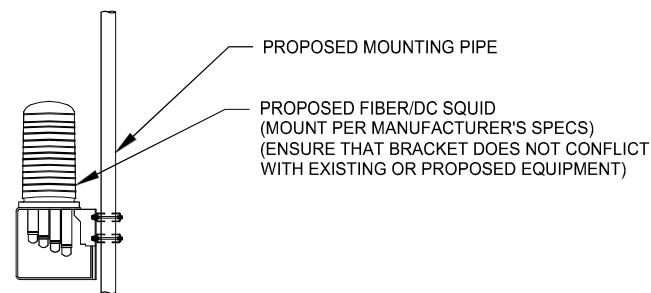
SHEET NUMBER: C-401	REVISION: 1
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1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



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



3 PROPOSED SQUID MOUNTING
SCALE: N.T.S.



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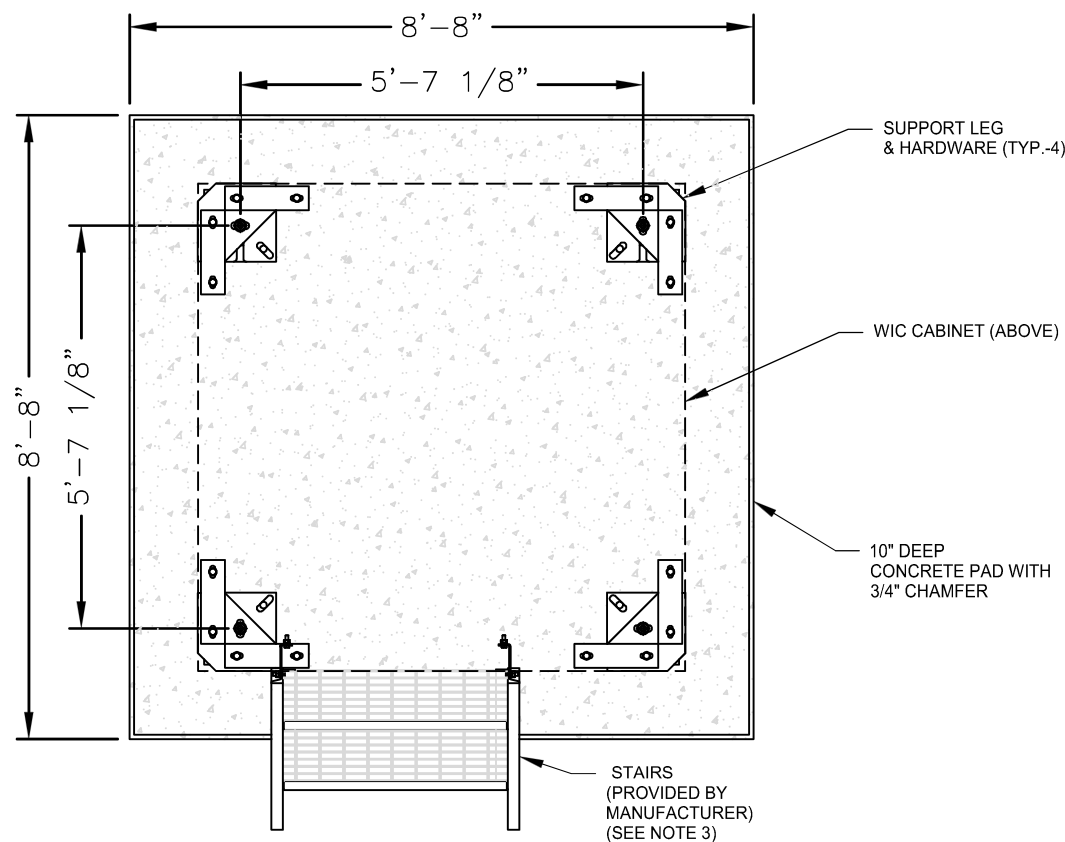
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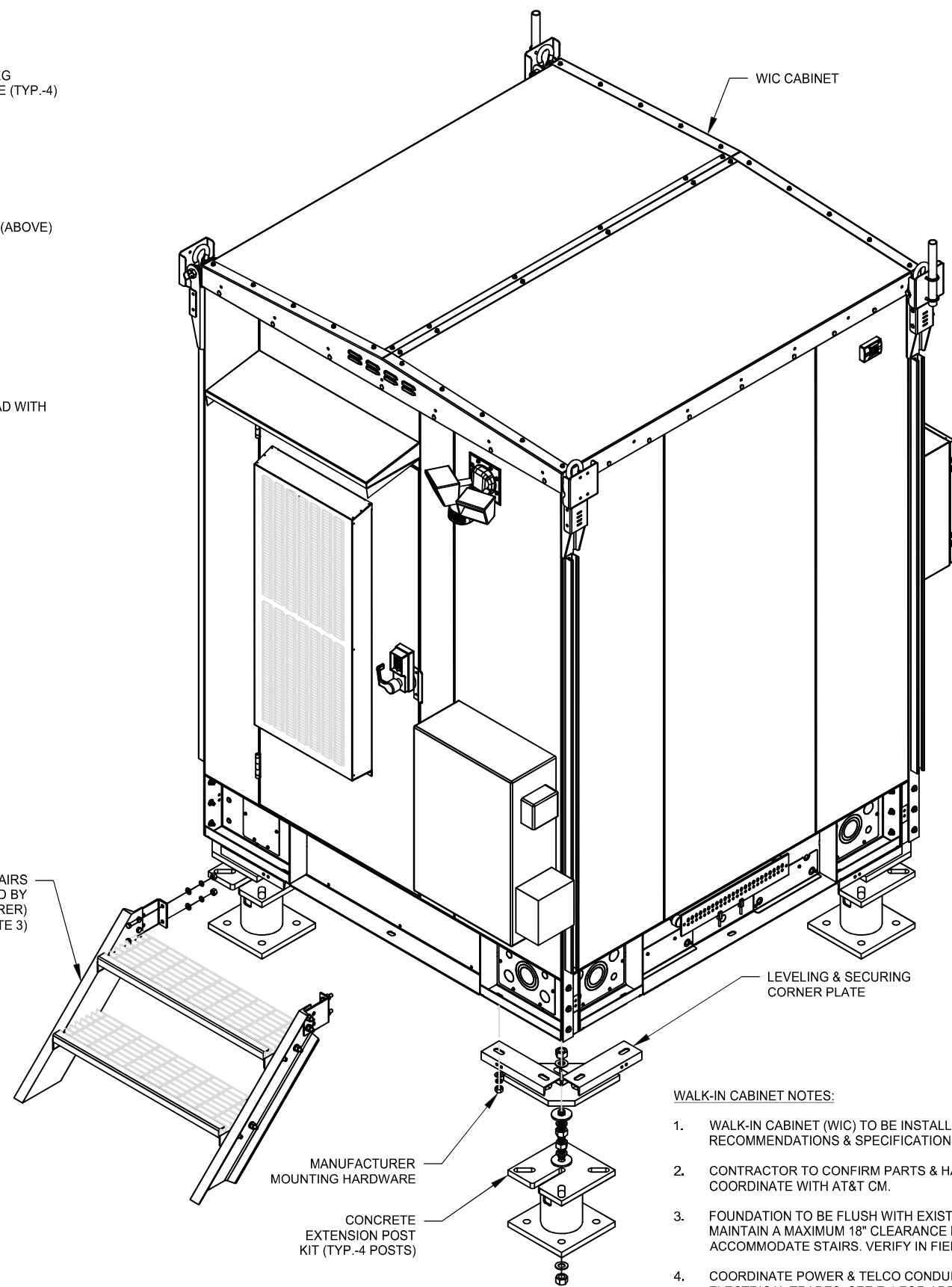
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CUSTOMER ID:	MRCTB050163
CUSTOMER #:	S1175

MOUNT DETAILS

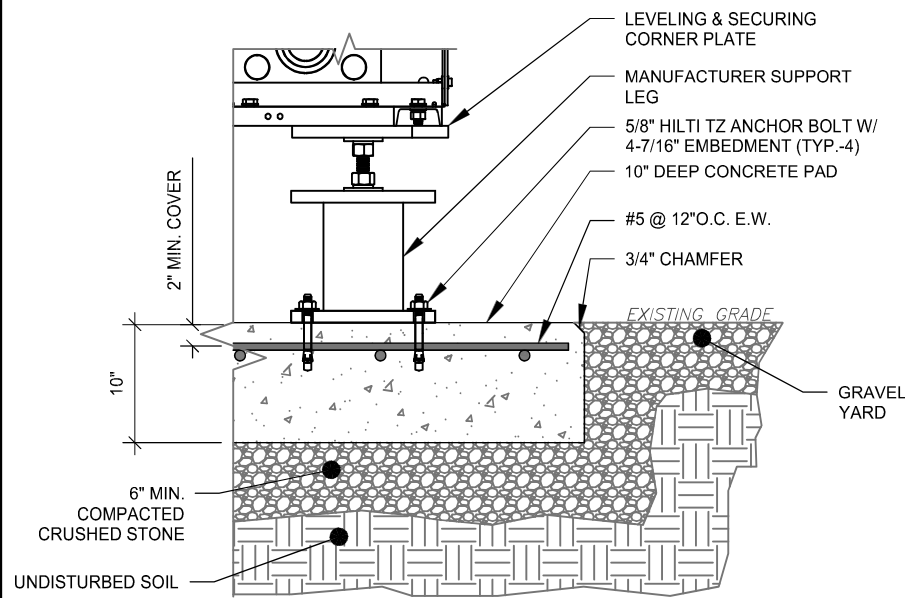
SHEET NUMBER:	REVISION:
C-501	1



1 WIC FOUNDATION DETAIL
SCALE: NOT TO SCALE



3 WIC ISOMETRIC
SCALE: NOT TO SCALE



2 WIC BASE SECTION
SCALE: NOT TO SCALE

WALK-IN CABINET NOTES:

1. WALK-IN CABINET (WIC) TO BE INSTALLED ACCORDING TO MANUFACTURER RECOMMENDATIONS & SPECIFICATIONS.
2. CONTRACTOR TO CONFIRM PARTS & HARDWARE PRIOR TO CONSTRUCTION & COORDINATE WITH AT&T CM.
3. FOUNDATION TO BE FLUSH WITH EXISTING GRADE. CONTRACTOR SHALL MAINTAIN A MAXIMUM 18" CLEARANCE FROM GRADE TO BOTTOM OF WIC TO ACCOMMODATE STAIRS. VERIFY IN FIELD PRIOR TO POST INSTALLATION.
4. COORDINATE POWER & TELCO CONDUIT STUBUP PLACEMENT WITH ELECTRICAL TRADES. SEE E-1 FOR ADDITIONAL INFORMATION.
5. PROVIDE WORKING HVAC AND ELECTRICAL WORKING SPACE CLEARANCES PER MANUFACTURER RECOMMENDATIONS & CODE REQUIREMENTS.
6. WIC DIMENSIONS: 6'-8"W X 6'-8"L X 9'-6" TALL (NO BASE)
WIC WEIGHT: 5500 LBS (EMPTY) 7500 LBS (FULLY INTEGRATED)
7. CONTRACTOR TO PROVIDE AND INSTALL SPECIFIED CONCRETE ANCHORS.



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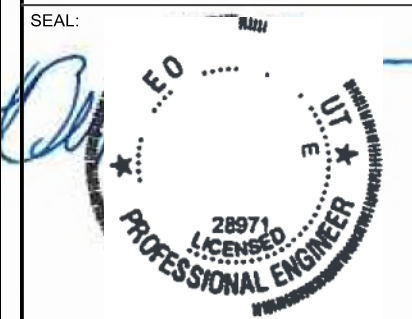
REV.	DESCRIPTION	BY	DATE
A	PRELIM	MR	04/27/21
0	FINAL	MR	06/01/21
1	FINAL	MR	08/05/21

ATC SITE NUMBER:
413849

ATC SITE NAME:
WINCHESTER PCS CT

AT&T MOBILITY SITE NAME:
MRCTB050163

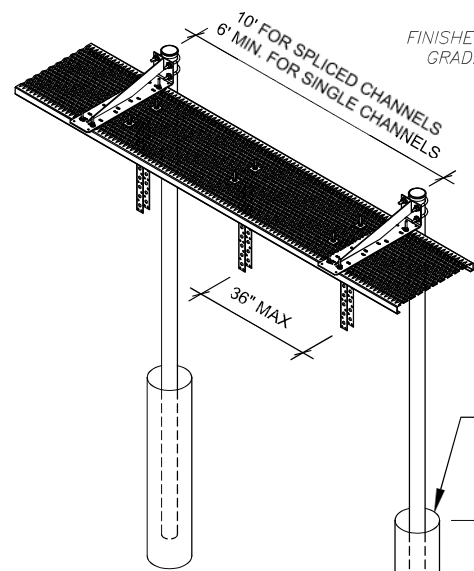
SITE ADDRESS:
32 NORFOLK ROAD
WINSTED, CT 06098



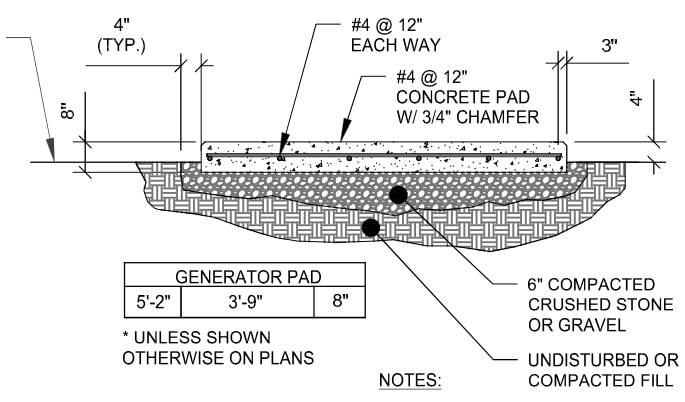
DATE DRAWN:	04/23/21
ATC JOB NO:	13626831
CUSTOMER ID:	MRCTB050163
CUSTOMER #:	S1175

CONSTRUCTION
DETAILS

SHEET NUMBER: C-502	REVISION: 1
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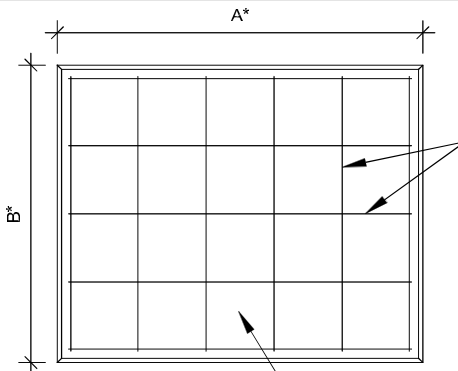
- ICE BRIDGE NOTES:**
- INCLUDES (3) UNIVERSAL VERTICAL TRAPEZE KITS PER 10' SPAN.
 - ALL COMPONENTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
 - CONTRACTOR SHALL DETERMINE REQUIRED QUANTITY OF ALL ICE BRIDGE COMPONENTS.
 - SNAP-IN HANGERS, SPLICE KITS, HINGE KITS, EXTENSION KITS, STIFFENERS, AND OTHER MISCELLANEOUS HARDWARE SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED.
 - ICE BRIDGE SHALL BE ROUTED TO ACCOMMODATE THE MINIMUM BENDING RADIUS OF THE COAXIAL CABLE.
 - ICE BRIDGE COMPONENTS SHOWN ARE SCHEMATIC, CONSULT MANUFACTURER FOR EXACT AND CURRENT SPECIFICATIONS.
 - USE BASE SHOE FOR ANCHORING TO CONCRETE PAD.



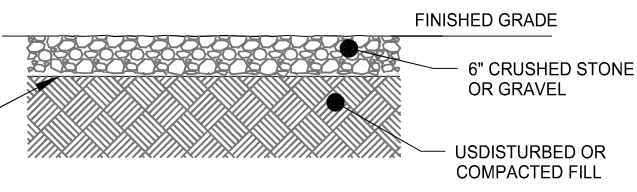
GENERATOR PAD		
5'-2"	3'-9"	8"

* UNLESS SHOWN OTHERWISE ON PLANS

- NOTES:**
- USE GALVANIZED HILTI EXPANSION ANCHORS OR, APPROVED EQUAL, FOR EQUIPMENT ANCHORAGE.
 - VERIFY THE SIZE OF THE GENERATOR WITH THE AT&T.
 - FOR SIZE AND LOCATION OF ANCHORS AND OTHER REQUIREMENT, SEE EQUIPMENT VENDOR DRAWINGS.



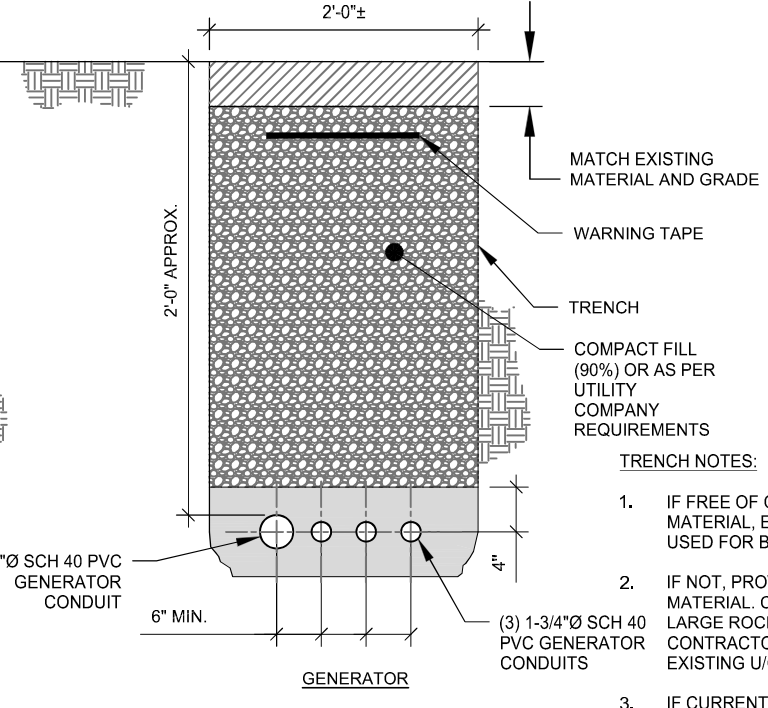
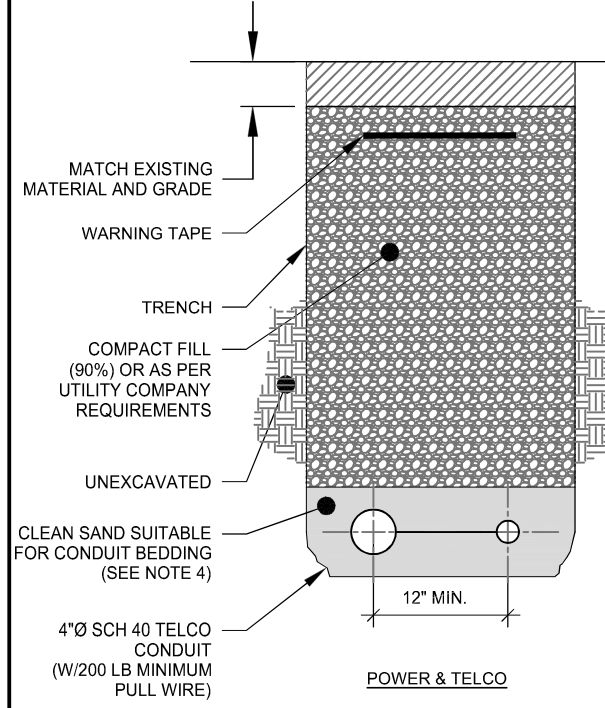
2 OUTDOOR PAD FOR MINOR EQUIPMENT
SCALE: NOT TO SCALE



- BEARING STRATA MEDIUM TO DENSE INSET GRANULAR MATERIAL OR COMPACTED GRAVEL FILL. 95% COMPACTION.
- FILL SHALL CONSIST OF CLEAN SOIL. NO DELETERIOUS MATERIALS OR ORGANICS TO BE USED.

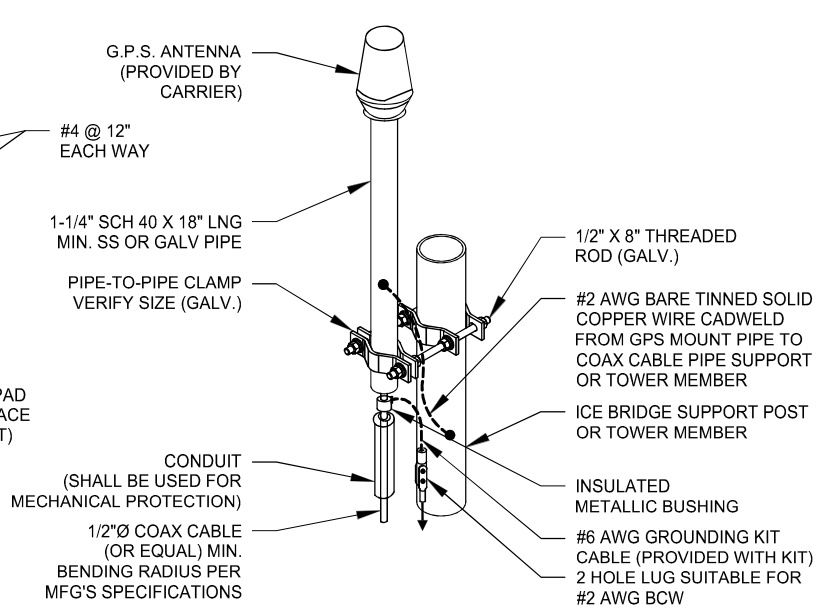
4 GRAVEL YARD DETAIL
SCALE: NOT TO SCALE

1 2-POST ICE BRIDGE (SITE PRO P/N: IB24D-V)
SCALE: NOT TO SCALE



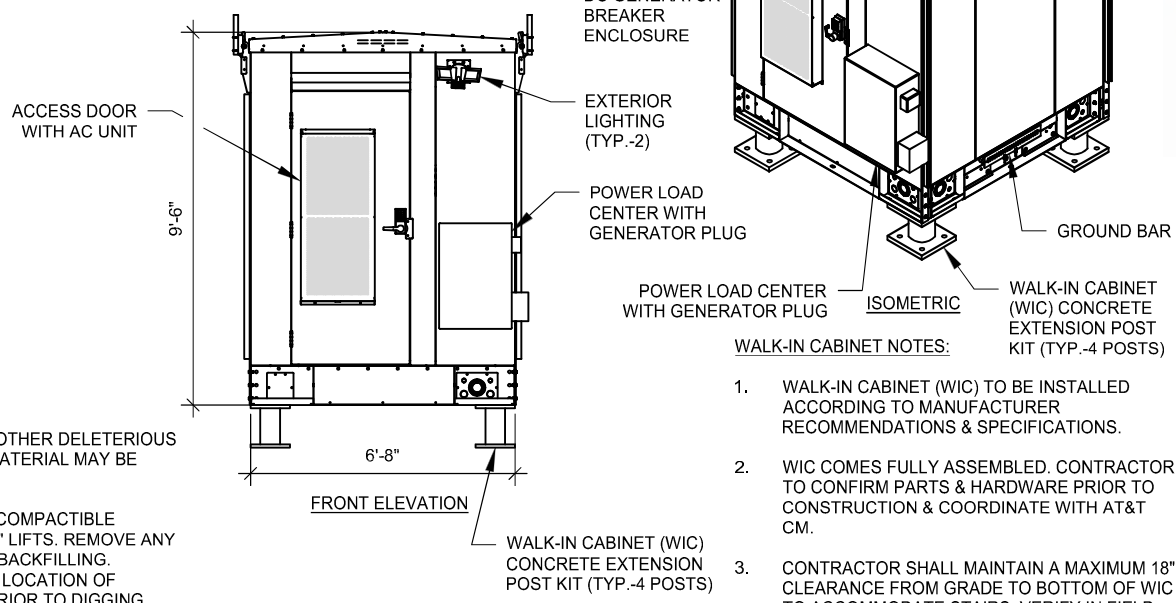
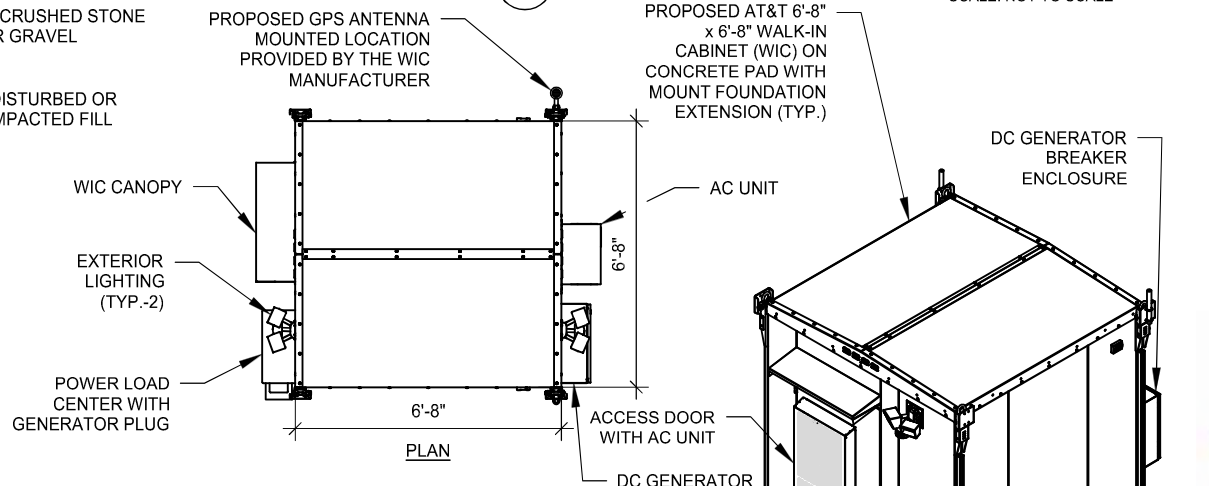
- TRENCH NOTES:**
- IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL.
 - IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
 - IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE CONTRACTOR SHALL HAND DIG U/G TRENCHING.
 - CONCRETE ENCASE CONDUIT WHEN TRENCHING UNDER SITE ACCESS ROAD.

5 BURIED CONDUIT TRENCH DETAIL
SCALE: NOT TO SCALE



- NOTE:**
- GPS SHALL BE PLACED WITH CLEAR SIGHT LINE TO THE SOUTHERN SKY.
 - CONTRACTOR TO SUPPLY COAX FOR GPS UNIT.

3 GPS ANTENNA ATTACHMENT DETAIL
SCALE: NOT TO SCALE



WALK-IN CABINET NOTES:

- WALK-IN CABINET (WIC) TO BE INSTALLED ACCORDING TO MANUFACTURER RECOMMENDATIONS & SPECIFICATIONS.
- WIC COMES FULLY ASSEMBLED. CONTRACTOR TO CONFIRM PARTS & HARDWARE PRIOR TO CONSTRUCTION & COORDINATE WITH AT&T CM.
- CONTRACTOR SHALL MAINTAIN A MAXIMUM 18" CLEARANCE FROM GRADE TO BOTTOM OF WIC TO ACCOMMODATE STAIRS. VERIFY IN FIELD PRIOR TO POST INSTALLATION.

6 WIC DETAIL
SCALE: NOT TO SCALE



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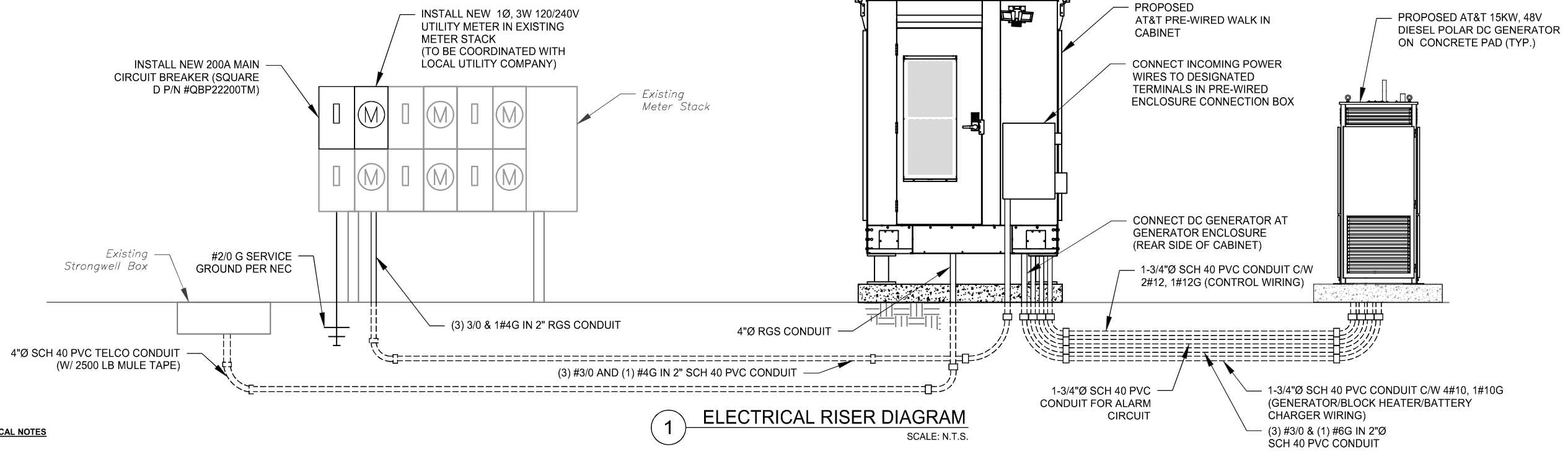


DATE DRAWN:	04/23/21
ATC JOB NO:	13626831
CUSTOMER ID:	MRCTB050163
CUSTOMER #:	S1175

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-503	1

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1 ELECTRICAL RISER DIAGRAM
SCALE: N.T.S.

GENERAL ELECTRICAL NOTES

- ALL ELECTRICAL WORK SHALL BE DONE IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY & LOCAL CODES, O.S.H.A., NEC, NFPA #70, AT&T MOBILITY SPECIFICATIONS, & THE SPECIFICATIONS DETAILED IN THESE PLANS.
- SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS & WORK TO BE PERFORMED UNDER THIS CONTRACT.
- CONTRACTOR SHALL PERFORM ALL VERIFICATION, OBSERVATION, TESTS, & EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT & THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT, & DISCREPANCIES.
- THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE. CONTRACTOR SHALL ENSURE THAT ACCESS TO EQUIPMENT IS MAINTAINED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS & ALL APPLICABLE CODES.
- EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANELBOARD, PULLBOX, J-BOX, SWITCH BOX, ETC., IN COMPLIANCE WITH OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA).
- CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR A COMPLETE & PROPERLY OPERATIVE SYSTEM, ENERGIZED THROUGHOUT & AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
- ALL MATERIALS & EQUIPMENT SHALL BE NEW & IN PERFECT CONDITION WHEN INSTALLED & SHALL BE OF THE BEST GRADE & OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED & APPROVED BY UNDERWRITER'S LABORATORY & SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, IEEE, & NFPA.
- ALL CONDUIT INSTALLED MAY BE SURFACE MOUNTED UNLESS OTHERWISE NOTED.
- COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
- ALL "CONDUIT ONLY" (C.O.) INSTALLATIONS SHALL HAVE A 3/8" PULL WIRE OR ROPE.
- CONTRACTOR SHALL PROVIDE AT&T MOBILITY MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, & CIRCUITS.
- ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO OWNER AT JOB COMPLETION.
- POWER WIRE & CABLE CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM UNLESS SPECIFICALLY NOTED OTHERWISE ON DRAWINGS. CONDUCTORS #10 AWG & SMALLER SHALL BE SOLID.
- ALL CONDUCTORS LARGER THAN #10 AWG SHALL BE STRANDED COPPER WITHIN 600V INSULATION, UNLESS NOTED OTHERWISE.
- ALL MATING SURFACES OF GROUND CONNECTIONS SHALL BE CLEANED SMOOTH & COATED WITH ANTI-OXIDANT PRIOR TO ATTACHMENT.
- ALL GROUND CONNECTIONS BELOW GRADE MUST BE EXOTHERMICALLY WELDED (CAD WELD OR APPROVED EQUAL)
- ALL EXTERIOR GROUNDING CONDUCTORS SHALL BE #2 AWG SOLID TINNED BARE COPPER WIRE UNLESS NOTED OTHERWISE.
- ALL CIRCUIT BREAKERS, FUSES & ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, & A MINIMUM OF 10,000 A.I.C. COORDINATE SHORT CIRCUIT REQUIREMENTS WITH LOCAL UTILITY COMPANY.
- CONTRACTOR SHALL PATCH, REPAIR, & PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
- IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, M PIPE RUNS, ETC., IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND/OR REINFORCING STEEL WILL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES.
- LOCATION OF TENDONS AND/OR REINFORCING STEEL ARE NOT DEFINITELY KNOWN &, THEREFORE, MUST BE SEARCHED FOR BY APPROPRIATE METHODS & EQUIPMENT VIA X-RAY OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING AND/OR STEEL TENDONS.
- PENETRATIONS IN FIRE RATED WALLS SHALL BE SEALED IN ACCORDANCE WITH ALL APPLICABLE CODES.
- ALL MATERIALS SHALL BE U.L. LISTED.

- CONDUIT:
 - RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR & SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED RAPPED WITH HUNTS WRAP PROCESS NO. 3.
 - ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL. FITTINGS SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
 - FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL & MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE "JAKE" OR "SQUEEZE" TYPE. SEAL TIGHT FLEXIBLE CONDUIT. ALL CONDUIT SHALL HAVE FULL SIZE GROUND WIRE.
 - CONDUIT RUNS MAY BE SURFACE MOUNTED IN CEILINGS OR WALLS UNLESS INDICATED OTHERWISE. CONDUIT SHALL RUN PARALLEL OR AT RIGHT ANGLES TO CEILING, FLOOR OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH ENGINEER PRIOR TO INSTALLING.
- ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
- CONTRACTOR SHALL COORDINATE THE ELECTRICAL SERVICE WITH AT&T MOBILITY & LOCAL UTILITY.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY NEC & ALL APPLICABLE CODES.
- GROUNING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE OWNER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE. CONTRACTOR SHALL SUBMIT TO THE PROJECT MANAGER ALL TEST REPORTS & ONE COMPLETE SET OF PRINTS SHOWING "INSTALLED WORK".
- UPON COMPLETION OF WORK, CONDUCT CONTINUITY, & FALL OF POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK & LEAVE WORK IN A COMPLETE & UNDAAGED CONDITION.
- ALL EXPOSED GROUND WIRES ROUTED ALONG THE SIDE OF EQUIPMENT SHELTERS OR ROUTED OVER CONCRETE FOUNDATIONS OR OTHER EXISTING STRUCTURES SHALL BE INSTALLED IN PROPERLY ANCHORED 3/4"Ø (MIN.) PVC CONDUIT.
- CONTRACTOR SHALL NOT DISTURB EXISTING GROUNDING SYSTEM. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY AT NO ADDITIONAL COST.
- ALL ELEMENTS OF ICE BRIDGE & AT&T MOBILITY UTILITY BACKBOARD MUST BE BONDED & JUMPERED TO GROUNDED COMPONENTS OF THESE SYSTEMS.
- ALL INTERIOR CABLES & WIRING SHALL BE NEATLY ROUTED IN OVERHEAD LADDER RACK & FASTENED TO LADDER RACK.
- ALL GROUNDING CONDUCTORS SHALL BE ROUTED DOWNWARDS FROM POINT OF ORIGIN TO TERMINATION POINT (GROUND BAR, GROUND RING, ETC.)
- GROUNING CONDUCTORS SHALL NOT REVERSE DIRECTION (EXCEPT HALO & BURIED GROUND RINGS). OTHER EXCEPTIONS NEED TO BE APPROVED BY AT&T MOBILITY CONSTRUCTION MANAGER PRIOR TO INSTALLATION.
- GROUNING CONDUCTORS SHALL HAVE A MINIMUM BENDING RADIUS OF 8".
- ALL CONNECTIONS TO GROUND PLATES SHALL BE CAD WELDED TO THE CENTER OF THE PLATE. ALL DETAILS SHOWING CONNECTIONS TO GROUND RODS ARE ALSO VALID FOR SIMILAR CONNECTIONS TO GROUND PLATES.
- FOLLOWING COMPLETION OF WORK, PROVIDE OWNER WITH AS-BUILT DRAWINGS SHOWING TELEPHONE & ELECTRIC LOCATIONS.
- WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE.
- COORDINATE WITH UTILITY & LOCAL ELECTRICAL INSPECTOR FOR FINAL POWER CONNECTION.
- UTILITY WILL SUPPLY METER. COORDINATE WITH UTILITY FOR METER TYPE & INTERCONNECTION.
- ALL EXISTING UNDERGROUND LINES ON SITE TO BE LOCATED PRIOR TO CONSTRUCTION. CALL DIGSAFE 1-888-DIG-SAFE OR 811 PRIOR TO CONSTRUCTION.
- SEAL ALL SERVICE ENTRANCES INTO SHELTER FOLLOWING INSTALLATION.
- COORDINATE WITH LOCAL TELEPHONE COMPANY FOR ALL ROUTING & DESIGN.
- CONTRACTOR TO VERIFY CONTROL WIRING SIZE WITH GENERATOR MANUFACTURER PRIOR TO CONSTRUCTION.

ELECTRICAL & TELEPHONE CONTACTS	
POWER COMPANY:	UNKNOWN
PHONE NUMBER:	UNKNOWN
TELEPHONE COMPANY:	PENDING AT&T ASSIGNMENT
PHONE NUMBER:	TBD

NOTE:
ALL EQUIPMENTS' SHORT-CIRCUIT CURRENT RATING SHALL EXCEED AVAILABLE FAULT CURRENT PER UTILITY



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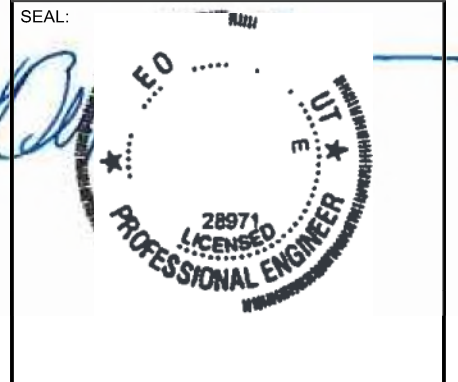
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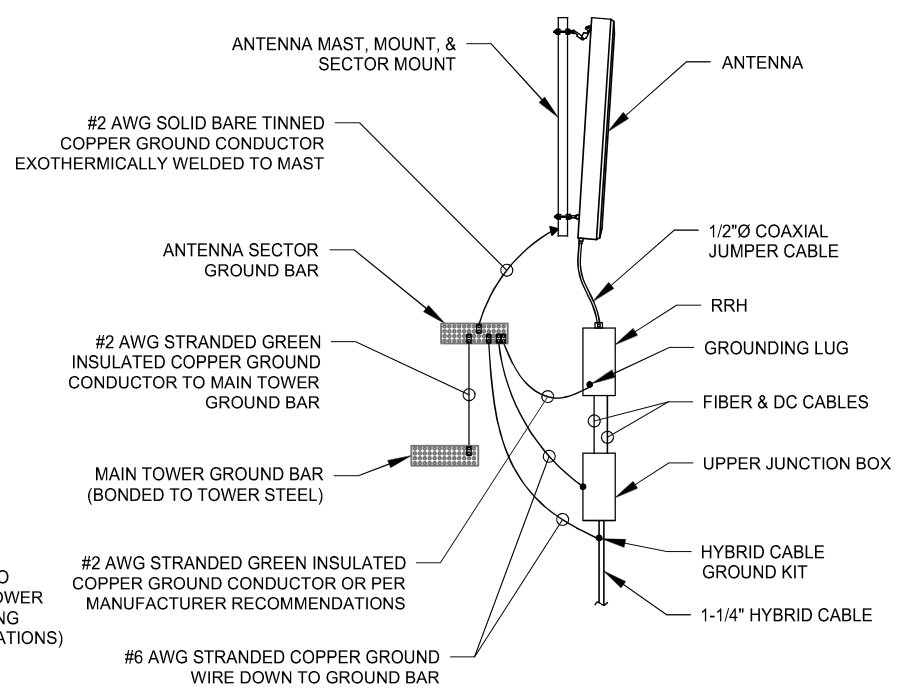
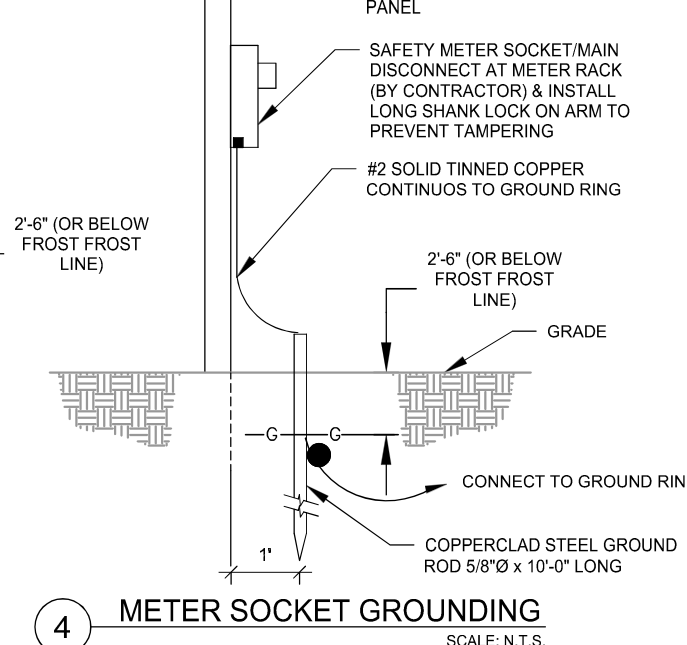
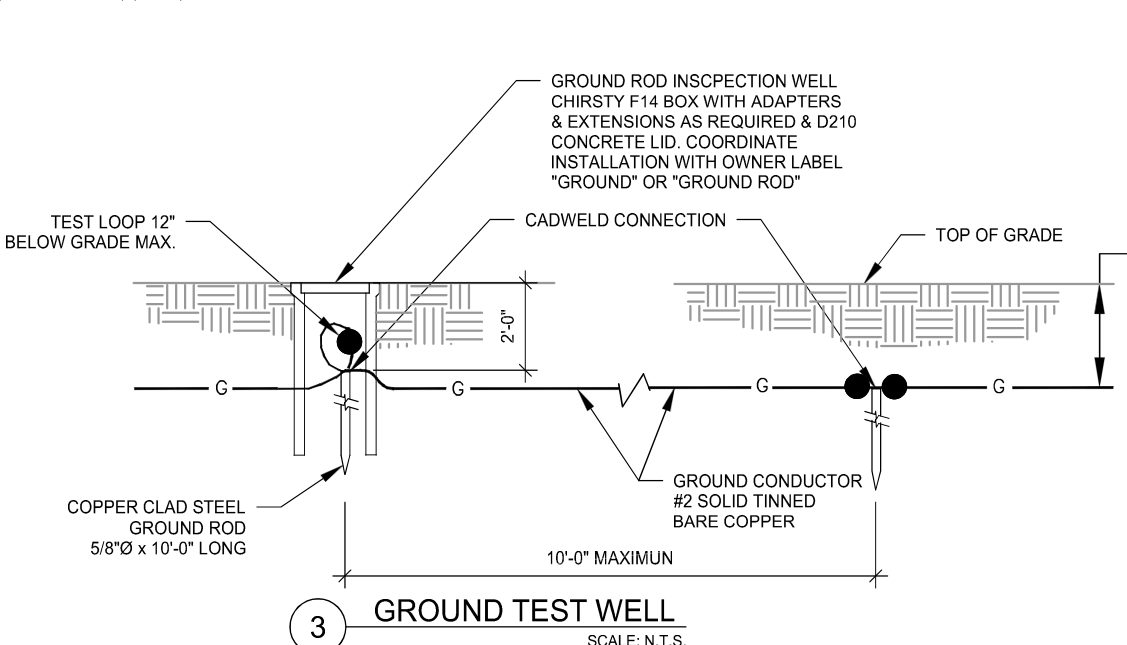
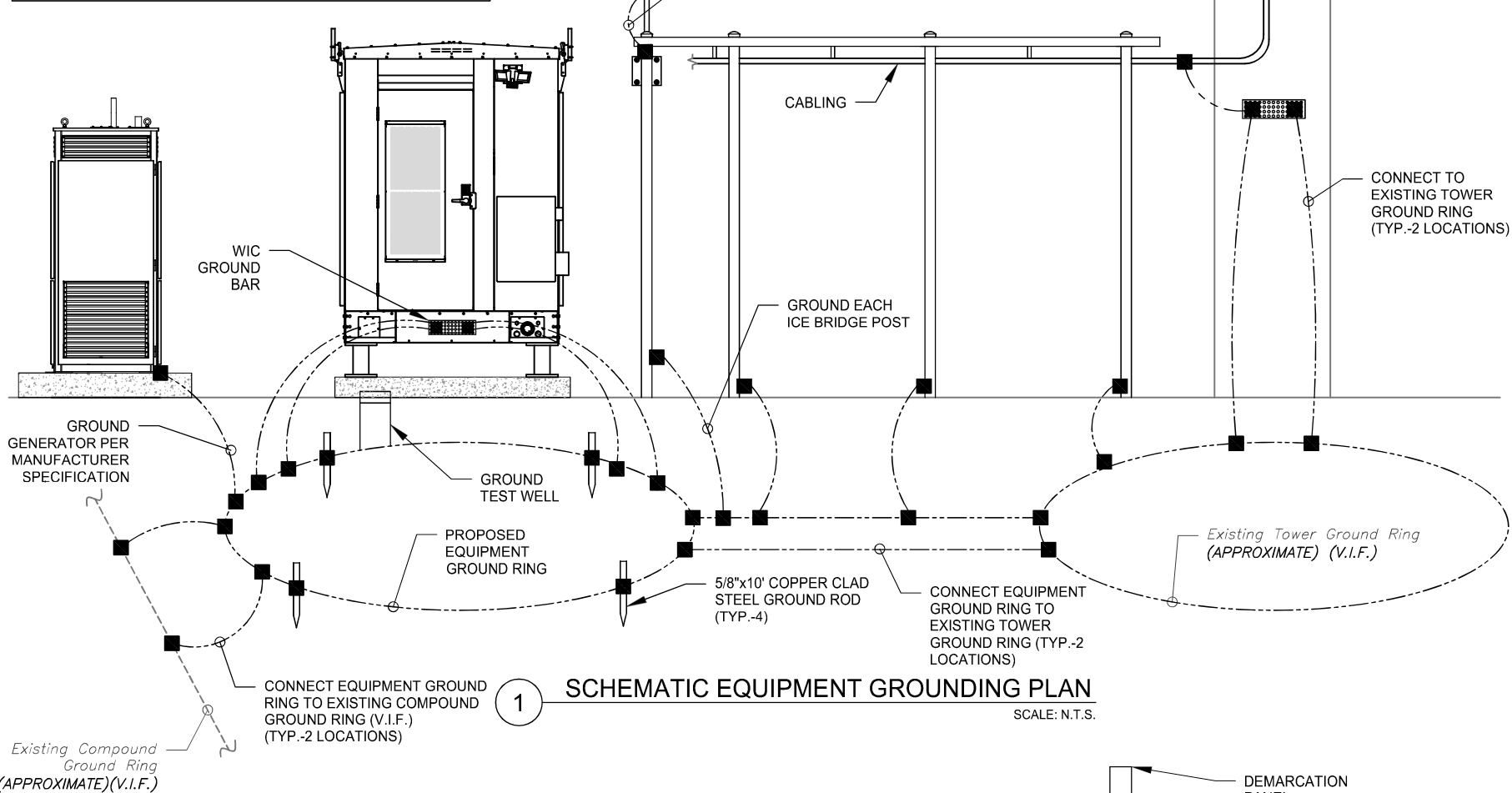
DATE DRAWN:	04/23/21
ATC JOB NO:	13626831
CUSTOMER ID:	MRCTB050163
CUSTOMER #:	S1175

GROUNDING DETAILS & ELECTRICAL SCHEMATIC

SHEET NUMBER: E-101	REVISION: 1
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GROUNDING LEGEND	
	GROUND BAR
	GROUND COPPER WIRE, SIZE AS NOTED
	MECHANICAL GROUND CONNECTION
	5/8"x10' COPPER CLAD STEEL GROUND ROD
	EXOTHERMIC (CADWELD) CONNECTION
	GROUND TEST WELL
	Existing Ground Ring (V.I.F.)



- GROUNDING GENERAL NOTES**
- ALL DOWN CONDUCTORS & THE GROUNDING RING CONDUCTOR SHALL BE #2 AWG, SOLID, BARE, TINNED COPPER, UNLESS OTHERWISE NOTED. ALL CONNECTIONS TO GROUNDING RING SHALL BE EXOTHERMICALLY WELDED. CONDUCTOR SHALL BE AT A MINIMUM DEPTH BELOW GRADE OF 30" OR TO LEDGE. MINIMUM BEND RADIUS SHALL BE 8 INCHES. CONDUCTOR SHALL BE AT LEAST 24 INCHES FROM ANY FOUNDATION, UNLESS OTHERWISE NOTED.
 - GROUND RODS SHALL BE 5/8" DIAMETER COPPER CLAD, HARGER, T&B, ERICO, OR EQUIVALENT. TOP OF ROD SHALL BE A MINIMUM OF 30" BELOW GRADE. IF LEDGE IS ENCOUNTERED, INSTALL GROUND ROD AT AN ANGLE. ELECTRICAL METER GROUND ROD EXCEPTED.
 - WHERE MECHANICAL CONNECTIONS ARE SPECIFIED, BOLTED, COMPRESSION-TYPE, CLAMPS OR SPLIT-BOLT TYPE CONNECTORS SHALL BE USED.
 - GRIND OFF GALVANIZING IN AFFECTED AREA. EXOTHERMICALLY WELD #2 CONDUCTOR AT 6" ABOVE GRADE OR FOUNDATION, WHICHEVER IS HIGHER. COLD-GALV AFTER. EXOTHERMICALLY WELD OTHER END TO GROUND RING.
 - INSTALL GROUNDING KITS AT ANTENNA CENTER LINE, & TOWER EXIT POINTS. GROUND HYBRID/COAX LINES. EXOTHERMICALLY WELD #2 DOWN CONDUCTOR TO PLATES, RUN DOWN TOWER, & TIE INTO GROUNDING SYSTEM.
 - ALL GROUNDING WORK SHALL COMPLY WITH U.S. CELLULAR STANDARDS. FOLLOWING COMPLETION OF WORK, GROUND SYSTEM MUST BE TESTED & SHALL HAVE A RESISTANCE OF 5 OHMS OR LESS SUBMIT AN INDEPENDENT "FALL POTENTIAL" TESTING REPORT.
 - CONTRACTOR SHALL HAND-DIG IN AREAS AROUND EXISTING UTILITIES.
 - NOTIFY CONSTRUCTION ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
 - GROUNDING RING IS SHOWN AS SCHEMATIC ONLY. IT IS DESIGNED WITHOUT BENEFIT OF RESISTIVITY TESTING & DOES NOT NECESSARILY REPRESENT A GROUNDING SYSTEM TO MEET ANY SPECIFIC GROUND RESISTANCE.
 - PRIOR TO POURING CONCRETE, ALL REBAR LOCATED NEAR THE BOTTOM OF THE FOUNDATION SHALL BE BONDED TOGETHER TO FORM A SINGLE GROUNDING ELECTRODE, BY STEEL TIES OF OTHER EFFECTIVE MEANS APPROVED BY N.E.C. & STRUCTURAL ENGINEER, & BONDED TO THE GROUND RING AS DETAILED IN THESE PLANS (INSPECTION MAY BE REQUIRED PRIOR TO POURING CONCRETE & MUST BE COORDINATED BY CONTRACTOR).
 - IN ACCORDANCE WITH N.E.C. REQUIREMENTS, ALL GROUNDING ELECTRODES PRESENT ON SITE SHALL BE BONDED TOGETHER (REFERENCE N.E.C. ARTICLE 250.50).



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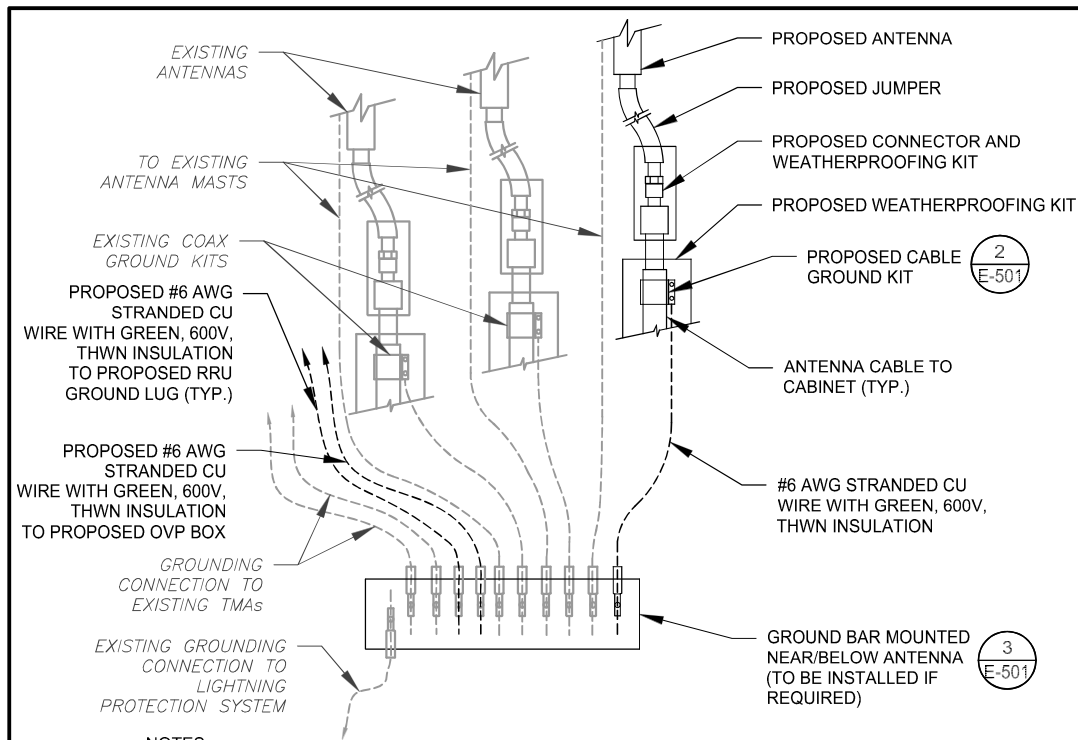
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GROUNDING DETAILS

SHEET NUMBER:
E-501

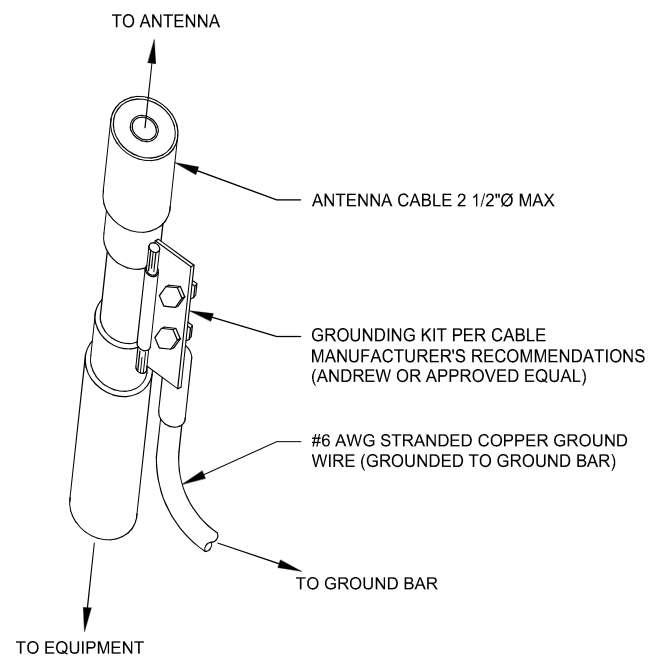
REVISION:
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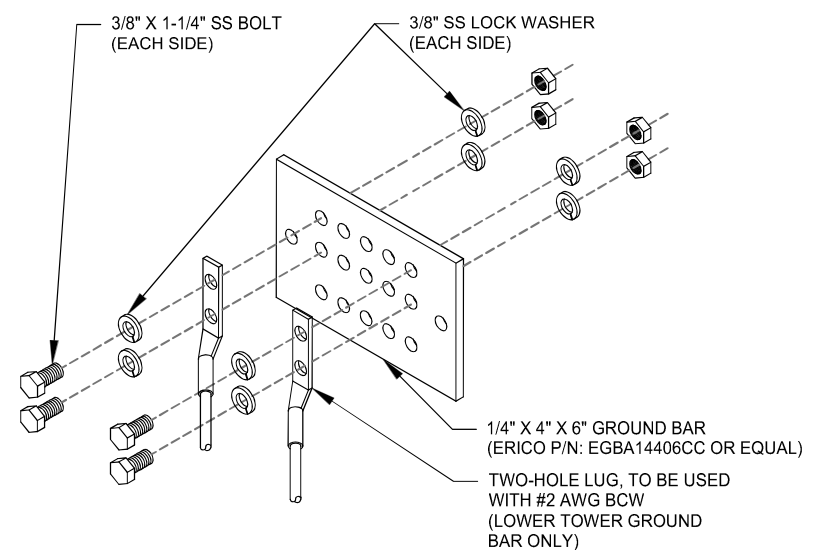
- NOTES:**
1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
 2. SITE GROUNDING SHALL COMPLY WITH AT&T MOBILITY GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH AT&T MOBILITY 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.



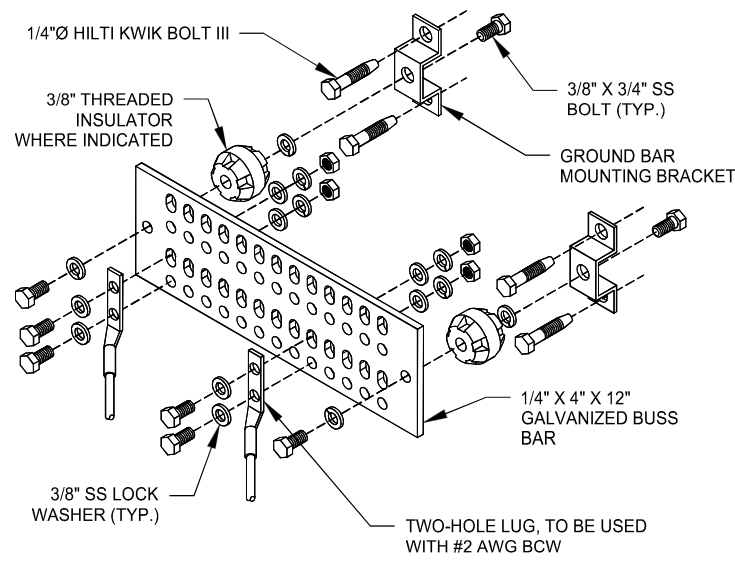
- GROUND KIT NOTES:**
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

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



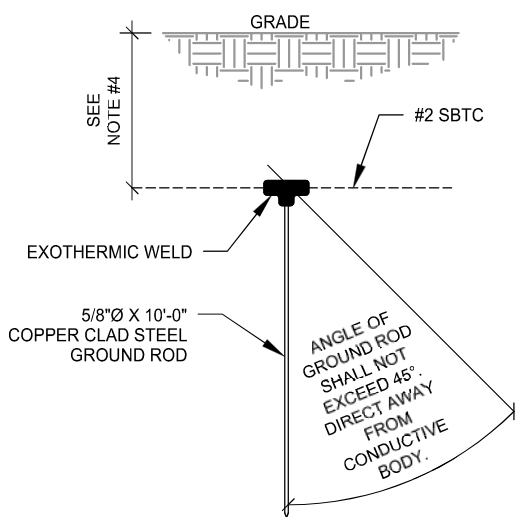
- GROUND BAR NOTES:**
1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
 2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

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



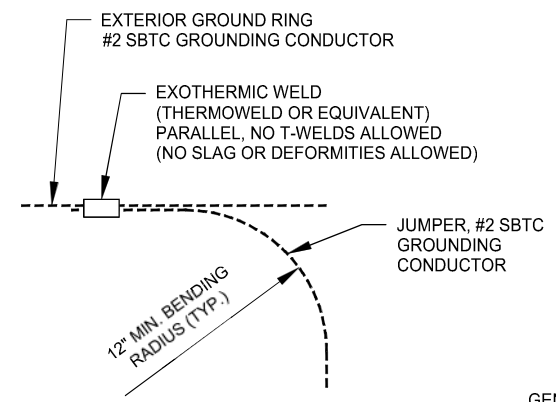
- GROUND BAR NOTES**
1. GROUND KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
 2. GROUND BAR SHALL BE BOLTED TO STRUCTURAL MEMBER OR ANCHORED TO CONCRETE SLAB W/ HILTI KWIK BOLT III.

4 MAIN GROUND BAR DETAIL
SCALE: N.T.S.

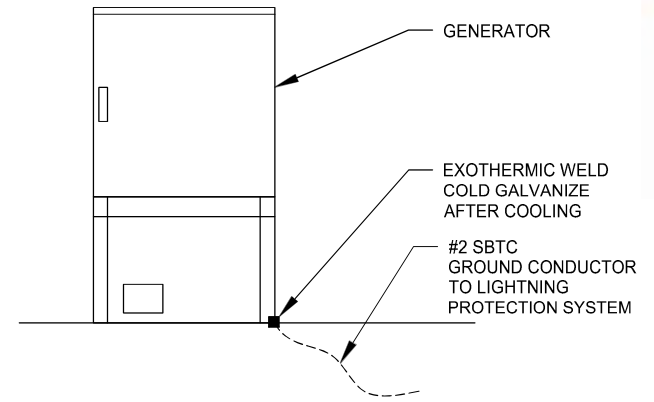


- NOTES:**
1. SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS.
 2. COORDINATE UTILITY, LOCATE BEFORE DIGGING.
 3. CONDUIT TRENCHING DEPTHS AT 36\"/>

5 GROUND ROD DETAIL
SCALE: N.T.S.



6 TIE CONNECTION DETAIL
SCALE: N.T.S.



- GENERATOR INSTALLATION NOTE:**
- INSTALL GENERATOR AND TRANSFER SWITCH WITH ALL SUPPLIED ACCESSORIES PER MANUFACTURER'S INSTALLATION INSTRUCTIONS AND SPECIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, ACCESSORIES FOR THE EXHAUST SYSTEM, FUEL SYSTEM, ENCLOSURE INTEGRITY (CAPS, PLUGS, COVERS, ETC.), ELECTRICAL CONNECTIONS, AND GROUNDING CONNECTIONS.

7 GENERATOR GROUNDING
SCALE: N.T.S.



Dewberry
Dewberry Engineers Inc.
99 SUMMER STREET
SUITE 700
BOSTON, MA 02110
PHONE: 617.531.0801
FAX: 617.695.3310

REV.	DESCRIPTION	BY	DATE
A	PRELIM	MR	04/27/21
0	FINAL	MR	06/01/21
1	FINAL	MR	08/05/21

ATC SITE NUMBER:
413849

ATC SITE NAME:
WINCHESTER PCS CT

AT&T MOBILITY SITE NAME:
MRCTB050163

SITE ADDRESS:
32 NORFOLK ROAD
WINSTED, CT 06098

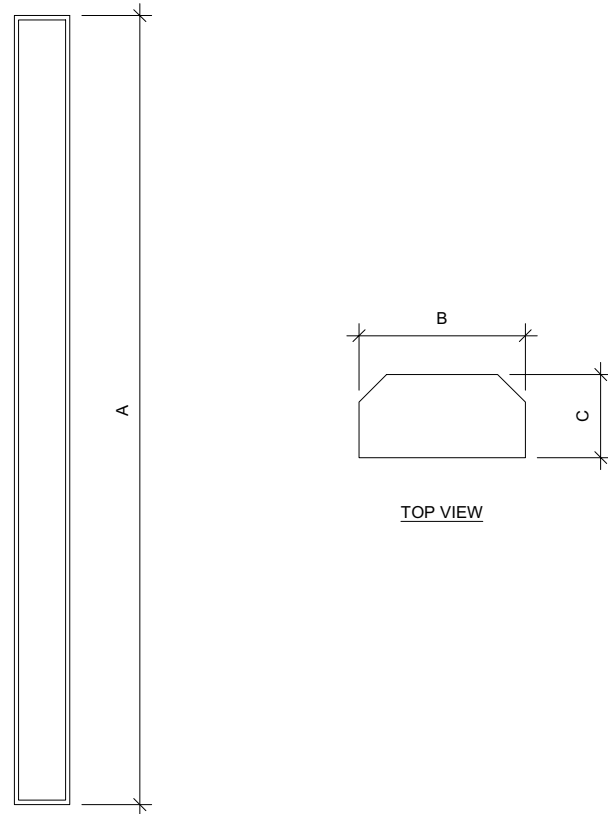


DATE DRAWN:	04/23/21
ATC JOB NO:	13626831
CUSTOMER ID:	MRCTB050163
CUSTOMER #:	S1175

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-502	1

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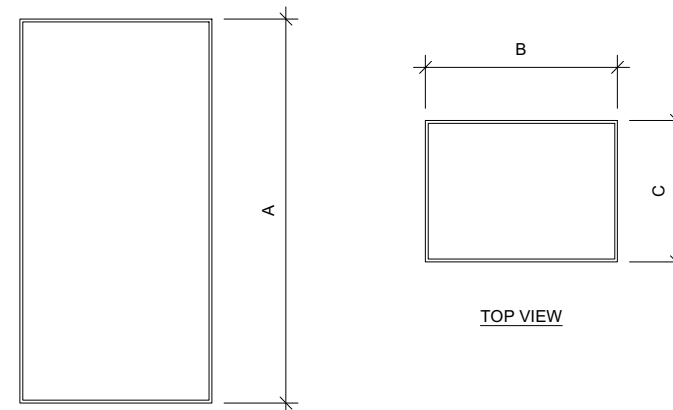


FRONT VIEW

TOP VIEW

1 ANTENNA SPECIFICATIONS
FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
TPA65R-BU8D	96.0"	21.0"	7.8"	82.5
DMP65R-BU8D	96.0"	20.7"	7.7"	95.7



FRONT VIEW

TOP VIEW

2 RRU SPECIFICATIONS
FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
RRUS 4449 B5/B12	17.9"	19.2"	9.4"	71
RRUS 8843 B2/B66A	14.9"	13.2"	10.9"	72
RRUS 4478 B14	16.5"	13.4"	7.7"	59.9

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PHONE: 617.531.0801
FAX: 617.695.3310

ATC SITE NUMBER:
413849

ATC SITE NAME:
WINCHESTER PCS CT

AT&T MOBILITY SITE NAME:
MRCTB050163

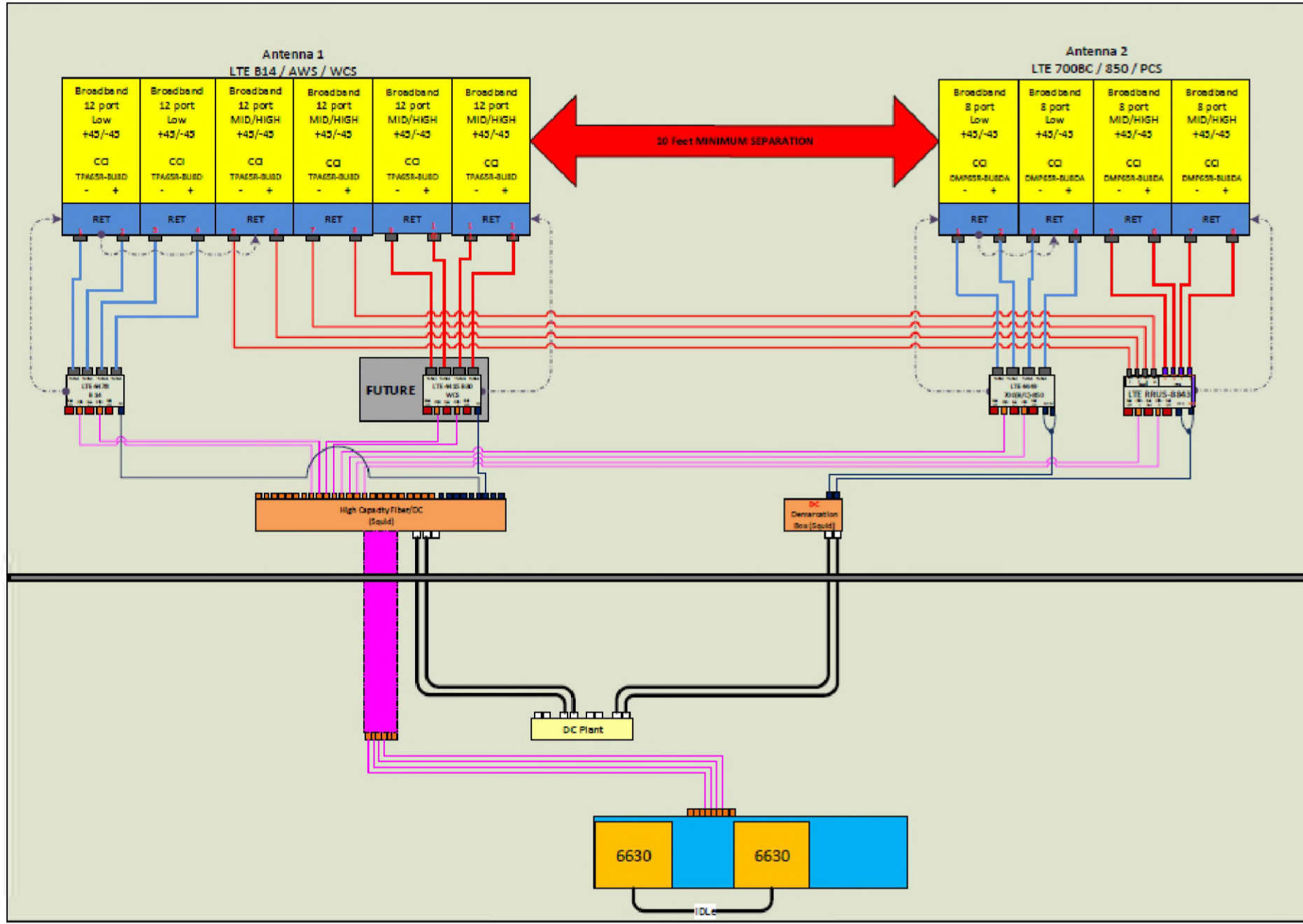
SITE ADDRESS:
32 NORFOLK ROAD
WINSTED, CT 06098



DATE DRAWN: 04/23/21
ATC JOB NO: 13626831
CUSTOMER ID: MRCTB050163
CUSTOMER #: S1175

SUPPLEMENTAL

SHEET NUMBER:
R-601



1 PLUMBING DIAGRAM



Dewberry
 Dewberry Engineers Inc.
 99 SUMMER STREET
 SUITE 700
 BOSTON, MA 02110
 PHONE: 617.531.0801
 FAX: 617.695.3310

ATC SITE NUMBER:
413849
 ATC SITE NAME:
WINCHESTER PCS CT
 AT&T MOBILITY SITE NAME:
MRCTB050163
 SITE ADDRESS:
32 NORFOLK ROAD
WINSTED, CT 06098



DATE DRAWN:	04/23/21
ATC JOB NO:	13626831
CUSTOMER ID:	MRCTB050163
CUSTOMER #:	S1175

SUPPLEMENTAL

SHEET NUMBER:
R-602

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8220-603 series

Reliability through Simplicity



8220-603 series
1 of 6

Founded in 1979 Polar Power specialized in solar photovoltaic systems, solar air conditioning and refrigeration. We developed and provided photovoltaic charging controls for telecommunications in the 1980s along with DC generators for the military. In 1994 we were first to provide DC generators with remote control and monitoring to the telecommunications industry.

Polar's success is based on engineering generators to meet the very specific needs of each application. Telecom site optimization is best met with the DC generator technology as the loads and batteries are DC. It makes no sense to install an AC generator and convert the output to DC. The AC generators are designed for a wide range of applications and they are not specifically produced for telecom applications so there are issues with reliability, space, and fuel efficiency.

Polar can save you considerable time and cost in permitting, installing, purchasing, and maintaining a backup generator. We reduce CAPEX and OPEX costs while improving backup reliability.

- Intertek 4003706
- Conforms to UL STD 2200
- Certified to CSA STD C22.2 No. 100
- Fuel tank is UL 142 Listed
- Meets EPA Emission Regulations
- CA/MA Emissions Compliant

2 year standard warranty, extended 5-10 year warranty available

8220-603-D-15-03 Diesel 15 kW -48 VDC



THE CONCEPTS AND FEATURES BEHIND POLAR'S BACKUP GENERATOR FOR TELECOMMUNICATIONS INCLUDE:

SMALL FOOTPRINT. Polar's DC generator is considerably smaller in size than an AC generator. You can now backup sites that could not accommodate an AC generator. Smaller also means less cost for space leasing.

LONG RESERVE. 48 to 72 hour reserve. Polar's DC generator can provide long reserve times because of very low fuel consumption. This generator should be the first choice for sites exposed to natural disasters requiring backup for weeks or months at a time (fuel consumption 1.02 gallon per hour).

LOW ACOUSTIC NOISE. <66 dBA@ 7 meters, and low vibration so as not to disturb the local residents or building landlords. Quieter than other generators with lower noise ratings.

LIGHTWEIGHT. Up to 1/3 the weight of a comparable AC generator. Facilitates roof top installations.

CORROSION RESISTANT. All-aluminum enclosure with stainless hardware for low maintenance, and long service life.

RODENT RESISTANT. Small animals can quickly destroy a generator set by gnawing on wires, fuel lines, radiator hoses, etc. Cooling air inlets and outlets have perforated aluminum screens to keep small rodents and large insects out. Stainless steel wire braid is placed over fuel and radiator lines for increased reliability and safety.

SUPERCAPACITOR STARTER. Failure to start is the number one problem plaguing generator reliability. Polar's unique design has replaced the starting battery with a Super Capacitor. Capacitors are more reliable and last longer than batteries (10-15 year life).

LONG LIFE. Controls and wire harnesses are designed to exceed a 20 year life. Higher grade, longer life electrical wire (UL 3173), weather tight connectors, gold plated connector pins on signal circuits. Controls and wire harness are easily replaceable.

ADVANCED MONITORING. Remote diagnostics, control, and monitoring. Ethernet and RS232 standard, with optional SNMP.

SIMPLICITY. Transfer switch, rectifier, and starting battery are not required.

249 E. Gardena Blvd, Gardena CA, 90248 | 310.830.9153 | www.polarpower.com | info@polarpowerinc.com

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Dewberry®
Dewberry Engineers Inc.
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PHONE: 617.531.0801
FAX: 617.695.3310

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ATC SITE NAME:
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DATE DRAWN:	04/23/21
ATC JOB NO:	13626831
CUSTOMER ID:	MRCTB050163
CUSTOMER #:	S1175

SUPPLEMENTAL

SHEET NUMBER:
R-603

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Exhibit 3

Structural Analysis Report



AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by

CLSENGINEERING
PLLC

Structural Analysis Report

Structure : 151 ft Monopole
ATC Site Name : Winchester PCS CT, CT
ATC Asset Number : 413849
Engineering Number : 13626831_C3_03
Proposed Carrier : AT&T MOBILITY
Carrier Site Name : MRCTB050163
Carrier Site Number : S1175
Site Location : 32 Norfolk Road
WINSTED, CT 06098-2227
41.940200,-73.095900
County : Litchfield
Date : April 6, 2021
Max Usage : 55%
Result : Pass

Prepared By:
Tyler M. Barker
CLS

Reviewed By:



Tyler M. Barker
CLS Engineering PLLC
PE # 32402 Exp. 1/31/2021
COA # PEC.001833 Exp. 8/14/2022
04/07/2021



Table of Contents

Introduction 1

Supporting Documents 1

Analysis 1

Conclusion..... 1

Existing and Reserved Equipment..... 2

Equipment to be Removed..... 2

Proposed Equipment 2

Structure Usages 3

Foundations 3

Deflection, Twist, and Sway..... 3

Standard Conditions 4

Calculations Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 151 ft monopole to reflect the change in loading by AT&T MOBILITY.

Supporting Documents

Tower Drawings	EI Project #15692, dated November 19, 2008
Foundation Drawing	EI Project #15692, dated November 19, 2008
Geotechnical Report	Terracon Project #J2085192, dated October 31, 2008

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:	114 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 1" 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 2
Feature:	Flat
Crest Height (H):	0 ft
Crest Length (L):	0 ft
Spectral Response:	$S_s = 0.17, S_1 = 0.05$
Site Class:	D - Stiff Soil

Conclusion

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

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
148.0	6	Amphenol Antel LPA-171063-12CF-EDIN-X	T-Arm	(18) 1 5/8" Coax	VERIZON WIRELESS
	2	Antel LPA-80063/6CF			
	4	Antel LPA-80080/6CF			
	3	Antel BXA-70063/6CF			

Equipment to be Removed

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
No loading was considered as removed as part of this analysis.					

Proposed Equipment

Elev. ¹ (ft)	Qty	Antenna	Mount Type	Lines	Carrier
137.0	3	Ericsson RRUS 8843 B2, B66A	SitePro 1 ULP12-4	(1) 0.39" (10mm) Fiber Trunk (3) 0.92" (23.4mm) Cable (2) 2 1/2" conduit	AT&T MOBILITY
	3	Ericsson RRUS 4478 B14			
	3	Ericsson RRUS 4449 B5, B12			
	1	Raycap DC9-48-60-24-8C-EV			
	3	CCI DMP65R-BU8D			
	3	CCI TPA65R-BU8D			

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	34%	Pass
Shaft	47%	Pass
Base Plate	18%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	9,136.4	9,136.4	4,956.5	54%
Shear (Kips)	82.1	82.1	45.2	55%

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
137.0	Ericsson RRUS 8843 B2, B66A	AT&T MOBILITY	0.867	0.706
	Ericsson RRUS 4478 B14			
	Ericsson RRUS 4449 B5, B12			
	Raycap DC9-48-60-24-8C-EV			
	CCI DMP65R-BU8D			
	CCI TPA65R-BU8D			

*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:

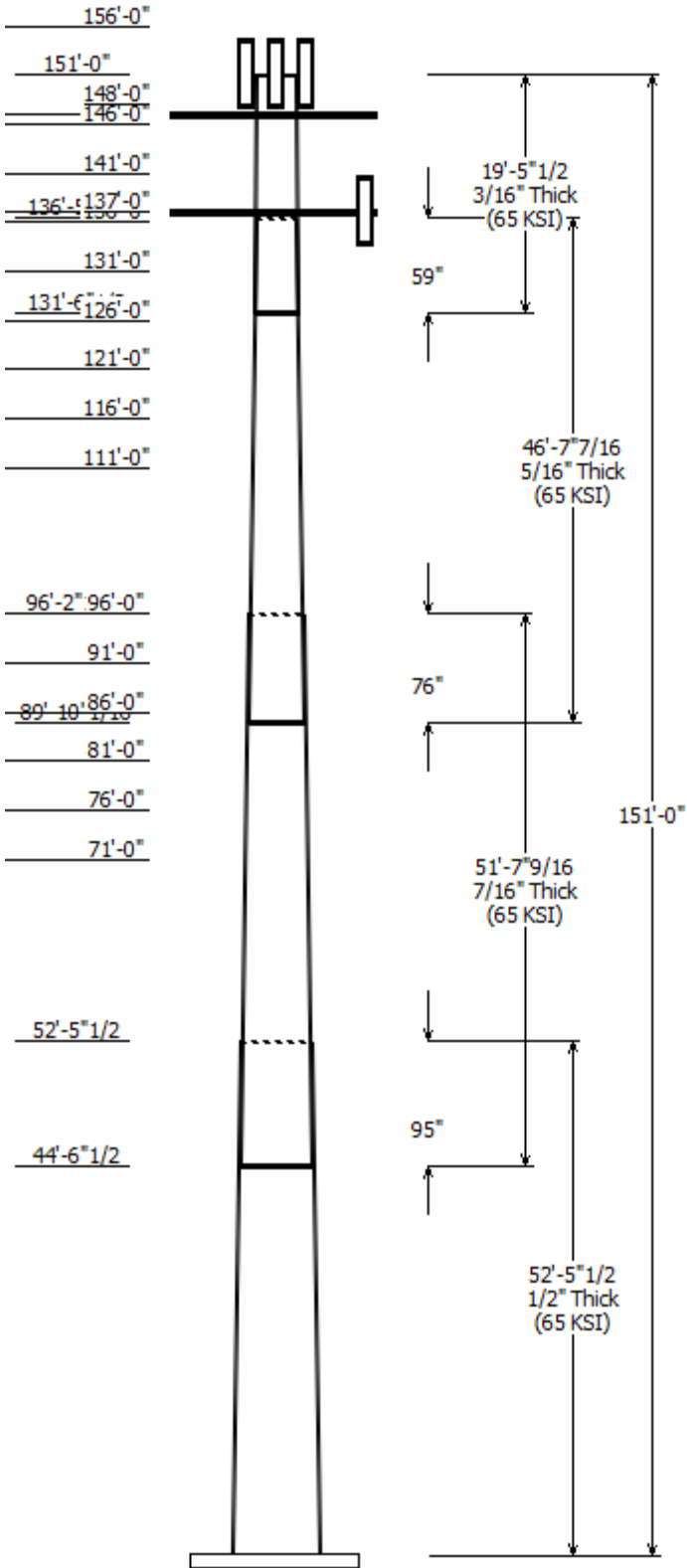
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

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 : AT&T MOBILITY	Code: ANSI/TIA-222-H
Pole : 413849	
Location : Winchester PCS CT, CT	
Description : 151 ft EEI Monopine	Risk Category : II
Shape : 18 Sides	Exposure : B
Height : 151.00 (ft)	Topo Method : Method 2
Base Elev (ft): 0.00	Topographic Feature : Flat
Taper: 0.290564in/ft)	

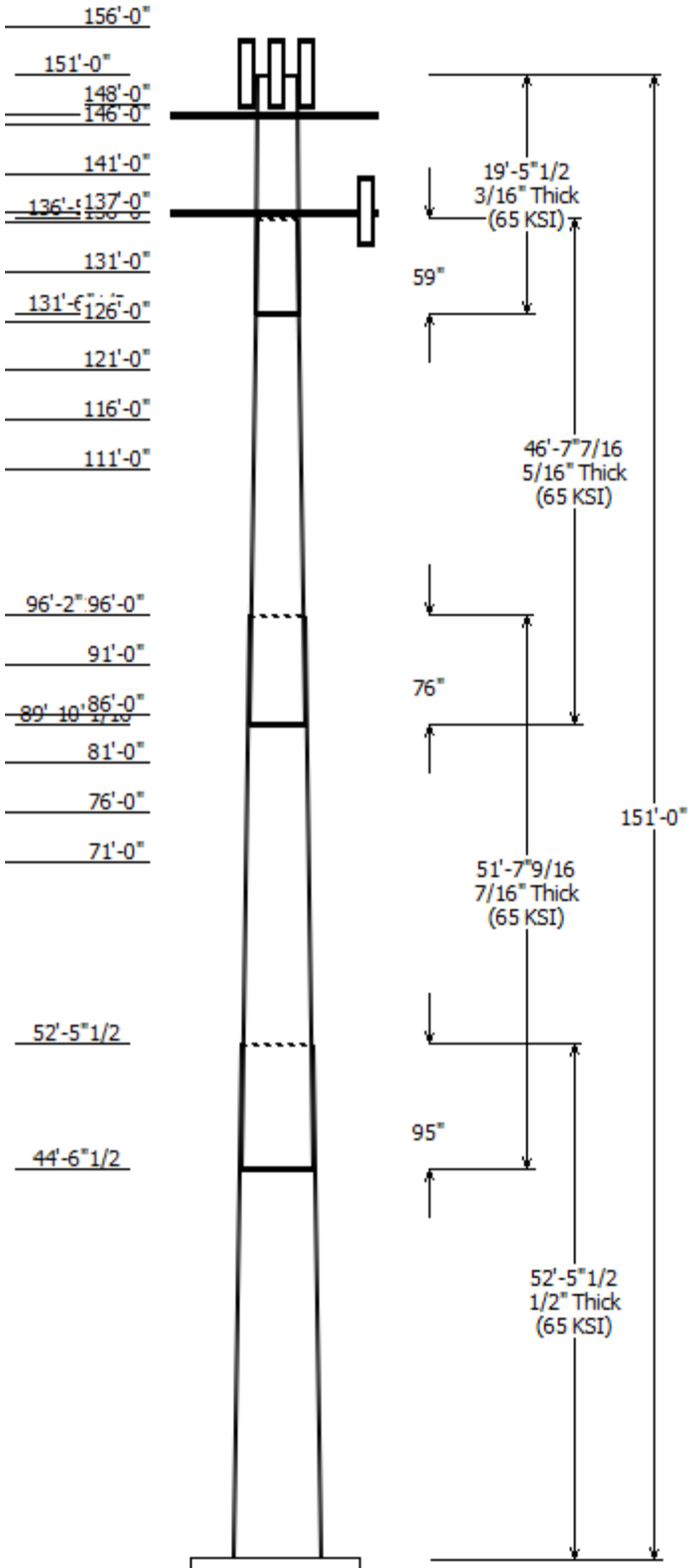
Sections Properties							
Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap Length (in)	Steel Grade
		Top	Bottom				
1	52.460	55.75	71.00	0.500		0.000	18 Sides 65
2	51.630	43.93	58.93	0.438	Slip Joint	95.000	18 Sides 65
3	46.620	32.85	46.39	0.313	Slip Joint	76.000	18 Sides 65
4	19.457	29.00	34.65	0.188	Slip Joint	59.000	18 Sides 65

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
156.000	156.000	1	Pine Branches
151.000	151.000	1	Pine Branches
148.000	149.000	2	Antel LPA-80063/6CF
148.000	149.000	4	Antel LPA-80080/6CF
148.000	149.000	3	Antel BXA-70063/6CF
148.000	149.000	6	Amphenol Antel LPA-171063-
147.000	147.000	3	Flat T-Arm
146.000	146.000	1	Pine Branches
141.000	141.000	1	Pine Branches
137.000	137.000	3	Generic Round T-Arm
137.000	137.000	3	CCI TPA65R-BU8D
137.000	137.000	3	CCI DMP65R-BU8D
137.000	137.000	1	Raycap DC9-48-60-24-8C-EV
137.000	137.000	3	Ericsson RRUS 4449 B5, B12
137.000	137.000	3	Ericsson RRUS 4478 B14
137.000	137.000	3	Ericsson RRUS 8843 B2, B66A
136.000	136.000	1	Pine Branches
131.000	131.000	1	Pine Branches
126.000	126.000	1	Pine Branches
121.000	121.000	1	Pine Branches
116.000	116.000	1	Pine Branches
111.000	111.000	1	Pine Branches
96.000	96.000	1	Pine Branches
91.000	91.000	1	Pine Branches
86.000	86.000	1	Pine Branches
81.000	81.000	1	Pine Branches
76.000	76.000	1	Pine Branches
71.000	71.000	1	Pine Branches

Linear Appurtenance			
Elev (ft) From	To	Description	Exposed To Wind
0.000	137.0	0.39" (10mm)	No
0.000	137.0	0.92" (23.4mm)	No
0.000	137.0	2 1/2" conduit	No
0.000	148.0	1 5/8" Coax	No

Load Cases	
1.2D + 1.0W	114 mph with No Ice
0.9D + 1.0W	114 mph with No Ice (Reduced DL)

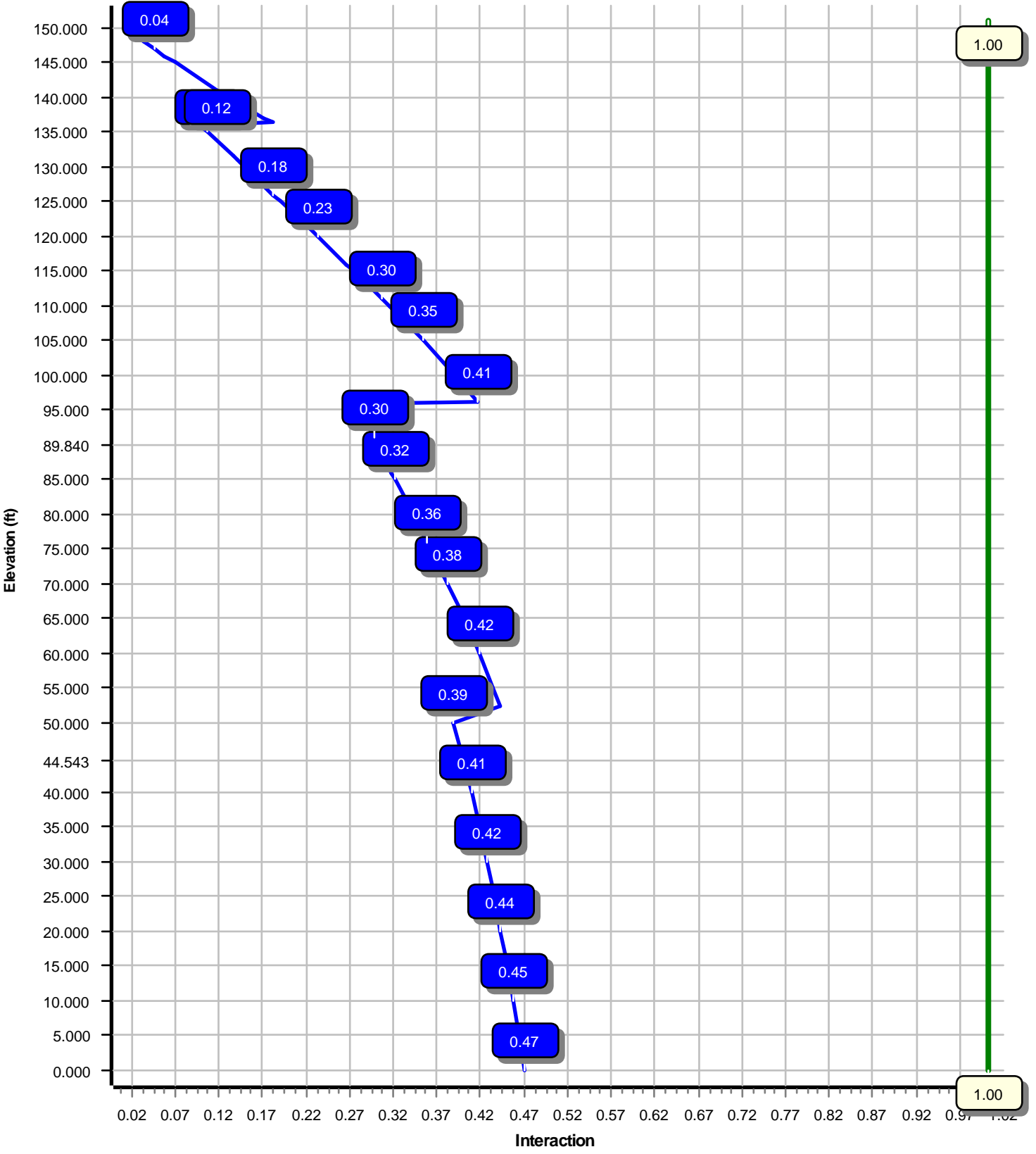
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph



Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.0W	4956.54	45.20	65.40
0.9D + 1.0W	4933.29	45.19	49.04
1.2D + 1.0Di + 1.0Wi	1623.46	14.74	95.15
1.2D + 1.0Ev + 1.0Eh	304.06	2.79	64.88
0.9D - 1.0Ev + 1.0Eh	302.42	2.79	45.38
1.0D + 1.0W	1224.85	11.20	54.53

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000

Load Case : 1.2D + 1.0W
Max Ratio 46.74% at 0.0 ft



Site Number: 413849

Code: ANSI/TIA-222-H

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Site Name: Winchester PCS CT, CT

Engineering Number:13626831_C3_03

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Customer: AT&T MOBILITY

Analysis Parameters

Location :	Litchfield County, CT	Height (ft) :	151
Code :	ANSI/TIA-222-H	Base Diameter (in) :	71.00
Shape :	18 Sides	Top Diameter (in) :	29.00
Pole Type :	Taper	Taper (in/ft) :	0.291
Pole Manufacturer :	EEI	Rotation (deg) :	0.00
Kd (non-service) :	0.95	Ke :	0.96

Ice & Wind Parameters

Exposure Category:	B	Design Wind Speed Without Ice:	114 mph
Risk Category:	II	Design Wind Speed With Ice:	50 mph
Topographic Factor Procedure:	Method 2	Operational Wind Speed:	60 mph
Feature:	Flat	Design Ice Thickness:	1.00 in
Crest Height (H):	0 ft	HMSL:	1143.00 ft
Crest Length (L):	0 ft		
Distance from Apex (x):	0 ft		
Upwind / Downwind			

Seismic Parameters

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	1.47		
T _L (sec):	6	p:	1.3
S _s :	0.167	S ₁ :	0.054
F _a :	1.600	F _v :	2.400
S _{ds} :	0.178	S _{d1} :	0.086
		C _s :	0.039
		C _s Max:	0.039
		C _s Min:	0.030

Load Cases

1.2D + 1.0W	114 mph with No Ice
0.9D + 1.0W	114 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 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: 413849

Code: ANSI/TIA-222-H

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Site Name: Winchester PCS CT, CT

Engineering Number:13626831_C3_03

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Customer: AT&T MOBILITY

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	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	52.460	0.5000	65		0.00	17,813	71.00	0.00	111.88	70255.7	23.28	142.00	55.75	52.46	87.69	33828.1	17.90	111.51	0.290563
2-18	51.630	0.4375	65	Slip	95.00	12,440	58.93	44.54	81.22	35113.6	21.99	134.70	43.93	96.17	60.39	14433.9	15.94	100.41	0.290563
3-18	46.620	0.3125	65	Slip	76.00	6,185	46.39	89.84	45.71	12263.8	24.42	148.47	32.85	136.46	32.27	4316.6	16.77	105.12	0.290563
4-18	19.457	0.1875	65	Slip	59.00	1,247	34.65	131.54	20.51	3078.3	30.83	184.82	29.00	151.00	17.15	1798.4	25.51	154.67	0.290563
Shaft Weight						37,684													

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
156.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	1,018.99	86.018	1.00
151.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	1,018.99	86.018	1.00
148.00	Amphenol Antel LPA-171063-	6	0.80	1.000	11.50	6.050	1.00	111.55	7.689	1.00
148.00	Antel BXA-70063/6CF	3	0.80	1.000	17.00	7.569	0.74	111.31	9.408	0.74
148.00	Antel LPA-80080/6CF	4	0.80	1.000	21.00	8.628	0.74	142.35	5.087	0.74
148.00	Antel LPA-80063/6CF	2	0.80	1.000	27.00	9.593	0.95	209.50	10.480	0.95
147.00	Flat T-Arm	3	0.75	0.000	250.00	12.900	0.67	389.29	18.350	0.67
146.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	1,017.58	85.885	1.00
141.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	1,016.12	85.749	1.00
137.00	Ericsson RRUS 8843 B2, B66A	3	0.80	0.000	72.00	1.639	0.50	112.57	2.198	0.50
137.00	Ericsson RRUS 4478 B14	3	0.80	0.000	59.90	1.842	0.50	96.50	2.436	0.50
137.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.000	71.00	1.969	0.50	113.66	2.586	0.50
137.00	Raycap DC9-48-60-24-8C-EV	1	0.80	0.000	16.00	4.788	1.00	101.45	5.762	1.00
137.00	Generic Round T-Arm	3	0.75	0.000	312.50	9.700	0.75	485.41	15.157	0.75
137.00	CCI DMP65R-BU8D	3	0.80	0.000	95.70	17.871	0.63	320.66	20.310	0.63
137.00	CCI TPA65R-BU8D	3	0.80	0.000	82.50	18.089	0.63	310.71	20.533	0.63
136.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	1,014.61	85.608	1.00
131.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	1,013.06	85.462	1.00
126.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	1,011.45	85.312	1.00
121.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	1,009.78	85.155	1.00
116.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	1,008.05	84.993	1.00
111.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	1,006.24	84.824	1.00
96.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	1,000.36	84.274	1.00
91.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	998.21	84.073	1.00
86.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	995.96	83.862	1.00
81.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	993.58	83.639	1.00
76.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	991.06	83.403	1.00
71.00	Pine Branches	1	1.00	0.000	600.00	46.800	1.00	988.39	83.153	1.00
Totals	Num Loadings:28	53			12,704.80			23,681.94		

Linear Appurtenance Properties

Load Case Azimuth (deg) :

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Max Coax / Flat	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind Carrier
0.00	148.00	18	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	N VERIZON WIRELESS
0.00	137.00	1	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	N AT&T MOBILITY
0.00	137.00	3	0.92" (23.4mm) Cable	0.92	0.89	N	0	0.00	0.00	0	N AT&T MOBILITY
0.00	137.00	2	2 1/2" conduit	2.88	5.79	N	0	0.00	0.00	0	N AT&T MOBILITY

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)
0.00		0.5000	71.000	111.879	70,255.7	23.28	142.00	74.0	1949.	0.0	0.0
5.00		0.5000	69.547	109.574	66,001.3	22.76	139.09	74.6	1869.	0.0	1,883.9
10.00		0.5000	68.094	107.268	61,922.1	22.25	136.19	75.2	1791.	0.0	1,844.7
15.00		0.5000	66.642	104.963	58,014.6	21.74	133.28	75.8	1714.	0.0	1,805.4
20.00		0.5000	65.189	102.657	54,275.1	21.23	130.38	76.4	1639.	0.0	1,766.2
25.00		0.5000	63.736	100.352	50,699.8	20.71	127.47	77.0	1566.	0.0	1,727.0
30.00		0.5000	62.283	98.046	47,285.0	20.20	124.57	77.6	1495.	0.0	1,687.8
35.00		0.5000	60.830	95.741	44,027.2	19.69	121.66	78.2	1425.	0.0	1,648.5
40.00		0.5000	59.377	93.435	40,922.5	19.18	118.75	78.8	1357.	0.0	1,609.3
44.54	Bot - Section 2	0.5000	58.057	91.340	38,231.1	18.71	116.11	79.4	1297.	0.0	1,428.3
45.00		0.5000	57.925	91.130	37,967.3	18.66	115.85	79.4	1291.	0.0	267.8
50.00		0.5000	56.472	88.824	35,157.9	18.15	112.94	80.1	1226.	0.0	2,892.5
52.46	Top - Section 1	0.4375	56.632	78.030	31,131.9	21.06	129.44	76.6	1082.	0.0	1,396.1
55.00		0.4375	55.894	77.006	29,921.3	20.76	127.76	77.0	1054.	0.0	670.0
60.00		0.4375	54.441	74.988	27,630.8	20.18	124.44	77.7	999.6	0.0	1,293.0
65.00		0.4375	52.988	72.971	25,460.3	19.59	121.12	78.4	946.4	0.0	1,258.7
70.00		0.4375	51.536	70.954	23,406.5	19.01	117.80	79.0	894.6	0.0	1,224.4
71.00		0.4375	51.245	70.550	23,009.5	18.89	117.13	79.2	884.4	0.0	240.8
75.00		0.4375	50.083	68.936	21,466.3	18.42	114.47	79.7	844.2	0.0	949.3
76.00		0.4375	49.792	68.533	21,091.6	18.30	113.81	79.9	834.3	0.0	233.9
80.00		0.4375	48.630	66.919	19,636.3	17.84	111.15	80.4	795.3	0.0	921.8
81.00		0.4375	48.339	66.515	19,283.3	17.72	110.49	80.6	785.7	0.0	227.0
85.00		0.4375	47.177	64.902	17,913.4	17.25	107.83	81.1	747.9	0.0	894.4
86.00		0.4375	46.887	64.498	17,581.4	17.13	107.17	81.2	738.6	0.0	220.2
89.84	Bot - Section 3	0.4375	45.771	62.949	16,344.6	16.68	104.62	81.8	703.3	0.0	832.7
90.00		0.4375	45.724	62.884	16,294.4	16.67	104.51	81.8	701.9	0.0	59.1
91.00		0.4375	45.434	62.481	15,982.8	16.55	103.85	81.9	692.9	0.0	368.2
95.00		0.4375	44.272	60.867	14,776.0	16.08	101.19	82.5	657.4	0.0	1,449.2
96.00		0.4375	43.981	60.463	14,484.1	15.96	100.53	82.6	648.6	0.0	356.4
96.17	Top - Section 2	0.3125	44.556	43.882	10,852.5	23.38	142.58	73.9	479.7	0.0	61.5
100.0		0.3125	43.444	42.779	10,054.7	22.75	139.02	74.6	455.9	0.0	564.2
105.0		0.3125	41.991	41.338	9,072.5	21.93	134.37	75.6	425.6	0.0	715.6
110.0		0.3125	40.538	39.897	8,156.5	21.11	129.72	76.6	396.3	0.0	691.1
111.0		0.3125	40.248	39.609	7,981.0	20.95	128.79	76.8	390.6	0.0	135.3
115.0		0.3125	39.085	38.456	7,304.2	20.29	125.07	77.5	368.1	0.0	531.3
116.0		0.3125	38.795	38.168	7,141.2	20.13	124.14	77.7	362.6	0.0	130.4
120.0		0.3125	37.632	37.015	6,513.5	19.47	120.42	78.5	340.9	0.0	511.7
121.0		0.3125	37.342	36.727	6,362.6	19.31	119.49	78.7	335.6	0.0	125.5
125.0		0.3125	36.180	35.574	5,782.1	18.65	115.77	79.5	314.8	0.0	492.1
126.0		0.3125	35.889	35.286	5,642.7	18.49	114.85	79.7	309.7	0.0	120.6
130.0		0.3125	34.727	34.133	5,107.5	17.83	111.13	80.4	289.7	0.0	472.4
131.0		0.3125	34.436	33.845	4,979.3	17.67	110.20	80.6	284.8	0.0	115.7
131.5	Bot - Section 4	0.3125	34.278	33.689	4,910.5	17.58	109.69	80.7	282.2	0.0	62.4
135.0		0.3125	33.274	32.693	4,487.6	17.01	106.48	81.4	265.6	0.0	628.1
136.0		0.3125	32.983	32.404	4,370.0	16.85	105.55	81.6	261.0	0.0	178.2
136.4	Top - Section 3	0.1875	33.225	19.661	2,711.2	29.48	177.20	66.7	160.7	0.0	81.5
137.0		0.1875	33.068	19.567	2,672.7	29.33	176.36	66.9	159.2	0.0	36.0
140.0		0.1875	32.196	19.048	2,465.8	28.51	171.71	67.9	150.8	0.0	197.1
141.0		0.1875	31.906	18.876	2,399.2	28.24	170.16	68.2	148.1	0.0	64.5
145.0		0.1875	30.743	18.184	2,145.0	27.15	163.96	69.5	137.4	0.0	252.2
146.0		0.1875	30.453	18.011	2,084.4	26.87	162.42	69.8	134.8	0.0	61.6
147.0		0.1875	30.162	17.838	2,024.9	26.60	160.87	70.1	132.2	0.0	61.0
148.0		0.1875	29.872	17.665	1,966.6	26.33	159.32	70.4	129.7	0.0	60.4
150.0		0.1875	29.291	17.319	1,853.4	25.78	156.22	71.1	124.6	0.0	119.0
151.0		0.1875	29.000	17.146	1,798.4	25.51	154.67	71.4	122.1	0.0	58.6
37,684.4											

Load Case: 1.2D + 1.0W	114 mph with No Ice	21 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		253.4	0.0					0.0	0.0	253.4	0.0	0.0	0.0
5.00		501.6	2,260.7					0.0	174.4	501.6	2,435.1	0.0	0.0
10.00		491.1	2,213.6					0.0	174.4	491.1	2,388.0	0.0	0.0
15.00		480.6	2,166.5					0.0	174.4	480.6	2,340.9	0.0	0.0
20.00		470.1	2,119.5					0.0	174.4	470.1	2,293.9	0.0	0.0
25.00		459.7	2,072.4					0.0	174.4	459.7	2,246.8	0.0	0.0
30.00		454.5	2,025.3					0.0	174.4	454.5	2,199.7	0.0	0.0
35.00		458.5	1,978.2					0.0	174.4	458.5	2,152.7	0.0	0.0
40.00		443.6	1,931.2					0.0	174.4	443.6	2,105.6	0.0	0.0
44.54	Bot - Section 2	234.1	1,714.0					0.0	158.5	234.1	1,872.5	0.0	0.0
45.00		260.8	321.4					0.0	15.9	260.8	337.3	0.0	0.0
50.00		356.9	3,471.0					0.0	174.4	356.9	3,645.4	0.0	0.0
52.46	Top - Section 1	239.8	1,675.3					0.0	85.8	239.8	1,761.2	0.0	0.0
55.00		361.6	804.0					0.0	88.6	361.6	892.6	0.0	0.0
60.00		478.9	1,551.6					0.0	174.4	478.9	1,726.0	0.0	0.0
65.00		476.9	1,510.4					0.0	174.4	476.9	1,684.8	0.0	0.0
70.00		285.1	1,469.2					0.0	174.4	285.1	1,643.6	0.0	0.0
71.00	Appurtenance(s)	235.9	288.9	1,399.0	0.0	0.0	720.0	0.0	34.9	1,634.9	1,043.8	0.0	0.0
75.00		235.5	1,139.1					0.0	139.5	235.5	1,278.7	0.0	0.0
76.00	Appurtenance(s)	233.6	280.7	1,426.4	0.0	0.0	720.0	0.0	34.9	1,660.0	1,035.5	0.0	0.0
80.00		233.1	1,106.2					0.0	139.5	233.1	1,245.7	0.0	0.0
81.00	Appurtenance(s)	230.8	272.4	1,452.6	0.0	0.0	720.0	0.0	34.9	1,683.4	1,027.3	0.0	0.0
85.00		230.2	1,073.2					0.0	139.5	230.2	1,212.8	0.0	0.0
86.00	Appurtenance(s)	220.4	264.2	1,477.7	0.0	0.0	720.0	0.0	34.9	1,698.1	1,019.1	0.0	0.0
89.84	Bot - Section 3	181.9	999.2					0.0	134.0	181.9	1,133.1	0.0	0.0
90.00		53.0	71.0					0.0	5.6	53.0	76.5	0.0	0.0
91.00	Appurtenance(s)	227.1	441.8	1,501.8	0.0	0.0	720.0	0.0	34.9	1,728.9	1,196.7	0.0	0.0
95.00		226.4	1,739.0					0.0	139.5	226.4	1,878.6	0.0	0.0
96.00	Appurtenance(s)	52.7	427.7	1,524.9	0.0	0.0	720.0	0.0	34.9	1,577.6	1,182.6	0.0	0.0
96.17	Top - Section 2	178.3	73.8					0.0	6.0	178.3	79.9	0.0	0.0
100.00		389.5	677.1					0.0	133.5	389.5	810.6	0.0	0.0
105.00		433.5	858.7					0.0	174.4	433.5	1,033.1	0.0	0.0
110.00		256.8	829.3					0.0	174.4	256.8	1,003.7	0.0	0.0
111.00	Appurtenance(s)	209.6	162.3	1,589.5	0.0	0.0	720.0	0.0	34.9	1,799.1	917.2	0.0	0.0
115.00		208.6	637.5					0.0	139.5	208.6	777.1	0.0	0.0
116.00	Appurtenance(s)	204.5	156.4	1,609.6	0.0	0.0	720.0	0.0	34.9	1,814.1	911.3	0.0	0.0
120.00		203.4	614.0					0.0	139.5	203.4	753.5	0.0	0.0
121.00	Appurtenance(s)	199.1	150.6	1,629.1	0.0	0.0	720.0	0.0	34.9	1,828.2	905.4	0.0	0.0
125.00		198.0	590.5					0.0	139.5	198.0	730.0	0.0	0.0
126.00	Appurtenance(s)	193.5	144.7	1,648.1	0.0	0.0	720.0	0.0	34.9	1,841.5	899.6	0.0	0.0
130.00		192.3	566.9					0.0	139.5	192.3	706.5	0.0	0.0
131.00	Appurtenance(s)	58.5	138.8	1,666.5	0.0	0.0	720.0	0.0	34.9	1,725.0	893.7	0.0	0.0
131.54	Bot - Section 4	151.0	74.9					0.0	19.0	151.0	93.9	0.0	0.0
135.00		167.7	753.8					0.0	120.6	167.7	874.3	0.0	0.0
136.00	Appurtenance(s)	54.2	213.9	1,684.4	0.0	0.0	720.0	0.0	34.9	1,738.7	968.7	0.0	0.0
136.46	Top - Section 3	37.0	97.7					0.0	16.0	37.0	113.8	0.0	0.0
137.00	Appurtenance(s)	129.3	43.2	2,925.5	0.0	0.0	2,516.2	0.0	18.8	3,054.8	2,578.2	0.0	0.0
140.00		145.4	236.5					0.0	53.1	145.4	289.7	0.0	0.0

Site Number: 413849

Code: ANSI/TIA-222-H

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Site Name: Winchester PCS CT, CT

Engineering Number: 13626831_C3_03

4/6/2021 10:35:04 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0W

114 mph with No Ice

21 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.20

Wind Load Factor :1.00

141.00	Appurtenance(s)	177.3	77.4	1,701.9	0.0	0.0	720.0	0.0	17.7	1,879.2	815.1	0.0	0.0
145.00		176.0	302.7					0.0	70.8	176.0	373.5	0.0	0.0
146.00	Appurtenance(s)	69.1	73.9	1,718.9	0.0	0.0	720.0	0.0	17.7	1,788.0	811.6	0.0	0.0
147.00	Appurtenance(s)	68.6	73.2	715.7	0.0	0.0	900.0	0.0	17.7	784.2	990.9	0.0	0.0
148.00	Appurtenance(s)	92.4	72.5	2,862.9	0.0	2,862.9	309.6	0.0	17.7	2,955.3	399.8	0.0	0.0
150.00		87.0	142.9					0.0	0.0	87.0	142.9	0.0	0.0
151.00	Appurtenance(s)	28.8	70.4	1,735.5	0.0	0.0	720.0	0.0	0.0	1,764.3	790.4	0.0	0.0
Totals:										43,647.0	64,720.9	0.00	0.00

Load Case: 1.2D + 1.0W

114 mph with No Ice

21 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	-65.40	-45.20	0.00	-4,956.54	0.00	4,956.54	7,453.69	1,963.48	12,502.6	10,820.4	0.00	0.00	0.467
5.00	-62.89	-44.81	0.00	-4,730.54	0.00	4,730.54	7,359.51	1,923.02	11,992.7	10,462.0	0.05	-0.10	0.461
10.00	-60.42	-44.41	0.00	-4,506.51	0.00	4,506.51	7,262.84	1,882.56	11,493.4	10,105.7	0.21	-0.20	0.455
15.00	-58.01	-44.03	0.00	-4,284.44	0.00	4,284.44	7,163.66	1,842.10	11,004.7	9,751.96	0.47	-0.30	0.448
20.00	-55.64	-43.64	0.00	-4,064.31	0.00	4,064.31	7,061.98	1,801.64	10,526.6	9,400.80	0.84	-0.40	0.441
25.00	-53.32	-43.26	0.00	-3,846.10	0.00	3,846.10	6,957.80	1,761.17	10,059.1	9,052.51	1.32	-0.50	0.433
30.00	-51.04	-42.88	0.00	-3,629.79	0.00	3,629.79	6,851.13	1,720.71	9,602.35	8,707.32	1.90	-0.61	0.425
35.00	-48.82	-42.49	0.00	-3,415.39	0.00	3,415.39	6,741.95	1,680.25	9,156.12	8,365.46	2.60	-0.72	0.416
40.00	-46.64	-42.10	0.00	-3,202.96	0.00	3,202.96	6,630.27	1,639.79	8,720.51	8,027.14	3.41	-0.82	0.407
44.54	-44.73	-41.88	0.00	-3,011.69	0.00	3,011.69	6,526.62	1,603.02	8,333.89	7,723.00	4.24	-0.92	0.398
45.00	-44.36	-41.66	0.00	-2,992.56	0.00	2,992.56	6,516.08	1,599.33	8,295.51	7,692.61	4.33	-0.93	0.397
50.00	-40.66	-41.30	0.00	-2,784.27	0.00	2,784.27	6,399.40	1,558.86	7,881.13	7,362.07	5.36	-1.04	0.385
52.46	-38.86	-41.06	0.00	-2,682.68	0.00	2,682.68	5,381.44	1,369.43	6,950.73	6,222.68	5.91	-1.09	0.439
55.00	-37.92	-40.74	0.00	-2,578.39	0.00	2,578.39	5,335.00	1,351.45	6,769.38	6,087.35	6.51	-1.15	0.432
60.00	-36.12	-40.30	0.00	-2,374.69	0.00	2,374.69	5,241.72	1,316.04	6,419.39	5,823.00	7.78	-1.27	0.416
65.00	-34.36	-39.85	0.00	-2,173.19	0.00	2,173.19	5,145.93	1,280.64	6,078.68	5,561.57	9.17	-1.38	0.398
70.00	-32.68	-39.57	0.00	-1,973.92	0.00	1,973.92	5,047.65	1,245.23	5,747.27	5,303.28	10.68	-1.50	0.380
71.00	-31.64	-37.94	0.00	-1,934.36	0.00	1,934.36	5,027.69	1,238.15	5,682.10	5,252.02	11.00	-1.52	0.376
75.00	-30.33	-37.70	0.00	-1,782.61	0.00	1,782.61	4,946.86	1,209.83	5,425.15	5,048.36	12.32	-1.62	0.360
76.00	-29.31	-36.04	0.00	-1,744.91	0.00	1,744.91	4,926.40	1,202.75	5,361.84	4,997.80	12.66	-1.64	0.356
80.00	-28.04	-35.80	0.00	-1,600.76	0.00	1,600.76	4,843.57	1,174.43	5,112.31	4,797.04	14.07	-1.73	0.340
81.00	-27.03	-34.11	0.00	-1,564.97	0.00	1,564.97	4,822.61	1,167.34	5,050.86	4,747.23	14.44	-1.75	0.336
85.00	-25.79	-33.86	0.00	-1,428.54	0.00	1,428.54	4,737.78	1,139.02	4,808.77	4,549.54	15.94	-1.84	0.320
86.00	-24.80	-32.16	0.00	-1,394.67	0.00	1,394.67	4,716.33	1,131.94	4,749.17	4,500.52	16.33	-1.86	0.316
89.84	-23.65	-31.96	0.00	-1,271.19	0.00	1,271.19	4,633.00	1,104.75	4,523.78	4,313.82	17.86	-1.95	0.301
90.00	-23.56	-31.91	0.00	-1,266.08	0.00	1,266.08	4,629.49	1,103.62	4,514.51	4,306.09	17.93	-1.95	0.300
91.00	-22.40	-30.16	0.00	-1,234.17	0.00	1,234.17	4,607.54	1,096.54	4,456.77	4,257.91	18.34	-1.97	0.295
95.00	-20.50	-29.88	0.00	-1,113.55	0.00	1,113.55	4,518.70	1,068.21	4,229.54	4,066.92	20.03	-2.05	0.279
96.00	-19.37	-28.27	0.00	-1,083.66	0.00	1,083.66	4,492.13	1,061.13	4,173.67	4,015.93	20.46	-2.08	0.275
96.17	-19.28	-28.10	0.00	-1,078.76	0.00	1,078.76	2,918.80	770.13	3,077.48	2,659.17	20.54	-2.08	0.414
100.00	-18.43	-27.72	0.00	-971.23	0.00	971.23	2,873.85	750.78	2,924.76	2,551.96	22.24	-2.16	0.388
105.00	-17.36	-27.28	0.00	-832.65	0.00	832.65	2,812.92	725.49	2,731.07	2,413.11	24.57	-2.28	0.353
110.00	-16.33	-27.00	0.00	-696.26	0.00	696.26	2,749.49	700.20	2,544.01	2,275.87	27.03	-2.40	0.313
111.00	-15.47	-25.18	0.00	-669.25	0.00	669.25	2,736.50	695.14	2,507.39	2,248.63	27.53	-2.43	0.305
115.00	-14.68	-24.95	0.00	-568.53	0.00	568.53	2,683.56	674.91	2,363.58	2,140.45	29.61	-2.52	0.272
116.00	-13.82	-23.11	0.00	-543.58	0.00	543.58	2,670.07	669.85	2,328.30	2,113.60	30.14	-2.54	0.264
120.00	-13.06	-22.89	0.00	-451.12	0.00	451.12	2,615.12	649.62	2,189.80	2,007.08	32.30	-2.62	0.231
121.00	-12.22	-21.03	0.00	-428.24	0.00	428.24	2,601.14	644.56	2,155.84	1,980.68	32.85	-2.64	0.222
125.00	-11.49	-20.81	0.00	-344.12	0.00	344.12	2,544.19	624.33	2,022.64	1,876.00	35.09	-2.71	0.189
126.00	-10.67	-18.93	0.00	-323.31	0.00	323.31	2,529.70	619.27	1,990.01	1,850.07	35.66	-2.72	0.180
130.00	-9.96	-18.71	0.00	-247.59	0.00	247.59	2,470.75	599.04	1,862.13	1,747.42	37.96	-2.78	0.147
131.00	-9.15	-16.95	0.00	-228.88	0.00	228.88	2,455.77	593.98	1,830.82	1,722.02	38.55	-2.79	0.137
131.54	-9.05	-16.79	0.00	-219.67	0.00	219.67	2,447.58	591.24	1,813.92	1,708.27	38.87	-2.80	0.133

Site Number: 413849

Code: ANSI/TIA-222-H

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Site Name: Winchester PCS CT, CT

Engineering Number: 13626831_C3_03

4/6/2021 10:35:04 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0W

114 mph with No Ice

21 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.20

Wind Load Factor :1.00

135.00	-8.18	-16.59	0.00	-161.62	0.00	161.62	2,394.82	573.75	1,708.25	1,621.57	40.91	-2.84	0.104
136.00	-7.30	-14.80	0.00	-145.03	0.00	145.03	2,379.33	568.70	1,678.27	1,596.75	41.50	-2.85	0.095
136.46	-7.19	-14.76	0.00	-138.23	0.00	138.23	1,180.67	345.04	1,029.55	804.32	41.78	-2.85	0.180
137.00	-4.76	-11.58	0.00	-130.25	0.00	130.25	1,178.12	343.40	1,019.79	798.75	42.10	-2.86	0.168
140.00	-4.47	-11.43	0.00	-95.50	0.00	95.50	1,163.42	334.30	966.44	767.75	43.91	-2.89	0.129
141.00	-3.75	-9.51	0.00	-84.08	0.00	84.08	1,158.32	331.27	948.98	757.40	44.52	-2.90	0.115
145.00	-3.38	-9.32	0.00	-46.04	0.00	46.04	1,136.91	319.13	880.71	716.01	46.96	-2.93	0.068
146.00	-2.66	-7.49	0.00	-36.72	0.00	36.72	1,131.31	316.09	864.04	705.66	47.58	-2.94	0.055
147.00	-1.71	-6.66	0.00	-29.23	0.00	29.23	1,125.61	313.06	847.53	695.32	48.19	-2.94	0.044
148.00	-1.47	-3.68	0.00	-19.71	0.00	19.71	1,119.80	310.02	831.18	684.99	48.81	-2.95	0.030
150.00	-1.33	-3.59	0.00	-12.35	0.00	12.35	1,107.90	303.95	798.96	664.36	50.05	-2.95	0.020
151.00	0.00	-3.52	0.00	-8.76	0.00	8.76	1,101.80	300.92	783.09	654.06	50.67	-2.95	0.014

Load Case: 0.9D + 1.0W

114 mph with No Ice (Reduced DL)

21 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		253.4	0.0					0.0	0.0	253.4	0.0	0.0	0.0
5.00		501.6	1,695.5					0.0	130.8	501.6	1,826.3	0.0	0.0
10.00		491.1	1,660.2					0.0	130.8	491.1	1,791.0	0.0	0.0
15.00		480.6	1,624.9					0.0	130.8	480.6	1,755.7	0.0	0.0
20.00		470.1	1,589.6					0.0	130.8	470.1	1,720.4	0.0	0.0
25.00		459.7	1,554.3					0.0	130.8	459.7	1,685.1	0.0	0.0
30.00		454.5	1,519.0					0.0	130.8	454.5	1,649.8	0.0	0.0
35.00		458.5	1,483.7					0.0	130.8	458.5	1,614.5	0.0	0.0
40.00		443.6	1,448.4					0.0	130.8	443.6	1,579.2	0.0	0.0
44.54	Bot - Section 2	234.1	1,285.5					0.0	118.9	234.1	1,404.3	0.0	0.0
45.00		260.8	241.1					0.0	11.9	260.8	253.0	0.0	0.0
50.00		356.9	2,603.3					0.0	130.8	356.9	2,734.1	0.0	0.0
52.46	Top - Section 1	239.8	1,256.5					0.0	64.4	239.8	1,320.9	0.0	0.0
55.00		361.6	603.0					0.0	66.5	361.6	669.4	0.0	0.0
60.00		478.9	1,163.7					0.0	130.8	478.9	1,294.5	0.0	0.0
65.00		476.9	1,132.8					0.0	130.8	476.9	1,263.6	0.0	0.0
70.00		285.1	1,101.9					0.0	130.8	285.1	1,232.7	0.0	0.0
71.00	Appurtenance(s)	235.9	216.7	1,399.0	0.0	0.0	540.0	0.0	26.2	1,634.9	782.8	0.0	0.0
75.00		235.5	854.4					0.0	104.7	235.5	959.0	0.0	0.0
76.00	Appurtenance(s)	233.6	210.5	1,426.4	0.0	0.0	540.0	0.0	26.2	1,660.0	776.7	0.0	0.0
80.00		233.1	829.6					0.0	104.7	233.1	934.3	0.0	0.0
81.00	Appurtenance(s)	230.8	204.3	1,452.6	0.0	0.0	540.0	0.0	26.2	1,683.4	770.5	0.0	0.0
85.00		230.2	804.9					0.0	104.7	230.2	909.6	0.0	0.0
86.00	Appurtenance(s)	220.4	198.1	1,477.7	0.0	0.0	540.0	0.0	26.2	1,698.1	764.3	0.0	0.0
89.84	Bot - Section 3	181.9	749.4					0.0	100.5	181.9	849.9	0.0	0.0
90.00		53.0	53.2					0.0	4.2	53.0	57.4	0.0	0.0
91.00	Appurtenance(s)	227.1	331.4	1,501.8	0.0	0.0	540.0	0.0	26.2	1,728.9	897.5	0.0	0.0
95.00		226.4	1,304.3					0.0	104.7	226.4	1,408.9	0.0	0.0
96.00	Appurtenance(s)	52.7	320.8	1,524.9	0.0	0.0	540.0	0.0	26.2	1,577.6	886.9	0.0	0.0
96.17	Top - Section 2	178.3	55.4					0.0	4.5	178.3	59.9	0.0	0.0
100.00		389.5	507.8					0.0	100.1	389.5	607.9	0.0	0.0
105.00		433.5	644.0					0.0	130.8	433.5	774.8	0.0	0.0
110.00		256.8	622.0					0.0	130.8	256.8	752.8	0.0	0.0
111.00	Appurtenance(s)	209.6	121.7	1,589.5	0.0	0.0	540.0	0.0	26.2	1,799.1	687.9	0.0	0.0
115.00		208.6	478.2					0.0	104.7	208.6	582.8	0.0	0.0
116.00	Appurtenance(s)	204.5	117.3	1,609.6	0.0	0.0	540.0	0.0	26.2	1,814.1	683.5	0.0	0.0
120.00		203.4	460.5					0.0	104.7	203.4	565.2	0.0	0.0
121.00	Appurtenance(s)	199.1	112.9	1,629.1	0.0	0.0	540.0	0.0	26.2	1,828.2	679.1	0.0	0.0
125.00		198.0	442.8					0.0	104.7	198.0	547.5	0.0	0.0
126.00	Appurtenance(s)	193.5	108.5	1,648.1	0.0	0.0	540.0	0.0	26.2	1,841.5	674.7	0.0	0.0
130.00		192.3	425.2					0.0	104.7	192.3	529.8	0.0	0.0
131.00	Appurtenance(s)	58.5	104.1	1,666.5	0.0	0.0	540.0	0.0	26.2	1,725.0	670.3	0.0	0.0
131.54	Bot - Section 4	151.0	56.2					0.0	14.2	151.0	70.4	0.0	0.0
135.00		167.7	565.3					0.0	90.4	167.7	655.8	0.0	0.0
136.00	Appurtenance(s)	54.2	160.4	1,684.4	0.0	0.0	540.0	0.0	26.2	1,738.7	726.6	0.0	0.0
136.46	Top - Section 3	37.0	73.3					0.0	12.0	37.0	85.3	0.0	0.0
137.00	Appurtenance(s)	129.3	32.4	2,925.5	0.0	0.0	1,887.1	0.0	14.1	3,054.8	1,933.7	0.0	0.0
140.00		145.4	177.4					0.0	39.9	145.4	217.2	0.0	0.0

Site Number: 413849

Code: ANSI/TIA-222-H

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Site Name: Winchester PCS CT, CT

Engineering Number: 13626831_C3_03

4/6/2021 10:35:06 PM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.0W

114 mph with No Ice (Reduced DL)

21 Iterations

Gust Response Factor :1.10

Dead Load Factor :0.90

Wind Load Factor :1.00

141.00	Appurtenance(s)	177.3	58.1	1,701.9	0.0	0.0	540.0	0.0	13.3	1,879.2	611.4	0.0	0.0
145.00		176.0	227.0					0.0	53.1	176.0	280.1	0.0	0.0
146.00	Appurtenance(s)	69.1	55.4	1,718.9	0.0	0.0	540.0	0.0	13.3	1,788.0	608.7	0.0	0.0
147.00	Appurtenance(s)	68.6	54.9	715.7	0.0	0.0	675.0	0.0	13.3	784.2	743.2	0.0	0.0
148.00	Appurtenance(s)	92.4	54.4	2,862.9	0.0	2,862.9	232.2	0.0	13.3	2,955.3	299.8	0.0	0.0
150.00		87.0	107.1					0.0	0.0	87.0	107.1	0.0	0.0
151.00	Appurtenance(s)	28.8	52.8	1,735.5	0.0	0.0	540.0	0.0	0.0	1,764.3	592.8	0.0	0.0
Totals:										43,647.0	48,540.7	0.00	0.00

Load Case: 0.9D + 1.0W

114 mph with No Ice (Reduced DL)

21 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	-49.04	-45.19	0.00	-4,933.29	0.00	4,933.29	7,453.69	1,963.48	12,502.6	10,820.4	0.00	0.00	0.463
5.00	-47.14	-44.76	0.00	-4,707.36	0.00	4,707.36	7,359.51	1,923.02	11,992.7	10,462.0	0.05	-0.10	0.457
10.00	-45.27	-44.35	0.00	-4,483.54	0.00	4,483.54	7,262.84	1,882.56	11,493.4	10,105.7	0.21	-0.20	0.450
15.00	-43.44	-43.94	0.00	-4,261.81	0.00	4,261.81	7,163.66	1,842.10	11,004.7	9,751.96	0.47	-0.30	0.444
20.00	-41.64	-43.53	0.00	-4,042.13	0.00	4,042.13	7,061.98	1,801.64	10,526.6	9,400.80	0.84	-0.40	0.436
25.00	-39.89	-43.13	0.00	-3,824.48	0.00	3,824.48	6,957.80	1,761.17	10,059.1	9,052.51	1.31	-0.50	0.429
30.00	-38.16	-42.73	0.00	-3,608.84	0.00	3,608.84	6,851.13	1,720.71	9,602.35	8,707.32	1.89	-0.61	0.421
35.00	-36.47	-42.32	0.00	-3,395.20	0.00	3,395.20	6,741.95	1,680.25	9,156.12	8,365.46	2.59	-0.71	0.412
40.00	-34.83	-41.92	0.00	-3,183.60	0.00	3,183.60	6,630.27	1,639.79	8,720.51	8,027.14	3.39	-0.82	0.403
44.54	-33.39	-41.69	0.00	-2,993.16	0.00	2,993.16	6,526.62	1,603.02	8,333.89	7,723.00	4.22	-0.92	0.393
45.00	-33.10	-41.46	0.00	-2,974.13	0.00	2,974.13	6,516.08	1,599.33	8,295.51	7,692.61	4.30	-0.93	0.392
50.00	-30.31	-41.10	0.00	-2,766.82	0.00	2,766.82	6,399.40	1,558.86	7,881.13	7,362.07	5.33	-1.03	0.381
52.46	-28.96	-40.86	0.00	-2,665.71	0.00	2,665.71	5,381.44	1,369.43	6,950.73	6,222.68	5.88	-1.09	0.435
55.00	-28.23	-40.53	0.00	-2,561.92	0.00	2,561.92	5,335.00	1,351.45	6,769.38	6,087.35	6.47	-1.14	0.427
60.00	-26.87	-40.08	0.00	-2,359.26	0.00	2,359.26	5,241.72	1,316.04	6,419.39	5,823.00	7.73	-1.26	0.411
65.00	-25.53	-39.63	0.00	-2,158.85	0.00	2,158.85	5,145.93	1,280.64	6,078.68	5,561.57	9.12	-1.38	0.394
70.00	-24.26	-39.34	0.00	-1,960.71	0.00	1,960.71	5,047.65	1,245.23	5,747.27	5,303.28	10.62	-1.49	0.376
71.00	-23.48	-37.71	0.00	-1,921.37	0.00	1,921.37	5,027.69	1,238.15	5,682.10	5,252.02	10.94	-1.52	0.371
75.00	-22.49	-37.47	0.00	-1,770.54	0.00	1,770.54	4,946.86	1,209.83	5,425.15	5,048.36	12.25	-1.61	0.356
76.00	-21.73	-35.81	0.00	-1,733.07	0.00	1,733.07	4,926.40	1,202.75	5,361.84	4,997.80	12.59	-1.63	0.352
80.00	-20.77	-35.57	0.00	-1,589.83	0.00	1,589.83	4,843.57	1,174.43	5,112.31	4,797.04	13.99	-1.72	0.337
81.00	-20.02	-33.88	0.00	-1,554.26	0.00	1,554.26	4,822.61	1,167.34	5,050.86	4,747.23	14.35	-1.74	0.332
85.00	-19.08	-33.64	0.00	-1,418.72	0.00	1,418.72	4,737.78	1,139.02	4,808.77	4,549.54	15.85	-1.83	0.317
86.00	-18.34	-31.94	0.00	-1,385.08	0.00	1,385.08	4,716.33	1,131.94	4,749.17	4,500.52	16.24	-1.85	0.312
89.84	-17.48	-31.74	0.00	-1,262.44	0.00	1,262.44	4,633.00	1,104.75	4,523.78	4,313.82	17.76	-1.93	0.297
90.00	-17.41	-31.69	0.00	-1,257.36	0.00	1,257.36	4,629.49	1,103.62	4,514.51	4,306.09	17.83	-1.94	0.297
91.00	-16.55	-29.95	0.00	-1,225.67	0.00	1,225.67	4,607.54	1,096.54	4,456.77	4,257.91	18.24	-1.96	0.292
95.00	-15.12	-29.69	0.00	-1,105.88	0.00	1,105.88	4,518.70	1,068.21	4,229.54	4,066.92	19.91	-2.04	0.276
96.00	-14.28	-28.08	0.00	-1,076.19	0.00	1,076.19	4,492.13	1,061.13	4,173.67	4,015.93	20.34	-2.06	0.272
96.17	-14.21	-27.91	0.00	-1,071.33	0.00	1,071.33	2,918.80	770.13	3,077.48	2,659.17	20.42	-2.07	0.409
100.00	-13.57	-27.52	0.00	-964.52	0.00	964.52	2,873.85	750.78	2,924.76	2,551.96	22.11	-2.14	0.384
105.00	-12.75	-27.09	0.00	-826.91	0.00	826.91	2,812.92	725.49	2,731.07	2,413.11	24.42	-2.27	0.349
110.00	-11.98	-26.82	0.00	-691.47	0.00	691.47	2,749.49	700.20	2,544.01	2,275.87	26.87	-2.39	0.310
111.00	-11.34	-25.00	0.00	-664.66	0.00	664.66	2,736.50	695.14	2,507.39	2,248.63	27.37	-2.41	0.301
115.00	-10.75	-24.78	0.00	-564.66	0.00	564.66	2,683.56	674.91	2,363.58	2,140.45	29.43	-2.50	0.269
116.00	-10.12	-22.94	0.00	-539.88	0.00	539.88	2,670.07	669.85	2,328.30	2,113.60	29.96	-2.52	0.260
120.00	-9.55	-22.72	0.00	-448.11	0.00	448.11	2,615.12	649.62	2,189.80	2,007.08	32.11	-2.60	0.228
121.00	-8.94	-20.87	0.00	-425.39	0.00	425.39	2,601.14	644.56	2,155.84	1,980.68	32.65	-2.62	0.219
125.00	-8.38	-20.66	0.00	-341.90	0.00	341.90	2,544.19	624.33	2,022.64	1,876.00	34.88	-2.69	0.187
126.00	-7.78	-18.79	0.00	-321.24	0.00	321.24	2,529.70	619.27	1,990.01	1,850.07	35.44	-2.71	0.178
130.00	-7.25	-18.58	0.00	-246.08	0.00	246.08	2,470.75	599.04	1,862.13	1,747.42	37.74	-2.76	0.145
131.00	-6.66	-16.82	0.00	-227.51	0.00	227.51	2,455.77	593.98	1,830.82	1,722.02	38.32	-2.78	0.136
131.54	-6.59	-16.67	0.00	-218.37	0.00	218.37	2,447.58	591.24	1,813.92	1,708.27	38.63	-2.78	0.131

Site Number: 413849

Code: ANSI/TIA-222-H

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Site Name: Winchester PCS CT, CT

Engineering Number: 13626831_C3_03

4/6/2021 10:35:06 PM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.0W

114 mph with No Ice (Reduced DL)

21 Iterations

Gust Response Factor :1.10

Dead Load Factor :0.90

Wind Load Factor :1.00

135.00	-5.94	-16.47	0.00	-160.74	0.00	160.74	2,394.82	573.75	1,708.25	1,621.57	40.66	-2.82	0.102
136.00	-5.30	-14.70	0.00	-144.27	0.00	144.27	2,379.33	568.70	1,678.27	1,596.75	41.25	-2.83	0.093
136.46	-5.21	-14.66	0.00	-137.50	0.00	137.50	1,180.67	345.04	1,029.55	804.32	41.53	-2.83	0.177
137.00	-3.43	-11.52	0.00	-129.59	0.00	129.59	1,178.12	343.40	1,019.79	798.75	41.85	-2.84	0.166
140.00	-3.22	-11.36	0.00	-95.04	0.00	95.04	1,163.42	334.30	966.44	767.75	43.64	-2.87	0.128
141.00	-2.70	-9.45	0.00	-83.68	0.00	83.68	1,158.32	331.27	948.98	757.40	44.25	-2.89	0.114
145.00	-2.42	-9.27	0.00	-45.86	0.00	45.86	1,136.91	319.13	880.71	716.01	46.68	-2.92	0.067
146.00	-1.91	-7.45	0.00	-36.59	0.00	36.59	1,131.31	316.09	864.04	705.66	47.29	-2.92	0.054
147.00	-1.20	-6.63	0.00	-29.14	0.00	29.14	1,125.61	313.06	847.53	695.32	47.90	-2.93	0.043
148.00	-1.05	-3.66	0.00	-19.65	0.00	19.65	1,119.80	310.02	831.18	684.99	48.52	-2.93	0.030
150.00	-0.95	-3.57	0.00	-12.33	0.00	12.33	1,107.90	303.95	798.96	664.36	49.75	-2.93	0.020
151.00	0.00	-3.52	0.00	-8.76	0.00	8.76	1,101.80	300.92	783.09	654.06	50.36	-2.94	0.014

Load Case: 1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice	21 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	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX	Dead Load	Wind FX	Torsion MY	Moment MZ	Dead Load	Wind FX	Dead Load	Wind FX	Dead Load	Torsion MY	Moment MZ
(ft)		(lb)	(lb)	(lb)	(lb-ft)	(lb-ft)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb-ft)	(lb)
0.00		81.9	0.0					0.0	0.0	81.9	0.0	0.0	0.0
5.00		162.3	2,601.1					0.0	174.4	162.3	2,775.5	0.0	0.0
10.00		159.3	2,586.1					0.0	174.4	159.3	2,760.6	0.0	0.0
15.00		156.1	2,550.6					0.0	174.4	156.1	2,725.0	0.0	0.0
20.00		152.9	2,508.3					0.0	174.4	152.9	2,682.7	0.0	0.0
25.00		149.7	2,462.5					0.0	174.4	149.7	2,636.9	0.0	0.0
30.00		148.2	2,414.5					0.0	174.4	148.2	2,588.9	0.0	0.0
35.00		149.7	2,365.0					0.0	174.4	149.7	2,539.4	0.0	0.0
40.00		145.0	2,314.4					0.0	174.4	145.0	2,488.8	0.0	0.0
44.54	Bot - Section 2	76.6	2,058.7					0.0	158.5	76.6	2,217.2	0.0	0.0
45.00		85.3	356.7					0.0	15.9	85.3	372.6	0.0	0.0
50.00		116.9	3,850.3					0.0	174.4	116.9	4,024.8	0.0	0.0
52.46	Top - Section 1	78.6	1,861.1					0.0	85.8	78.6	1,946.9	0.0	0.0
55.00		118.6	994.3					0.0	88.6	118.6	1,082.9	0.0	0.0
60.00		157.2	1,919.1					0.0	174.4	157.2	2,093.6	0.0	0.0
65.00		156.8	1,871.4					0.0	174.4	156.8	2,045.8	0.0	0.0
70.00		93.8	1,823.3					0.0	174.4	93.8	1,997.7	0.0	0.0
71.00	Appurtenance(s)	77.7	359.6	478.2	0.0	0.0	1,708.4	0.0	34.9	555.9	2,102.9	0.0	0.0
75.00		77.6	1,416.8					0.0	139.5	77.6	1,556.3	0.0	0.0
76.00	Appurtenance(s)	77.1	349.9	489.0	0.0	0.0	1,711.1	0.0	34.9	566.1	2,095.9	0.0	0.0
80.00		76.9	1,377.7					0.0	139.5	76.9	1,517.3	0.0	0.0
81.00	Appurtenance(s)	76.3	340.1	499.4	0.0	0.0	1,713.6	0.0	34.9	575.7	2,088.6	0.0	0.0
85.00		76.1	1,338.5					0.0	139.5	76.1	1,478.1	0.0	0.0
86.00	Appurtenance(s)	72.9	330.3	509.4	0.0	0.0	1,716.0	0.0	34.9	582.3	2,081.2	0.0	0.0
89.84	Bot - Section 3	60.2	1,247.9					0.0	134.0	60.2	1,381.9	0.0	0.0
90.00		17.6	81.5					0.0	5.6	17.6	87.1	0.0	0.0
91.00	Appurtenance(s)	75.3	507.2	519.0	0.0	0.0	1,718.2	0.0	34.9	594.2	2,260.3	0.0	0.0
95.00		75.0	1,994.7					0.0	139.5	75.0	2,134.3	0.0	0.0
96.00	Appurtenance(s)	17.5	491.4	528.2	0.0	0.0	1,720.4	0.0	34.9	545.7	2,246.6	0.0	0.0
96.17	Top - Section 2	59.2	84.9					0.0	6.0	59.2	90.9	0.0	0.0
100.00		129.4	915.3					0.0	133.5	129.4	1,048.8	0.0	0.0
105.00		144.3	1,161.2					0.0	174.4	144.3	1,335.6	0.0	0.0
110.00		85.6	1,123.0					0.0	174.4	85.6	1,297.4	0.0	0.0
111.00	Appurtenance(s)	70.0	220.8	554.2	0.0	0.0	1,726.2	0.0	34.9	624.2	1,981.9	0.0	0.0
115.00		69.7	865.5					0.0	139.5	69.7	1,005.0	0.0	0.0
116.00	Appurtenance(s)	68.4	213.1	562.3	0.0	0.0	1,728.0	0.0	34.9	630.8	1,976.1	0.0	0.0
120.00		68.1	834.7					0.0	139.5	68.1	974.2	0.0	0.0
121.00	Appurtenance(s)	66.8	205.4	570.2	0.0	0.0	1,729.8	0.0	34.9	637.0	1,970.1	0.0	0.0
125.00		66.4	803.8					0.0	139.5	66.4	943.3	0.0	0.0
126.00	Appurtenance(s)	65.1	197.7	577.9	0.0	0.0	1,731.4	0.0	34.9	643.0	1,964.0	0.0	0.0
130.00		64.7	772.8					0.0	139.5	64.7	912.3	0.0	0.0
131.00	Appurtenance(s)	19.7	189.9	585.4	0.0	0.0	1,733.1	0.0	34.9	605.1	1,957.9	0.0	0.0
131.54	Bot - Section 4	50.9	102.6					0.0	19.0	50.9	121.5	0.0	0.0
135.00		56.6	927.0					0.0	120.6	56.6	1,047.6	0.0	0.0
136.00	Appurtenance(s)	18.3	263.7	592.7	0.0	0.0	1,734.6	0.0	34.9	611.0	2,033.2	0.0	0.0
136.46	Top - Section 3	12.5	120.6					0.0	16.0	12.5	136.6	0.0	0.0
137.00	Appurtenance(s)	43.7	69.9	698.0	0.0	0.0	4,335.5	0.0	18.8	741.8	4,424.3	0.0	0.0
140.00		49.2	381.2					0.0	53.1	49.2	434.3	0.0	0.0

Site Number: 413849

Code: ANSI/TIA-222-H

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Site Name: Winchester PCS CT, CT

Engineering Number: 13626831_C3_03

4/6/2021 10:35:08 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice	21 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		

141.00	Appurtenance(s)	60.1	125.3	599.9	0.0	0.0	1,736.1	0.0	17.7	660.0	1,879.1	0.0	0.0
145.00		59.7	487.7					0.0	70.8	59.7	558.6	0.0	0.0
146.00	Appurtenance(s)	23.5	119.8	606.8	0.0	0.0	1,737.6	0.0	17.7	630.3	1,875.1	0.0	0.0
147.00	Appurtenance(s)	23.3	118.7	195.8	0.0	0.0	1,227.9	0.0	17.7	219.2	1,364.3	0.0	0.0
148.00	Appurtenance(s)	32.7	117.6	579.8	0.0	579.8	1,853.2	0.0	17.7	612.5	1,988.5	0.0	0.0
150.00		31.5	231.6					0.0	0.0	31.5	231.6	0.0	0.0
151.00	Appurtenance(s)	10.4	114.3	613.6	0.0	0.0	1,739.0	0.0	0.0	624.1	1,853.3	0.0	0.0
Totals:										14,179.1	93,415.2	0.00	0.00

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

21 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	-95.15	-14.74	0.00	-1,623.46	0.00	1,623.46	7,453.69	1,963.48	12,502.6	10,820.4	0.00	0.00	0.163
5.00	-92.37	-14.63	0.00	-1,549.74	0.00	1,549.74	7,359.51	1,923.02	11,992.7	10,462.0	0.02	-0.03	0.161
10.00	-89.60	-14.52	0.00	-1,476.58	0.00	1,476.58	7,262.84	1,882.56	11,493.4	10,105.7	0.07	-0.06	0.159
15.00	-86.86	-14.41	0.00	-1,403.97	0.00	1,403.97	7,163.66	1,842.10	11,004.7	9,751.96	0.15	-0.10	0.156
20.00	-84.17	-14.30	0.00	-1,331.91	0.00	1,331.91	7,061.98	1,801.64	10,526.6	9,400.80	0.28	-0.13	0.154
25.00	-81.53	-14.20	0.00	-1,260.39	0.00	1,260.39	6,957.80	1,761.17	10,059.1	9,052.51	0.43	-0.17	0.151
30.00	-78.93	-14.09	0.00	-1,189.41	0.00	1,189.41	6,851.13	1,720.71	9,602.35	8,707.32	0.62	-0.20	0.148
35.00	-76.38	-13.97	0.00	-1,118.97	0.00	1,118.97	6,741.95	1,680.25	9,156.12	8,365.46	0.85	-0.23	0.145
40.00	-73.89	-13.86	0.00	-1,049.10	0.00	1,049.10	6,630.27	1,639.79	8,720.51	8,027.14	1.12	-0.27	0.142
44.54	-71.67	-13.80	0.00	-986.12	0.00	986.12	6,526.62	1,603.02	8,333.89	7,723.00	1.39	-0.30	0.139
45.00	-71.29	-13.73	0.00	-979.82	0.00	979.82	6,516.08	1,599.33	8,295.51	7,692.61	1.42	-0.30	0.138
50.00	-67.26	-13.62	0.00	-911.16	0.00	911.16	6,399.40	1,558.86	7,881.13	7,362.07	1.76	-0.34	0.134
52.46	-65.31	-13.55	0.00	-877.64	0.00	877.64	5,381.44	1,369.43	6,950.73	6,222.68	1.94	-0.36	0.153
55.00	-64.22	-13.46	0.00	-843.21	0.00	843.21	5,335.00	1,351.45	6,769.38	6,087.35	2.13	-0.38	0.151
60.00	-62.12	-13.33	0.00	-775.91	0.00	775.91	5,241.72	1,316.04	6,419.39	5,823.00	2.55	-0.42	0.145
65.00	-60.07	-13.20	0.00	-709.25	0.00	709.25	5,145.93	1,280.64	6,078.68	5,561.57	3.00	-0.45	0.139
70.00	-58.06	-13.11	0.00	-643.26	0.00	643.26	5,047.65	1,245.23	5,747.27	5,303.28	3.50	-0.49	0.133
71.00	-55.96	-12.56	0.00	-630.15	0.00	630.15	5,027.69	1,238.15	5,682.10	5,252.02	3.60	-0.50	0.131
75.00	-54.40	-12.48	0.00	-579.93	0.00	579.93	4,946.86	1,209.83	5,425.15	5,048.36	4.03	-0.53	0.126
76.00	-52.31	-11.91	0.00	-567.44	0.00	567.44	4,926.40	1,202.75	5,361.84	4,997.80	4.15	-0.54	0.124
80.00	-50.79	-11.84	0.00	-519.79	0.00	519.79	4,843.57	1,174.43	5,112.31	4,797.04	4.61	-0.57	0.119
81.00	-48.70	-11.26	0.00	-507.95	0.00	507.95	4,822.61	1,167.34	5,050.86	4,747.23	4.73	-0.57	0.117
85.00	-47.22	-11.18	0.00	-462.93	0.00	462.93	4,737.78	1,139.02	4,808.77	4,549.54	5.22	-0.60	0.112
86.00	-45.14	-10.59	0.00	-451.75	0.00	451.75	4,716.33	1,131.94	4,749.17	4,500.52	5.35	-0.61	0.110
89.84	-43.76	-10.53	0.00	-411.08	0.00	411.08	4,633.00	1,104.75	4,523.78	4,313.82	5.85	-0.64	0.105
90.00	-43.67	-10.51	0.00	-409.40	0.00	409.40	4,629.49	1,103.62	4,514.51	4,306.09	5.87	-0.64	0.105
91.00	-41.41	-9.90	0.00	-398.89	0.00	398.89	4,607.54	1,096.54	4,456.77	4,257.91	6.00	-0.64	0.103
95.00	-39.28	-9.81	0.00	-359.28	0.00	359.28	4,518.70	1,068.21	4,229.54	4,066.92	6.56	-0.67	0.097
96.00	-37.04	-9.25	0.00	-349.46	0.00	349.46	4,492.13	1,061.13	4,173.67	4,015.93	6.70	-0.68	0.095
96.17	-36.95	-9.19	0.00	-347.86	0.00	347.86	2,918.80	770.13	3,077.48	2,659.17	6.72	-0.68	0.144
100.00	-35.89	-9.07	0.00	-312.68	0.00	312.68	2,873.85	750.78	2,924.76	2,551.96	7.28	-0.70	0.135
105.00	-34.55	-8.94	0.00	-267.32	0.00	267.32	2,812.92	725.49	2,731.07	2,413.11	8.04	-0.74	0.123
110.00	-33.25	-8.85	0.00	-222.65	0.00	222.65	2,749.49	700.20	2,544.01	2,275.87	8.84	-0.78	0.110
111.00	-31.28	-8.20	0.00	-213.80	0.00	213.80	2,736.50	695.14	2,507.39	2,248.63	9.00	-0.79	0.107
115.00	-30.27	-8.13	0.00	-180.99	0.00	180.99	2,683.56	674.91	2,363.58	2,140.45	9.68	-0.82	0.096
116.00	-28.30	-7.48	0.00	-172.86	0.00	172.86	2,670.07	669.85	2,328.30	2,113.60	9.85	-0.83	0.093
120.00	-27.33	-7.40	0.00	-142.95	0.00	142.95	2,615.12	649.62	2,189.80	2,007.08	10.55	-0.85	0.082
121.00	-25.37	-6.74	0.00	-135.55	0.00	135.55	2,601.14	644.56	2,155.84	1,980.68	10.73	-0.86	0.078
125.00	-24.42	-6.67	0.00	-108.58	0.00	108.58	2,544.19	624.33	2,022.64	1,876.00	11.46	-0.88	0.068
126.00	-22.47	-6.00	0.00	-101.91	0.00	101.91	2,529.70	619.27	1,990.01	1,850.07	11.65	-0.88	0.064
130.00	-21.55	-5.92	0.00	-77.91	0.00	77.91	2,470.75	599.04	1,862.13	1,747.42	12.40	-0.90	0.053
131.00	-19.61	-5.29	0.00	-71.99	0.00	71.99	2,455.77	593.98	1,830.82	1,722.02	12.59	-0.91	0.050
131.54	-19.48	-5.24	0.00	-69.11	0.00	69.11	2,447.58	591.24	1,813.92	1,708.27	12.69	-0.91	0.048

Site Number: 413849

Code: ANSI/TIA-222-H

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Site Name: Winchester PCS CT, CT

Engineering Number: 13626831_C3_03

4/6/2021 10:35:08 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

21 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

135.00	-18.44	-5.17	0.00	-51.00	0.00	51.00	2,394.82	573.75	1,708.25	1,621.57	13.35	-0.92	0.039
136.00	-16.41	-4.53	0.00	-45.83	0.00	45.83	2,379.33	568.70	1,678.27	1,596.75	13.54	-0.92	0.036
136.46	-16.28	-4.51	0.00	-43.75	0.00	43.75	1,180.67	345.04	1,029.55	804.32	13.63	-0.93	0.068
137.00	-11.87	-3.70	0.00	-41.32	0.00	41.32	1,178.12	343.40	1,019.79	798.75	13.74	-0.93	0.062
140.00	-11.43	-3.64	0.00	-30.22	0.00	30.22	1,163.42	334.30	966.44	767.75	14.33	-0.94	0.049
141.00	-9.56	-2.96	0.00	-26.57	0.00	26.57	1,158.32	331.27	948.98	757.40	14.52	-0.94	0.043
145.00	-9.01	-2.89	0.00	-14.75	0.00	14.75	1,136.91	319.13	880.71	716.01	15.32	-0.95	0.029
146.00	-7.14	-2.23	0.00	-11.87	0.00	11.87	1,131.31	316.09	864.04	705.66	15.52	-0.95	0.023
147.00	-5.78	-1.98	0.00	-9.64	0.00	9.64	1,125.61	313.06	847.53	695.32	15.72	-0.95	0.019
148.00	-3.80	-1.34	0.00	-7.08	0.00	7.08	1,119.80	310.02	831.18	684.99	15.92	-0.96	0.014
150.00	-3.57	-1.30	0.00	-4.40	0.00	4.40	1,107.90	303.95	798.96	664.36	16.32	-0.96	0.010
151.00	0.00	-1.24	0.00	-3.10	0.00	3.10	1,101.80	300.92	783.09	654.06	16.52	-0.96	0.005

Load Case: 1.0D + 1.0W	Serviceability 60 mph	20 Iterations
Gust Response Factor :1.10		
Dead Load Factor :1.00		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX	Dead Load	Wind FX	Torsion MY	Moment MZ	Dead Load	Wind FX	Dead Load	Wind FX	Dead Load	Torsion MY	Moment MZ
(ft)		(lb)	(lb)	(lb)	(lb-ft)	(lb-ft)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb-ft)	(lb)
0.00		62.8	0.0					0.0	0.0	62.8	0.0	0.0	0.0
5.00		124.3	1,883.9					0.0	145.4	124.3	2,029.2	0.0	0.0
10.00		121.7	1,844.7					0.0	145.4	121.7	1,990.0	0.0	0.0
15.00		119.1	1,805.4					0.0	145.4	119.1	1,950.8	0.0	0.0
20.00		116.5	1,766.2					0.0	145.4	116.5	1,911.6	0.0	0.0
25.00		113.9	1,727.0					0.0	145.4	113.9	1,872.3	0.0	0.0
30.00		112.7	1,687.8					0.0	145.4	112.7	1,833.1	0.0	0.0
35.00		113.6	1,648.5					0.0	145.4	113.6	1,793.9	0.0	0.0
40.00		109.9	1,609.3					0.0	145.4	109.9	1,754.7	0.0	0.0
44.54	Bot - Section 2	58.0	1,428.3					0.0	132.1	58.0	1,560.4	0.0	0.0
45.00		64.6	267.8					0.0	13.3	64.6	281.1	0.0	0.0
50.00		88.5	2,892.5					0.0	145.4	88.5	3,037.9	0.0	0.0
52.46	Top - Section 1	59.4	1,396.1					0.0	71.5	59.4	1,467.6	0.0	0.0
55.00		89.6	670.0					0.0	73.8	89.6	743.8	0.0	0.0
60.00		118.7	1,293.0					0.0	145.4	118.7	1,438.4	0.0	0.0
65.00		118.2	1,258.7					0.0	145.4	118.2	1,404.0	0.0	0.0
70.00		70.7	1,224.4					0.0	145.4	70.7	1,369.7	0.0	0.0
71.00	Appurtenance(s)	58.5	240.8	346.7	0.0	0.0	600.0	0.0	29.1	405.2	869.8	0.0	0.0
75.00		58.4	949.3					0.0	116.3	58.4	1,065.6	0.0	0.0
76.00	Appurtenance(s)	57.9	233.9	353.5	0.0	0.0	600.0	0.0	29.1	411.4	863.0	0.0	0.0
80.00		57.8	921.8					0.0	116.3	57.8	1,038.1	0.0	0.0
81.00	Appurtenance(s)	57.2	227.0	360.0	0.0	0.0	600.0	0.0	29.1	417.2	856.1	0.0	0.0
85.00		57.1	894.4					0.0	116.3	57.1	1,010.6	0.0	0.0
86.00	Appurtenance(s)	54.6	220.2	366.2	0.0	0.0	600.0	0.0	29.1	420.9	849.2	0.0	0.0
89.84	Bot - Section 3	45.1	832.7					0.0	111.6	45.1	944.3	0.0	0.0
90.00		13.1	59.1					0.0	4.7	13.1	63.8	0.0	0.0
91.00	Appurtenance(s)	56.3	368.2	372.2	0.0	0.0	600.0	0.0	29.1	428.5	997.2	0.0	0.0
95.00		56.1	1,449.2					0.0	116.3	56.1	1,565.5	0.0	0.0
96.00	Appurtenance(s)	13.1	356.4	377.9	0.0	0.0	600.0	0.0	29.1	391.0	985.5	0.0	0.0
96.17	Top - Section 2	44.2	61.5					0.0	5.0	44.2	66.6	0.0	0.0
100.00		96.5	564.2					0.0	111.2	96.5	675.5	0.0	0.0
105.00		107.4	715.6					0.0	145.4	107.4	860.9	0.0	0.0
110.00		63.6	691.1					0.0	145.4	63.6	836.4	0.0	0.0
111.00	Appurtenance(s)	52.0	135.3	393.9	0.0	0.0	600.0	0.0	29.1	445.9	764.3	0.0	0.0
115.00		51.7	531.3					0.0	116.3	51.7	647.6	0.0	0.0
116.00	Appurtenance(s)	50.7	130.4	398.9	0.0	0.0	600.0	0.0	29.1	449.6	759.4	0.0	0.0
120.00		50.4	511.7					0.0	116.3	50.4	627.9	0.0	0.0
121.00	Appurtenance(s)	49.3	125.5	403.8	0.0	0.0	600.0	0.0	29.1	453.1	754.5	0.0	0.0
125.00		49.1	492.1					0.0	116.3	49.1	608.3	0.0	0.0
126.00	Appurtenance(s)	47.9	120.6	408.5	0.0	0.0	600.0	0.0	29.1	456.4	749.6	0.0	0.0
130.00		47.7	472.4					0.0	116.3	47.7	588.7	0.0	0.0
131.00	Appurtenance(s)	14.5	115.7	413.0	0.0	0.0	600.0	0.0	29.1	427.6	744.7	0.0	0.0
131.54	Bot - Section 4	37.4	62.4					0.0	15.8	37.4	78.2	0.0	0.0
135.00		41.6	628.1					0.0	100.5	41.6	728.6	0.0	0.0
136.00	Appurtenance(s)	13.4	178.2	417.5	0.0	0.0	600.0	0.0	29.1	430.9	807.3	0.0	0.0
136.46	Top - Section 3	9.2	81.5					0.0	13.4	9.2	94.8	0.0	0.0
137.00	Appurtenance(s)	32.1	36.0	725.1	0.0	0.0	2,096.8	0.0	15.7	757.1	2,148.5	0.0	0.0
140.00		36.0	197.1					0.0	44.3	36.0	241.4	0.0	0.0

Site Number: 413849

Code: ANSI/TIA-222-H

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Site Name: Winchester PCS CT, CT

Engineering Number: 13626831_C3_03

4/6/2021 10:35:10 PM

Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W

Serviceability 60 mph

20 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.00

Wind Load Factor :1.00

141.00	Appurtenance(s)	43.9	64.5	421.8	0.0	0.0	600.0	0.0	14.8	465.8	679.3	0.0	0.0
145.00		43.6	252.2					0.0	59.0	43.6	311.3	0.0	0.0
146.00	Appurtenance(s)	17.1	61.6	426.0	0.0	0.0	600.0	0.0	14.8	443.2	676.3	0.0	0.0
147.00	Appurtenance(s)	17.0	61.0	177.4	0.0	0.0	750.0	0.0	14.8	194.4	825.8	0.0	0.0
148.00	Appurtenance(s)	22.9	60.4	709.6	0.0	709.6	258.0	0.0	14.8	732.5	333.2	0.0	0.0
150.00		21.6	119.0					0.0	0.0	21.6	119.0	0.0	0.0
151.00	Appurtenance(s)	7.1	58.6	430.2	0.0	0.0	600.0	0.0	0.0	437.3	658.6	0.0	0.0
Totals:										10,817.9	53,934.1	0.00	0.00

Load Case: 1.0D + 1.0W

Serviceability 60 mph

20 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	-54.53	-11.20	0.00	-1,224.85	0.00	1,224.85	7,453.69	1,963.48	12,502.6	10,820.4	0.00	0.00	0.121
5.00	-52.50	-11.10	0.00	-1,168.86	0.00	1,168.86	7,359.51	1,923.02	11,992.7	10,462.0	0.01	-0.02	0.119
10.00	-50.50	-11.00	0.00	-1,113.37	0.00	1,113.37	7,262.84	1,882.56	11,493.4	10,105.7	0.05	-0.05	0.117
15.00	-48.55	-10.90	0.00	-1,058.40	0.00	1,058.40	7,163.66	1,842.10	11,004.7	9,751.96	0.12	-0.07	0.115
20.00	-46.63	-10.80	0.00	-1,003.92	0.00	1,003.92	7,061.98	1,801.64	10,526.6	9,400.80	0.21	-0.10	0.113
25.00	-44.75	-10.70	0.00	-949.93	0.00	949.93	6,957.80	1,761.17	10,059.1	9,052.51	0.33	-0.12	0.111
30.00	-42.92	-10.60	0.00	-896.44	0.00	896.44	6,851.13	1,720.71	9,602.35	8,707.32	0.47	-0.15	0.109
35.00	-41.12	-10.50	0.00	-843.43	0.00	843.43	6,741.95	1,680.25	9,156.12	8,365.46	0.64	-0.18	0.107
40.00	-39.36	-10.40	0.00	-790.92	0.00	790.92	6,630.27	1,639.79	8,720.51	8,027.14	0.84	-0.20	0.105
44.54	-37.80	-10.35	0.00	-743.65	0.00	743.65	6,526.62	1,603.02	8,333.89	7,723.00	1.05	-0.23	0.102
45.00	-37.51	-10.29	0.00	-738.93	0.00	738.93	6,516.08	1,599.33	8,295.51	7,692.61	1.07	-0.23	0.102
50.00	-34.47	-10.20	0.00	-687.47	0.00	687.47	6,399.40	1,558.86	7,881.13	7,362.07	1.32	-0.26	0.099
52.46	-33.00	-10.14	0.00	-662.37	0.00	662.37	5,381.44	1,369.43	6,950.73	6,222.68	1.46	-0.27	0.113
55.00	-32.26	-10.06	0.00	-636.60	0.00	636.60	5,335.00	1,351.45	6,769.38	6,087.35	1.61	-0.28	0.111
60.00	-30.81	-9.95	0.00	-586.28	0.00	586.28	5,241.72	1,316.04	6,419.39	5,823.00	1.92	-0.31	0.107
65.00	-29.40	-9.84	0.00	-536.52	0.00	536.52	5,145.93	1,280.64	6,078.68	5,561.57	2.26	-0.34	0.102
70.00	-28.03	-9.77	0.00	-487.31	0.00	487.31	5,047.65	1,245.23	5,747.27	5,303.28	2.64	-0.37	0.098
71.00	-27.16	-9.37	0.00	-477.54	0.00	477.54	5,027.69	1,238.15	5,682.10	5,252.02	2.72	-0.38	0.096
75.00	-26.10	-9.31	0.00	-440.07	0.00	440.07	4,946.86	1,209.83	5,425.15	5,048.36	3.04	-0.40	0.093
76.00	-25.23	-8.90	0.00	-430.76	0.00	430.76	4,926.40	1,202.75	5,361.84	4,997.80	3.13	-0.40	0.091
80.00	-24.19	-8.84	0.00	-395.18	0.00	395.18	4,843.57	1,174.43	5,112.31	4,797.04	3.48	-0.43	0.087
81.00	-23.34	-8.42	0.00	-386.34	0.00	386.34	4,822.61	1,167.34	5,050.86	4,747.23	3.57	-0.43	0.086
85.00	-22.33	-8.36	0.00	-352.66	0.00	352.66	4,737.78	1,139.02	4,808.77	4,549.54	3.94	-0.45	0.082
86.00	-21.48	-7.94	0.00	-344.31	0.00	344.31	4,716.33	1,131.94	4,749.17	4,500.52	4.03	-0.46	0.081
89.84	-20.53	-7.89	0.00	-313.83	0.00	313.83	4,633.00	1,104.75	4,523.78	4,313.82	4.41	-0.48	0.077
90.00	-20.47	-7.88	0.00	-312.57	0.00	312.57	4,629.49	1,103.62	4,514.51	4,306.09	4.43	-0.48	0.077
91.00	-19.47	-7.44	0.00	-304.69	0.00	304.69	4,607.54	1,096.54	4,456.77	4,257.91	4.53	-0.49	0.076
95.00	-17.91	-7.38	0.00	-274.92	0.00	274.92	4,518.70	1,068.21	4,229.54	4,066.92	4.95	-0.51	0.072
96.00	-16.93	-6.98	0.00	-267.54	0.00	267.54	4,492.13	1,061.13	4,173.67	4,015.93	5.05	-0.51	0.070
96.17	-16.86	-6.94	0.00	-266.33	0.00	266.33	2,918.80	770.13	3,077.48	2,659.17	5.07	-0.51	0.106
100.00	-16.18	-6.84	0.00	-239.79	0.00	239.79	2,873.85	750.78	2,924.76	2,551.96	5.49	-0.53	0.100
105.00	-15.32	-6.73	0.00	-205.59	0.00	205.59	2,812.92	725.49	2,731.07	2,413.11	6.07	-0.56	0.091
110.00	-14.48	-6.67	0.00	-171.92	0.00	171.92	2,749.49	700.20	2,544.01	2,275.87	6.68	-0.59	0.081
111.00	-13.72	-6.22	0.00	-165.25	0.00	165.25	2,736.50	695.14	2,507.39	2,248.63	6.80	-0.60	0.079
115.00	-13.07	-6.16	0.00	-140.39	0.00	140.39	2,683.56	674.91	2,363.58	2,140.45	7.31	-0.62	0.071
116.00	-12.31	-5.70	0.00	-134.23	0.00	134.23	2,670.07	669.85	2,328.30	2,113.60	7.44	-0.63	0.068
120.00	-11.68	-5.65	0.00	-111.41	0.00	111.41	2,615.12	649.62	2,189.80	2,007.08	7.98	-0.65	0.060
121.00	-10.93	-5.19	0.00	-105.76	0.00	105.76	2,601.14	644.56	2,155.84	1,980.68	8.11	-0.65	0.058
125.00	-10.33	-5.14	0.00	-85.00	0.00	85.00	2,544.19	624.33	2,022.64	1,876.00	8.67	-0.67	0.049
126.00	-9.58	-4.67	0.00	-79.86	0.00	79.86	2,529.70	619.27	1,990.01	1,850.07	8.81	-0.67	0.047
130.00	-8.99	-4.62	0.00	-61.17	0.00	61.17	2,470.75	599.04	1,862.13	1,747.42	9.38	-0.69	0.039
131.00	-8.25	-4.18	0.00	-56.55	0.00	56.55	2,455.77	593.98	1,830.82	1,722.02	9.52	-0.69	0.036
131.54	-8.17	-4.15	0.00	-54.28	0.00	54.28	2,447.58	591.24	1,813.92	1,708.27	9.60	-0.69	0.035

Site Number: 413849

Code: ANSI/TIA-222-H

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Site Name: Winchester PCS CT, CT

Engineering Number: 13626831_C3_03

4/6/2021 10:35:11 PM

Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W				Serviceability 60 mph				20 Iterations					
Gust Response Factor :1.10													
Dead Load Factor :1.00													
Wind Load Factor :1.00													
135.00	-7.45	-4.10	0.00	-39.95	0.00	39.95	2,394.82	573.75	1,708.25	1,621.57	10.10	-0.70	0.028
136.00	-6.64	-3.66	0.00	-35.85	0.00	35.85	2,379.33	568.70	1,678.27	1,596.75	10.25	-0.70	0.025
136.46	-6.55	-3.65	0.00	-34.17	0.00	34.17	1,180.67	345.04	1,029.55	804.32	10.32	-0.70	0.048
137.00	-4.41	-2.86	0.00	-32.20	0.00	32.20	1,178.12	343.40	1,019.79	798.75	10.40	-0.71	0.044
140.00	-4.17	-2.82	0.00	-23.62	0.00	23.62	1,163.42	334.30	966.44	767.75	10.85	-0.71	0.034
141.00	-3.49	-2.35	0.00	-20.79	0.00	20.79	1,158.32	331.27	948.98	757.40	11.00	-0.72	0.031
145.00	-3.18	-2.30	0.00	-11.39	0.00	11.39	1,136.91	319.13	880.71	716.01	11.60	-0.72	0.019
146.00	-2.51	-1.85	0.00	-9.09	0.00	9.09	1,131.31	316.09	864.04	705.66	11.75	-0.73	0.015
147.00	-1.69	-1.65	0.00	-7.24	0.00	7.24	1,125.61	313.06	847.53	695.32	11.90	-0.73	0.012
148.00	-1.37	-0.91	0.00	-4.88	0.00	4.88	1,119.80	310.02	831.18	684.99	12.06	-0.73	0.008
150.00	-1.25	-0.89	0.00	-3.06	0.00	3.06	1,107.90	303.95	798.96	664.36	12.36	-0.73	0.006
151.00	0.00	-0.87	0.00	-2.17	0.00	2.17	1,101.80	300.92	783.09	654.06	12.52	-0.73	0.003

Equivalent Lateral Forces Method Analysis

Spectral Response Acceleration for Short Period (S_s):	0.17
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}):	0.18
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.09
Seismic Response Coefficient (C_s):	0.04
Upper Limit C_s	0.04
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	1.47
Redundancy Factor (ρ):	1.30
Seismic Force Distribution Exponent (k):	1.48
Total Unfactored Dead Load:	54.53 k
Seismic Base Shear (E):	2.79 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)
54	150.50	59	99	0.003	8	72
53	149.00	119	199	0.005	15	147
52	147.50	75	124	0.003	9	93
51	146.50	76	123	0.003	9	94
50	145.50	76	123	0.003	9	94
49	143.00	311	489	0.013	38	385
48	140.50	79	121	0.003	9	98
47	138.50	241	362	0.010	28	298
46	136.73	52	76	0.002	6	64
45	136.23	95	139	0.004	11	117
44	135.50	207	301	0.008	23	256
43	133.27	729	1,032	0.028	79	900
42	131.27	78	108	0.003	8	97
41	130.50	145	199	0.005	15	179
40	128.00	589	785	0.022	60	727
39	125.50	150	194	0.005	15	185
38	123.00	608	765	0.021	59	752
37	120.50	155	188	0.005	14	191
36	118.00	628	742	0.020	57	776
35	115.50	159	183	0.005	14	197
34	113.00	648	718	0.020	55	800
33	110.50	164	176	0.005	14	203
32	107.50	836	861	0.024	66	1,033
31	102.50	861	826	0.023	63	1,064
30	98.09	675	607	0.017	47	835

29	96.09	67	58	0.002	4	82
28	95.50	385	333	0.009	26	476
27	93.00	1,565	1,300	0.036	100	1,934
26	90.50	397	317	0.009	24	491
25	89.92	64	50	0.001	4	79
24	87.92	944	722	0.020	55	1,167
23	85.50	249	183	0.005	14	308
22	83.00	1,011	709	0.020	54	1,249
21	80.50	256	172	0.005	13	316
20	78.00	1,038	664	0.018	51	1,283
19	75.50	263	160	0.004	12	325
18	73.00	1,066	618	0.017	47	1,317
17	70.50	270	149	0.004	11	333
16	67.50	1,370	707	0.019	54	1,692
15	62.50	1,404	647	0.018	50	1,735
14	57.50	1,438	585	0.016	45	1,777
13	53.73	744	274	0.008	21	919
12	51.23	1,468	503	0.014	39	1,813
11	47.50	3,038	931	0.026	71	3,754
10	44.77	281	79	0.002	6	347
9	42.27	1,560	402	0.011	31	1,928
8	37.50	1,755	379	0.010	29	2,168
7	32.50	1,794	313	0.009	24	2,217
6	27.50	1,833	250	0.007	19	2,265
5	22.50	1,872	190	0.005	15	2,314
4	17.50	1,912	133	0.004	10	2,362
3	12.50	1,951	83	0.002	6	2,410
2	7.50	1,990	40	0.001	3	2,459
1	2.50	2,029	8	0.000	1	2,507
Pine Branches	151.00	600	1,022	0.028	78	741
Pine Branches	151.00	600	1,022	0.028	78	741
Amphenol Antel LPA-1	148.00	69	114	0.003	9	85
Antel BXA-70063/6CF_	148.00	51	84	0.002	6	63
Antel LPA-80080/6CF	148.00	84	139	0.004	11	104
Antel LPA-80063/6CF	148.00	54	89	0.002	7	67
Flat T-Arm	147.00	750	1,228	0.034	94	927
Pine Branches	146.00	600	973	0.027	75	741
Pine Branches	141.00	600	924	0.025	71	741
Ericsson RRUS 8843 B	137.00	216	319	0.009	24	267
Ericsson RRUS 4478 B	137.00	180	265	0.007	20	222
Ericsson RRUS 4449 B	137.00	213	314	0.009	24	263
Raycap DC9-48-60-24-	137.00	16	24	0.001	2	20
Generic Round T-Arm	137.00	938	1,383	0.038	106	1,158
CCI DMP65R-BU8D	137.00	287	424	0.012	32	355
CCI TPA65R-BU8D	137.00	248	365	0.010	28	306
Pine Branches	136.00	600	876	0.024	67	741
Pine Branches	131.00	600	828	0.023	64	741
Pine Branches	126.00	600	782	0.022	60	741
Pine Branches	121.00	600	736	0.020	56	741
Pine Branches	116.00	600	692	0.019	53	741
Pine Branches	111.00	600	648	0.018	50	741
Pine Branches	96.00	600	522	0.014	40	741
Pine Branches	91.00	600	482	0.013	37	741
Pine Branches	86.00	600	444	0.012	34	741
Pine Branches	81.00	600	406	0.011	31	741
Pine Branches	76.00	600	369	0.010	28	741
Pine Branches	71.00	600	334	0.009	26	741
		54,534	36,307	1.000	2,785	67,384

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)
54	150.50	59	99	0.003	8	51
53	149.00	119	199	0.005	15	103
52	147.50	75	124	0.003	9	65
51	146.50	76	123	0.003	9	65
50	145.50	76	123	0.003	9	66
49	143.00	311	489	0.013	38	269
48	140.50	79	121	0.003	9	69
47	138.50	241	362	0.010	28	209
46	136.73	52	76	0.002	6	45
45	136.23	95	139	0.004	11	82
44	135.50	207	301	0.008	23	179
43	133.27	729	1,032	0.028	79	630
42	131.27	78	108	0.003	8	68
41	130.50	145	199	0.005	15	125
40	128.00	589	785	0.022	60	509
39	125.50	150	194	0.005	15	129
38	123.00	608	765	0.021	59	526
37	120.50	155	188	0.005	14	134
36	118.00	628	742	0.020	57	543
35	115.50	159	183	0.005	14	138
34	113.00	648	718	0.020	55	560
33	110.50	164	176	0.005	14	142
32	107.50	836	861	0.024	66	723
31	102.50	861	826	0.023	63	744
30	98.09	675	607	0.017	47	584
29	96.09	67	58	0.002	4	58
28	95.50	385	333	0.009	26	333
27	93.00	1,565	1,300	0.036	100	1,353
26	90.50	397	317	0.009	24	343
25	89.92	64	50	0.001	4	55
24	87.92	944	722	0.020	55	816
23	85.50	249	183	0.005	14	215
22	83.00	1,011	709	0.020	54	874
21	80.50	256	172	0.005	13	221
20	78.00	1,038	664	0.018	51	897
19	75.50	263	160	0.004	12	227
18	73.00	1,066	618	0.017	47	921
17	70.50	270	149	0.004	11	233
16	67.50	1,370	707	0.019	54	1,184
15	62.50	1,404	647	0.018	50	1,214
14	57.50	1,438	585	0.016	45	1,243
13	53.73	744	274	0.008	21	643
12	51.23	1,468	503	0.014	39	1,269
11	47.50	3,038	931	0.026	71	2,626
10	44.77	281	79	0.002	6	243
9	42.27	1,560	402	0.011	31	1,349
8	37.50	1,755	379	0.010	29	1,517
7	32.50	1,794	313	0.009	24	1,551
6	27.50	1,833	250	0.007	19	1,584
5	22.50	1,872	190	0.005	15	1,618
4	17.50	1,912	133	0.004	10	1,652
3	12.50	1,951	83	0.002	6	1,686
2	7.50	1,990	40	0.001	3	1,720
1	2.50	2,029	8	0.000	1	1,754
Pine Branches	151.00	600	1,022	0.028	78	519
Pine Branches	151.00	600	1,022	0.028	78	519
Amphenol Antel LPA-1	148.00	69	114	0.003	9	60

Site Number: 413849

Code: ANSI/TIA-222-H

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Site Name: Winchester PCS CT, CT

Engineering Number: 13626831_C3_03

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Customer: AT&T MOBILITY

Antel BXA-70063/6CF_	148.00	51	84	0.002	6	44
Antel LPA-80080/6CF	148.00	84	139	0.004	11	73
Antel LPA-80063/6CF	148.00	54	89	0.002	7	47
Flat T-Arm	147.00	750	1,228	0.034	94	648
Pine Branches	146.00	600	973	0.027	75	519
Pine Branches	141.00	600	924	0.025	71	519
Ericsson RRUS 8843 B	137.00	216	319	0.009	24	187
Ericsson RRUS 4478 B	137.00	180	265	0.007	20	155
Ericsson RRUS 4449 B	137.00	213	314	0.009	24	184
Raycap DC9-48-60-24-	137.00	16	24	0.001	2	14
Generic Round T-Arm	137.00	938	1,383	0.038	106	810
CCI DMP65R-BU8D	137.00	287	424	0.012	32	248
CCI TPA65R-BU8D	137.00	248	365	0.010	28	214
Pine Branches	136.00	600	876	0.024	67	519
Pine Branches	131.00	600	828	0.023	64	519
Pine Branches	126.00	600	782	0.022	60	519
Pine Branches	121.00	600	736	0.020	56	519
Pine Branches	116.00	600	692	0.019	53	519
Pine Branches	111.00	600	648	0.018	50	519
Pine Branches	96.00	600	522	0.014	40	519
Pine Branches	91.00	600	482	0.013	37	519
Pine Branches	86.00	600	444	0.012	34	519
Pine Branches	81.00	600	406	0.011	31	519
Pine Branches	76.00	600	369	0.010	28	519
Pine Branches	71.00	600	334	0.009	26	519
		54,534	36,307	1.000	2,785	47,138

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	-64.88	-2.79	0.00	-304.06	0.00	304.06	7,453.69	1,963.48	12,502.6	10,820.4	0.00	0.00	0.037
5.00	-62.42	-2.79	0.00	-290.13	0.00	290.13	7,359.51	1,923.02	11,992.7	10,462.0	0.00	-0.01	0.036
10.00	-60.01	-2.79	0.00	-276.18	0.00	276.18	7,262.84	1,882.56	11,493.4	10,105.7	0.01	-0.01	0.036
15.00	-57.64	-2.79	0.00	-262.23	0.00	262.23	7,163.66	1,842.10	11,004.7	9,751.96	0.03	-0.02	0.035
20.00	-55.33	-2.78	0.00	-248.31	0.00	248.31	7,061.98	1,801.64	10,526.6	9,400.80	0.05	-0.02	0.034
25.00	-53.06	-2.76	0.00	-234.43	0.00	234.43	6,957.80	1,761.17	10,059.1	9,052.51	0.08	-0.03	0.034
30.00	-50.85	-2.74	0.00	-220.63	0.00	220.63	6,851.13	1,720.71	9,602.35	8,707.32	0.12	-0.04	0.033
35.00	-48.68	-2.72	0.00	-206.92	0.00	206.92	6,741.95	1,680.25	9,156.12	8,365.46	0.16	-0.04	0.032
40.00	-46.75	-2.69	0.00	-193.33	0.00	193.33	6,630.27	1,639.79	8,720.51	8,027.14	0.21	-0.05	0.031
44.54	-46.40	-2.69	0.00	-181.12	0.00	181.12	6,526.62	1,603.02	8,333.89	7,723.00	0.26	-0.06	0.031
45.00	-42.65	-2.61	0.00	-179.89	0.00	179.89	6,516.08	1,599.33	8,295.51	7,692.61	0.26	-0.06	0.030
50.00	-40.84	-2.58	0.00	-166.83	0.00	166.83	6,399.40	1,558.86	7,881.13	7,362.07	0.33	-0.06	0.029
52.46	-39.92	-2.56	0.00	-160.49	0.00	160.49	5,381.44	1,369.43	6,950.73	6,222.68	0.36	-0.07	0.033
55.00	-38.14	-2.51	0.00	-154.00	0.00	154.00	5,335.00	1,351.45	6,769.38	6,087.35	0.40	-0.07	0.032
60.00	-36.40	-2.47	0.00	-141.44	0.00	141.44	5,241.72	1,316.04	6,419.39	5,823.00	0.47	-0.08	0.031
65.00	-34.71	-2.41	0.00	-129.11	0.00	129.11	5,145.93	1,280.64	6,078.68	5,561.57	0.56	-0.08	0.030
70.00	-34.38	-2.40	0.00	-117.05	0.00	117.05	5,047.65	1,245.23	5,747.27	5,303.28	0.65	-0.09	0.029
71.00	-32.32	-2.33	0.00	-114.64	0.00	114.64	5,027.69	1,238.15	5,682.10	5,252.02	0.67	-0.09	0.028
75.00	-32.00	-2.32	0.00	-105.33	0.00	105.33	4,946.86	1,209.83	5,425.15	5,048.36	0.75	-0.10	0.027
76.00	-29.97	-2.24	0.00	-103.01	0.00	103.01	4,926.40	1,202.75	5,361.84	4,997.80	0.77	-0.10	0.027
80.00	-29.65	-2.23	0.00	-94.06	0.00	94.06	4,843.57	1,174.43	5,112.31	4,797.04	0.85	-0.10	0.026
81.00	-27.66	-2.14	0.00	-91.84	0.00	91.84	4,822.61	1,167.34	5,050.86	4,747.23	0.88	-0.11	0.025
85.00	-27.36	-2.12	0.00	-83.29	0.00	83.29	4,737.78	1,139.02	4,808.77	4,549.54	0.97	-0.11	0.024
86.00	-25.45	-2.03	0.00	-81.16	0.00	81.16	4,716.33	1,131.94	4,749.17	4,500.52	0.99	-0.11	0.023
89.84	-25.37	-2.03	0.00	-73.36	0.00	73.36	4,633.00	1,104.75	4,523.78	4,313.82	1.08	-0.12	0.022
90.00	-24.88	-2.00	0.00	-73.03	0.00	73.03	4,629.49	1,103.62	4,514.51	4,306.09	1.09	-0.12	0.022
91.00	-22.20	-1.86	0.00	-71.03	0.00	71.03	4,607.54	1,096.54	4,456.77	4,257.91	1.11	-0.12	0.022
95.00	-21.73	-1.84	0.00	-63.57	0.00	63.57	4,518.70	1,068.21	4,229.54	4,066.92	1.21	-0.12	0.020
96.00	-20.90	-1.79	0.00	-61.73	0.00	61.73	4,492.13	1,061.13	4,173.67	4,015.93	1.24	-0.12	0.020
96.17	-20.07	-1.74	0.00	-61.42	0.00	61.42	2,918.80	770.13	3,077.48	2,659.17	1.24	-0.12	0.030
100.00	-19.01	-1.68	0.00	-54.75	0.00	54.75	2,873.85	750.78	2,924.76	2,551.96	1.34	-0.13	0.028
105.00	-17.97	-1.61	0.00	-46.34	0.00	46.34	2,812.92	725.49	2,731.07	2,413.11	1.48	-0.14	0.026
110.00	-17.77	-1.60	0.00	-38.27	0.00	38.27	2,749.49	700.20	2,544.01	2,275.87	1.63	-0.14	0.023
111.00	-16.23	-1.49	0.00	-36.66	0.00	36.66	2,736.50	695.14	2,507.39	2,248.63	1.66	-0.14	0.022
115.00	-16.03	-1.48	0.00	-30.69	0.00	30.69	2,683.56	674.91	2,363.58	2,140.45	1.78	-0.15	0.020
116.00	-14.51	-1.37	0.00	-29.21	0.00	29.21	2,670.07	669.85	2,328.30	2,113.60	1.81	-0.15	0.019
120.00	-14.32	-1.35	0.00	-23.74	0.00	23.74	2,615.12	649.62	2,189.80	2,007.08	1.94	-0.15	0.017
121.00	-12.83	-1.23	0.00	-22.38	0.00	22.38	2,601.14	644.56	2,155.84	1,980.68	1.97	-0.16	0.016
125.00	-12.64	-1.22	0.00	-17.44	0.00	17.44	2,544.19	624.33	2,022.64	1,876.00	2.11	-0.16	0.014
126.00	-11.18	-1.10	0.00	-16.22	0.00	16.22	2,529.70	619.27	1,990.01	1,850.07	2.14	-0.16	0.013
130.00	-11.00	-1.08	0.00	-11.84	0.00	11.84	2,470.75	599.04	1,862.13	1,747.42	2.27	-0.16	0.011
131.00	-10.16	-1.01	0.00	-10.76	0.00	10.76	2,455.77	593.98	1,830.82	1,722.02	2.31	-0.16	0.010
131.54	-9.26	-0.92	0.00	-10.21	0.00	10.21	2,447.58	591.24	1,813.92	1,708.27	2.33	-0.16	0.010
135.00	-9.00	-0.90	0.00	-7.02	0.00	7.02	2,394.82	573.75	1,708.25	1,621.57	2.45	-0.17	0.008
136.00	-8.14	-0.82	0.00	-6.11	0.00	6.11	2,379.33	568.70	1,678.27	1,596.75	2.48	-0.17	0.007
136.46	-8.08	-0.82	0.00	-5.74	0.00	5.74	1,180.67	345.04	1,029.55	804.32	2.50	-0.17	0.014
137.00	-5.19	-0.54	0.00	-5.30	0.00	5.30	1,178.12	343.40	1,019.79	798.75	2.52	-0.17	0.011

Site Number: 413849

Code: ANSI/TIA-222-H

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Site Name: Winchester PCS CT, CT

Engineering Number: 13626831_C3_03

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Customer: AT&T MOBILITY

140.00	-5.09	-0.53	0.00	-3.67	0.00	3.67	1,163.42	334.30	966.44	767.75	2.62	-0.17	0.009
141.00	-3.97	-0.42	0.00	-3.14	0.00	3.14	1,158.32	331.27	948.98	757.40	2.66	-0.17	0.008
145.00	-3.87	-0.41	0.00	-1.45	0.00	1.45	1,136.91	319.13	880.71	716.01	2.80	-0.17	0.005
146.00	-3.04	-0.32	0.00	-1.04	0.00	1.04	1,131.31	316.09	864.04	705.66	2.83	-0.17	0.004
147.00	-2.02	-0.22	0.00	-0.72	0.00	0.72	1,125.61	313.06	847.53	695.32	2.87	-0.17	0.003
148.00	-1.55	-0.17	0.00	-0.50	0.00	0.50	1,119.80	310.02	831.18	684.99	2.90	-0.17	0.002
150.00	-1.48	-0.16	0.00	-0.16	0.00	0.16	1,107.90	303.95	798.96	664.36	2.97	-0.17	0.002
151.00	0.00	-0.16	0.00	0.00	0.00	0.00	1,101.80	300.92	783.09	654.06	3.01	-0.17	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	-45.38	-2.79	0.00	-302.42	0.00	302.42	7,453.69	1,963.48	12,502.6	10,820.4	0.00	0.00	0.034
5.00	-43.66	-2.79	0.00	-288.49	0.00	288.49	7,359.51	1,923.02	11,992.7	10,462.0	0.00	-0.01	0.034
10.00	-41.98	-2.78	0.00	-274.56	0.00	274.56	7,262.84	1,882.56	11,493.4	10,105.7	0.01	-0.01	0.033
15.00	-40.32	-2.78	0.00	-260.64	0.00	260.64	7,163.66	1,842.10	11,004.7	9,751.96	0.03	-0.02	0.032
20.00	-38.71	-2.77	0.00	-246.74	0.00	246.74	7,061.98	1,801.64	10,526.6	9,400.80	0.05	-0.02	0.032
25.00	-37.12	-2.75	0.00	-232.91	0.00	232.91	6,957.80	1,761.17	10,059.1	9,052.51	0.08	-0.03	0.031
30.00	-35.57	-2.73	0.00	-219.15	0.00	219.15	6,851.13	1,720.71	9,602.35	8,707.32	0.12	-0.04	0.030
35.00	-34.05	-2.70	0.00	-205.49	0.00	205.49	6,741.95	1,680.25	9,156.12	8,365.46	0.16	-0.04	0.030
40.00	-32.70	-2.68	0.00	-191.97	0.00	191.97	6,630.27	1,639.79	8,720.51	8,027.14	0.21	-0.05	0.029
44.54	-32.46	-2.67	0.00	-179.81	0.00	179.81	6,526.62	1,603.02	8,333.89	7,723.00	0.26	-0.06	0.028
45.00	-29.83	-2.60	0.00	-178.59	0.00	178.59	6,516.08	1,599.33	8,295.51	7,692.61	0.26	-0.06	0.028
50.00	-28.57	-2.56	0.00	-165.60	0.00	165.60	6,399.40	1,558.86	7,881.13	7,362.07	0.33	-0.06	0.027
52.46	-27.92	-2.54	0.00	-159.30	0.00	159.30	5,381.44	1,369.43	6,950.73	6,222.68	0.36	-0.07	0.031
55.00	-26.68	-2.50	0.00	-152.84	0.00	152.84	5,335.00	1,351.45	6,769.38	6,087.35	0.39	-0.07	0.030
60.00	-25.47	-2.45	0.00	-140.35	0.00	140.35	5,241.72	1,316.04	6,419.39	5,823.00	0.47	-0.08	0.029
65.00	-24.28	-2.40	0.00	-128.10	0.00	128.10	5,145.93	1,280.64	6,078.68	5,561.57	0.55	-0.08	0.028
70.00	-24.05	-2.39	0.00	-116.12	0.00	116.12	5,047.65	1,245.23	5,747.27	5,303.28	0.65	-0.09	0.027
71.00	-22.61	-2.31	0.00	-113.73	0.00	113.73	5,027.69	1,238.15	5,682.10	5,252.02	0.66	-0.09	0.026
75.00	-22.38	-2.30	0.00	-104.48	0.00	104.48	4,946.86	1,209.83	5,425.15	5,048.36	0.74	-0.10	0.025
76.00	-20.97	-2.22	0.00	-102.18	0.00	102.18	4,926.40	1,202.75	5,361.84	4,997.80	0.76	-0.10	0.025
80.00	-20.74	-2.21	0.00	-93.30	0.00	93.30	4,843.57	1,174.43	5,112.31	4,797.04	0.85	-0.10	0.024
81.00	-19.35	-2.12	0.00	-91.09	0.00	91.09	4,822.61	1,167.34	5,050.86	4,747.23	0.87	-0.10	0.023
85.00	-19.14	-2.11	0.00	-82.60	0.00	82.60	4,737.78	1,139.02	4,808.77	4,549.54	0.96	-0.11	0.022
86.00	-17.80	-2.02	0.00	-80.50	0.00	80.50	4,716.33	1,131.94	4,749.17	4,500.52	0.98	-0.11	0.022
89.84	-17.75	-2.01	0.00	-72.75	0.00	72.75	4,633.00	1,104.75	4,523.78	4,313.82	1.08	-0.12	0.021
90.00	-17.40	-1.99	0.00	-72.43	0.00	72.43	4,629.49	1,103.62	4,514.51	4,306.09	1.08	-0.12	0.021
91.00	-15.53	-1.85	0.00	-70.44	0.00	70.44	4,607.54	1,096.54	4,456.77	4,257.91	1.10	-0.12	0.020
95.00	-15.20	-1.82	0.00	-63.04	0.00	63.04	4,518.70	1,068.21	4,229.54	4,066.92	1.20	-0.12	0.019
96.00	-14.62	-1.78	0.00	-61.22	0.00	61.22	4,492.13	1,061.13	4,173.67	4,015.93	1.23	-0.12	0.019
96.17	-14.04	-1.73	0.00	-60.91	0.00	60.91	2,918.80	770.13	3,077.48	2,659.17	1.23	-0.12	0.028
100.00	-13.29	-1.67	0.00	-54.28	0.00	54.28	2,873.85	750.78	2,924.76	2,551.96	1.34	-0.13	0.026
105.00	-12.57	-1.60	0.00	-45.94	0.00	45.94	2,812.92	725.49	2,731.07	2,413.11	1.47	-0.14	0.024
110.00	-12.43	-1.59	0.00	-37.94	0.00	37.94	2,749.49	700.20	2,544.01	2,275.87	1.62	-0.14	0.021
111.00	-11.35	-1.48	0.00	-36.35	0.00	36.35	2,736.50	695.14	2,507.39	2,248.63	1.65	-0.14	0.020
115.00	-11.21	-1.47	0.00	-30.42	0.00	30.42	2,683.56	674.91	2,363.58	2,140.45	1.77	-0.15	0.018
116.00	-10.15	-1.36	0.00	-28.95	0.00	28.95	2,670.07	669.85	2,328.30	2,113.60	1.80	-0.15	0.018
120.00	-10.02	-1.34	0.00	-23.53	0.00	23.53	2,615.12	649.62	2,189.80	2,007.08	1.93	-0.15	0.016
121.00	-8.97	-1.22	0.00	-22.19	0.00	22.19	2,601.14	644.56	2,155.84	1,980.68	1.96	-0.15	0.015
125.00	-8.84	-1.21	0.00	-17.29	0.00	17.29	2,544.19	624.33	2,022.64	1,876.00	2.09	-0.16	0.013
126.00	-7.82	-1.09	0.00	-16.08	0.00	16.08	2,529.70	619.27	1,990.01	1,850.07	2.12	-0.16	0.012
130.00	-7.69	-1.07	0.00	-11.74	0.00	11.74	2,470.75	599.04	1,862.13	1,747.42	2.26	-0.16	0.010
131.00	-7.11	-1.00	0.00	-10.67	0.00	10.67	2,455.77	593.98	1,830.82	1,722.02	2.29	-0.16	0.009
131.54	-6.48	-0.92	0.00	-10.12	0.00	10.12	2,447.58	591.24	1,813.92	1,708.27	2.31	-0.16	0.009
135.00	-6.30	-0.89	0.00	-6.96	0.00	6.96	2,394.82	573.75	1,708.25	1,621.57	2.43	-0.16	0.007
136.00	-5.70	-0.81	0.00	-6.06	0.00	6.06	2,379.33	568.70	1,678.27	1,596.75	2.46	-0.16	0.006
136.46	-5.65	-0.81	0.00	-5.69	0.00	5.69	1,180.67	345.04	1,029.55	804.32	2.48	-0.16	0.012
137.00	-3.63	-0.54	0.00	-5.25	0.00	5.25	1,178.12	343.40	1,019.79	798.75	2.50	-0.16	0.010

Site Number: 413849

Code: ANSI/TIA-222-H

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Site Name: Winchester PCS CT, CT

Engineering Number: 13626831_C3_03

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Customer: AT&T MOBILITY

140.00	-3.56	-0.53	0.00	-3.64	0.00	3.64	1,163.42	334.30	966.44	767.75	2.60	-0.17	0.008
141.00	-2.78	-0.42	0.00	-3.11	0.00	3.11	1,158.32	331.27	948.98	757.40	2.64	-0.17	0.007
145.00	-2.71	-0.41	0.00	-1.44	0.00	1.44	1,136.91	319.13	880.71	716.01	2.78	-0.17	0.004
146.00	-2.13	-0.32	0.00	-1.03	0.00	1.03	1,131.31	316.09	864.04	705.66	2.81	-0.17	0.003
147.00	-1.41	-0.22	0.00	-0.71	0.00	0.71	1,125.61	313.06	847.53	695.32	2.85	-0.17	0.002
148.00	-1.09	-0.17	0.00	-0.49	0.00	0.49	1,119.80	310.02	831.18	684.99	2.88	-0.17	0.002
150.00	-1.04	-0.16	0.00	-0.16	0.00	0.16	1,107.90	303.95	798.96	664.36	2.95	-0.17	0.001
151.00	0.00	-0.16	0.00	0.00	0.00	0.00	1,101.80	300.92	783.09	654.06	2.99	-0.17	0.000

Site Number: 413849

Code: ANSI/TIA-222-H

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Site Name: Winchester PCS CT, CT

Engineering Number: 13626831_C3_03

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Customer: AT&T MOBILITY

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	45.20	0.00	65.40	0.00	0.00	4956.54	0.00	0.47
0.9D + 1.0W	45.19	0.00	49.04	0.00	0.00	4933.29	0.00	0.46
1.2D + 1.0Di + 1.0Wi	14.74	0.00	95.15	0.00	0.00	1623.46	0.00	0.16
1.2D + 1.0Ev + 1.0Eh	2.79	0.00	64.88	0.00	0.00	304.06	0.00	0.04
0.9D - 1.0Ev + 1.0Eh	2.79	0.00	45.38	0.00	0.00	302.42	0.00	0.03
1.0D + 1.0W	11.20	0.00	54.53	0.00	0.00	1224.85	0.00	0.12



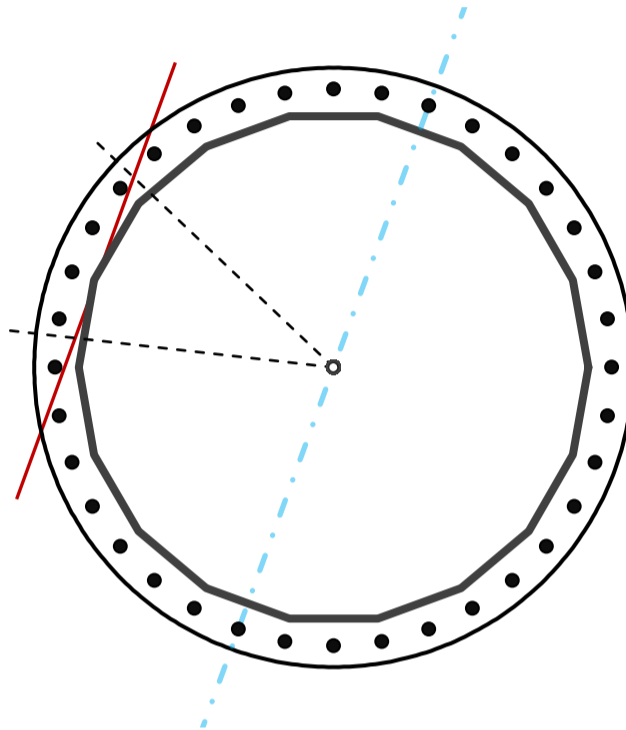
Base Plate & Anchor Rod Analysis

Pole Dimensions		
Number of Sides	18	-
Diameter	71	in
Thickness	1/2	in
Orientation Offset		°

Base Reactions		
Moment, Mu	4,956.5	k-ft
Axial, Pu	65.4	k
Shear, Vu	45.2	k
Neutral Axis	70	°

Report Capacities		
Component	Capacity	Result
Base Plate	18%	Pass
Anchor Rods	34%	Pass
Dwyidag	-	-

Base Plate		
Shape	Round	-
Diameter, ϕ	85	in
Thickness	3 1/4	in
Grade	A572-50	
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Clip	N/A	in
Orientation Offset		°
Anchor Rod Detail	d	$\eta=0.5$
Clear Distance	3	in
Applied Moment, Mu	601.8	k
Bending Stress, ϕMn	3436.6	k



Original Anchor Rods		
Arrangement	Radial	-
Quantity	36	-
Diameter, ϕ	2 1/4	in
Bolt Circle	79	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	6.9	in
Orientation Offset		°
Applied Force, Pu	88.0	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	45.2	4956.5	1.00
Anchor Rod Forces	45.2	4956.5	1.00
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	0.0	0.00
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	110.1798	6.1211	0.5119		68461.84
Bolt	3.9761	3.2477	0.8393	4.5	85838.26
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	0.0000	0.0000	0.0000		0.00
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate

Shape	Round	-
Diameter, D	85	in
Thickness, t	3.25	in
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Base Plate Chord	46.733	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	3	-

Anchor Rods

Anchor Rod Quantity, N	36	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	79	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	88.0	k
Applied Shear, Vu	0.3	k
Compressive Capacity, ϕP_n	259.8	k
Tensile Capacity, ϕR_n	0.339	OK
Interaction Capacity	0.341	OK

External Base Plate

Chord Length AA	39.569	in
Additional AA	6.000	in
Section Modulus, Z	120.330	in ³
Applied Moment, Mu	664.2	k-ft
Bending Capacity, ϕM_n	5414.9	k-ft
Capacity, Mu/ ϕM_n	0.123	OK

Chord Length AB	37.521	in
Additional AB	6.000	in
Section Modulus, Z	114.924	in ³
Applied Moment, Mu	458.1	k-ft
Bending Capacity, ϕM_n	5171.6	k-ft
Capacity, Mu/ ϕM_n	0.089	OK

Bend Line Length	28.921	in
Additional Bend Line	0.000	in
Section Modulus, Z	76.369	in ³
Applied Moment, Mu	601.8	k-ft
Bending Capacity, ϕM_n	3436.6	k-ft
Capacity, Mu/ ϕM_n	0.175	OK

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, ϕM_n	0.0	k-ft
Capacity, Mu/ ϕM_n		

Exhibit 4

Antenna Mount Analysis Report



AMERICAN TOWER®
CORPORATION

This report was prepared for American Tower Corporation by



**TOWER
ENGINEERING
PROFESSIONALS**

Antenna Mount Analysis Report

ATC Site Name : Winchester PCS CT
ATC Site Number : 413849
Engineering Number : 13326507_C8_01
Mount Elevation : 137 ft
Carrier : AT&T Mobility
Carrier Site Name : MRCTB050163
Carrier Site Number : S1175
Site Location : 32 Norfolk Road
Winsted, CT 06098
41.9401940, -73.0659030
County : Litchfield
Date : March 30, 2021
Max Usage : 63.0%
Result : Pass

Prepared By:
W. Harrison Welch, E.I.
TEP# 199882.515361

Reviewed By:



03/30/2021



Table of Contents

Introduction..... 1

Supporting Documents..... 1

Analysis..... 1

Conclusion 1

Antenna Loading..... 2

Structure Usages..... 2

Mount Layout..... 3

Equipment Layout..... 4

Standard Conditions5

Calculations..... Attached



Introduction

The purpose of this report is to summarize results of the antenna mount analysis performed for AT&T Mobility at 137 ft.

Supporting Documents

Spec. Sheet	Spec. Sheet for SitePro 1 ULP12-4xx
RFDS	RFDS dated March 5, 2021
Photos	Site photos from 2020

Analysis

This antenna mount was analyzed using RISA-3D v17 analysis software

Basic Wind Speed:	120 mph (Ultimate)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1" Ice Thickness
Codes:	ANSI/TIA-222-H
Risk Category:	II
Exposure Category:	C
Topographic Category:	Method 2
Kzt:	1.000
Spectral Response:	$S_s = 0.167$, $S_1 = 0.054$
Site Class:	D – Default (Section 11.4.3)
Live Loads:	$L_m = 500$ lbs, $L_v = 250$ lbs

Conclusion

Based on the analysis results, the antenna mount meets the requirements per the applicable codes listed above. The mount can support the equipment as described in this report. If the load differs from that described in this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.

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.

**Antenna Loading**

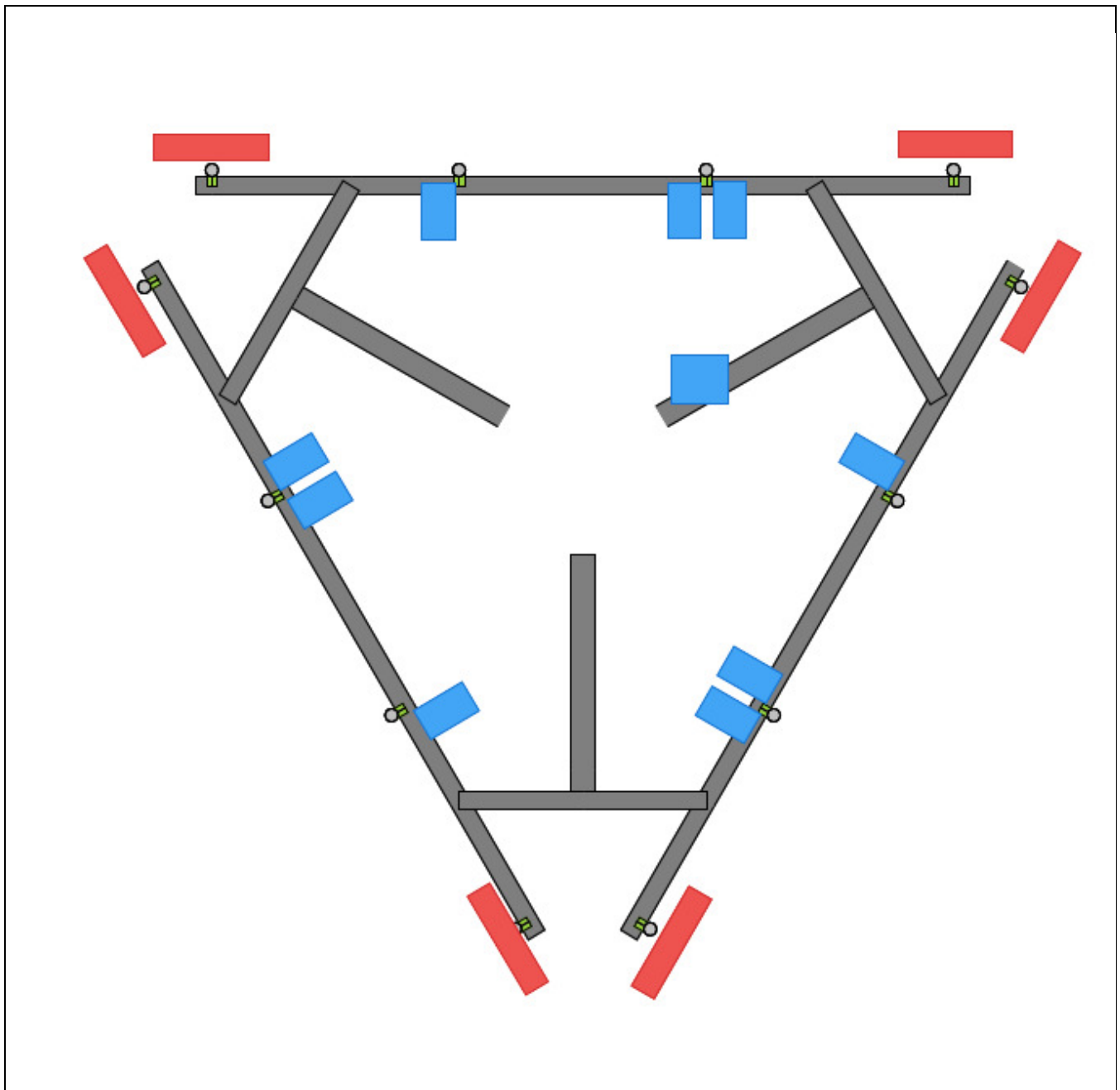
Mount Centerline (ft)	Antenna Centerline (ft)	Qty	Antenna Model
137	137	3	CCI TPA65R-BU8D
		3	CCI DMP65R-BU8D
		3	Ericsson RRUS 4478 B14
		3	Ericsson RRUS 4449 B5, B12
		3	Ericsson RRUS 8843 B2, B66A
		1	Raycap DC9-48-60-24-8C-EV

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Face Horizontal	35.1%	Pass
Support Horizontals	63.0%	Pass
Support Bracing	38.0%	Pass
Mount Pipes	43.9%	Pass
Connection Bolts	35.5%	Pass
Connection Plate	46.7%	Pass

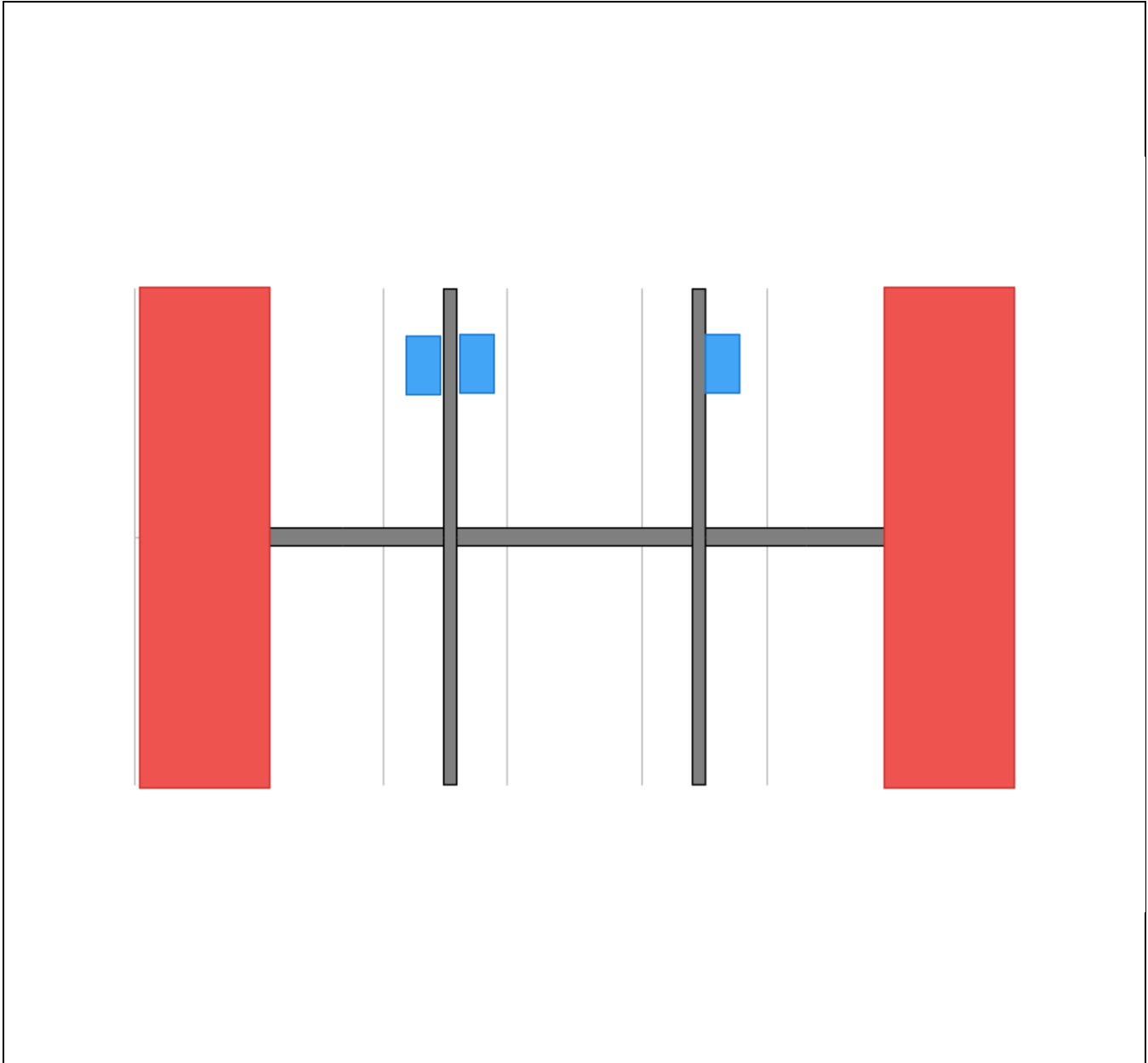


Mount Layout





Equipment Layout





Standard Conditions

All engineering services performed by TEP 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 TEP

It is the responsibility of the client to ensure that the information provided to TEP and used in the performance of our engineering services is correct and complete.

TEP assumes that all structures were constructed in accordance with the drawings and specifications.

TEP assumes that the mount has been maintained in accordance with the manufacturer's specification.

TEP assumes that all mount components are in sufficient condition to carry their full design capacity for this analysis.

Serviceability with respect to antenna twist, tilt, roll, or lateral translation, is not checked and is left to the carrier or tower owner to ensure conformance.

All material grades used for this analysis, unless verified by mount manufacturer design, were assumed per AISC Table 2-4, 15th Edition. See RISA 3-D output for confirmation on grades used in this analysis.

All connections are to be verified for condition and tightness by the installation contractor preceding any changes to the appurtenance mounting system and/or equipment attached to it.

Unless explicitly agreed by both the client and TEP, 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. TEP is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

Exhibit 5

NIER Study Report



NIER Study Report

SITE NAME:

413849 Winchester PCS CT

LOCATION:

Winsted, Connecticut

COMPANY:

**American Tower
Woburn, Massachusetts**

April 8th, 2021



Contents

DISCLAIMER NOTICE.....	2
INTRODUCTION.....	3
SITE AND FACILITY CONSIDERATIONS	3
POWER DENSITY CALCULATIONS	4
APPENDIX 1 TOPOGRAPHIC MAP	5
APPENDIX 2 SATELLITE PHOTO.....	6
APPENDIX 3 FCC OET-65 MPE LIMIT STUDY	7
APPENDIX 4 TOWER RADIATION PATTERNS	8
APPENDIX 5 INFORMATION PERTAINING TO MPE STUDIES.....	9
APPENDIX 6 MPE STANDARDS METHODOLOGY	11



Disclaimer Notice

This work is based upon our best interpretation of available information. However, these data and their interpretation are constantly changing. Therefore, we do not warrant that any undertaking based on this report will be successful, or that others will not require further research or actions in support of this proposal or future undertaking. In the event of errors, our liability is strictly limited to replacement of this document with a corrected one. Liability for consequential damages is specifically disclaimed. Any use of this document constitutes an agreement to hold Tower Engineering Professionals and its employees harmless and indemnify it for all liability, claims, demands, and litigation expenses and attorney's fees arising out of such use.

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TOWER ENGINEERING PROFESSIONALS
KINSTON, NORTH CAROLINA



NIER STUDY REPORT

413849 Winchester PCS CT

Winsted, Connecticut

INTRODUCTION

Tower Engineering Professionals (TEP) has been retained by American Tower (ATC) of Woburn, Massachusetts to evaluate the RF emissions of an existing tower at this location.

SITE AND FACILITY CONSIDERATIONS

Site Winchester PCS CT is located at 32 Norfolk Road in Winsted, CT at coordinates 41.940194, -73.095903. The support structure is a 150' stealth monopine. The installation consists of two antenna levels with radiation centers of 148' & 137' above ground level. All antennae will have a radiation center as described above. All data used in this study was provided by one or more of the following sources:

1. ATC furnished data
2. Compiled from carrier and manufacturer standard configurations
3. Empirical data collected by TEP

A topographic map of the study area is located in Appendix 1. A satellite view of the study area is located in Appendix 2.



POWER DENSITY CALCULATIONS

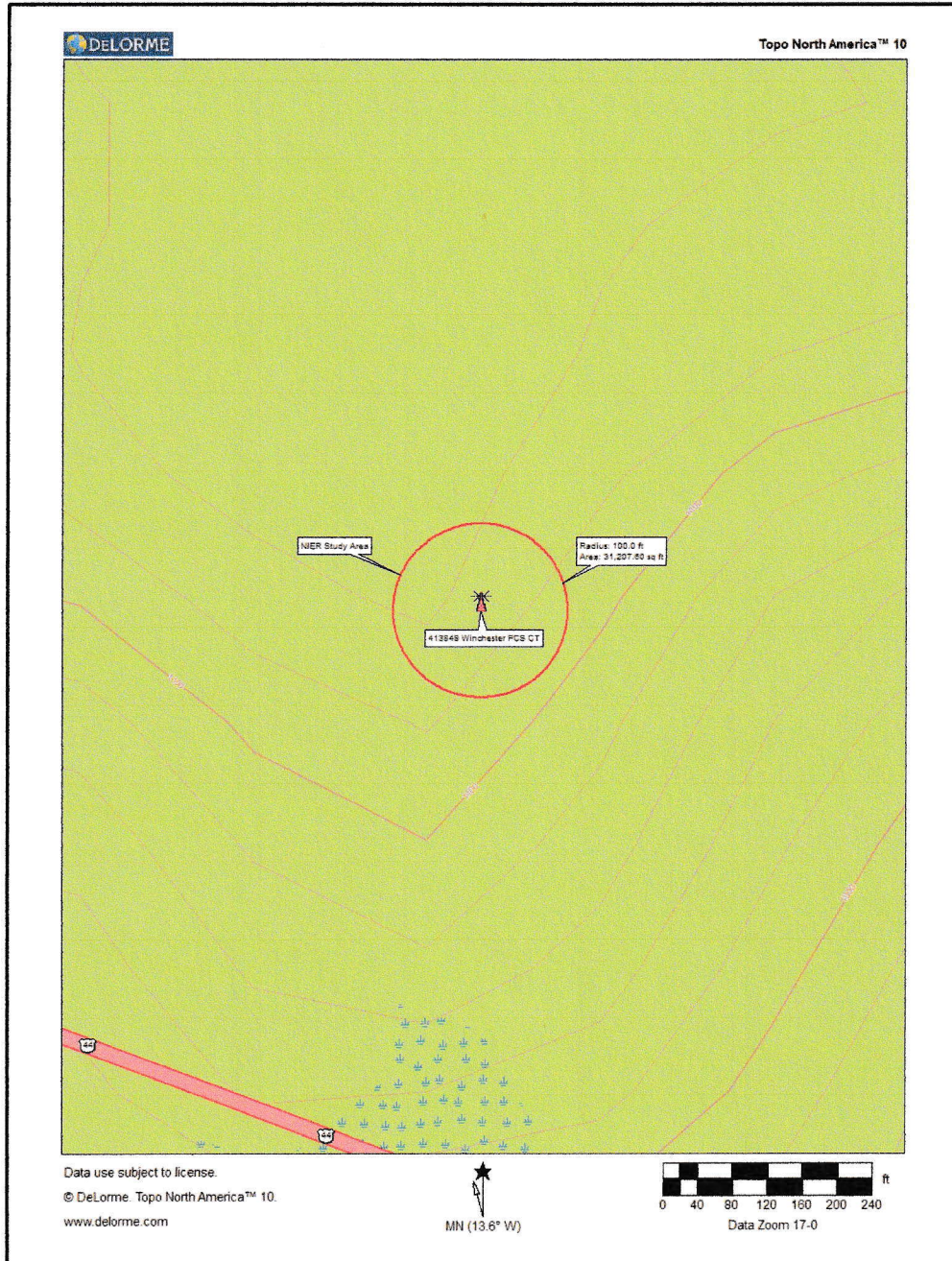
Graphs of the power density at different distances from the transmitter, compared to FCC MPE general population and occupational limits, may be seen in Appendix 3. These limits are based upon the Information Relating to MPE Standards found in Appendix 5. Study methodology may be seen in Appendix 6, which describes the Non-Ionizing Radiation Prediction Models. Approximate radiation patterns may be found in Appendix 4. This site **IS** in compliance with FCC OET-65 MPE limits.

April 8th, 2021

Michael W. Hayden NCE CPBE CBNT AMD CPI
Director, RF Design & Services
Tower Engineering Professionals

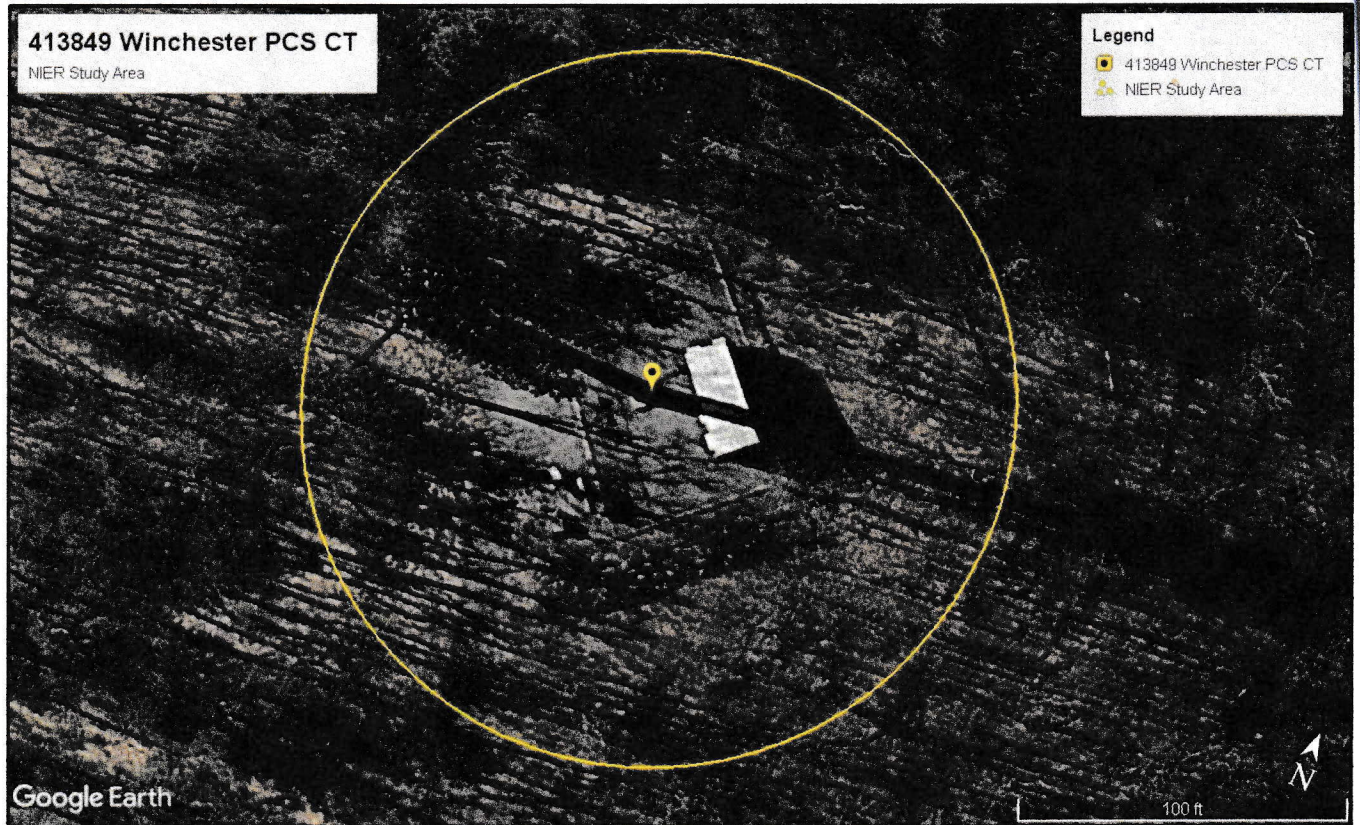


APPENDIX 1 Topographic Map



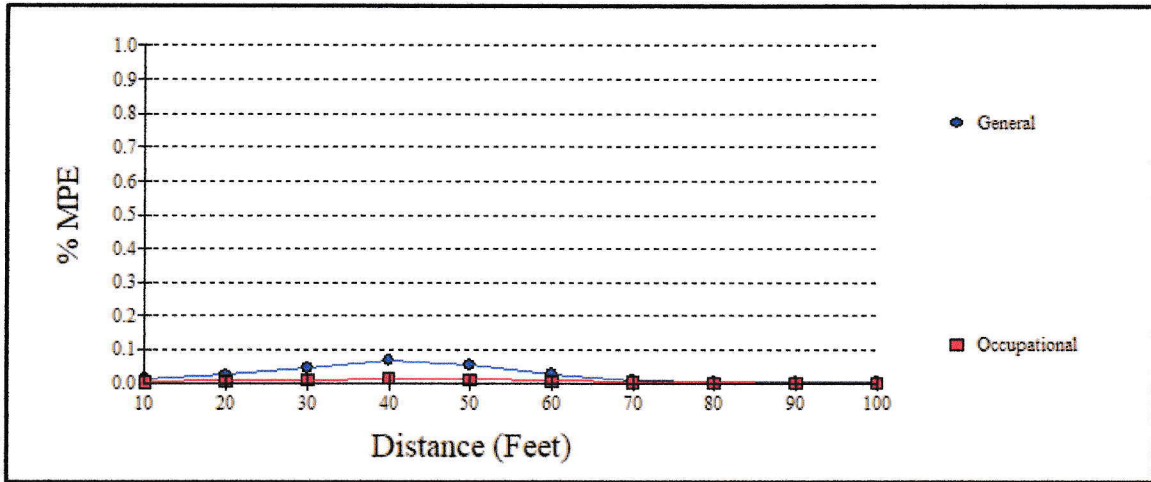


APPENDIX 2 Satellite Photo



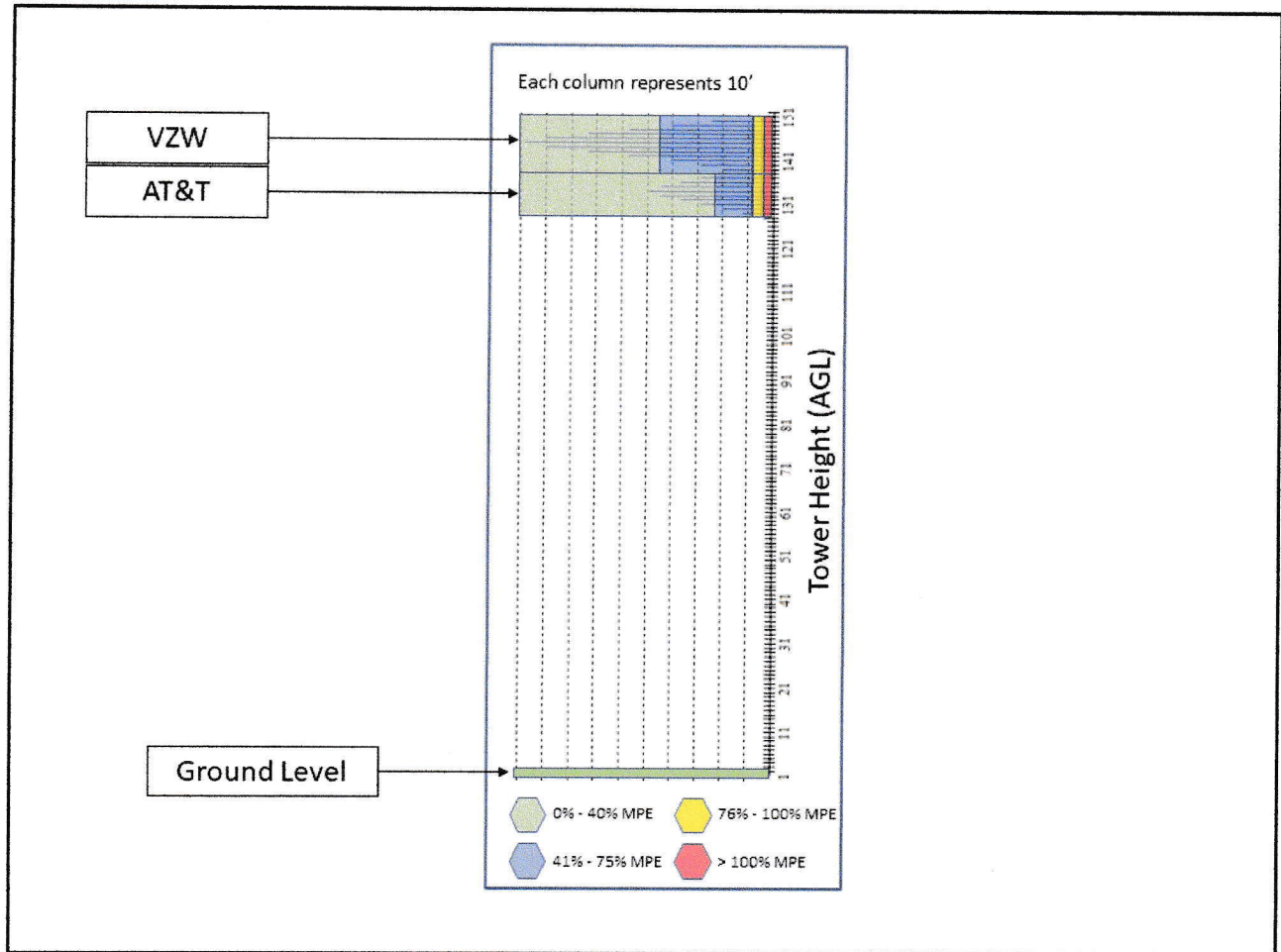


APPENDIX 3 FCC OET-65 MPE Limit Study



Maximum Power Density (@40'):	0.0007 mW/cm ²
General Population MPE (@40'):	0.07%
Occupational MPE (@40'):	0.01%

APPENDIX 4 Tower Radiation Patterns





APPENDIX 5 Information Pertaining to MPE Studies

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits were developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist, they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies, whole-body absorption is less efficient, and consequently, the MPE limits are less restrictive.



MPE limits are defined in terms of power density (units of milliwatts per centimeter squared: mW/cm^2), electric field strength (units of volts per meter: V/m) and magnetic field strength (units of amperes per meter: A/m). The far-field of a transmitting antenna is where the electric field vector (E), the magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

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.

General population/uncontrolled exposure limits apply to situations in which the general public 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 public 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. Additional details can be found in FCC OET 65.



APPENDIX 6 MPE Standards Methodology

This study predicts RF field strength and power density levels that emanate from communications system antennae. It considers all transmitter power levels (less filter and line losses) delivered to each active transmitting antenna at the communications site. Calculations are performed to determine power density and MPE levels for each antenna as well as composite levels from all antennas. The calculated levels are based on where a human (Observer) would be standing at various locations at the site. The point of interest where the MPE level is predicted is based on the height of the Observer.

Compliance with the FCC limits on RF emissions are determined by spatially averaging a person's exposure over the projected area of an adult human body, that is approximately six-feet or two-meters, as defined in the ANSI/IEEE C95.1 standard. The MPE limits are specified as time-averaged exposure limits. This means that exposure is averaged over an identifiable time interval. It is 30 minutes for the general population/uncontrolled RF environment and 6 minutes for the occupational/controlled RF environment. However, in the case of the general public, time averaging should not be applied because the general public is typically not aware of RF exposure and they do not have control of their exposure time. Therefore, it should be assumed that any RF exposure to the general public will be continuous.

The FCC's limits for exposure at different frequencies are shown in the following Tables.

Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm²)	Averaging Time E ², H ² or S (minutes)
0.3 - 3.0	614	1.63	100*	6
3.0 - 30	1842/f	4.89/f	900/F ²	6
30 - 300	61.4	0.163	1.0	6
300 - 1500	--	--	f/300	6
1500 - 100,000	--	--	5	6

f = frequency

* = Plane-wave equivalent power density



Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3 - 1.34	614	1.63	100*	30
1.34 - 30	824/f	2.19/f	180/F ²	30
30 -300	27.5	0.073	0.2	30
300 -1500	--	--	f/1500	30
1500 -100,000	--	--	1.0	30

f = frequency

* = Plane-wave equivalent power density

General population/uncontrolled exposures apply in situations in which the general public may be exposed or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

It is important to understand that these limits apply cumulatively to all sources of RF emissions affecting a given area. For example, if several different communications system antennas occupy a shared facility such as a tower or rooftop, then the total exposure from all systems at the facility must be within compliance of the FCC guidelines.

The field strength emanating from an antenna can be estimated based on the characteristics of an antenna radiating in free space. There are basically two field areas associated with a radiating antenna. When close to the antenna, the region is known as the Near Field. Within this region, the characteristics of the RF fields are very complex and the wave front is extremely curved. As you move further from the antenna, the wave front has less curvature and becomes planar. The wave front still has a curvature but it appears to occupy a flat plane in space (plane-wave radiation). This region is known as the Far Field.



Two models are utilized to predict Near and Far field power densities. They are based on the formulae in FCC OET 65. As this study is concerned only with Near Field calculations, we will only describe the model used for this study. For additional details, refer to FCC OET Bulletin 65.

Cylindrical Model (Near Field Predictions)

Spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna. While the actual power density will vary along the height of the antenna, the average value along its length will closely follow the relation given by the following equation:

$$S = P \div 2\pi RL$$

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

For directional-type antennas, power densities can be estimated by dividing the input power by that portion of a cylindrical surface area corresponding to the angular beam width of the antenna. For example, for the case of a 120-degree azimuthal beam width, the surface area should correspond to 1/3 that of a full cylinder. This would increase the power density near the antenna by a factor of three over that for a purely omni-directional antenna. Mathematically, this can be represented by the following formula:

$$S = (180 / \theta_{BW}) P \div \pi RL$$

Where:

S = Power Density

θ_{BW} = Beam width of antenna in degrees (3 dB half-power point)

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

If the antenna is a 360-degree omni-directional antenna, this formula would be equivalent to the previous formula.



Spherical Model (Far Field Predictions)

Spatially averaged plane-wave power densities in the Far Field of an antenna may be estimated by considering the additional factors of antenna gain and reflective waves that would contribute to exposure.

The radiation pattern of an antenna has developed in the Far Field region and the power gain needs to be considered in exposure predictions. Also, if the vertical radiation pattern of the antenna is considered, the exposure predictions would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential four-fold increase in power density.

These additional factors are considered and the Far Field prediction model is determined by the following equation:

$$S = EIRP \times Rc \div 4\pi R^2$$

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

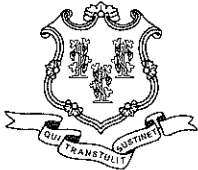
Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

The EIRP includes the antenna gain. If the antenna pattern is considered, the antenna gain is relative based on the horizontal and vertical pattern gain values at that particular location in space, on a rooftop or on the ground. However, it is recommended that the antenna radiation pattern characteristics not be considered to provide a conservative "worst case" prediction. This is the equation is utilized for the Far Field exposure predictions herein.

Exhibit 6

Original Facility Approval



Daniel F. Caruso
Chairman

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: siting.council@ct.gov

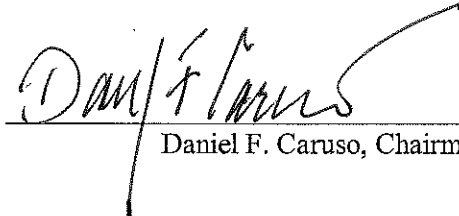
Internet: ct.gov/csc

**CERTIFICATE
OF
ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED
DOCKET NO. 361**

Pursuant to General Statutes § 16-50k, as amended, the Connecticut Siting Council hereby issues a Certificate of Environmental Compatibility and Public Need to Cellco Partnership d/b/a Verizon Wireless for the construction, maintenance and operation of a telecommunications facility located off Norfolk Road (Route 44), Winchester, Connecticut.

This Certificate is issued in accordance with and subject to the terms and conditions set forth in the Decision and Order of the Council on September 11, 2008.

By order of the Council,



Daniel F. Caruso, Chairman

September 11, 2008

Exhibit 7

(4) Notice Confirmations

Kimberly Revak

From: UPS <pkginfo@ups.com>
Sent: Thursday, August 26, 2021 10:53 PM
To: Kimberly Revak
Subject: UPS Schedule Delivery Update, Tracking Number 1Z9Y45030327618421



Your scheduled delivery date has changed.

Scheduled Delivery Date: Monday, 08/30/2021

Important Delivery Information

From: CENTERLINE SITE ACQUISITION
Tracking Number: [1Z9Y45030327618421](#)

Shipment Details

Ship To: Gary Waitt - Site Development
American Tower Corporation
10 Presidential Way
WOBURN, MA 018011053
US

Number of Packages: 1
Weight: 1.0 LBS
Reference Number 1: Winchester - ATC



It's the thought that counts

Create a Return



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Kimberly Revak

From: UPS <pkginfo@ups.com>
Sent: Thursday, August 26, 2021 11:07 PM
To: Kimberly Revak
Subject: UPS Schedule Delivery Update, Tracking Number 1Z9Y45030316164290



To get an estimated delivery time for most UPS packages, click [Continue](#)

Your scheduled delivery date has changed.

Scheduled Delivery Date: Friday, 08/27/2021

[Continue](#)



[Change Delivery](#)

[Manage Preferences](#)

[View Delivery Planner](#)

Important Delivery Information

From: CENTERLINE SITE ACQUISITION
Tracking Number: [1Z9Y45030316164290](#)

Shipment Details

Ship To: WIN 21 LLC
156 Roosevelt Drive
SEYMOUR, CT 064832148
US

UPS Service: UPS GROUND

Number of Packages: 1

Reference Number 1: Winchester - LL

Kimberly Revak

From: UPS <pkginfo@ups.com>
Sent: Thursday, August 26, 2021 10:53 PM
To: Kimberly Revak
Subject: UPS Schedule Delivery Update, Tracking Number 1Z9Y45030317353164



Your scheduled delivery date has changed.

Scheduled Delivery Date: Friday, 08/27/2021

Important Delivery Information

From: CENTERLINE SITE ACQUISITION
Tracking Number: [1Z9Y45030317353164](#)

Shipment Details

Ship To: Attn: Joshua Kelly - Town Manager
Town of Winchester
Town Hall
338 Main Street
WINSTED, CT 060981697
US

Number of Packages: 1
Weight: 1.0 LBS
Reference Number 1: Winchester - Town



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[Create a Return](#)



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Kimberly Revak

From: UPS <pkginfo@ups.com>
Sent: Thursday, August 26, 2021 10:53 PM
To: Kimberly Revak
Subject: UPS Schedule Delivery Update, Tracking Number 1Z9Y45030313320152



Your scheduled delivery date has changed.

Scheduled Delivery Date: Friday, 08/27/2021

Important Delivery Information

From: CENTERLINE SITE ACQUISITION
Tracking Number: [1Z9Y45030313320152](#)

Shipment Details

Ship To: Pamela Colombie / Planning Dept
Town of Winchester
Town Hall
338 Main Street
WINSTED, CT 060981697
US

Number of Packages: 1
Weight: 1.0 LBS
Reference Number 1: Winchester - Zoning



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