



May 19, 2016

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

Regarding: Notice of Exempt Modification – Antenna Swap,  
Addition of Three Radio Heads and a DC/Fiber Squid  
Property Address: 2 Prestige Park Road East Hartford, CT 06108  
(a/k/a 310 Prestige Park Drive)

Dear Ms. Bachman:

AT&T currently maintains a wireless telecommunications facility on an existing 150-foot monopole at the above-referenced address, latitude 41.78816944444444, longitude -72.60075833333333. Said monopole is owned by American Tower Corporation. The equipment space in the customer building is 24' x 22' totaling 528 square feet.

AT&T desires to modify its existing telecommunications facility by swapping three (3) antennas and adding three remote-radio heads ("RRHs") as well as a DC/Fiber Squid. The centerline height of said antennas is and will remain at 153 feet. Antennas are mounted utilizing a platform with hand rails.

Please accept this application 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 Honorable Marcia A. Leclerc, Mayor of East Hartford, as well as to the landowner Fremont Prestige II LLC c/o Fremont Management LLC. A copy of this letter is also being sent to the monopole owner American Tower Corporation.

The planned modifications to AT&T's facility fall squarely within those activities explicitly provided for in R.C.S.A. §16-50j-72 (b)(2). Specifically:

1. The planned modification will not result in an increase in the height of the existing structure. The antennas to be swapped will be installed at the existing height of 153 feet on the 150-foot monopole.
2. The proposed modifications will not involve any changes to ground-mounted equipment, and therefore will not require an extension of the site boundary.
3. The proposed modification will not increase the noise level at the facility by six decibel or more, or to levels that exceed state and local criteria.

4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above Federal Communications Commission (FCC) safety standard. An RF emissions calculation (attached) for AT&T's modified facility is herein provided.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The monopole and its foundation can support AT&T's proposed modifications (please see attached structural analysis completed by American Tower dated May 16, 2016).

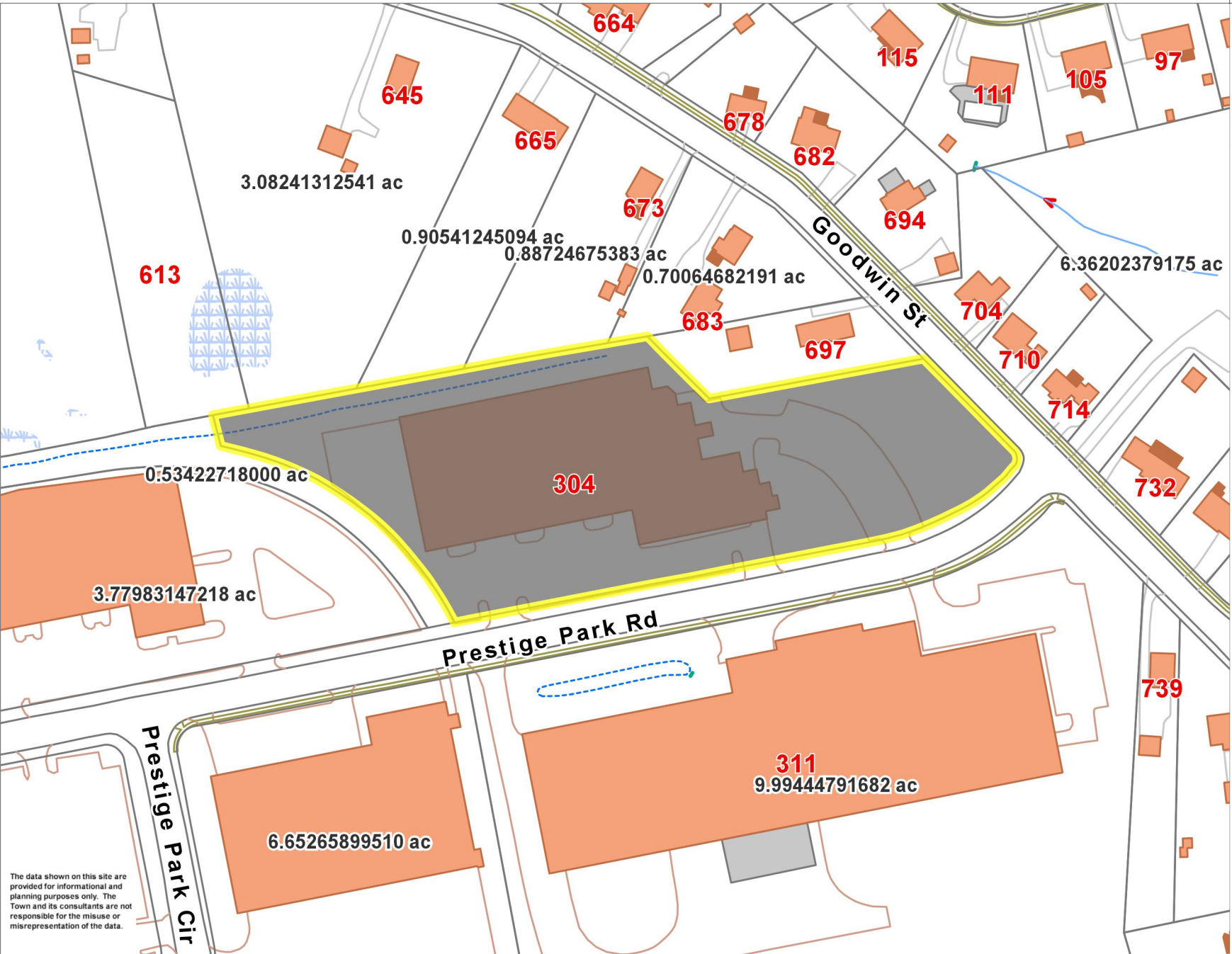
For the foregoing reasons, AT&T respectfully requests that the proposed antenna swap remote radio head and D/C Fiber Squid installation be allowed within the exempt modifications under R.C.S.A. §16-50j-72 (b)(2).

Sincerely,

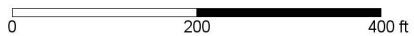


Sarah Snell  
Site Acquisition Specialist

cc: The Honorable Marcia A. Leclerc, Mayor of East Hartford  
Fremont Prestige II LLC c/o Fremont Management LLC (Landowner)  
American Tower Corporation (Tower Owner)



The data shown on this site are provided for informational and planning purposes only. The Town and its consultants are not responsible for the misuse or misrepresentation of the data.



Printed on 05/17/2016 at 10:32 AM

# Town of East Hartford Property Summary Report

## 284-310 PRESTIGE PARK RD

<b>MAP LOT:</b>	49-14	<b>CAMA PID:</b>	11576
<b>LOCATION:</b>	284-310 PRESTIGE PARK RD		
<b>OWNER NAME:</b>	FREMONT PRESTIGE I I L L C / C/O FREMONT MANAGEMENT L L C		



### OWNER OF RECORD

FREMONT PRESTIGE I I L L C  
 C/O FREMONT MANAGEMENT L L C  
 65 LA SALLE RD SUITE 202  
 WEST HARTFORD, CT 06107



<b>LIVING AREA:</b>	56744	<b>ZONING:</b>	I3	<b>ACREAGE:</b>	3.99
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### SALES HISTORY

OWNER	BOOK / PAGE	SALE DATE	SALE PRICE
FREMONT PRESTIGE I I L L C C/O FREMONT MANAGEMENT L L	2714/ 23	14-Mar-2006	\$0.00
FREMONT PRESTIGE PARK LLC C/O FREMONT MANAGEMENT	1932/ 157	31-Oct-2000	\$1,389,000.00
TOLLAND ENTERPRISES	1087/ 147	01-Sep-1987	\$0.00
BECKENSTEIN LOUIS & HENRY	418/ 490	01-Jan-1900	\$0.00

### CURRENT PARCEL ASSESSMENT

<b>TOTAL:</b>	\$1,336,330.00	<b>IMPROVEMENTS:</b>	\$1,152,970.00	<b>LAND:</b>	\$183,360.00
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### ASSESSING HISTORY

FISCAL YEAR	TOTAL VALUE	IMPROVEMENT VALUE	LAND VALUE
2015	\$1,336,330.00	\$1,152,970.00	\$183,360.00
2014	\$1,336,330.00	\$1,152,970.00	\$183,360.00
2013	\$1,336,328.00	\$1,152,968.00	\$183,360.00
2012	\$1,336,328.00	\$1,152,968.00	\$183,360.00
2011	\$1,336,328.00	\$1,152,968.00	\$183,360.00

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## 284-310 PRESTIGE PARK RD

<b>MAP LOT:</b>	49-14	<b>CAMA PID:</b>	11576
<b>LOCATION:</b>	284-310 PRESTIGE PARK RD		
<b>OWNER NAME:</b>	FREMONT PRESTIGE I I L L C / C/O FREMONT MANAGEMENT L L C		

### BUILDING # 1

<b>YEAR BUILT</b>	1968	<b>EXT WALL 1</b>	Brick
<b>STYLE</b>	Storage Facility	<b>INT WALLS 1</b>	Painted Block
<b>MODEL</b>	Ind/Comm	<b>HEAT FUEL</b>	Other
<b>STORIES</b>	1.0	<b>HEAT TYPE</b>	Other
<b>OCCUPANCY</b>	Light Storage	<b>AC TYPE</b>	Partial
<b>ROOF</b>	Flat	<b>BEDROOMS</b>	
<b>ROOF COVER</b>	Typical	<b>FULL BATHS</b>	0
<b>FLOOR COVER 1</b>	Mixed	<b>HALF BATHS</b>	
<b>% BSMT</b>	null	<b>TOTAL ROOMS</b>	0
<b>% FIN BSMT</b>	null	<b>% REC RM</b>	null
<b>% SEMI FIN BSMT</b>	null	<b>% ATTIC FINISH</b>	null
<b>BSMT GARAGE</b>	null	<b>FIREPLACES</b>	null



### EXTRA FEATURES

DESCRIPTION	CODE	UNITS
Sprinklers-Wet	SPR1	56744 S.F.
Load Dock	LDK	1 UNITS
W/Partitions	MEZ3	5674 S.F.

### OUTBUILDINGS

DESCRIPTION	CODE	UNITS
Paving	PAV1	1x47000 (47000 SF)
Rail Road Siding	RRS	1x300 (300 L.F.)

**PROJECT INFORMATION**

- SCOPE OF WORK:
- REPLACE ANTENNA MOUNT WITH COMMSCOPE MTC3607 ANTENNA MOUNT
  - REMOVE (1) EXISTING LTE ANTENNA PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (3) EXISTING ANTENNAS TO BE REMOVED.
  - NEW AT&T ANTENNAS: (1) NEW ANTENNA PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (3) NEW ANTENNAS; (6) EXISTING GSM/UMTS ANTENNAS TO REMAIN (2 PER SECTOR)
  - AT&T RRUs: (1) NEW RRUs PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (3) NEW RRUs; (1) EXISTING RRU PER SECTOR TO REMAIN, FOR A TOTAL OF (3) EXISTING RRUs.
  - (1) NEW A2 MODULE PER SECTOR WITH (3) SECTORS, FOR A TOTAL OF (3) NEW A2 MODULES.
  - (1) PROPOSED DC SQUID, (1) EXISTING DC SQUID

SITE ADDRESS: 2 PRESTIGE PARK ROAD  
EAST HARTFORD, CT 06108

LATITUDE: 41.788306 41° 47' 17.97"N  
LONGITUDE: -72.6005431 -72° 36' 1.95516"W

USID: 59330

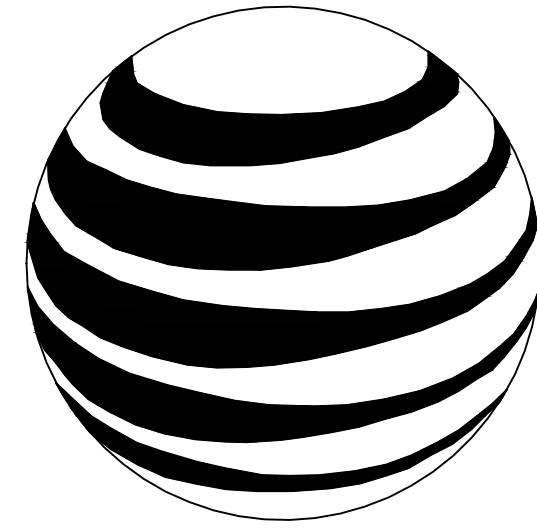
TOWER OWNER: AMERICAN TOWER CORPORATION  
10 PRESIDENTIAL WAY  
WOBURN, MA 01801

TYPE OF SITE: MONOPOLE/INDOOR EQUIPMENT

MONOPOLE HEIGHT: 150'-0"±  
RAD CENTER: 154'-0"±

CURRENT USE: UNMANNED WIRELESS TELECOMMUNICATIONS FACILITY

PROPOSED USE: UNMANNED WIRELESS TELECOMMUNICATIONS FACILITY



**at&t**  
**MOBILITY**

**FA CODE: 10034965**  
**SITE NUMBER: CT1002**  
**SITE NAME: EAST HARTFORD**

**PROJECT TEAM**

**CLIENT REPRESENTATIVE**

COMPANY: EMPIRE TELECOM  
ADDRESS: 16 ESQUIRE ROAD  
BILLERICA, MA 01821  
CONTACT: DAVID COOPER  
PHONE: 617-639-4908  
EMAIL: dcooper@empiretelecomm.com

**SITE ACQUISITION:**

COMPANY: VERTICAL DEVELOPMENT, LLC  
ADDRESS: 20 COMMERCIAL STREET  
BRANFORD, CT 06405  
CONTACT: DAVID BASS  
PHONE: 203-826-5857  
EMAIL: dbass@verticaldevelopmentllc.com

**ZONING:**

COMPANY: VERTICAL DEVELOPMENT, LLC  
ADDRESS: 20 COMMERCIAL STREET  
BRANFORD, CT 06405  
CONTACT: DAVID BASS  
PHONE: 203-826-5857  
EMAIL: dbass@verticaldevelopmentllc.com

**ENGINEERING:**

COMPANY: COM-EX CONSULTANTS, LLC  
ADDRESS: 115 ROUTE 46  
SUITE E39  
MOUNTAIN LAKES, NJ 07046  
CONTACT: NICHOLAS D. BARILE, P.E.  
PHONE: 862-209-4300  
EMAIL: nbarile@comexconsultants.com

**RF ENGINEER:**

COMPANY: AT&T MOBILITY – NEW ENGLAND  
ADDRESS: 550 COCHITUATE ROAD  
SUITE 550 13 & 14  
FRAMINGHAM, MA 01701  
CONTACT: CAMERON SYME  
PHONE: 508-596-7146  
EMAIL: cs6970@att.com

**CONSTRUCTION MANAGEMENT:**

COMPANY: EMPIRE TELECOM  
ADDRESS: 16 ESQUIRE ROAD  
BILLERICA, MA 01821  
CONTACT: GRZEGORZ "GREG" DORMAN  
PHONE: 484-683-1750  
EMAIL: gdorman@empiretelecomm.com

**VICINITY MAP**

1. HEAD WEST ON COCHITUATE RD TOWARD SPEEN STREET (0.3 MI). 2. TAKE THE RAMP TO I-90 E/MASSPIKE W/SPRINGFIELD/BOSTON (0.6 MI). 3. KEEP LEFT AT THE FORK, FOLLOW SIGNS FOR INTERSTATE 90 W/MASSACHUSETTS TURNPIKE/WORCESTER/SPRINGFIELD AND MERGE ONTO I-90 W/MASSACHUSETTS TURNPIKE (38.3 MI). 4. TAKE EXIT 9 TO MERGE ONTO I-84 TOWARD US-20/HARTFORD/NEW YORK CITY (73.9 MI). 5. TAKE EXIT 20 TO MERGE ONTO US-44 WEST. 6. CONTINUE ON US-44 W. DRIVE TO PRESTIGE PARK RD IN EAST HARTFORD (2.5 MI). DESTINATION WILL BE ON YOUR LEFT.



**DRAWING INDEX**

		REV.
T-1	TITLE SHEET	0
GN-1	GROUNDING & GENERAL NOTES	0
A-1	COMPOUND LAYOUT	0
A-2	EQUIPMENT LAYOUTS	0
A-3	ANTENNA LAYOUTS & ELEVATIONS	0
A-4	DETAILS	0
A-5	ANTENNA MOUNTING DETAILS	0
G-1	GROUNDING, ONE-LINE DIAGRAM & DETAILS	0

**GENERAL NOTES**

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

**APPROVALS**

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN, ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR SITE MODIFICATIONS.

DISCIPLINE:	NAME:	DATE:
SITE ACQUISITION:		
CONSTRUCTION MANAGER:		
AT&T PROJECT MANAGER:		



CONNECTICUT LAW REQUIRES TWO WORKING DAYS NOTICE PRIOR TO ANY EARTH MOVING ACTIVITIES BY CALLING 800-922-4455 OR DIAL 811

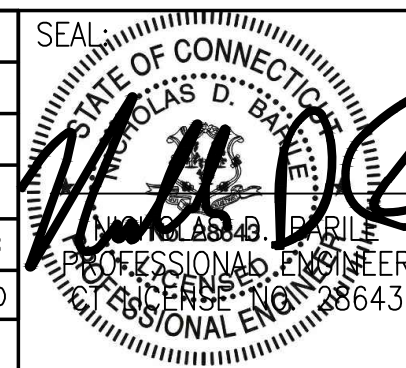


**SITE NUMBER: CT1002**  
**SITE NAME: EAST HARTFORD**  
2 PRESTIGE PARK RD.  
EAST HARTFORD, CT 06108  
HARTFORD COUNTY



NO.	DATE	REVISIONS	BY	CHK	APP'D
0	04/11/16	ISSUED AS FINAL	PV	NDB	NDB

SCALE: AS SHOWN    DESIGNED BY: CJT    DRAWN BY: CJT



AT&T		
DRAWING TITLE:		
TITLE SHEET		
JOB NUMBER	DRAWING NUMBER	REV
15173-EMP	T-1	0

**GROUNDING NOTES:**

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.
2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS. TESTS SHALL BE PERFORMED IN ACCORDANCE WITH 25471-000-3PS-EG00-0001, DESIGN & TESTING OF FACILITY GROUNDING FOR CELL SITES.
4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS; 2 AWG STRANDED COPPER FOR OUTDOOR BTS.
6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED WITH STAINLESS STEEL HARDWARE TO THE BRIDGE AND THE TOWER GROUND BAR.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
11. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWG COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
12. GROUND CONDUCTORS USED IN THE FACILITY GROUND AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC PLASTIC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (E.G., NON-METALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
13. ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF ANSI/TIA 222. FOR TOWERS BEING BUILT TO REV-G OF THE STANDARD, THE WIRE SIZE OF THE BURIED GROUND RING AND CONNECTIONS BETWEEN THE TOWER AND THE BURIED GROUND RING SHALL BE CHANGED FROM 2 AWG TO 2/0 AWG. IN ADDITION, THE MINIMUM LENGTH OF THE GROUND RODS SHALL BE INCREASED FROM EIGHT FEET (8') TO TEN FEET (10').
14. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE 1/2" OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID TINNED COPPER GROUND WIRE, PER NEC 250.50.

**GENERAL NOTES:**

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:  
 CONTRACTOR - EMPIRE TELECOM  
 SUBCONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)  
 OWNER - AT&T MOBILITY  
 OEM - ORIGINAL EQUIPMENT MANUFACTURER
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR (EMPIRE TELECOM).
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.
5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
6. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
7. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
8. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR. ROUTING OF TRENCHING SHALL BE APPROVED BY CONTRACTOR
9. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
10. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OFF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
11. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.
12. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.
13. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS UNLESS OTHERWISE SPECIFIED. ALL CONCRETING WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.
14. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy=36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCH UP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
15. CONSTRUCTION SHALL COMPLY WITH SPECIFICATION 25741-000-3APS-A00Z-00002, "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF AT&T MOBILITY SITES."
16. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
17. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK MAY NEED TO BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.
18. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

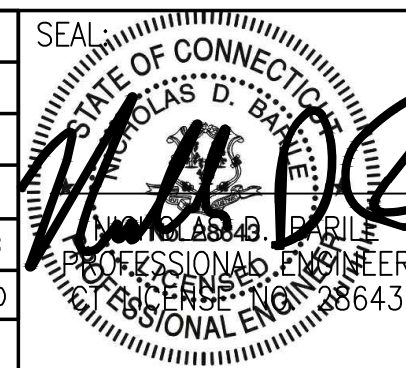
19. SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
  - INTERNATIONAL BUILDING CODE: IBC 2009 WITH LOCAL & COUNTY AMENDMENTS
  - NATIONAL ELECTRICAL CODE: NEC 2011 WITH LOCAL & COUNTY AMENDMENTS
  - FIRE/LIFE SAFETY CODE: NFPA-101 2009 WITH LOCAL & COUNTY AMENDMENTS
20. SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
  - AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
  - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, THIRTEENTH EDITION
  - AMERICAN SOCIETY OF TESTING OF MATERIALS, ASTM
  - TELECOMMUNICATIONS INDUSTRY ASSOCIATION (ANSI/TIA-222-G-1), STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES:
  - TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS
  - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION, OSHA
  - INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVELY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT
  - TELCORDIA GR-1503, COAXIAL CABLE CONNECTIONS
21. FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.
22. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES AND EXISTING CONDITIONS AT THE SITE PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA AND SUBMIT TO THE ENGINEER ANY DISCREPANCIES FROM THE DRAWINGS.



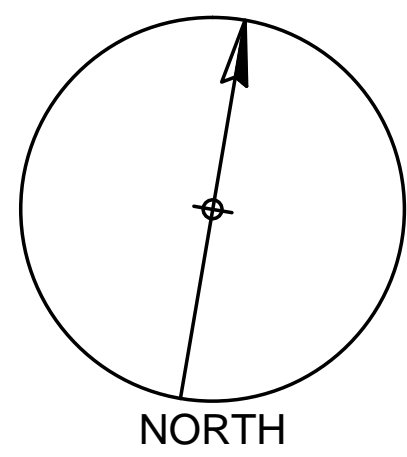
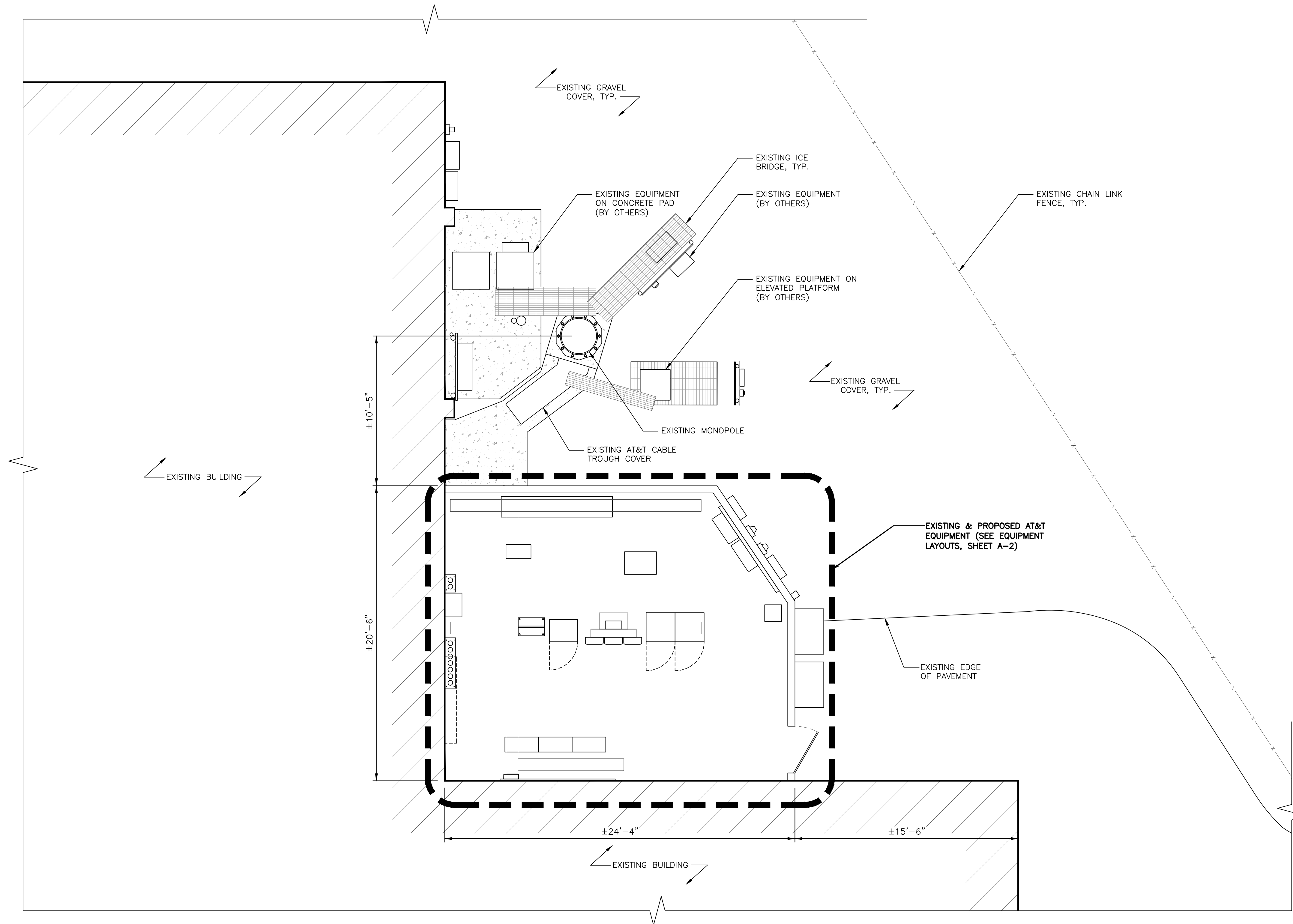
**SITE NUMBER: CT1002**  
**SITE NAME: EAST HARTFORD**  
 2 PRESTIGE PARK RD.  
 EAST HARTFORD, CT 06108  
 HARTFORD COUNTY



0	04/11/16	ISSUED AS FINAL	PV	NDB	NDB
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN			DESIGNED BY: CJT		DRAWN BY: CJT



<b>AT&amp;T</b>		
DRAWING TITLE: <b>GROUNDING &amp; GENERAL NOTES</b>		
JOB NUMBER 15173-EMP	DRAWING NUMBER GN-1	REV 0



**COMPOUND LAYOUT**

SCALE: 1" = 4'-0"



( IN FEET )  
1/4 Inch = 1 Foot

**NOTE:**  
CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA AND SUBMIT TO THE ENGINEER ANY DISCREPANCIES FROM THE DRAWINGS.

**COM-EX**  
Consultants  
115 ROUTE 46  
SUITE E39  
MOUNTAIN LAKES, NJ 07046  
PHONE: 862.209.4300  
FAX: 862.209.4301

**EMPIRE**  
telecom  
16 ESQUIRE ROAD  
BILLERICA, MA 01821

**SITE NUMBER: CT1002**  
**SITE NAME: EAST HARTFORD**  
2 PRESTIGE PARK RD.  
EAST HARTFORD, CT 06108  
HARTFORD COUNTY

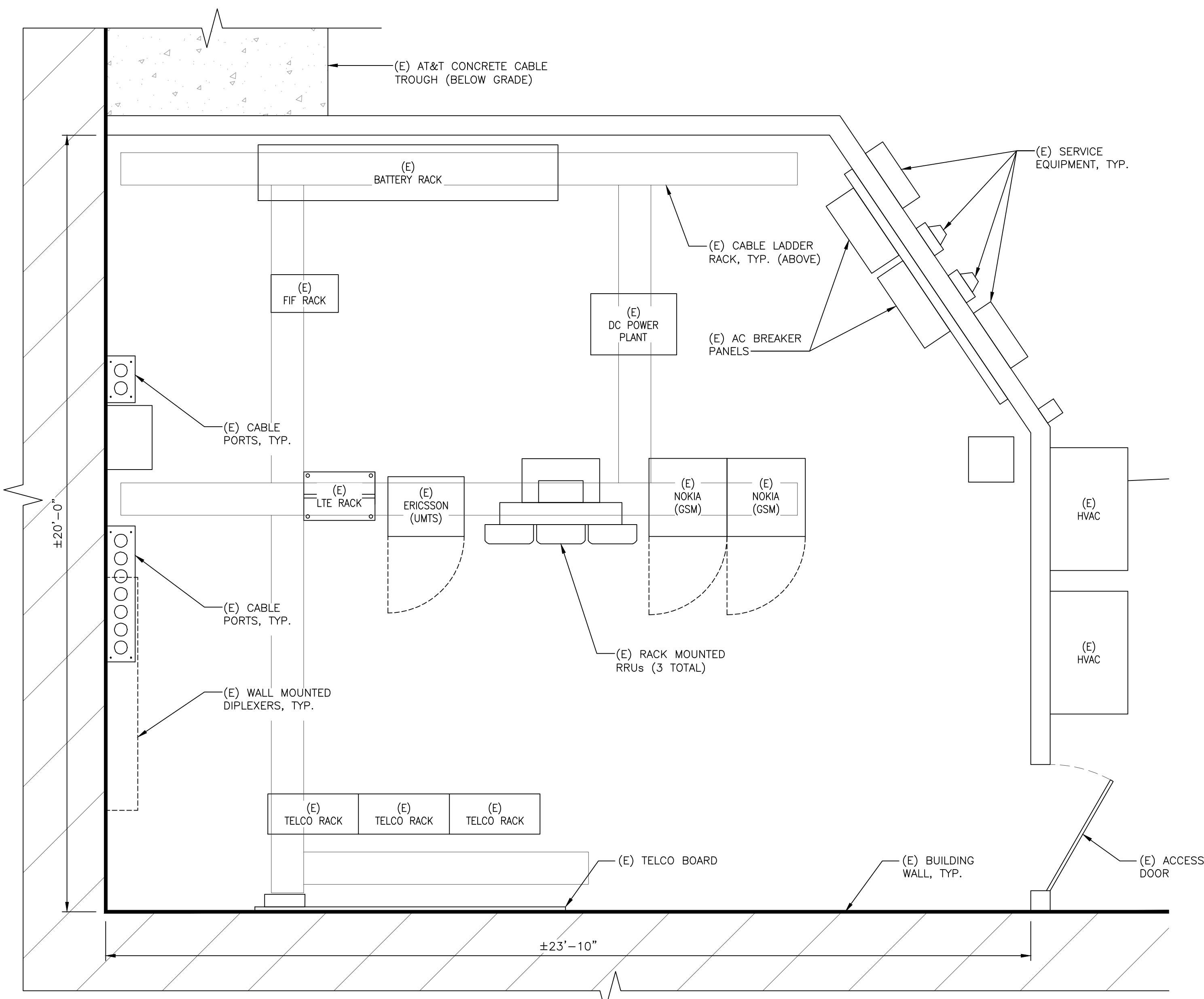
 **at&t**  
MOBILITY  
550 COCHITUATE ROAD  
FRAMINGHAM, MA 01701

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NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN			DESIGNED BY: CJT		DRAWN BY: CJT

SEAL  
STATE OF CONNECTICUT  
PROFESSIONAL ENGINEER  
15173-EMP

<b>AT&amp;T</b>		
DRAWING TITLE: <b>COMPOUND LAYOUT</b>		
JOB NUMBER 15173-EMP	DRAWING NUMBER A-1	REV 0



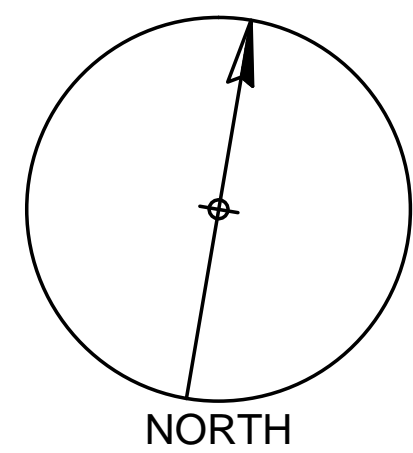


**EXISTING EQUIPMENT LAYOUT**

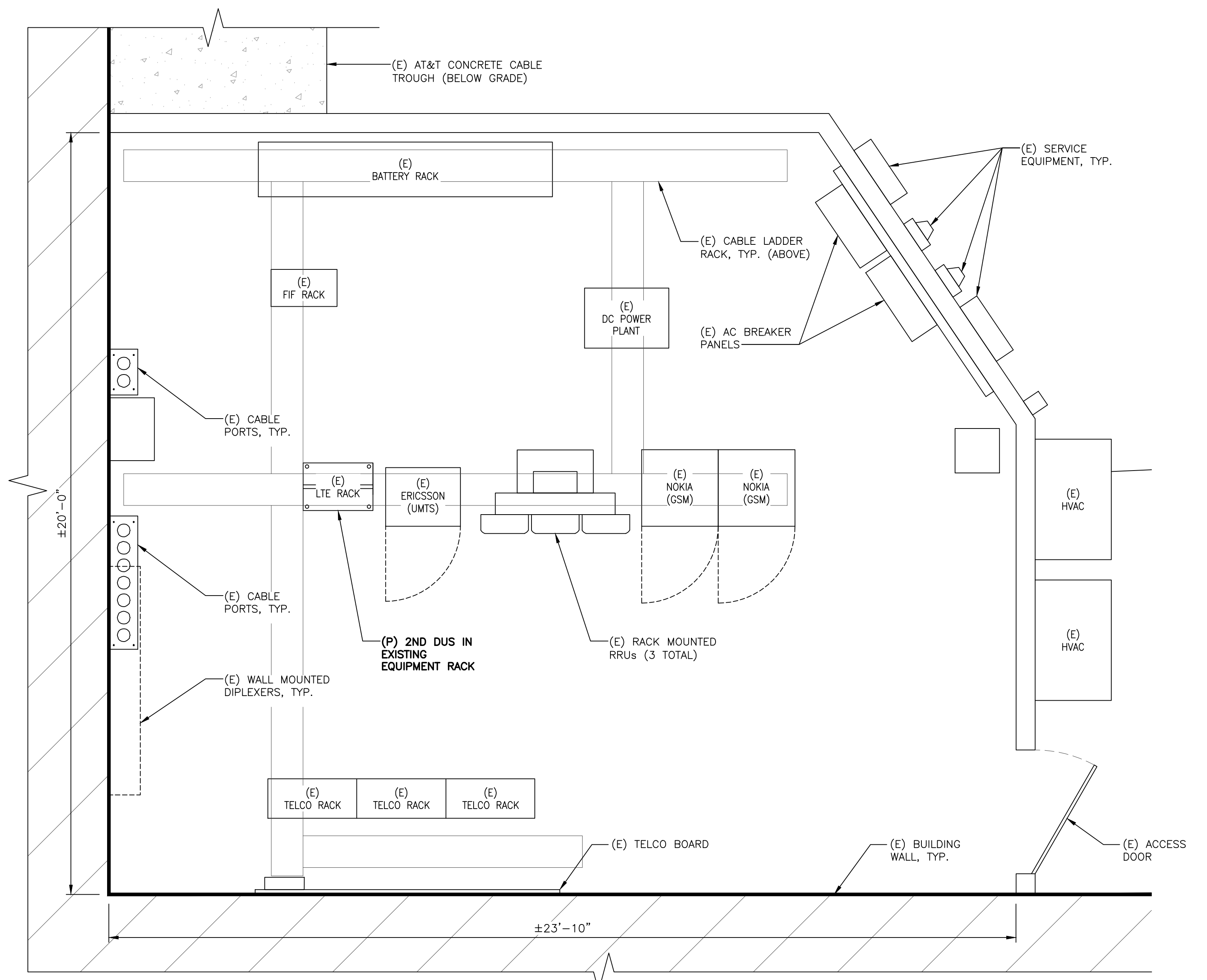
SCALE: 1" = 2'-0"



( IN FEET )  
1/2 Inch = 1 Foot

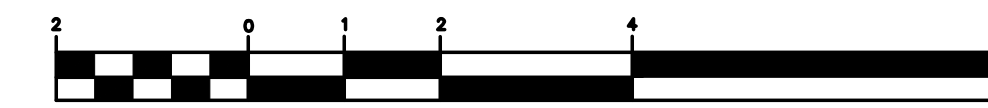


NORTH

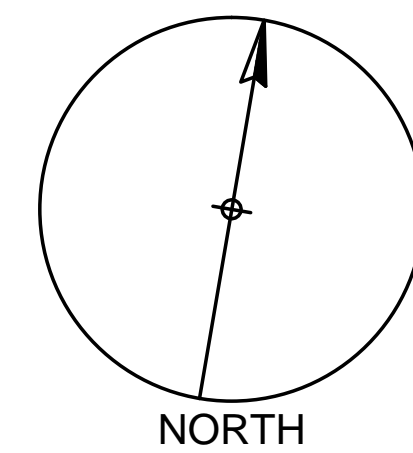


**PROPOSED EQUIPMENT LAYOUT**

SCALE: 1" = 2'-0"



( IN FEET )  
1/2 Inch = 1 Foot



NORTH

**COM-EX**  
Consultants  
115 ROUTE 46  
SUITE E39  
MOUNTAIN LAKES, NJ 07046  
PHONE: 862.209.4300  
FAX: 862.209.4301

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telecom  
16 ESQUIRE ROAD  
BILLERICA, MA 01821

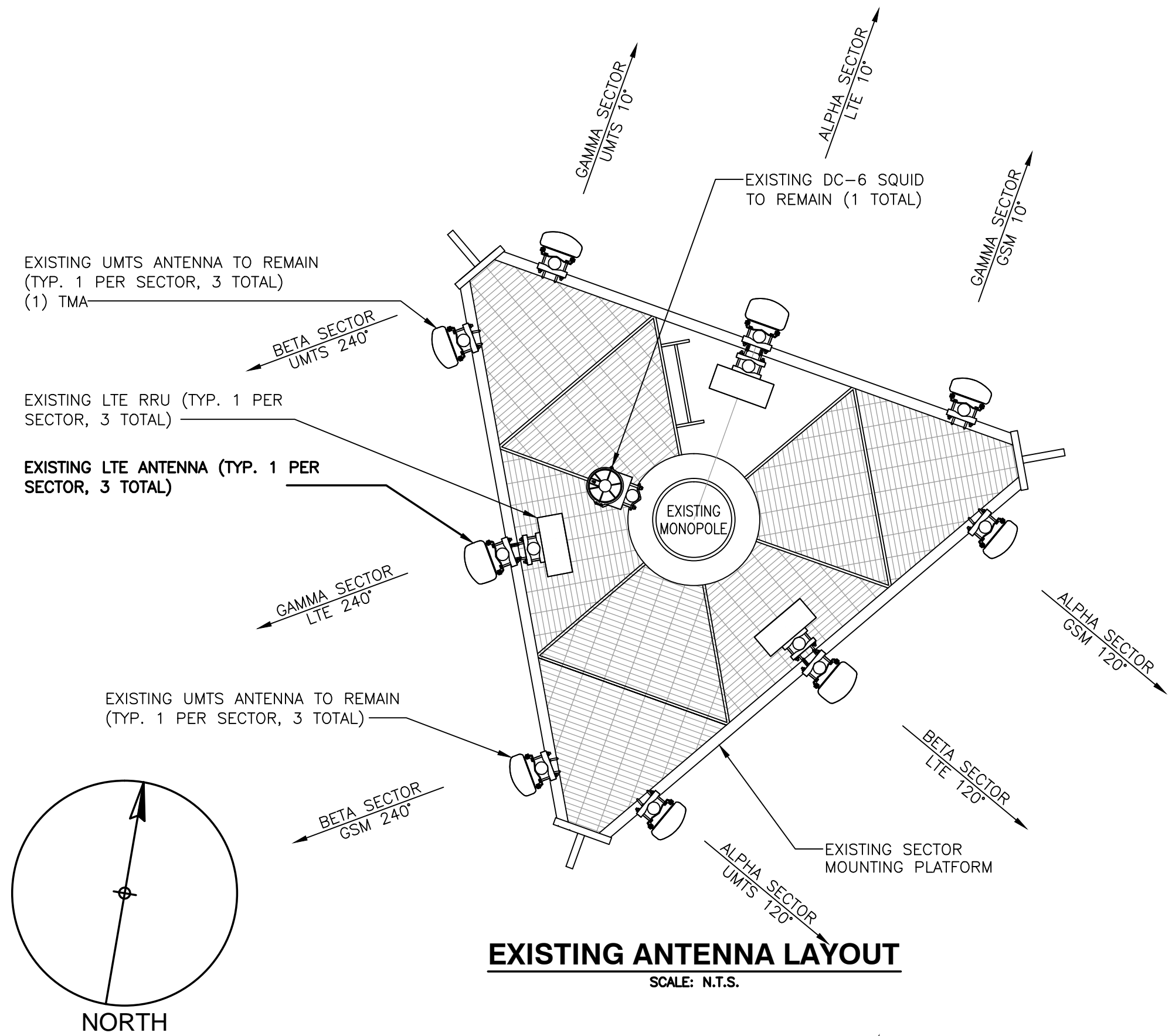
**SITE NUMBER: CT1002**  
**SITE NAME: EAST HARTFORD**  
2 PRESTIGE PARK RD.  
EAST HARTFORD, CT 06108  
HARTFORD COUNTY

**at&t**  
MOBILITY  
550 COCHITUATE ROAD  
FRAMINGHAM, MA 01701

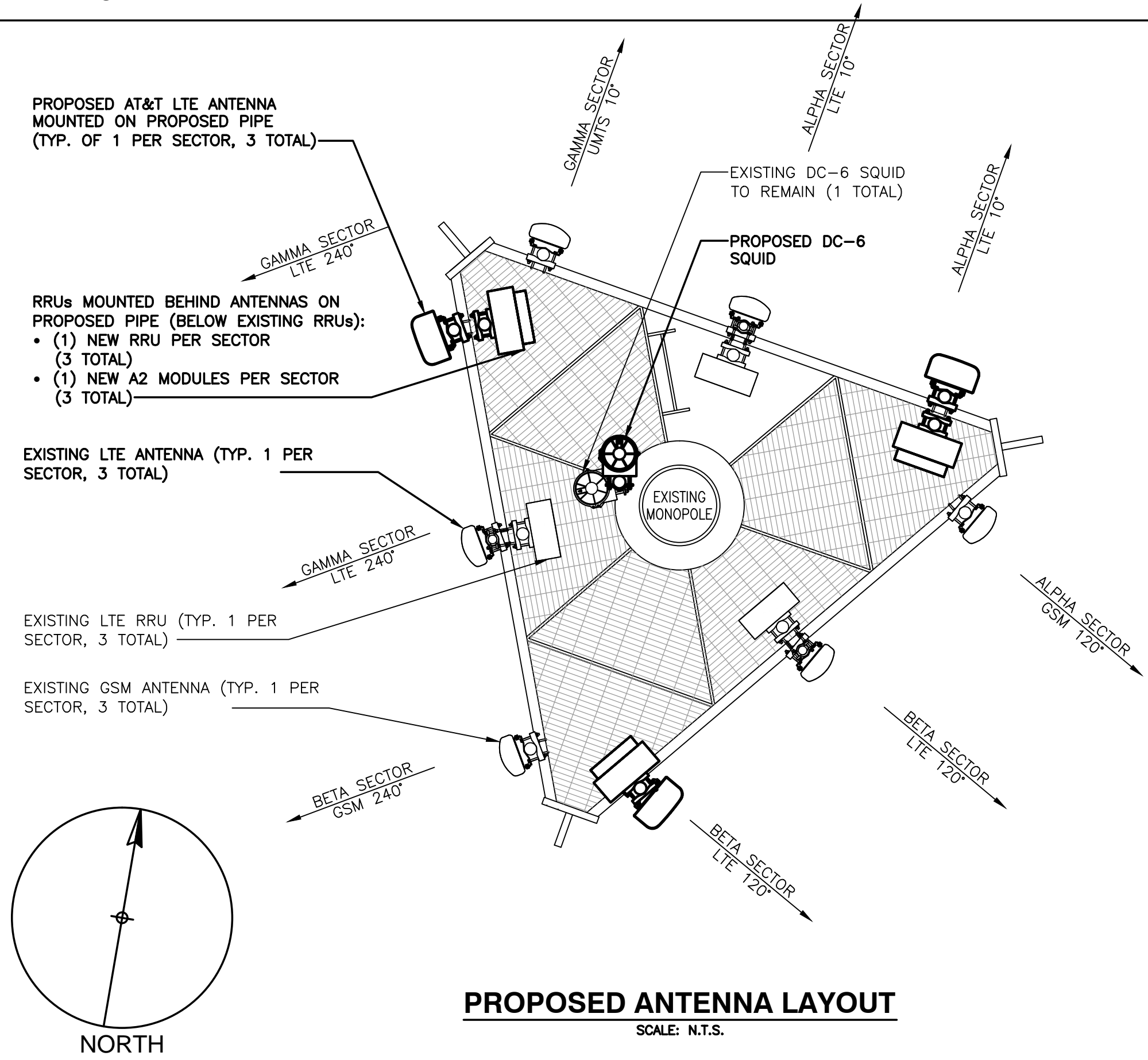
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SCALE: AS SHOWN		DESIGNED BY: CJT	DRAWN BY: CJT		

SEAL  
STATE OF CONNECTICUT  
PROFESSIONAL ENGINEER  
NO. 38643  
DATE 04/11/16

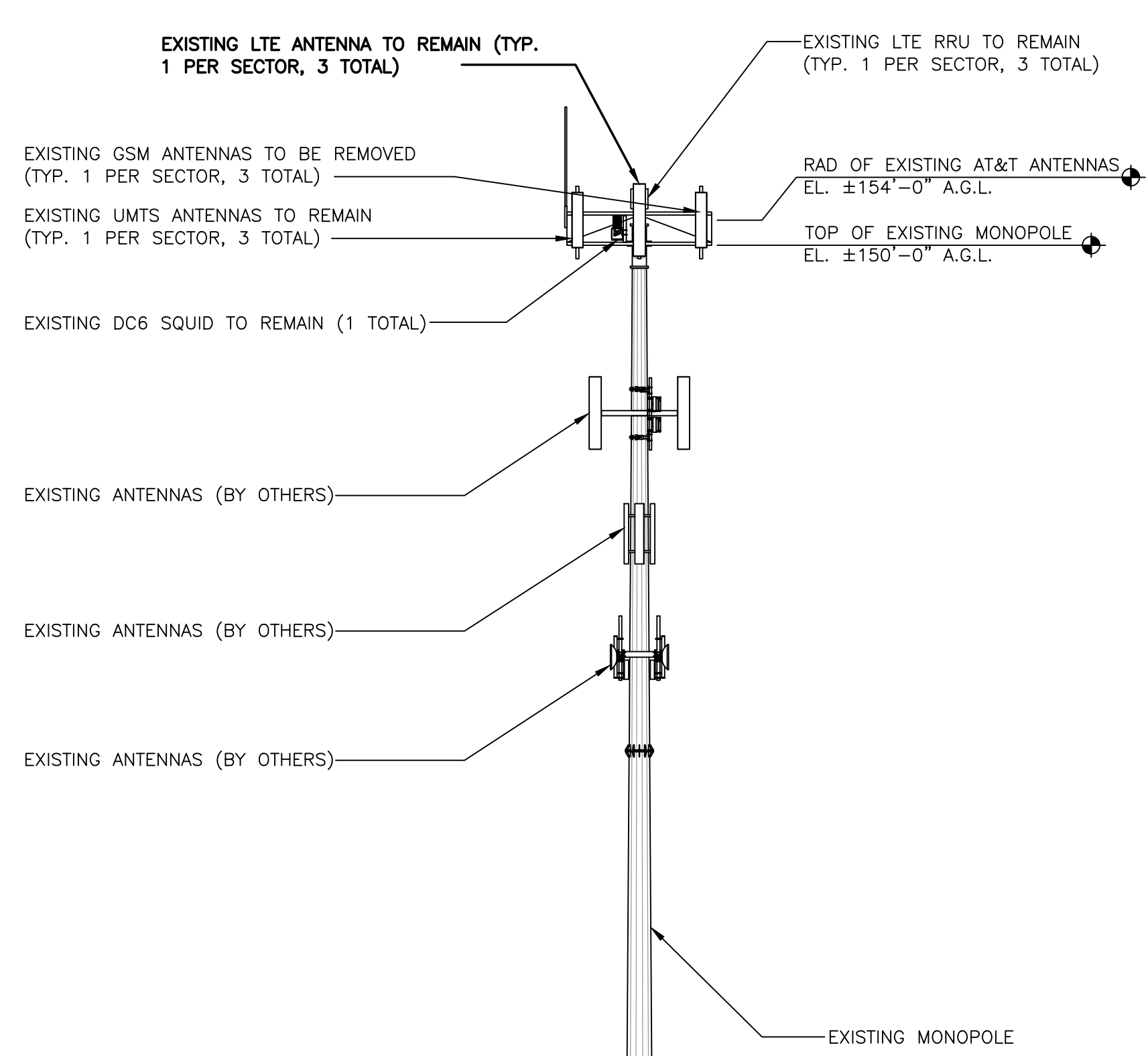
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DRAWING TITLE:		
EQUIPMENT LAYOUTS		
JOB NUMBER	DRAWING NUMBER	REV
15173-EMP	A-2	0



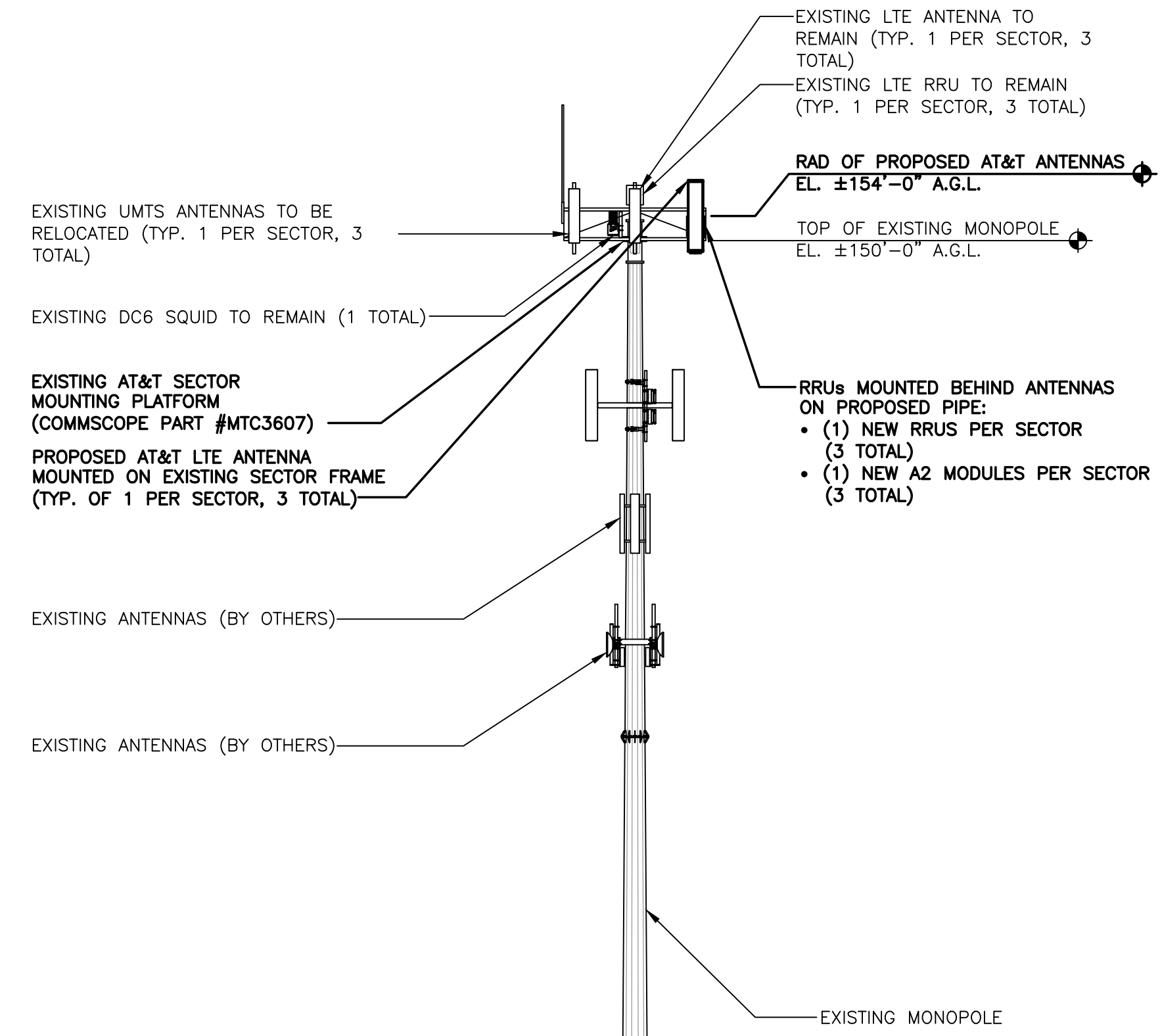
**EXISTING ANTENNA LAYOUT**  
SCALE: N.T.S.



**PROPOSED ANTENNA LAYOUT**  
SCALE: N.T.S.



**EXISTING TOWER ELEVATION**  
SCALE: NTS



**PROPOSED TOWER ELEVATION**  
SCALE: NTS

PROJECT OWNER IS RESPONSIBLE FOR PROVIDING A STRUCTURAL STABILITY ANALYSIS TO DETERMINE THE CAPACITY AND SUITABILITY OF THE EXISTING ANTENNA SUPPORT STRUCTURE TO SAFELY CARRY ALL ADDITIONAL LOADS IMPOSED BY THE PROPOSED EQUIPMENT AS SHOWN HEREIN. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR INCORPORATING ANY REQUIRED STRUCTURAL MODIFICATIONS INTO THEIR SCOPE OF WORK.

**COM-EX**  
Consultants  
115 ROUTE 46  
SUITE E39  
MOUNTAIN LAKES, NJ 07046  
PHONE: 862.209.4300  
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**EMPIRE**  
telecom  
16 ESQUIRE ROAD  
BILLERICA, MA 01821

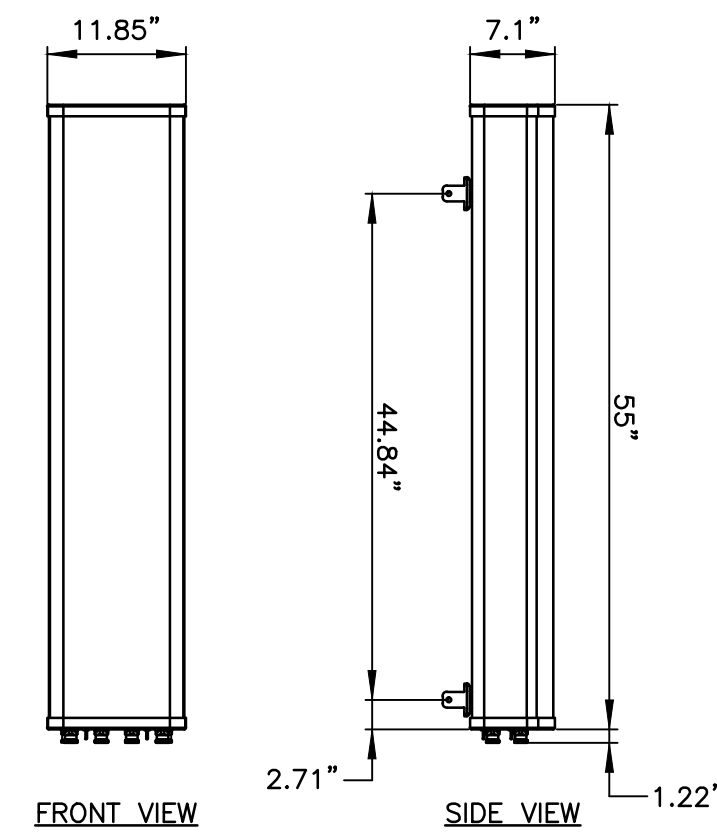
**SITE NUMBER: CT1002**  
**SITE NAME: EAST HARTFORD**  
2 PRESTIGE PARK RD.  
EAST HARTFORD, CT 06108  
HARTFORD COUNTY

**at&t**  
MOBILITY  
550 COCHITUATE ROAD  
FRAMINGHAM, MA 01701

0	04/11/16	ISSUED AS FINAL	PV	NDB	NDB
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: CJT	DRAWN BY: CJT		

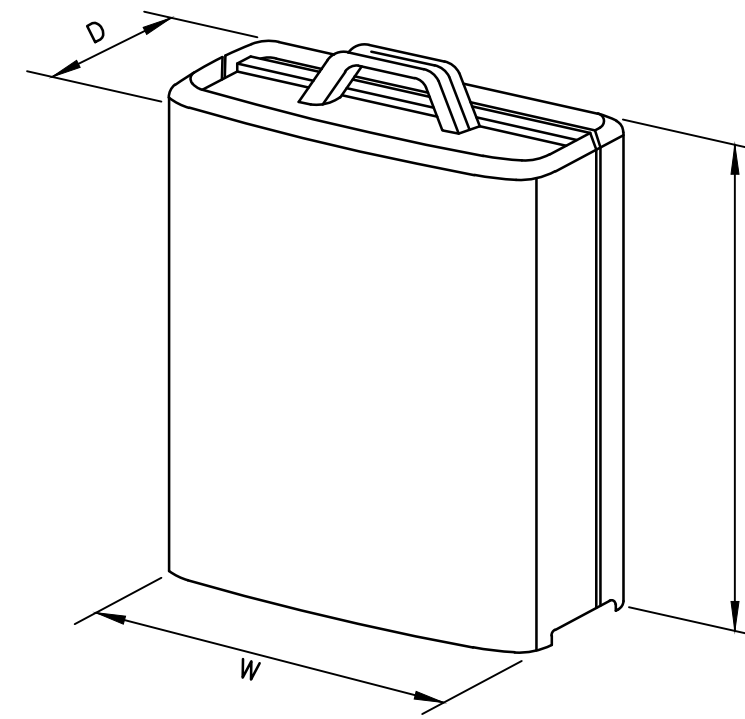
STATE OF CONNECTICUT  
Professional Engineer  
No. 38643  
Date: 04/11/16

**AT&T**  
DRAWING TITLE:  
**ANTENNA LAYOUTS & ELEVATIONS**  
JOB NUMBER: 15173-EMP  
DRAWING NUMBER: A-3  
REV: 0



MANUFACTURER	ANDREW
MODEL	SBNHH-1D65A
WEIGHT	33.5 LBS

**LTE ANTENNA DETAIL**  
SCALE: N.T.S.



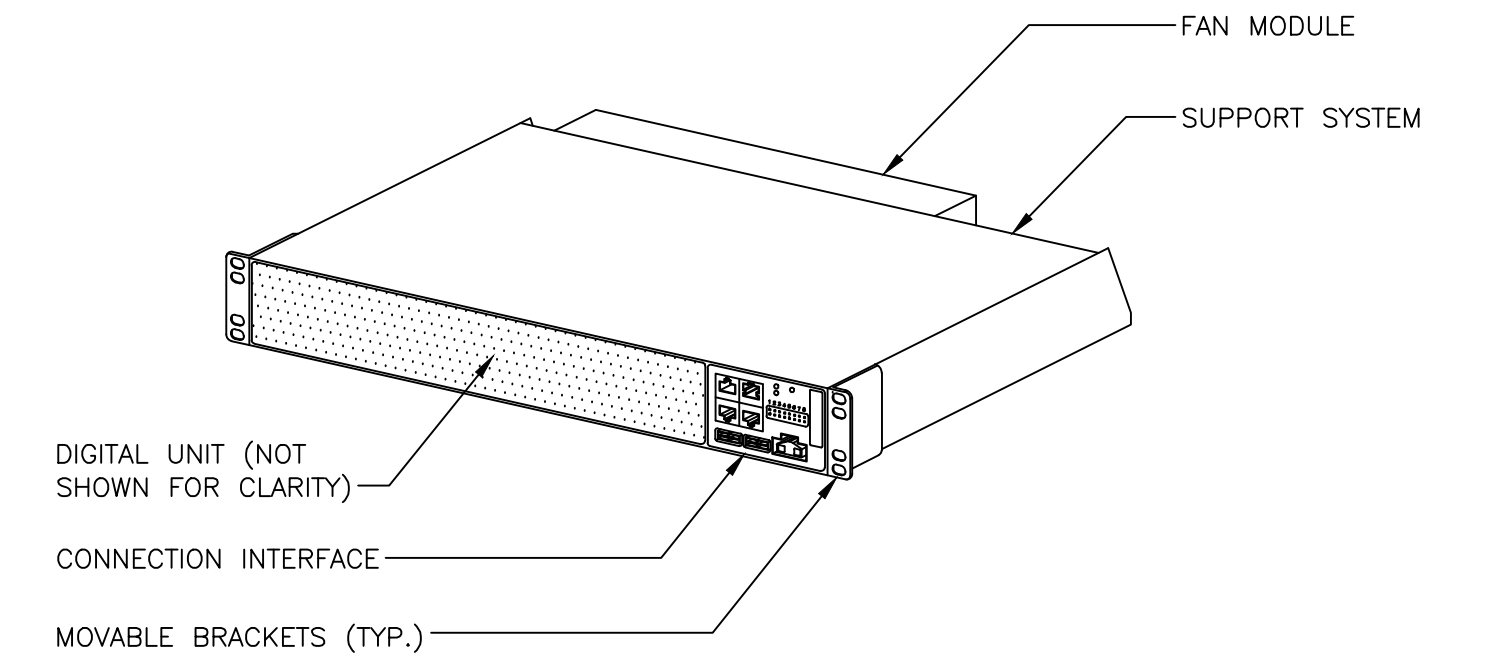
MODEL	L x W x H	WEIGHT
*RRUS-11	19.69" x 16.97" x 7.17"	50.7 LBS
*RRUS-12	20.4" x 18.5" x 7.5"	58 LBS
RRUS-32	29.9" x 13.3" x 9.5"	77 LBS

\*DENOTES EXISTING

**RRUS DETAIL**  
SCALE: N.T.S.

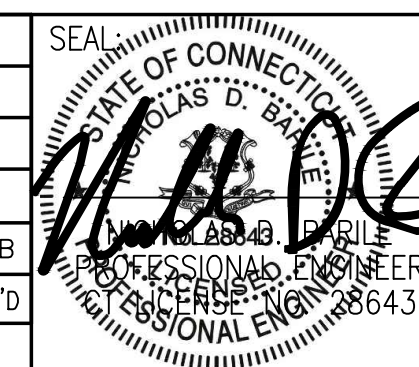
**ERICSSON RBS-6601**

DIMENSIONS, WxDxH: 2.6"H x 13.77"D x 19"W  
WEIGHT: <22 lbs.



**RBS DETAIL**  
SCALE: N.T.S.

0	04/11/16	ISSUED AS FINAL	PV	NDB	NDB
NO.	DATE	REVISIONS	BY	CHK	APP'D
SCALE: AS SHOWN		DESIGNED BY: CJT	DRAWN BY: CJT		



<b>AT&amp;T</b>		
DRAWING TITLE: <b>DETAILS</b>		
JOB NUMBER 15173-EMP	DRAWING NUMBER A-4	REV 0

PROPOSED AT&T LTE/GSM ANTENNA AND RRUS MOUNTED ON EXISTING SECTOR FRAME (TYP. OF 1 PER SECTOR, 3 TOTAL)

EXISTING LTE AND RRUS MOUNTED ON PIPE:  
 • (1) ANTENNA & RRU PER SECTOR (3 TOTAL)

EXISTING DC-6 SQUID MOUNTED TO VERTICAL PIPE TO REMAIN (1 TOTAL)

EXISTING UMS ANTENNA TO REMAIN (TYP. OF 1 PER SECTOR, 3 TOTAL)

EXISTING MONOPOLE

**PROPOSED ANTENNA MOUNTING DETAIL (FRONT VIEW)**

SCALE: N.T.S.

PROPOSED LTE/GSM ANTENNA (TYP. OF 1 ANTENNA PER SECTOR, TOTAL OF 3)

PROPOSED RRUS MOUNTED BEHIND ANTENNAS ON PROPOSED PIPE:  
 • (1) NEW RRU PER SECTOR (3 TOTAL)

EXISTING DC-6 SQUID MOUNTED TO VERTICAL PIPE TO REMAIN (1 TOTAL)

**PROPOSED ANTENNA MOUNTING DETAIL (SIDE VIEW)**

SCALE: N.T.S.

**EXISTING ANTENNA SCHEDULE**

SECTOR	POSITION	MAKE	MODEL	SIZE (INCHES)
ALPHA	A1	POWERWAVE	7770	55"x11"x5"
	A2	-	-	-
	A3	CCI	OPA-65R-LCUU-H6	72"x14.8"x7.4"
	A4	POWERWAVE	7770	55"x11"x5"
BETA	B1	POWERWAVE	7770	55"x11"x5"
	B2	-	-	-
	B3	CCI	OPA-65R-LCUU-H6	72"x14.8"x7.4"
	B4	POWERWAVE	7770	55"x11"x5"
GAMMA	G1	POWERWAVE	7770	55"x11"x5"
	G2	-	-	-
	G3	CCI	OPA-65R-LCUU-H6	72"x14.8"x7.4"
	G4	POWERWAVE	7770	55"x11"x5"

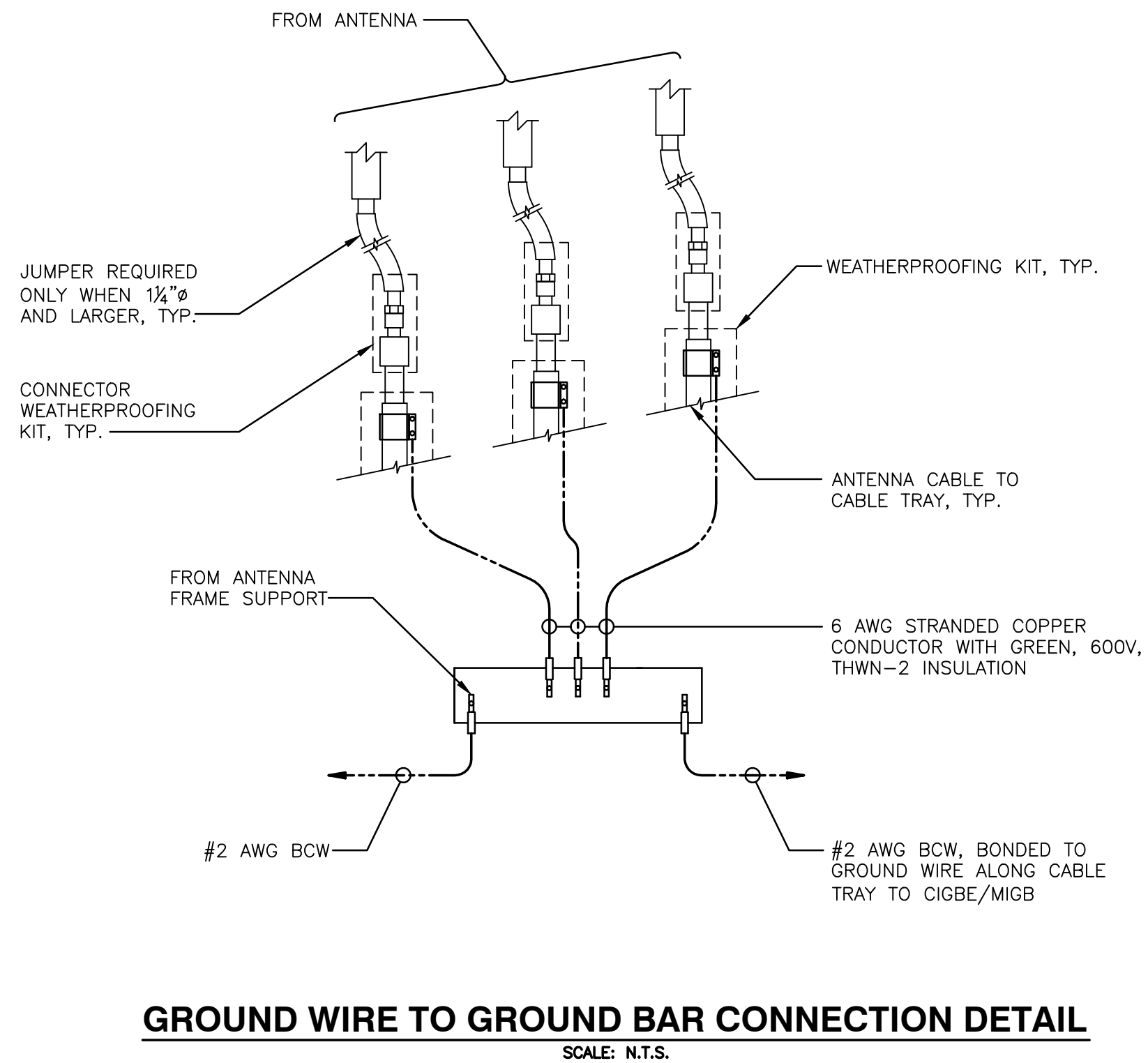
**FINAL ANTENNA SCHEDULE**

SECTOR	POSITION	MAKE	MODEL	SIZE (INCHES)
ALPHA	A1	POWERWAVE	7770	55"x11"x5"
	A2	-	-	-
	A3	CCI	OPA-65R-LCUU-H6	72"x14.8"x7.4"
	A4	ANDREW	SBNHH-1D65A	55"x11.85"x7.1"
BETA	B1	POWERWAVE	7770	55"x11"x5"
	B2	-	-	-
	B3	CCI	OPA-65R-LCUU-H6	72"x14.8"x7.4"
	B4	ANDREW	SBNHH-1D65A	55"x11.85"x7.1"
GAMMA	G1	POWERWAVE	7770	55"x11"x5"
	G2	-	-	-
	G3	CCI	OPA-65R-LCUU-H6	72"x14.8"x7.4"
	G4	ANDREW	SBNHH-1D65A	55"x11.85"x7.1"

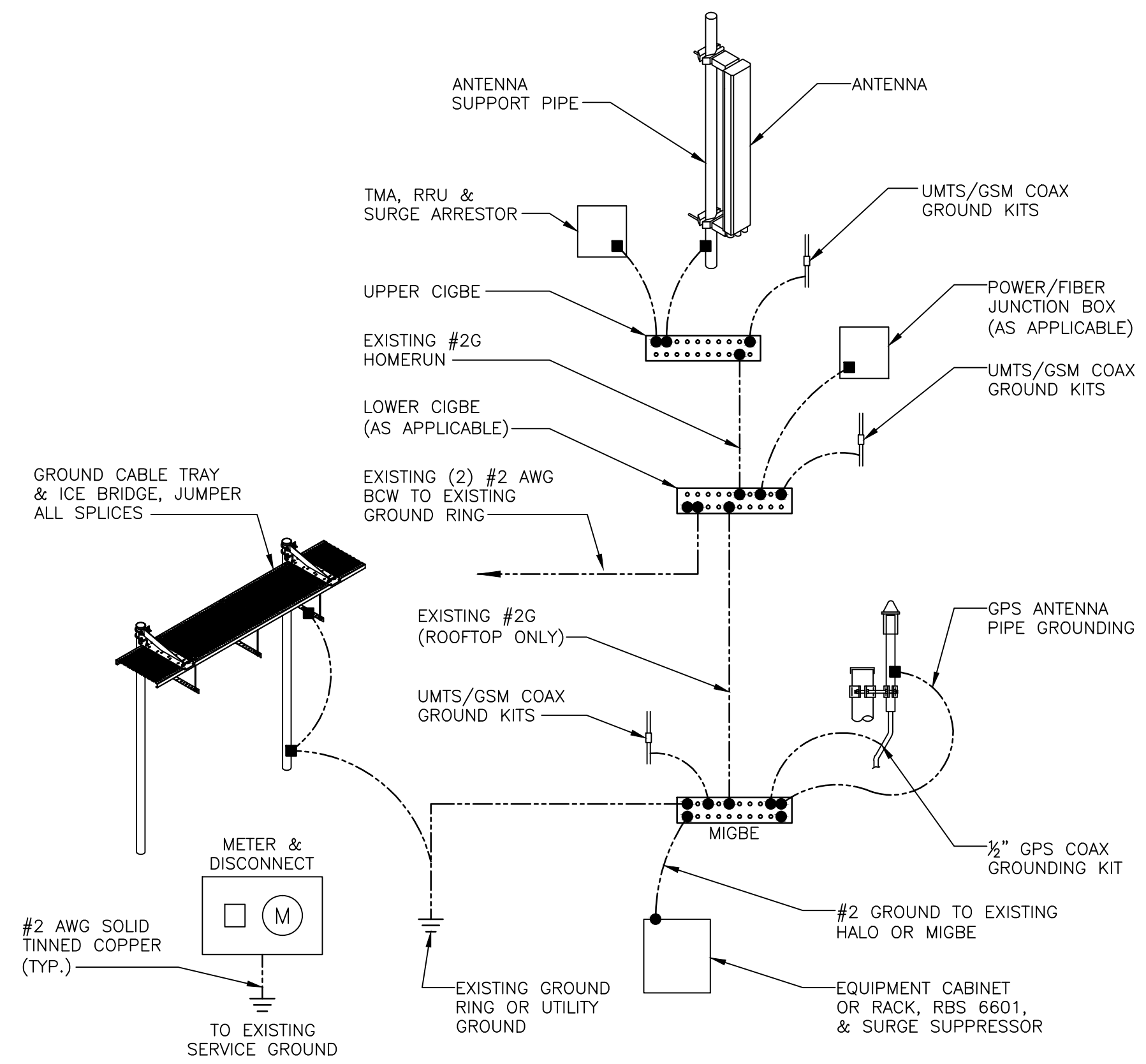
**PROPOSED RRU SCHEDULE**

SECTOR	MAKE	MODEL	SIZE (INCHES)	ADDITIONAL COMPONENT	SIZE (INCHES)
ALPHA	ERICSSON	RRUS-12 (EXISTING)	20.4"x18.5"x7.5"	ERICSSON A2 MODULE	16.4"x15.2"x3.4"
	ERICSSON	RRUS-11 (EXISTING)	19.7"x16.9"x7.2"		
	ERICSSON	RRUS-32	29.9"x13.3"x9.5"		
BETA	ERICSSON	RRUS-12 (EXISTING)	20.4"x18.5"x7.5"	ERICSSON A2 MODULE	16.4"x15.2"x3.4"
	ERICSSON	RRUS-11 (EXISTING)	19.7"x16.9"x7.2"		
	ERICSSON	RRUS-32	29.9"x13.3"x9.5"		
GAMMA	ERICSSON	RRUS-12 (EXISTING)	20.4"x18.5"x7.5"	ERICSSON A2 MODULE	16.4"x15.2"x3.4"
	ERICSSON	RRUS-11 (EXISTING)	19.7"x16.9"x7.2"		
	ERICSSON	RRUS-32	29.9"x13.3"x9.5"		

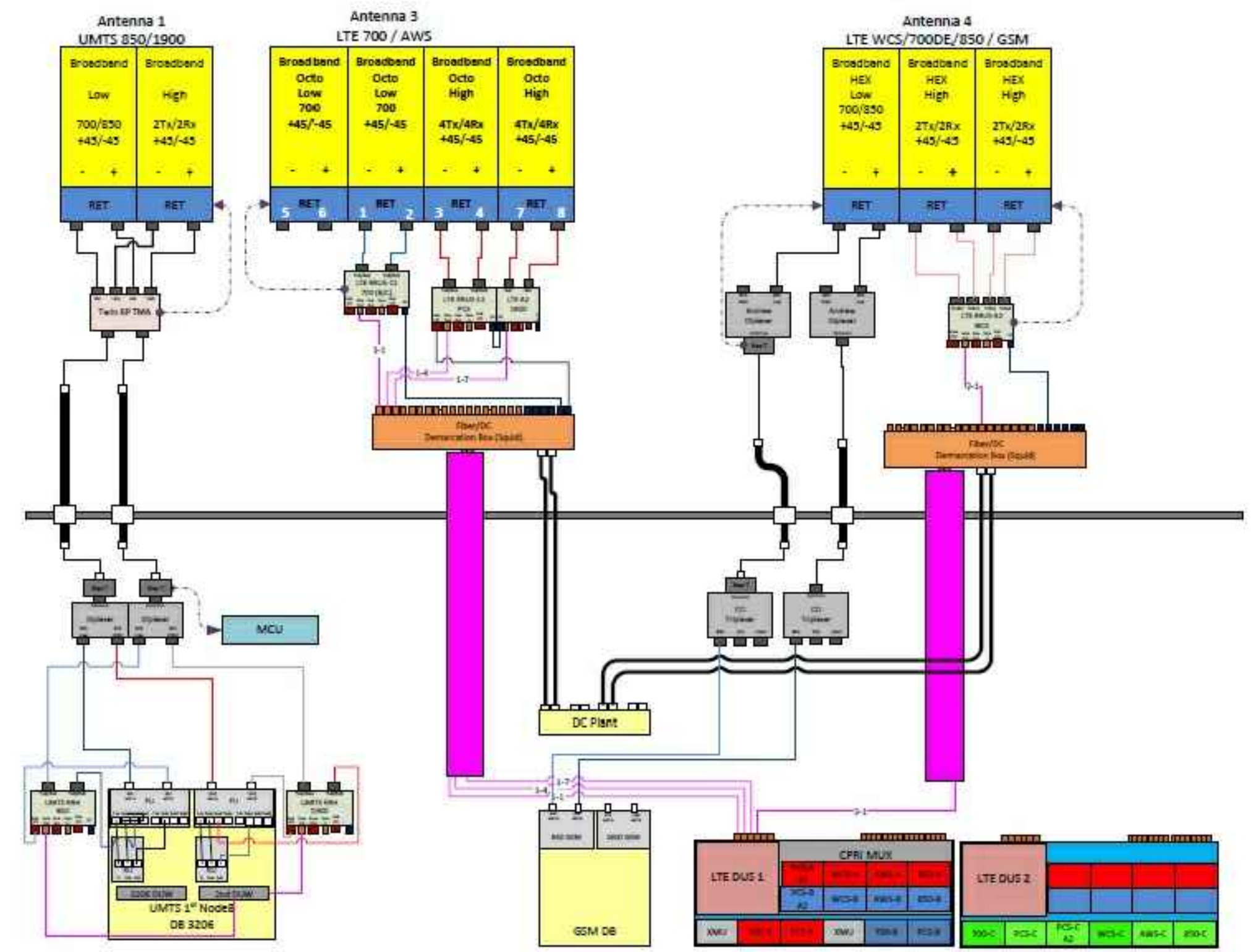
PROJECT OWNER IS RESPONSIBLE FOR PROVIDING A STRUCTURAL STABILITY ANALYSIS TO DETERMINE THE CAPACITY AND SUITABILITY OF THE EXISTING ANTENNA SUPPORT STRUCTURE TO SAFELY CARRY ALL ADDITIONAL LOADS IMPOSED BY THE PROPOSED EQUIPMENT AS SHOWN HEREIN. GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR INCORPORATING ANY REQUIRED STRUCTURAL MODIFICATIONS INTO THEIR SCOPE OF WORK.



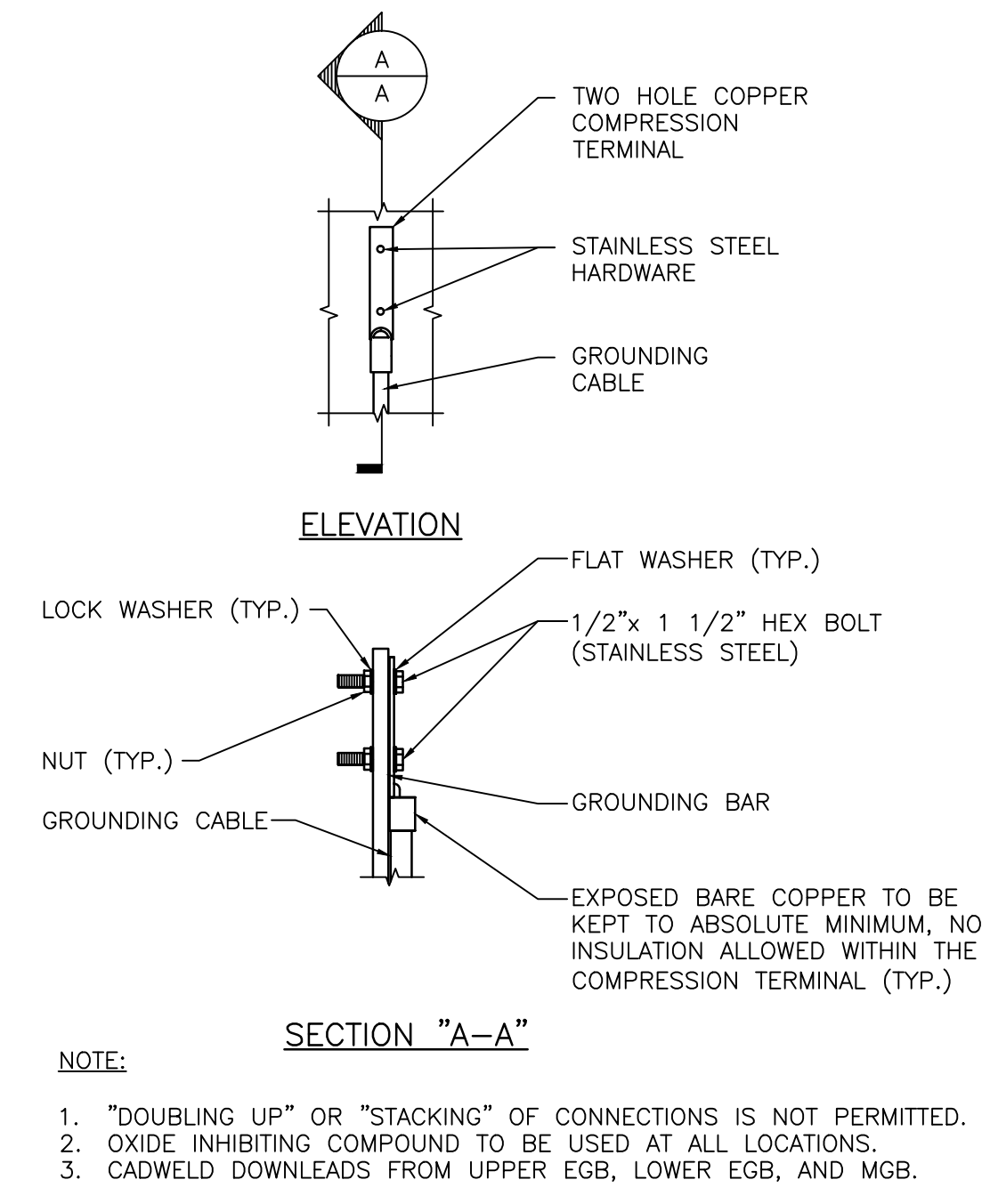
**GROUND WIRE TO GROUND BAR CONNECTION DETAIL**  
SCALE: N.T.S.



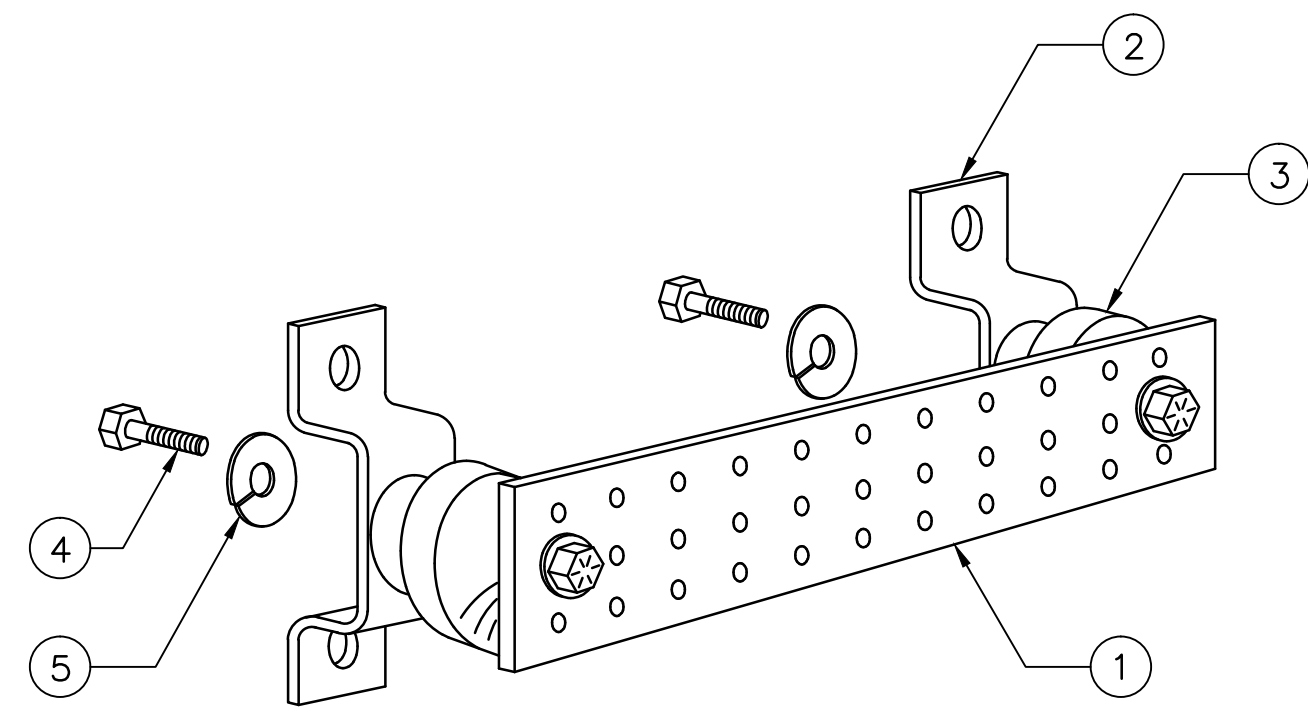
**GROUNDING RISER DIAGRAM**  
SCALE: N.T.S.



**TYPICAL PLUMBING DIAGRAM (PER SECTOR)**  
SCALE: N.T.S.



**TYPICAL GROUND BAR CONNECTION DETAIL**  
SCALE: N.T.S.



ITEM NO.	QTY.	DESCRIPTION
1	1	SOLID GROUND BAR (20"x 4"x 1/4")
2	2	WALL MOUNTING BRACKET
3	2	INSULATORS
4	4	5/8"-11x1" H.H.C.S.
5	4	5/8" LOCK WASHER

**GROUND BAR DETAIL**  
SCALE: N.T.S.

NOTES:

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

**SECTION "P" - SURGE PRODUCERS**

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

**SECTION "A" - SURGE ABSORBERS**

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



**AMERICAN TOWER®**  
CORPORATION

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## Structural Analysis Report

**Structure** : 150 ft Monopole  
**ATC Site Name** : E H F R - Prestige Park, CT  
**ATC Site Number** : 302473  
**Engineering Number** : 64647527  
**Proposed Carrier** : AT&T Mobility  
**Carrier Site Name** : East Hartford  
**Carrier Site Number** : CT1002/FA#10034965  
**Site Location** : 310 Prestige Park Rd.  
East Hartford, CT 06108-1206  
41.788333,-72.600556  
**County** : Hartford  
**Date** : May 16, 2016  
**Max Usage** : 99%  
**Result** : Pass - Pending Modifications\*

Reviewed by:  
Scott Wirgau, PE  
Structural Team Leader

Prepared By:  
John D. Bigham, E.I.  
Structural Engineer II



May 16 2016 5:05 PM

\*Modifications noted are in relation to a project by Verizon on this monopole, COA: PEC.0001553 that shall be completed prior to AT&T's installation.



**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 150 ft monopole to reflect the change in loading by AT&T Mobility.

## Supporting Documents

<b>Tower Drawings</b>	SpectraSite Drawing #D1, dated June 12, 20032
<b>Foundation Drawing</b>	Southern New England Telephone Job #38904, dated April 20, 1983
<b>Geotechnical Report</b>	GeoTechnologies Inc. Project #1-02-1122-EA, dated September 6, 2002
<b>Modifications</b>	ATC Project #51574133, dated January 17, 2013 ATC Project #63706335, dated October 19, 2015 [Pending]

## 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.

<b>Basic Wind Speed:</b>	95 mph (3-Second Gust)
<b>Basic Wind Speed w/ Ice:</b>	50 mph (3-Second Gust) w/ 1" radial ice concurrent
<b>Code:</b>	ANSI/TIA-222-G / 2003 IBC w/ 2005 CT Supplement & 2009 CT Amendment
<b>Structure Class:</b>	II
<b>Exposure Category:</b>	B
<b>Topographic Category:</b>	1
<b>Crest Height:</b>	0 ft
<b>Spectral Response:</b>	$S_s = 0.18, S_1 = 0.06$
<b>Site Class:</b>	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 once the pending modifications have been installed. Failure to install the modifications listed will void the results of this analysis.

If you have any questions or require additional information, please contact American Tower via email at [Engineering@americantower.com](mailto: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**

Elevation <sup>1</sup> (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	153.0	6	Powerwave LGP21401	Platform w/ Handrails	(12) 7/8" Coax (2) 0.78" 8 AWG 6 (1) 3/8" Coax (1) 3" Conduit	AT&T Mobility
		1	Raycap DC6-48-60-18-8F			
		3	Ericsson RRUS 11 (Band 12) (55 lb)			
		3	Ericsson RRUS 12 w/ RRUS A2			
		3	Powerwave 7770.00 (27 lbs)			
		3	CCI OPA-65R-LCUU-H6			
138.0	134.0	3	RFS IBC1900BB-1	T-Arms	(4) 1 1/4" Hybriflex	Sprint Nextel
		3	RFS IBC1900HG-2A			
		6	Alcatel-Lucent 4X40W RRH			
		3	Alcatel-Lucent 800MHz RRH w/ Notch Filter			
		3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
		3	RFS APXVTM14-C-I20			
		2	RFS APXV9ERR18-C-A20			
1	RFS APXVSP18-C-A20					
128.0	129.0	3	Ericsson AIR 21, 1.3M, B2A B4P (91.5 lbs)	Collar	(6) 1 5/8" Coax (1) 1 5/8" Hybriflex	Metro PCS
		3	Ericsson AIR 21, 1.3M, B4A B2P (90.4 lbs)			
118.0	117.0	3	NextNet BTS-2500	Collar Mount	(6) 5/16" Coax (3) 1/2" Coax (1) 2" Conduit	Clearwire
		3	Argus LLPX310R			
	115.0	3	DragonWave Horizon Compact			
		1	DragonWave A-ANT-23G-1-C			
		2	DragonWave A-ANT-23G-2-C			
114.0	1	24" x 24" Junction Box				
98.0	98.0	3	Alcatel-Lucent RRH2X60-1900A-4R	Low Profile Platform	(2) 1.58" Hybrid	Verizon
		3	Alcatel-Lucent RRH2x60 700			
		3	Alcatel-Lucent RRH2X60-AWS Band 4			
		2	RFS DB-T1-6Z-8AB-0Z			
		12	Andrew SBNHH-1D65B			
33.0	33.0	1	GPS	Stand-off	(1) 1/2" Coax	AT&T Mobility
28.0	28.0	1	GPS	Stand-off	(1) 1/2" Coax	Sprint Nextel

**Equipment to be Removed**

Elevation <sup>1</sup> (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
153.0	153.0	3	Powerwave 7770.00	-	(12) 7/8" Coax (1) 3/8" Coax (1) 0.39" Cable	AT&T Mobility
		6	Kathrein 860 10025			
		6	Powerwave LGP21401			
		3	Ericsson RRUS 11 (Band 12) (55 lb)			

**Proposed Equipment**



Elevation <sup>1</sup> (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
150.0	153.0	6	Powerwave 7020.00 Dual Band RET	Platform w/ Handrails	(2) 0.78" 8 AWG 6 (2) 0.39" Fiber Trunk	AT&T Mobility
		1	Raycap DC6-48-60-18-8F			
		3	Ericsson RRUS-32			
		3	Andrew SBNHH-1D65A			

<sup>1</sup>Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Install proposed coax inside the pole shaft.

**Structure Usages**

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	86%	Pass
Shaft	99%	Pass
Base Plate	55%	Pass
Flanges	99%	Pass
Reinforcement	85%	Pass

**Foundations**

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	2,664.5	88%
Axial (Kips)	79.9	83%
Shear (Kips)	26.3	24%

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

**Deflection and Sway\***

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
150.0	Powerwave 7020.00 Dual Band RET	AT&T Mobility	2.872	2.259
	Raycap DC6-48-60-18-8F			
	Ericsson RRUS-32			
	Andrew SBNHH-1D65A			
118.0	DragonWave A-ANT-23G-1-C	Clearwire Corporatio	1.715	1.738
	DragonWave A-ANT-23G-2-C			

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



## **Standard Conditions**

All engineering services are performed on the basis that the information used is current and correct. This information may consist of, but is not necessary limited, to:

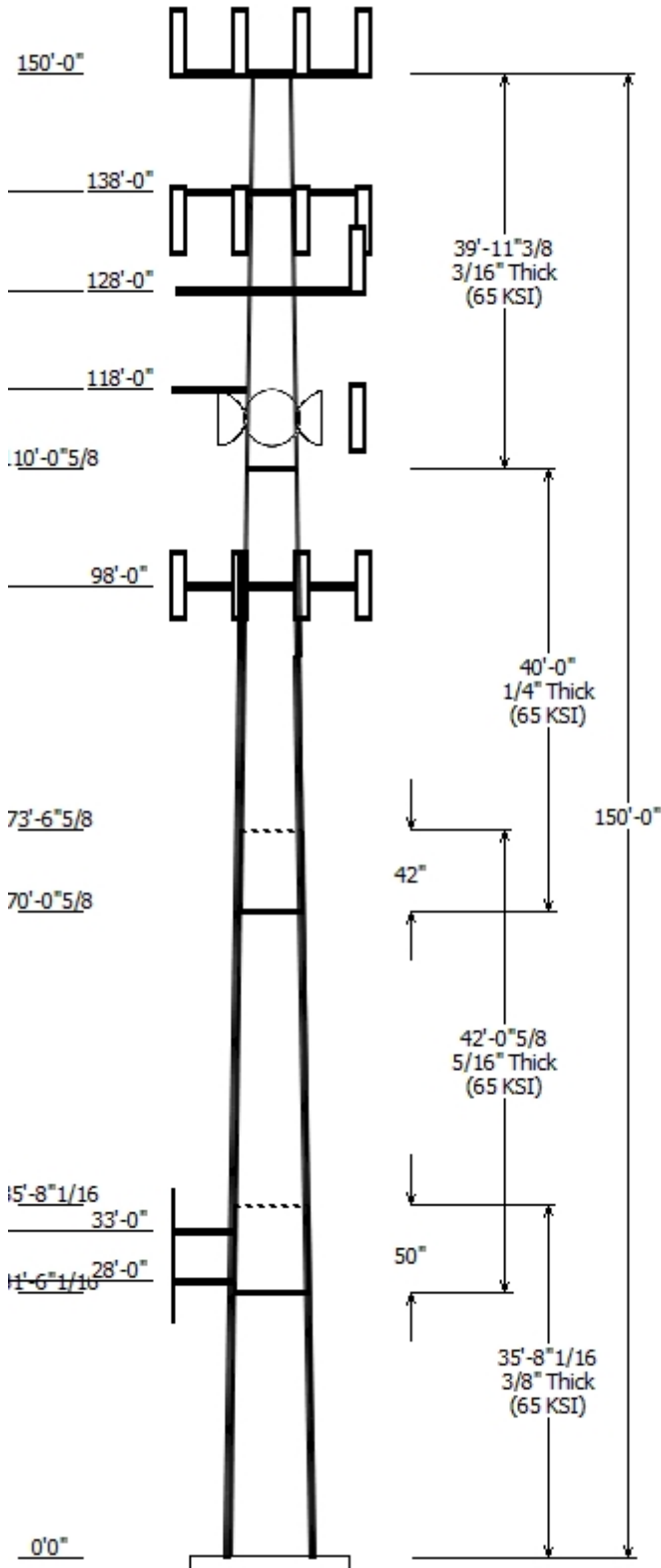
- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.
- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

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. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

Unless explicitly agreed by both the client and American Tower Corporation, all services will be performed in accordance with the current revision of ANSI/TIA -222. The design basic wind speed will be determined based on the minimum basic wind speed as prescribed in ANSI/TIA-222. Although every effort is taken to ensure that the loading considered is adequate to meet the requirements of all applicable regulatory entities, we can provide no assurance to meet any other local and state codes or requirements. If wind and ice loads or other relevant parameters are to be different from the minimum values recommended by the codes, the client shall specify the exact requirement.

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 we supply.

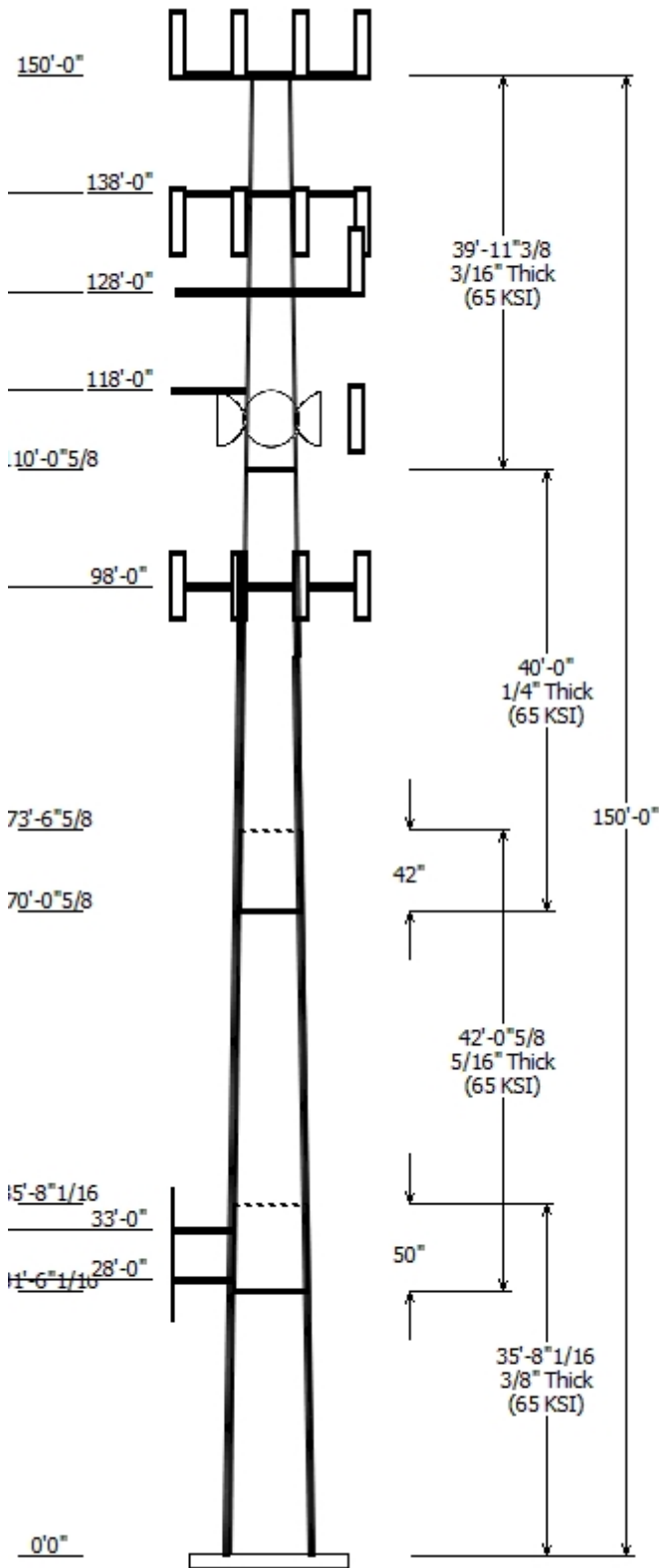
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Job Information	
Pole :	302473
Code :	TIA/EIA-222-F
Description :	150' ITT Meyer Type "B" Monopole
Client :	AT&T MOBILITY
Location :	E H F R - Prestige Park, CT
Shape :	12 Sides
Height :	150.00 (ft)
Base Elev (ft):	0.00
Taper:	0.15656(in/ft)

Sections Properties								
Shaft Section	Length (ft)	Diameter (in)		Thick (in)	Joint Type	Overlap		Steel Grade (ksi)
		Across Top	Flats Bottom			Length (in)	Taper (in/ft)	
1	35.670	31.77	37.36	0.375		0.000	0.156600	65
2	42.050	26.46	33.05	0.313	Slip Joint	50.000	0.156600	65
3	40.000	21.25	27.51	0.250	Slip Joint	42.000	0.156600	65
4	39.947	15.00	21.25	0.188	Butt Joint	0.000	0.156600	65

Discrete Appurtenance				
Attach Elev (ft)	Force Elev (ft)	Qty	Description	
150.000	153.000	6	Powerwave 7020.00 Dual Band	
150.000	153.000	3	Ericsson RRUS 12 w/ RRUS A2	
150.000	153.000	1	Raycap DC6-48-60-18-8F	
150.000	153.000	3	Powerwave Allgon 7770.00 (27	
150.000	150.000	3	Round Side Arm	
150.000	153.000	3	CCI OPA-65R-LCUU-H6	
150.000	153.000	3	Ericsson RRUS-32	
150.000	153.000	1	Raycap DC6-48-60-18-8F	
150.000	150.000	1	Flat Platform w/ Handrails	
150.000	153.000	3	Andrew SBNHH-1D65A	
150.000	153.000	3	Ericsson RRUS 11 (Band 12) (55	
150.000	153.000	6	Powerwave LGP21401	
138.000	134.000	3	Alcatel-Lucent TD-RRHx20-25	
138.000	134.000	3	RFS APXVTM14-C-I20	
138.000	138.000	3	Round T-Arm	
138.000	134.000	3	RFS IBC1900HG-2A	
138.000	134.000	3	RFS IBC1900BB-1	
138.000	134.000	1	RFS APXVSP18-C-A20	
138.000	134.000	2	RFS APXV9ERR18-C-A20	
138.000	134.000	3	Alcatel-Lucent 800 MHz RRH	
138.000	134.000	6	Alcatel-Lucent 4X40W RRH	
128.000	128.000	1	Collar	
128.000	129.000	3	Ericsson AIR 21, 1.3M, B2A B4P	
128.000	129.000	3	Ericsson AIR 21, 1.3M, B4A B2P	
118.000	114.000	1	24" x 24" Junction Box	
118.000	117.000	3	NextNet BTS-2500	
118.000	115.000	3	DragonWave Horizon Compact	
118.000	115.000	2	DragonWave A-ANT-23G-2-C	
118.000	115.000	1	DragonWave A-ANT-23G-1-C	
118.000	118.000	1	Collar Mount	
118.000	117.000	3	Argus LLPX310R	
98.000	98.000	12	Andrew SBNHH-1D65B	
98.000	98.000	2	RFS DB-T1-6Z-8AB-0Z	
98.000	98.000	3	Alcatel-Lucent RRH2X60-AWS	
98.000	98.000	3	Alcatel-Lucent RRH2x60 700	
98.000	98.000	3	Alcatel-Lucent RRH2X60-1900A-	
98.000	98.000	1	Flat Low Profile Platform	
33.000	33.000	1	Stand-off	
33.000	33.000	1	GPS	
28.000	28.000	1	Stand-off	
28.000	28.000	1	GPS	



Linear Appurtenance			
Elev (ft)		Description	Exposed To Wind
From	To		
4.000	118.0	1/2" Coax	No
4.000	118.0	2" Conduit	No
4.000	118.0	5/16" Coax	No
4.000	128.0	1 5/8" Coax	Yes
4.000	128.0	1 5/8" Hybriflex	Yes
4.000	138.0	1 1/4" Hybriflex	No
4.000	150.0	0.39" Fiber Trunk	No
4.000	150.0	0.78" 8 AWG 6	No
4.000	150.0	0.78" 8 AWG 6	No
4.000	150.0	3" Conduit	No
4.000	150.0	3/8" Coax	No
4.000	150.0	7/8" Coax	No
4.000	28.000	1/2" Coax	Yes
4.000	33.000	1/2" Coax	Yes
4.000	98.000	1.58" Hybrid	No
0.000	106.1	#20 Dywidag Bars	Yes

Load Cases	
1.2D + 1.6W	95 mph with No Ice
0.9D + 1.6W	95 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Lateral
(0.9 - 0.2Sds) * DL + E	Seismic (Reduced DL) Equivalent Modal
1.0D + 1.0W	Serviceability 60 mph

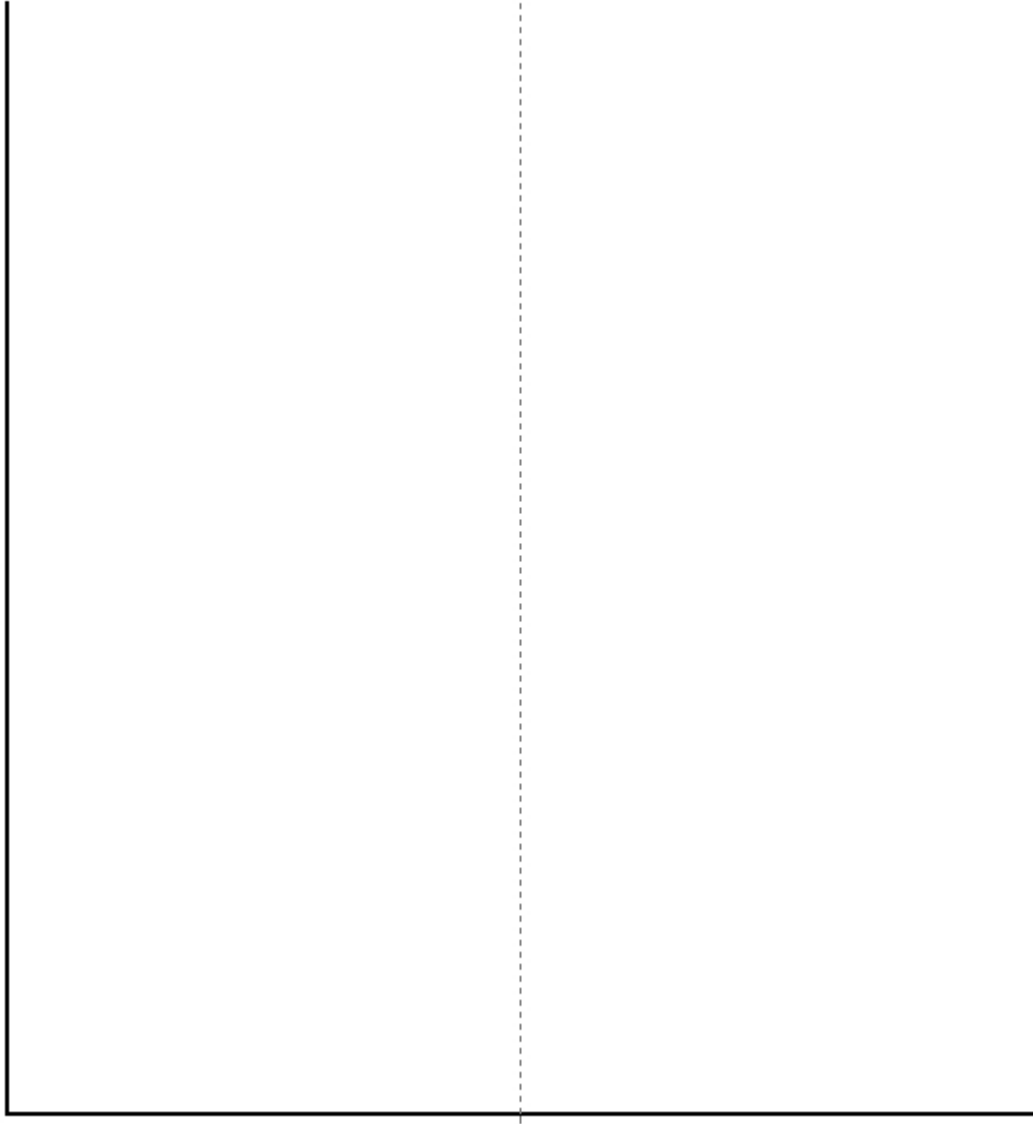
Reactions			
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	2664.54	26.32	41.54
0.9D + 1.6W	2611.32	26.20	31.14
1.2D + 1.0Di + 1.0Wi	776.54	6.76	79.91
(1.2 + 0.2Sds) * DL + E ELFM	173.42	1.36	41.55
(1.2 + 0.2Sds) * DL + E EMAM	270.10	2.11	41.55
(0.9 - 0.2Sds) * DL + E ELFM	169.30	1.36	28.92
(0.9 - 0.2Sds) * DL + E EMAM	263.17	2.11	28.92
1.0D + 1.0W	665.11	6.66	34.67

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	118.00	20.580	1.738
1.0D + 1.0W	118.00	20.580	1.738

**Load Case : 1.2D + 1.6W**  
**Max Ratio 98.93% at 110.1ft**

**Elevation (ft)**

0.00  
**Stresses (ksi)**



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Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

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Customer: AT&T MOBILITY

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### Analysis Parameters

Location:	Hartford County, CT		
Code:	TIA/EIA-222-F	Height (ft):	150
Shape:	12 Sides	Base Diameter (in):	37.36
Pole Type:	Taper	Top Diameter (in):	15.00
Pole Manufacturer:	ITT Meyer	Taper (in/ft) :	0.157

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### Load Cases

1.2D + 1.6W	95 mph with No Ice
0.9D + 1.6W	95 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
(1.2 + 0.2Sds) * DL + E E LFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E E MAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E E LFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2Sds) * DL + E E MAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

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Customer: AT&T MOBILITY

**Shaft Section Properties**

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom						Top						
							Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Taper (in/ft)
1-12	35.670	0.3750	65		0.00	5,011	37.36	0.00	44.66	7797.4	24.55	99.63	31.77	35.67	37.92	4771.7	20.56	84.73	0.156567
2-12	42.050	0.3125	65	Slip	50.00	4,240	33.05	31.50	32.94	4507.5	26.20	105.77	26.46	73.55	26.32	2298.4	20.55	84.70	0.156567
3-12	40.000	0.2500	65	Slip	42.00	2,645	27.51	70.05	21.95	2083.0	27.35	110.07	21.25	110.05	16.91	952.2	20.64	85.02	0.156567
4-12	39.947	0.1875	65	Butt	0.00	1,472	21.25	110.05	12.72	720.5	28.23	113.36	15.00	150.00	8.94	250.5	19.29	80.00	0.156567
Shaft Weight						13,368													

**Discrete Appurtenance Properties**

Attach Elev (ft)	Description	Qty	No Ice			Ice			Distance From Face (ft)	Vert Ecc (ft)
			Weight (lb)	EPAA (sf)	Orientation Factor	Weight (lb)	EPAA (sf)	Orientation Factor		
150.00	Andrew SBNHH-1D65A	3	40.90	5.880	0.69	74.70	6.490	0.69	0.000	3.000
150.00	CCI OPA-65R-LCUU-H6	3	73.00	9.660	0.66	141.77	14.350	0.66	0.000	3.000
150.00	Ericsson RRUS 11 (Band 12)	3	55.00	2.520	0.50	74.30	3.290	0.50	0.000	3.000
150.00	Ericsson RRUS 12 w/ RRUS	3	71.40	3.150	0.50	0.00	0.000	0.50	0.000	3.000
150.00	Ericsson RRUS-32	3	77.00	3.310	0.50	104.90	4.300	0.50	0.000	3.000
150.00	Flat Platform w/ Handrails	1	2000.00	38.000	1.00	2,450.00	48.400	1.00	0.000	0.000
150.00	Powerwave 7020.00 Dual	6	2.20	0.400	0.50	5.10	0.540	0.50	0.000	3.000
150.00	Powerwave Allgon 7770.00	3	27.00	5.510	0.65	0.00	0.000	0.65	0.000	3.000
150.00	Powerwave LGP21401	6	14.10	1.100	0.50	21.26	1.530	0.50	0.000	3.000
150.00	Raycap DC6-48-60-18-8F	1	20.00	1.110	1.00	0.00	0.000	1.00	0.000	3.000
150.00	Raycap DC6-48-60-18-8F	1	20.00	1.110	1.00	49.50	1.670	1.00	0.000	3.000
150.00	Round Side Arm	3	150.00	5.200	0.67	175.00	5.900	0.67	0.000	0.000
138.00	Alcatel-Lucent 4X40W RRH	6	59.50	2.320	0.50	0.00	0.000	0.50	0.000	-4.000
138.00	Alcatel-Lucent 800 MHz RRH	3	61.80	2.500	0.50	87.80	3.260	0.50	0.000	-4.000
138.00	Alcatel-Lucent TD-RRH8x20-	3	70.00	4.050	0.50	77.40	2.430	0.50	0.000	-4.000
138.00	RFS APXV9ERR18-C-A20	2	62.00	8.020	0.71	0.00	0.000	0.71	0.000	-4.000
138.00	RFS APXVSP18-C-A20	1	57.00	8.020	0.69	106.50	9.080	0.69	0.000	-4.000
138.00	RFS APXVTM14-C-I20	3	52.90	6.340	0.66	106.50	9.080	0.66	0.000	-4.000
138.00	RFS IBC1900BB-1	3	22.00	0.970	0.50	0.00	0.000	0.50	0.000	-4.000
138.00	RFS IBC1900HG-2A	3	22.00	0.970	0.50	0.00	0.000	0.50	0.000	-4.000
138.00	Round T-Arm	3	250.00	9.700	0.67	314.00	12.100	0.67	0.000	0.000
128.00	Collar	1	560.00	8.500	1.00	300.00	4.500	1.00	0.000	0.000
128.00	Ericsson AIR 21, 1.3M, B2A	3	91.50	6.040	0.70	132.60	7.200	0.70	0.000	1.000
128.00	Ericsson AIR 21, 1.3M, B4A	3	90.40	6.080	0.70	132.60	7.200	0.70	0.000	1.000
118.00	24" x 24" Junction Box	1	20.00	5.600	1.00	53.00	6.080	1.00	0.000	-4.000
118.00	Argus LLPX310R	3	28.60	4.290	0.63	54.50	5.360	0.63	0.000	-1.000
118.00	Collar Mount	1	560.00	8.500	1.00	680.00	10.500	1.00	0.000	0.000
118.00	DragonWave A-ANT-23G-1-C	1	15.00	1.610	0.90	25.10	1.830	0.90	0.000	-3.000
118.00	DragonWave A-ANT-23G-2-C	2	12.30	4.690	0.90	55.10	5.050	0.90	0.000	-3.000
118.00	DragonWave Horizon	3	10.60	0.430	0.50	17.00	0.580	0.50	0.000	-3.000
118.00	NextNet BTS-2500	3	35.00	1.820	0.50	48.30	2.430	0.50	0.000	-1.000
98.00	Alcatel-Lucent RRH2x60 700	3	56.70	2.150	0.50	60.40	2.860	0.50	0.000	0.000
98.00	Alcatel-Lucent RRH2X60-	3	46.00	1.880	0.50	55.40	2.500	0.50	0.000	0.000
98.00	Alcatel-Lucent RRH2X60-	3	55.00	3.700	0.50	73.70	4.160	0.50	0.000	0.000
98.00	Andrew SBNHH-1D65B	12	50.70	5.240	0.50	101.00	9.210	0.50	0.000	0.000
98.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	1,700.00	31.600	1.00	0.000	0.000
98.00	RFS DB-T1-6Z-8AB-OZ	2	44.00	4.800	0.50	144.50	6.080	0.50	0.000	0.000
33.00	GPS	1	10.00	1.000	0.50	18.24	1.210	0.50	0.000	0.000
33.00	Stand-off	1	50.00	2.000	1.00	0.00	0.000	1.00	0.000	0.000
28.00	GPS	1	10.00	1.000	0.50	18.24	1.210	0.50	0.000	0.000
28.00	Stand-off	1	50.00	2.000	1.00	75.00	3.000	1.00	0.000	0.000
Totals		112	10332.20			12,437.55			Number of Loadings : 41	



Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

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Customer: AT&T MOBILITY

**Linear Appurtenance Properties**

Elev From (ft)	Elev To (ft)	Qty	Description	— No Ice —		— Ice —		Exposed To Wind
				Weight (lb/ft)	CaAa (sf/ft)	Weight (lb/ft)	CaAa (sf/ft)	
4.00	150.00	2	0.39" Fiber Trunk	0.06	0.00	0.00	0.00	N
4.00	150.00	2	0.78" 8 AWG 6	0.59	0.00	0.00	0.00	N
4.00	150.00	2	0.78" 8 AWG 6	0.59	0.00	0.00	0.00	N
4.00	150.00	1	3" Conduit	7.58	0.00	0.00	0.00	N
4.00	150.00	1	3/8" Coax	0.08	0.00	0.00	0.00	N
4.00	150.00	12	7/8" Coax	3.96	0.00	0.00	0.00	N
4.00	138.00	4	1 1/4" Hybriflex Cable	1.00	0.00	0.00	0.00	N
4.00	128.00	6	1 5/8" Coax	4.92	0.00	0.00	0.00	Y
4.00	128.00	1	1 5/8" Hybriflex	1.30	0.00	0.00	0.00	Y
4.00	118.00	3	1/2" Coax	0.15	0.00	0.00	0.00	N
4.00	118.00	1	2" Conduit	3.65	0.00	0.00	0.00	N
4.00	118.00	6	5/16" Coax	0.05	0.00	0.00	0.00	N
0.00	106.10	4	#20 Dywidag Bars	0.00	0.00	0.00	0.00	Y
4.00	98.00	2	1.58" Hybrid	1.61	0.00	0.00	0.00	N
4.00	33.00	1	1/2" Coax	0.15	0.00	0.00	0.00	Y
4.00	28.00	1	1/2" Coax	0.15	0.06	0.84	0.18	Y
Total Weight				3,380.46 (lb)		20.16 (lb)		

**Additional Steel**

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	— Intermediate Connections —			Connectors	Continuation?
						Description	Spacing (in)	Len (in)		
0.00	91.10	4	SOL #20 All Thread	80	2.19	6" Angle Bracket	30.0	3.31	5/8" A36 U-Bolt	No
91.10	101.7	4	SOL #20 All Thread	80	2.19	6" Angle Bracket	30.0	3.31	5/8" A36 U-Bolt	No

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E HFR - Prestige Park, CT

Engineering Number: 64647527

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Customer: AT&T MOBILITY

**Segment Properties** (Max Len : 5.ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	W/t Ratio	D/t Ratio	Fy (ksi)	Fb (ksi)	Fa (ksi)	Weight (lb)	Additional Reinforcing		
												Area (in <sup>2</sup> )	Ix (in <sup>4</sup> )	Weight (lb)
0.00		0.3750	37.360	44.659	7,797.4	24.55	99.63	65	78	40	0.0	19.64	4,953	0.0
5.00		0.3750	36.577	43.714	7,312.7	23.99	97.54	65	79	40	751.8	19.64	4,776	334.0
10.00		0.3750	35.794	42.769	6,848.5	23.43	95.45	65	79	40	735.7	19.64	4,602	334.0
15.00		0.3750	35.012	41.824	6,404.4	22.87	93.36	65	80	40	719.6	19.64	4,431	334.0
20.00		0.3750	34.229	40.878	5,979.9	22.31	91.28	65	80	40	703.5	19.64	4,264	334.0
25.00		0.3750	33.446	39.933	5,574.5	21.75	89.19	65	81	40	687.5	19.64	4,100	334.0
28.00		0.3750	32.976	39.366	5,340.4	21.42	87.94	65	81	40	404.8	19.64	4,003	200.4
30.00		0.3750	32.663	38.988	5,188.0	21.20	87.10	65	82	40	266.6	19.64	3,939	133.6
31.50	Bot - Section 2	0.3750	32.428	38.704	5,075.3	21.03	86.47	65	82	40	198.7	19.64	3,891	100.4
33.00		0.3750	32.193	38.421	4,964.8	20.86	85.85	65	82	40	363.6	19.64	3,971	100.0
35.00		0.3750	31.880	38.042	4,819.7	20.64	85.01	65	82	40	481.7	19.64	3,907	133.6
35.67	Top - Section 1	0.3125	32.400	32.288	4,243.4	25.64	103.68	65	77	0	160.3	19.64	3,886	44.8
40.00		0.3125	31.722	31.606	3,980.1	25.06	101.51	65	77	40	470.7	19.64	3,750	289.2
45.00		0.3125	30.940	30.818	3,689.8	24.39	99.01	65	78	40	531.0	19.64	3,596	334.0
50.00		0.3125	30.157	30.031	3,414.1	23.71	96.50	65	79	40	517.6	19.64	3,446	334.0
55.00		0.3125	29.374	29.243	3,152.4	23.04	94.00	65	80	40	504.2	19.64	3,298	334.0
60.00		0.3125	28.591	28.455	2,904.4	22.37	91.49	65	80	40	490.8	19.64	3,154	334.0
65.00		0.3125	27.808	27.668	2,669.8	21.70	88.99	65	81	40	477.4	19.64	3,013	334.0
70.00		0.3125	27.025	26.880	2,448.2	21.03	86.48	65	82	40	464.0	19.64	2,876	334.0
70.05	Bot - Section 3	0.3125	27.017	26.871	2,445.9	21.02	86.45	65	82	40	4.9	19.64	2,874	3.6
73.55	Top - Section 2	0.2500	26.969	21.509	1,959.9	26.76	107.88	65	76	0	575.5	19.64	2,866	233.8
75.00		0.2500	26.743	21.326	1,910.5	26.52	106.97	65	76	40	105.4	19.64	2,827	96.6
80.00		0.2500	25.960	20.696	1,746.1	25.68	103.84	65	77	40	357.5	19.64	2,694	334.0
85.00		0.2500	25.177	20.066	1,591.4	24.84	100.71	65	78	40	346.8	19.64	2,564	334.0
90.00		0.2500	24.394	19.436	1,446.1	24.00	97.58	65	79	40	336.0	19.64	2,437	334.0
91.10	Reinf. Top Reinf	0.2500	24.222	19.297	1,415.4	23.82	96.89	65	79	40	72.5	19.64	2,409	73.5
95.00		0.2500	23.611	18.806	1,310.0	23.16	94.44	65	79	40	252.8	19.64	2,314	260.5
98.00		0.2500	23.141	18.428	1,232.5	22.66	92.57	65	80	40	190.0	19.64	2,242	200.4
100.0		0.2500	22.828	18.176	1,182.7	22.32	91.31	65	80	40	124.6	19.64	2,194	133.6
101.7	Reinf. Top	0.2500	22.548	17.950	1,139.2	22.02	90.19	65	81	40	110.0	19.64	2,151	119.6
105.0		0.2500	22.046	17.545	1,063.9	21.48	88.18	65	81	40	193.9			
110.0		0.2500	21.263	16.915	953.3	20.65	85.05	65	82	40	293.2			
110.0	Top - Section 3	0.2500	21.254	16.908	952.2	20.64	85.02	65	82	40	3.1			
110.0	Bot - Section 4	0.1875	21.254	12.719	720.5	28.23	113.36	65	74	40				
115.0		0.1875	20.480	12.251	643.9	27.12	109.23	65	75	40	210.2			
118.0		0.1875	20.010	11.968	600.2	26.45	106.72	65	76	40	123.6			
120.0		0.1875	19.697	11.779	572.2	26.00	105.05	65	76	40	80.8			
125.0		0.1875	18.914	11.306	506.1	24.89	100.88	65	78	40	196.4			
128.0		0.1875	18.444	11.023	469.0	24.21	98.37	65	78	40	114.0			
130.0		0.1875	18.131	10.834	445.2	23.77	96.70	65	79	40	74.4			
135.0		0.1875	17.349	10.361	389.5	22.65	92.53	65	80	40	180.3			
138.0		0.1875	16.879	10.077	358.4	21.98	90.02	65	81	40	104.3			
140.0		0.1875	16.566	9.888	338.6	21.53	88.35	65	81	40	67.9			
145.0		0.1875	15.783	9.416	292.3	20.41	84.18	65	82	40	164.2			
150.0		0.1875	15.000	8.943	250.5	19.29	80.00	65	82	40	156.2			
											13,368.2			6,799.5

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E HFR - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:17 PM

Customer: AT&T MOBILITY

<b>Load Case:</b> 1.2D + 1.6W	95 mph with No Ice	27 Iterations
Gust Response Factor : 1.10		
Dead Load Factor : 1.20		
Wind Load Factor : 1.60		

**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		259.4	0.0					0.0	0.0	259.4	0.0	0.0	0.0
5.00		512.6	902.1					0.0	439.4	512.6	1,341.6	0.0	0.0
10.00		501.0	882.8					92.1	594.1	593.1	1,476.9	0.0	0.0
15.00		490.1	863.5					92.1	594.1	582.2	1,457.6	0.0	0.0
20.00		479.1	844.2					92.1	594.1	571.2	1,438.3	0.0	0.0
25.00		376.3	824.9					92.1	594.1	468.4	1,419.0	0.0	0.0
28.00	Appertunance(s)	231.3	485.7	66.3	0.0	0.0	72.0	55.3	356.4	352.8	914.1	0.0	0.0
30.00		160.9	319.9					36.8	237.3	197.7	557.2	0.0	0.0
31.50	Bot - Section 2	139.5	238.5					27.8	178.3	167.4	416.8	0.0	0.0
33.00	Appertunance(s)	165.3	436.3	68.1	0.0	0.0	72.0	28.0	177.6	261.4	685.8	0.0	0.0
35.00		126.8	578.1					37.7	236.9	164.5	815.0	0.0	0.0
35.67	Top - Section 1	239.7	192.4					12.7	79.4	252.5	271.7	0.0	0.0
40.00		450.2	564.9					83.3	512.9	533.5	1,077.7	0.0	0.0
45.00		486.4	637.3					98.3	592.3	584.7	1,229.5	0.0	0.0
50.00		488.6	621.2					100.3	592.3	589.0	1,213.4	0.0	0.0
55.00		489.1	605.1					102.2	592.3	591.4	1,197.3	0.0	0.0
60.00		488.1	589.0					104.0	592.3	592.1	1,181.3	0.0	0.0
65.00		485.7	572.9					105.6	592.3	591.3	1,165.2	0.0	0.0
70.00		244.7	556.8					107.2	592.3	351.8	1,149.1	0.0	0.0
70.05	Bot - Section 3	174.0	5.9					1.2	6.3	175.1	12.2	0.0	0.0
73.55	Top - Section 2	241.9	690.6					75.9	414.6	317.8	1,105.2	0.0	0.0
75.00		312.6	126.5					31.6	171.4	344.2	297.9	0.0	0.0
80.00		481.2	429.0					110.0	592.3	591.2	1,021.2	0.0	0.0
85.00		474.8	416.1					111.3	592.3	586.1	1,008.4	0.0	0.0
90.00		287.1	403.2					112.5	592.3	399.6	995.5	0.0	0.0
91.10	Reinf. Top Reinf	231.9	87.0					24.9	130.3	256.8	217.3	0.0	0.0
95.00		317.7	303.4					88.8	462.0	406.5	765.4	0.0	0.0
98.00	Appertunance(s)	227.8	228.1	2,443.1	0.0	0.0	3,203.4	68.8	355.4	2,739.7	3,786.8	0.0	0.0
100.00		171.0	149.5					46.1	229.2	217.1	378.6	0.0	0.0
101.79	Reinf. Top	223.2	132.0					41.4	205.1	264.6	337.1	0.0	0.0
105.00		350.7	232.6					74.6	110.5	425.3	343.1	0.0	0.0
110.00		209.8	351.8					0.0	172.1	209.8	523.9	0.0	0.0
110.05	Top - Section 3	177.7	3.7					0.0	1.8	177.7	5.5	0.0	0.0
115.00		280.3	252.2					0.0	170.3	280.3	422.5	0.0	0.0
118.00	Appertunance(s)	173.2	148.3	1,243.2	0.0	-2,238.6	1,010.6	0.0	103.3	1,416.4	1,262.3	0.0	0.0
120.00		237.2	97.0					0.0	58.4	237.2	155.3	0.0	0.0
125.00		267.8	235.7					0.0	145.9	267.8	381.6	0.0	0.0
128.00	Appertunance(s)	164.2	136.8	1,184.2	0.0	836.0	1,326.8	0.0	87.5	1,348.3	1,551.2	0.0	0.0
130.00		223.1	89.2					0.0	43.4	223.1	132.7	0.0	0.0
135.00		250.7	216.4					0.0	108.6	250.7	325.0	0.0	0.0
138.00	Appertunance(s)	152.9	125.2	2,244.7	0.0	-6,530.6	2,368.9	0.0	65.2	2,397.6	2,559.3	0.0	0.0
140.00		207.9	81.5					0.0	33.8	207.9	115.4	0.0	0.0
145.00		289.0	197.1					0.0	84.6	289.0	281.7	0.0	0.0
150.00	Appertunance(s)	141.6	187.4	4,088.9	0.0	6,036.1	4,344.8	0.0	84.6	4,230.5	4,616.9	0.0	0.0
<b>Totals:</b>										26,477.2	41,609.4	0.00	0.00

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E HFR - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:20 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W

95 mph with No Ice

27 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.20

Wind Load Factor : 1.60

Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-26.325	-41.541	0.000	0.000	0.000	-2,664.539	0.000	0.000	0.000	0.000
5.00	-26.012	-40.070	0.000	0.000	0.000	-2,532.919	-0.156	0.000	0.156	-0.290
10.00	-25.603	-38.468	0.000	0.000	0.000	-2,402.863	-0.615	0.000	0.615	-0.580
15.00	-25.190	-36.891	0.000	0.000	0.000	-2,274.852	-1.379	0.000	1.379	-0.871
20.00	-24.772	-35.338	0.000	0.000	0.000	-2,148.907	-2.447	0.000	2.447	-1.161
25.00	-24.408	-33.832	0.000	0.000	0.000	-2,025.049	-3.818	0.000	3.818	-1.451
28.00	-24.115	-32.866	0.000	0.000	0.000	-1,951.825	-4.787	0.000	4.787	-1.626
30.00	-23.959	-32.272	0.000	0.000	0.000	-1,903.596	-5.494	0.000	5.494	-1.744
31.50	-23.828	-31.824	0.000	0.000	0.000	-1,867.579	-6.057	0.000	6.057	-1.832
33.00	-23.599	-31.105	0.000	0.000	0.000	-1,831.918	-6.646	0.000	6.646	-1.920
35.00	-23.447	-30.265	0.000	0.000	0.000	-1,784.720	-7.475	0.000	7.475	-2.035
35.67	-23.260	-29.945	0.000	0.000	0.000	-1,769.011	-7.764	0.000	7.764	-2.074
40.00	-22.822	-28.780	0.000	0.000	0.000	-1,668.299	-9.759	0.000	9.759	-2.319
45.00	-22.326	-27.463	0.000	0.000	0.000	-1,554.192	-12.346	0.000	12.346	-2.615
50.00	-21.812	-26.169	0.000	0.000	0.000	-1,442.563	-15.241	0.000	15.241	-2.908
55.00	-21.282	-24.899	0.000	0.000	0.000	-1,333.505	-18.440	0.000	18.440	-3.195
60.00	-20.738	-23.654	0.000	0.000	0.000	-1,227.097	-21.937	0.000	21.937	-3.478
65.00	-20.181	-22.433	0.000	0.000	0.000	-1,123.411	-25.726	0.000	25.726	-3.754
70.00	-19.801	-21.264	0.000	0.000	0.000	-1,022.509	-29.799	0.000	29.799	-4.022
70.05	-19.661	-21.232	0.000	0.000	0.000	-1,021.453	-29.844	0.000	29.844	-4.025
73.55	-19.310	-20.109	0.000	0.000	0.000	-952.641	-32.863	0.000	32.863	-4.210
75.00	-19.004	-19.780	0.000	0.000	0.000	-924.706	-34.149	0.000	34.149	-4.285
80.00	-18.420	-18.725	0.000	0.000	0.000	-829.688	-38.775	0.000	38.775	-4.548
85.00	-17.829	-17.692	0.000	0.000	0.000	-737.589	-43.670	0.000	43.670	-4.799
90.00	-17.387	-16.691	0.000	0.000	0.000	-648.444	-48.820	0.000	48.820	-5.036
91.10	-17.145	-16.464	0.000	0.000	0.000	-629.318	-49.985	0.000	49.985	-5.088
95.00	-16.712	-15.695	0.000	0.000	0.000	-562.454	-54.210	0.000	54.210	-5.261
98.00	-13.654	-12.154	0.000	0.000	0.000	-512.319	-57.553	0.000	57.553	-5.387
100.0	-13.418	-11.780	0.000	0.000	0.000	-485.011	-59.825	0.000	59.825	-5.469
101.7	-13.142	-11.447	0.000	0.000	0.000	-460.993	-61.886	0.000	61.886	-5.540
105.0	-12.748	-11.075	0.000	0.000	0.000	-418.809	-65.649	0.000	65.649	-5.662
110.0	-12.532	-10.520	0.000	0.000	0.000	-355.069	-71.848	0.000	71.848	-6.180
110.0	-12.401	-10.480	0.000	0.000	0.000	-354.401	-71.917	0.000	71.917	-6.185
115.0	-12.148	-10.003	0.000	0.000	0.000	-293.060	-78.570	0.000	78.570	-6.664
118.0	-10.637	-8.864	0.000	0.000	0.000	-256.616	-82.866	0.000	82.866	-7.028
120.0	-10.441	-8.669	0.000	0.000	0.000	-235.341	-85.853	0.000	85.853	-7.261
125.0	-10.183	-8.256	0.000	0.000	0.000	-183.136	-93.721	0.000	93.721	-7.781
128.0	-8.661	-6.872	0.000	0.000	0.000	-151.751	-98.688	0.000	98.688	-8.064
130.0	-8.454	-6.731	0.000	0.000	0.000	-134.430	-102.093	0.000	102.093	-8.238
135.0	-8.188	-6.409	0.000	0.000	0.000	-92.162	-110.892	0.000	110.892	-8.600
138.0	-5.441	-4.229	0.000	0.000	0.000	-67.599	-116.335	0.000	116.335	-8.775
140.0	-5.228	-4.133	0.000	0.000	0.000	-56.718	-120.018	0.000	120.018	-8.874
145.0	-4.908	-3.889	0.000	0.000	0.000	-30.577	-129.380	0.000	129.380	-9.057
150.0	-4.230	0.000	0.000	0.000	0.000	-6.036	-138.883	0.000	138.883	-9.146

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:20 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W

95 mph with No Ice

27 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.20

Wind Load Factor : 1.60

Calculated Stresses

Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)	Allowable Stress (Fa) (ksi)	Stress Ratio
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.9	0.0	0.000
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.2	0.0	0.000
15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.8	0.0	0.000
20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
28.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.4	0.0	0.000
30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.6	0.0	0.000
31.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.8	0.0	0.000
40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.4	0.0	0.000
45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.1	0.0	0.000
50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.9	0.0	0.000
55.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.6	0.0	0.000
60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.3	0.0	0.000
65.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
70.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
73.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.5	0.0	0.000
75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.8	0.0	0.000
80.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.7	0.0	0.000
85.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
90.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
95.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.5	0.0	0.000
98.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
105.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.3	0.0	0.000
110.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.9	0.0	0.000
115.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.1	0.0	0.000
118.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.9	0.0	0.000
120.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.4	0.0	0.000
125.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
128.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.3	0.0	0.000
130.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.8	0.0	0.000
135.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
138.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
140.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.2	0.0	0.000
145.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E HFR - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:21 PM

Customer: AT&T MOBILITY

<b>Load Case:</b> 0.9D + 1.6W	95 mph with No Ice (Reduced DL)	27 Iterations
Gust Response Factor : 1.10		
Dead Load Factor : 0.90		
Wind Load Factor : 1.60		

**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		215.6	0.0					0.0	0.0	215.6	0.0	0.0	0.0
5.00		468.9	676.6					0.0	329.6	468.9	1,006.2	0.0	0.0
10.00		501.0	662.1					92.1	445.5	593.1	1,107.7	0.0	0.0
15.00		490.1	647.7					92.1	445.5	582.2	1,093.2	0.0	0.0
20.00		479.1	633.2					92.1	445.5	571.2	1,078.7	0.0	0.0
25.00		376.3	618.7					92.1	445.5	468.4	1,064.3	0.0	0.0
28.00	Appertunance(s)	231.3	364.3	66.3	0.0	0.0	54.0	55.3	267.3	352.8	685.6	0.0	0.0
30.00		160.9	240.0					36.8	177.9	197.7	417.9	0.0	0.0
31.50	Bot - Section 2	139.5	178.8					27.8	133.8	167.4	312.6	0.0	0.0
33.00	Appertunance(s)	165.3	327.2	68.1	0.0	0.0	54.0	28.0	133.2	261.4	514.4	0.0	0.0
35.00		126.8	433.5					37.7	177.7	164.5	611.2	0.0	0.0
35.67	Top - Section 1	239.7	144.3					12.7	59.5	252.5	203.8	0.0	0.0
40.00		450.2	423.6					83.3	384.7	533.5	808.3	0.0	0.0
45.00		486.4	477.9					98.3	444.2	584.7	922.1	0.0	0.0
50.00		488.6	465.9					100.3	444.2	589.0	910.1	0.0	0.0
55.00		489.1	453.8					102.2	444.2	591.4	898.0	0.0	0.0
60.00		488.1	441.8					104.0	444.2	592.1	885.9	0.0	0.0
65.00		485.7	429.7					105.6	444.2	591.3	873.9	0.0	0.0
70.00		244.7	417.6					107.2	444.2	351.8	861.8	0.0	0.0
70.05	Bot - Section 3	174.0	4.4					1.2	4.7	175.1	9.1	0.0	0.0
73.55	Top - Section 2	241.9	518.0					75.9	310.9	317.8	828.9	0.0	0.0
75.00		312.6	94.9					31.6	128.5	344.2	223.4	0.0	0.0
80.00		481.2	321.7					110.0	444.2	591.2	765.9	0.0	0.0
85.00		474.8	312.1					111.3	444.2	586.1	756.3	0.0	0.0
90.00		287.1	302.4					112.5	444.2	399.6	746.6	0.0	0.0
91.10	Reinf. Top Reinf	231.9	65.2					24.9	97.7	256.8	163.0	0.0	0.0
95.00		317.7	227.5					88.8	346.5	406.5	574.0	0.0	0.0
98.00	Appertunance(s)	227.8	171.0	2,443.1	0.0	0.0	2,402.5	68.8	266.5	2,739.7	2,840.1	0.0	0.0
100.00		171.0	112.1					46.1	171.9	217.1	284.0	0.0	0.0
101.79	Reinf. Top	223.2	99.0					41.4	153.8	264.6	252.9	0.0	0.0
105.00		324.8	174.5					74.6	82.9	399.4	257.4	0.0	0.0
110.00		183.9	263.8					0.0	129.1	183.9	392.9	0.0	0.0
110.05	Top - Section 3	177.7	2.8					0.0	1.4	177.7	4.1	0.0	0.0
115.00		280.3	189.1					0.0	127.7	280.3	316.9	0.0	0.0
118.00	Appertunance(s)	173.2	111.3	1,243.2	0.0	-2,238.6	758.0	0.0	77.5	1,416.4	946.7	0.0	0.0
120.00		237.2	72.7					0.0	43.8	237.2	116.5	0.0	0.0
125.00		267.1	176.7					0.0	109.4	267.1	286.2	0.0	0.0
128.00	Appertunance(s)	163.5	102.6	1,184.2	0.0	836.0	995.1	0.0	65.7	1,347.6	1,163.4	0.0	0.0
130.00		223.1	66.9					0.0	32.6	223.1	99.5	0.0	0.0
135.00		250.7	162.3					0.0	81.4	250.7	243.7	0.0	0.0
138.00	Appertunance(s)	152.9	93.9	2,244.7	0.0	-6,530.6	1,776.7	0.0	48.9	2,397.6	1,919.4	0.0	0.0
140.00		207.9	61.1					0.0	25.4	207.9	86.5	0.0	0.0
145.00		289.0	147.8					0.0	63.4	289.0	211.2	0.0	0.0
150.00	Appertunance(s)	141.6	140.6	4,088.9	0.0	6,036.1	3,258.6	0.0	63.4	4,230.5	3,462.6	0.0	0.0
<b>Totals:</b>										26,336.6	31,207.0	0.00	0.00

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H FR - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:24 PM

Customer: AT&T MOBILITY

**Load Case:** 0.9D + 1.6W

95 mph with No Ice (Reduced DL)

27 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 0.90

Wind Load Factor : 1.60

**Calculated Shaft Forces and Deflections**

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-26.199	-31.141	0.000	0.000	0.000	-2,611.325	0.000	0.000	0.000	0.000
5.00	-25.877	-30.008	0.000	0.000	0.000	-2,480.331	-0.152	0.000	0.152	-0.284
10.00	-25.419	-28.779	0.000	0.000	0.000	-2,350.948	-0.602	0.000	0.602	-0.568
15.00	-24.960	-27.569	0.000	0.000	0.000	-2,223.856	-1.350	0.000	1.350	-0.852
20.00	-24.501	-26.380	0.000	0.000	0.000	-2,099.058	-2.395	0.000	2.395	-1.136
25.00	-24.109	-25.231	0.000	0.000	0.000	-1,976.556	-3.737	0.000	3.737	-1.419
28.00	-23.799	-24.496	0.000	0.000	0.000	-1,904.231	-4.684	0.000	4.684	-1.590
30.00	-23.631	-24.043	0.000	0.000	0.000	-1,856.634	-5.375	0.000	5.375	-1.705
31.50	-23.490	-23.700	0.000	0.000	0.000	-1,821.109	-5.926	0.000	5.926	-1.791
33.00	-23.252	-23.154	0.000	0.000	0.000	-1,785.953	-6.502	0.000	6.502	-1.877
35.00	-23.097	-22.519	0.000	0.000	0.000	-1,739.449	-7.312	0.000	7.312	-1.989
35.67	-22.891	-22.269	0.000	0.000	0.000	-1,723.975	-7.595	0.000	7.595	-2.027
40.00	-22.427	-21.378	0.000	0.000	0.000	-1,624.856	-9.543	0.000	9.543	-2.265
45.00	-21.906	-20.372	0.000	0.000	0.000	-1,512.724	-12.070	0.000	12.070	-2.554
50.00	-21.371	-19.385	0.000	0.000	0.000	-1,403.195	-14.897	0.000	14.897	-2.838
55.00	-20.823	-18.419	0.000	0.000	0.000	-1,296.344	-18.019	0.000	18.019	-3.118
60.00	-20.264	-17.472	0.000	0.000	0.000	-1,192.232	-21.431	0.000	21.431	-3.393
65.00	-19.697	-16.546	0.000	0.000	0.000	-1,090.912	-25.127	0.000	25.127	-3.661
70.00	-19.324	-15.665	0.000	0.000	0.000	-992.430	-29.099	0.000	29.099	-3.921
70.05	-19.174	-15.637	0.000	0.000	0.000	-991.400	-29.143	0.000	29.143	-3.924
73.55	-18.831	-14.792	0.000	0.000	0.000	-924.292	-32.085	0.000	32.085	-4.103
75.00	-18.514	-14.540	0.000	0.000	0.000	-897.049	-33.340	0.000	33.340	-4.176
80.00	-17.927	-13.743	0.000	0.000	0.000	-804.480	-37.848	0.000	37.848	-4.431
85.00	-17.336	-12.964	0.000	0.000	0.000	-714.845	-42.617	0.000	42.617	-4.675
90.00	-16.905	-12.213	0.000	0.000	0.000	-628.164	-47.633	0.000	47.633	-4.905
91.10	-16.659	-12.040	0.000	0.000	0.000	-609.568	-48.768	0.000	48.768	-4.954
95.00	-16.232	-11.463	0.000	0.000	0.000	-544.601	-52.882	0.000	52.882	-5.122
98.00	-13.262	-8.860	0.000	0.000	0.000	-495.905	-56.137	0.000	56.137	-5.244
100.0	-13.031	-8.580	0.000	0.000	0.000	-469.381	-58.348	0.000	58.348	-5.323
101.7	-12.758	-8.332	0.000	0.000	0.000	-446.056	-60.355	0.000	60.355	-5.392
105.0	-12.380	-8.046	0.000	0.000	0.000	-405.104	-64.017	0.000	64.017	-5.511
110.0	-12.190	-7.621	0.000	0.000	0.000	-343.205	-70.050	0.000	70.050	-6.011
110.0	-12.045	-7.585	0.000	0.000	0.000	-342.555	-70.117	0.000	70.117	-6.016
115.0	-11.783	-7.218	0.000	0.000	0.000	-282.971	-76.587	0.000	76.587	-6.479
118.0	-10.299	-6.390	0.000	0.000	0.000	-247.622	-80.763	0.000	80.763	-6.830
120.0	-10.090	-6.238	0.000	0.000	0.000	-227.024	-83.666	0.000	83.666	-7.055
125.0	-9.828	-5.923	0.000	0.000	0.000	-176.575	-91.311	0.000	91.311	-7.557
128.0	-8.356	-4.919	0.000	0.000	0.000	-146.255	-96.135	0.000	96.135	-7.830
130.0	-8.144	-4.813	0.000	0.000	0.000	-129.544	-99.441	0.000	99.441	-7.997
135.0	-7.881	-4.573	0.000	0.000	0.000	-88.827	-107.983	0.000	107.983	-8.346
138.0	-5.235	-3.014	0.000	0.000	0.000	-65.184	-113.265	0.000	113.265	-8.515
140.0	-5.024	-2.947	0.000	0.000	0.000	-54.715	-116.840	0.000	116.840	-8.610
145.0	-4.712	-2.771	0.000	0.000	0.000	-29.598	-125.925	0.000	125.925	-8.787
150.0	-4.230	0.000	0.000	0.000	0.000	-6.036	-135.147	0.000	135.147	-8.874

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:24 PM

Customer: AT&T MOBILITY

**Load Case:** 0.9D + 1.6W

95 mph with No Ice (Reduced DL)

27 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 0.90

Wind Load Factor : 1.60

**Calculated Stresses**

Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)	Allowable Stress (Fa) (ksi)	Stress Ratio
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.9	0.0	0.000
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.2	0.0	0.000
15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.8	0.0	0.000
20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
28.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.4	0.0	0.000
30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.6	0.0	0.000
31.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.8	0.0	0.000
40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.4	0.0	0.000
45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.1	0.0	0.000
50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.9	0.0	0.000
55.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.6	0.0	0.000
60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.3	0.0	0.000
65.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
70.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
73.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.5	0.0	0.000
75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.8	0.0	0.000
80.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.7	0.0	0.000
85.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
90.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
95.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.5	0.0	0.000
98.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
105.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.3	0.0	0.000
110.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.9	0.0	0.000
115.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.1	0.0	0.000
118.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.9	0.0	0.000
120.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.4	0.0	0.000
125.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
128.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.3	0.0	0.000
130.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.8	0.0	0.000
135.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
138.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
140.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.2	0.0	0.000
145.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000



Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E HFR - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:24 PM

Customer: AT&T MOBILITY

**Load Case:** 1.2D + 1.0Di + 1.0Wi                      50 mph with 1.00 in Radial Ice                      27 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		48.4	0.0					0.0	0.0	48.4	0.0	0.0	0.0
5.00		96.3	1,283.4					0.0	564.0	96.3	1,847.4	0.0	0.0
10.00		95.0	1,301.6					34.9	883.4	129.9	2,185.0	0.0	0.0
15.00		93.5	1,296.1					35.7	902.3	129.2	2,198.4	0.0	0.0
20.00		91.8	1,282.8					36.3	915.6	128.2	2,198.4	0.0	0.0
25.00		72.4	1,265.4					36.7	926.0	109.1	2,191.4	0.0	0.0
28.00	Appertunance(s)	44.6	751.0	20.5	0.0	0.0	110.8	22.2	559.8	87.4	1,421.6	0.0	0.0
30.00		31.1	496.9					14.9	362.9	46.0	859.8	0.0	0.0
31.50	Bot - Section 2	27.0	371.4					11.3	273.4	38.3	644.8	0.0	0.0
33.00	Appertunance(s)	32.0	570.8	19.5	0.0	0.0	208.2	11.4	272.8	62.9	1,051.8	0.0	0.0
35.00		24.6	757.2					15.6	353.1	40.1	1,110.3	0.0	0.0
35.67	Top - Section 1	46.6	252.5					5.3	118.5	51.8	370.9	0.0	0.0
40.00		87.7	948.2					34.9	767.7	122.6	1,715.9	0.0	0.0
45.00		95.1	1,075.0					41.9	890.5	137.0	1,965.5	0.0	0.0
50.00		95.9	1,053.6					43.5	894.5	139.4	1,948.0	0.0	0.0
55.00		96.4	1,031.5					45.0	898.1	141.4	1,929.5	0.0	0.0
60.00		96.6	1,008.8					46.4	901.4	143.1	1,910.2	0.0	0.0
65.00		96.6	985.7					47.8	904.5	144.4	1,890.1	0.0	0.0
70.00		48.8	962.1					49.0	907.3	97.8	1,869.4	0.0	0.0
70.05	Bot - Section 3	34.7	10.2					0.5	9.7	35.3	19.9	0.0	0.0
73.55	Top - Section 2	48.3	975.6					35.0	636.8	83.4	1,612.4	0.0	0.0
75.00		62.7	243.8					14.6	263.6	77.4	507.4	0.0	0.0
80.00		96.9	825.2					51.4	912.6	148.2	1,737.8	0.0	0.0
85.00		96.1	803.9					52.4	915.0	148.5	1,718.9	0.0	0.0
90.00		58.3	782.3					53.5	917.3	111.8	1,699.6	0.0	0.0
91.10	Reinf. Top Reinf	47.3	170.1					11.9	202.1	59.2	372.2	0.0	0.0
95.00		65.0	592.3					42.6	717.4	107.6	1,309.6	0.0	0.0
98.00	Appertunance(s)	46.7	447.1	762.0	0.0	0.0	8,448.3	33.2	552.7	842.0	9,448.1	0.0	0.0
100.00		35.2	294.1					22.3	361.1	57.5	655.2	0.0	0.0
101.79	Reinf. Top	46.1	260.3					20.1	323.5	66.2	583.7	0.0	0.0
105.00		74.9	458.5					36.3	323.4	111.3	781.9	0.0	0.0
110.00		45.9	693.7					0.0	397.3	45.9	1,091.0	0.0	0.0
110.05	Top - Section 3	44.7	7.3					0.0	3.9	44.7	11.3	0.0	0.0
115.00		70.6	580.8					0.0	364.0	70.6	944.8	0.0	0.0
118.00	Appertunance(s)	43.8	344.3	327.3	0.0	-496.5	2,510.9	0.0	221.3	371.1	3,076.4	0.0	0.0
120.00		60.4	226.0					0.0	137.2	60.4	363.3	0.0	0.0
125.00		68.3	547.8					0.0	343.8	68.3	891.6	0.0	0.0
128.00	Appertunance(s)	42.1	320.5	323.1	0.0	180.1	4,278.4	0.0	206.8	365.2	4,805.7	0.0	0.0
130.00		57.8	210.2					0.0	43.4	57.8	253.6	0.0	0.0
135.00		65.3	507.9					0.0	108.6	65.3	616.5	0.0	0.0
138.00	Appertunance(s)	40.1	296.5	567.2	0.0	-1,368.0	6,435.2	0.0	65.2	607.3	6,796.8	0.0	0.0
140.00		55.0	194.1					0.0	33.8	55.0	227.9	0.0	0.0
145.00		77.1	467.5					0.0	84.6	77.1	552.1	0.0	0.0
150.00	Appertunance(s)	38.0	447.1	1,083.4	0.0	1,451.2	9,995.2	0.0	84.6	1,121.4	10,526.9	0.0	0.0
<b>Totals:</b>										6,751.70	79,912.7	0.00	0.00

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E HFR - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:27 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

27 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.20

Wind Load Factor : 1.00

Calculated Shaft Forces and Deflections

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-6.763	-79.908	0.000	0.000	0.000	-776.537	0.000	0.000	0.000	0.000
5.00	-6.781	-78.050	0.000	0.000	0.000	-742.724	-0.045	0.000	0.045	-0.085
10.00	-6.760	-75.856	0.000	0.000	0.000	-708.819	-0.180	0.000	0.180	-0.170
15.00	-6.733	-73.648	0.000	0.000	0.000	-675.020	-0.404	0.000	0.404	-0.256
20.00	-6.702	-71.440	0.000	0.000	0.000	-641.355	-0.718	0.000	0.718	-0.343
25.00	-6.662	-69.241	0.000	0.000	0.000	-607.848	-1.124	0.000	1.124	-0.429
28.00	-6.615	-67.815	0.000	0.000	0.000	-587.864	-1.410	0.000	1.410	-0.482
30.00	-6.598	-66.953	0.000	0.000	0.000	-574.634	-1.620	0.000	1.620	-0.517
31.50	-6.584	-66.305	0.000	0.000	0.000	-564.716	-1.787	0.000	1.787	-0.544
33.00	-6.546	-65.250	0.000	0.000	0.000	-554.861	-1.962	0.000	1.962	-0.571
35.00	-6.521	-64.138	0.000	0.000	0.000	-541.769	-2.209	0.000	2.209	-0.606
35.67	-6.513	-63.763	0.000	0.000	0.000	-537.400	-2.295	0.000	2.295	-0.617
40.00	-6.461	-62.039	0.000	0.000	0.000	-509.199	-2.889	0.000	2.889	-0.692
45.00	-6.393	-60.065	0.000	0.000	0.000	-476.895	-3.663	0.000	3.663	-0.783
50.00	-6.317	-58.110	0.000	0.000	0.000	-444.930	-4.530	0.000	4.530	-0.873
55.00	-6.231	-56.173	0.000	0.000	0.000	-413.348	-5.492	0.000	5.492	-0.962
60.00	-6.137	-54.257	0.000	0.000	0.000	-382.195	-6.546	0.000	6.546	-1.049
65.00	-6.034	-52.361	0.000	0.000	0.000	-351.512	-7.692	0.000	7.692	-1.135
70.00	-5.935	-50.489	0.000	0.000	0.000	-321.343	-8.926	0.000	8.926	-1.220
70.05	-5.926	-50.467	0.000	0.000	0.000	-321.026	-8.940	0.000	8.940	-1.220
73.55	-5.842	-48.853	0.000	0.000	0.000	-300.288	-9.856	0.000	9.856	-1.279
75.00	-5.799	-48.342	0.000	0.000	0.000	-291.837	-10.248	0.000	10.248	-1.302
80.00	-5.676	-46.600	0.000	0.000	0.000	-262.845	-11.657	0.000	11.657	-1.385
85.00	-5.546	-44.878	0.000	0.000	0.000	-234.467	-13.151	0.000	13.151	-1.465
90.00	-5.423	-43.178	0.000	0.000	0.000	-206.740	-14.726	0.000	14.726	-1.541
91.10	-5.381	-42.804	0.000	0.000	0.000	-200.775	-15.083	0.000	15.083	-1.557
95.00	-5.272	-41.493	0.000	0.000	0.000	-179.790	-16.379	0.000	16.379	-1.612
98.00	-4.179	-32.070	0.000	0.000	0.000	-163.975	-17.405	0.000	17.405	-1.653
100.0	-4.116	-31.415	0.000	0.000	0.000	-155.617	-18.103	0.000	18.103	-1.679
101.7	-4.050	-30.832	0.000	0.000	0.000	-148.249	-18.737	0.000	18.737	-1.702
105.0	-3.970	-30.046	0.000	0.000	0.000	-135.250	-19.895	0.000	19.895	-1.741
110.0	-3.931	-28.952	0.000	0.000	0.000	-115.401	-21.809	0.000	21.809	-1.909
110.0	-3.927	-28.936	0.000	0.000	0.000	-115.191	-21.831	0.000	21.831	-1.911
115.0	-3.891	-27.985	0.000	0.000	0.000	-95.765	-23.894	0.000	23.894	-2.066
118.0	-3.448	-24.919	0.000	0.000	0.000	-84.094	-25.231	0.000	25.231	-2.186
120.0	-3.428	-24.551	0.000	0.000	0.000	-77.199	-26.163	0.000	26.163	-2.262
125.0	-3.376	-23.655	0.000	0.000	0.000	-60.062	-28.625	0.000	28.625	-2.433
128.0	-2.828	-18.866	0.000	0.000	0.000	-49.754	-30.184	0.000	30.184	-2.525
130.0	-2.788	-18.611	0.000	0.000	0.000	-44.099	-31.254	0.000	31.254	-2.582
135.0	-2.721	-17.994	0.000	0.000	0.000	-30.159	-34.024	0.000	34.024	-2.701
138.0	-1.799	-11.233	0.000	0.000	0.000	-21.995	-35.740	0.000	35.740	-2.758
140.0	-1.743	-11.006	0.000	0.000	0.000	-18.396	-36.902	0.000	36.902	-2.790
145.0	-1.646	-10.458	0.000	0.000	0.000	-9.683	-39.857	0.000	39.857	-2.849
150.0	-1.121	0.000	0.000	0.000	0.000	-1.451	-42.858	0.000	42.858	-2.876

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:27 PM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

27 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.20

Wind Load Factor : 1.00

Calculated Stresses

Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)	Allowable Stress (Fa) (ksi)	Stress Ratio
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.9	0.0	0.000
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.2	0.0	0.000
15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.8	0.0	0.000
20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
28.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.4	0.0	0.000
30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.6	0.0	0.000
31.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.8	0.0	0.000
40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.4	0.0	0.000
45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.1	0.0	0.000
50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.9	0.0	0.000
55.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.6	0.0	0.000
60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.3	0.0	0.000
65.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
70.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
73.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.5	0.0	0.000
75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.8	0.0	0.000
80.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.7	0.0	0.000
85.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
90.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
95.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.5	0.0	0.000
98.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
105.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.3	0.0	0.000
110.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.9	0.0	0.000
115.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.1	0.0	0.000
118.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.9	0.0	0.000
120.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.4	0.0	0.000
125.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
128.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.3	0.0	0.000
130.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.8	0.0	0.000
135.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
138.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
140.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.2	0.0	0.000
145.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:27 PM

Customer: AT&T MOBILITY

<b>Load Case:</b> (1.2 + 0.2Sds) * DL + E E LFM	Seismic Equivalent Lateral Forces Method	25 Iterations
Gust Response Factor : 1.10		
Dead Load Factor : 1.20		
Wind Load Factor : 0.00		

**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		0.0	0.0					0.0	0.0	0.0	0.0	0.0	0.0
5.00		0.0	902.1					0.0	439.4	0.0	1,341.6	0.0	0.0
10.00		0.0	882.8					0.0	594.1	0.0	1,476.9	0.0	0.0
15.00		0.0	863.5					0.0	594.1	0.0	1,457.6	0.0	0.0
20.00		0.0	844.2					0.0	594.1	0.0	1,438.3	0.0	0.0
25.00		0.0	824.9					0.0	594.1	0.0	1,419.0	0.0	0.0
28.00	Appertunance(s)	0.0	485.7	0.0	0.0	0.0	72.0	0.0	356.4	0.0	914.1	0.0	0.0
30.00		0.0	319.9					0.0	237.3	0.0	557.2	0.0	0.0
31.50	Bot - Section 2	0.0	238.5					0.0	178.3	0.0	416.8	0.0	0.0
33.00	Appertunance(s)	0.0	436.3	0.0	0.0	0.0	72.0	0.0	177.6	0.0	685.8	0.0	0.0
35.00		0.0	578.1					0.0	236.9	0.0	815.0	0.0	0.0
35.67	Top - Section 1	0.0	192.4					0.0	79.4	0.0	271.7	0.0	0.0
40.00		0.0	564.9					0.0	512.9	0.0	1,077.7	0.0	0.0
45.00		0.0	637.3					0.0	592.3	0.0	1,229.5	0.0	0.0
50.00		0.0	621.2					0.0	592.3	0.0	1,213.4	0.0	0.0
55.00		0.0	605.1					0.0	592.3	0.0	1,197.3	0.0	0.0
60.00		0.0	589.0					0.0	592.3	0.0	1,181.3	0.0	0.0
65.00		0.0	572.9					0.0	592.3	0.0	1,165.2	0.0	0.0
70.00		0.0	556.8					0.0	592.3	0.0	1,149.1	0.0	0.0
70.05	Bot - Section 3	0.0	5.9					0.0	6.3	0.0	12.2	0.0	0.0
73.55	Top - Section 2	0.0	690.6					0.0	414.6	0.0	1,105.2	0.0	0.0
75.00		0.0	126.5					0.0	171.4	0.0	297.9	0.0	0.0
80.00		0.0	429.0					0.0	592.3	0.0	1,021.2	0.0	0.0
85.00		0.0	416.1					0.0	592.3	0.0	1,008.4	0.0	0.0
90.00		0.0	403.2					0.0	592.3	0.0	995.5	0.0	0.0
91.10	Reinf. Top Reinf	0.0	87.0					0.0	130.3	0.0	217.3	0.0	0.0
95.00		0.0	303.4					0.0	462.0	0.0	765.4	0.0	0.0
98.00	Appertunance(s)	0.0	228.1	0.0	0.0	0.0	3,203.4	0.0	355.4	0.0	3,786.8	0.0	0.0
100.00		0.0	149.5					0.0	229.2	0.0	378.6	0.0	0.0
101.79	Reinf. Top	0.0	132.0					0.0	205.1	0.0	337.1	0.0	0.0
105.00		0.0	232.6					0.0	110.5	0.0	343.1	0.0	0.0
110.00		0.0	351.8					0.0	172.1	0.0	523.9	0.0	0.0
110.05	Top - Section 3	0.0	3.7					0.0	1.8	0.0	5.5	0.0	0.0
115.00		0.0	252.2					0.0	170.3	0.0	422.5	0.0	0.0
118.00	Appertunance(s)	0.0	148.3	0.0	0.0	0.0	1,010.6	0.0	103.3	0.0	1,262.3	0.0	0.0
120.00		0.0	97.0					0.0	58.4	0.0	155.3	0.0	0.0
125.00		0.0	235.7					0.0	145.9	0.0	381.6	0.0	0.0
128.00	Appertunance(s)	0.0	136.8	0.0	0.0	0.0	1,326.8	0.0	87.5	0.0	1,551.2	0.0	0.0
130.00		0.0	89.2					0.0	43.4	0.0	132.7	0.0	0.0
135.00		0.0	216.4					0.0	108.6	0.0	325.0	0.0	0.0
138.00	Appertunance(s)	0.0	125.2	0.0	0.0	0.0	2,368.9	0.0	65.2	0.0	2,559.3	0.0	0.0
140.00		0.0	81.5					0.0	33.8	0.0	115.4	0.0	0.0
145.00		0.0	197.1					0.0	84.6	0.0	281.7	0.0	0.0
150.00	Appertunance(s)	0.0	187.4	0.0	0.0	0.0	4,344.8	0.0	84.6	0.0	4,616.9	0.0	0.0
<b>Totals:</b>										0.00	41,609.4	0.00	0.00

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H FR - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:30 PM

Customer: AT&T MOBILITY

<b>Load Case:</b> (1.2 + 0.2Sds) * DL + E ELM	Seismic Equivalent Lateral Forces Method	25 Iterations
Gust Response Factor : 1.10		
Dead Load Factor : 1.20		
Wind Load Factor : 0.00		

**Calculated Shaft Forces and Deflections**

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-1.359	-41.549	0.000	0.000	0.000	-173.425	0.000	0.000	0.000	0.000
5.00	-1.371	-40.025	0.000	0.000	0.000	-166.631	-0.010	0.000	0.010	-0.019
10.00	-1.383	-38.520	0.000	0.000	0.000	-159.774	-0.040	0.000	0.040	-0.038
15.00	-1.392	-37.036	0.000	0.000	0.000	-152.861	-0.091	0.000	0.091	-0.058
20.00	-1.400	-35.571	0.000	0.000	0.000	-145.899	-0.161	0.000	0.161	-0.077
25.00	-1.406	-34.702	0.000	0.000	0.000	-138.898	-0.253	0.000	0.253	-0.097
28.00	-1.409	-34.052	0.000	0.000	0.000	-134.680	-0.318	0.000	0.318	-0.109
30.00	-1.411	-33.622	0.000	0.000	0.000	-131.863	-0.365	0.000	0.365	-0.117
31.50	-1.410	-32.988	0.000	0.000	0.000	-129.743	-0.403	0.000	0.403	-0.123
33.00	-1.408	-32.073	0.000	0.000	0.000	-127.632	-0.443	0.000	0.443	-0.129
35.00	-1.409	-31.793	0.000	0.000	0.000	-124.816	-0.499	0.000	0.499	-0.137
35.67	-1.406	-30.680	0.000	0.000	0.000	-123.872	-0.518	0.000	0.518	-0.140
40.00	-1.403	-29.411	0.000	0.000	0.000	-117.785	-0.653	0.000	0.653	-0.157
45.00	-1.399	-28.159	0.000	0.000	0.000	-110.768	-0.829	0.000	0.829	-0.178
50.00	-1.392	-26.923	0.000	0.000	0.000	-103.771	-1.027	0.000	1.027	-0.199
55.00	-1.381	-25.704	0.000	0.000	0.000	-96.811	-1.247	0.000	1.247	-0.220
60.00	-1.367	-24.501	0.000	0.000	0.000	-89.904	-1.489	0.000	1.489	-0.241
65.00	-1.350	-23.315	0.000	0.000	0.000	-83.068	-1.752	0.000	1.752	-0.261
70.00	-1.353	-23.302	0.000	0.000	0.000	-76.320	-2.036	0.000	2.036	-0.281
70.05	-1.328	-22.162	0.000	0.000	0.000	-76.248	-2.039	0.000	2.039	-0.281
73.55	-1.324	-21.854	0.000	0.000	0.000	-71.599	-2.250	0.000	2.250	-0.295
75.00	-1.299	-20.800	0.000	0.000	0.000	-69.684	-2.341	0.000	2.341	-0.301
80.00	-1.273	-19.759	0.000	0.000	0.000	-63.191	-2.666	0.000	2.666	-0.321
85.00	-1.243	-18.732	0.000	0.000	0.000	-56.827	-3.013	0.000	3.013	-0.340
90.00	-1.238	-18.508	0.000	0.000	0.000	-50.613	-3.379	0.000	3.379	-0.358
91.10	-1.210	-17.718	0.000	0.000	0.000	-49.251	-3.462	0.000	3.462	-0.362
95.00	-1.188	-17.116	0.000	0.000	0.000	-44.533	-3.763	0.000	3.763	-0.376
98.00	-1.029	-13.421	0.000	0.000	0.000	-40.970	-4.003	0.000	4.003	-0.386
100.0	-1.015	-13.073	0.000	0.000	0.000	-38.912	-4.166	0.000	4.166	-0.392
101.7	-0.999	-12.719	0.000	0.000	0.000	-37.096	-4.314	0.000	4.314	-0.398
105.0	-0.977	-12.178	0.000	0.000	0.000	-33.888	-4.585	0.000	4.585	-0.408
110.0	-0.981	-12.172	0.000	0.000	0.000	-29.002	-5.035	0.000	5.035	-0.450
110.0	-0.961	-11.736	0.000	0.000	0.000	-28.949	-5.040	0.000	5.040	-0.451
115.0	-0.952	-11.476	0.000	0.000	0.000	-24.195	-5.528	0.000	5.528	-0.490
118.0	-0.882	-10.273	0.000	0.000	0.000	-21.338	-5.846	0.000	5.846	-0.520
120.0	-0.861	-9.879	0.000	0.000	0.000	-19.575	-6.068	0.000	6.068	-0.539
125.0	-0.850	-9.647	0.000	0.000	0.000	-15.269	-6.657	0.000	6.657	-0.583
128.0	-0.743	-8.142	0.000	0.000	0.000	-12.718	-7.031	0.000	7.031	-0.606
130.0	-0.720	-7.807	0.000	0.000	0.000	-11.232	-7.288	0.000	7.288	-0.621
135.0	-0.707	-7.610	0.000	0.000	0.000	-7.633	-7.955	0.000	7.955	-0.651
138.0	-0.491	-5.049	0.000	0.000	0.000	-5.514	-8.369	0.000	8.369	-0.665
140.0	-0.466	-4.759	0.000	0.000	0.000	-4.531	-8.649	0.000	8.649	-0.673
145.0	-0.440	-4.478	0.000	0.000	0.000	-2.201	-9.363	0.000	9.363	-0.687
150.0	-0.386	0.000	0.000	0.000	0.000	0.000	-10.087	0.000	10.087	-0.693

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:30 PM

Customer: AT&T MOBILITY

**Load Case:** (1.2 + 0.2Sds) \* DL + E E LFM

Seismic Equivalent Lateral Forces Method

25 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.20

Wind Load Factor : 0.00

**Calculated Stresses**

Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)	Allowable Stress (Fa) (ksi)	Stress Ratio
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.9	0.0	0.000
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.2	0.0	0.000
15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.8	0.0	0.000
20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
28.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.4	0.0	0.000
30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.6	0.0	0.000
31.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.8	0.0	0.000
40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.4	0.0	0.000
45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.1	0.0	0.000
50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.9	0.0	0.000
55.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.6	0.0	0.000
60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.3	0.0	0.000
65.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
70.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
73.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.5	0.0	0.000
75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.8	0.0	0.000
80.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.7	0.0	0.000
85.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
90.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
95.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.5	0.0	0.000
98.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
105.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.3	0.0	0.000
110.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.9	0.0	0.000
115.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.1	0.0	0.000
118.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.9	0.0	0.000
120.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.4	0.0	0.000
125.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
128.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.3	0.0	0.000
130.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.8	0.0	0.000
135.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
138.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
140.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.2	0.0	0.000
145.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:31 PM

Customer: AT&T MOBILITY

<b>Load Case:</b> (1.2 + 0.2Sds) * DL + E EMAM	Seismic Equivalent Modal Analysis Method	25 Iterations
Gust Response Factor : 1.10		
Dead Load Factor : 1.20		
Wind Load Factor : 0.00		

**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		0.0	0.0					0.0	0.0	0.0	0.0	0.0	0.0
5.00		0.0	902.1					0.0	439.4	0.0	1,341.6	0.0	0.0
10.00		0.0	882.8					0.0	594.1	0.0	1,476.9	0.0	0.0
15.00		0.0	863.5					0.0	594.1	0.0	1,457.6	0.0	0.0
20.00		0.0	844.2					0.0	594.1	0.0	1,438.3	0.0	0.0
25.00		0.0	824.9					0.0	594.1	0.0	1,419.0	0.0	0.0
28.00	Appertunance(s)	0.0	485.7	0.0	0.0	0.0	72.0	0.0	356.4	0.0	914.1	0.0	0.0
30.00		0.0	319.9					0.0	237.3	0.0	557.2	0.0	0.0
31.50	Bot - Section 2	0.0	238.5					0.0	178.3	0.0	416.8	0.0	0.0
33.00	Appertunance(s)	0.0	436.3	0.0	0.0	0.0	72.0	0.0	177.6	0.0	685.8	0.0	0.0
35.00		0.0	578.1					0.0	236.9	0.0	815.0	0.0	0.0
35.67	Top - Section 1	0.0	192.4					0.0	79.4	0.0	271.7	0.0	0.0
40.00		0.0	564.9					0.0	512.9	0.0	1,077.7	0.0	0.0
45.00		0.0	637.3					0.0	592.3	0.0	1,229.5	0.0	0.0
50.00		0.0	621.2					0.0	592.3	0.0	1,213.4	0.0	0.0
55.00		0.0	605.1					0.0	592.3	0.0	1,197.3	0.0	0.0
60.00		0.0	589.0					0.0	592.3	0.0	1,181.3	0.0	0.0
65.00		0.0	572.9					0.0	592.3	0.0	1,165.2	0.0	0.0
70.00		0.0	556.8					0.0	592.3	0.0	1,149.1	0.0	0.0
70.05	Bot - Section 3	0.0	5.9					0.0	6.3	0.0	12.2	0.0	0.0
73.55	Top - Section 2	0.0	690.6					0.0	414.6	0.0	1,105.2	0.0	0.0
75.00		0.0	126.5					0.0	171.4	0.0	297.9	0.0	0.0
80.00		0.0	429.0					0.0	592.3	0.0	1,021.2	0.0	0.0
85.00		0.0	416.1					0.0	592.3	0.0	1,008.4	0.0	0.0
90.00		0.0	403.2					0.0	592.3	0.0	995.5	0.0	0.0
91.10	Reinf. Top Reinf	0.0	87.0					0.0	130.3	0.0	217.3	0.0	0.0
95.00		0.0	303.4					0.0	462.0	0.0	765.4	0.0	0.0
98.00	Appertunance(s)	0.0	228.1	0.0	0.0	0.0	3,203.4	0.0	355.4	0.0	3,786.8	0.0	0.0
100.00		0.0	149.5					0.0	229.2	0.0	378.6	0.0	0.0
101.79	Reinf. Top	0.0	132.0					0.0	205.1	0.0	337.1	0.0	0.0
105.00		0.0	232.6					0.0	110.5	0.0	343.1	0.0	0.0
110.00		0.0	351.8					0.0	172.1	0.0	523.9	0.0	0.0
110.05	Top - Section 3	0.0	3.7					0.0	1.8	0.0	5.5	0.0	0.0
115.00		0.0	252.2					0.0	170.3	0.0	422.5	0.0	0.0
118.00	Appertunance(s)	0.0	148.3	0.0	0.0	0.0	1,010.6	0.0	103.3	0.0	1,262.3	0.0	0.0
120.00		0.0	97.0					0.0	58.4	0.0	155.3	0.0	0.0
125.00		0.0	235.7					0.0	145.9	0.0	381.6	0.0	0.0
128.00	Appertunance(s)	0.0	136.8	0.0	0.0	0.0	1,326.8	0.0	87.5	0.0	1,551.2	0.0	0.0
130.00		0.0	89.2					0.0	43.4	0.0	132.7	0.0	0.0
135.00		0.0	216.4					0.0	108.6	0.0	325.0	0.0	0.0
138.00	Appertunance(s)	0.0	125.2	0.0	0.0	0.0	2,368.9	0.0	65.2	0.0	2,559.3	0.0	0.0
140.00		0.0	81.5					0.0	33.8	0.0	115.4	0.0	0.0
145.00		0.0	197.1					0.0	84.6	0.0	281.7	0.0	0.0
150.00	Appertunance(s)	0.0	187.4	0.0	0.0	0.0	4,344.8	0.0	84.6	0.0	4,616.9	0.0	0.0
<b>Totals:</b>										0.00	41,609.4	0.00	0.00

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H FR - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:34 PM

Customer: AT&T MOBILITY

<b>Load Case:</b> (1.2 + 0.2Sds) * DL + E EMAM	Seismic Equivalent Modal Analysis Method	25 Iterations
Gust Response Factor : 1.10		
Dead Load Factor : 1.20		
Wind Load Factor : 0.00		

**Calculated Shaft Forces and Deflections**

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-2.110	-41.549	0.000	0.000	0.000	-270.105	0.000	0.000	0.000	0.000
5.00	-2.093	-40.024	0.000	0.000	0.000	-259.557	-0.016	0.000	0.016	-0.030
10.00	-2.066	-38.519	0.000	0.000	0.000	-249.093	-0.063	0.000	0.063	-0.059
15.00	-2.035	-37.034	0.000	0.000	0.000	-238.761	-0.141	0.000	0.141	-0.090
20.00	-2.000	-35.568	0.000	0.000	0.000	-228.589	-0.252	0.000	0.252	-0.120
25.00	-1.982	-34.699	0.000	0.000	0.000	-218.591	-0.394	0.000	0.394	-0.151
28.00	-1.966	-34.049	0.000	0.000	0.000	-212.646	-0.496	0.000	0.496	-0.171
30.00	-1.955	-33.619	0.000	0.000	0.000	-208.715	-0.570	0.000	0.570	-0.183
31.50	-1.935	-32.985	0.000	0.000	0.000	-205.776	-0.629	0.000	0.629	-0.193
33.00	-1.904	-32.070	0.000	0.000	0.000	-202.879	-0.691	0.000	0.691	-0.203
35.00	-1.898	-31.789	0.000	0.000	0.000	-199.071	-0.779	0.000	0.779	-0.216
35.67	-1.860	-30.676	0.000	0.000	0.000	-197.800	-0.809	0.000	0.809	-0.220
40.00	-1.821	-29.407	0.000	0.000	0.000	-189.747	-1.022	0.000	1.022	-0.247
45.00	-1.784	-28.154	0.000	0.000	0.000	-180.641	-1.299	0.000	1.299	-0.282
50.00	-1.746	-26.918	0.000	0.000	0.000	-171.724	-1.612	0.000	1.612	-0.316
55.00	-1.710	-25.698	0.000	0.000	0.000	-162.995	-1.962	0.000	1.962	-0.351
60.00	-1.679	-24.495	0.000	0.000	0.000	-154.445	-2.348	0.000	2.348	-0.386
65.00	-1.657	-23.309	0.000	0.000	0.000	-146.049	-2.770	0.000	2.770	-0.421
70.00	-1.664	-23.296	0.000	0.000	0.000	-137.764	-3.230	0.000	3.230	-0.456
70.05	-1.643	-22.155	0.000	0.000	0.000	-137.676	-3.235	0.000	3.235	-0.457
73.55	-1.645	-21.847	0.000	0.000	0.000	-131.926	-3.580	0.000	3.580	-0.482
75.00	-1.645	-20.793	0.000	0.000	0.000	-129.547	-3.727	0.000	3.727	-0.492
80.00	-1.664	-19.751	0.000	0.000	0.000	-121.322	-4.263	0.000	4.263	-0.530
85.00	-1.694	-18.723	0.000	0.000	0.000	-113.002	-4.839	0.000	4.839	-0.568
90.00	-1.706	-18.498	0.000	0.000	0.000	-104.531	-5.453	0.000	5.453	-0.605
91.10	-1.732	-17.707	0.000	0.000	0.000	-102.654	-5.593	0.000	5.593	-0.613
95.00	-1.756	-17.104	0.000	0.000	0.000	-95.899	-6.107	0.000	6.107	-0.642
98.00	-1.861	-13.406	0.000	0.000	0.000	-90.631	-6.517	0.000	6.517	-0.664
100.0	-1.873	-13.058	0.000	0.000	0.000	-86.910	-6.799	0.000	6.799	-0.679
101.7	-1.885	-12.703	0.000	0.000	0.000	-83.558	-7.055	0.000	7.055	-0.691
105.0	-1.907	-12.161	0.000	0.000	0.000	-77.507	-7.528	0.000	7.528	-0.714
110.0	-1.917	-12.153	0.000	0.000	0.000	-67.974	-8.328	0.000	8.328	-0.811
110.0	-1.928	-11.716	0.000	0.000	0.000	-67.872	-8.337	0.000	8.337	-0.812
115.0	-1.941	-11.453	0.000	0.000	0.000	-58.337	-9.228	0.000	9.228	-0.905
118.0	-1.926	-10.248	0.000	0.000	0.000	-52.515	-9.821	0.000	9.821	-0.979
120.0	-1.923	-9.852	0.000	0.000	0.000	-48.664	-10.242	0.000	10.242	-1.027
125.0	-1.921	-9.618	0.000	0.000	0.000	-39.051	-11.377	0.000	11.377	-1.136
128.0	-1.810	-8.113	0.000	0.000	0.000	-33.288	-12.110	0.000	12.110	-1.197
130.0	-1.781	-7.776	0.000	0.000	0.000	-29.669	-12.620	0.000	12.620	-1.235
135.0	-1.761	-7.579	0.000	0.000	0.000	-20.763	-13.958	0.000	13.958	-1.316
138.0	-1.364	-5.023	0.000	0.000	0.000	-15.479	-14.798	0.000	14.798	-1.355
140.0	-1.309	-4.733	0.000	0.000	0.000	-12.752	-15.371	0.000	15.371	-1.378
145.0	-1.241	-4.454	0.000	0.000	0.000	-6.207	-16.837	0.000	16.837	-1.418
150.0	-1.130	0.000	0.000	0.000	0.000	0.000	-18.333	0.000	18.333	-1.433



Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:34 PM

Customer: AT&T MOBILITY

Load Case: (1.2 + 0.2Sds) \* DL + E EMAM

Seismic Equivalent Modal Analysis Method

25 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.20

Wind Load Factor : 0.00

Calculated Stresses

Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)	Allowable Stress (Fa) (ksi)	Stress Ratio
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.9	0.0	0.000
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.2	0.0	0.000
15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.8	0.0	0.000
20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
28.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.4	0.0	0.000
30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.6	0.0	0.000
31.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.8	0.0	0.000
40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.4	0.0	0.000
45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.1	0.0	0.000
50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.9	0.0	0.000
55.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.6	0.0	0.000
60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.3	0.0	0.000
65.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
70.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
73.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.5	0.0	0.000
75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.8	0.0	0.000
80.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.7	0.0	0.000
85.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
90.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
95.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.5	0.0	0.000
98.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
105.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.3	0.0	0.000
110.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.9	0.0	0.000
115.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.1	0.0	0.000
118.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.9	0.0	0.000
120.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.4	0.0	0.000
125.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
128.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.3	0.0	0.000
130.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.8	0.0	0.000
135.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
138.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
140.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.2	0.0	0.000
145.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:34 PM

Customer: AT&T MOBILITY

<b>Load Case:</b> (0.9 - 0.2Sds) * DL + E E LFM	Seismic (Reduced DL) Equivalent Lateral Forces Method	24 Iterations
Gust Response Factor : 1.10		
Dead Load Factor : 0.90		
Wind Load Factor : 0.00		

**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		0.0	0.0					0.0	0.0	0.0	0.0	0.0	0.0
5.00		0.0	676.6					0.0	329.6	0.0	1,006.2	0.0	0.0
10.00		0.0	662.1					0.0	445.5	0.0	1,107.7	0.0	0.0
15.00		0.0	647.7					0.0	445.5	0.0	1,093.2	0.0	0.0
20.00		0.0	633.2					0.0	445.5	0.0	1,078.7	0.0	0.0
25.00		0.0	618.7					0.0	445.5	0.0	1,064.3	0.0	0.0
28.00	Appertunance(s)	0.0	364.3	0.0	0.0	0.0	54.0	0.0	267.3	0.0	685.6	0.0	0.0
30.00		0.0	240.0					0.0	177.9	0.0	417.9	0.0	0.0
31.50	Bot - Section 2	0.0	178.8					0.0	133.8	0.0	312.6	0.0	0.0
33.00	Appertunance(s)	0.0	327.2	0.0	0.0	0.0	54.0	0.0	133.2	0.0	514.4	0.0	0.0
35.00		0.0	433.5					0.0	177.7	0.0	611.2	0.0	0.0
35.67	Top - Section 1	0.0	144.3					0.0	59.5	0.0	203.8	0.0	0.0
40.00		0.0	423.6					0.0	384.7	0.0	808.3	0.0	0.0
45.00		0.0	477.9					0.0	444.2	0.0	922.1	0.0	0.0
50.00		0.0	465.9					0.0	444.2	0.0	910.1	0.0	0.0
55.00		0.0	453.8					0.0	444.2	0.0	898.0	0.0	0.0
60.00		0.0	441.8					0.0	444.2	0.0	885.9	0.0	0.0
65.00		0.0	429.7					0.0	444.2	0.0	873.9	0.0	0.0
70.00		0.0	417.6					0.0	444.2	0.0	861.8	0.0	0.0
70.05	Bot - Section 3	0.0	4.4					0.0	4.7	0.0	9.1	0.0	0.0
73.55	Top - Section 2	0.0	518.0					0.0	310.9	0.0	828.9	0.0	0.0
75.00		0.0	94.9					0.0	128.5	0.0	223.4	0.0	0.0
80.00		0.0	321.7					0.0	444.2	0.0	765.9	0.0	0.0
85.00		0.0	312.1					0.0	444.2	0.0	756.3	0.0	0.0
90.00		0.0	302.4					0.0	444.2	0.0	746.6	0.0	0.0
91.10	Reinf. Top Reinf	0.0	65.2					0.0	97.7	0.0	163.0	0.0	0.0
95.00		0.0	227.5					0.0	346.5	0.0	574.0	0.0	0.0
98.00	Appertunance(s)	0.0	171.0	0.0	0.0	0.0	2,402.5	0.0	266.5	0.0	2,840.1	0.0	0.0
100.00		0.0	112.1					0.0	171.9	0.0	284.0	0.0	0.0
101.79	Reinf. Top	0.0	99.0					0.0	153.8	0.0	252.9	0.0	0.0
105.00		0.0	174.5					0.0	82.9	0.0	257.4	0.0	0.0
110.00		0.0	263.8					0.0	129.1	0.0	392.9	0.0	0.0
110.05	Top - Section 3	0.0	2.8					0.0	1.4	0.0	4.1	0.0	0.0
115.00		0.0	189.1					0.0	127.7	0.0	316.9	0.0	0.0
118.00	Appertunance(s)	0.0	111.3	0.0	0.0	0.0	758.0	0.0	77.5	0.0	946.7	0.0	0.0
120.00		0.0	72.7					0.0	43.8	0.0	116.5	0.0	0.0
125.00		0.0	176.7					0.0	109.4	0.0	286.2	0.0	0.0
128.00	Appertunance(s)	0.0	102.6	0.0	0.0	0.0	995.1	0.0	65.7	0.0	1,163.4	0.0	0.0
130.00		0.0	66.9					0.0	32.6	0.0	99.5	0.0	0.0
135.00		0.0	162.3					0.0	81.4	0.0	243.7	0.0	0.0
138.00	Appertunance(s)	0.0	93.9	0.0	0.0	0.0	1,776.7	0.0	48.9	0.0	1,919.4	0.0	0.0
140.00		0.0	61.1					0.0	25.4	0.0	86.5	0.0	0.0
145.00		0.0	147.8					0.0	63.4	0.0	211.2	0.0	0.0
150.00	Appertunance(s)	0.0	140.6	0.0	0.0	0.0	3,258.6	0.0	63.4	0.0	3,462.6	0.0	0.0
<b>Totals:</b>										0.00	31,207.0	0.00	0.00

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H FR - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:37 PM

Customer: AT&T MOBILITY

<b>Load Case:</b> (0.9 - 0.2Sds) * DL + E E LFM	Seismic (Reduced DL) Equivalent Lateral Forces Method	24 Iterations
Gust Response Factor : 1.10		
Dead Load Factor : 0.90		
Wind Load Factor : 0.00		

**Calculated Shaft Forces and Deflections**

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-1.356	-28.919	0.000	0.000	0.000	-169.296	0.000	0.000	0.000	0.000
5.00	-1.364	-27.858	0.000	0.000	0.000	-162.518	-0.010	0.000	0.010	-0.019
10.00	-1.372	-26.811	0.000	0.000	0.000	-155.697	-0.039	0.000	0.039	-0.037
15.00	-1.378	-25.777	0.000	0.000	0.000	-148.839	-0.088	0.000	0.088	-0.056
20.00	-1.382	-24.758	0.000	0.000	0.000	-141.952	-0.157	0.000	0.157	-0.075
25.00	-1.385	-24.153	0.000	0.000	0.000	-135.043	-0.246	0.000	0.246	-0.094
28.00	-1.386	-23.701	0.000	0.000	0.000	-130.887	-0.310	0.000	0.310	-0.106
30.00	-1.387	-23.401	0.000	0.000	0.000	-128.115	-0.356	0.000	0.356	-0.114
31.50	-1.386	-22.960	0.000	0.000	0.000	-126.030	-0.393	0.000	0.393	-0.120
33.00	-1.383	-22.323	0.000	0.000	0.000	-123.955	-0.431	0.000	0.431	-0.126
35.00	-1.384	-22.128	0.000	0.000	0.000	-121.189	-0.486	0.000	0.486	-0.134
35.67	-1.379	-21.353	0.000	0.000	0.000	-120.262	-0.505	0.000	0.505	-0.136
40.00	-1.375	-20.470	0.000	0.000	0.000	-114.290	-0.636	0.000	0.636	-0.153
45.00	-1.369	-19.598	0.000	0.000	0.000	-107.416	-0.808	0.000	0.808	-0.174
50.00	-1.359	-18.738	0.000	0.000	0.000	-100.574	-1.000	0.000	1.000	-0.194
55.00	-1.347	-17.889	0.000	0.000	0.000	-93.777	-1.214	0.000	1.214	-0.214
60.00	-1.332	-17.052	0.000	0.000	0.000	-87.041	-1.449	0.000	1.449	-0.234
65.00	-1.313	-16.226	0.000	0.000	0.000	-80.382	-1.704	0.000	1.704	-0.254
70.00	-1.316	-16.217	0.000	0.000	0.000	-73.817	-1.980	0.000	1.980	-0.273
70.05	-1.291	-15.423	0.000	0.000	0.000	-73.747	-1.983	0.000	1.983	-0.273
73.55	-1.286	-15.209	0.000	0.000	0.000	-69.228	-2.189	0.000	2.189	-0.286
75.00	-1.261	-14.476	0.000	0.000	0.000	-67.367	-2.276	0.000	2.276	-0.292
80.00	-1.235	-13.751	0.000	0.000	0.000	-61.060	-2.592	0.000	2.592	-0.311
85.00	-1.205	-13.036	0.000	0.000	0.000	-54.885	-2.928	0.000	2.928	-0.330
90.00	-1.200	-12.880	0.000	0.000	0.000	-48.859	-3.283	0.000	3.283	-0.347
91.10	-1.172	-12.330	0.000	0.000	0.000	-47.540	-3.364	0.000	3.364	-0.351
95.00	-1.150	-11.911	0.000	0.000	0.000	-42.969	-3.657	0.000	3.657	-0.364
98.00	-0.999	-9.339	0.000	0.000	0.000	-39.519	-3.889	0.000	3.889	-0.374
100.0	-0.985	-9.097	0.000	0.000	0.000	-37.521	-4.047	0.000	4.047	-0.381
101.7	-0.970	-8.851	0.000	0.000	0.000	-35.758	-4.191	0.000	4.191	-0.386
105.0	-0.947	-8.474	0.000	0.000	0.000	-32.646	-4.454	0.000	4.454	-0.396
110.0	-0.950	-8.470	0.000	0.000	0.000	-27.911	-4.890	0.000	4.890	-0.436
110.0	-0.929	-8.167	0.000	0.000	0.000	-27.860	-4.895	0.000	4.895	-0.436
115.0	-0.919	-7.985	0.000	0.000	0.000	-23.264	-5.367	0.000	5.367	-0.474
118.0	-0.851	-7.148	0.000	0.000	0.000	-20.507	-5.675	0.000	5.675	-0.503
120.0	-0.829	-6.874	0.000	0.000	0.000	-18.806	-5.890	0.000	5.890	-0.522
125.0	-0.817	-6.713	0.000	0.000	0.000	-14.661	-6.459	0.000	6.459	-0.563
128.0	-0.714	-5.665	0.000	0.000	0.000	-12.209	-6.821	0.000	6.821	-0.586
130.0	-0.691	-5.432	0.000	0.000	0.000	-10.781	-7.069	0.000	7.069	-0.600
135.0	-0.678	-5.295	0.000	0.000	0.000	-7.325	-7.714	0.000	7.714	-0.629
138.0	-0.472	-3.513	0.000	0.000	0.000	-5.292	-8.114	0.000	8.114	-0.643
140.0	-0.447	-3.311	0.000	0.000	0.000	-4.349	-8.385	0.000	8.385	-0.650
145.0	-0.422	-3.116	0.000	0.000	0.000	-2.112	-9.074	0.000	9.074	-0.664
150.0	-0.386	0.000	0.000	0.000	0.000	0.000	-9.773	0.000	9.773	-0.669

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:37 PM

Customer: AT&T MOBILITY

**Load Case:** (0.9 - 0.2Sds) \* DL + E E LFM      Seismic (Reduced DL) Equivalent Lateral Forces Method      24 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 0.90

Wind Load Factor : 0.00

**Calculated Stresses**

Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)	Allowable Stress (Fa) (ksi)	Stress Ratio
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.9	0.0	0.000
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.2	0.0	0.000
15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.8	0.0	0.000
20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
28.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.4	0.0	0.000
30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.6	0.0	0.000
31.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.8	0.0	0.000
40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.4	0.0	0.000
45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.1	0.0	0.000
50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.9	0.0	0.000
55.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.6	0.0	0.000
60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.3	0.0	0.000
65.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
70.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
73.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.5	0.0	0.000
75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.8	0.0	0.000
80.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.7	0.0	0.000
85.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
90.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
95.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.5	0.0	0.000
98.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
105.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.3	0.0	0.000
110.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.9	0.0	0.000
115.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.1	0.0	0.000
118.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.9	0.0	0.000
120.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.4	0.0	0.000
125.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
128.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.3	0.0	0.000
130.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.8	0.0	0.000
135.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
138.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
140.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.2	0.0	0.000
145.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:38 PM

Customer: AT&T MOBILITY

<b>Load Case:</b> (0.9 - 0.2Sds) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method	25 Iterations
Gust Response Factor : 1.10		
Dead Load Factor : 0.90		
Wind Load Factor : 0.00		

**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		0.0	0.0					0.0	0.0	0.0	0.0	0.0	0.0
5.00		0.0	676.6					0.0	329.6	0.0	1,006.2	0.0	0.0
10.00		0.0	662.1					0.0	445.5	0.0	1,107.7	0.0	0.0
15.00		0.0	647.7					0.0	445.5	0.0	1,093.2	0.0	0.0
20.00		0.0	633.2					0.0	445.5	0.0	1,078.7	0.0	0.0
25.00		0.0	618.7					0.0	445.5	0.0	1,064.3	0.0	0.0
28.00	Appertunance(s)	0.0	364.3	0.0	0.0	0.0	54.0	0.0	267.3	0.0	685.6	0.0	0.0
30.00		0.0	240.0					0.0	177.9	0.0	417.9	0.0	0.0
31.50	Bot - Section 2	0.0	178.8					0.0	133.8	0.0	312.6	0.0	0.0
33.00	Appertunance(s)	0.0	327.2	0.0	0.0	0.0	54.0	0.0	133.2	0.0	514.4	0.0	0.0
35.00		0.0	433.5					0.0	177.7	0.0	611.2	0.0	0.0
35.67	Top - Section 1	0.0	144.3					0.0	59.5	0.0	203.8	0.0	0.0
40.00		0.0	423.6					0.0	384.7	0.0	808.3	0.0	0.0
45.00		0.0	477.9					0.0	444.2	0.0	922.1	0.0	0.0
50.00		0.0	465.9					0.0	444.2	0.0	910.1	0.0	0.0
55.00		0.0	453.8					0.0	444.2	0.0	898.0	0.0	0.0
60.00		0.0	441.8					0.0	444.2	0.0	885.9	0.0	0.0
65.00		0.0	429.7					0.0	444.2	0.0	873.9	0.0	0.0
70.00		0.0	417.6					0.0	444.2	0.0	861.8	0.0	0.0
70.05	Bot - Section 3	0.0	4.4					0.0	4.7	0.0	9.1	0.0	0.0
73.55	Top - Section 2	0.0	518.0					0.0	310.9	0.0	828.9	0.0	0.0
75.00		0.0	94.9					0.0	128.5	0.0	223.4	0.0	0.0
80.00		0.0	321.7					0.0	444.2	0.0	765.9	0.0	0.0
85.00		0.0	312.1					0.0	444.2	0.0	756.3	0.0	0.0
90.00		0.0	302.4					0.0	444.2	0.0	746.6	0.0	0.0
91.10	Reinf. Top Reinf	0.0	65.2					0.0	97.7	0.0	163.0	0.0	0.0
95.00		0.0	227.5					0.0	346.5	0.0	574.0	0.0	0.0
98.00	Appertunance(s)	0.0	171.0	0.0	0.0	0.0	2,402.5	0.0	266.5	0.0	2,840.1	0.0	0.0
100.00		0.0	112.1					0.0	171.9	0.0	284.0	0.0	0.0
101.79	Reinf. Top	0.0	99.0					0.0	153.8	0.0	252.9	0.0	0.0
105.00		0.0	174.5					0.0	82.9	0.0	257.4	0.0	0.0
110.00		0.0	263.8					0.0	129.1	0.0	392.9	0.0	0.0
110.05	Top - Section 3	0.0	2.8					0.0	1.4	0.0	4.1	0.0	0.0
115.00		0.0	189.1					0.0	127.7	0.0	316.9	0.0	0.0
118.00	Appertunance(s)	0.0	111.3	0.0	0.0	0.0	758.0	0.0	77.5	0.0	946.7	0.0	0.0
120.00		0.0	72.7					0.0	43.8	0.0	116.5	0.0	0.0
125.00		0.0	176.7					0.0	109.4	0.0	286.2	0.0	0.0
128.00	Appertunance(s)	0.0	102.6	0.0	0.0	0.0	995.1	0.0	65.7	0.0	1,163.4	0.0	0.0
130.00		0.0	66.9					0.0	32.6	0.0	99.5	0.0	0.0
135.00		0.0	162.3					0.0	81.4	0.0	243.7	0.0	0.0
138.00	Appertunance(s)	0.0	93.9	0.0	0.0	0.0	1,776.7	0.0	48.9	0.0	1,919.4	0.0	0.0
140.00		0.0	61.1					0.0	25.4	0.0	86.5	0.0	0.0
145.00		0.0	147.8					0.0	63.4	0.0	211.2	0.0	0.0
150.00	Appertunance(s)	0.0	140.6	0.0	0.0	0.0	3,258.6	0.0	63.4	0.0	3,462.6	0.0	0.0
<b>Totals:</b>										0.00	31,207.0	0.00	0.00

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H FR - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:41 PM

Customer: AT&T MOBILITY

**Load Case:** (0.9 - 0.2Sds) \* DL + E EMAM      Seismic (Reduced DL) Equivalent Modal Analysis Method      25 Iterations

Gust Response Factor : 1.10  
Dead Load Factor : 0.90  
Wind Load Factor : 0.00

**Calculated Shaft Forces and Deflections**

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-2.106	-28.919	0.000	0.000	0.000	-263.173	0.000	0.000	0.000	0.000
5.00	-2.083	-27.857	0.000	0.000	0.000	-252.642	-0.015	0.000	0.015	-0.029
10.00	-2.050	-26.809	0.000	0.000	0.000	-242.227	-0.061	0.000	0.061	-0.058
15.00	-2.013	-25.775	0.000	0.000	0.000	-231.976	-0.137	0.000	0.137	-0.087
20.00	-1.973	-24.755	0.000	0.000	0.000	-221.913	-0.245	0.000	0.245	-0.117
25.00	-1.950	-24.150	0.000	0.000	0.000	-212.051	-0.384	0.000	0.384	-0.147
28.00	-1.932	-23.697	0.000	0.000	0.000	-206.200	-0.482	0.000	0.482	-0.166
30.00	-1.920	-23.398	0.000	0.000	0.000	-202.337	-0.554	0.000	0.554	-0.178
31.50	-1.898	-22.957	0.000	0.000	0.000	-199.451	-0.612	0.000	0.612	-0.188
33.00	-1.866	-22.320	0.000	0.000	0.000	-196.610	-0.672	0.000	0.672	-0.197
35.00	-1.858	-22.124	0.000	0.000	0.000	-192.877	-0.757	0.000	0.757	-0.209
35.67	-1.819	-21.350	0.000	0.000	0.000	-191.632	-0.787	0.000	0.787	-0.214
40.00	-1.777	-20.466	0.000	0.000	0.000	-183.755	-0.993	0.000	0.993	-0.240
45.00	-1.736	-19.594	0.000	0.000	0.000	-174.868	-1.262	0.000	1.262	-0.273
50.00	-1.695	-18.733	0.000	0.000	0.000	-166.188	-1.566	0.000	1.566	-0.307
55.00	-1.657	-17.884	0.000	0.000	0.000	-157.713	-1.905	0.000	1.905	-0.340
60.00	-1.623	-17.047	0.000	0.000	0.000	-149.431	-2.280	0.000	2.280	-0.374
65.00	-1.599	-16.221	0.000	0.000	0.000	-141.315	-2.690	0.000	2.690	-0.408
70.00	-1.603	-16.211	0.000	0.000	0.000	-133.320	-3.135	0.000	3.135	-0.443
70.05	-1.584	-15.417	0.000	0.000	0.000	-133.235	-3.140	0.000	3.140	-0.443
73.55	-1.584	-15.203	0.000	0.000	0.000	-127.691	-3.474	0.000	3.474	-0.467
75.00	-1.585	-14.469	0.000	0.000	0.000	-125.399	-3.617	0.000	3.617	-0.477
80.00	-1.603	-13.744	0.000	0.000	0.000	-117.476	-4.137	0.000	4.137	-0.514
85.00	-1.632	-13.028	0.000	0.000	0.000	-109.463	-4.694	0.000	4.694	-0.550
90.00	-1.642	-12.871	0.000	0.000	0.000	-101.305	-5.290	0.000	5.290	-0.586
91.10	-1.669	-12.320	0.000	0.000	0.000	-99.498	-5.426	0.000	5.426	-0.594
95.00	-1.693	-11.900	0.000	0.000	0.000	-92.989	-5.923	0.000	5.923	-0.622
98.00	-1.809	-9.326	0.000	0.000	0.000	-87.911	-6.321	0.000	6.321	-0.644
100.0	-1.822	-9.083	0.000	0.000	0.000	-84.292	-6.594	0.000	6.594	-0.658
101.7	-1.834	-8.836	0.000	0.000	0.000	-81.031	-6.843	0.000	6.843	-0.670
105.0	-1.854	-8.458	0.000	0.000	0.000	-75.143	-7.301	0.000	7.301	-0.692
110.0	-1.861	-8.452	0.000	0.000	0.000	-65.873	-8.077	0.000	8.077	-0.786
110.0	-1.870	-8.147	0.000	0.000	0.000	-65.774	-8.085	0.000	8.085	-0.787
115.0	-1.879	-7.964	0.000	0.000	0.000	-56.522	-8.949	0.000	8.949	-0.878
118.0	-1.867	-7.125	0.000	0.000	0.000	-50.885	-9.524	0.000	9.524	-0.949
120.0	-1.862	-6.849	0.000	0.000	0.000	-47.150	-9.931	0.000	9.931	-0.995
125.0	-1.857	-6.685	0.000	0.000	0.000	-37.842	-11.031	0.000	11.031	-1.101
128.0	-1.753	-5.637	0.000	0.000	0.000	-32.270	-11.742	0.000	11.742	-1.160
130.0	-1.725	-5.403	0.000	0.000	0.000	-28.763	-12.236	0.000	12.236	-1.197
135.0	-1.703	-5.265	0.000	0.000	0.000	-20.140	-13.534	0.000	13.534	-1.275
138.0	-1.324	-3.488	0.000	0.000	0.000	-15.030	-14.348	0.000	14.348	-1.314
140.0	-1.271	-3.287	0.000	0.000	0.000	-12.382	-14.903	0.000	14.903	-1.335
145.0	-1.205	-3.092	0.000	0.000	0.000	-6.026	-16.324	0.000	16.324	-1.374
150.0	-1.130	0.000	0.000	0.000	0.000	0.000	-17.774	0.000	17.774	-1.389

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:41 PM

Customer: AT&T MOBILITY

**Load Case:** (0.9 - 0.2Sds) \* DL + E EMAM      Seismic (Reduced DL) Equivalent Modal Analysis Method      25 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 0.90

Wind Load Factor : 0.00

**Calculated Stresses**

Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)	Allowable Stress (Fa) (ksi)	Stress Ratio
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.9	0.0	0.000
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.2	0.0	0.000
15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.8	0.0	0.000
20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
28.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.4	0.0	0.000
30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.6	0.0	0.000
31.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.8	0.0	0.000
40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.4	0.0	0.000
45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.1	0.0	0.000
50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.9	0.0	0.000
55.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.6	0.0	0.000
60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.3	0.0	0.000
65.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
70.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
73.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.5	0.0	0.000
75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.8	0.0	0.000
80.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.7	0.0	0.000
85.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
90.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
95.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.5	0.0	0.000
98.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
105.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.3	0.0	0.000
110.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.9	0.0	0.000
115.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.1	0.0	0.000
118.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.9	0.0	0.000
120.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.4	0.0	0.000
125.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
128.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.3	0.0	0.000
130.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.8	0.0	0.000
135.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
138.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
140.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.2	0.0	0.000
145.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E HFR - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:41 PM

Customer: AT&T MOBILITY

**Load Case:** 1.0D + 1.0W

Serviceability 60 mph

26 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.00

Wind Load Factor : 1.00

**Applied Segment Forces Summary**

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion Moment MY (lb-ft)	MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion Moment MY (lb-ft)	Moment MZ (lb)
0.00		53.8	0.0					0.0	0.0	53.8	0.0	0.0	0.0
5.00		116.9	751.8					0.0	366.2	116.9	1,118.0	0.0	0.0
10.00		124.9	735.7					27.0	495.0	151.9	1,230.8	0.0	0.0
15.00		122.2	719.6					27.0	495.0	149.1	1,214.7	0.0	0.0
20.00		119.4	703.5					27.0	495.0	146.4	1,198.6	0.0	0.0
25.00		93.8	687.5					27.0	495.0	120.8	1,182.5	0.0	0.0
28.00	Appertunance(s)	57.7	404.8	16.5	0.0	0.0	60.0	16.2	297.0	90.4	761.8	0.0	0.0
30.00		40.1	266.6					10.8	197.7	50.9	464.3	0.0	0.0
31.50	Bot - Section 2	34.8	198.7					8.2	148.6	43.0	347.3	0.0	0.0
33.00	Appertunance(s)	41.2	363.6	17.0	0.0	0.0	60.0	8.2	148.0	66.5	571.5	0.0	0.0
35.00		31.6	481.7					11.2	197.4	42.8	679.1	0.0	0.0
35.67	Top - Section 1	59.8	160.3					3.8	66.1	63.6	226.5	0.0	0.0
40.00		112.2	470.7					25.0	427.4	137.2	898.1	0.0	0.0
45.00		121.3	531.0					29.8	493.5	151.1	1,024.6	0.0	0.0
50.00		121.8	517.6					30.8	493.5	152.6	1,011.2	0.0	0.0
55.00		121.9	504.2					31.7	493.5	153.6	997.8	0.0	0.0
60.00		121.7	490.8					32.5	493.5	154.2	984.4	0.0	0.0
65.00		121.1	477.4					33.3	493.5	154.4	971.0	0.0	0.0
70.00		61.0	464.0					34.0	493.5	95.0	957.6	0.0	0.0
70.05	Bot - Section 3	43.4	4.9					0.4	5.3	43.7	10.1	0.0	0.0
73.55	Top - Section 2	60.3	575.5					24.2	345.5	84.6	921.0	0.0	0.0
75.00		77.9	105.4					10.1	142.8	88.0	248.2	0.0	0.0
80.00		120.0	357.5					35.4	493.5	155.4	851.0	0.0	0.0
85.00		118.4	346.8					36.0	493.5	154.4	840.3	0.0	0.0
90.00		71.6	336.0					36.6	493.5	108.2	829.6	0.0	0.0
91.10	Reinf. Top Reinf	57.8	72.5					8.1	108.6	66.0	181.1	0.0	0.0
95.00		79.2	252.8					29.1	385.0	108.3	637.8	0.0	0.0
98.00	Appertunance(s)	56.8	190.0	609.1	0.0	0.0	2,669.5	22.6	296.1	688.5	3,155.7	0.0	0.0
100.00		42.6	124.6					15.2	191.0	57.8	315.5	0.0	0.0
101.79	Reinf. Top	55.7	110.0					13.7	170.9	69.3	280.9	0.0	0.0
105.00		81.0	193.9					24.7	92.1	105.7	285.9	0.0	0.0
110.00		45.9	293.2					0.0	143.4	45.9	436.6	0.0	0.0
110.05	Top - Section 3	44.3	3.1					0.0	1.5	44.3	4.6	0.0	0.0
115.00		69.9	210.2					0.0	141.9	69.9	352.1	0.0	0.0
118.00	Appertunance(s)	43.2	123.6	309.9	0.0	-558.1	842.2	0.0	86.1	353.1	1,051.9	0.0	0.0
120.00		59.1	80.8					0.0	48.6	59.1	129.4	0.0	0.0
125.00		66.6	196.4					0.0	121.6	66.6	318.0	0.0	0.0
128.00	Appertunance(s)	40.8	114.0	295.2	0.0	208.4	1,105.7	0.0	73.0	336.0	1,292.6	0.0	0.0
130.00		55.6	74.4					0.0	36.2	55.6	110.6	0.0	0.0
135.00		62.5	180.3					0.0	90.5	62.5	270.8	0.0	0.0
138.00	Appertunance(s)	38.1	104.3	559.6	0.0	-1,628.1	1,974.1	0.0	54.3	597.7	2,132.7	0.0	0.0
140.00		51.8	67.9					0.0	28.2	51.8	96.1	0.0	0.0
145.00		72.0	164.2					0.0	70.5	72.0	234.7	0.0	0.0
150.00	Appertunance(s)	35.3	156.2	1,019.4	0.0	1,504.8	3,620.7	0.0	70.5	1,054.7	3,847.4	0.0	0.0
<b>Totals:</b>										6,693.15	34,674.5	0.00	0.00



Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E HFR - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:44 PM

Customer: AT&T MOBILITY

**Load Case: 1.0D + 1.0W**

Serviceability 60 mph

26 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.00

Wind Load Factor : 1.00

**Calculated Shaft Forces and Deflections**

Seg Elev (ft)	Lateral FX (-) (kips)	Axial FY (-) (kips)	Lateral FZ (kips)	Moment MX (ft-kips)	Torsion MY (ft-kips)	Moment MZ (ft-kips)	X Deflect (in)	Z Deflect (in)	Total Deflect (in)	Rotation (deg)
0.00	-6.661	-34.670	0.000	0.000	0.000	-665.109	0.000	0.000	0.000	0.000
5.00	-6.586	-33.544	0.000	0.000	0.000	-631.803	-0.039	0.000	0.039	-0.072
10.00	-6.473	-32.305	0.000	0.000	0.000	-598.874	-0.153	0.000	0.153	-0.145
15.00	-6.359	-31.083	0.000	0.000	0.000	-566.512	-0.344	0.000	0.344	-0.217
20.00	-6.245	-29.877	0.000	0.000	0.000	-534.719	-0.610	0.000	0.610	-0.289
25.00	-6.146	-28.689	0.000	0.000	0.000	-503.496	-0.952	0.000	0.952	-0.362
28.00	-6.068	-27.924	0.000	0.000	0.000	-485.058	-1.193	0.000	1.193	-0.405
30.00	-6.026	-27.458	0.000	0.000	0.000	-472.921	-1.369	0.000	1.369	-0.434
31.50	-5.991	-27.109	0.000	0.000	0.000	-463.862	-1.510	0.000	1.510	-0.456
33.00	-5.932	-26.535	0.000	0.000	0.000	-454.896	-1.656	0.000	1.656	-0.478
35.00	-5.891	-25.854	0.000	0.000	0.000	-443.033	-1.863	0.000	1.863	-0.507
35.67	-5.842	-25.625	0.000	0.000	0.000	-439.086	-1.935	0.000	1.935	-0.516
40.00	-5.725	-24.721	0.000	0.000	0.000	-413.791	-2.431	0.000	2.431	-0.577
45.00	-5.593	-23.691	0.000	0.000	0.000	-385.167	-3.075	0.000	3.075	-0.650
50.00	-5.457	-22.675	0.000	0.000	0.000	-357.202	-3.795	0.000	3.795	-0.723
55.00	-5.317	-21.673	0.000	0.000	0.000	-329.918	-4.591	0.000	4.591	-0.794
60.00	-5.173	-20.685	0.000	0.000	0.000	-303.335	-5.460	0.000	5.460	-0.864
65.00	-5.027	-19.710	0.000	0.000	0.000	-277.469	-6.402	0.000	6.402	-0.932
70.00	-4.926	-18.752	0.000	0.000	0.000	-252.335	-7.414	0.000	7.414	-0.998
70.05	-4.890	-18.740	0.000	0.000	0.000	-252.073	-7.425	0.000	7.425	-0.999
73.55	-4.799	-17.818	0.000	0.000	0.000	-234.957	-8.175	0.000	8.175	-1.045
75.00	-4.719	-17.568	0.000	0.000	0.000	-228.015	-8.495	0.000	8.495	-1.063
80.00	-4.566	-16.715	0.000	0.000	0.000	-204.418	-9.643	0.000	9.643	-1.128
85.00	-4.412	-15.874	0.000	0.000	0.000	-181.586	-10.859	0.000	10.859	-1.190
90.00	-4.295	-15.044	0.000	0.000	0.000	-159.529	-12.137	0.000	12.137	-1.248
91.10	-4.232	-14.862	0.000	0.000	0.000	-154.804	-12.426	0.000	12.426	-1.261
95.00	-4.119	-14.225	0.000	0.000	0.000	-138.298	-13.474	0.000	13.474	-1.304
98.00	-3.363	-11.084	0.000	0.000	0.000	-125.942	-14.304	0.000	14.304	-1.335
100.0	-3.301	-10.769	0.000	0.000	0.000	-119.216	-14.867	0.000	14.867	-1.355
101.7	-3.230	-10.488	0.000	0.000	0.000	-113.308	-15.379	0.000	15.379	-1.372
105.0	-3.131	-10.201	0.000	0.000	0.000	-102.941	-16.312	0.000	16.312	-1.402
110.0	-3.085	-9.762	0.000	0.000	0.000	-87.285	-17.849	0.000	17.849	-1.529
110.0	-3.051	-9.755	0.000	0.000	0.000	-87.120	-17.866	0.000	17.866	-1.531
115.0	-2.988	-9.400	0.000	0.000	0.000	-72.029	-19.516	0.000	19.516	-1.648
118.0	-2.615	-8.356	0.000	0.000	0.000	-63.064	-20.580	0.000	20.580	-1.738
120.0	-2.565	-8.224	0.000	0.000	0.000	-57.835	-21.321	0.000	21.321	-1.795
125.0	-2.502	-7.904	0.000	0.000	0.000	-45.008	-23.271	0.000	23.271	-1.923
128.0	-2.128	-6.622	0.000	0.000	0.000	-37.294	-24.502	0.000	24.502	-1.993
130.0	-2.077	-6.511	0.000	0.000	0.000	-33.038	-25.346	0.000	25.346	-2.035
135.0	-2.011	-6.240	0.000	0.000	0.000	-22.655	-27.527	0.000	27.527	-2.124
138.0	-1.337	-4.130	0.000	0.000	0.000	-16.621	-28.876	0.000	28.876	-2.167
140.0	-1.284	-4.035	0.000	0.000	0.000	-13.948	-29.789	0.000	29.789	-2.192
145.0	-1.205	-3.803	0.000	0.000	0.000	-7.529	-32.110	0.000	32.110	-2.237
150.0	-1.055	0.000	0.000	0.000	0.000	-1.505	-34.466	0.000	34.466	-2.259

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:44 PM

Customer: AT&T MOBILITY

**Load Case:** 1.0D + 1.0W

Serviceability 60 mph

26 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.00

Wind Load Factor : 1.00

**Calculated Stresses**

Seg Elev (ft)	Applied Stresses							Allowable Stress (Fb) (ksi)	Allowable Stress (Fa) (ksi)	Stress Ratio
	Axial (Y) (ksi)	Shear (X) (ksi)	Shear (Z) (ksi)	Torsion (ksi)	Bending (X) (ksi)	Bending (Z) (ksi)	Combined (ksi)			
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.9	0.0	0.000
5.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.2	0.0	0.000
15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.8	0.0	0.000
20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
28.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.4	0.0	0.000
30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.6	0.0	0.000
31.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
35.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.8	0.0	0.000
40.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.4	0.0	0.000
45.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.1	0.0	0.000
50.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.9	0.0	0.000
55.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.6	0.0	0.000
60.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.3	0.0	0.000
65.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.0	0.0	0.000
70.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
70.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.8	0.0	0.000
73.55	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.5	0.0	0.000
75.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.8	0.0	0.000
80.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.7	0.0	0.000
85.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
90.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.5	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
91.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.7	0.0	0.000
95.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	79.5	0.0	0.000
98.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.4	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
101.79	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
105.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.3	0.0	0.000
110.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
110.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	73.9	0.0	0.000
115.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.1	0.0	0.000
118.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	75.9	0.0	0.000
120.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	76.4	0.0	0.000
125.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	77.6	0.0	0.000
128.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.3	0.0	0.000
130.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	78.8	0.0	0.000
135.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.0	0.0	0.000
138.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	80.7	0.0	0.000
140.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.2	0.0	0.000
145.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000
150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	81.9	0.0	0.000

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:45 PM

Customer: AT&T MOBILITY

**Load Case:**  $(1.2 + 0.2Sds) * DL + E$  E LFM

Seismic Equivalent Lateral Forces Method

25 Iterations

Gust Response Factor : 1.10

Dead Load Factor : 1.20

Wind Load Factor : 0.00

Site Number: 302473

Code: TIA/EIA-222-F

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Site Name: E H F R - Prestige Park, CT

Engineering Number: 64647527

5/16/2016 4:48:45 PM

Customer: AT&T MOBILITY

**Analysis Summary**

Load Case	Reactions						Combined Stress (ksi)	Max Stresses		
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)		Allowable Stress (ksi)	Elev (ft)	Stress Ratio
1.2D + 1.6W	26.3	0.00	41.54	0.00	0.00	2664.54	0.00	0.0	110.05	0.989
0.9D + 1.6W	26.2	0.00	31.14	0.00	0.00	2611.32	0.00	0.0	110.05	0.953
1.2D + 1.0Di +	6.8	0.00	79.91	0.00	0.00	776.54	0.00	0.0	110.05	0.352
(1.2 + 0.2Sds) *	1.4	0.00	41.55	0.00	0.00	173.42	0.00	0.0	110.05	0.094
(1.2 + 0.2Sds) *	2.1	0.00	41.55	0.00	0.00	270.10	0.00	0.0	110.05	0.201
(0.9 - 0.2Sds) *	1.4	0.00	28.92	0.00	0.00	169.30	0.00	0.0	110.05	0.086
(0.9 - 0.2Sds) *	2.1	0.00	28.92	0.00	0.00	263.17	0.00	0.0	110.05	0.191
1.0D + 1.0W	6.7	0.00	34.67	0.00	0.00	665.11	0.00	0.0	110.05	0.252

**Additional Steel Summary**

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors			Upper Termination Connectors				Lower Termination Connectors				Max Member		
			VQ/I (lb/in)	Shear Applied (kips)	Shear Allow (kips)	MQ/I (kips)	Allow (kips)	Num Reqd	Num Actual	MQ/I (kips)	Allow (kips)	Num Reqd	Num Actual	fb (ksi)	Fb (ksi)	Ratio
0.00	91.1	(4) SOL-#20 All Thre	345.8	10.4	16.8	151.6	12.0	13	0	0.0	12.0	0	0	279.5	330.5	0.846
91.1	101.	(4) SOL-#20 All Thre	347.0	10.4	16.8	122.0	12.0	11	12	151.6	12.0	13	0	153.7	330.5	0.465

<b>Base/Flange Plate</b>	Plate Type	<b>Baseplate</b>
	Pole Diameter	37.36 in
	Pole Thickness	0.375 in
	Plate Length	44 in
	Plate Thickness	2.5 in
	Plate Fy	60 ksi
	Weld Length	0.3125 in
	$\phi_s$ Resistance	1385.29 k-in
	Applied	758.38 k-in
<b>Stiffeners</b>	#	0

Code Rev. **G**

Date **5/16/2016**  
 Engineer **JDB**  
 Site # **302473**  
 Carrier **AT&T**

Moment **2664.5 k-ft**  
 Axial **41.5 k**

<b>Bolts</b>	#	<b>8</b>
	Bolt Circle	44 in
	(R)adial / (S)quare	S
	Bolt Gap	6 in
	Diameter	2.25 in
	Hole Diameter	2.625 in
	Type	A615-75
	Fy	75 ksi
	Fu	100 ksi
	$\phi_s$ Resistance	259.82 k
Applied	223.71 k	
<b>Reinforcement</b>	#	<b>4</b>
	DYW. Circle	44.235 in
	Offset Angle	22.5 °
	Type	#20
	Diameter	2.5 in
Fu	100 ksi	
<b>Extra Bolts O</b>	#	0

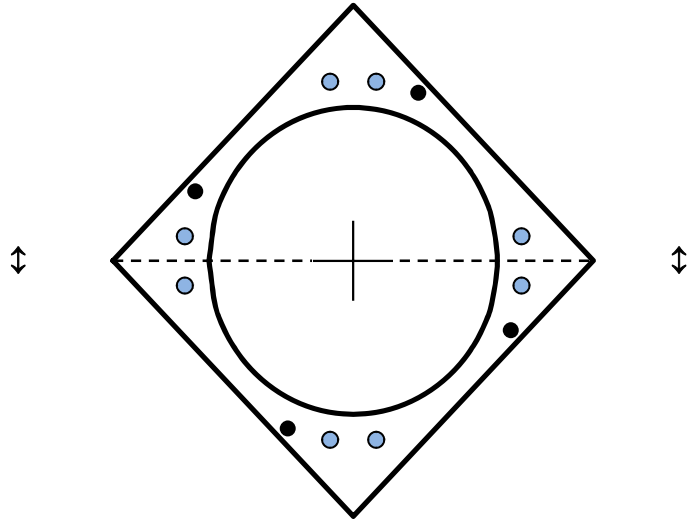


Plate Stress Ratio:  
**0.55** (Pass)

Bolt Stress Ratio:  
**0.86** (Pass)

<b>Base/Flange Plate</b>	Plate Type	<b>Flange @ 110.0 ft</b>
	Pole Diameter	21.25 in
	Pole Thickness	0.1875 in
	Plate Diameter	28.6 in
	Plate Thickness	1 in
	Plate Fy	60 ksi
	Weld Length	0.3125 in
	$\phi_s$ Resistance	238.53 k-in
	Applied	72.76 k-in
	<b>Stiffeners</b>	#
Thickness		0.5 in
Length		3 in
Height		3.5 in
Chamfer		0 in
Offset Angle		22°
Fy		36 ksi

Code Rev. **G**

Date **5/16/2016**  
 Engineer **JDB**  
 Site # **302473**  
 Carrier **AT&T**

Moment **354.4 k-ft**  
 Axial **10.5 k**

<b>Bolts</b>	#	<b>12</b>
	Bolt Circle	25.75 in
	(R)adial / (S)quare	R
	Diameter	1 in
	Hole Diameter	1.1875 in
	Type	A325
	Fy	92 ksi
	Fu	120 ksi
	$\phi_s$ Resistance	54.52 k
	Applied	54.15 k
<b>Reinforcement</b>	#	<b>0</b>
<b>Extra Bolts</b>	#	<b>0</b>

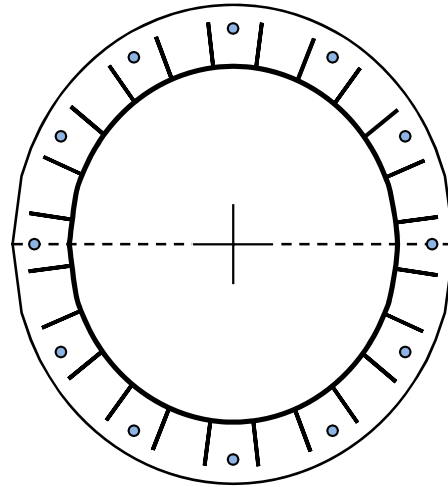
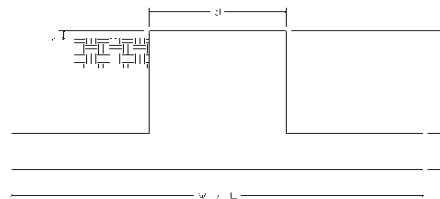


Plate Stress Ratio:  
**0.31** (Pass)

Bolt Stress Ratio:  
**0.99** (Pass)

Site Name: E H F R - Prestige Park  
 Site Number: 302473  
 Engineering Number: 64647527  
 Engineer: JDB  
 Date: 05/16/16  
 Tower Type: MP

Program Last Updated: 5/13/2014



**Design Loads (Factored) - Analysis per TIA-222-G Standards**

Design / Analysis / Mapping:

Analysis

Total Shear:	26.3 k
Moment:	2664.5 k-ft
Tower + Appurtenance Weight:	41.5 k
Depth to Base of Foundation (l + t - h):	8.00 ft
Diameter of Pier (d):	4.33 ft
Height of Pier above Ground (h):	0.50
Width of Pad (W):	18.00 ft
Length of Pad (L):	18.00 ft
Thickness of Pad (t):	3.00 ft
Tower Leg Center to Center:	0.00 ft
Number of Tower Legs:	1.0 (1 if MP or GT)
Tower Center from Mat Center:	0.00 ft
Depth Below Ground Surface to Water Table:	12.00 ft
Unit Weight of Concrete:	150.0 pcf
Unit Weight of Soil Above Water Table:	115.0 pcf
Unit Weight of Water:	62.4 pcf
Unit Weight of Soil Below Water Table:	60.0 pcf
Friction Angle of Uplift:	15.0 Degrees
Ultimate Coefficient of Shear Friction:	0.40
Ultimate Compressive Bearing Pressure:	9000.0 psf
Ultimate Passive Pressure on Pad Face:	0.0 psf
$\phi_{\text{Soil and Concrete Weight}}$ :	0.9
$\phi_{\text{Soil}}$ :	0.75

Concrete Strength ( $f'_c$ ):	4000 psi
Pad Tension Steel Depth:	32.00 in
$\phi_{\text{Shear}}$ :	0.75
$\phi_{\text{Flexure / Tension}}$ :	0.90
$\phi_{\text{Compression}}$ :	0.65
$\beta$ :	0.85
Bottom Pad Rebar Size #:	10
# of Bottom Pad Rebar:	36
Pad Bottom Steel Area:	45.72 in <sup>2</sup>
Pad Steel $F_y$ :	60000 psi
Top Pad Rebar Size #:	6
# of Top Pad Rebar:	36
Pad Top Steel Area:	15.84 in <sup>2</sup>
Pier Rebar Size #:	11
Pier Steel Area (Single Bar):	1.56 in <sup>2</sup>
# of Pier Rebar:	14
Pier Steel $F_y$ :	60000 psi
Pier Cage Diameter:	44.0 in
Rebar Strain Limit:	0.008
Steel Elastic Modulus:	29000 ksi
Tie Rebar Size #:	4
Tie Steel Area (Single Bar):	0.20 in <sup>2</sup>
Tie Spacing:	12 in
Tie Steel $F_y$ :	60000 psi

**Overturning Moment Usage**

Design OTM:	2888.3 k-ft
OTM Resistance:	3299.2 k-ft
Design OTM / OTM Resistance:	<b>0.88</b> Result: OK

**Soil Bearing Pressure Usage**

Net Bearing Pressure:	5570 psf
Factored Nominal Bearing Pressure:	6750 psf
Net Bearing Pressure/Factored Nominal Bearing Pressure:	<b>0.83</b> Result: OK
Load Direction Controlling Design Bearing Pressure:	Diagonal to Pad Edge

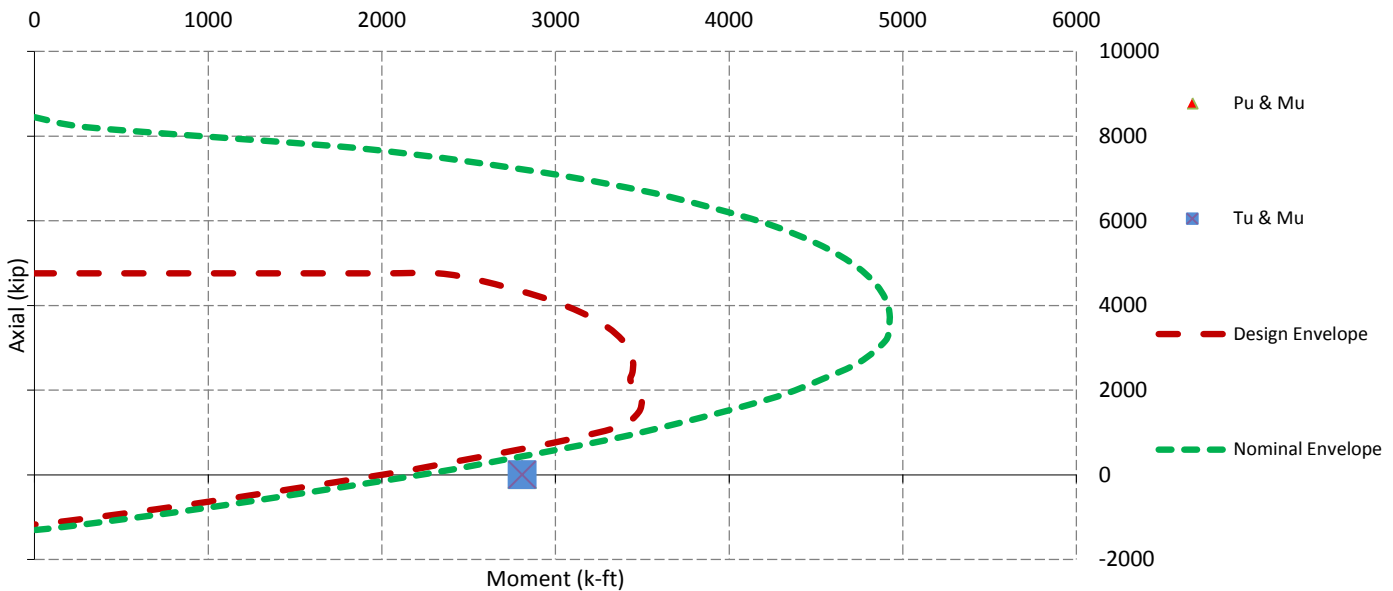
**Sliding Factor of Safety**

Total Factored Sliding Resistance:	111.1 k
Sliding Design / Sliding Resistance:	<b>0.24</b> Result: OK

**One Way Shear, Flexural Capacity, and Punching Shear**

Factored One Way Shear ( $V_u$ ):	202.7 k
One Way Shear Capacity ( $\phi V_c$ ):	575.3 k - ACI11.3.1.1
$V_u / \phi V_c$ :	<b>0.35</b> Result: OK
Load Direction Controlling Shear Capacity:	Diagonal to Pad Edge
Lower Steel Pad Factored Moment ( $M_u$ ):	1203.5 k-ft
Lower Steel Pad Moment Capacity ( $\phi M_n$ ):	6257.1 k-ft - ACI10.3
$M_u / \phi M_n$ :	<b>0.19</b> Result: OK
Load Direction Controlling Flexural Capacity:	Parallel to Pad Edge
Upper Steel Pad Factored Moment ( $M_u$ ):	687.1 k-ft
Upper Steel Pad Moment Capacity ( $\phi M_n$ ):	2241.8 k-ft
$M_u / \phi M_n$ :	<b>0.31</b> Result: OK
Lower Pad Flexural Reinforcement Ratio:	0.0066 OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Upper Pad Flexural Reinforcement Ratio:	0.0023 OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Lower Pad Reinforcement Spacing:	6 in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Upper Pad Reinforcement Spacing:	6 in - Pad Reinforcing Spacing OK - ACI7.12.2.2 & 10.5.4
Factored Punching Shear ( $V_u$ ):	-78.9 k
Nominal Punching Shear Capacity ( $\phi_c V_n$ ):	1601.5 k - ACI11.12.2.1
$V_u / \phi V_c$ :	<b>-0.05</b> Result: OK
Factored Moment in Pier ( $M_u$ ):	2809.3 k-ft
Pier Moment Capacity ( $\phi M_n$ ):	2995.7 k-ft
$M_u / \phi M_n$ :	<b>0.80</b> Result: OK
Factored Shear in Pier ( $V_u$ ):	26.3 k
Pier Shear Capacity ( $\phi V_n$ ):	201.2 k
$V_u / \phi V_c$ :	<b>0.13</b> Result: OK
Pier Shear Reinforcement Ratio:	0.0009 No Ties Necessary for Shear - ACI11.5.6.1
Factored Tension in Pier ( $T_u$ ):	0.0 k
Pier Tension Capacity ( $\phi T_n$ ):	1179.4 k
$T_u / \phi T_n$ :	<b>0.00</b> Result: OK
Factored Compression in Pier ( $P_u$ ):	0.0 k
Pier Compression Capacity ( $\phi P_n$ ):	3710.3 k - ACI10.3.6.2
$P_u / \phi P_n$ :	<b>0.00</b> Result: OK
Pier Compression Reinforcement Ratio:	0.010 OK - Reinforcement Ratio Met - ACI10.9.1 & 10.8.4
$M_u / \phi_B M_n + T_u / \phi_T T_n$ :	<b>0.80</b> Result: OK

Nominal and Design Moment Capacity and Factored Design Loads





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

AT&T Existing Facility

Site ID: CT1002

East Hartford  
2 Prestige Park Road  
East Hartford, CT 06108

**March 1, 2016**

**EBI Project Number: 6216000910**

Site Compliance Summary	
Compliance Status:	<b>COMPLIANT</b>
Site total MPE% of FCC general public allowable limit:	<b>4.23 %</b>

March 1, 2016

AT&T Mobility – New England  
Attn: Cameron Syme, RF Manager  
550 Cochituate Road  
Suite 550 – 13&14  
Framingham, MA 06040

Emissions Analysis for Site: **CT1002 – East Hartford**

EBI Consulting was directed to analyze the proposed AT&T facility located at **2 Prestige Park Road, East Hartford, CT**, for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

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

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

General population/uncontrolled exposure limits apply to situations in which the general 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.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ( $\mu\text{W}/\text{cm}^2$ ). The general population exposure limits for the 700 and 850 MHz Bands are approximately  $467 \mu\text{W}/\text{cm}^2$  and  $567 \mu\text{W}/\text{cm}^2$  respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) bands is  $1000 \mu\text{W}/\text{cm}^2$ . Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

## **CALCULATIONS**

Calculations were done for the proposed AT&T Wireless antenna facility located at **2 Prestige Park Road, East Hartford, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6 foot person standing at the base of the tower.

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

- 1) 2 UMTS channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 2) 2 UMTS channels (PCS Band – 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 3) 2 LTE channels (700 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 4) 2 LTE channels (PCS Band – 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 5) 2 GSM channels (850 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.
- 6) 2 LTE channels (WCS Band – 2300 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

- 7) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 8) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 9) The antennas used in this modeling are the **CCI HPA-65R-LCUU-H6, Commscope SBNHH-1D65A and the Powerwave 7770.00** for transmission in the 700 MHz, 850 MHz, 1900 MHz (PCS) and 2300 MHz (WCS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 10) The antenna mounting height centerline of the proposed antennas is **153 feet** above ground level (AGL).
- 11) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

All calculations were done with respect to uncontrolled / general public threshold limits.

### AT&T Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Powerwave 7770.00	Make / Model:	Powerwave 7770.00	Make / Model:	Powerwave 7770.00
Gain:	11.4 / 13.4 dBd	Gain:	11.4 / 13.4 dBd	Gain:	11.4 / 13.4 dBd
Height (AGL):	153 feet	Height (AGL):	153 feet	Height (AGL):	153 feet
Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)	Frequency Bands	850 MHz / 1900 MHz (PCS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power(W):	120	Total TX Power(W):	120	Total TX Power(W):	120
ERP (W):	2,140.89	ERP (W):	2,140.89	ERP (W):	2,140.89
Antenna A1 MPE%	<b>0.46</b>	Antenna B1 MPE%	<b>0.46</b>	Antenna C1 MPE%	<b>0.46</b>
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	CCI OPA-65R-LCUU-H6	Make / Model:	CCI OPA-65R-LCUU-H6	Make / Model:	CCI OPA-65R-LCUU-H6
Gain:	11.65 / 14.85 dBd	Gain:	11.65 / 14.85 dBd	Gain:	11.65 / 14.85 dBd
Height (AGL):	153 feet	Height (AGL):	153 feet	Height (AGL):	153 feet
Frequency Bands	700 MHz / 1900 MHz (PCS)	Frequency Bands	700 MHz / 1900 MHz (PCS)	Frequency Bands	700 MHz / 1900 MHz (PCS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power(W):	180	Total TX Power(W):	180	Total TX Power(W):	180
ERP (W):	3,587.57	ERP (W):	3,587.57	ERP (W):	3,587.57
Antenna A2 MPE%	<b>0.82</b>	Antenna B2 MPE%	<b>0.82</b>	Antenna C2 MPE%	<b>0.82</b>
Antenna #:	3	Antenna #:	3	Antenna #:	3
Make / Model:	Commscope SBNHH-1D65A	Make / Model:	Commscope SBNHH-1D65A	Make / Model:	Commscope SBNHH-1D65A
Gain:	10.65 / 14.85 dBd	Gain:	10.65 / 14.85 dBd	Gain:	10.65 / 14.85 dBd
Height (AGL):	153 feet	Height (AGL):	153 feet	Height (AGL):	153 feet
Frequency Bands	850 MHz / 2300 MHz (PCS)	Frequency Bands	850 MHz / 2300 MHz (PCS)	Frequency Bands	850 MHz / 2300 MHz (PCS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power(W):	180	Total TX Power(W):	180	Total TX Power(W):	180
ERP (W):	3,226.69	ERP (W):	3,226.69	ERP (W):	3,226.69
Antenna A3 MPE%	<b>0.80</b>	Antenna B3 MPE%	<b>0.80</b>	Antenna C3 MPE%	<b>0.80</b>

Site Composite MPE%	
Carrier	MPE%
AT&T – Max per sector	<b>2.08 %</b>
Clearwire	0.09 %
Clearwire MW	0.12 %
MetroPCS	0.92 %
Sprint	1.02 %
<b>Site Total MPE %:</b>	<b>4.23 %</b>

AT&T Sector 1 Total:	2.08 %
AT&T Sector 2 Total:	2.08 %
AT&T Sector 3 Total:	2.08 %
<b>Site Total:</b>	<b>4.23 %</b>

AT&T _ Max Per Sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ( $\mu\text{W}/\text{cm}^2$ )	Frequency (MHz)	Allowable MPE ( $\mu\text{W}/\text{cm}^2$ )	Calculated % MPE
AT&T 850 MHz UMTS	2	414.12	153	1.38	850	567	0.24 %
AT&T 1900 MHz (PCS) UMTS	2	656.33	153	2.18	1900	1000	0.22 %
AT&T 700 MHz LTE	2	877.31	153	2.92	700	467	0.51 %
AT&T 1900 MHz (PCS) LTE	2	916.48	153	3.05	1900	1000	0.30 %
AT&T 850 MHz GSM	2	696.87	153	2.32	850	567	0.50 %
AT&T 2300 MHz (WCS) LTE	2	916.48	153	3.05	2300	1000	0.30 %
						Total:	2.08 %

## Summary

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

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

AT&T Sector	Power Density Value (%)
Sector 1:	2.08 %
Sector 2:	2.08 %
Sector 3 :	2.08 %
AT&T Maximum Total (per sector):	2.08 %
Site Total:	4.23 %
Site Compliance Status:	<b>COMPLIANT</b>

The anticipated composite MPE value for this site assuming all carriers present is **4.23%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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



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