



February 3, 2020

Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

**Regarding:** Notice of Exempt Modification - RESUBMISSION  
**Facility Address:** 284-310 Prestige Park Road, East Hartford, CT  
**Facility Coordinates (Lat.)** 41.78833333  
**(Long)** -72.60055556  
**Applicant:** American Tower Corp. (ATC)

Dear Council:

Pursuant to the letter received from the Council on January 14, 2020, American Tower Corporation, Inc. (ATC) has received notice from the State Building Inspector regarding our structural submittal. Therefore, we are resubmitting our application with the inclusion of said notice.

American Tower Corporation, Inc. (ATC) currently maintains a 150' wireless telecommunication tower facility at the above referenced address., parcel ID EHAR-000049-000000-000014 in the Town of East Hartford. The property is owned by Fremont Prestige II LLC, c/o Fremont Management LLC. American Tower Corporation, Inc (ATC) now intends to, within the leased area, perform the following tower modification:

- Install (4) #20 all thread rods at -7.5' to 22.5' elevation on the tower.
- Install (4) plate reinforcements at the 90' to 110' elevation on the tower.
- Install (3) plate reinforcements at the 110' to 120' elevation on the tower.

This tower facility was approved by the Connecticut Siting Council. on Docket NO. 40, May 15,1984. The proposed tower reinforcement is within the existing, approved compound space on the existing tower, this modification request complies with the conditions of the original Tower Approval.

Please accept this letter, as notification pursuant to Regulations of Connecticut State Agencies @16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. @16-50j-72(b)(2). In accordance with R.C.S.A. @16-50j-73. A copy of this letter is being sent to, Maria A. Leclerc - Mayor, Eileen Buckheit – Development Director, for the Town of East Hartford, as well as the property owner, and tower owner.

#### ATTACHMENT A

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

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The installation of the reinforcement plates will not increase radio frequency emissions at the facility to the level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

For the foregoing reasons, American Tower Corporation (ATC) respectfully resubmits that the proposed modifications to the above referenced telecommunications facility constitute an exempt modification under R.C.S.A. @16-50j-72(b)(2).

Best Regards,

*Margie Weber*

Margie Weber  
Program Manager  
[mweber@nbcllc.com](mailto:mweber@nbcllc.com)  
215.416.0363

Attachments

Cc:

Marcia A. Leclerc – Mayor, Town of East Hartford

Eileen Buckheit – Development Director, Town of East Hartford

American Tower Corporation (ATC), tower owner

Fremont Prestige II LLC c/o Fremont Management LLC, property owner



DEPARTMENT OF ADMINISTRATIVE SERVICES

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February 2, 2020

Margie Weber, Program Manager  
Network Building & Consulting  
1777 Sentry Parkway West, VEVA 27, Suite 400  
Blue Bell, PA 19422

Re: Structural Analysis Report for Site #302473  
310 Prestige Park Road, East Hartford, CT

Ms. Weber,

Based on the Structural Analysis Report by American Tower Corporation, dated April 26, 2019, the proposed additions to this tower comply with the structural requirements of the 2018 Connecticut State Building Code.

If you have any questions you may contact me as 860-713-5900.

Sincerely,

A handwritten signature in blue ink, appearing to read "JC Cassidy".

Joseph V. Cassidy, P.E.  
State Building Inspector



**AMERICAN TOWER®**  
CORPORATION

**LETTER OF AUTHORIZATION**

**SITE NO: 302473**

**SITE NAME: E H F R – Prestige Park**

**SITE ADDRESS: 310 Prestige Park Road, Hartford, CT 06108**

**APN: EHAR-000049-000000-000014**

I, Margaret Robinson, Senior Counsel, US Tower Division on behalf of American Tower\*, owner of the tower facility located at the address identified above (the “Tower Facility”), do hereby authorize **Structural Components LLC**, its successors and assigns, to act as American Tower’s non-exclusive agent for the purpose of filing and securing any zoning, land-use, building permit and/or electrical permit application(s) and approvals of the applicable jurisdiction for and to conduct the construction of the installation of antennas and related telecommunications equipment on the Tower Facility located at the above address. This installation shall not affect adjoining lands and will occur only within the area leased by American Tower.

American Tower understands that the application may be denied, modified or approved with conditions. The above authorization is limited to the acceptance by American Tower of conditions related to American Tower’s installation. Any such conditions of approval or modifications will not be effective unless approved in writing by American Tower.

The above authorization does not permit **Structural Components LLC**, to modify or alter any existing permit(s) and/or zoning or land-use conditions or impose any additional conditions unrelated to American Tower’s installation of telecommunications equipment without the prior written approval of American Tower.

Signature: \_\_\_\_\_

Margaret Robinson, Senior Counsel  
US Tower Division

**NOTARY BLOCK**

**COMMONWEALTH OF MASSACHUSETTS**  
County of Middlesex

This instrument was acknowledged before me by Margaret Robinson, Senior Counsel of American Tower (Tower Facility owner and/or operator), personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same.

WITNESS my hand and official seal, this 3<sup>rd</sup> day of January 2020.

NOTARY SEAL




Notary Public \_\_\_\_\_  
My Commission Expires: April 10, 2020

\* American Tower as used herein is defined as American Tower Corporation and any of its affiliates or subsidiaries.



# BILL OF MATERIALS

QUANTITY REQUIRED	QUANTITY PROVIDED	PART NUMBER	DESCRIPTION	LENGTH	SHEET LIST	PART WEIGHT	WEIGHT (lb)	NOTES
<b>DYWIDAG REINFORCEMENT MATERIAL &amp; HARDWARE</b>								
4	4	DYD-20-ATR-30	#20 ALL THREAD ROD 30'	30'-0"	A-3	501.0	2004	GALVANIZED
22	22	BR-20C	L 6" X 3 1/2" X 3/8"	1'-0"	A-3	12.3	271	CONCENTRIC
8	8	TB-20C-12	L 6" X 3 1/2" X 3/8"	3'-6 3/4"	A-3	43.8	350	CONCENTRIC
150	158	UB-580-3125	U-BOLT ASSEMBLIES FOR #20 ROD	----	----	----	----	GALVANIZED
100	105	NG-0625-0875-A490	NEXGEN2 BLIND BOLT ASSEMB., M20 W/ SPRING SLEEVE, A490	----	----	----	----	ALLFASTENERS - 2NG2060
10	15	#20SB	STEP BOLT WELDMENT	0'-7 1/4"	#20SB	2.5	38	
<b>PLATE REINFORCEMENT MATERIAL &amp; HARDWARE</b>								
1	1	302473-1	PL 1 1/4" X 4"	16'-4"	A-4, A-4A, F-1	291.8	292	
1	1	302473-2	TERMINATION WELDMENT	8'-8 3/16"	A-4, A-4A, F-2	183.6	184	
3	3	302473-3	PLATE WELDMENT	20'-0"	A-4, A-4A, F-3	375.5	1127	
3	3	302473-4	PLATE WELDMENT	10'-0"	A-4, A-4A, F-4	239.3	718	
3	3	302473-5	PL 1" X 2 1/2"	2'-1 1/2"	A-4, A-4A, F-1	19.0	57	
12	13	UB-580-3125	U-BOLT ASSEMBLIES FOR #20 ROD	----	----	----	----	GALVANIZED
99	104	NG-1438-1875-A490	NEXGEN2 BLIND BOLT ASSEMB., M20 W/ SPRING SLEEVE, A490	----	----	----	----	ALLFASTENERS - 2NG2048
3	4	NG-2250-2688-A490	NEXGEN2 BLIND BOLT ASSEMB., M20 W/ SPRING SLEEVE, A490	----	----	----	----	ALLFASTENERS - 2NG2068
24	29	FPSB	FLAT PLATE STEP BOLT WELDMENT	0'-7 1/4"	FPSB	2.0	58	
<b>FLANGE BOLTS</b>								
12	13	BK-1000-375-A490-MAG	BOLT, 1"Ø A490 W/ HHN-LKW-FW, MAGNI 565 COATING	3 3/4"	----	----	----	ALLFASTENERS - 2STB01334A490M-A
<b>TOTAL WEIGHT (lb)</b>						<b>5,099</b>		



**AMERICAN TOWER®**  
**A.T. ENGINEERING SERVICE, PLLC**  
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 COA: PEC.0001553

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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CWB	04/01/19

ATC SITE NUMBER:  
**302473**

ATC SITE NAME:  
**E H F R - PRESTIGE PARK**  
**CONNECTICUT**

SITE ADDRESS:  
310 PRESTIGE PARK RD.  
EAST HARTFORD, CT 06108

DRAWN BY:	CWB
APPROVED BY:	CDW/KCI
DATE DRAWN:	04/01/19
ATC JOB NO:	OAA745293_C6_06

**BILL OF MATERIALS**

SHEET NUMBER: <b>B-1</b>	REVISION: <b>0</b>
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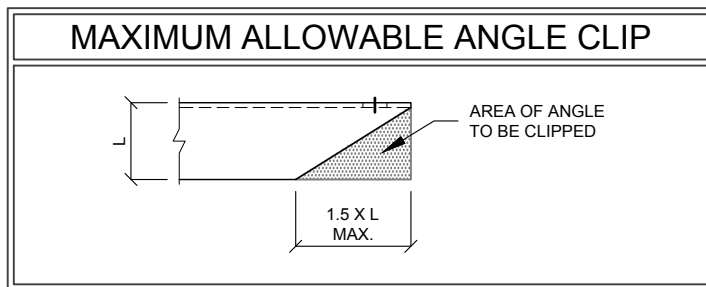
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**GENERAL**

- ALL WORK TO BE COMPLETED PER APPLICABLE LOCAL, STATE, FEDERAL CODES AND ORDINANCES AND COMPLY WITH ATC MASTER SPECIFICATIONS FOR WIRELESS TOWER SITES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND ABIDING BY ALL REQUIRED PERMITS.
- ALL WORK INDICATED ON THESE DRAWINGS SHALL BE PERFORMED BY QUALIFIED CONTRACTORS EXPERIENCED IN TOWER AND FOUNDATION CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY OF ANY INSTALLATION INTERFERENCES. ALL NEW WORK SHALL ACCOMMODATE EXISTING CONDITIONS. DETAILS NOT SPECIFICALLY SHOWN ON THE DRAWINGS SHALL FOLLOW SIMILAR DETAILS FOR THIS JOB.
- ANY SUBSTITUTIONS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS, AND SHOULD BE SIMILAR TO THOSE SHOWN. ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- ANY MANUFACTURED DESIGN ELEMENTS SHALL CONFORM TO THE REQUIREMENTS OF THESE NOTES AND SPECIFICATIONS AND SHOULD BE SIMILAR TO THOSE SHOWN. THESE DESIGN ELEMENTS MUST BE STAMPED BY AN ENGINEER PROFESSIONALLY REGISTERED IN THE STATE OF THE PROJECT, AND SUBMITTED TO THE ENGINEER OF RECORD FOR APPROVAL PRIOR TO FABRICATION.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH LOCAL CODES AND OSHA SAFETY REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND EXECUTION OF ALL MISCELLANEOUS SHORING, BRACING, TEMPORARY SUPPORTS, ETC. NECESSARY, PER ANSII/TIA-322 AND ANSII/ASSE A10.48, TO PROVIDE A COMPLETE AND STABLE STRUCTURE AS SHOWN ON THESE DRAWINGS.
- CONTRACTOR'S PROPOSED INSTALLATION SHALL NOT INTERFERE, NOR DENY ACCESS TO, ANY EXISTING OPERATIONAL AND SAFETY EQUIPMENT.

**STRUCTURAL STEEL**

- ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS, LATEST EDITION.
- ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
- ALL U-BOLTS SHALL BE ASTM A36 OR EQUIVALENT, WITH LOCKING DEVICE, UNLESS NOTED OTHERWISE.
- FIELD CUT EDGES, EXCEPT DRILLED HOLES, SHALL BE GROUND SMOOTH.
- ALL FIELD CUT SURFACES, FIELD DRILLED HOLES & GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
- ALL STRUCTURAL STEEL EMBEDDED IN THE CONCRETE SHALL BE APPLIED WITH (2) BRUSHED COATS OF POLYGUARD CA-14 MASTIC OR EQUIVALENT. REFER TO THE MANUFACTURER SPECIFICATIONS FOR SURFACE PREPARATION AND APPLICATION. APPLICATION OF POLYGUARD 400 WRAP IS NOT ESSENTIAL.
- CONTRACTOR SHALL PERFORM WORK ON ONLY ONE (1) TOWER FACE AND REPLACE/REINFORCE ONE (1) BOLT/MEMBER AT A TIME.
- ALL FIELD DRILLED HOLES TO BE USED FOR FIELD BOLTING INSTALLATION SHALL BE STANDARD HOLES, AS DEFINED BY AISC, UNLESS NOTED OTHERWISE.



**PAINT**

- AS REQUIRED, CLEAN AND PAINT PROPOSED STEEL ACCORDING TO FAA ADVISORY CIRCULAR AC 70/7460-1L.

**WELDING**

- ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
- ALL WELDS SHALL BE INSPECTED VISUALLY. IF DIRECTED BY ENGINEER OF RECORD, 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE (100% IF REJECTABLE DEFECTS ARE FOUND) TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
- INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
- ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
- ALL WELDING ON LATTICE TOWERS SHALL BE DONE WITH E70XX ELECTRODES. ALL WELDING ON POLE STRUCTURES SHALL BE DONE WITH E80XX ELECTRODES UNLESS NOTED OTHERWISE.
- PRIOR TO FIELD WELDING GALVANIZED MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.

**BOLT TIGHTENING PROCEDURE**

- STRUCTURAL CONNECTIONS TO BE ASSEMBLED AND INSPECTED IN ACCORDANCE WITH RCSC SPECIFICATIONS.
- FLANGE BOLTS SHALL BE INSTALLED AND TIGHTENED USING DIRECT TENSION INDICATING (DTI) SQUIRTER WASHERS. DTI SQUIRTER WASHERS ARE TO BE INSTALLED AND ORIENTED / TIGHTENED PER MANUFACTURER SPECIFICATIONS TO ACHIEVE DESIRED LEVEL OF BOLT PRE-TENSION.
- IN LIEU OF USING DTI SQUIRTER WASHERS, FLANGE BOLTS MAY BE TIGHTENED USING AISC / RCSC "TURN-OF-THE-NUT" METHOD, PENDING APPROVAL BY THE ENGINEER OF RECORD (EOR). TIGHTEN FLANGE BOLTS USING THE CHART BELOW:

**BOLT LENGTHS UP TO AND INCLUDING FOUR DIAMETERS**

1/2"	BOLTS UP TO AND INCLUDING 2.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
5/8"	BOLTS UP TO AND INCLUDING 2.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
3/4"	BOLTS UP TO AND INCLUDING 3.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
7/8"	BOLTS UP TO AND INCLUDING 3.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1"	BOLTS UP TO AND INCLUDING 4.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS UP TO AND INCLUDING 4.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS UP TO AND INCLUDING 5.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS UP TO AND INCLUDING 5.5 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS UP TO AND INCLUDING 6.0 INCH LENGTH	+1/3 TURN BEYOND SNUG TIGHT

**BOLT LENGTHS OVER FOUR DIAMETERS BUT NOT EXCEEDING EIGHT DIAMETERS**

1/2"	BOLTS 2.25 TO 4.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
5/8"	BOLTS 2.75 TO 5.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
3/4"	BOLTS 3.25 TO 6.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
7/8"	BOLTS 3.75 TO 7.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1"	BOLTS 4.25 TO 8.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/8"	BOLTS 4.75 TO 9.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/4"	BOLTS 5.25 TO 10.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-3/8"	BOLTS 5.75 TO 11.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT
1-1/2"	BOLTS 6.25 TO 12.0 INCH LENGTH	+1/2 TURN BEYOND SNUG TIGHT

- SPLICE BOLTS SUBJECT TO DIRECT TENSION SHALL BE INSTALLED AND TIGHTENED AS PER SECTION 8.2.1 OF THE AISC "SPECIFICATION FOR STRUCTURAL JOINTS USING A325 OR A490 BOLTS", LOCATED IN THE AISC MANUAL OF STEEL CONSTRUCTION. THE INSTALLATION PROCEDURE IS PARAPHRASED AS FOLLOWS:

FASTENERS SHALL BE INSTALLED IN PROPERLY ALIGNED HOLES AND TIGHTENED BY ONE OF THE METHODS DESCRIBED IN SUBSECTION 8.2.1 THROUGH 8.2.4.

**8.2.1 TURN-OF-NUT PRETENSIONING**

BOLTS SHALL BE INSTALLED IN ALL HOLES OF THE CONNECTION AND BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1, UNTIL ALL THE BOLTS ARE SIMULTANEOUSLY SNUG TIGHT AND THE CONNECTION IS FULLY COMPACTED. FOLLOWING THIS INITIAL OPERATION ALL BOLTS IN THE CONNECTION SHALL BE TIGHTENED FURTHER BY THE APPLICABLE AMOUNT OF ROTATION SPECIFIED ABOVE. DURING THE TIGHTENING OPERATION THERE SHALL BE NO ROTATION OF THE PART NOT TURNED BY THE WRENCH. TIGHTENING SHALL PROGRESS SYSTEMATICALLY.

- ALL OTHER BOLTED CONNECTIONS SHALL BE BROUGHT TO A SNUG TIGHT CONDITION AS DEFINED IN SECTION 8.1 OF THE SPECIFICATION.

ALL BOLT HOLES SHALL BE ALIGNED TO PERMIT INSERTION OF THE BOLTS WITHOUT UNDUE DAMAGE TO THE THREADS. BOLTS SHALL BE PLACED IN ALL HOLES WITH WASHERS POSITIONED AS REQUIRED AND NUTS THREADED TO COMPLETE THE ASSEMBLY. COMPACTING THE JOINT TO THE SNUG-TIGHT CONDITION SHALL PROGRESS SYSTEMATICALLY FROM THE MOST RIGID PART OF THE JOINT. THE SNUG-TIGHTENED CONDITION IS THE TIGHTNESS THAT IS ATTAINED WITH A FEW IMPACTS OF AN IMPACT WRENCH OR THE FULL EFFORT OF AN IRONWORKER USING AN ORDINARY SPUD WRENCH TO BRING THE CONNECTED PLIES INTO FIRM CONTACT.

**APPLICABLE CODES AND STANDARDS**

- ANSI/TIA: STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES, 222-G EDITION.
- 2018 CONNECTICUT STATE BUILDING CODE.
- 2015 INTERNATIONAL BUILDING CODE.
- ACI 318: AMERICAN CONCRETE INSTITUTE, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, 318-02.
- CRSI: CONCRETE REINFORCING STEEL INSTITUTE, MANUAL OF STANDARD PRACTICE, LATEST EDITION.
- AISC: AMERICAN INSTITUTE OF STEEL CONSTRUCTION, MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
- AWS: AMERICAN WELDING SOCIETY D1.1, STRUCTURAL WELDING CODE, LATEST EDITION.

**SPECIAL INSPECTION**

- A QUALIFIED INDEPENDENT TESTING LABORATORY, EMPLOYED BY THE OWNER, SHALL PERFORM INSPECTION AND TESTING IN ACCORDANCE WITH IBC 2015, SECTION 1704 AS REQUIRED BY PROJECT SPECIFICATIONS FOR THE FOLLOWING CONSTRUCTION WORK:
  - STRUCTURAL WELDING (CONTINUOUS INSPECTION OF FIELD WELD ONLY)
  - HIGH STRENGTH BOLTS (PERIODIC INSPECTION OF A325 EXTENSION FLANGE BOLTS TO BE TIGHTENED PER "TURN-OF-THE-NUT" METHOD)
- THE INSPECTION AGENCY SHALL SUBMIT INSPECTION AND TEST REPORTS TO THE BUILDING DEPARTMENT, THE ENGINEER OF RECORD, AND THE OWNER IN ACCORDANCE WITH IBC 2015, SECTION 1704, UNLESS THE FABRICATOR IS APPROVED BY THE BUILDING OFFICIAL TO PERFORM SUCH WORK WITHOUT THE SPECIAL INSPECTIONS.

**AMERICAN TOWER®**  
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 COA: PEC.0001553

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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CWB	04/01/19

ATC SITE NUMBER:  
**302473**

ATC SITE NAME:  
**E H F R - PRESTIGE PARK**

**CONNECTICUT**

SITE ADDRESS:  
 310 PRESTIGE PARK RD.  
 EAST HARTFORD, CT 06108

DRAWN BY:	CWB
APPROVED BY:	CDW/KCI
DATE DRAWN:	04/01/19
ATC JOB NO:	OAA745293_C6_06

**IBC GENERAL NOTES**

SHEET NUMBER:	REVISION:
<b>IGN</b>	<b>0</b>



**MODIFICATION INSPECTION NOTES**

THE SPECIAL INSPECTION (SI) PROCEDURE IS INTENDED TO CONFIRM THAT CONSTRUCTION AND INSTALLATION MEETS ENGINEERING DESIGN, ATC PROCEDURES AND ATC STANDARD SPECIFICATIONS FOR WIRELESS TOWER SITES.

TO ENSURE THAT THE REQUIREMENTS OF THE SI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR AND THE INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO IS RECEIVED FROM AMERICAN TOWER CORPORATION (ATC). IT IS EXPECTED THAT EACH PARTY WILL PROACTIVELY REACH OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN, CONTACT YOUR AMERICAN TOWER POINT OF CONTACT.

**SPECIAL INSPECTOR**

THE SPECIAL INSPECTOR IS REQUIRED TO CONTACT THE GENERAL CONTRACTOR AS SOON AS RECEIVING A PO FROM ATC. UPON RECEIVING A PO FROM ATC THE SPECIAL INSPECTOR AT A MINIMUM MUST:

- REVIEW THE REQUIREMENTS OF THE SI CHECKLIST.
- WORK WITH THE GENERAL CONTRACTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
- ANY CONCERNS WITH THE SCOPE OF WORK OR PROJECT COMMITMENT MUST BE RELAYED TO THE ATC POINT OF CONTACT IMMEDIATELY.

THE SPECIAL INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GENERAL CONTRACTOR INSPECTION AND TEST REPORTS, REVIEWING THESE DOCUMENTS FOR ADHERENCE TO CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE SI REPORT TO AMERICAN TOWER CORPORATION.

**GENERAL CONTRACTOR**

THE GENERAL CONTRACTOR IS REQUIRED TO CONTACT THE SI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE SI CHECKLIST.
- WORK WITH THE SI TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS.
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS.

THE GENERAL CONTRACTOR SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE SI CHECKLIST.

**SPECIAL INSPECTION CHECKLIST**

INSPECTION DOCUMENT	DESCRIPTION	INSPECTION TESTING REQUIRED	RESPONSIBILITY	SI REVIEW REQUIRED			INSPECTION FREQUENCY	
				PRE CX	DURING CX	POST CX	PERIODIC	CONTINUOUS
SPECIAL INSPECTION FIELD WORK & REPORT	DOCUMENTATION AND SITE VISIT CONDUCTED BY AN ATC APPROVED SPECIAL INSPECTOR AS REQUIRED BY ATC AND OTHER AUTHORITIES HAVING JURISDICTION. INSPECTION PARAMETERS TO FOLLOW ATC'S STANDARD SPECIFICATION FOR WIRELESS TOWER SITES.	✓	SI			✓		
ENGINEERING ASSEMBLY DRAWINGS	GC SHALL SUBMIT DRAWINGS TO SI FOR INCLUSION IN SI REPORT	✓	GC	✓				
FABRICATED MATERIAL VERIFICATION & INSPECTION	MTR AND OR MILL CERTIFICATIONS FOR SUPPLIED MATERIALS GC SHALL SUPPLY SI WITH REPORTS TO BE INCLUDED IN SI REPORT WHEN REQUIRED BY ATC	✓	SI	✓				
CERTIFIED WELD INSPECTION	INSPECTION AND REPORT OF STRUCTURAL WELDING PERFORMED DURING PROJECT COMPLETED BY A CWI AND INCLUDED WITHIN SI REPORT	✓	GC / TA	✓	✓	✓	✓	
FOUNDATION INSPECTION & VERIFICATION	VISUAL OBSERVATION AND APPROVAL OF FOUNDATION EXCAVATION, REBAR PLACEMENT, CASING/SHORING/FORMING PLACEMENT, AND ANCHOR TEMPLATE AND ANCHOR PLACEMENT - TO BE SI APPROVED PRIOR TO CONCRETE POUR AND DOCUMENTED IN THE SI REPORT		SI					
ANCHOR, ROCK ANCHOR OR HELICAL PULL-OUT TEST	PULL TESTING OF INSTALLED ANCHORS TO BE COMPLETED AND DOCUMENTED IN SI REPORT		GC / TA					
CONCRETE INSPECTION & VERIFICATION	CONCRETE MIX DESIGN, SLUMP TEST, COMPRESSIVE TESTING, AND SAMPLE GATHERING TECHNIQUES ARE TO BE PROVIDED FOR INCLUSION IN THE SI REPORT. SI SHALL VERIFY CONCRETE PLACEMENT AS REQUIRED BY THE DESIGN DOCUMENTS (INSPECTION FREQUENCY IS MARKED CONTINUOUS)		GC / TA					
DYWIDAG PLACEMENT/ANCHOR BOLT EMBEDMENT - EPOXY/GROUT INSTALL	ANCHOR/BAR EMBEDMENT, HOLE SIZE, EPOXY/GROUT TYPE, INSTALLATION TEMPERATURE AND INSTALLATION SHALL BE VERIFIED BY THE SI AND INCLUDED IN THE SI REPORT	✓	GC / SI		✓			✓
BASE PLATE GROUT INSPECTION & VERIFICATION	BASE PLATE GROUTING TYPE AND PLACEMENT SHALL BE CONFIRMED BY THE SI AND INCLUDED IN THE SI REPORT		GC / SI					
EARTHWORK INSPECTION & VERIFICATION	EXCAVATION, FILL, SLOPE, GRADE AND OTHER EARTHWORK REQUIREMENTS PER PLANS SHALL BE VERIFIED BY THE SI AND INCLUDED IN THE SI REPORT		GC / TA					
COMPACTION VERIFICATION	CONTRACTOR SHALL PROVIDE AN INDEPENDENT THIRD PARTY CERTIFIED INSPECTION WHICH PROVIDES TEST RESULTS FOR COMPACTION TEST OF SOILS IN PLACE TO ASTM STANDARDS.		GC / TA					
GROUND TESTING & VERIFICATION	GC SHALL PROVIDE DOCUMENTATION SHOWING THAT THE GROUNDING SYSTEM SHALL HAVE A MEASURED RESISTANCE TO THE GROUND OF NOT MORE THAN THE RECOMMENDED 10 OHMS. PER THE ATC CONSTRUCTION SPECIFICATION UNDER SECTION 2.15 THIS DOCUMENTATION MUST BE AN INDEPENDENT CERTIFICATION.		GC					
STEEL CONSTRUCTION INSPECTION & VERIFICATION	VISUAL OBSERVATION AND APPROVAL OF STEEL CONSTRUCTION TO BE PERFORMED BY THE SI. INSPECTION TO INCLUDE VERIFICATION OF NEW CONSTRUCTION OR MODIFICATION OF EXISTING CONSTRUCTION PER ENGINEERED PLANS. DETAILED VERIFICATION SHALL BE INCLUDED IN SI REPORT.	✓	SI			✓	✓	
ON-SITE COLD GALVANIZING VERIFICATION	SI SHALL VERIFY WITH GC ALL COLD GALVANIZATION TYPE AND APPLICATION AND INCLUDE SUMMARY IN SI REPORT	✓	GC			✓	✓	
GUY WIRE TENSIONING & TOWER ALIGNMENT REPORT	GC SHALL PROVIDE SI EVIDENCE OF PROPER GUY TENSIONING AND TOWER PLUMB PER PLANS. SI SHALL VERIFY AND INCLUDE PLUMB AND TENSION REPORTING IN SI REPORT.		GC					
GC AS-BUILT DRAWINGS WITH CONSTRUCTION RED-LINES	GC SHALL SUBMIT "AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS TO SI FOR APPROVAL/REVIEW AND INCLUSION IN SI REPORT	✓	GC			✓		
SI AS-BUILT DRAWINGS WITH INSPECTION RED-LINES (AS REQUIRED)	SI SHALL SUBMIT "AS-BUILT" DRAWINGS INDICATING ANY APPROVED CHANGES TO ENGINEERED PLANS WITHIN SI REPORT	✓	SI			✓		
TIA INSPECTION	SI SHALL COMPLETE TIA INSPECTION AND PROVIDE SEPARATE TIA INSPECTION DOCUMENTATION TO ATC CM		SI					
PHOTOGRAPHS	PHOTOGRAPHIC EVIDENCE OF SPECIAL INSPECTION, ON SITE REMEDIATION, AND ITEMS FAILING INSPECTION & REQUIRING FOLLOW UP TO BE INCLUDED WITHIN THE SI REPORT. COMPLETE PHOTO LOG IS TO BE SUBMITTED WITHIN SI REPORT.	✓	GC / SI			✓		

NOTE: SPECIAL INSPECTIONS ARE INTENDED TO BE A COLLABORATIVE EFFORT BETWEEN GC AND SI. WHENEVER POSSIBLE GC IS TO PROVIDE SI WITH PHOTOGRAPHIC OR OTHER ACCEPTABLE EVIDENCE OF PROPER INSTALLATION IF PERIODIC INSPECTION FREQUENCY IS ACCEPTABLE. THE GC AND SI SHALL WORK TO COMPILE EVIDENCE OF PROPER CONSTRUCTION AND LIMIT THE NUMBER OF SI SITE VISITS REQUIRED.

TABLE KEY:  
 SI - ATC APPROVED SPECIAL INSPECTOR  
 GC - GENERAL CONTRACTOR  
 TA - 3RD PARTY TESTING AGENCY  
 CX - CONSTRUCTION  
 CM - CONSTRUCTION MANAGER  
 ATC - AMERICAN TOWER CORPORATION



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0	FIRST ISSUE	CWB	04/01/19

ATC SITE NUMBER:  
**302473**  
 ATC SITE NAME:  
**E H F R - PRESTIGE PARK**  
**CONNECTICUT**  
 SITE ADDRESS:  
 310 PRESTIGE PARK RD.  
 EAST HARTFORD, CT 06108

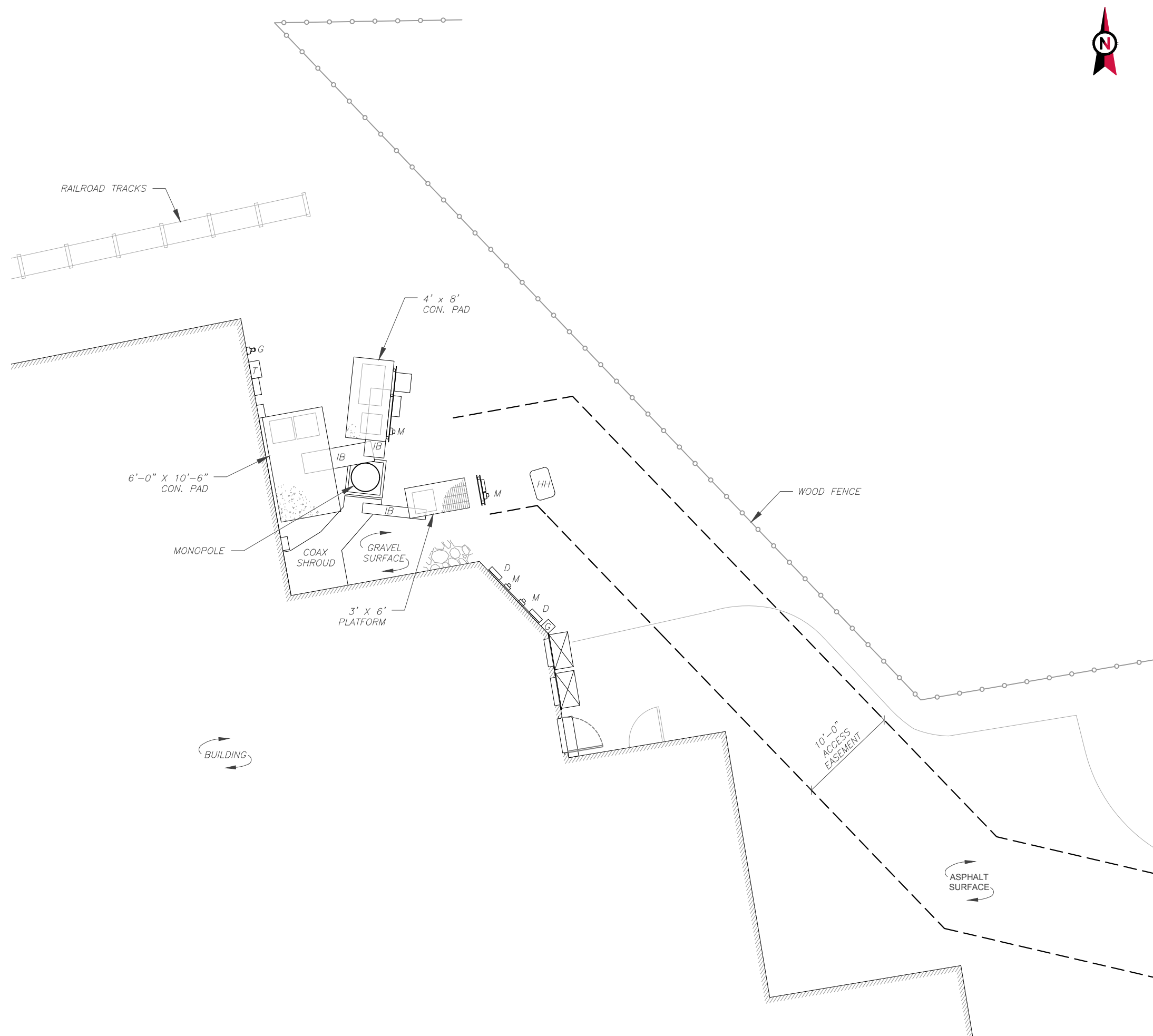
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APPROVED BY:	CDW/KCI
DATE DRAWN:	04/01/19
ATC JOB NO:	OAA745293_C6_06

**SPECIAL INSPECTION CHECKLIST**

SHEET NUMBER:	REVISION:
<b>SIC</b>	<b>0</b>

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LEGEND	
⊗	GROUNDING TEST WELL
AV, A/V	AIR VENT
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
C	CABINET
CS	COAX SHROUD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACLE
HH, V	HAND HOLE, VAULT
HFC	HYDROGEN FUEL CELL
HSM	HYDROGEN STORAGE MATERIAL
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
LPG	LIQUID PROPANE GAS
M	METER
OHW	OVERHEAD WIRE
P	POWER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
---	PROPERTY LINE
- - -	ADJACENT PROPERTY LINE
- · - · -	LEASE AREA
- · - · -	EASEMENT
○ ○ ○ ○	WOOD FENCE
— — — —	WIRE FENCE
□ □ □ □	METAL FENCE
— — — —	GUARD RAIL
x x x x	CHAINLINK FENCE
— — — —	ROAD (DIRT)
— — — —	ROAD (STONE)
— — — —	ROAD (PAVED)



  
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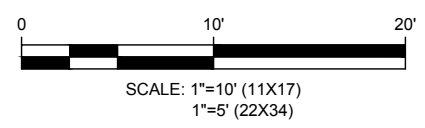
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 310 PRESTIGE PARK RD.  
 EAST HARTFORD, CT 06108

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APPROVED BY:	CDW/KCI
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SITE PLAN	
SHEET NUMBER:	REVISION:
<b>C-101</b>	<b>0</b>



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AT&T MOBILITY  
EL: 153.0' [PROPOSED]

EL: 150.0'  
[TOP OF STRUCTURE]

SECTION 4

EL: 110.0'

SECTION 3

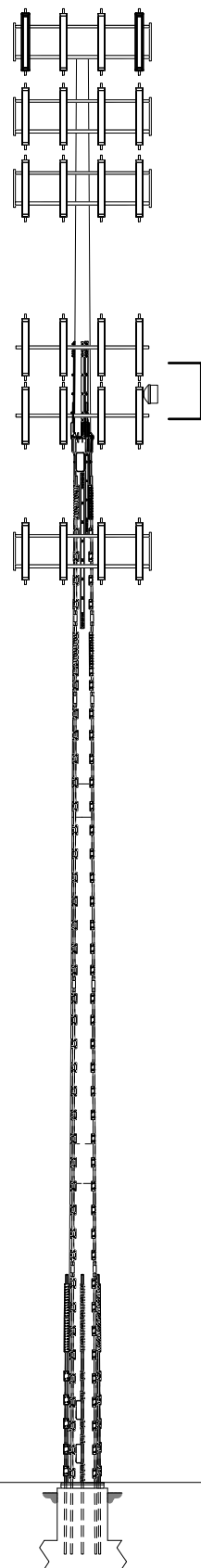
EL: 73.6'

SECTION 2

EL: 35.7'

SECTION 1

EL: 0.0'  
[BOTTOM OF STRUCTURE]



TOWER ELEVATION VIEW

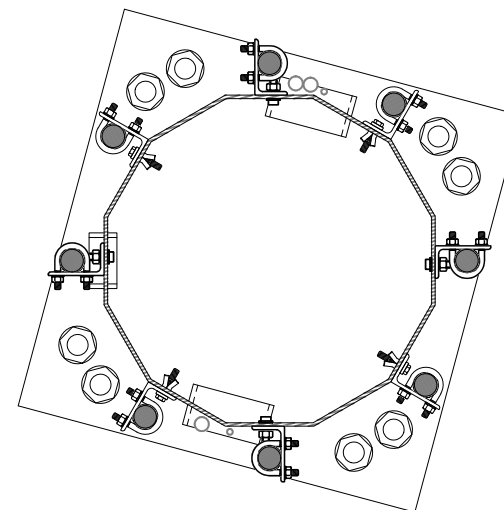
MOUNT MAY REQUIRE SUPPORT AND RE-MOUNTING DURING INSTALLATION. SEE NOTE BELOW.

INSTALL (4) PLATE REINFORCEMENTS [PL 1 1/4" X 4"] FROM EL: 90.0' TO 110.0'. AND INSTALL (3) PLATE REINFORCEMENTS [PL 1 1/4" X 5"] FROM EL: 110.0' TO 120.0'. SEE SHEETS A-4 THRU A-4B FOR INSTALLATION DETAILS & UPGRADE 1"Ø FLANGE BOLTS WITH NEW 1"Ø X 3 3/4" A490 BOLTS [BK-1000-375-A490-MAG] SEE FLANGE BOLT INSTALLATION DETAIL.

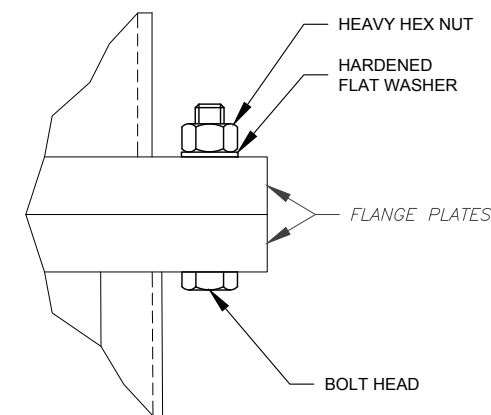
INSTALL (4) DYWIDAG #20 ALL THREAD RODS FROM EL: -7.5' TO 22.5'. SEE SHEETS A-2 TO A-3A FOR INSTALLATION DETAILS.

ADDITIONAL TOWER INFORMATION:

1. PRE-MOD MAPPING WAS COMPLETED FOR THIS PROJECT.



COAX DISTRIBUTION EXTERIOR ONLY



FLANGE BOLT INSTALLATION TYPICAL DETAIL

ALL FLANGE BOLTS SHALL BE TIGHTENED BY USING AISC/RCSC "TURN-OF-THE-NUT" METHODOLOGY. SEE SHEET IGN FOR DETAILS.

- NOTES:
1. PROPOSED AT&T MOBILITY COAX TO BE INSTALLED INSIDE MONOPOLE.
  2. CONTACT AMERICAN TOWER FIELD OPERATIONS WHEN EXISTING EQUIPMENT INTERFERES WITH INSTALLATION OF MODIFICATIONS. ONCE APPROVED, EXISTING EQUIPMENT MAY BE TEMPORARILY MOVED DURING INSTALLATION & REINSTALLED TO THE ORIGINAL HEIGHT & LOCATION BY CONTRACTOR POST COMPLETION OF MODIFICATIONS.



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**CONNECTICUT**

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EAST HARTFORD, CT 06108

DRAWN BY:	CWB
APPROVED BY:	CDW/KCI
DATE DRAWN:	04/01/19
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MODIFICATION PROFILE	
SHEET NUMBER:	REVISION:
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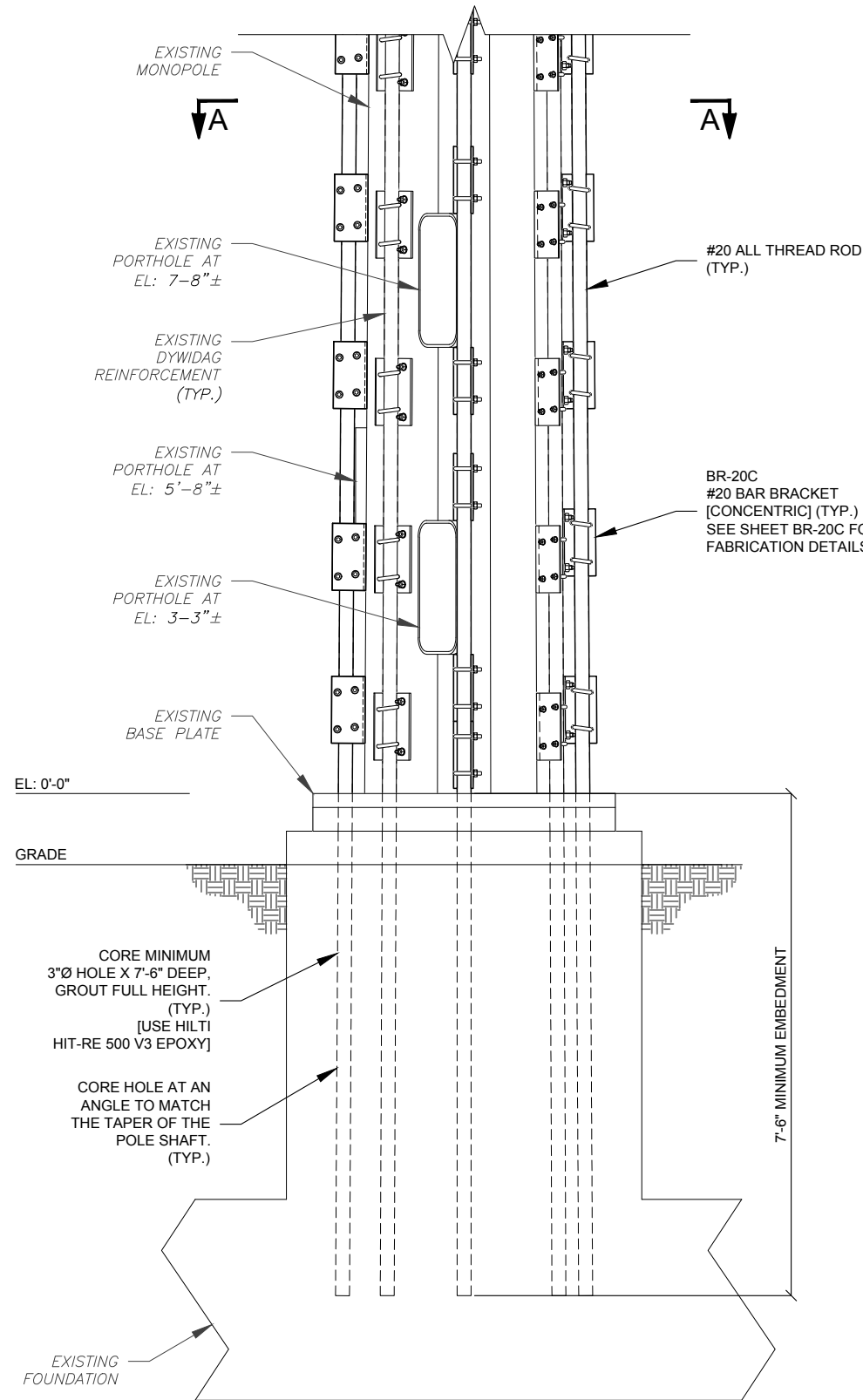
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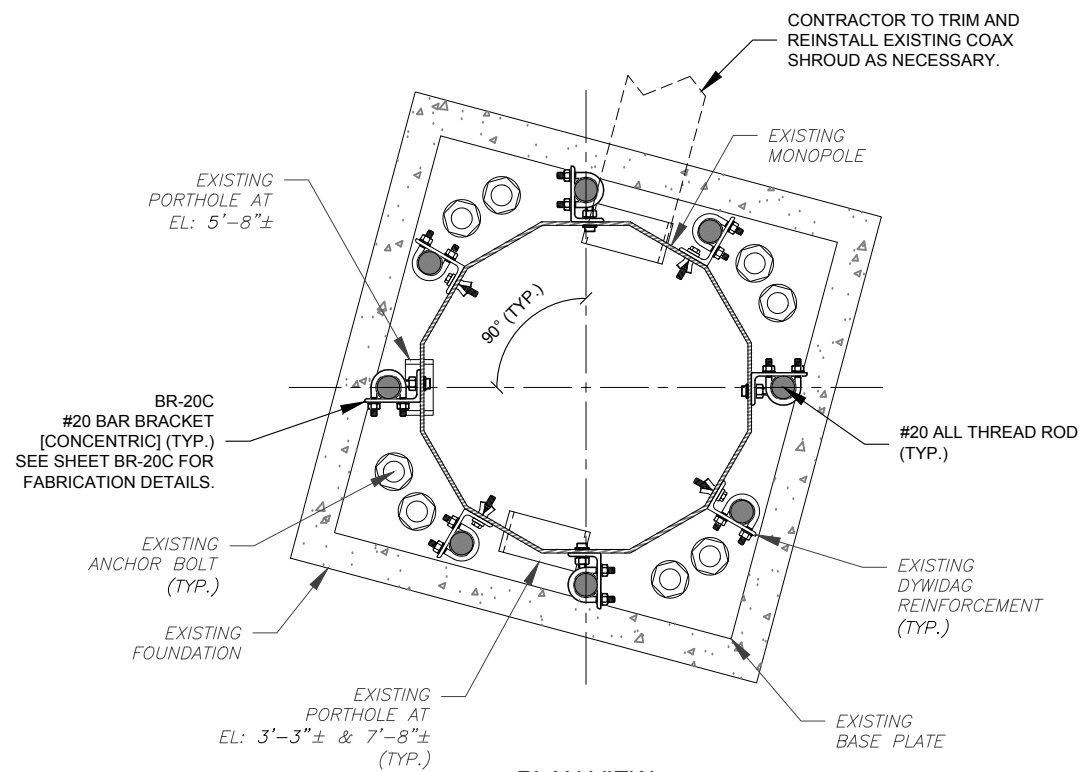
**FOUNDATION DETAILS**

SHEET NUMBER:	REVISION:
<b>A-2</b>	<b>0</b>

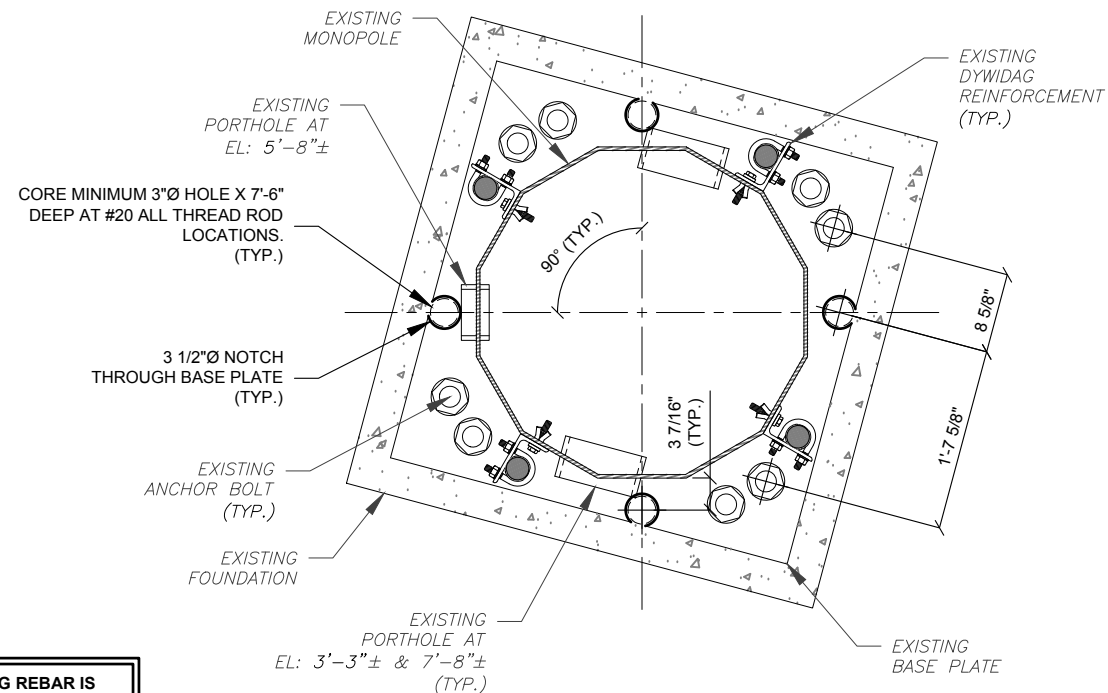


**ELEVATION VIEW  
 FOUNDATION DETAIL**

**NOTE:**  
 CONTRACTOR TO CONTACT ENGINEER OF RECORD IF EXISTING REBAR IS ENCOUNTERED DURING CORING.



**PLAN VIEW  
 SECTION "A-A"**



**PLAN VIEW  
 HOLE DRILL DETAIL**



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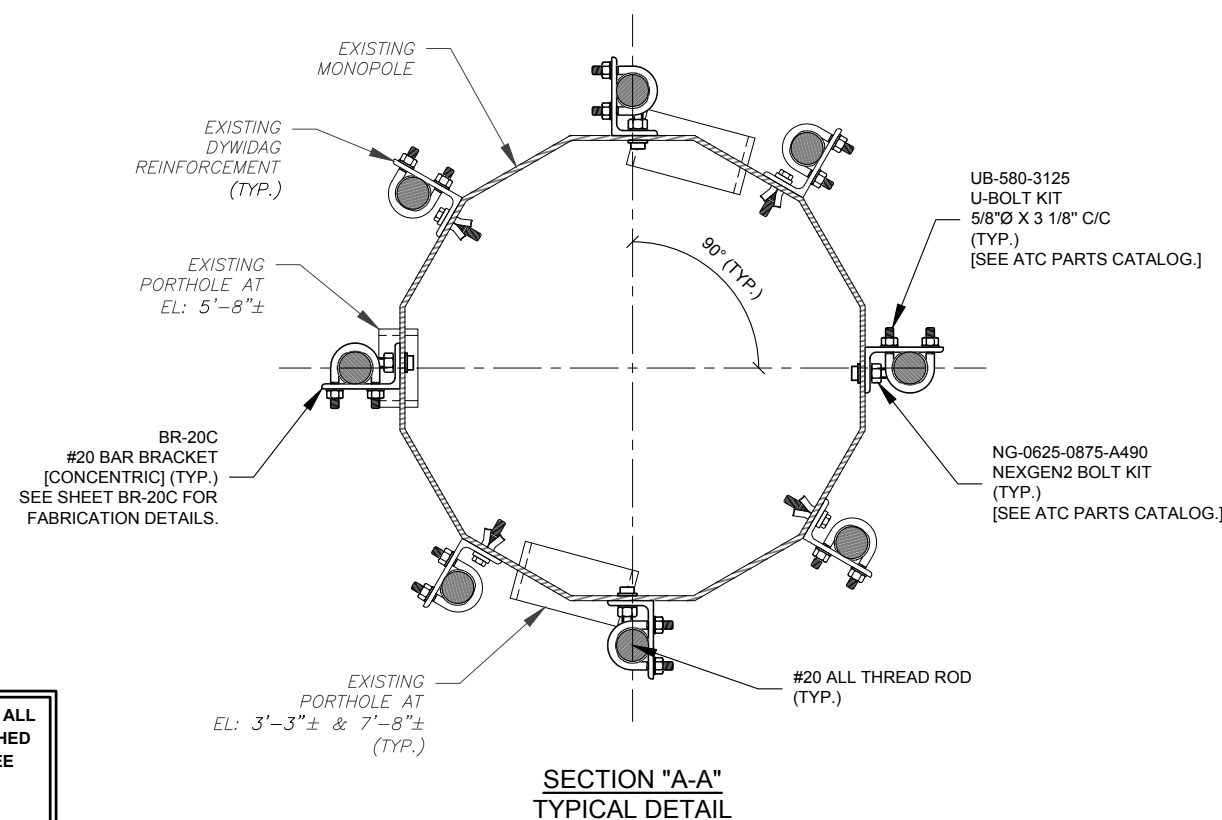
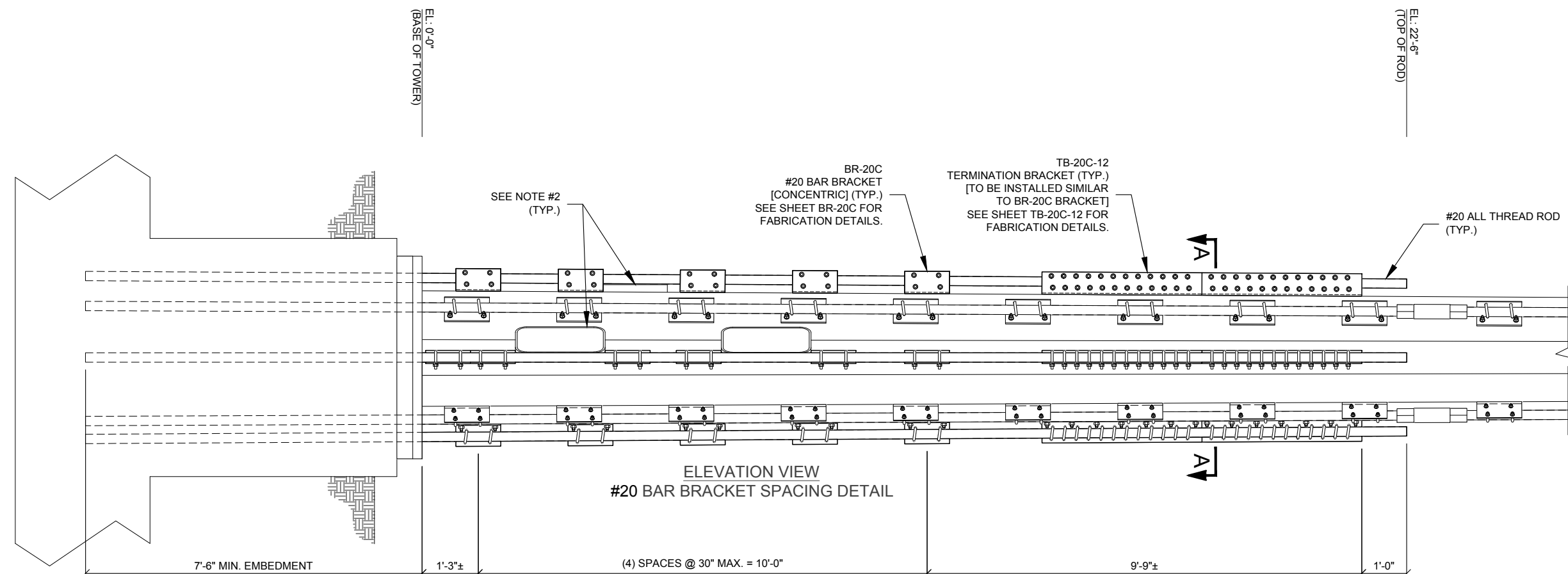
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**CONNECTICUT**

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**REINFORCEMENT  
 INSTALLATION DETAILS**

SHEET NUMBER:	REVISION:
<b>A-3</b>	<b>0</b>



- NOTES:**
1. REPLACE ANY EXISTING STEP BOLTS THAT INTERFERE WITH THE NEW #20 ALL THREAD ROD REINFORCEMENTS. THE NEW STEP BOLTS SHALL BE ATTACHED TO THE #20 ALL THREAD RODS IN THE SAME APPROXIMATE LOCATION. SEE SHEET #20SB FOR INSTALLATION DETAILS.
  2. PLACE A BRACKET (BR-20C) DIRECTLY ABOVE AND BELOW ANY EXISTING PORTHOLE AS REQUIRED.
  3. SEE SHEET A-3A FOR #20 ALL THREAD ROD BRACKET INSTALLATION DETAILS.



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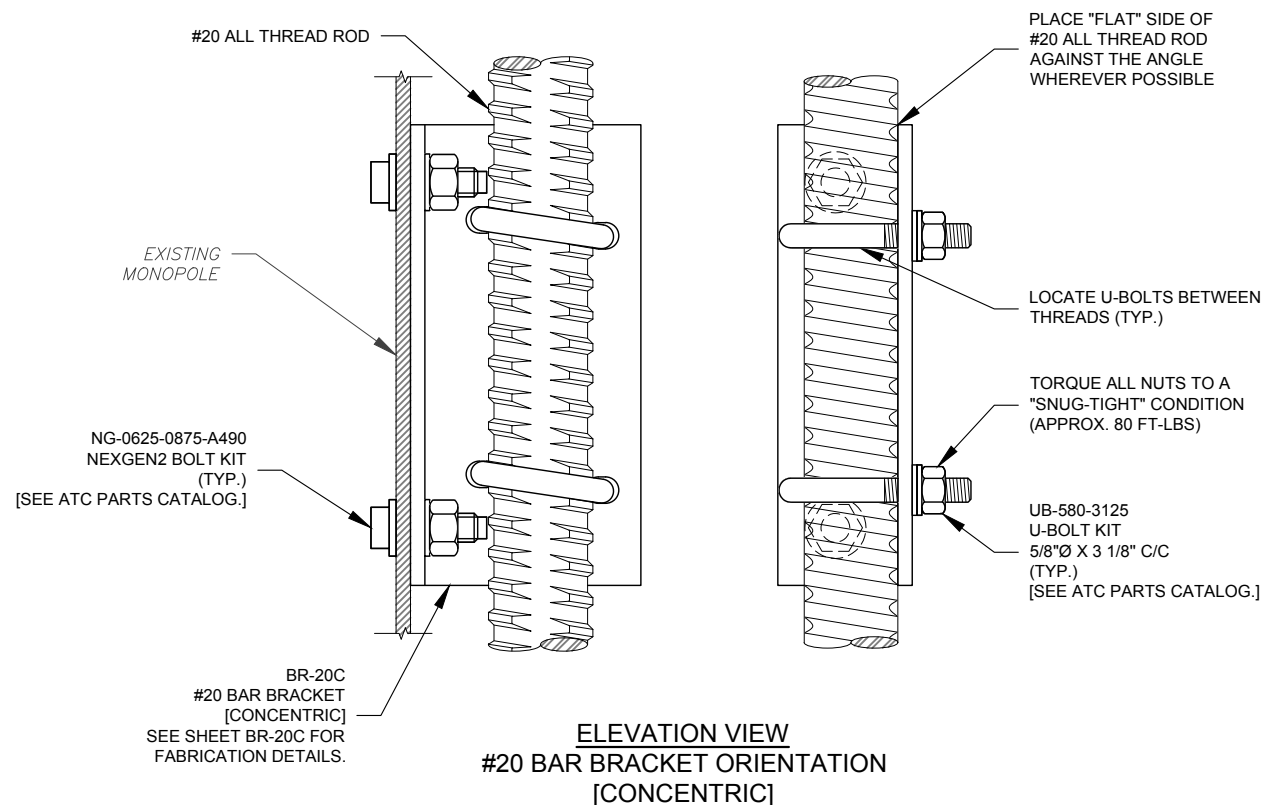
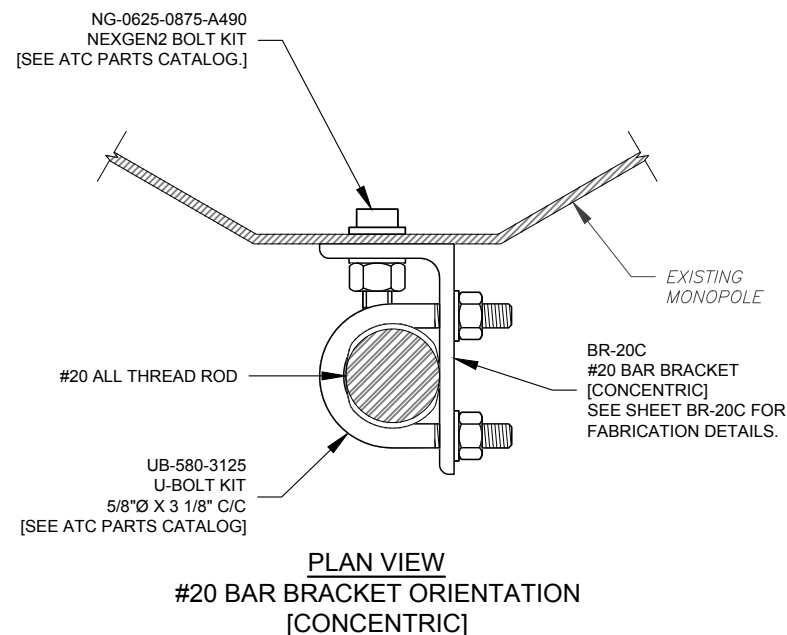
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**REINFORCEMENT  
 INSTALLATION DETAILS  
 (CONT'D)**

SHEET NUMBER: **A-3A**      REVISION: **0**

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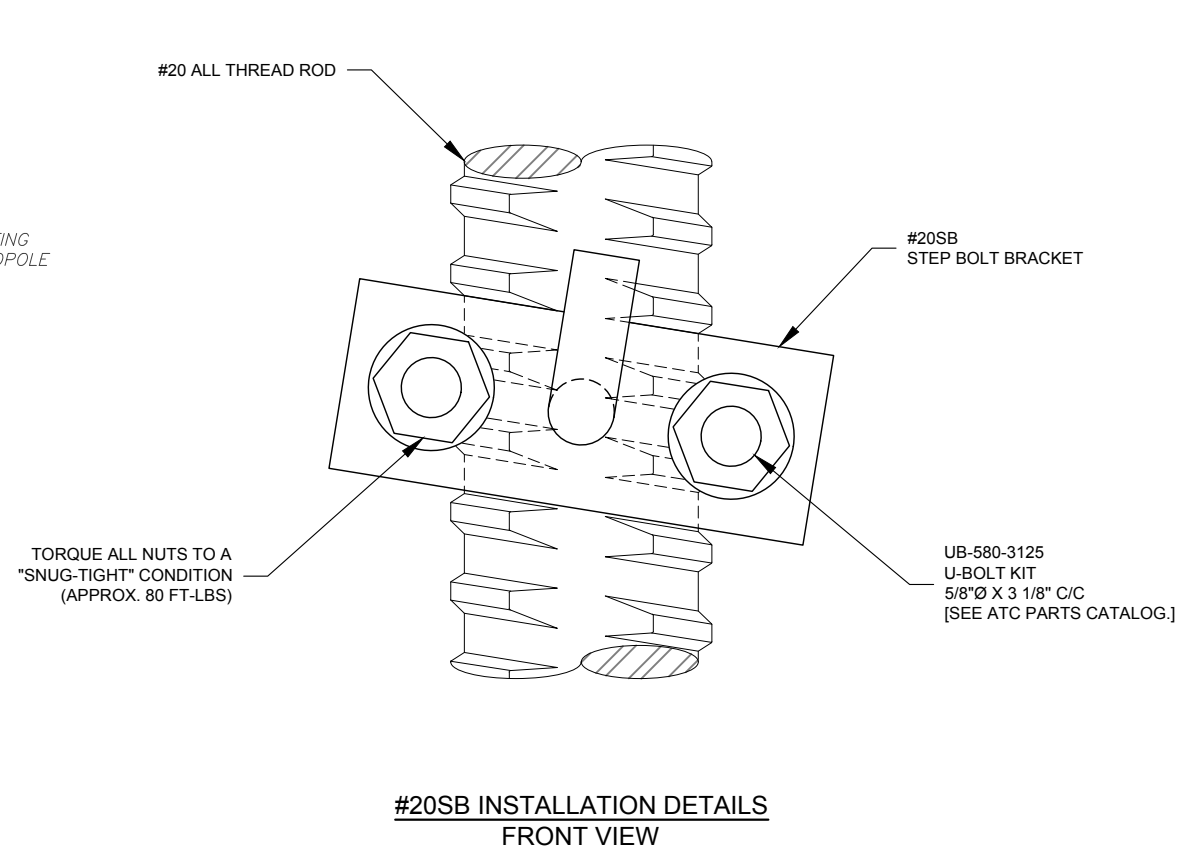
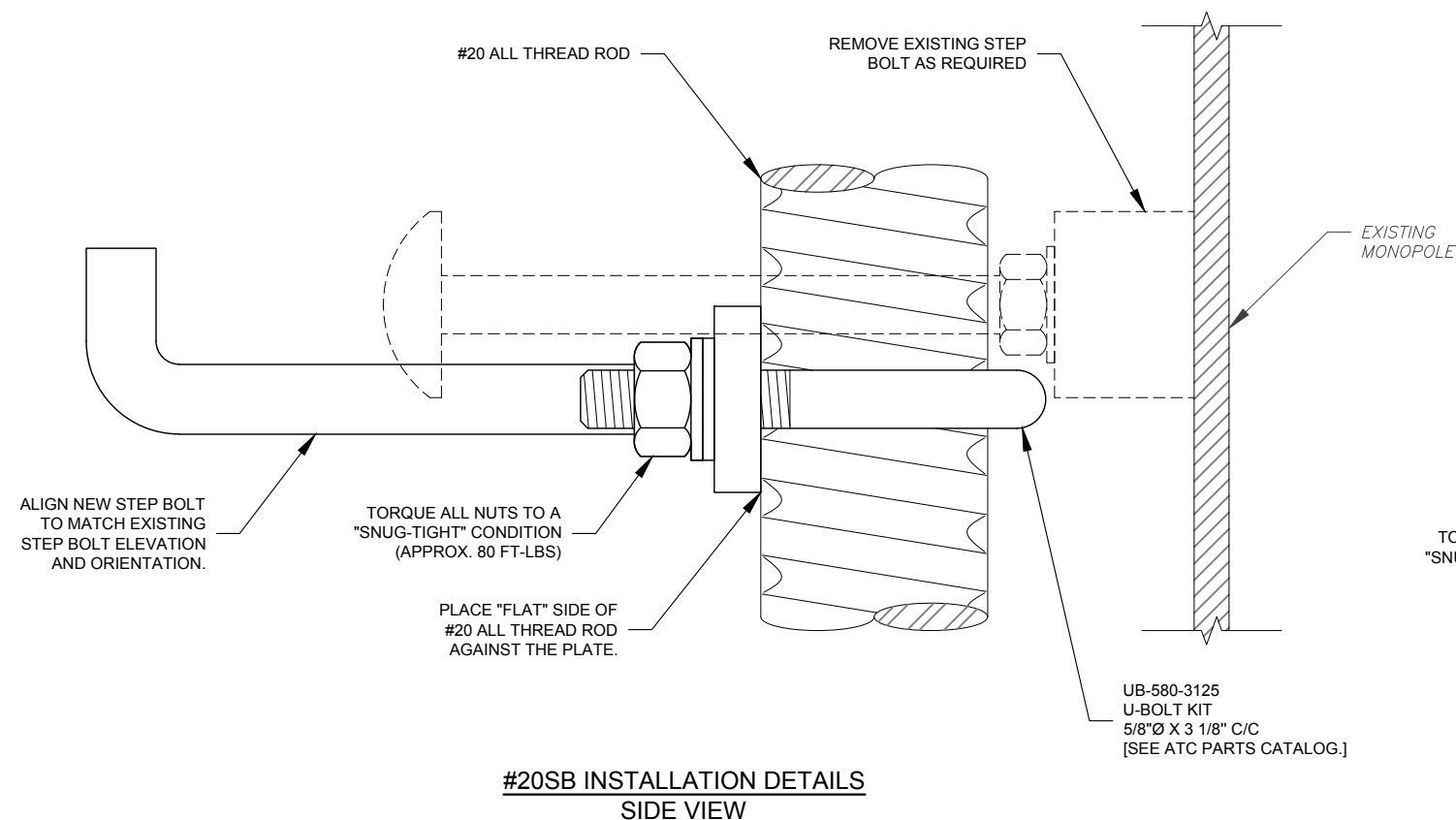


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**NOTE:**  
 STEP PEG SPACING IS NOT TO EXCEED 15" MAX. STAGGERED OR 30" MAX. ON ANY SINGLE SIDE OF THE DYWIDAG BAR.

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DATE DRAWN:	04/01/19
ATC JOB NO:	OAA745293_C6_06

**#20 STEP BOLT BRACKET  
INSTALLATION DETAILS**

SHEET NUMBER:	REVISION:
<b>#20SB</b>	<b>0</b>

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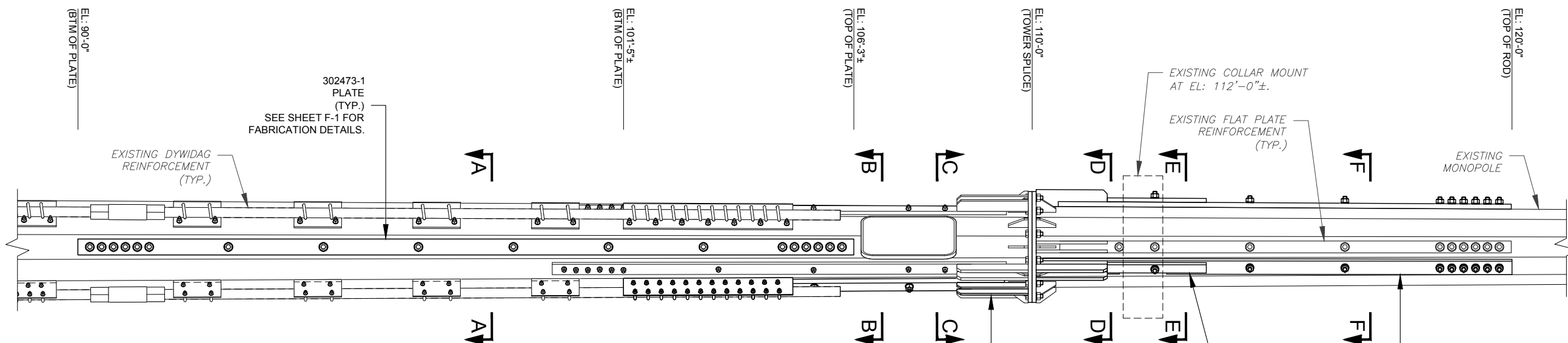
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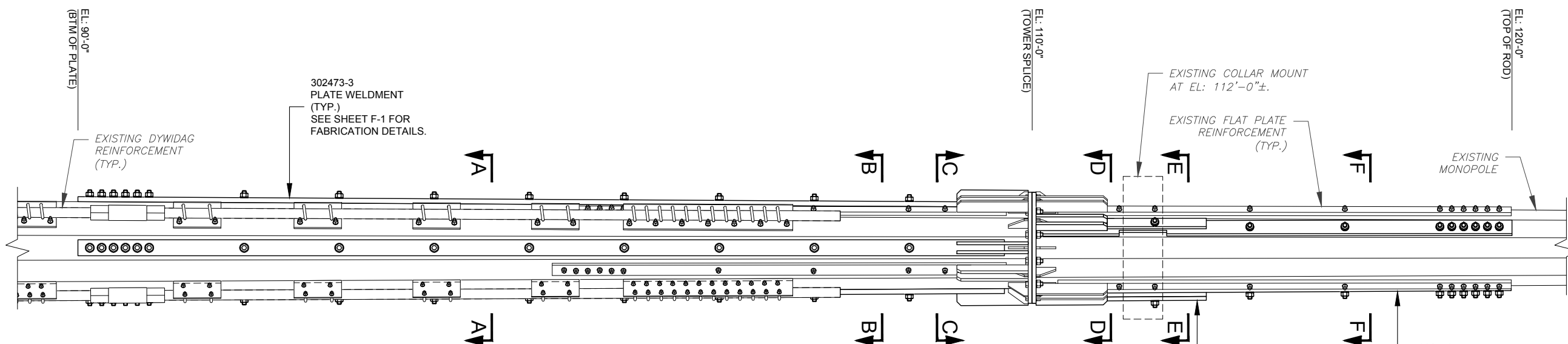
**PLATE WELDMENT  
 INSTALLATION DETAILS**

SHEET NUMBER:  
**A-4**

REVISION:  
**0**



**ELEVATION VIEW  
 PLATE INSTALLATION DETAIL  
 (FRONT VIEW)**



**ELEVATION VIEW  
 PLATE INSTALLATION DETAIL  
 (REAR VIEW)**

- NOTES:**
- SEE SHEET A-4A FOR SECTIONS "A-A" THRU "G-G" AND TYPICAL WELD DETAILS.
  - REPLACE ANY EXISTING STEP BOLTS THAT INTERFERE WITH THE NEW PLATE WELDMENT INSTALLATIONS. THE NEW STEP BOLTS SHALL BE ATTACHED TO THE PLATE WELDMENTS IN THE SAME APPROXIMATE LOCATION. SEE SHEET FBSB FOR INSTALLATION DETAILS.
  - NG-2250-2688-A490 NEXGEN2 BOLT KITS ARE SUPPLIED AS REQUIRED FOR BAR BRACKET CONNECTIONS THAT FALL WITHIN MOUNT BYPASS PLATE [302473-5] LOCATIONS.

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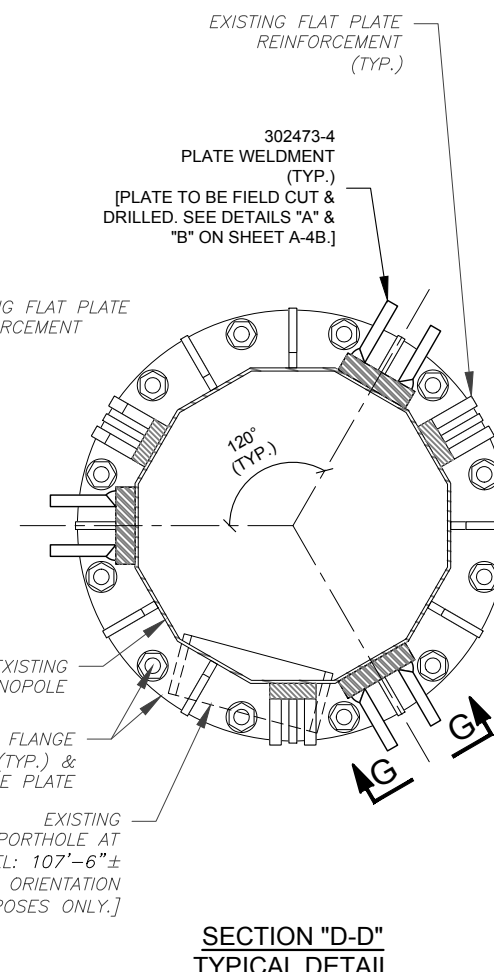
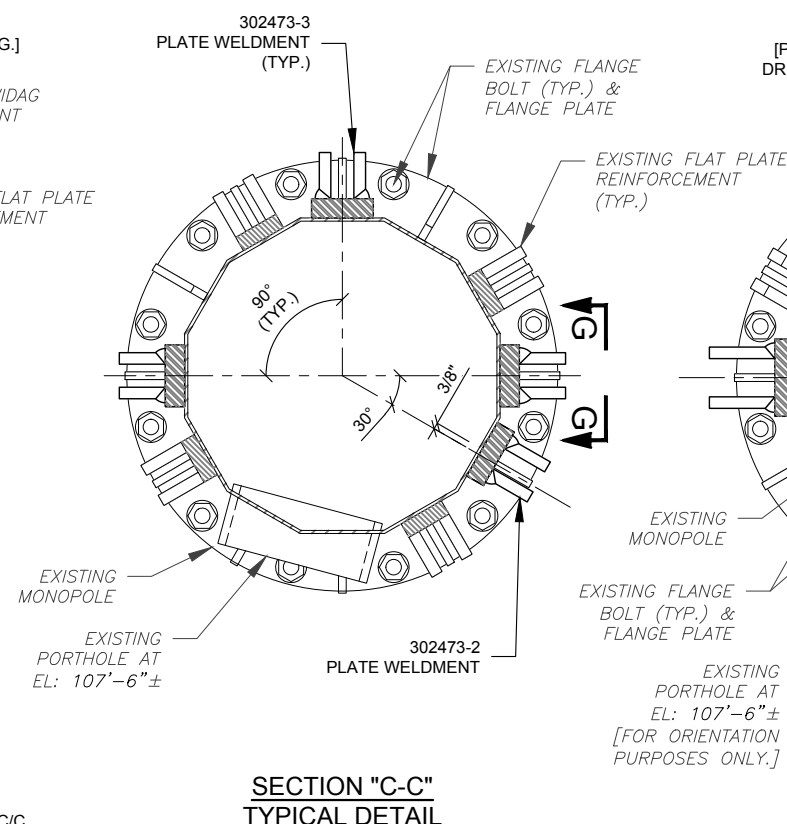
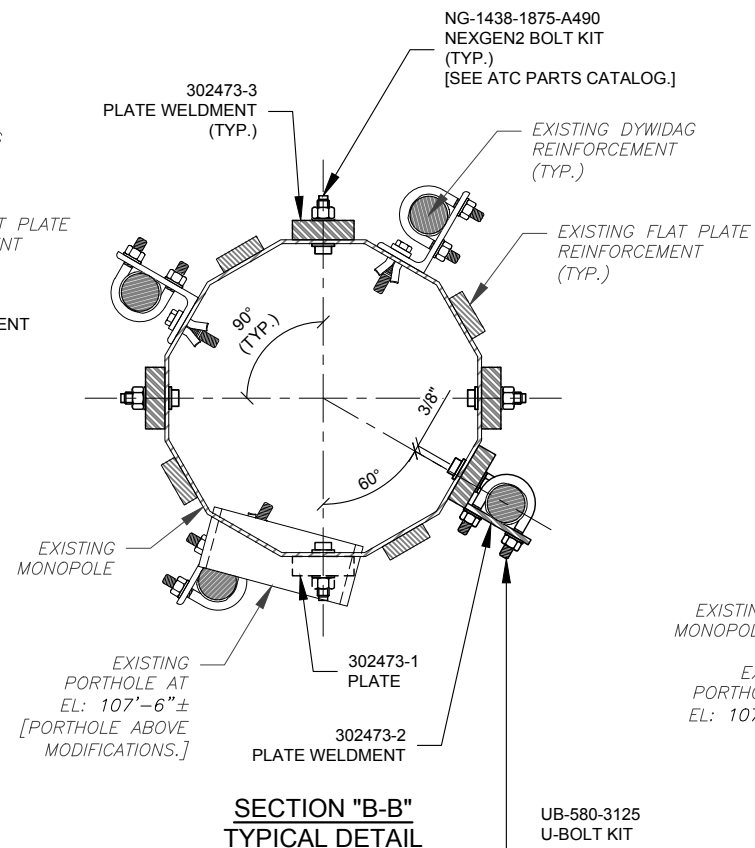
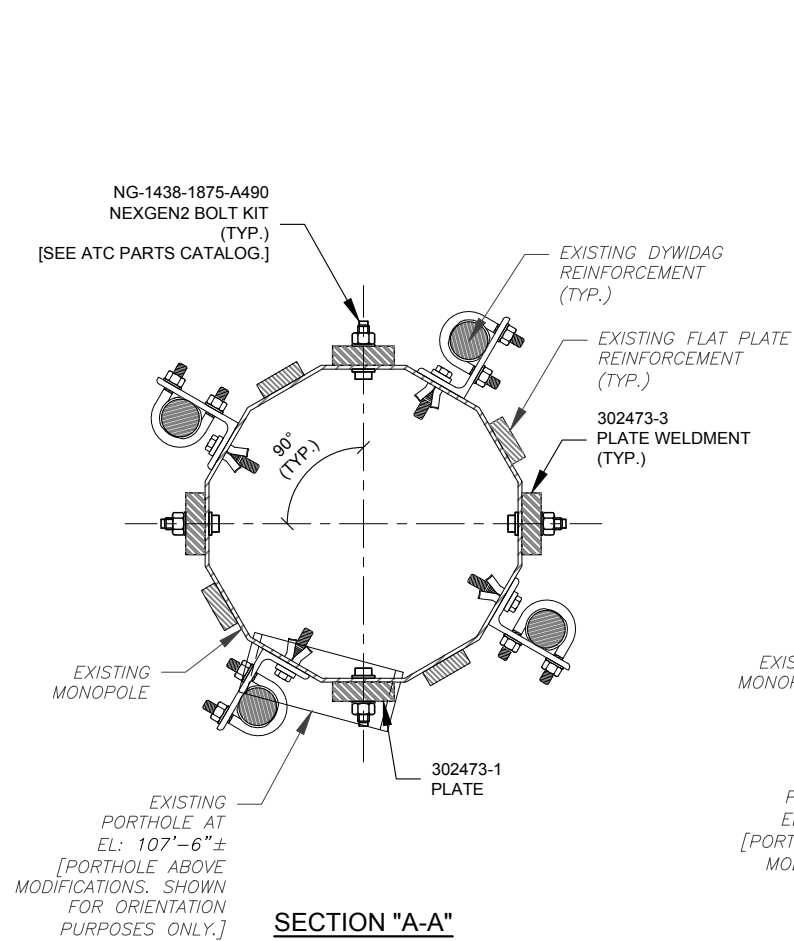
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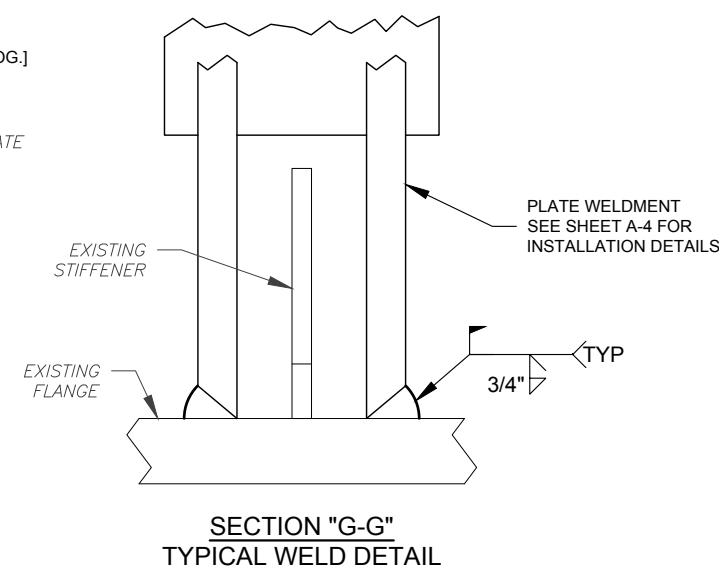
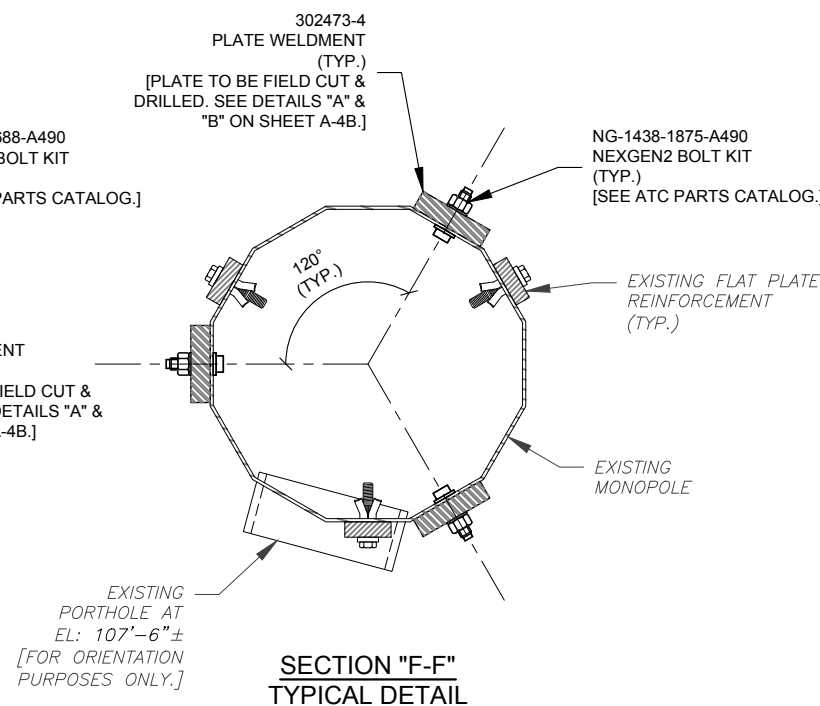
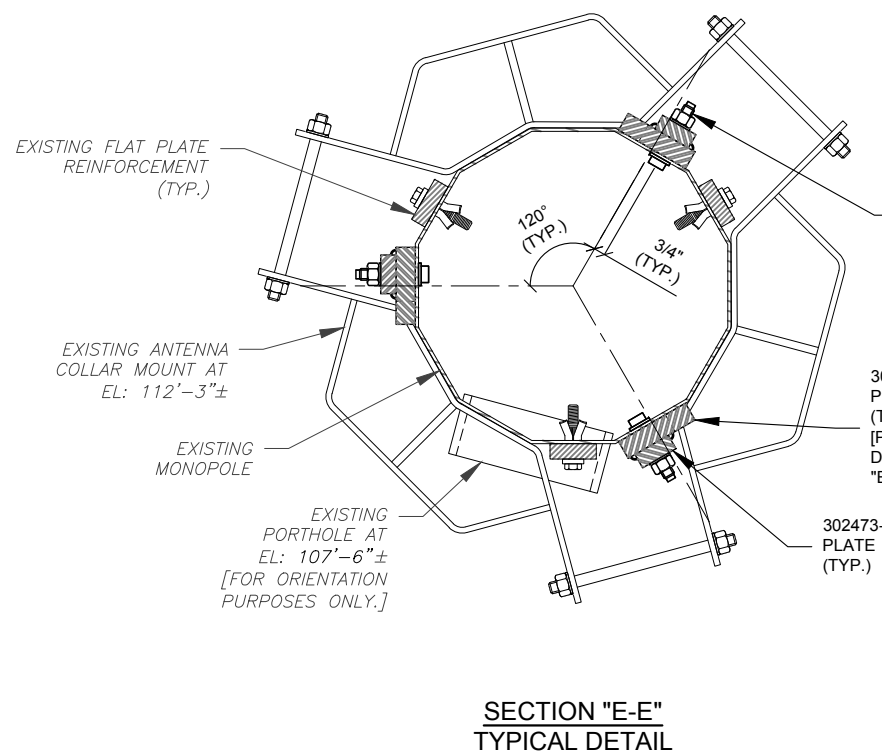
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**SEE SHEET A-4 FOR ADDITIONAL INSTALLATION DETAILS.**



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ATC JOB NO:	OAA745293_C6_06

**PLATE WELDMENT  
 INSTALLATION DETAILS  
 (CONT'D)**

SHEET NUMBER:  
**A-4A**

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ATC SITE NAME:  
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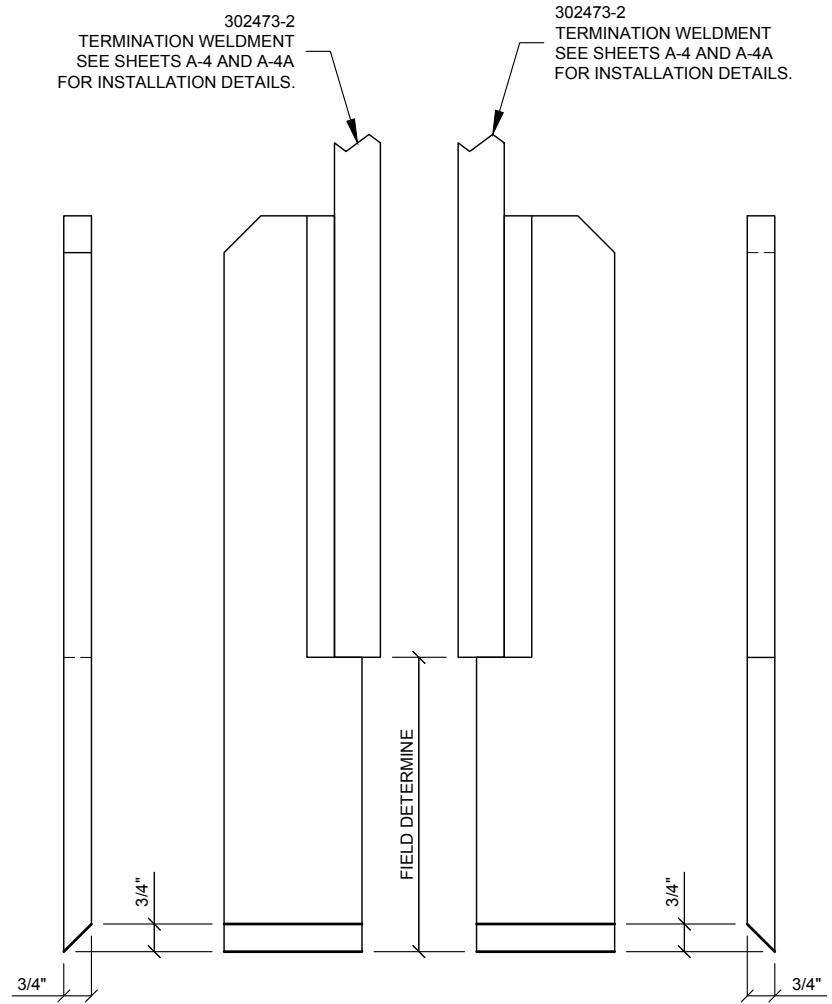
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 EAST HARTFORD, CT 06108

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APPROVED BY:	CDW/KCI
DATE DRAWN:	04/01/19
ATC JOB NO:	OAA745293_C6_06

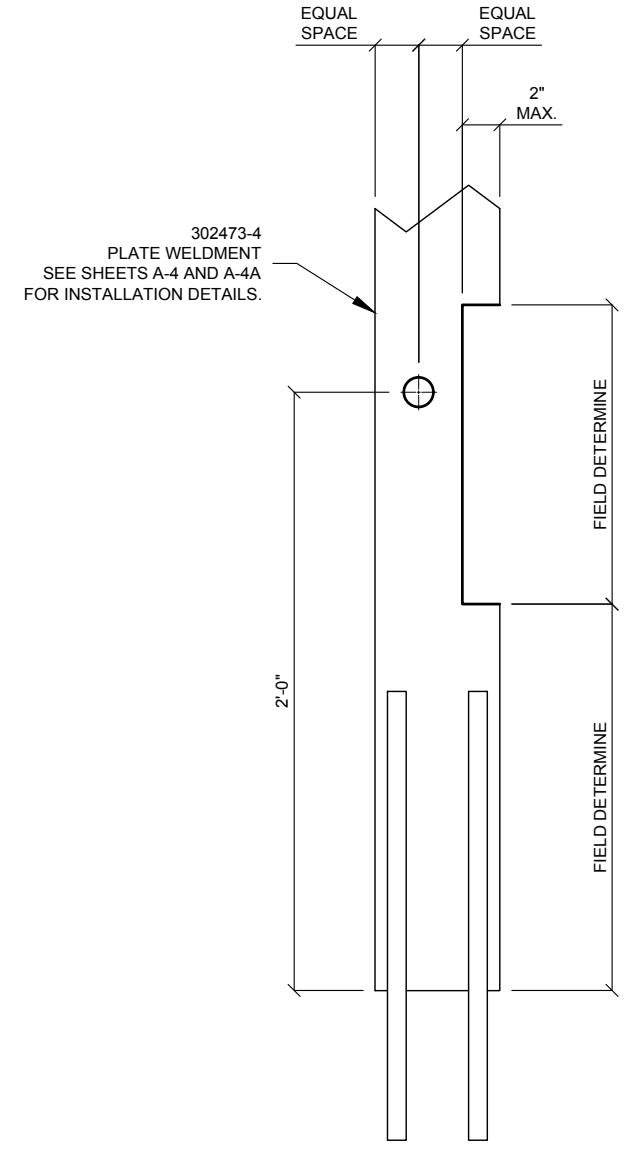
**PLATE WELDMENT  
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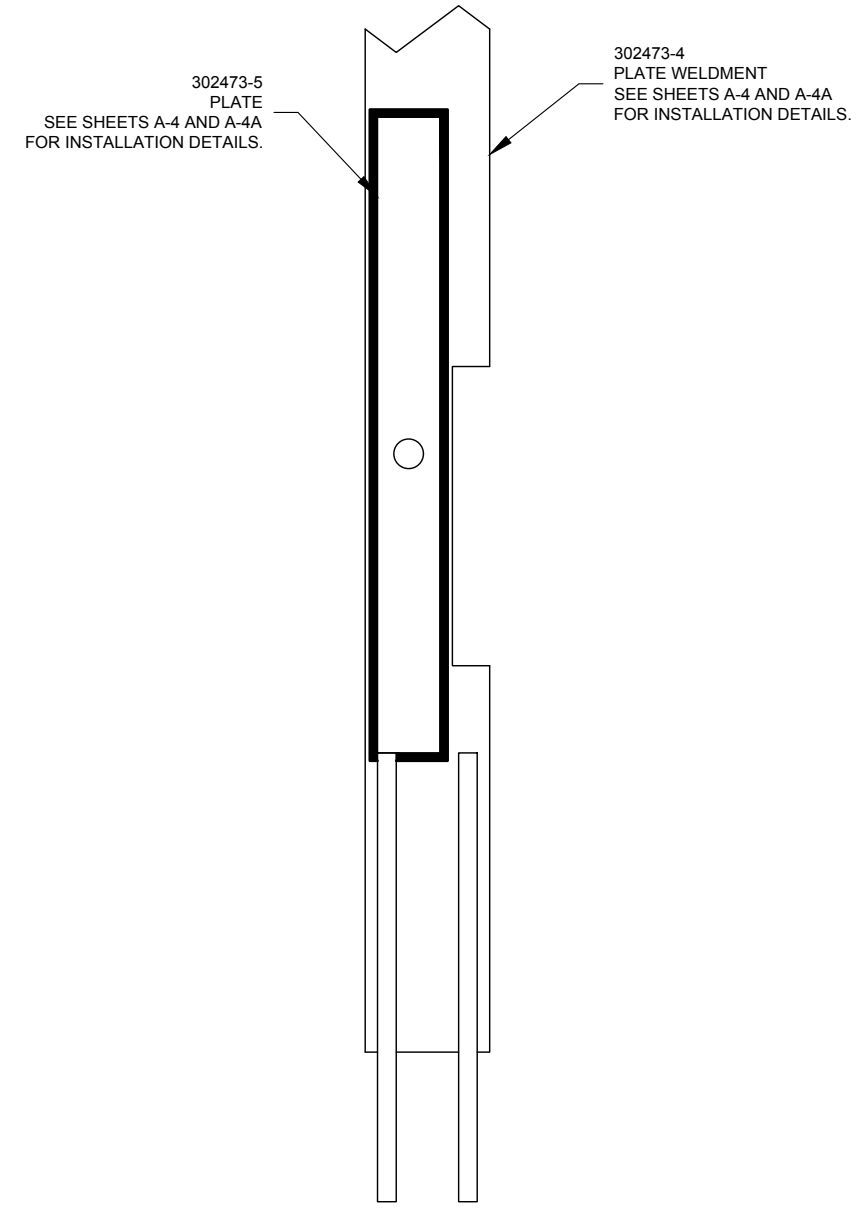
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**DETAIL "A"**  
 FIELD CUT



**DETAIL "B"**  
 TYPICAL FIELD CUT & DRILL DETAIL  
 STEP 1



**DETAIL "B"**  
 TYPICAL FIELD WELD DETAIL  
 STEP 2



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ATC SITE NUMBER:  
**302473**

ATC SITE NAME:  
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**CONNECTICUT**

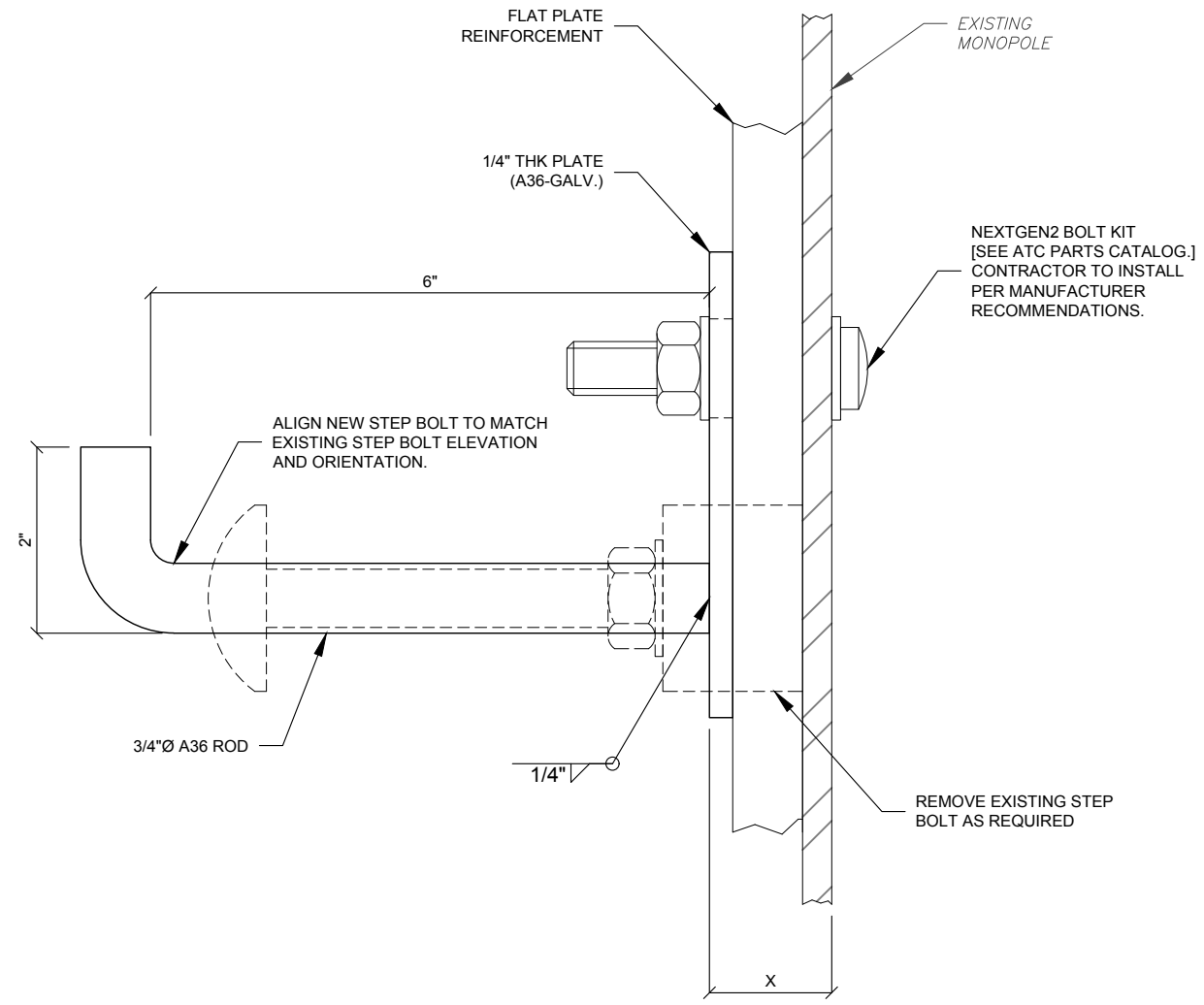
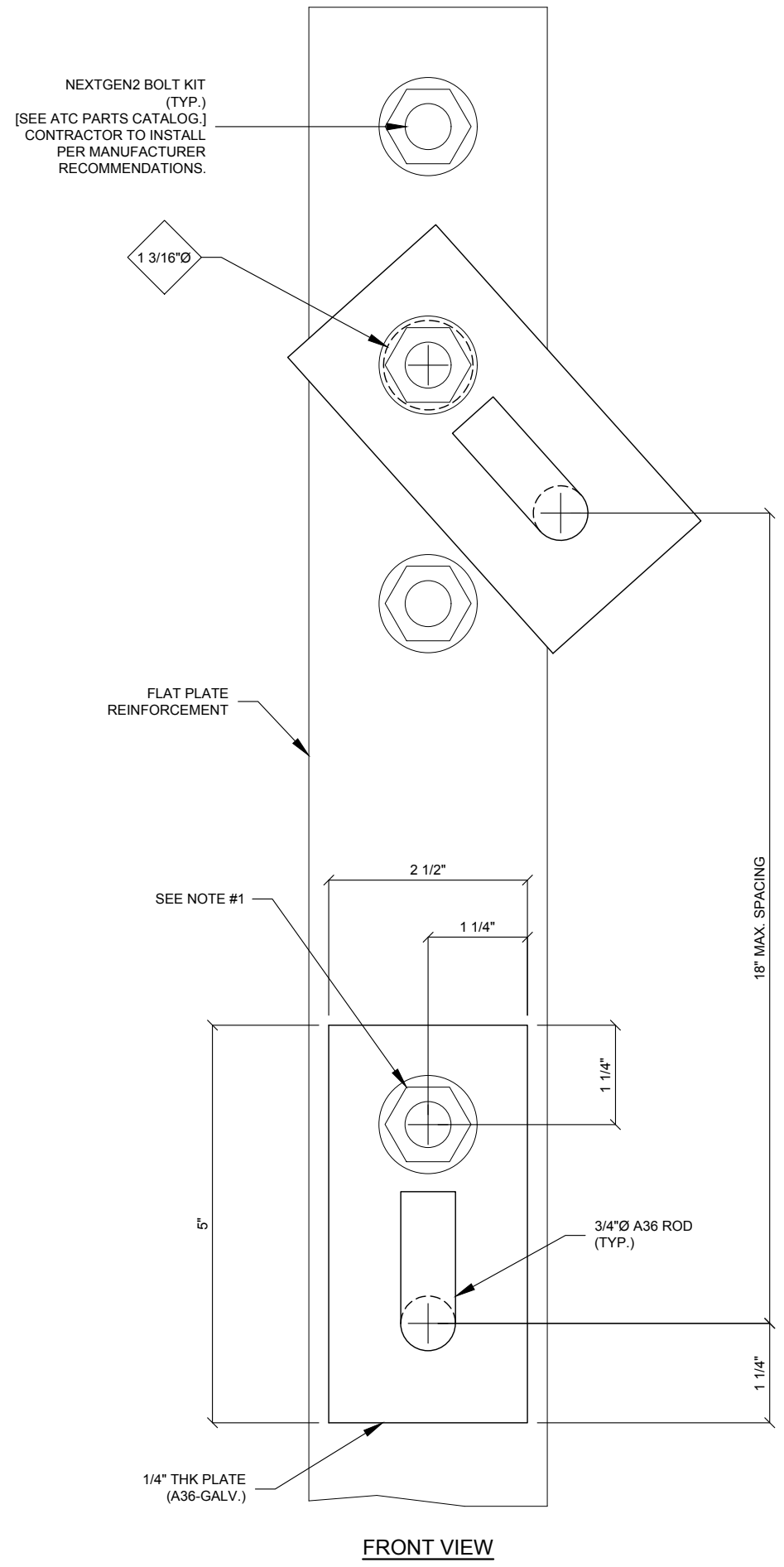
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DRAWN BY:	CWB
APPROVED BY:	CDW/KCI
DATE DRAWN:	04/01/19
ATC JOB NO:	OAA745293_C6_06

**FLAT PLATE STEP BOLT BRACKET FABRICATION & INSTALLATION DETAILS**

SHEET NUMBER:  
**FPSB**

REVISION:  
**0**



**SIDE VIEW**

NEXGEN2 BLIND BOLTS (A490)		
ATC KIT NUMBER	ALLFASTENER	RANGE (IN)
NG-0625-0875-A490	2NG2060	0.625-0.875
NG-0938-1438-A490	2NG2036	0.9375-1.4375
NG-1438-1875-A490	2NG2048	1.4375-1.875
NG-1875-2250-A490	2NG2057	1.875-2.25
NG-2250-2688-A490	2NG2068	2.25-2.6875
NG-2688-3750-A490	2NG2096	2.6875-3.75
NG-3750-5000-A490	2NG2127	3.75-5
NG-5000-8313-A490	2NG2212	5-8.3125

- NOTES:**
- BLIND BOLT LENGTHS TO BE VERIFIED PRIOR TO FLAT PLATE AND STEP BOLT INSTALLATION. USE NEXGEN2 BLIND BOLT CHART.
  - STEP PEG SPACING IS NOT TO EXCEED 15" MAX. STAGGERED OR 30" MAX. ON ANY SINGLE SIDE OF THE FLAT PLATE.

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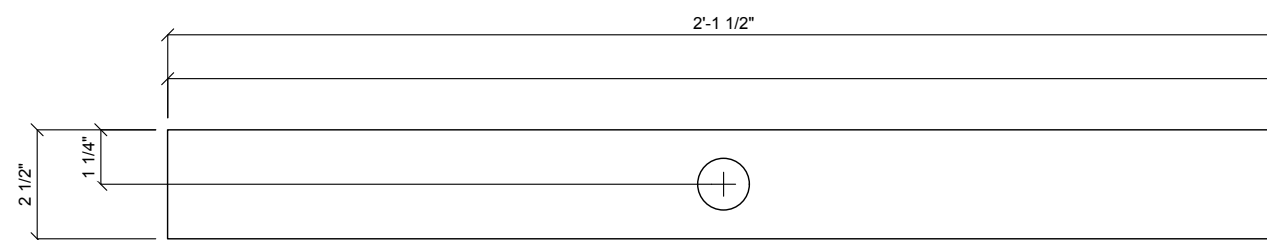
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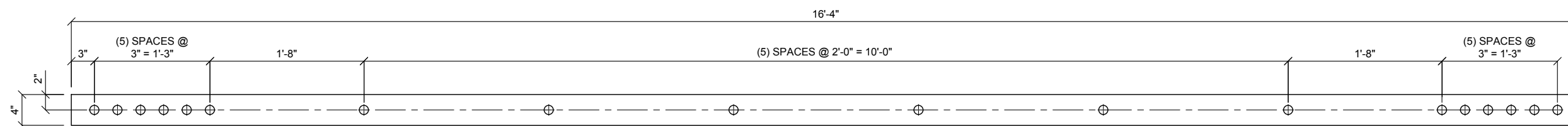
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DATE DRAWN:	04/01/19
ATC JOB NO:	OAA745293_C6_06

**PLATE  
 FABRICATION DETAILS**

SHEET NUMBER:	REVISION:
<b>F-1</b>	<b>0</b>



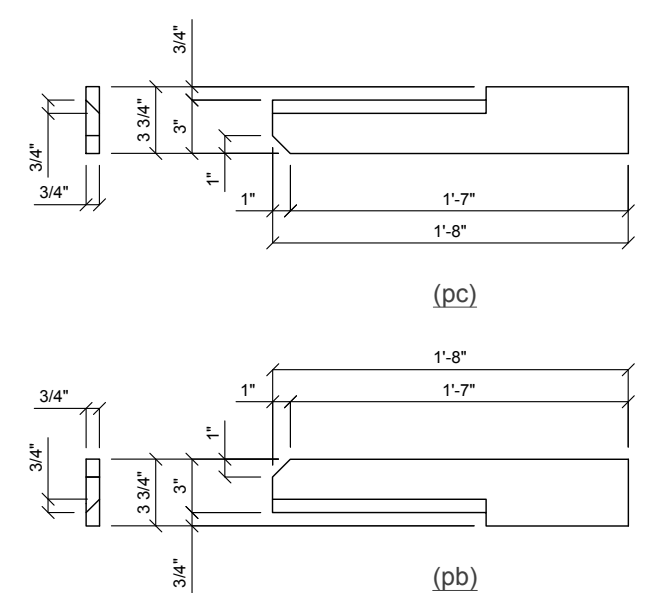
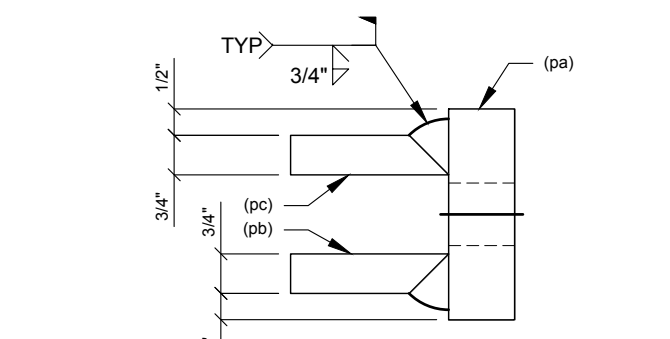
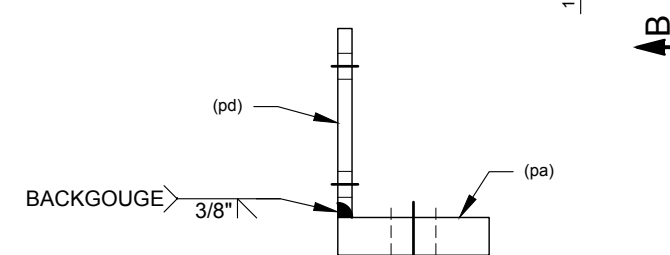
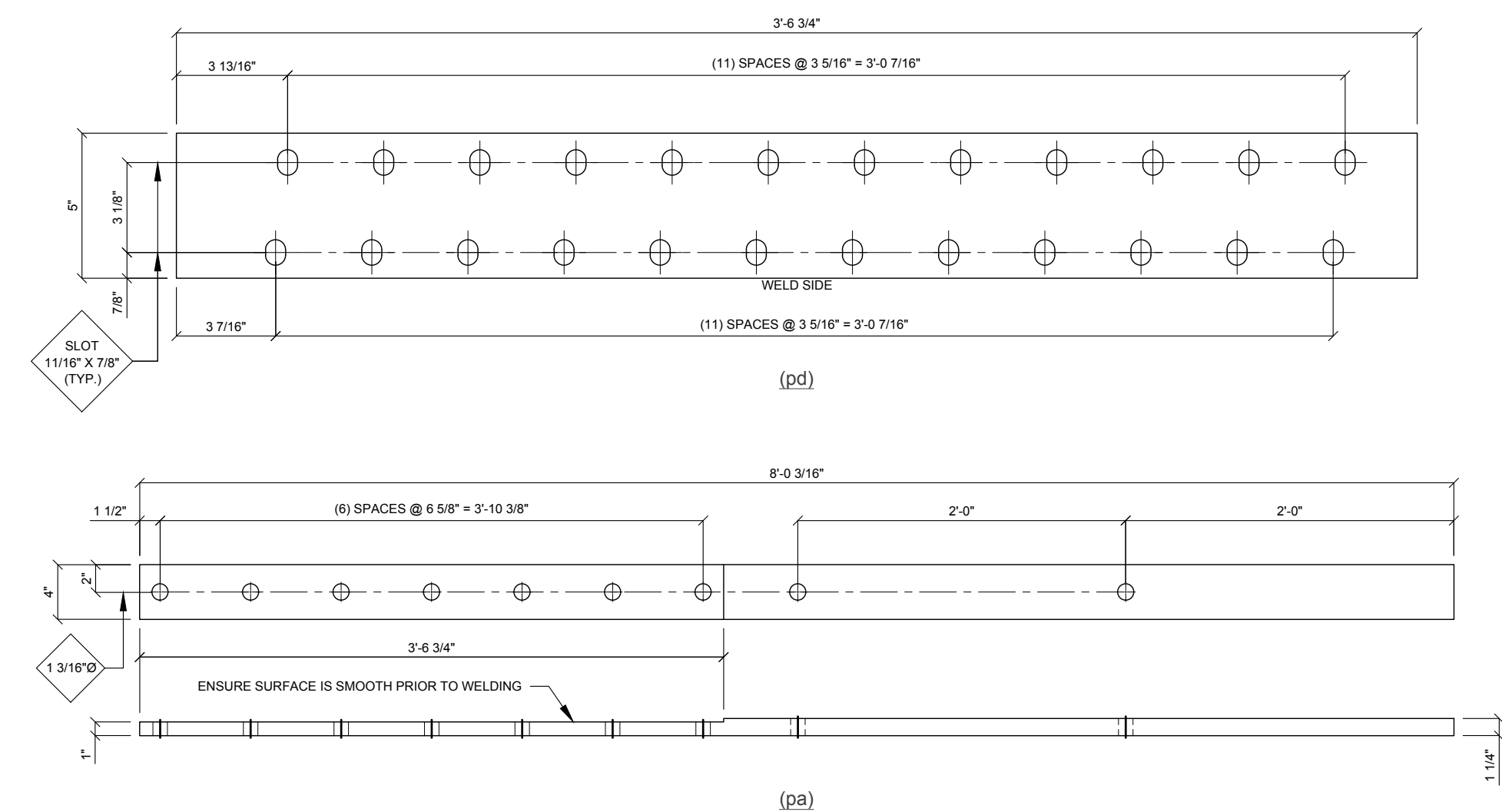
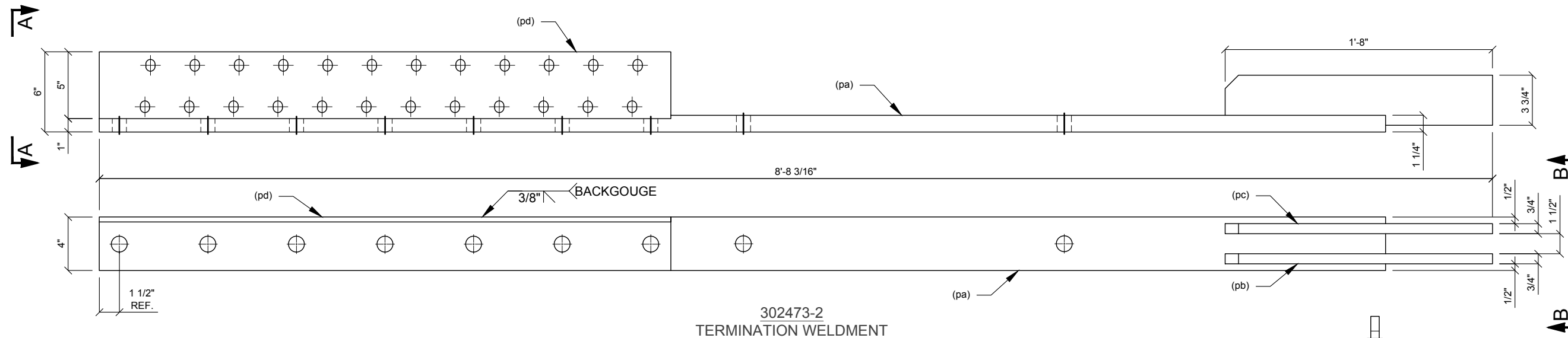
**302473-5  
 PLATE**



**302473-1  
 PLATE**

PART NO.	DESCRIPTION	LENGTH	NOTES	BLK WT	GALV WT
302473-5	PL 1" X 2 1/2"	2'-1 1/2"		18.1#	19.0#
302473-1	PL 1 1/4" X 4"	16'-4"		277.9#	291.8#
<b>MATERIAL: A572 GR. 65</b>		<b>FINISH: GALVANIZED</b>		<b>HOLES: 1 3/16"Ø</b>	

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PART NO.	QTY	DESCRIPTION	LENGTH	NOTES	BLK WT
(pd)	1	PL 3/8" X 5"	3'-6 3/4"		22.7#
(pc)	1	PL 3/4" X 3 3/4"	1'-8"	SHAPE	13.9#
(pb)	1	PL 3/4" X 3 3/4"	1'-8"	SHAPE	13.9#
(pa)	1	PL 1 1/4" X 4"	8'-0 3/16"	SHAPE	124.3#
302473-2	1	TERMINATION WELDMENT	8'-8 3/16"		174.9#
<b>MATERIAL:</b> A572 GR. 65		<b>FINISH:</b> GALVANIZED		<b>HOLES:</b> AS NOTED	<b>GALV WT:</b> 183.6#

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ATC SITE NUMBER:  
**302473**

ATC SITE NAME:  
**E H F R - PRESTIGE PARK  
CONNECTICUT**

SITE ADDRESS:  
310 PRESTIGE PARK RD.  
EAST HARTFORD, CT 06108

DRAWN BY:	CWB
APPROVED BY:	CDW/KCI
DATE DRAWN:	04/01/19
ATC JOB NO:	OAA745293_C6_06

TERMINATION WELDMENT  
FABRICATION DETAILS

SHEET NUMBER: **F-2**      REVISION: **0**

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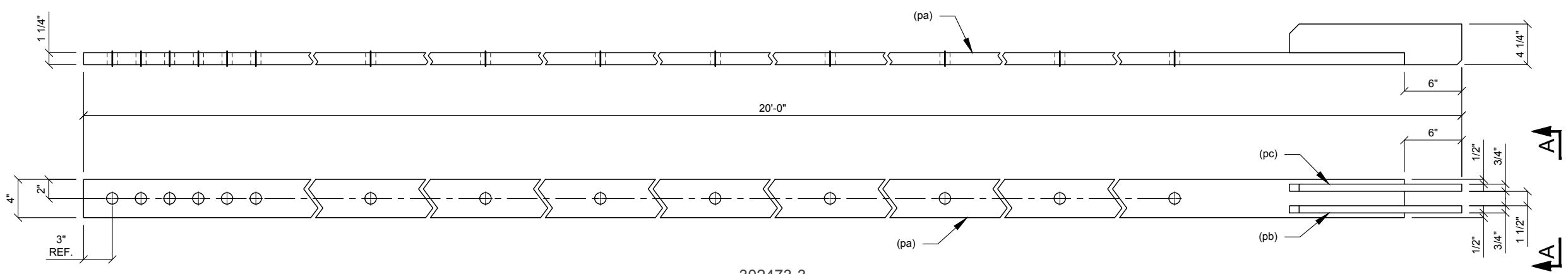
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**CONNECTICUT**  
 SITE ADDRESS:  
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 EAST HARTFORD, CT 06108

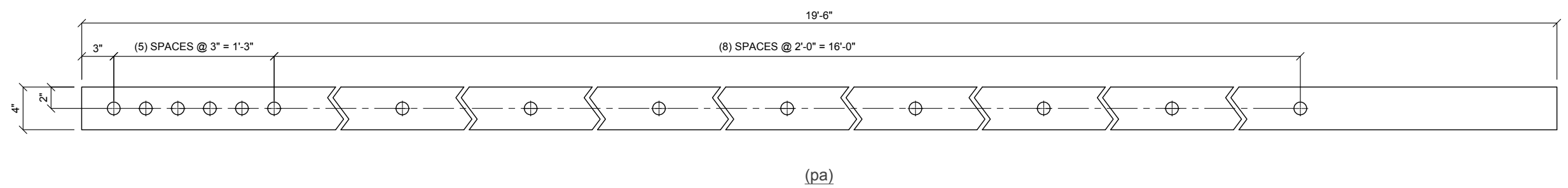
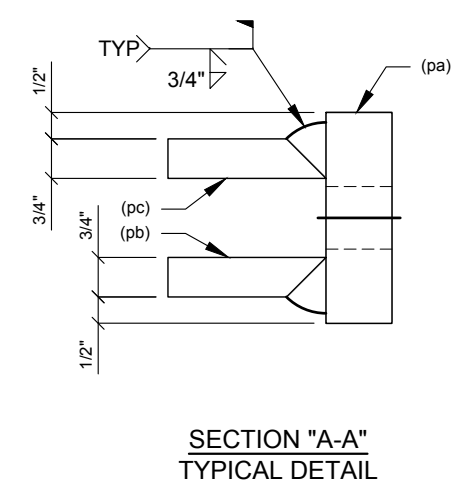
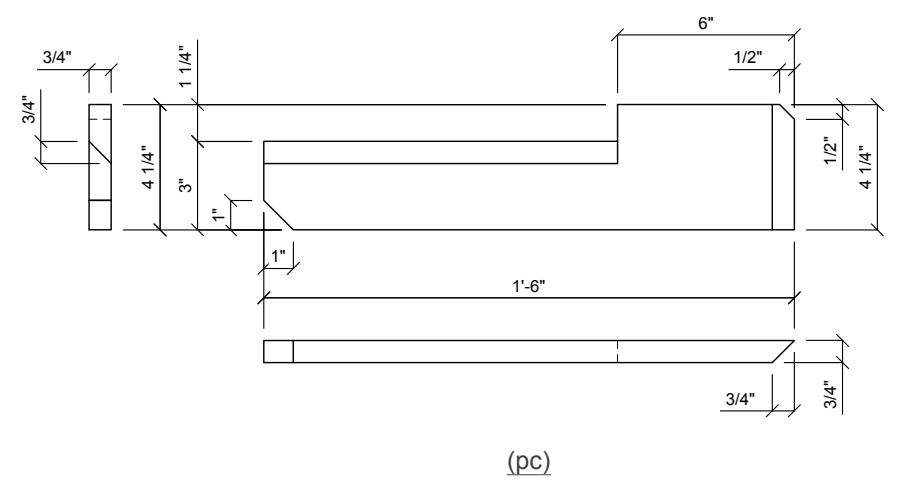
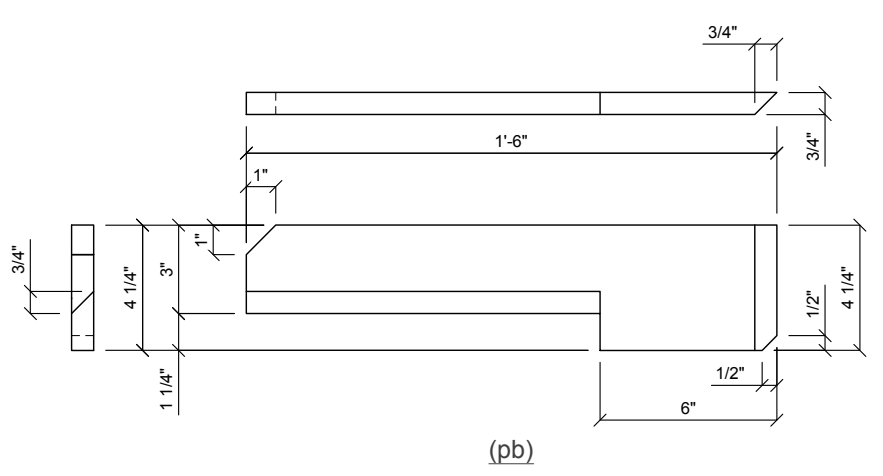
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ATC JOB NO:	OAA745293_C6_06

**PLATE WELDMENT  
 FABRICATION DETAILS**

SHEET NUMBER:	REVISION:
<b>F-3</b>	<b>0</b>



**302473-3  
 PLATE WELDMENT**



PART NO.	QTY	DESCRIPTION	LENGTH	NOTES	BLK WT
(pc)	1	PL 3/4" X 4 1/4"	1'-6"	SHAPE	12.9#
(pb)	1	PL 3/4" X 4 1/4"	1'-6"	SHAPE	12.9#
(pa)	1	PL 1 1/4" X 4"	19'-6"		331.8#
302473-3	1	PLATE WELDMENT	20'-0"		357.7#
<b>MATERIAL:</b> A572 GR. 65		<b>FINISH:</b> GALVANIZED	<b>HOLES:</b> 1 3/16"Ø	<b>GALV WT:</b>	375.5#

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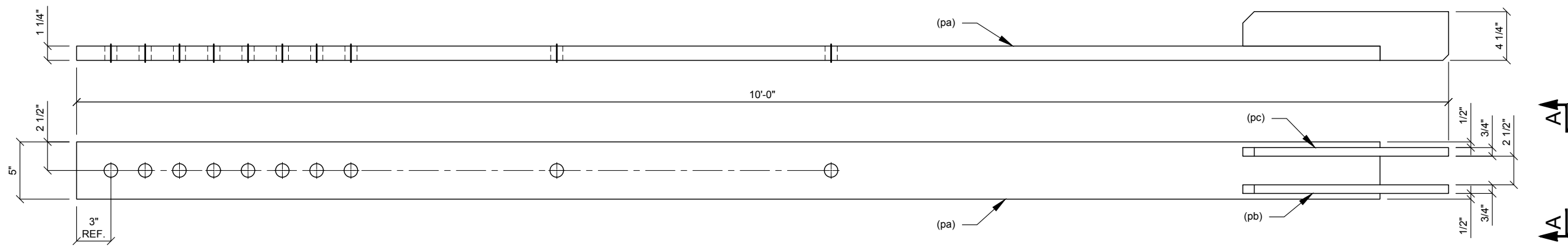
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	CWB	04/01/19

ATC SITE NUMBER:  
**302473**  
 ATC SITE NAME:  
**E H F R - PRESTIGE PARK**  
**CONNECTICUT**  
 SITE ADDRESS:  
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 EAST HARTFORD, CT 06108

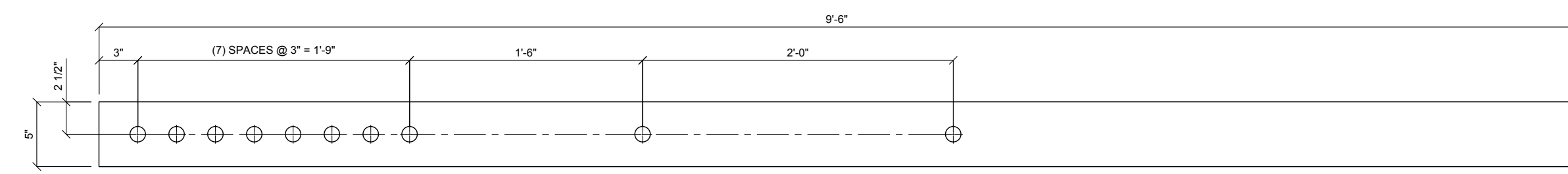
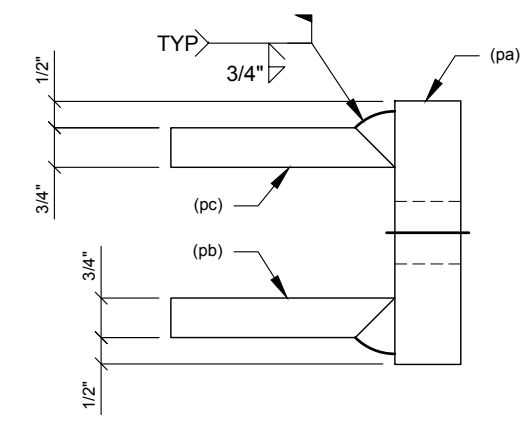
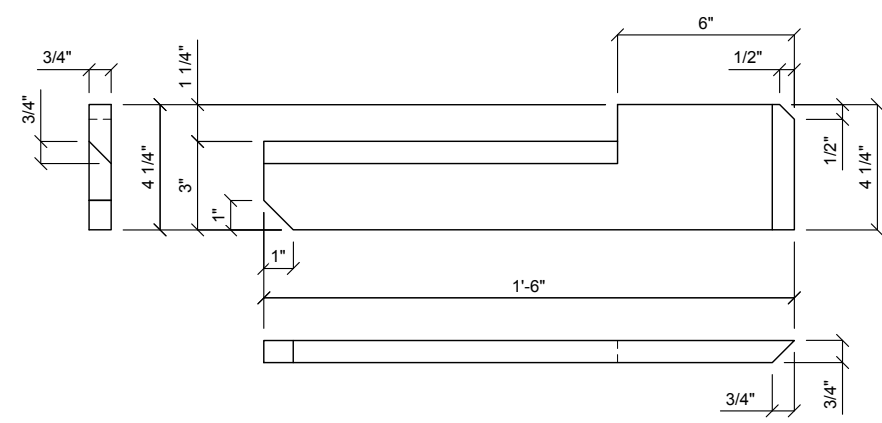
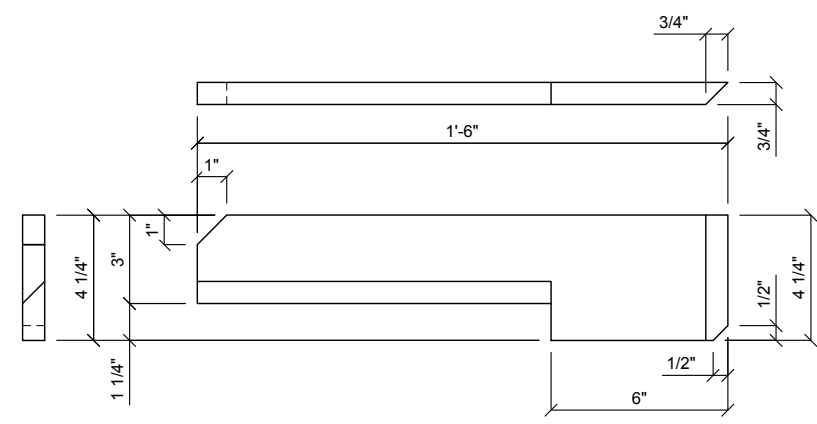
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DATE DRAWN:	04/01/19
ATC JOB NO:	OAA745293_C6_06

**PLATE WELDMENT  
 FABRICATION DETAILS**

SHEET NUMBER:  
**F-4**  
 REVISION:  
**0**



**302473-4  
 PLATE WELDMENT**



PART NO.	QTY	DESCRIPTION	LENGTH	NOTES	BLK WT
(pc)	1	PL 3/4" X 3 3/4"	1'-6"	SHAPE	12.9#
(pb)	1	PL 3/4" X 3 3/4"	1'-6"	SHAPE	12.9#
(pa)	1	PL 1 1/4" X 5"	9'-6"		202.0#
302473-4	1	TERMINATION WELDMENT	10'-0"		227.9#
<b>MATERIAL:</b> A572 GR. 65		<b>FINISH:</b> GALVANIZED		<b>HOLES:</b> 1 3/16"Ø	<b>GALV WT:</b> 239.3#

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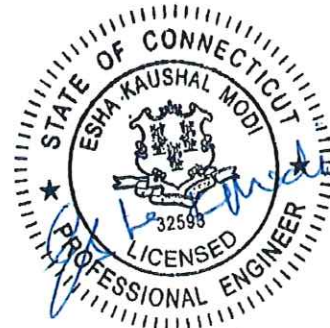
## Structural Analysis Report

**Structure** : 150 ft Monopole  
**ATC Site Name** : E H F R - Prestige Park, CT  
**ATC Site Number** : 302473  
**Engineering Number** : OAA745293\_C3\_03  
**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  
41.788300,-72.600600  
**County** : Hartford  
**Date** : January 30, 2019  
**Max Usage** : 123%  
**Result** : Fail

Prepared By:  
Jennifer Yu  
Structural Engineer I

*Jennifer Yu*

Reviewed By:



Authorized by "EOR"  
Jan 31 2019 1:08 PM

**cosign**

COA: PEC.0001553





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## 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, 2002
<b>Foundation Drawing</b>	Southern New England Telephone Job #38904, dated April 20, 1983
<b>Geotechnical Report</b>	GeoTechnologies Project #1-02-1122-EA, dated September 6, 2002
<b>Modifications</b>	SpectraSite Site#CT-0009, dated March 19, 2003 ATC Project #51574133, dated January 17, 2013 ATC Project #63706335, dated October 19, 2015 ATC Project #OAA696438_C6_05, dated July 11, 2017

## 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>	97 mph (3-Second Gust, Vasd) / 125 mph (3-Second Gust, Vult)
<b>Basic Wind Speed w/ Ice:</b>	50 mph (3-Second Gust) w/ 1" radial ice concurrent
<b>Code:</b>	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
<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 does not meet the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report after the modifications listed below are completed:

Reinforce the reinforcement  
Reinforce flange at 110 ft

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**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
153.0	6	Powerwave Allgon LGP21401	Platform with Handrails	(4) 0.78" (19.7mm) 8 AWG 6 (1) 3/8" (0.38"- 9.5mm) RET Control Cable (12) 7/8" Coax	AT&T Mobility
	6	Powerwave Allgon 7020.00 Dual Band RET			
	2	Raycap DC6-48-60-18-8F			
	3	CCI OPA-65R-LCUU-H6			
	3	Powerwave Allgon 7770.00 (27 lbs)			
	3	Ericsson RRUS-32 (77 lbs)			
138.0	3	Alcatel-Lucent 800 MHz RRH w/ Notch Filter	T-Arm	(3) 1 1/4" Hybriflex Cable	Sprint Nextel
	3	RFS IBC1900HG-2A			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	RFS APXVTM14-C-I20			
	2	RFS APXV9ERR18-C-A20			
	1	RFS APXVSPP18-C-A20			
	3	RFS IBC1900BB-1			
	3	Alcatel-Lucent 4X40W RRH			
128.0	3	Ericsson AIR 21, 1.3M, B4A B2P (90.4 lbs)	T-Arm	(6) 1 5/8" Coax (1) 1 5/8" Hybriflex (1) 1/2" Coax	Metro PCS Inc
	3	Ericsson AIR32 B66Aa/B2a			
	3	Andrew LNX-6515DS-A1M			
119.0	1	Generic 12" x 12" Junction Box	Collar	(1) 2" conduit (3) 1/2" Coax (6) 5/16" (0.31"- 7.9mm) Coax	Clearwire Corporation
118.0	3	NextNet BTS-2500			
	2	DragonWave A-ANT-23G-2-C			
	3	Argus LLPX310R			
	1	DragonWave A-ANT-23G-1-C			
	3	DragonWave Horizon Compact			
98.0	3	Alcatel-Lucent RRH2X60-1900A-4R	Sector Frame	(2) 1.58" (40.1mm) Hybrid	Verizon Wireless
	3	Alcatel-Lucent RRH2x60 700			
	3	Alcatel-Lucent RRH2X60-AWS Band 4			
	2	RFS DB-T1-6Z-8AB-0Z			
	12	Andrew SBNHH-1D65B			
35.0	1	Generic GPS	Stand-Off	(1) 1/2" Coax	AT&T Mobility
34.0	1	Generic GPS	Stand-Off	(1) 1/2" Coax	Sprint Nextel

**Equipment to be Removed**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
153.0	3	Ericsson RRUS 12 w/ RRUS A2	-	-	AT&T Mobility
	3	Powerwave Allgon 7770.00 (27 lbs)			
	3	Ericsson RRUS 11 (Band 12) (55 lb)			



**Proposed Equipment**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
153.0	1	Raycap DC6-48-60-18-8F	Platform with Handrails	(2) 0.78" (19.7mm) 8 AWG 6 (2) 0.39" (10mm) Fiber Trunk	AT&T Mobility
	3	Ericsson Radio 8843 - B2 + B66A			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 4478 B14			
	3	Kaelus DBCT108F1V92-1			
	6	Kathrein Scala 80010965			

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

Install proposed lines inside the pole shaft.

**Structure Usages**

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	103%	Pass
Shaft	93%	Pass
Base Plate	72%	Pass
Flanges	123%	Fail
Reinforcement	110%	Fail

**Foundations**

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	3,202.4	96%
Axial (Kips)	45.7	26%
Shear (Kips)	30.4	44%

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	Kaelus DBCT108F1V92-1	AT&T Mobility	3.207	2.395
	Raycap DC6-48-60-18-8F			
	Ericsson Radio 8843 - B2 + B66A			
	Ericsson RRUS 4449 B5, B12			
	Ericsson RRUS 4478 B14			
	Kathrein Scala 80010965			
118.0	DragonWave A-ANT-23G-1-C	Clearwire Corporation	1.995	1.865
	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 performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

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

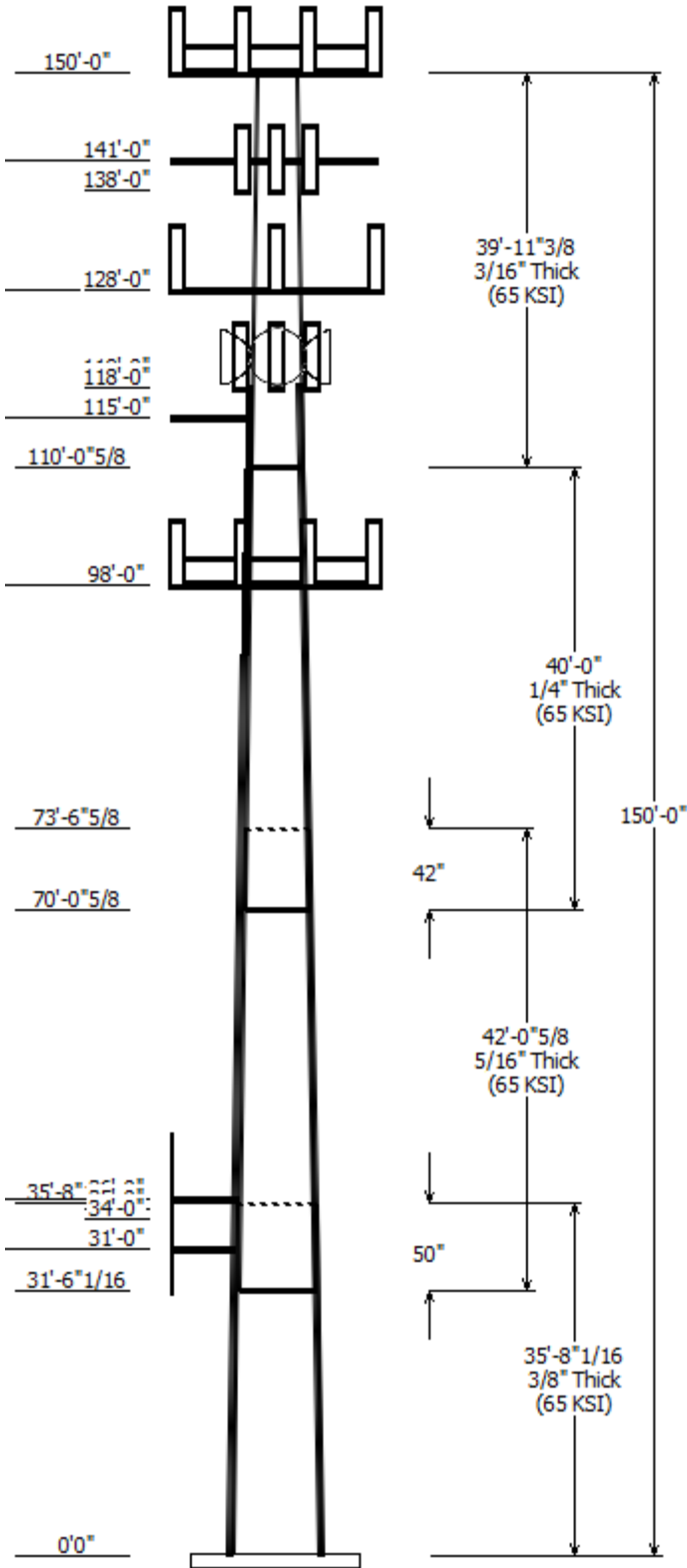
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

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

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

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

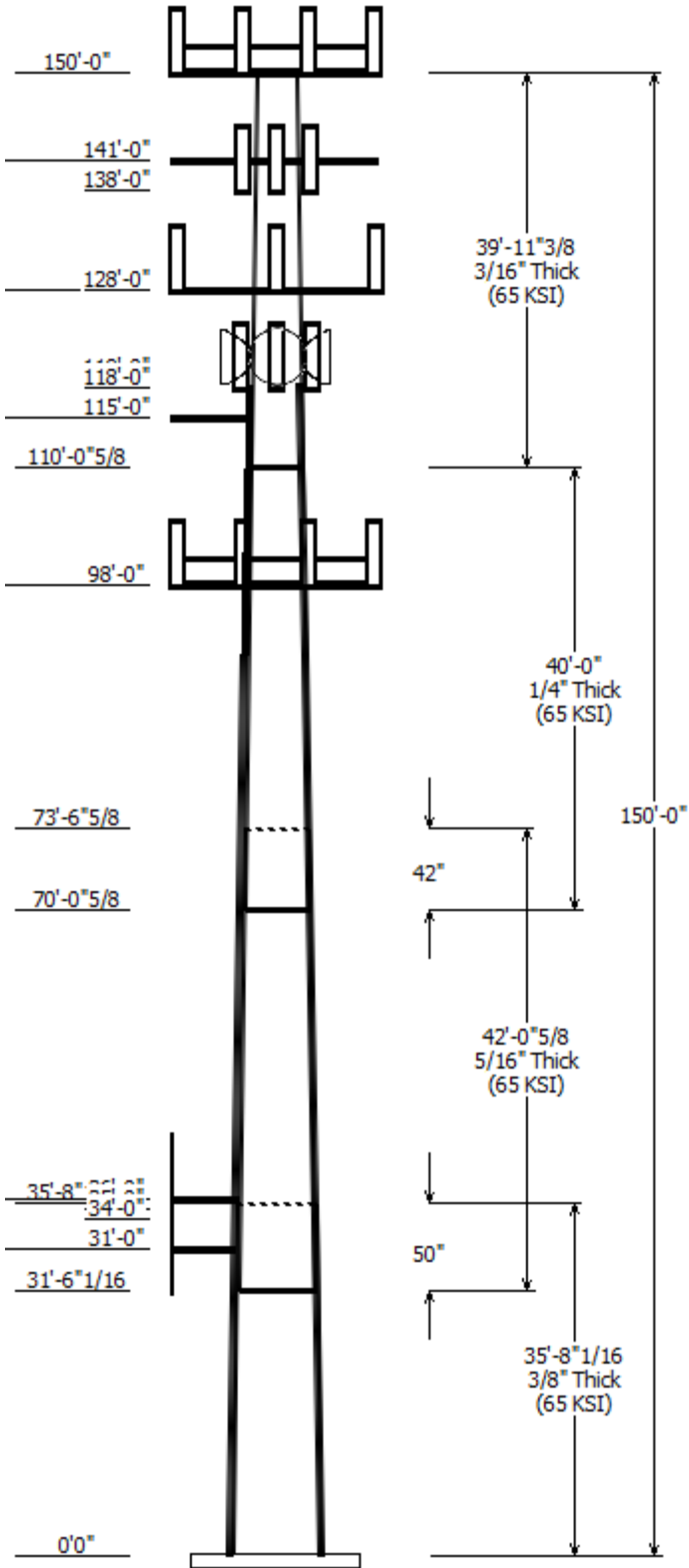
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Job Information	
Pole : 302473	Code: ANSI/TIA-222-G
Location : E H F R - Prestige Park, CT	
Description : 150' ITT Meyer Type "B" Monopole	
Client : AT&T MOBILITY	Struct Class : II
Shape : 12 Sides	Exposure : B
Height : 150.00 (ft)	Topo : 1
Base Elev (ft): 0.00	
Taper: 0.156567(in/ft)	

Sections Properties						
Shaft Section	Length (ft)	Diameter (in)		Joint Type	Overlap Length (in)	Steel Grade
		Across Flats Top	Across Flats Bottom			
1	35.670	31.77	37.36	0.375	0.000	12 Sides 65
2	42.050	26.46	33.05	0.313	50.000	12 Sides 65
3	40.000	21.25	27.51	0.250	42.000	12 Sides 65
4	39.947	15.00	21.25	0.188	0.000	12 Sides 65

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
150.000	153.000	6	Kathrein Scala 80010965
150.000	153.000	3	CCI OPA-65R-LCUU-H6
150.000	153.000	3	Powerwave Allgon 7770.00 (27
150.000	153.000	3	Ericsson RRUS-32 (77 lbs)
150.000	153.000	3	Ericsson RRUS 4478 B14
150.000	153.000	3	Ericsson RRUS 4449 B5, B12
150.000	153.000	3	Ericsson Radio 8843 - B2 + B66
150.000	153.000	1	Raycap DC6-48-60-18-8F
150.000	153.000	2	Raycap DC6-48-60-18-8F
150.000	153.000	6	Powerwave Allgon LGP21401
150.000	153.000	3	Kaelus DBCT108F1V92-1
150.000	153.000	6	Powerwave Allgon 7020.00
150.000	150.000	3	Stand Off
150.000	150.000	1	Round Platform w/ Handrails
141.000	141.000	3	Round T-Arm
138.000	142.000	3	Alcatel-Lucent 4X40W RRH
138.000	142.000	3	RFS IBC1900BB-1
138.000	142.000	1	RFS APXVSP18-C-A20
138.000	142.000	2	RFS APXV9ERR18-C-A20
138.000	142.000	3	RFS APXVTM14-C-I20
138.000	142.000	3	Alcatel-Lucent TD-RRH8x20-25
138.000	142.000	3	RFS IBC1900HG-2A
138.000	142.000	3	Alcatel-Lucent 800 MHz RRH
128.000	128.000	3	Round T-Arm
128.000	129.000	3	Andrew LNX-6515DS-A1M
128.000	129.000	3	Ericsson AIR32 B66Aa/B2a
128.000	129.000	3	Ericsson AIR 21, 1.3M, B4A B2P
119.000	119.000	1	Generic 12" x 12" Junction Box
118.000	120.000	3	DragonWave Horizon Compact
118.000	120.000	1	DragonWave A-ANT-23G-1-C
118.000	120.000	3	Argus LLPX310R
118.000	120.000	2	DragonWave A-ANT-23G-2-C
118.000	120.000	3	NextNet BTS-2500
115.000	115.000	1	Collar
98.000	98.000	3	Generic Flat Light Sector Fram
98.000	101.000	12	Andrew SBNHH-1D65B
98.000	101.000	2	RFS DB-T1-6Z-8AB-0Z
98.000	101.000	3	Alcatel-Lucent RRH2X60-AWS
98.000	101.000	3	Alcatel-Lucent RRH2x60 700
98.000	101.000	3	Alcatel-Lucent RRH2X60-1900A-
36.000	36.000	1	Stand-off
35.000	32.000	1	Generic GPS
34.000	37.000	1	Generic GPS
31.000	31.000	1	Stand-off



Linear Appurtenance			
Elev (ft)		Description	Exposed To Wind
From	To		
110.0	120.0	Reinforcing Plate	Yes
106.0	110.0	Reinforcing Plate	Yes
4.000	128.0	1 5/8" Hybriflex	Yes
4.000	129.0	1 1/4" (1.25"-	Yes
0.000	138.0	1 1/4" Hybriflex	No
0.000	142.0	5/8" Hybriflex	No
0.000	150.0	0.39" (10mm)	No
0.000	150.0	0.78" (19.7mm) 8	No
0.000	150.0	0.78" (19.7mm) 8	No
0.000	150.0	3" conduit	No
0.000	150.0	3/8" (0.38"-	No
0.000	150.0	7/8" Coax	No
0.000	150.0	7/8" Coax	No
0.000	118.0	1/2" Coax	No
0.000	118.0	5/16" (0.31"-	No
0.000	119.0	2" conduit	No
0.000	34.000	1/2" Coax	Yes
0.000	35.000	1/2" Coax	No
0.000	98.000	1.58" (40.1mm)	No
0.000	101.0	1 1/4" Hybriflex	Yes
0.000	106.0	#20 Dywidag Bars	Yes
0.000	128.0	1 5/8" Coax	No
0.000	128.0	1/2" Coax	No

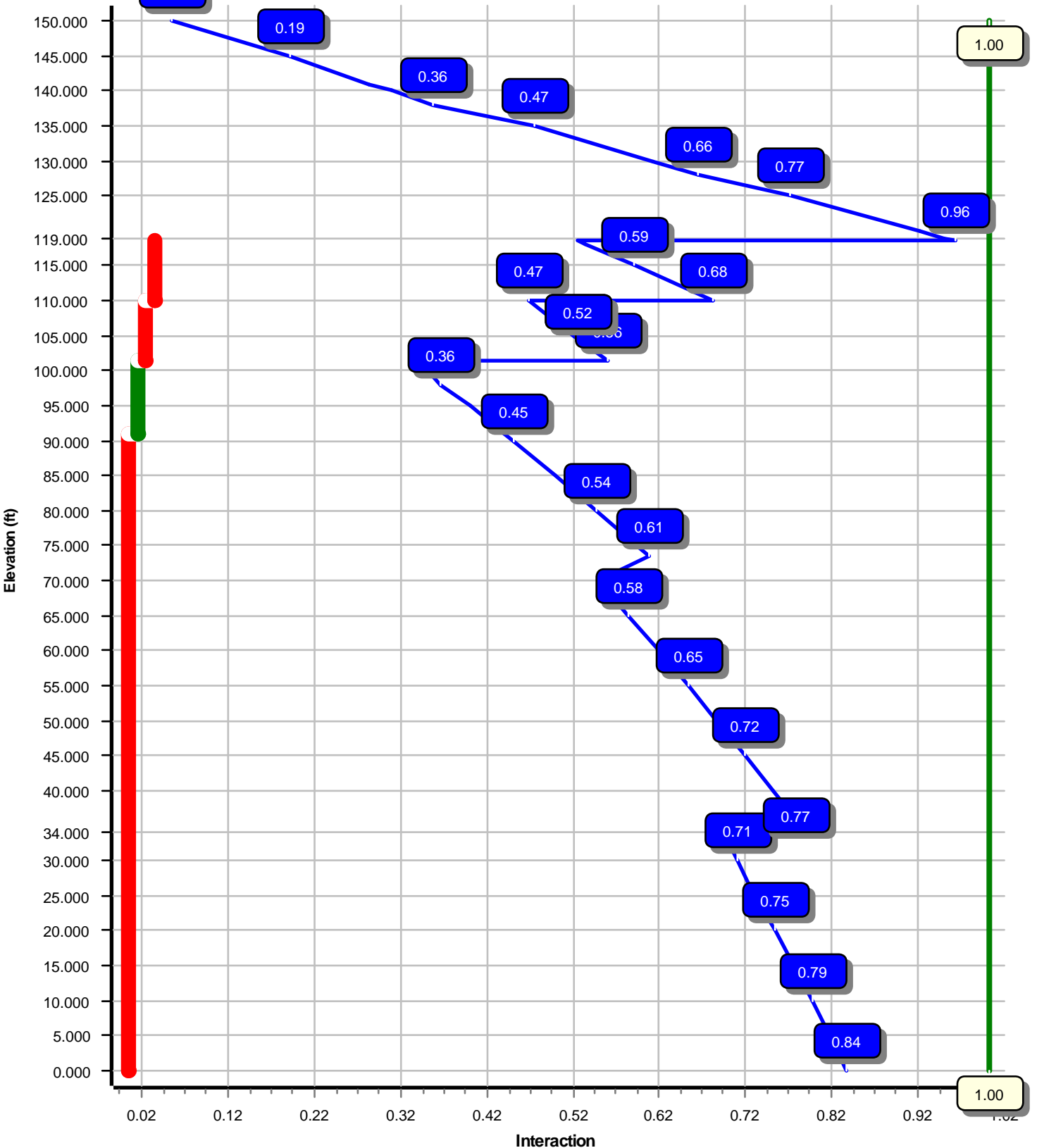
Load Cases	
1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2Sds) * DL + E	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2Sds) * DL + E	Seismic (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	3202.42	30.41	45.68
0.9D + 1.6W	3123.17	30.20	34.24
1.2D + 1.0Di + 1.0Wi	978.50	7.71	94.85
(1.2 + 0.2Sds) * DL + E ELFM	193.19	1.49	45.62
(1.2 + 0.2Sds) * DL + E EMAM	303.79	2.33	45.62
(0.9 - 0.2Sds) * DL + E ELFM	188.19	1.49	31.74
(0.9 - 0.2Sds) * DL + E EMAM	295.09	2.33	31.74
1.0D + 1.0W	763.82	7.36	38.14

Dish Deflections			
Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	118.00	23.823	1.877
1.0D + 1.0W	118.00	23.823	1.877



Load Case : 1.2D + 1.6W  
Max Ratio 96.11% at 118.5 ft



Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:10 AM

Customer: AT&T MOBILITY

Analysis Parameters

Location :	HARTFORD County, CT	Height (ft) :	150
Code :	ANSI/TIA-222-G	Base Diameter (in) :	37.36
Shape :	12 Sides	Top Diameter (in) :	15.00
Pole Type :	Taper	Taper (in/ft) :	0.157
Pole Manufacturer :	ITT Meyer	Rotation (deg) :	0.00

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	97 mph
Exposure Category:	B	Design Wind Speed With Ice:	50 mph
Topographic Category:	1	Operational Wind Speed:	60 mph
Crest Height:	0 ft	Design Ice Thickness:	1.00 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	3.09		
T <sub>L</sub> (sec):	6	p:	1.3
S <sub>s</sub> :	0.180	S <sub>1</sub> :	0.060
F <sub>a</sub> :	1.600	F <sub>v</sub> :	2.400
S <sub>ds</sub> :	0.192	S <sub>d1</sub> :	0.096
		C <sub>s</sub> :	0.030
		C <sub>s</sub> Max:	0.030
		C <sub>s</sub> Min:	0.030

Load Cases

1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
(1.2 + 0.2S <sub>ds</sub> ) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2S <sub>ds</sub> ) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2S <sub>ds</sub> ) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2S <sub>ds</sub> ) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:10 AM

Customer: AT&T MOBILITY

**Shaft Section Properties**

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Slip		Weight (lb)	Bottom						Top						
				Joint Type	Joint Len (in)		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	24.02	99.63	31.77	35.67	37.92	4771.7	20.02	84.73	0.156567
2-12	42.050	0.3125	65	Slip	50.00	4,240	33.05	31.50	32.94	4507.5	25.66	105.77	26.46	73.55	26.32	2298.4	20.02	84.70	0.156567
3-12	40.000	0.2500	65	Slip	42.00	2,645	27.51	70.05	21.95	2083.0	26.81	110.07	21.25	110.05	16.91	952.2	20.10	85.02	0.156567
4-12	39.947	0.1875	65	Butt	0.00	1,472	21.25	110.05	12.72	720.5	27.69	113.36	15.00	150.00	8.94	250.5	18.76	80.00	0.156567
Shaft Weight						13,368													

**Discrete Appurtenance Properties**

Attach Elev (ft)	Description	Qty	Distance From Face (ft)	Vert Ecc (ft)	Weight (lb)	No Ice EPAa (sf)	Orientation Factor
150.00	CCI OPA-65R-LCUU-H6	3	0.000	3.000	73.00	9.660	0.66
150.00	Ericsson Radio 8843 - B2 + B66	3	0.000	3.000	71.90	1.650	0.50
150.00	Ericsson RRUS 4449 B5, B12	3	0.000	3.000	71.00	1.970	0.50
150.00	Ericsson RRUS 4478 B14	3	0.000	3.000	59.40	2.020	0.50
150.00	Ericsson RRUS-32 (77 lbs)	3	0.000	3.000	77.00	3.310	0.50
150.00	Kaelus DBCT108F1V92-1	3	0.000	3.000	13.90	0.630	0.50
150.00	Kathrein Scala 80010965	6	0.000	3.000	97.60	13.810	0.62
150.00	Powerwave Allgon 7020.00 Dual	6	0.000	3.000	2.20	0.340	0.50
150.00	Powerwave Allgon 7770.00 (27 l	3	0.000	3.000	27.00	5.510	0.65
150.00	Powerwave Allgon LGP21401	6	0.000	3.000	14.10	1.100	0.50
150.00	Raycap DC6-48-60-18-8F	2	0.000	3.000	20.00	1.110	1.00
150.00	Raycap DC6-48-60-18-8F	1	0.000	3.000	20.00	1.110	1.00
150.00	Round Platform w/ Handrails	1	0.000	0.000	2000.00	27.200	1.00
150.00	Stand Off	3	0.000	0.000	75.00	2.500	0.67
141.00	Round T-Arm	3	0.000	0.000	250.00	9.700	0.67
138.00	Alcatel-Lucent 4X40W RRH	3	0.000	4.000	59.50	2.320	0.50
138.00	Alcatel-Lucent 800 MHz RRH w/	3	0.000	4.000	61.80	2.500	0.50
138.00	Alcatel-Lucent TD-RRH8x20-25 w	3	0.000	4.000	70.00	4.050	0.50
138.00	RFS APXV9ERR18-C-A20	2	0.000	4.000	62.00	8.020	0.78
138.00	RFS APXVSP18-C-A20	1	0.000	4.000	57.00	8.020	0.69
138.00	RFS APXVTM14-C-I20	3	0.000	4.000	52.90	6.340	0.66
138.00	RFS IBC1900BB-1	3	0.000	4.000	22.00	0.970	0.50
138.00	RFS IBC1900HG-2A	3	0.000	4.000	22.00	0.970	0.50
128.00	Andrew LNX-6515DS-A1M	3	0.000	1.000	49.80	11.410	0.70
128.00	Ericsson AIR 21, 1.3M, B4A B2P	3	0.000	1.000	90.40	6.090	0.70
128.00	Ericsson AIR32 B66Aa/B2a	3	0.000	1.000	132.20	6.510	0.71
128.00	Round T-Arm	3	0.000	0.000	250.00	9.700	0.67
119.00	Generic 12" x 12" Junction Box	1	0.000	0.000	10.00	1.200	1.00
118.00	Argus LLPX310R	3	0.000	2.000	28.60	4.290	0.63
118.00	DragonWave A-ANT-23G-1-C	1	0.000	2.000	15.00	1.610	1.00
118.00	DragonWave A-ANT-23G-2-C	2	0.000	2.000	12.30	4.690	0.50
118.00	DragonWave Horizon Compact	3	0.000	2.000	10.60	0.720	0.50
118.00	NextNet BTS-2500	3	0.000	2.000	35.00	1.820	0.50
115.00	Collar	1	0.000	0.000	560.00	8.500	1.00
98.00	Alcatel-Lucent RRH2x60 700	3	0.000	3.000	56.70	2.150	0.50
98.00	Alcatel-Lucent RRH2X60-1900A-4	3	0.000	3.000	46.00	1.870	0.50
98.00	Alcatel-Lucent RRH2X60-AWS	3	0.000	3.000	55.00	3.350	0.50
98.00	Andrew SBNHH-1D65B	12	0.000	3.000	50.70	8.170	0.69
98.00	Generic Flat Light Sector Fram	3	0.000	0.000	500.00	17.900	0.67
98.00	RFS DB-T1-6Z-8AB-0Z	2	0.000	3.000	44.00	4.800	0.69
36.00	Stand-off	1	0.000	0.000	50.00	2.000	1.00
35.00	Generic GPS	1	0.000	-3.000	10.00	0.900	1.00
34.00	Generic GPS	1	0.000	3.000	10.00	0.900	1.00
31.00	Stand-off	1	0.000	0.000	50.00	2.000	1.00
Totals	Num Loadings:44	126			11132.50		

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:10 AM

Customer: AT&T MOBILITY

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Diameter (in)	Coax Weight (lb/ft)	Projected Flat	Projected Width (in)	Exposed To Wind	Carrier
0.00	150.00	2	0.39" (10mm) Fiber	0.39	0.06	N	0.00	N	AT&T MOBILITY
0.00	150.00	4	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0.00	N	AT&T MOBILITY
0.00	150.00	2	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0.00	N	AT&T MOBILITY
0.00	150.00	2	3" conduit	3.50	7.58	N	0.00	N	AT&T MOBILITY
0.00	150.00	1	3/8" (0.38"- 9.5mm)	0.38	0.23	N	0.00	N	AT&T MOBILITY
0.00	150.00	12	7/8" Coax	1.09	0.33	N	0.00	N	AT&T MOBILITY
0.00	150.00	6	7/8" Coax	1.09	0.33	N	0.00	N	AT&T MOBILITY
0.00	142.00	1	5/8" Hybriflex	0.84	0.70	N	0.00	N	SPRINT NEXTEL
0.00	138.00	3	1 1/4" Hybriflex Cable	1.54	1.00	N	0.00	N	SPRINT NEXTEL
4.00	129.00	1	1 1/4" (1.25"- 31.8mm)	1.25	1.05	N	0.00	Y	METRO PCS INC
0.00	128.00	6	1 5/8" Coax	1.98	0.82	N	0.00	N	METRO PCS INC
0.00	128.00	1	1/2" Coax	0.63	0.15	N	0.00	N	METRO PCS INC
4.00	128.00	1	1 5/8" Hybriflex	1.98	1.30	N	1.98	Y	METRO PCS INC
110.00	120.00	3	Reinforcing Plate	1.00	0.00	Y	1.33	Y	--
0.00	119.00	1	2" conduit	2.38	3.65	N	0.00	N	CLEARWIRE CORPORATION
0.00	118.00	3	1/2" Coax	0.63	0.15	N	0.00	N	CLEARWIRE CORPORATION
0.00	118.00	6	5/16" (0.31"-7.9mm)	0.31	0.05	N	0.00	N	CLEARWIRE CORPORATION
106.00	110.00	4	Reinforcing Plate	1.00	0.00	Y	2.00	Y	--
0.00	106.00	4	#20 Dywidag Bars	4.00	0.00	N	6.02	Y	--
0.00	101.00	2	1 1/4" Hybriflex Cable	1.54	1.00	N	0.00	Y	VERIZON WIRELESS
0.00	98.00	2	1.58" (40.1mm) Hybrid	1.58	1.61	N	0.00	N	VERIZON WIRELESS
0.00	35.00	1	1/2" Coax	0.63	0.15	N	0.00	N	AT&T MOBILITY
0.00	34.00	1	1/2" Coax	0.63	0.15	N	0.00	Y	SPRINT NEXTEL

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	101.5	4	SOL #20 All Thread	80	2.19	6" Angle Bracket	30.0	3.31	5/8" A36 U-Bolt	Yes
101.5	110.0	4	PL PL 3" x 1"	46	0.00	AJAX M20 Class	24.0	3.00	AJAX M20 Class	No
110.0	118.5	3	PL PL 1" x 3"	46	0.00	AJAX M20 Class	24.0	3.00	AJAX M20 Class	No

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	F'y (ksi)	S (in <sup>3</sup> )	Z (in <sup>3</sup> )	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	24.02	99.63	78.5	403.2	0.0	0.0	19.64	4,954	0.0
5.00		0.3750	36.577	43.714	7,312.7	23.46	97.54	79.1	386.2	0.0	751.8	19.64	4,777	334.0
10.00		0.3750	35.794	42.769	6,848.5	22.90	95.45	79.7	369.6	0.0	735.7	19.64	4,603	334.0
15.00		0.3750	35.012	41.824	6,404.4	22.34	93.36	80.4	353.4	0.0	719.6	19.64	4,433	334.0
20.00		0.3750	34.229	40.878	5,979.9	21.78	91.28	81.0	337.5	0.0	703.5	19.64	4,265	334.0
25.00		0.3750	33.446	39.933	5,574.5	21.22	89.19	81.6	322.0	0.0	687.5	19.64	4,101	334.0
30.00		0.3750	32.663	38.988	5,188.0	20.66	87.10	81.9	306.8	0.0	671.4	19.64	3,940	334.0
31.00		0.3750	32.506	38.799	5,112.9	20.55	86.68	81.9	303.9	0.0	132.3	19.64	3,908	66.8
31.50	Bot - Section 2	0.3750	32.428	38.704	5,075.3	20.49	86.47	81.9	302.4	0.0	66.4	19.64	3,892	33.6
34.00		0.3750	32.037	38.232	4,891.9	20.21	85.43	81.9	295.0	0.0	605.0	19.64	3,940	166.8
35.00		0.3750	31.880	38.042	4,819.7	20.10	85.01	81.9	292.1	0.0	240.3	19.64	3,908	66.8
35.67	Top - Section 1	0.3125	32.400	32.288	4,243.4	25.10	103.68	77.3	253.0	0.0	160.3	19.64	3,887	44.8
36.00		0.3125	32.349	32.236	4,222.9	25.06	103.52	77.4	252.2	0.0	36.2	19.64	3,876	22.0
40.00		0.3125	31.722	31.606	3,980.1	24.52	101.51	78.0	242.4	0.0	434.5	19.64	3,751	267.2
45.00		0.3125	30.940	30.818	3,689.8	23.85	99.01	78.7	230.4	0.0	531.0	19.64	3,597	334.0
50.00		0.3125	30.157	30.031	3,414.1	23.18	96.50	79.4	218.7	0.0	517.6	19.64	3,447	334.0
55.00		0.3125	29.374	29.243	3,152.4	22.51	94.00	80.2	207.3	0.0	504.2	19.64	3,299	334.0
60.00		0.3125	28.591	28.455	2,904.4	21.84	91.49	80.9	196.2	0.0	490.8	19.64	3,155	334.0
65.00		0.3125	27.808	27.668	2,669.8	21.16	88.99	81.6	185.5	0.0	477.4	19.64	3,014	334.0
70.00		0.3125	27.025	26.880	2,448.2	20.49	86.48	81.9	175.0	0.0	464.0	19.64	2,877	334.0
70.05	Bot - Section 3	0.3125	27.017	26.871	2,445.9	20.49	86.45	81.9	174.9	0.0	4.9	19.64	2,875	3.6
73.55	Top - Section 2	0.2500	26.969	21.509	1,959.9	26.23	107.88	76.1	140.4	0.0	575.5	19.64	2,867	233.8
75.00		0.2500	26.743	21.326	1,910.5	25.98	106.97	76.4	138.0	0.0	105.4	19.64	2,828	96.6
80.00		0.2500	25.960	20.696	1,746.1	25.14	103.84	77.3	129.9	0.0	357.5	19.64	2,695	334.0
85.00		0.2500	25.177	20.066	1,591.4	24.30	100.71	78.2	122.1	0.0	346.8	19.64	2,565	334.0
90.00		0.2500	24.394	19.436	1,446.1	23.47	97.58	79.1	114.5	0.0	336.0	19.64	2,438	334.0
91.10	Reinf. Top Reinf	0.2500	24.222	19.297	1,415.4	23.28	96.89	79.3	112.9	0.0	72.5	19.64	2,410	73.5
95.00		0.2500	23.611	18.806	1,310.0	22.63	94.44	80.0	107.2	0.0	252.8	19.64	2,314	260.5
98.00		0.2500	23.141	18.428	1,232.5	22.12	92.57	80.6	102.9	0.0	190.0	19.64	2,242	200.4
100.0		0.2500	22.828	18.176	1,182.7	21.79	91.31	81.0	100.1	0.0	124.6	19.64	2,194	133.6
101.5	Reinf. Top Reinf	0.2500	22.593	17.987	1,146.1	21.54	90.37	81.2	98.0	0.0	92.3	19.64	2,158	100.2
105.0		0.2500	22.046	17.545	1,063.9	20.95	88.18	81.9	93.2	0.0	211.6	12.00	801.6	142.9
110.0	Reinf. Top Reinf	0.2500	21.263	16.915	953.3	20.11	85.05	81.9	86.6	0.0	293.2	12.00	748.4	204.2
110.0	Top - Section 3	0.2500	21.254	16.908	952.2	20.10	85.02	81.9	86.5	0.0	3.1	9.000	560.9	1.6
110.0	Bot - Section 4	0.1875	21.254	12.719	720.5	27.69	113.36	74.5	65.5	0.0		9.000	560.9	
115.0		0.1875	20.480	12.251	643.9	26.59	109.23	75.7	60.7	0.0	210.2	9.000	522.8	151.5
118.0		0.1875	20.010	11.968	600.2	25.92	106.72	76.4	57.9	0.0	123.6	9.000	500.4	91.9
118.5	Reinf. Top	0.1875	19.932	11.921	593.2	25.80	106.30	76.6	57.5	0.0	20.3	9.000	496.7	15.3
119.0		0.1875	19.854	11.873	586.1	25.69	105.89	76.7	57.0	0.0	20.2			
120.0		0.1875	19.697	11.779	572.2	25.47	105.05	76.9	56.1	0.0	40.2			
125.0		0.1875	18.914	11.306	506.1	24.35	100.88	78.2	51.7	0.0	196.4			
128.0		0.1875	18.444	11.023	469.0	23.68	98.37	78.9	49.1	0.0	114.0			
130.0		0.1875	18.131	10.834	445.2	23.23	96.70	79.4	47.4	0.0	74.4			
135.0		0.1875	17.349	10.361	389.5	22.11	92.53	80.6	43.4	0.0	180.3			
138.0		0.1875	16.879	10.077	358.4	21.44	90.02	81.3	41.0	0.0	104.3			
140.0		0.1875	16.566	9.888	338.6	20.99	88.35	81.8	39.5	0.0	67.9			
141.0		0.1875	16.409	9.794	328.9	20.77	87.52	81.9	38.7	0.0	33.5			
145.0		0.1875	15.783	9.416	292.3	19.88	84.18	81.9	35.8	0.0	130.7			
150.0		0.1875	15.000	8.943	250.5	18.76	80.00	81.9	32.3	0.0	156.2			
											13,368.2			7,387.7

<b>Load Case: 1.2D + 1.6W</b>	<b>97 mph with No Ice</b>	<b>28 Iterations</b>
Gust Response Factor :1.10		Wind Importance Factor :1.00
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		270.4	0.0					0.0	0.0	270.4	0.0	0.0	0.0
5.00		534.4	902.1					0.0	665.7	534.4	1,567.8	0.0	0.0
10.00		522.3	882.8					94.6	677.0	617.0	1,559.8	0.0	0.0
15.00		510.9	863.5					94.6	677.0	605.5	1,540.5	0.0	0.0
20.00		499.5	844.2					94.6	677.0	594.1	1,521.2	0.0	0.0
25.00		488.1	824.9					94.6	677.0	582.7	1,501.9	0.0	0.0
30.00		289.0	805.6					94.6	677.0	383.6	1,482.6	0.0	0.0
31.00	Appurtenance(s)	72.0	158.8	57.0	0.0	0.0	60.0	19.0	135.4	147.9	354.2	0.0	0.0
31.50	Bot - Section 2	147.0	79.6					9.6	68.1	156.6	147.8	0.0	0.0
34.00	Appurtenance(s)	172.4	726.0	27.0	0.0	80.9	12.0	48.0	338.0	247.4	1,076.1	0.0	0.0
35.00	Appurtenance(s)	82.8	288.3	25.9	0.0	-77.6	12.0	19.4	135.2	128.1	435.5	0.0	0.0
35.67	Top - Section 1	49.7	192.4					13.1	90.5	62.8	282.9	0.0	0.0
36.00	Appurtenance(s)	216.6	43.5	59.4	0.0	0.0	60.0	6.5	44.6	282.6	148.0	0.0	0.0
40.00		453.0	521.4					79.1	540.1	532.1	1,061.5	0.0	0.0
45.00		507.1	637.3					101.0	675.2	608.1	1,312.4	0.0	0.0
50.00		509.4	621.2					103.1	675.2	612.5	1,296.3	0.0	0.0
55.00		509.9	605.1					105.1	675.2	615.0	1,280.3	0.0	0.0
60.00		508.9	589.0					106.9	675.2	615.7	1,264.2	0.0	0.0
65.00		506.4	572.9					108.6	675.2	614.9	1,248.1	0.0	0.0
70.00		255.1	556.8					110.1	675.2	365.2	1,232.0	0.0	0.0
70.05	Bot - Section 3	181.4	5.9					1.2	7.2	182.6	13.1	0.0	0.0
73.55	Top - Section 2	252.2	690.6					78.0	472.6	330.2	1,163.3	0.0	0.0
75.00		325.9	126.5					32.4	195.4	358.3	321.9	0.0	0.0
80.00		501.7	429.0					113.0	675.2	614.7	1,104.2	0.0	0.0
85.00		495.0	416.1					114.4	675.2	609.4	1,091.3	0.0	0.0
90.00		299.3	403.2					115.7	675.2	415.0	1,078.4	0.0	0.0
91.10	Reinf. Top Reinf	241.8	87.0					25.6	148.5	267.4	235.5	0.0	0.0
95.00		331.3	303.4					91.3	526.6	422.5	830.0	0.0	0.0
98.00	Appurtenance(s)	237.4	228.1	3,792.3	0.0	8,173.5	3,203.4	70.7	405.1	4,100.4	3,836.6	0.0	0.0
100.00		164.8	149.5					47.4	262.3	212.1	411.8	0.0	0.0
101.50	Reinf. Top Reinf	232.7	110.7					35.6	195.6	268.4	306.3	0.0	0.0
105.00		390.1	253.9					83.6	341.7	473.7	595.6	0.0	0.0
110.00	Reinf. Top Reinf	230.0	351.8					110.4	488.1	340.4	839.9	0.0	0.0
110.05	Top - Section 3	214.9	3.7					0.0	4.6	214.9	8.2	0.0	0.0
115.00	Appurtenance(s)	340.4	252.2	352.1	0.0	0.0	672.0	0.0	422.3	692.5	1,346.5	0.0	0.0
118.00	Appurtenance(s)	149.1	148.3	601.2	0.0	1,202.5	314.6	0.0	256.1	750.3	719.1	0.0	0.0
118.50	Reinf. Top	42.4	24.4					0.0	42.2	42.4	66.6	0.0	0.0
119.00	Appurtenance(s)	63.5	24.3	50.2	0.0	0.0	12.0	0.0	23.9	113.7	60.1	0.0	0.0
120.00		217.9	48.3					0.0	43.3	217.9	91.6	0.0	0.0
125.00		279.2	235.7					0.0	216.7	279.2	452.3	0.0	0.0
128.00	Appurtenance(s)	171.2	136.8	2,357.7	0.0	1,733.2	1,880.6	0.0	130.0	2,528.9	2,147.4	0.0	0.0
130.00		232.6	89.2					0.0	70.1	232.6	159.4	0.0	0.0
135.00		261.4	216.4					0.0	172.1	261.4	388.5	0.0	0.0
138.00	Appurtenance(s)	159.4	125.2	1,647.6	0.0	6,590.3	1,254.7	0.0	103.3	1,807.0	1,483.2	0.0	0.0
140.00		94.3	81.5					0.0	61.7	94.3	143.2	0.0	0.0
141.00	Appurtenance(s)	153.6	40.2	642.0	0.0	0.0	900.0	0.0	30.8	795.6	971.0	0.0	0.0
145.00		270.1	156.9					0.0	120.8	270.1	277.7	0.0	0.0
150.00	Appurtenance(s)	147.6	187.4	4,920.7	0.0	10,441.9	4,977.6	0.0	149.9	5,068.3	5,315.0	0.0	0.0

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:18 AM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W

97 mph with No Ice

28 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

Totals: 30,541.0 45,770.8 0.00 0.00

**Load Case: 1.2D + 1.6W**

97 mph with No Ice

28 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

**Calculated Forces**

Seg	Pu	Vu	Tu	Mu	Mu	Resultant	phi	phi	phi	phi	Total		
Elev	FY (-)	FX (-)	MY	MZ	MX	Moment	Pn	Vn	Tn	Mn	Deflect	Rotation	Ratio
(ft)	(kips)	(kips)	(ft-kips)	(ft-kips)	(ft-kips)	(ft-kips)	(kips)	(kips)	(ft-kips)	(ft-kips)	(in)	(deg)	
0.00	-45.68	-30.41	0.00	-3,202.42	0.00	3,202.42	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.835
5.00	-43.93	-30.14	0.00	-3,050.37	0.00	3,050.37	3,113.28	1,556.64	4,641.42	2,292.22	0.19	-0.35	0.815
10.00	-42.19	-29.77	0.00	-2,899.67	0.00	2,899.67	3,069.45	1,534.72	4,476.09	2,210.57	0.74	-0.70	0.794
15.00	-40.48	-29.39	0.00	-2,750.83	0.00	2,750.83	3,024.57	1,512.28	4,312.14	2,129.61	1.66	-1.05	0.773
20.00	-38.80	-29.00	0.00	-2,603.89	0.00	2,603.89	2,978.65	1,489.33	4,149.68	2,049.37	2.95	-1.40	0.751
25.00	-37.14	-28.60	0.00	-2,458.89	0.00	2,458.89	2,931.70	1,465.85	3,988.78	1,969.91	4.60	-1.75	0.728
30.00	-35.56	-28.30	0.00	-2,315.87	0.00	2,315.87	2,873.79	1,436.89	3,816.40	1,884.77	6.63	-2.10	0.707
31.00	-35.19	-28.17	0.00	-2,287.57	0.00	2,287.57	2,859.85	1,429.93	3,779.26	1,866.44	7.08	-2.18	0.703
31.50	-34.99	-28.08	0.00	-2,273.39	0.00	2,273.39	2,852.84	1,426.42	3,760.64	1,857.24	7.31	-2.21	0.701
34.00	-33.87	-27.86	0.00	-2,203.21	0.00	2,203.21	2,818.05	1,409.02	3,668.95	1,811.96	8.51	-2.39	0.682
35.00	-33.41	-27.75	0.00	-2,175.35	0.00	2,175.35	2,804.11	1,402.06	3,632.54	1,793.98	9.02	-2.46	0.678
35.67	-33.11	-27.69	0.00	-2,156.76	0.00	2,156.76	2,247.39	1,123.70	2,971.54	1,467.53	9.37	-2.51	0.777
36.00	-32.90	-27.50	0.00	-2,147.63	0.00	2,147.63	2,245.17	1,122.59	2,963.78	1,463.70	9.54	-2.53	0.775
40.00	-31.71	-27.10	0.00	-2,037.64	0.00	2,037.64	2,217.94	1,108.97	2,870.05	1,417.41	11.79	-2.82	0.749
45.00	-30.27	-26.61	0.00	-1,902.16	0.00	1,902.16	2,182.97	1,091.48	2,753.70	1,359.95	14.94	-3.19	0.717
50.00	-28.85	-26.10	0.00	-1,769.10	0.00	1,769.10	2,146.96	1,073.48	2,638.35	1,302.98	18.47	-3.54	0.684
55.00	-27.45	-25.58	0.00	-1,638.58	0.00	1,638.58	2,109.91	1,054.96	2,524.10	1,246.56	22.37	-3.90	0.651
60.00	-26.09	-25.03	0.00	-1,510.70	0.00	1,510.70	2,071.82	1,035.91	2,411.06	1,190.73	26.63	-4.25	0.616
65.00	-24.75	-24.46	0.00	-1,385.56	0.00	1,385.56	2,032.70	1,016.35	2,299.33	1,135.55	31.26	-4.59	0.581
70.00	-23.48	-24.07	0.00	-1,263.24	0.00	1,263.24	1,981.31	990.65	2,176.68	1,074.98	36.23	-4.92	0.548
70.05	-23.43	-23.93	0.00	-1,261.95	0.00	1,261.95	1,980.69	990.35	2,175.31	1,074.30	36.29	-4.92	0.547
73.55	-22.24	-23.56	0.00	-1,178.19	0.00	1,178.19	1,473.36	736.68	1,622.77	801.43	39.98	-5.15	0.606
75.00	-21.86	-23.26	0.00	-1,144.11	0.00	1,144.11	1,465.95	732.98	1,600.80	790.57	41.55	-5.24	0.592
80.00	-20.70	-22.66	0.00	-1,027.82	0.00	1,027.82	1,439.68	719.84	1,525.22	753.25	47.21	-5.57	0.545
85.00	-19.56	-22.05	0.00	-914.54	0.00	914.54	1,412.37	706.19	1,450.29	716.24	53.20	-5.88	0.497
90.00	-18.46	-21.58	0.00	-804.31	0.00	804.31	1,384.02	692.01	1,376.10	679.61	59.50	-6.17	0.448
91.10	-18.20	-21.33	0.00	-780.58	0.00	780.58	1,377.65	688.82	1,359.89	671.60	60.93	-6.24	0.437
91.10	-18.20	-21.33	0.00	-780.58	0.00	780.58	1,377.65	688.82	1,359.89	671.60	60.93	-6.24	0.437
95.00	-17.36	-20.87	0.00	-697.40	0.00	697.40	1,354.64	677.32	1,302.77	643.39	66.11	-6.45	0.399
98.00	-13.98	-16.39	0.00	-626.60	0.00	626.60	1,336.51	668.25	1,259.21	621.88	70.20	-6.61	0.363
100.00	-13.57	-16.16	0.00	-593.81	0.00	593.81	1,324.21	662.11	1,230.38	607.64	72.99	-6.71	0.348
101.50	-13.26	-15.88	0.00	-569.58	0.00	569.58	1,314.88	657.44	1,208.86	597.01	75.10	-6.78	0.336
101.50	-13.26	-15.88	0.00	-569.58	0.00	569.58	1,314.88	657.44	1,208.86	597.01	75.10	-6.78	0.557
105.00	-12.66	-15.40	0.00	-513.99	0.00	513.99	1,293.27	646.64	1,159.51	572.64	80.12	-6.94	0.518
110.00	-11.82	-14.99	0.00	-436.99	0.00	436.99	1,246.82	623.41	1,077.26	532.02	87.58	-7.31	0.466
110.00	-11.82	-14.99	0.00	-436.99	0.00	436.99	1,246.82	623.41	1,077.26	532.02	87.58	-7.31	0.524
110.05	-11.79	-14.82	0.00	-436.19	0.00	436.19	1,246.32	623.16	1,076.40	531.59	87.66	-7.31	0.523
110.05	-11.79	-14.82	0.00	-436.19	0.00	436.19	852.93	426.46	741.03	365.97	87.66	-7.31	0.679
115.00	-10.47	-14.01	0.00	-362.89	0.00	362.89	834.88	417.44	698.45	344.94	95.41	-7.68	0.589
118.00	-9.82	-13.20	0.00	-319.64	0.00	319.64	823.44	411.72	672.79	332.27	100.30	-7.93	0.532
118.50	-9.75	-13.15	0.00	-313.04	0.00	313.04	821.50	410.75	668.53	330.16	101.13	-7.97	0.524
118.50	-9.75	-13.15	0.00	-313.04	0.00	313.04	821.50	410.75	668.53	330.16	101.13	-7.97	0.961
119.00	-9.69	-13.05	0.00	-306.47	0.00	306.47	819.55	409.77	664.27	328.06	101.97	-8.01	0.947
120.00	-9.54	-12.89	0.00	-293.42	0.00	293.42	815.61	407.80	655.76	323.86	103.66	-8.16	0.919
125.00	-9.02	-12.62	0.00	-228.98	0.00	228.98	795.30	397.65	613.53	303.00	112.53	-8.81	0.768
128.00	-7.25	-9.83	0.00	-189.38	0.00	189.38	782.61	391.31	588.45	290.61	118.16	-9.16	0.662
130.00	-7.07	-9.61	0.00	-169.72	0.00	169.72	773.95	386.97	571.85	282.42	122.03	-9.38	0.611
135.00	-6.67	-9.33	0.00	-121.65	0.00	121.65	751.56	375.78	530.84	262.16	132.06	-9.85	0.474
138.00	-5.50	-7.31	0.00	-87.07	0.00	87.07	737.63	368.82	506.58	250.18	138.30	-10.08	0.356
140.00	-5.37	-7.20	0.00	-72.44	0.00	72.44	728.14	364.07	490.58	242.28	142.52	-10.21	0.307
141.00	-4.54	-6.26	0.00	-65.24	0.00	65.24	721.90	360.95	481.67	237.88	144.66	-10.27	0.281



Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:18 AM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.6W

97 mph with No Ice

28 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

145.00	-4.30	-5.95	0.00	-40.21	0.00	40.21	694.03	347.02	445.00	219.77	153.30	-10.45	0.189
150.00	0.00	-5.07	0.00	-10.44	0.00	10.44	659.19	329.60	401.19	198.13	164.26	-10.57	0.053

<b>Load Case:</b> 0.9D + 1.6W	97 mph with No Ice (Reduced DL)	28 Iterations
Gust Response Factor :1.10		Wind Importance Factor :1.00
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		224.8	0.0					0.0	0.0	224.8	0.0	0.0	0.0
5.00		488.8	676.6					0.0	499.3	488.8	1,175.9	0.0	0.0
10.00		522.3	662.1					94.6	507.7	617.0	1,169.9	0.0	0.0
15.00		510.9	647.7					94.6	507.7	605.5	1,155.4	0.0	0.0
20.00		499.5	633.2					94.6	507.7	594.1	1,140.9	0.0	0.0
25.00		488.1	618.7					94.6	507.7	582.7	1,126.4	0.0	0.0
30.00		289.0	604.2					94.6	507.7	383.6	1,112.0	0.0	0.0
31.00	Appurtenance(s)	72.0	119.1	57.0	0.0	0.0	45.0	19.0	101.5	147.9	265.7	0.0	0.0
31.50	Bot - Section 2	147.0	59.7					9.6	51.1	156.6	110.8	0.0	0.0
34.00	Appurtenance(s)	172.4	544.5	27.0	0.0	80.9	9.0	48.0	253.5	247.4	807.0	0.0	0.0
35.00	Appurtenance(s)	82.8	216.2	25.9	0.0	-77.6	9.0	19.4	101.4	128.1	326.7	0.0	0.0
35.67	Top - Section 1	49.7	144.3					13.1	67.9	62.8	212.1	0.0	0.0
36.00	Appurtenance(s)	216.6	32.6	59.4	0.0	0.0	45.0	6.5	33.4	282.6	111.0	0.0	0.0
40.00		453.0	391.0					79.1	405.1	532.1	796.1	0.0	0.0
45.00		507.1	477.9					101.0	506.4	608.1	984.3	0.0	0.0
50.00		509.4	465.9					103.1	506.4	612.5	972.3	0.0	0.0
55.00		509.9	453.8					105.1	506.4	615.0	960.2	0.0	0.0
60.00		508.9	441.8					106.9	506.4	615.7	948.1	0.0	0.0
65.00		506.4	429.7					108.6	506.4	614.9	936.1	0.0	0.0
70.00		255.1	417.6					110.1	506.4	365.2	924.0	0.0	0.0
70.05	Bot - Section 3	181.4	4.4					1.2	5.4	182.6	9.8	0.0	0.0
73.55	Top - Section 2	252.2	518.0					78.0	354.5	330.2	872.5	0.0	0.0
75.00		325.9	94.9					32.4	146.5	358.3	241.4	0.0	0.0
80.00		501.7	321.7					113.0	506.4	614.7	828.1	0.0	0.0
85.00		495.0	312.1					114.4	506.4	609.4	818.5	0.0	0.0
90.00		299.3	302.4					115.7	506.4	415.0	808.8	0.0	0.0
91.10	Reinf. Top Reinf	241.8	65.2					25.6	111.4	267.4	176.6	0.0	0.0
95.00		331.3	227.5					91.3	395.0	422.5	622.5	0.0	0.0
98.00	Appurtenance(s)	237.4	171.0	3,792.3	0.0	8,173.5	2,402.5	70.7	303.8	4,100.4	2,877.4	0.0	0.0
100.00		164.8	112.1					47.4	196.8	212.1	308.9	0.0	0.0
101.50	Reinf. Top Reinf	232.7	83.1					35.6	146.7	268.4	229.7	0.0	0.0
105.00		390.1	190.4					83.6	256.3	473.7	446.7	0.0	0.0
110.00	Reinf. Top Reinf	229.7	263.8					110.4	366.1	340.1	629.9	0.0	0.0
110.05	Top - Section 3	185.3	2.8					0.0	3.4	185.3	6.2	0.0	0.0
115.00	Appurtenance(s)	292.2	189.1	352.1	0.0	0.0	504.0	0.0	316.7	644.3	1,009.9	0.0	0.0
118.00	Appurtenance(s)	126.9	111.3	601.2	0.0	1,202.5	236.0	0.0	192.1	728.1	539.3	0.0	0.0
118.50	Reinf. Top	35.9	18.3					0.0	31.7	35.9	50.0	0.0	0.0
119.00	Appurtenance(s)	53.7	18.2	50.2	0.0	0.0	9.0	0.0	17.9	103.9	45.1	0.0	0.0
120.00		211.3	36.2					0.0	32.5	211.3	68.7	0.0	0.0
125.00		278.5	176.7					0.0	162.5	278.5	339.2	0.0	0.0
128.00	Appurtenance(s)	170.4	102.6	2,357.7	0.0	1,733.2	1,410.5	0.0	97.5	2,528.2	1,610.6	0.0	0.0
130.00		232.6	66.9					0.0	52.6	232.6	119.5	0.0	0.0
135.00		261.4	162.3					0.0	129.1	261.4	291.4	0.0	0.0
138.00	Appurtenance(s)	159.4	93.9	1,647.6	0.0	6,590.3	941.0	0.0	77.5	1,807.0	1,112.4	0.0	0.0
140.00		94.3	61.1					0.0	46.2	94.3	107.4	0.0	0.0
141.00	Appurtenance(s)	153.6	30.1	642.0	0.0	0.0	675.0	0.0	23.1	795.6	728.3	0.0	0.0
145.00		270.1	117.7					0.0	90.6	270.1	208.3	0.0	0.0
150.00	Appurtenance(s)	147.6	140.6	4,920.7	0.0	10,441.9	3,733.2	0.0	112.5	5,068.3	3,986.2	0.0	0.0

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:27 AM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

28 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

Totals: 30,325.1 34,328.1 0.00 0.00

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

97 mph with No Ice (Reduced DL)

28 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

**Calculated Forces**

Seg	Pu	Vu	Tu	Mu	Mu	Resultant	phi	phi	phi	phi	Total		
Elev	FY (-)	FX (-)	MY	MZ	MX	Moment	Pn	Vn	Tn	Mn	Deflect	Rotation	Ratio
(ft)	(kips)	(kips)	(ft-kips)	(ft-kips)	(ft-kips)	(ft-kips)	(kips)	(kips)	(ft-kips)	(ft-kips)	(in)	(deg)	
0.00	-34.24	-30.20	0.00	-3,123.17	0.00	3,123.17	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.812
5.00	-32.88	-29.91	0.00	-2,972.16	0.00	2,972.16	3,113.28	1,556.64	4,641.42	2,292.22	0.18	-0.34	0.792
10.00	-31.55	-29.47	0.00	-2,822.62	0.00	2,822.62	3,069.45	1,534.72	4,476.09	2,210.57	0.72	-0.68	0.771
15.00	-30.23	-29.03	0.00	-2,675.29	0.00	2,675.29	3,024.57	1,512.28	4,312.14	2,129.61	1.62	-1.02	0.750
20.00	-28.93	-28.58	0.00	-2,530.16	0.00	2,530.16	2,978.65	1,489.33	4,149.68	2,049.37	2.87	-1.36	0.728
25.00	-27.65	-28.13	0.00	-2,387.25	0.00	2,387.25	2,931.70	1,465.85	3,988.78	1,969.91	4.48	-1.71	0.705
30.00	-26.45	-27.81	0.00	-2,246.59	0.00	2,246.59	2,873.79	1,436.89	3,816.40	1,884.77	6.45	-2.05	0.684
31.00	-26.17	-27.67	0.00	-2,218.78	0.00	2,218.78	2,859.85	1,429.93	3,779.26	1,866.44	6.89	-2.12	0.680
31.50	-26.01	-27.56	0.00	-2,204.85	0.00	2,204.85	2,852.84	1,426.42	3,760.64	1,857.24	7.11	-2.15	0.678
34.00	-25.16	-27.33	0.00	-2,135.96	0.00	2,135.96	2,818.05	1,409.02	3,668.95	1,811.96	8.28	-2.32	0.659
35.00	-24.81	-27.22	0.00	-2,108.63	0.00	2,108.63	2,804.11	1,402.06	3,632.54	1,793.98	8.78	-2.39	0.655
35.67	-24.59	-27.16	0.00	-2,090.39	0.00	2,090.39	2,247.39	1,123.70	2,971.54	1,467.53	9.12	-2.44	0.751
36.00	-24.41	-26.94	0.00	-2,081.43	0.00	2,081.43	2,245.17	1,122.59	2,963.78	1,463.70	9.29	-2.46	0.749
40.00	-23.50	-26.50	0.00	-1,973.67	0.00	1,973.67	2,217.94	1,108.97	2,870.05	1,417.41	11.47	-2.74	0.724
45.00	-22.39	-25.98	0.00	-1,841.15	0.00	1,841.15	2,182.97	1,091.48	2,753.70	1,359.95	14.53	-3.10	0.692
50.00	-21.30	-25.44	0.00	-1,711.24	0.00	1,711.24	2,146.96	1,073.48	2,638.35	1,302.98	17.96	-3.44	0.660
55.00	-20.23	-24.89	0.00	-1,584.02	0.00	1,584.02	2,109.91	1,054.96	2,524.10	1,246.56	21.74	-3.78	0.627
60.00	-19.19	-24.32	0.00	-1,459.57	0.00	1,459.57	2,071.82	1,035.91	2,411.06	1,190.73	25.88	-4.12	0.593
65.00	-18.17	-23.74	0.00	-1,337.96	0.00	1,337.96	2,032.70	1,016.35	2,299.33	1,135.55	30.37	-4.45	0.559
70.00	-17.21	-23.35	0.00	-1,219.25	0.00	1,219.25	1,981.31	990.65	2,176.68	1,074.98	35.20	-4.77	0.527
70.05	-17.17	-23.20	0.00	-1,218.00	0.00	1,218.00	1,980.69	990.35	2,175.31	1,074.30	35.25	-4.77	0.527
73.55	-16.27	-22.84	0.00	-1,136.80	0.00	1,136.80	1,473.36	736.68	1,622.77	801.43	38.83	-4.99	0.583
75.00	-15.98	-22.52	0.00	-1,103.75	0.00	1,103.75	1,465.95	732.98	1,600.80	790.57	40.35	-5.08	0.569
80.00	-15.09	-21.92	0.00	-991.14	0.00	991.14	1,439.68	719.84	1,525.22	753.25	45.84	-5.39	0.524
85.00	-14.23	-21.30	0.00	-881.56	0.00	881.56	1,412.37	706.19	1,450.29	716.24	51.64	-5.69	0.477
90.00	-13.40	-20.85	0.00	-775.05	0.00	775.05	1,384.02	692.01	1,376.10	679.61	57.75	-5.98	0.430
91.10	-13.21	-20.59	0.00	-752.11	0.00	752.11	1,377.65	688.82	1,359.89	671.60	59.13	-6.04	0.420
91.10	-13.21	-20.59	0.00	-752.11	0.00	752.11	1,377.65	688.82	1,359.89	671.60	59.13	-6.04	0.420
95.00	-12.57	-20.15	0.00	-671.80	0.00	671.80	1,354.64	677.32	1,302.77	643.39	64.15	-6.25	0.383
98.00	-10.13	-15.78	0.00	-603.18	0.00	603.18	1,336.51	668.25	1,259.21	621.88	68.11	-6.40	0.348
100.00	-9.82	-15.54	0.00	-571.63	0.00	571.63	1,324.21	662.11	1,230.38	607.64	70.81	-6.49	0.334
101.50	-9.60	-15.27	0.00	-548.31	0.00	548.31	1,314.88	657.44	1,208.86	597.01	72.86	-6.56	0.323
101.50	-9.60	-15.27	0.00	-548.31	0.00	548.31	1,314.88	657.44	1,208.86	597.01	72.86	-6.56	0.535
105.00	-9.14	-14.79	0.00	-494.87	0.00	494.87	1,293.27	646.64	1,159.51	572.64	77.72	-6.72	0.498
110.00	-8.51	-14.40	0.00	-420.92	0.00	420.92	1,246.82	623.41	1,077.26	532.02	84.93	-7.07	0.448
110.00	-8.51	-14.40	0.00	-420.92	0.00	420.92	1,246.82	623.41	1,077.26	532.02	84.93	-7.07	0.503
110.05	-8.48	-14.25	0.00	-420.15	0.00	420.15	1,246.32	623.16	1,076.40	531.59	85.01	-7.07	0.502
110.05	-8.48	-14.25	0.00	-420.15	0.00	420.15	852.93	426.46	741.03	365.97	85.01	-7.07	0.652
115.00	-7.49	-13.52	0.00	-349.68	0.00	349.68	834.88	417.44	698.45	344.94	92.51	-7.43	0.566
118.00	-7.02	-12.74	0.00	-307.92	0.00	307.92	823.44	411.72	672.79	332.27	97.25	-7.67	0.511
118.50	-6.97	-12.70	0.00	-301.55	0.00	301.55	821.50	410.75	668.53	330.16	98.05	-7.71	0.503
118.50	-6.97	-12.70	0.00	-301.55	0.00	301.55	821.50	410.75	668.53	330.16	98.05	-7.71	0.923
119.00	-6.92	-12.61	0.00	-295.20	0.00	295.20	819.55	409.77	664.27	328.06	98.86	-7.75	0.909
120.00	-6.79	-12.43	0.00	-282.60	0.00	282.60	815.61	407.80	655.76	323.86	100.49	-7.89	0.882
125.00	-6.40	-12.16	0.00	-220.42	0.00	220.42	795.30	397.65	613.53	303.00	109.07	-8.52	0.736
128.00	-5.14	-9.45	0.00	-182.20	0.00	182.20	782.61	391.31	588.45	290.61	114.52	-8.86	0.634
130.00	-5.01	-9.23	0.00	-163.30	0.00	163.30	773.95	386.97	571.85	282.42	118.26	-9.07	0.585
135.00	-4.71	-8.95	0.00	-117.17	0.00	117.17	751.56	375.78	530.84	262.16	127.96	-9.52	0.454
138.00	-3.90	-6.99	0.00	-83.73	0.00	83.73	737.63	368.82	506.58	250.18	133.99	-9.74	0.340
140.00	-3.80	-6.89	0.00	-69.74	0.00	69.74	728.14	364.07	490.58	242.28	138.08	-9.86	0.293
141.00	-3.20	-5.99	0.00	-62.85	0.00	62.85	721.90	360.95	481.67	237.88	140.14	-9.92	0.269

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:27 AM

Customer: AT&T MOBILITY

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

28 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

145.00	-3.03	-5.69	0.00	-38.90	0.00	38.90	694.03	347.02	445.00	219.77	148.49	-10.10	0.182
150.00	0.00	-5.07	0.00	-10.44	0.00	10.44	659.19	329.60	401.19	198.13	159.08	-10.22	0.053

<b>Load Case:</b> 1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice	29 Iterations
Gust Response Factor :1.10	Ice Dead Load Factor :1.00	Wind Importance Factor :1.00
Dead Load Factor :1.20		Ice Importance Factor :1.00
Wind Load Factor :1.00		

**Applied Segment Forces Summary**

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		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	866.9	96.3	2,150.4	0.0	0.0
10.00		95.0	1,301.6					34.9	952.8	129.9	2,254.4	0.0	0.0
15.00		93.5	1,296.1					35.7	970.6	129.2	2,266.7	0.0	0.0
20.00		91.8	1,282.8					36.3	983.2	128.2	2,266.0	0.0	0.0
25.00		90.2	1,265.4					36.7	993.0	126.9	2,258.4	0.0	0.0
30.00		53.5	1,245.6					37.1	1,001.1	90.6	2,246.7	0.0	0.0
31.00	Appurtenance(s)	13.4	247.4	17.0	0.0	0.0	149.7	7.5	201.1	37.8	598.1	0.0	0.0
31.50	Bot - Section 2	27.3	124.2					3.8	101.3	31.1	225.5	0.0	0.0
34.00	Appurtenance(s)	32.0	949.8	8.1	0.0	24.4	55.6	19.2	503.5	59.3	1,508.9	0.0	0.0
35.00	Appurtenance(s)	15.4	378.0	7.8	0.0	-23.4	55.7	7.8	196.0	31.0	629.8	0.0	0.0
35.67	Top - Section 1	9.2	252.5					5.3	131.3	14.5	383.8	0.0	0.0
36.00	Appurtenance(s)	40.4	73.1	17.8	0.0	0.0	150.3	2.6	64.7	60.8	288.1	0.0	0.0
40.00		84.6	875.7					32.3	786.1	116.9	1,661.8	0.0	0.0
45.00		95.1	1,075.0					41.9	986.9	137.0	2,061.9	0.0	0.0
50.00		95.9	1,053.6					43.5	991.2	139.4	2,044.8	0.0	0.0
55.00		96.4	1,031.5					45.0	995.2	141.4	2,026.6	0.0	0.0
60.00		96.6	1,008.8					46.4	998.8	143.1	2,007.6	0.0	0.0
65.00		96.6	985.7					47.8	1,002.2	144.4	1,987.8	0.0	0.0
70.00		48.8	962.1					49.0	1,005.3	97.8	1,967.4	0.0	0.0
70.05	Bot - Section 3	34.7	10.2					0.5	10.7	35.3	20.9	0.0	0.0
73.55	Top - Section 2	48.3	975.6					35.0	705.5	83.4	1,681.2	0.0	0.0
75.00		62.7	243.8					14.6	292.0	77.4	535.9	0.0	0.0
80.00		96.9	825.2					51.4	1,011.1	148.2	1,836.3	0.0	0.0
85.00		96.1	803.9					52.4	1,013.7	148.5	1,817.6	0.0	0.0
90.00		58.3	782.3					53.5	1,016.2	111.8	1,798.6	0.0	0.0
91.10	Reinf. Top Reinf	47.3	170.1					11.9	223.9	59.2	394.0	0.0	0.0
95.00		65.0	592.3					42.6	794.7	107.6	1,387.0	0.0	0.0
98.00	Appurtenance(s)	46.7	447.1	1,027.3	0.0	1,976.8	11,117.1	33.2	612.3	1,107.3	12,176.5	0.0	0.0
100.00		32.5	294.1					22.3	400.9	54.8	695.0	0.0	0.0
101.50	Reinf. Top Reinf	46.1	218.4					16.8	293.8	62.9	512.2	0.0	0.0
105.00		77.6	500.2					39.6	543.8	117.2	1,043.9	0.0	0.0
110.00	Reinf. Top Reinf	45.9	693.7					58.2	674.2	104.1	1,367.9	0.0	0.0
110.05	Top - Section 3	44.7	7.3					0.0	6.2	44.7	13.5	0.0	0.0
115.00	Appurtenance(s)	70.6	580.8	121.9	0.0	0.0	1,839.8	0.0	572.7	192.5	2,993.2	0.0	0.0
118.00	Appurtenance(s)	30.8	344.3	152.9	0.0	305.7	1,498.7	0.0	347.8	183.6	2,190.7	0.0	0.0
118.50	Reinf. Top	8.7	57.0					0.0	57.6	8.7	114.5	0.0	0.0
119.00	Appurtenance(s)	13.1	56.8	14.9	0.0	0.0	76.4	0.0	39.2	28.0	172.3	0.0	0.0
120.00		51.7	112.9					0.0	74.0	51.7	186.9	0.0	0.0
125.00		68.3	547.8					0.0	311.1	68.3	858.9	0.0	0.0
128.00	Appurtenance(s)	42.1	320.5	627.0	0.0	407.5	5,434.8	0.0	187.0	669.0	5,942.3	0.0	0.0
130.00		57.8	210.2					0.0	78.9	57.8	289.1	0.0	0.0
135.00		65.3	507.9					0.0	172.1	65.3	680.0	0.0	0.0
138.00	Appurtenance(s)	40.1	296.5	410.9	0.0	1,643.8	4,823.1	0.0	103.3	451.1	5,222.8	0.0	0.0
140.00		23.8	194.1					0.0	61.7	23.8	255.7	0.0	0.0
141.00	Appurtenance(s)	39.1	96.1	226.9	0.0	0.0	2,482.2	0.0	30.8	266.0	2,609.1	0.0	0.0
145.00		69.2	373.3					0.0	120.8	69.2	494.1	0.0	0.0
150.00	Appurtenance(s)	38.0	447.1	1,330.8	0.0	2,471.1	16,135.1	0.0	149.9	1,368.8	16,732.1	0.0	0.0

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:35 AM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

29 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

Totals: 7,670.33 94,856.9 0.00 0.00

**Load Case: 1.2D + 1.0Di + 1.0Wi**

50 mph with 1.00 in Radial Ice

29 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

**Calculated Forces**

Seg	Pu	Vu	Tu	Mu	Mu	Resultant	phi	phi	phi	phi	Total		
Elev	FY (-)	FX (-)	MY	MZ	MX	Moment	Pn	Vn	Tn	Mn	Deflect	Rotation	Ratio
(ft)	(kips)	(kips)	(ft-kips)	(ft-kips)	(ft-kips)	(ft-kips)	(kips)	(kips)	(ft-kips)	(ft-kips)	(in)	(deg)	
0.00	-94.85	-7.71	0.00	-978.50	0.00	978.50	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.273
5.00	-92.68	-7.79	0.00	-939.94	0.00	939.94	3,113.28	1,556.64	4,641.42	2,292.22	0.06	-0.11	0.269
10.00	-90.42	-7.82	0.00	-901.01	0.00	901.01	3,069.45	1,534.72	4,476.09	2,210.57	0.23	-0.22	0.264
15.00	-88.14	-7.85	0.00	-861.89	0.00	861.89	3,024.57	1,512.28	4,312.14	2,129.61	0.51	-0.32	0.259
20.00	-85.85	-7.88	0.00	-822.63	0.00	822.63	2,978.65	1,489.33	4,149.68	2,049.37	0.91	-0.44	0.254
25.00	-83.58	-7.89	0.00	-783.25	0.00	783.25	2,931.70	1,465.85	3,988.78	1,969.91	1.43	-0.55	0.248
30.00	-81.33	-7.87	0.00	-743.79	0.00	743.79	2,873.79	1,436.89	3,816.40	1,884.77	2.06	-0.66	0.243
31.00	-80.73	-7.85	0.00	-735.91	0.00	735.91	2,859.85	1,429.93	3,779.26	1,866.44	2.20	-0.68	0.242
31.50	-80.50	-7.87	0.00	-731.96	0.00	731.96	2,852.84	1,426.42	3,760.64	1,857.24	2.27	-0.69	0.242
34.00	-78.98	-7.85	0.00	-712.29	0.00	712.29	2,818.05	1,409.02	3,668.95	1,811.96	2.65	-0.75	0.236
35.00	-78.35	-7.83	0.00	-704.45	0.00	704.45	2,804.11	1,402.06	3,632.54	1,793.98	2.81	-0.77	0.235
35.67	-77.97	-7.83	0.00	-699.20	0.00	699.20	2,247.39	1,123.70	2,971.54	1,467.53	2.92	-0.79	0.270
36.00	-77.67	-7.83	0.00	-696.62	0.00	696.62	2,245.17	1,122.59	2,963.78	1,463.70	2.97	-0.80	0.270
40.00	-76.00	-7.83	0.00	-665.29	0.00	665.29	2,217.94	1,108.97	2,870.05	1,417.41	3.68	-0.89	0.263
45.00	-73.92	-7.82	0.00	-626.12	0.00	626.12	2,182.97	1,091.48	2,753.70	1,359.95	4.68	-1.01	0.254
50.00	-71.87	-7.79	0.00	-587.04	0.00	587.04	2,146.96	1,073.48	2,638.35	1,302.98	5.80	-1.13	0.244
55.00	-69.83	-7.75	0.00	-548.11	0.00	548.11	2,109.91	1,054.96	2,524.10	1,246.56	7.05	-1.25	0.235
60.00	-67.81	-7.69	0.00	-509.38	0.00	509.38	2,071.82	1,035.91	2,411.06	1,190.73	8.42	-1.36	0.224
65.00	-65.81	-7.63	0.00	-470.91	0.00	470.91	2,032.70	1,016.35	2,299.33	1,135.55	9.91	-1.48	0.214
70.00	-63.84	-7.54	0.00	-432.75	0.00	432.75	1,981.31	990.65	2,176.68	1,074.98	11.52	-1.59	0.204
70.05	-63.81	-7.55	0.00	-432.35	0.00	432.35	1,980.69	990.35	2,175.31	1,074.30	11.54	-1.59	0.204
73.55	-62.13	-7.48	0.00	-405.91	0.00	405.91	1,473.36	736.68	1,622.77	801.43	12.73	-1.67	0.228
75.00	-61.58	-7.47	0.00	-395.09	0.00	395.09	1,465.95	732.98	1,600.80	790.57	13.25	-1.70	0.223
80.00	-59.74	-7.38	0.00	-357.76	0.00	357.76	1,439.68	719.84	1,525.22	753.25	15.09	-1.82	0.208
85.00	-57.91	-7.28	0.00	-320.87	0.00	320.87	1,412.37	706.19	1,450.29	716.24	17.05	-1.93	0.192
90.00	-56.11	-7.16	0.00	-284.48	0.00	284.48	1,384.02	692.01	1,376.10	679.61	19.12	-2.03	0.176
91.10	-55.71	-7.14	0.00	-276.60	0.00	276.60	1,377.65	688.82	1,359.89	671.60	19.59	-2.05	0.173
91.10	-55.71	-7.14	0.00	-276.60	0.00	276.60	1,377.65	688.82	1,359.89	671.60	19.59	-2.05	0.173
95.00	-54.32	-7.04	0.00	-248.75	0.00	248.75	1,354.64	677.32	1,302.77	643.39	21.30	-2.13	0.159
98.00	-42.19	-5.51	0.00	-225.64	0.00	225.64	1,336.51	668.25	1,259.21	621.88	22.66	-2.18	0.144
100.00	-41.50	-5.45	0.00	-214.62	0.00	214.62	1,324.21	662.11	1,230.38	607.64	23.58	-2.22	0.139
101.50	-40.98	-5.40	0.00	-206.43	0.00	206.43	1,314.88	657.44	1,208.86	597.01	24.28	-2.25	0.135
101.50	-40.98	-5.40	0.00	-206.43	0.00	206.43	1,314.88	657.44	1,208.86	597.01	24.28	-2.25	0.218
105.00	-39.94	-5.31	0.00	-187.53	0.00	187.53	1,293.27	646.64	1,159.51	572.64	25.95	-2.31	0.205
110.00	-38.57	-5.20	0.00	-160.97	0.00	160.97	1,246.82	623.41	1,077.26	532.02	28.44	-2.44	0.188
110.00	-38.57	-5.20	0.00	-160.97	0.00	160.97	1,246.82	623.41	1,077.26	532.02	28.44	-2.44	0.211
110.05	-38.55	-5.20	0.00	-160.69	0.00	160.69	1,246.32	623.16	1,076.40	531.59	28.46	-2.44	0.210
110.05	-38.55	-5.20	0.00	-160.69	0.00	160.69	852.93	426.46	741.03	365.97	28.46	-2.44	0.274
115.00	-35.56	-4.95	0.00	-134.98	0.00	134.98	834.88	417.44	698.45	344.94	31.07	-2.58	0.241
118.00	-33.37	-4.69	0.00	-119.84	0.00	119.84	823.44	411.72	672.79	332.27	32.71	-2.67	0.220
118.50	-33.26	-4.69	0.00	-117.49	0.00	117.49	821.50	410.75	668.53	330.16	33.00	-2.69	0.217
118.50	-33.26	-4.69	0.00	-117.49	0.00	117.49	821.50	410.75	668.53	330.16	33.00	-2.69	0.396
119.00	-33.09	-4.67	0.00	-115.15	0.00	115.15	819.55	409.77	664.27	328.06	33.28	-2.70	0.391
120.00	-32.89	-4.70	0.00	-110.47	0.00	110.47	815.61	407.80	655.76	323.86	33.85	-2.76	0.382
125.00	-32.02	-4.69	0.00	-86.97	0.00	86.97	795.30	397.65	613.53	303.00	36.87	-3.00	0.327
128.00	-26.11	-3.76	0.00	-72.49	0.00	72.49	782.61	391.31	588.45	290.61	38.80	-3.14	0.283
130.00	-25.82	-3.74	0.00	-64.97	0.00	64.97	773.95	386.97	571.85	282.42	40.13	-3.22	0.264
135.00	-25.14	-3.70	0.00	-46.26	0.00	46.26	751.56	375.78	530.84	262.16	43.60	-3.40	0.210
138.00	-19.95	-2.96	0.00	-33.53	0.00	33.53	737.63	368.82	506.58	250.18	45.76	-3.49	0.161
140.00	-19.69	-2.93	0.00	-27.62	0.00	27.62	728.14	364.07	490.58	242.28	47.23	-3.54	0.141
141.00	-17.10	-2.52	0.00	-24.69	0.00	24.69	721.90	360.95	481.67	237.88	47.97	-3.56	0.128



Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:36 AM

Customer: AT&T MOBILITY

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

29 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

145.00	-16.61	-2.43	0.00	-14.63	0.00	14.63	694.03	347.02	445.00	219.77	50.98	-3.63	0.091
150.00	0.00	-1.37	0.00	-2.47	0.00	2.47	659.19	329.60	401.19	198.13	54.81	-3.67	0.012

<b>Load Case: 1.0D + 1.0W</b>	<b>Serviceability 60 mph</b>	<b>27 Iterations</b>
Gust Response Factor :1.10		Wind Importance Factor :1.00
Dead Load Factor :1.00		
Wind Load Factor :1.00		

**Applied Segment Forces Summary**

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		53.8	0.0					0.0	0.0	53.8	0.0	0.0	0.0
5.00		116.9	751.8					0.0	554.7	116.9	1,306.5	0.0	0.0
10.00		124.9	735.7					27.0	564.1	151.9	1,299.9	0.0	0.0
15.00		122.2	719.6					27.0	564.1	149.1	1,283.8	0.0	0.0
20.00		119.4	703.5					27.0	564.1	146.4	1,267.7	0.0	0.0
25.00		116.7	687.5					27.0	564.1	143.7	1,251.6	0.0	0.0
30.00		69.1	671.4					27.0	564.1	96.1	1,235.5	0.0	0.0
31.00	Appurtenance(s)	17.2	132.3	13.6	0.0	0.0	50.0	5.4	112.8	36.3	295.2	0.0	0.0
31.50	Bot - Section 2	35.2	66.4					2.7	56.8	37.9	123.2	0.0	0.0
34.00	Appurtenance(s)	41.2	605.0	6.4	0.0	19.3	10.0	13.8	281.7	61.5	896.7	0.0	0.0
35.00	Appurtenance(s)	19.8	240.3	6.2	0.0	-18.6	10.0	5.6	112.7	31.6	362.9	0.0	0.0
35.67	Top - Section 1	11.9	160.3					3.8	75.4	15.7	235.7	0.0	0.0
36.00	Appurtenance(s)	51.8	36.2	14.2	0.0	0.0	50.0	1.9	37.1	67.9	123.4	0.0	0.0
40.00		108.3	434.5					23.1	450.1	131.4	884.6	0.0	0.0
45.00		121.3	531.0					29.8	562.6	151.1	1,093.7	0.0	0.0
50.00		121.8	517.6					30.8	562.6	152.6	1,080.3	0.0	0.0
55.00		121.9	504.2					31.7	562.6	153.6	1,066.9	0.0	0.0
60.00		121.7	490.8					32.5	562.6	154.2	1,053.5	0.0	0.0
65.00		121.1	477.4					33.3	562.6	154.4	1,040.1	0.0	0.0
70.00		61.0	464.0					34.0	562.6	95.0	1,026.7	0.0	0.0
70.05	Bot - Section 3	43.4	4.9					0.4	6.0	43.7	10.9	0.0	0.0
73.55	Top - Section 2	60.3	575.5					24.2	393.9	84.6	969.4	0.0	0.0
75.00		77.9	105.4					10.1	162.8	88.0	268.2	0.0	0.0
80.00		120.0	357.5					35.4	562.6	155.4	920.1	0.0	0.0
85.00		118.4	346.8					36.0	562.6	154.4	909.4	0.0	0.0
90.00		71.6	336.0					36.6	562.6	108.2	898.7	0.0	0.0
91.10	Reinf. Top Reinf	57.8	72.5					8.1	123.8	66.0	196.3	0.0	0.0
95.00		79.2	252.8					29.1	438.9	108.3	691.7	0.0	0.0
98.00	Appurtenance(s)	56.8	190.0	906.9	0.0	1,954.6	2,669.5	22.6	337.6	986.3	3,197.1	0.0	0.0
100.00		39.4	124.6					15.2	218.6	54.6	343.2	0.0	0.0
101.50	Reinf. Top Reinf	55.7	92.3					11.4	163.0	67.1	255.3	0.0	0.0
105.00		93.3	211.6					26.9	284.7	120.2	496.3	0.0	0.0
110.00	Reinf. Top Reinf	54.9	293.2					28.4	406.8	83.4	699.9	0.0	0.0
110.05	Top - Section 3	44.3	3.1					0.0	3.8	44.3	6.9	0.0	0.0
115.00	Appurtenance(s)	69.9	210.2	84.2	0.0	0.0	560.0	0.0	351.9	154.1	1,122.1	0.0	0.0
118.00	Appurtenance(s)	30.3	123.6	143.8	0.0	287.6	262.2	0.0	213.4	174.1	599.2	0.0	0.0
118.50	Reinf. Top	8.6	20.3					0.0	35.2	8.6	55.5	0.0	0.0
119.00	Appurtenance(s)	12.8	20.2	12.0	0.0	0.0	10.0	0.0	19.9	24.8	50.1	0.0	0.0
120.00		50.5	40.2					0.0	36.1	50.5	76.4	0.0	0.0
125.00		66.6	196.4					0.0	180.6	66.6	376.9	0.0	0.0
128.00	Appurtenance(s)	40.8	114.0	563.8	0.0	414.5	1,567.2	0.0	108.3	604.6	1,789.5	0.0	0.0
130.00		55.6	74.4					0.0	58.4	55.6	132.8	0.0	0.0
135.00		62.5	180.3					0.0	143.5	62.5	323.8	0.0	0.0
138.00	Appurtenance(s)	38.1	104.3	394.0	0.0	1,576.0	1,045.6	0.0	86.1	432.1	1,236.0	0.0	0.0
140.00		22.5	67.9					0.0	51.4	22.5	119.3	0.0	0.0
141.00	Appurtenance(s)	36.7	33.5	153.5	0.0	0.0	750.0	0.0	25.7	190.3	809.2	0.0	0.0
145.00		64.6	130.7					0.0	100.7	64.6	231.4	0.0	0.0
150.00	Appurtenance(s)	35.3	156.2	1,176.7	0.0	2,497.0	4,148.0	0.0	125.0	1,212.0	4,429.1	0.0	0.0

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:44 AM

Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W

Serviceability 60 mph

27 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

Totals: 7,388.30 38,142.3 0.00 0.00

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

Serviceability 60 mph

27 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

**Calculated Forces**

Seg	Pu	Vu	Tu	Mu	Mu	Resultant	phi	phi	phi	phi	Total		
Elev	FY (-)	FX (-)	MY	MZ	MX	Moment	Pn	Vn	Tn	Mn	Deflect	Rotation	Ratio
(ft)	(kips)	(kips)	(ft-kips)	(ft-kips)	(ft-kips)	(ft-kips)	(kips)	(kips)	(ft-kips)	(ft-kips)	(in)	(deg)	
0.00	-38.14	-7.36	0.00	-763.82	0.00	763.82	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.205
5.00	-36.82	-7.30	0.00	-727.01	0.00	727.01	3,113.28	1,556.64	4,641.42	2,292.22	0.04	-0.08	0.200
10.00	-35.51	-7.19	0.00	-690.52	0.00	690.52	3,069.45	1,534.72	4,476.09	2,210.57	0.18	-0.17	0.195
15.00	-34.22	-7.09	0.00	-654.55	0.00	654.55	3,024.57	1,512.28	4,312.14	2,129.61	0.40	-0.25	0.189
20.00	-32.94	-6.99	0.00	-619.10	0.00	619.10	2,978.65	1,489.33	4,149.68	2,049.37	0.70	-0.33	0.184
25.00	-31.68	-6.88	0.00	-584.17	0.00	584.17	2,931.70	1,465.85	3,988.78	1,969.91	1.10	-0.42	0.178
30.00	-30.44	-6.80	0.00	-549.77	0.00	549.77	2,873.79	1,436.89	3,816.40	1,884.77	1.58	-0.50	0.173
31.00	-30.14	-6.77	0.00	-542.96	0.00	542.96	2,859.85	1,429.93	3,779.26	1,866.44	1.69	-0.52	0.172
31.50	-30.02	-6.74	0.00	-539.56	0.00	539.56	2,852.84	1,426.42	3,760.64	1,857.24	1.74	-0.53	0.171
34.00	-29.12	-6.69	0.00	-522.70	0.00	522.70	2,818.05	1,409.02	3,668.95	1,811.96	2.03	-0.57	0.167
35.00	-28.75	-6.66	0.00	-516.02	0.00	516.02	2,804.11	1,402.06	3,632.54	1,793.98	2.15	-0.58	0.166
35.67	-28.52	-6.65	0.00	-511.55	0.00	511.55	2,247.39	1,123.70	2,971.54	1,467.53	2.23	-0.60	0.190
36.00	-28.39	-6.60	0.00	-509.36	0.00	509.36	2,245.17	1,122.59	2,963.78	1,463.70	2.27	-0.60	0.189
40.00	-27.50	-6.49	0.00	-482.98	0.00	482.98	2,217.94	1,108.97	2,870.05	1,417.41	2.81	-0.67	0.183
45.00	-26.40	-6.37	0.00	-450.52	0.00	450.52	2,182.97	1,091.48	2,753.70	1,359.95	3.56	-0.76	0.175
50.00	-25.31	-6.24	0.00	-418.69	0.00	418.69	2,146.96	1,073.48	2,638.35	1,302.98	4.39	-0.84	0.167
55.00	-24.24	-6.10	0.00	-387.52	0.00	387.52	2,109.91	1,054.96	2,524.10	1,246.56	5.32	-0.93	0.159
60.00	-23.18	-5.96	0.00	-357.01	0.00	357.01	2,071.82	1,035.91	2,411.06	1,190.73	6.34	-1.01	0.150
65.00	-22.13	-5.82	0.00	-327.21	0.00	327.21	2,032.70	1,016.35	2,299.33	1,135.55	7.43	-1.09	0.142
70.00	-21.10	-5.72	0.00	-298.11	0.00	298.11	1,981.31	990.65	2,176.68	1,074.98	8.62	-1.17	0.134
70.05	-21.09	-5.68	0.00	-297.81	0.00	297.81	1,980.69	990.35	2,175.31	1,074.30	8.63	-1.17	0.134
73.55	-20.12	-5.59	0.00	-277.91	0.00	277.91	1,473.36	736.68	1,622.77	801.43	9.51	-1.22	0.148
75.00	-19.85	-5.52	0.00	-269.82	0.00	269.82	1,465.95	732.98	1,600.80	790.57	9.88	-1.24	0.145
80.00	-18.92	-5.37	0.00	-242.24	0.00	242.24	1,439.68	719.84	1,525.22	753.25	11.22	-1.32	0.133
85.00	-18.01	-5.21	0.00	-215.42	0.00	215.42	1,412.37	706.19	1,450.29	716.24	12.64	-1.39	0.122
90.00	-17.11	-5.09	0.00	-189.36	0.00	189.36	1,384.02	692.01	1,376.10	679.61	14.14	-1.46	0.110
91.10	-16.92	-5.03	0.00	-183.76	0.00	183.76	1,377.65	688.82	1,359.89	671.60	14.48	-1.48	0.107
91.10	-16.92	-5.03	0.00	-183.76	0.00	183.76	1,377.65	688.82	1,359.89	671.60	14.48	-1.48	0.107
95.00	-16.22	-4.92	0.00	-164.13	0.00	164.13	1,354.64	677.32	1,302.77	643.39	15.71	-1.53	0.098
98.00	-13.05	-3.85	0.00	-147.42	0.00	147.42	1,336.51	668.25	1,259.21	621.88	16.68	-1.56	0.089
100.00	-12.71	-3.79	0.00	-139.72	0.00	139.72	1,324.21	662.11	1,230.38	607.64	17.34	-1.59	0.085
101.50	-12.45	-3.73	0.00	-134.03	0.00	134.03	1,314.88	657.44	1,208.86	597.01	17.84	-1.61	0.082
101.50	-12.45	-3.73	0.00	-134.03	0.00	134.03	1,314.88	657.44	1,208.86	597.01	17.84	-1.61	0.135
105.00	-11.96	-3.60	0.00	-120.99	0.00	120.99	1,293.27	646.64	1,159.51	572.64	19.03	-1.64	0.126
110.00	-11.26	-3.51	0.00	-102.97	0.00	102.97	1,246.82	623.41	1,077.26	532.02	20.80	-1.73	0.114
110.00	-11.26	-3.51	0.00	-102.97	0.00	102.97	1,246.82	623.41	1,077.26	532.02	20.80	-1.73	0.128
110.05	-11.25	-3.47	0.00	-102.79	0.00	102.79	1,246.32	623.16	1,076.40	531.59	20.82	-1.73	0.128
110.05	-11.25	-3.47	0.00	-102.79	0.00	102.79	852.93	426.46	741.03	365.97	20.82	-1.73	0.166
115.00	-10.13	-3.30	0.00	-85.61	0.00	85.61	834.88	417.44	698.45	344.94	22.66	-1.82	0.144
118.00	-9.53	-3.11	0.00	-75.43	0.00	75.43	823.44	411.72	672.79	332.27	23.82	-1.88	0.130
118.50	-9.48	-3.10	0.00	-73.87	0.00	73.87	821.50	410.75	668.53	330.16	24.02	-1.89	0.128
118.50	-9.48	-3.10	0.00	-73.87	0.00	73.87	821.50	410.75	668.53	330.16	24.02	-1.89	0.235
119.00	-9.43	-3.08	0.00	-72.32	0.00	72.32	819.55	409.77	664.27	328.06	24.22	-1.90	0.232
120.00	-9.35	-3.04	0.00	-69.25	0.00	69.25	815.61	407.80	655.76	323.86	24.62	-1.93	0.225
125.00	-8.97	-2.98	0.00	-54.04	0.00	54.04	795.30	397.65	613.53	303.00	26.72	-2.08	0.190
128.00	-7.20	-2.32	0.00	-44.69	0.00	44.69	782.61	391.31	588.45	290.61	28.06	-2.17	0.163
130.00	-7.06	-2.27	0.00	-40.06	0.00	40.06	773.95	386.97	571.85	282.42	28.98	-2.22	0.151
135.00	-6.74	-2.20	0.00	-28.73	0.00	28.73	751.56	375.78	530.84	262.16	31.36	-2.33	0.119
138.00	-5.52	-1.72	0.00	-20.55	0.00	20.55	737.63	368.82	506.58	250.18	32.85	-2.38	0.090
140.00	-5.40	-1.70	0.00	-17.11	0.00	17.11	728.14	364.07	490.58	242.28	33.85	-2.41	0.078
141.00	-4.60	-1.47	0.00	-15.41	0.00	15.41	721.90	360.95	481.67	237.88	34.36	-2.43	0.071

Site Number: 302473

Code: ANSI/TIA-222-G © 2007 - 2019 by ATC IP LLC. All rights reserved.

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:44 AM

Customer: AT&T MOBILITY

Load Case: 1.0D + 1.0W

Serviceability 60 mph

27 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

145.00	-4.37	-1.40	0.00	-9.51	0.00	9.51	694.03	347.02	445.00	219.77	36.41	-2.47	0.050
150.00	0.00	-1.21	0.00	-2.50	0.00	2.50	659.19	329.60	401.19	198.13	39.02	-2.50	0.013

### Equivalent Lateral Forces Method Analysis

(Based on ASCE7-10 Chapters 11, 12, 15)

Spectral Response Acceleration for Short Period ( $S_s$ ):	0.18
Spectral Response Acceleration at 1.0 Second Period ( $S_1$ ):	0.06
Long-Period Transition Period ( $T_L$ ):	6
Importance Factor ( $I_E$ ):	1.00
Site Coefficient $F_a$ :	1.60
Site Coefficient $F_v$ :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.19
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.10
Seismic Response Coefficient ( $C_s$ ):	0.03
Upper Limit $C_s$	0.03
Lower Limit $C_s$	0.03
Period based on Rayleigh Method (sec):	3.09
Redundancy Factor ( $\rho$ ):	1.30
Seismic Force Distribution Exponent (k):	2.00
Total Unfactored Dead Load:	38.14 k
Seismic Base Shear (E):	1.49 k

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

Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	$W_z$ (lb-ft)	$C_{vx}$	Horizontal Force (lb)	Vertical Force (lb)
47	147.50	281	6,116	0.019	28	348
46	143.00	231	4,732	0.015	22	287
45	140.50	59	1,168	0.004	5	73
44	139.00	119	2,305	0.007	11	148
43	136.50	190	3,547	0.011	16	236
42	132.50	324	5,684	0.018	26	401
41	129.00	133	2,210	0.007	10	164
40	126.50	222	3,557	0.011	16	275
39	122.50	377	5,656	0.018	26	467
38	119.50	76	1,090	0.003	5	95
37	118.75	40	566	0.002	3	50
36	118.25	56	776	0.002	4	69
35	116.50	337	4,574	0.014	21	417
34	112.53	562	7,117	0.022	33	696
33	110.03	7	83	0.000	0	8
32	107.50	700	8,088	0.025	37	867
31	103.25	496	5,291	0.016	24	615
30	100.75	255	2,591	0.008	12	316
29	99.00	343	3,363	0.010	16	425
28	96.50	528	4,913	0.015	23	653
27	93.05	692	5,989	0.019	28	857
26	90.55	196	1,609	0.005	7	243
25	87.50	899	6,881	0.021	32	1,113

24	82.50	909	6,190	0.019	29	1,126
23	77.50	920	5,527	0.017	26	1,139
22	74.28	268	1,480	0.005	7	332
21	71.80	969	4,998	0.016	23	1,200
20	70.03	11	53	0.000	0	13
19	67.50	1,027	4,678	0.015	22	1,271
18	62.50	1,040	4,063	0.013	19	1,288
17	57.50	1,053	3,483	0.011	16	1,305
16	52.50	1,067	2,941	0.009	14	1,321
15	47.50	1,080	2,437	0.008	11	1,338
14	42.50	1,094	1,975	0.006	9	1,354
13	38.00	885	1,277	0.004	6	1,095
12	35.83	73	94	0.000	0	91
11	35.33	236	294	0.001	1	292
10	34.50	353	420	0.001	2	437
9	32.75	887	951	0.003	4	1,098
8	31.25	123	120	0.000	1	153
7	30.50	245	228	0.001	1	304
6	27.50	1,236	934	0.003	4	1,530
5	22.50	1,252	634	0.002	3	1,550
4	17.50	1,268	388	0.001	2	1,570
3	12.50	1,284	201	0.001	1	1,590
2	7.50	1,300	73	0.000	0	1,610
1	2.50	1,307	8	0.000	0	1,618
Powerwave Allgon 702	150.00	13	297	0.001	1	16
Kaelus DBCT108F1V92-	150.00	42	938	0.003	4	52
Powerwave Allgon LGP	150.00	85	1,904	0.006	9	105
Raycap DC6-48-60-18-	150.00	40	900	0.003	4	50
Raycap DC6-48-60-18-	150.00	20	450	0.001	2	25
Ericsson Radio 8843	150.00	216	4,853	0.015	22	267
Ericsson RRUS 4449 B	150.00	213	4,793	0.015	22	264
Ericsson RRUS 4478 B	150.00	178	4,010	0.012	19	221
Stand Off	150.00	225	5,063	0.016	23	279
Ericsson RRUS-32 (77	150.00	231	5,198	0.016	24	286
Powerwave Allgon 777	150.00	81	1,823	0.006	8	100
CCI OPA-65R-LCUU-H6	150.00	219	4,928	0.015	23	271
Kathrein Scala 80010	150.00	586	13,176	0.041	61	725
Round Platform w/ Ha	150.00	2,000	45,000	0.140	208	2,477
Round T-Arm	141.00	750	14,911	0.046	69	929
RFS IBC1900HG-2A	138.00	66	1,257	0.004	6	82
RFS IBC1900BB-1	138.00	66	1,257	0.004	6	82
Alcatel-Lucent 4X40W	138.00	178	3,399	0.011	16	221
Alcatel-Lucent 800 M	138.00	185	3,531	0.011	16	230
Alcatel-Lucent TD-RR	138.00	210	3,999	0.012	18	260
RFS APXVTM14-C-I20	138.00	159	3,022	0.009	14	197
RFS APXV9ERR18-C-A20	138.00	124	2,361	0.007	11	154
RFS APXVSP18-C-A20	138.00	57	1,086	0.003	5	71
Ericsson AIR 21, 1.3	128.00	271	4,443	0.014	21	336
Ericsson AIR32 B66Aa	128.00	397	6,498	0.020	30	491
Round T-Arm	128.00	750	12,288	0.038	57	929
Andrew LNX-6515DS-A1	128.00	149	2,448	0.008	11	185
Generic 12" x 12" Ju	119.00	10	142	0.000	1	12
DragonWave Horizon C	118.00	32	443	0.001	2	39
DragonWave A-ANT-23G	118.00	15	209	0.001	1	19
NextNet BTS-2500	118.00	105	1,462	0.005	7	130
Argus LLPX310R	118.00	86	1,195	0.004	6	106
DragonWave A-ANT-23G	118.00	25	343	0.001	2	30
Collar	115.00	560	7,406	0.023	34	694
Alcatel-Lucent RRH2X	98.00	138	1,325	0.004	6	171
Alcatel-Lucent RRH2x	98.00	170	1,634	0.005	8	211
Alcatel-Lucent RRH2X	98.00	165	1,585	0.005	7	204
RFS DB-T1-6Z-8AB-0Z	98.00	88	845	0.003	4	109
Andrew SBNHH-1D65B	98.00	608	5,843	0.018	27	753
Generic Flat Light S	98.00	1,500	14,406	0.045	67	1,858

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:44 AM

Customer: AT&T MOBILITY

Stand-off	36.00	50	65	0.000	0	62
Generic GPS	35.00	10	12	0.000	0	12
Generic GPS	34.00	10	12	0.000	0	12
Stand-off	31.00	50	48	0.000	0	62
		38,142	322,160	1.000	1,488	47,236

Load Case (0.9 - 0.2Sds) \* DL + E ELMF

Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
47	147.50	281	6,116	0.019	28	242
46	143.00	231	4,732	0.015	22	199
45	140.50	59	1,168	0.004	5	51
44	139.00	119	2,305	0.007	11	103
43	136.50	190	3,547	0.011	16	164
42	132.50	324	5,684	0.018	26	279
41	129.00	133	2,210	0.007	10	114
40	126.50	222	3,557	0.011	16	192
39	122.50	377	5,656	0.018	26	325
38	119.50	76	1,090	0.003	5	66
37	118.75	40	566	0.002	3	35
36	118.25	56	776	0.002	4	48
35	116.50	337	4,574	0.014	21	290
34	112.53	562	7,117	0.022	33	484
33	110.03	7	83	0.000	0	6
32	107.50	700	8,088	0.025	37	603
31	103.25	496	5,291	0.016	24	428
30	100.75	255	2,591	0.008	12	220
29	99.00	343	3,363	0.010	16	296
28	96.50	528	4,913	0.015	23	455
27	93.05	692	5,989	0.019	28	596
26	90.55	196	1,609	0.005	7	169
25	87.50	899	6,881	0.021	32	774
24	82.50	909	6,190	0.019	29	784
23	77.50	920	5,527	0.017	26	793
22	74.28	268	1,480	0.005	7	231
21	71.80	969	4,998	0.016	23	835
20	70.03	11	53	0.000	0	9
19	67.50	1,027	4,678	0.015	22	885
18	62.50	1,040	4,063	0.013	19	896
17	57.50	1,053	3,483	0.011	16	908
16	52.50	1,067	2,941	0.009	14	919
15	47.50	1,080	2,437	0.008	11	931
14	42.50	1,094	1,975	0.006	9	942
13	38.00	885	1,277	0.004	6	762
12	35.83	73	94	0.000	0	63
11	35.33	236	294	0.001	1	203
10	34.50	353	420	0.001	2	304
9	32.75	887	951	0.003	4	764
8	31.25	123	120	0.000	1	106
7	30.50	245	228	0.001	1	211
6	27.50	1,236	934	0.003	4	1,065
5	22.50	1,252	634	0.002	3	1,078
4	17.50	1,268	388	0.001	2	1,092
3	12.50	1,284	201	0.001	1	1,106
2	7.50	1,300	73	0.000	0	1,120
1	2.50	1,307	8	0.000	0	1,126
Powerwave Allgon 702	150.00	13	297	0.001	1	11
Kaelus DBCT108F1V92-	150.00	42	938	0.003	4	36
Powerwave Allgon LGP	150.00	85	1,904	0.006	9	73



Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:44 AM

Customer: AT&T MOBILITY

Raycap DC6-48-60-18-	150.00	40	900	0.003	4	34
Raycap DC6-48-60-18-	150.00	20	450	0.001	2	17
Ericsson Radio 8843	150.00	216	4,853	0.015	22	186
Ericsson RRUS 4449 B	150.00	213	4,793	0.015	22	184
Ericsson RRUS 4478 B	150.00	178	4,010	0.012	19	154
Stand Off	150.00	225	5,063	0.016	23	194
Ericsson RRUS-32 (77	150.00	231	5,198	0.016	24	199
Powerwave Allgon 777	150.00	81	1,823	0.006	8	70
CCI OPA-65R-LCUU-H6	150.00	219	4,928	0.015	23	189
Kathrein Scala 80010	150.00	586	13,176	0.041	61	505
Round Platform w/ Ha	150.00	2,000	45,000	0.140	208	1,723
Round T-Arm	141.00	750	14,911	0.046	69	646
RFS IBC1900HG-2A	138.00	66	1,257	0.004	6	57
RFS IBC1900BB-1	138.00	66	1,257	0.004	6	57
Alcatel-Lucent 4X40W	138.00	178	3,399	0.011	16	154
Alcatel-Lucent 800 M	138.00	185	3,531	0.011	16	160
Alcatel-Lucent TD-RR	138.00	210	3,999	0.012	18	181
RFS APXVTM14-C-I20	138.00	159	3,022	0.009	14	137
RFS APXV9ERR18-C-A20	138.00	124	2,361	0.007	11	107
RFS APXVSP18-C-A20	138.00	57	1,086	0.003	5	49
Ericsson AIR 21, 1.3	128.00	271	4,443	0.014	21	234
Ericsson AIR32 B66Aa	128.00	397	6,498	0.020	30	342
Round T-Arm	128.00	750	12,288	0.038	57	646
Andrew LNX-6515DS-A1	128.00	149	2,448	0.008	11	129
Generic 12" x 12" Ju	119.00	10	142	0.000	1	9
DragonWave Horizon C	118.00	32	443	0.001	2	27
DragonWave A-ANT-23G	118.00	15	209	0.001	1	13
NextNet BTS-2500	118.00	105	1,462	0.005	7	90
Argus LLPX310R	118.00	86	1,195	0.004	6	74
DragonWave A-ANT-23G	118.00	25	343	0.001	2	21
Collar	115.00	560	7,406	0.023	34	482
Alcatel-Lucent RRH2X	98.00	138	1,325	0.004	6	119
Alcatel-Lucent RRH2x	98.00	170	1,634	0.005	8	147
Alcatel-Lucent RRH2X	98.00	165	1,585	0.005	7	142
RFS DB-T1-6Z-8AB-0Z	98.00	88	845	0.003	4	76
Andrew SBNHH-1D65B	98.00	608	5,843	0.018	27	524
Generic Flat Light S	98.00	1,500	14,406	0.045	67	1,292
Stand-off	36.00	50	65	0.000	0	43
Generic GPS	35.00	10	12	0.000	0	9
Generic GPS	34.00	10	12	0.000	0	9
Stand-off	31.00	50	48	0.000	0	43
		38,142	322,160	1.000	1,488	32,863

Load Case (1.2 + 0.2Sds) \* DL + E ELFM Seismic Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-45.62	-1.49	0.00	-193.19	0.00	193.19	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.060
5.00	-44.01	-1.51	0.00	-185.71	0.00	185.71	3,113.28	1,556.64	4,641.42	2,292.22	0.01	-0.02	0.059
10.00	-42.42	-1.52	0.00	-178.16	0.00	178.16	3,069.45	1,534.72	4,476.09	2,210.57	0.04	-0.04	0.058
15.00	-40.85	-1.54	0.00	-170.54	0.00	170.54	3,024.57	1,512.28	4,312.14	2,129.61	0.10	-0.06	0.057
20.00	-39.30	-1.55	0.00	-162.86	0.00	162.86	2,978.65	1,489.33	4,149.68	2,049.37	0.18	-0.09	0.055
25.00	-37.76	-1.55	0.00	-155.12	0.00	155.12	2,931.70	1,465.85	3,988.78	1,969.91	0.28	-0.11	0.054
30.00	-37.46	-1.56	0.00	-147.35	0.00	147.35	2,873.79	1,436.89	3,816.40	1,884.77	0.41	-0.13	0.053
31.00	-37.25	-1.56	0.00	-145.79	0.00	145.79	2,859.85	1,429.93	3,779.26	1,866.44	0.43	-0.13	0.053
31.50	-36.15	-1.56	0.00	-145.00	0.00	145.00	2,852.84	1,426.42	3,760.64	1,857.24	0.45	-0.14	0.053
34.00	-35.70	-1.56	0.00	-141.11	0.00	141.11	2,818.05	1,409.02	3,668.95	1,811.96	0.52	-0.15	0.052
35.00	-35.39	-1.56	0.00	-139.55	0.00	139.55	2,804.11	1,402.06	3,632.54	1,793.98	0.56	-0.15	0.051
35.67	-35.30	-1.56	0.00	-138.50	0.00	138.50	2,247.39	1,123.70	2,971.54	1,467.53	0.58	-0.16	0.059
36.00	-34.15	-1.56	0.00	-137.99	0.00	137.99	2,245.17	1,122.59	2,963.78	1,463.70	0.59	-0.16	0.059
40.00	-32.79	-1.56	0.00	-131.75	0.00	131.75	2,217.94	1,108.97	2,870.05	1,417.41	0.73	-0.18	0.057
45.00	-31.45	-1.56	0.00	-123.96	0.00	123.96	2,182.97	1,091.48	2,753.70	1,359.95	0.93	-0.20	0.055
50.00	-30.13	-1.55	0.00	-116.18	0.00	116.18	2,146.96	1,073.48	2,638.35	1,302.98	1.15	-0.22	0.053
55.00	-28.82	-1.54	0.00	-108.43	0.00	108.43	2,109.91	1,054.96	2,524.10	1,246.56	1.39	-0.25	0.051
60.00	-27.54	-1.53	0.00	-100.74	0.00	100.74	2,071.82	1,035.91	2,411.06	1,190.73	1.67	-0.27	0.048
65.00	-26.26	-1.51	0.00	-93.11	0.00	93.11	2,032.70	1,016.35	2,299.33	1,135.55	1.96	-0.29	0.046
70.00	-26.25	-1.51	0.00	-85.56	0.00	85.56	1,981.31	990.65	2,176.68	1,074.98	2.28	-0.32	0.044
70.05	-25.05	-1.49	0.00	-85.48	0.00	85.48	1,980.69	990.35	2,175.31	1,074.30	2.28	-0.32	0.044
73.55	-24.72	-1.48	0.00	-80.28	0.00	80.28	1,473.36	736.68	1,622.77	801.43	2.52	-0.33	0.049
75.00	-23.58	-1.46	0.00	-78.13	0.00	78.13	1,465.95	732.98	1,600.80	790.57	2.62	-0.34	0.048
80.00	-22.45	-1.43	0.00	-70.85	0.00	70.85	1,439.68	719.84	1,525.22	753.25	2.99	-0.36	0.045
85.00	-21.34	-1.40	0.00	-63.70	0.00	63.70	1,412.37	706.19	1,450.29	716.24	3.37	-0.38	0.042
90.00	-21.09	-1.39	0.00	-56.70	0.00	56.70	1,384.02	692.01	1,376.10	679.61	3.78	-0.40	0.039
91.10	-20.24	-1.36	0.00	-55.17	0.00	55.17	1,377.65	688.82	1,359.89	671.60	3.88	-0.41	0.038
91.10	-20.24	-1.36	0.00	-55.17	0.00	55.17	1,377.65	688.82	1,359.89	671.60	3.88	-0.41	0.038
95.00	-19.58	-1.34	0.00	-49.85	0.00	49.85	1,354.64	677.32	1,302.77	643.39	4.22	-0.42	0.035
98.00	-15.85	-1.18	0.00	-45.82	0.00	45.82	1,336.51	668.25	1,259.21	621.88	4.48	-0.43	0.032
100.00	-15.54	-1.17	0.00	-43.46	0.00	43.46	1,324.21	662.11	1,230.38	607.64	4.67	-0.44	0.031
101.50	-14.92	-1.14	0.00	-41.70	0.00	41.70	1,314.88	657.44	1,208.86	597.01	4.81	-0.45	0.030
101.50	-14.92	-1.14	0.00	-41.70	0.00	41.70	1,314.88	657.44	1,208.86	597.01	4.81	-0.45	0.047
105.00	-14.06	-1.10	0.00	-37.70	0.00	37.70	1,293.27	646.64	1,159.51	572.64	5.14	-0.46	0.044
110.00	-14.05	-1.11	0.00	-32.18	0.00	32.18	1,246.82	623.41	1,077.26	532.02	5.63	-0.48	0.040
110.00	-14.05	-1.11	0.00	-32.18	0.00	32.18	1,246.82	623.41	1,077.26	532.02	5.63	-0.48	0.045
110.05	-13.35	-1.07	0.00	-32.12	0.00	32.12	1,246.32	623.16	1,076.40	531.59	5.64	-0.48	0.045
110.05	-13.35	-1.07	0.00	-32.12	0.00	32.12	852.93	426.46	741.03	365.97	5.64	-0.48	0.059
115.00	-12.24	-1.01	0.00	-26.82	0.00	26.82	834.88	417.44	698.45	344.94	6.15	-0.51	0.051
118.00	-11.85	-0.99	0.00	-23.79	0.00	23.79	823.44	411.72	672.79	332.27	6.48	-0.53	0.047
118.50	-11.80	-0.99	0.00	-23.30	0.00	23.30	821.50	410.75	668.53	330.16	6.54	-0.53	0.047
118.50	-11.80	-0.99	0.00	-23.30	0.00	23.30	821.50	410.75	668.53	330.16	6.54	-0.53	0.085
119.00	-11.69	-0.98	0.00	-22.80	0.00	22.80	819.55	409.77	664.27	328.06	6.59	-0.54	0.084
120.00	-11.22	-0.96	0.00	-21.82	0.00	21.82	815.61	407.80	655.76	323.86	6.71	-0.55	0.081
125.00	-10.95	-0.95	0.00	-17.04	0.00	17.04	795.30	397.65	613.53	303.00	7.30	-0.60	0.070
128.00	-8.84	-0.80	0.00	-14.20	0.00	14.20	782.61	391.31	588.45	290.61	7.69	-0.62	0.060
130.00	-8.44	-0.77	0.00	-12.61	0.00	12.61	773.95	386.97	571.85	282.42	7.95	-0.64	0.056
135.00	-8.21	-0.76	0.00	-8.75	0.00	8.75	751.56	375.78	530.84	262.16	8.64	-0.67	0.044
138.00	-6.77	-0.64	0.00	-6.49	0.00	6.49	737.63	368.82	506.58	250.18	9.07	-0.69	0.035
140.00	-6.69	-0.63	0.00	-5.21	0.00	5.21	728.14	364.07	490.58	242.28	9.36	-0.70	0.031
141.00	-5.48	-0.53	0.00	-4.58	0.00	4.58	721.90	360.95	481.67	237.88	9.50	-0.70	0.027
145.00	-5.13	-0.50	0.00	-2.48	0.00	2.48	694.03	347.02	445.00	219.77	10.10	-0.71	0.019
150.00	0.00	-0.43	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	10.85	-0.72	0.000

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Site Number: 302473

Code: ANSI/TIA-222-G © 2007 - 2019 by ATC IP LLC. All rights reserved.

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:45 AM

Customer: AT&T MOBILITY

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Load Case (0.9 - 0.2Sds) \* DL + E ELFM

Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-31.74	-1.49	0.00	-188.19	0.00	188.19	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.055
5.00	-30.62	-1.50	0.00	-180.73	0.00	180.73	3,113.28	1,556.64	4,641.42	2,292.22	0.01	-0.02	0.054
10.00	-29.51	-1.51	0.00	-173.21	0.00	173.21	3,069.45	1,534.72	4,476.09	2,210.57	0.04	-0.04	0.053
15.00	-28.42	-1.52	0.00	-165.66	0.00	165.66	3,024.57	1,512.28	4,312.14	2,129.61	0.10	-0.06	0.052
20.00	-27.34	-1.53	0.00	-158.06	0.00	158.06	2,978.65	1,489.33	4,149.68	2,049.37	0.18	-0.08	0.051
25.00	-26.27	-1.53	0.00	-150.43	0.00	150.43	2,931.70	1,465.85	3,988.78	1,969.91	0.27	-0.11	0.050
30.00	-26.06	-1.53	0.00	-142.79	0.00	142.79	2,873.79	1,436.89	3,816.40	1,884.77	0.40	-0.13	0.049
31.00	-25.91	-1.53	0.00	-141.25	0.00	141.25	2,859.85	1,429.93	3,779.26	1,866.44	0.42	-0.13	0.049
31.50	-25.15	-1.53	0.00	-140.48	0.00	140.48	2,852.84	1,426.42	3,760.64	1,857.24	0.44	-0.13	0.049
34.00	-24.84	-1.53	0.00	-136.66	0.00	136.66	2,818.05	1,409.02	3,668.95	1,811.96	0.51	-0.14	0.048
35.00	-24.62	-1.53	0.00	-135.13	0.00	135.13	2,804.11	1,402.06	3,632.54	1,793.98	0.54	-0.15	0.047
35.67	-24.56	-1.53	0.00	-134.10	0.00	134.10	2,247.39	1,123.70	2,971.54	1,467.53	0.56	-0.15	0.054
36.00	-23.75	-1.53	0.00	-133.60	0.00	133.60	2,245.17	1,122.59	2,963.78	1,463.70	0.57	-0.15	0.054
40.00	-22.81	-1.52	0.00	-127.49	0.00	127.49	2,217.94	1,108.97	2,870.05	1,417.41	0.71	-0.17	0.053
45.00	-21.88	-1.52	0.00	-119.87	0.00	119.87	2,182.97	1,091.48	2,753.70	1,359.95	0.90	-0.19	0.051
50.00	-20.96	-1.51	0.00	-112.28	0.00	112.28	2,146.96	1,073.48	2,638.35	1,302.98	1.12	-0.22	0.049
55.00	-20.05	-1.50	0.00	-104.74	0.00	104.74	2,109.91	1,054.96	2,524.10	1,246.56	1.35	-0.24	0.047
60.00	-19.16	-1.48	0.00	-97.25	0.00	97.25	2,071.82	1,035.91	2,411.06	1,190.73	1.62	-0.26	0.045
65.00	-18.27	-1.46	0.00	-89.84	0.00	89.84	2,032.70	1,016.35	2,299.33	1,135.55	1.90	-0.28	0.042
70.00	-18.26	-1.47	0.00	-82.52	0.00	82.52	1,981.31	990.65	2,176.68	1,074.98	2.21	-0.31	0.041
70.05	-17.43	-1.44	0.00	-82.44	0.00	82.44	1,980.69	990.35	2,175.31	1,074.30	2.21	-0.31	0.040
73.55	-17.19	-1.44	0.00	-77.40	0.00	77.40	1,473.36	736.68	1,622.77	801.43	2.44	-0.32	0.045
75.00	-16.40	-1.41	0.00	-75.32	0.00	75.32	1,465.95	732.98	1,600.80	790.57	2.54	-0.33	0.044
80.00	-15.62	-1.38	0.00	-68.27	0.00	68.27	1,439.68	719.84	1,525.22	753.25	2.90	-0.35	0.041
85.00	-14.84	-1.35	0.00	-61.35	0.00	61.35	1,412.37	706.19	1,450.29	716.24	3.27	-0.37	0.038
90.00	-14.67	-1.35	0.00	-54.60	0.00	54.60	1,384.02	692.01	1,376.10	679.61	3.67	-0.39	0.035
91.10	-14.08	-1.32	0.00	-53.11	0.00	53.11	1,377.65	688.82	1,359.89	671.60	3.76	-0.39	0.034
91.10	-14.08	-1.32	0.00	-53.11	0.00	53.11	1,377.65	688.82	1,359.89	671.60	3.76	-0.39	0.034
95.00	-13.62	-1.29	0.00	-47.98	0.00	47.98	1,354.64	677.32	1,302.77	643.39	4.09	-0.41	0.032
98.00	-11.03	-1.14	0.00	-44.10	0.00	44.10	1,336.51	668.25	1,259.21	621.88	4.35	-0.42	0.029
100.00	-10.81	-1.13	0.00	-41.81	0.00	41.81	1,324.21	662.11	1,230.38	607.64	4.52	-0.43	0.028
101.50	-10.38	-1.10	0.00	-40.11	0.00	40.11	1,314.88	657.44	1,208.86	597.01	4.66	-0.43	0.027
101.50	-10.38	-1.10	0.00	-40.11	0.00	40.11	1,314.88	657.44	1,208.86	597.01	4.66	-0.43	0.044
105.00	-9.78	-1.07	0.00	-36.25	0.00	36.25	1,293.27	646.64	1,159.51	572.64	4.98	-0.44	0.041
110.00	-9.77	-1.07	0.00	-30.92	0.00	30.92	1,246.82	623.41	1,077.26	532.02	5.45	-0.47	0.037
110.00	-9.77	-1.07	0.00	-30.92	0.00	30.92	1,246.82	623.41	1,077.26	532.02	5.45	-0.47	0.042
110.05	-9.29	-1.03	0.00	-30.86	0.00	30.86	1,246.32	623.16	1,076.40	531.59	5.46	-0.47	0.041
110.05	-9.29	-1.03	0.00	-30.86	0.00	30.86	852.93	426.46	741.03	365.97	5.46	-0.47	0.054
115.00	-8.51	-0.97	0.00	-25.75	0.00	25.75	834.88	417.44	698.45	344.94	5.96	-0.49	0.047
118.00	-8.24	-0.95	0.00	-22.83	0.00	22.83	823.44	411.72	672.79	332.27	6.27	-0.51	0.043
118.50	-8.21	-0.95	0.00	-22.35	0.00	22.35	821.50	410.75	668.53	330.16	6.33	-0.51	0.043
118.50	-8.21	-0.95	0.00	-22.35	0.00	22.35	821.50	410.75	668.53	330.16	6.33	-0.51	0.078
119.00	-8.13	-0.95	0.00	-21.87	0.00	21.87	819.55	409.77	664.27	328.06	6.38	-0.52	0.077
120.00	-7.81	-0.92	0.00	-20.93	0.00	20.93	815.61	407.80	655.76	323.86	6.49	-0.53	0.074
125.00	-7.62	-0.91	0.00	-16.33	0.00	16.33	795.30	397.65	613.53	303.00	7.07	-0.57	0.063
128.00	-6.15	-0.77	0.00	-13.61	0.00	13.61	782.61	391.31	588.45	290.61	7.44	-0.60	0.055
130.00	-5.87	-0.74	0.00	-12.08	0.00	12.08	773.95	386.97	571.85	282.42	7.69	-0.62	0.050
135.00	-5.71	-0.72	0.00	-8.38	0.00	8.38	751.56	375.78	530.84	262.16	8.36	-0.65	0.040
138.00	-4.71	-0.61	0.00	-6.21	0.00	6.21	737.63	368.82	506.58	250.18	8.77	-0.66	0.031
140.00	-4.65	-0.60	0.00	-4.99	0.00	4.99	728.14	364.07	490.58	242.28	9.05	-0.67	0.027
141.00	-3.81	-0.50	0.00	-4.39	0.00	4.39	721.90	360.95	481.67	237.88	9.19	-0.68	0.024
145.00	-3.57	-0.47	0.00	-2.37	0.00	2.37	694.03	347.02	445.00	219.77	9.76	-0.69	0.016
150.00	0.00	-0.43	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	10.49	-0.69	0.000

### Equivalent Modal Forces Analysis

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period ( $S_s$ ):	0.18
Spectral Response Acceleration at 1.0 Second Period ( $S_1$ ):	0.06
Importance Factor ( $I_E$ ):	1.00
Site Coefficient $F_a$ :	1.60
Site Coefficient $F_v$ :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.19
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.10
Period Based on Rayleigh Method (sec):	3.09
Redundancy Factor ( $p$ ):	1.30

Load Case (1.2 + 0.2Sds) \* DL + E EMAM      Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
47	147.50	281	1.828	1.667	1.025	0.321	78	348
46	143.00	231	1.718	1.191	0.842	0.255	51	287
45	140.50	59	1.658	0.970	0.752	0.221	11	73
44	139.00	119	1.623	0.851	0.702	0.201	21	148
43	136.50	190	1.565	0.674	0.624	0.170	28	236
42	132.50	324	1.475	0.441	0.513	0.125	35	401
41	129.00	133	1.398	0.280	0.430	0.090	10	164
40	126.50	222	1.344	0.186	0.377	0.067	13	275
39	122.50	377	1.261	0.069	0.302	0.034	11	467
38	119.50	76	1.200	0.004	0.254	0.013	1	95
37	118.75	40	1.185	-0.009	0.243	0.008	0	50
36	118.25	56	1.175	-0.018	0.236	0.005	0	69
35	116.50	337	1.140	-0.045	0.213	-0.006	-2	417
34	112.53	562	1.064	-0.088	0.165	-0.026	-13	696
33	110.03	7	1.017	-0.105	0.140	-0.037	0	8
32	107.50	700	0.971	-0.116	0.117	-0.046	-28	867
31	103.25	496	0.895	-0.122	0.086	-0.056	-24	615
30	100.75	255	0.853	-0.119	0.070	-0.060	-13	316
29	99.00	343	0.823	-0.116	0.061	-0.061	-18	425
28	96.50	528	0.782	-0.108	0.049	-0.062	-28	653
27	93.05	692	0.727	-0.095	0.035	-0.059	-35	857
26	90.55	196	0.689	-0.083	0.028	-0.054	-9	243
25	87.50	899	0.643	-0.068	0.020	-0.046	-36	1,113
24	82.50	909	0.572	-0.043	0.012	-0.027	-21	1,126
23	77.50	920	0.505	-0.018	0.007	-0.005	-4	1,139
22	74.28	268	0.463	-0.003	0.006	0.010	2	332
21	71.80	969	0.433	0.007	0.006	0.020	17	1,200
20	70.03	11	0.412	0.014	0.006	0.027	0	13
19	67.50	1,027	0.383	0.023	0.007	0.035	31	1,271
18	62.50	1,040	0.328	0.039	0.010	0.048	43	1,288
17	57.50	1,053	0.278	0.050	0.014	0.055	50	1,305
16	52.50	1,067	0.232	0.058	0.019	0.058	54	1,321
15	47.50	1,080	0.190	0.064	0.025	0.059	55	1,338
14	42.50	1,094	0.152	0.068	0.030	0.058	55	1,354

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:45 AM

Customer: AT&T MOBILITY

13	38.00	885	0.121	0.070	0.034	0.057	44	1,095
12	35.83	73	0.108	0.071	0.036	0.056	4	91
11	35.33	236	0.105	0.071	0.037	0.056	12	292
10	34.50	353	0.100	0.071	0.037	0.056	17	437
9	32.75	887	0.090	0.071	0.038	0.056	43	1,098
8	31.25	123	0.082	0.072	0.039	0.055	6	153
7	30.50	245	0.078	0.072	0.040	0.055	12	304
6	27.50	1,236	0.064	0.072	0.041	0.054	58	1,530
5	22.50	1,252	0.043	0.070	0.042	0.053	57	1,550
4	17.50	1,268	0.026	0.067	0.040	0.050	55	1,570
3	12.50	1,284	0.013	0.059	0.034	0.046	51	1,590
2	7.50	1,300	0.005	0.044	0.025	0.037	42	1,610
1	2.50	1,307	0.001	0.018	0.010	0.018	21	1,618
Powerwave Allgon 702	150.00	13	1.890	1.980	1.140	0.361	4	16
Kaelus DBCT108F1V92-	150.00	42	1.890	1.980	1.140	0.361	13	52
Powerwave Allgon LGP	150.00	85	1.890	1.980	1.140	0.361	26	105
Raycap DC6-48-60-18-	150.00	40	1.890	1.980	1.140	0.361	13	50
Raycap DC6-48-60-18-	150.00	20	1.890	1.980	1.140	0.361	6	25
Ericsson Radio 8843	150.00	216	1.890	1.980	1.140	0.361	67	267
Ericsson RRUS 4449 B	150.00	213	1.890	1.980	1.140	0.361	67	264
Ericsson RRUS 4478 B	150.00	178	1.890	1.980	1.140	0.361	56	221
Stand Off	150.00	225	1.890	1.980	1.140	0.361	70	279
Ericsson RRUS-32 (77	150.00	231	1.890	1.980	1.140	0.361	72	286
Powerwave Allgon 777	150.00	81	1.890	1.980	1.140	0.361	25	100
CCI OPA-65R-LCUU-H6	150.00	219	1.890	1.980	1.140	0.361	68	271
Kathrein Scala 80010	150.00	586	1.890	1.980	1.140	0.361	183	725
Round Platform w/ Ha	150.00	2,000	1.890	1.980	1.140	0.361	625	2,477
Round T-Arm	141.00	750	1.670	1.012	0.769	0.227	148	929
RFS IBC1900HG-2A	138.00	66	1.600	0.778	0.670	0.189	11	82
RFS IBC1900BB-1	138.00	66	1.600	0.778	0.670	0.189	11	82
Alcatel-Lucent 4X40W	138.00	178	1.600	0.778	0.670	0.189	29	221
Alcatel-Lucent 800 M	138.00	185	1.600	0.778	0.670	0.189	30	230
Alcatel-Lucent TD-RR	138.00	210	1.600	0.778	0.670	0.189	34	260
RFS APXVTM14-C-I20	138.00	159	1.600	0.778	0.670	0.189	26	197
RFS APXV9ERR18-C-A20	138.00	124	1.600	0.778	0.670	0.189	20	154
RFS APXVSP18-C-A20	138.00	57	1.600	0.778	0.670	0.189	9	71
Ericsson AIR 21, 1.3	128.00	271	1.376	0.240	0.408	0.081	19	336
Ericsson AIR32 B66Aa	128.00	397	1.376	0.240	0.408	0.081	28	491
Round T-Arm	128.00	750	1.376	0.240	0.408	0.081	52	929
Andrew LNX-6515DS-A1	128.00	149	1.376	0.240	0.408	0.081	10	185
Generic 12" x 12" Ju	119.00	10	1.190	-0.005	0.247	0.010	0	12
DragonWave Horizon C	118.00	32	1.170	-0.022	0.233	0.003	0	39
DragonWave A-ANT-23G	118.00	15	1.170	-0.022	0.233	0.003	0	19
NextNet BTS-2500	118.00	105	1.170	-0.022	0.233	0.003	0	130
Argus LLPX310R	118.00	86	1.170	-0.022	0.233	0.003	0	106
DragonWave A-ANT-23G	118.00	25	1.170	-0.022	0.233	0.003	0	30
Collar	115.00	560	1.111	-0.064	0.194	-0.014	-7	694
Alcatel-Lucent RRH2X	98.00	138	0.807	-0.113	0.056	-0.062	-7	171
Alcatel-Lucent RRH2x	98.00	170	0.807	-0.113	0.056	-0.062	-9	211
Alcatel-Lucent RRH2X	98.00	165	0.807	-0.113	0.056	-0.062	-9	204
RFS DB-T1-6Z-8AB-OZ	98.00	88	0.807	-0.113	0.056	-0.062	-5	109
Andrew SBNHH-1D65B	98.00	608	0.807	-0.113	0.056	-0.062	-33	753
Generic Flat Light S	98.00	1,500	0.807	-0.113	0.056	-0.062	-80	1,858
Stand-off	36.00	50	0.109	0.071	0.036	0.057	2	62
Generic GPS	35.00	10	0.103	0.071	0.037	0.056	0	12
Generic GPS	34.00	10	0.097	0.071	0.038	0.056	0	12
Stand-off	31.00	50	0.081	0.072	0.040	0.055	2	62
		38,142	91.623	41.668	33.685	8.962	2,340	47,236

Load Case (0.9 - 0.2Sds) \* DL + E EMAM

Seismic (Reduced DL) Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
47	147.50	281	1.828	1.667	1.025	0.321	78	242
46	143.00	231	1.718	1.191	0.842	0.255	51	199
45	140.50	59	1.658	0.970	0.752	0.221	11	51
44	139.00	119	1.623	0.851	0.702	0.201	21	103
43	136.50	190	1.565	0.674	0.624	0.170	28	164
42	132.50	324	1.475	0.441	0.513	0.125	35	279
41	129.00	133	1.398	0.280	0.430	0.090	10	114
40	126.50	222	1.344	0.186	0.377	0.067	13	192
39	122.50	377	1.261	0.069	0.302	0.034	11	325
38	119.50	76	1.200	0.004	0.254	0.013	1	66
37	118.75	40	1.185	-0.009	0.243	0.008	0	35
36	118.25	56	1.175	-0.018	0.236	0.005	0	48
35	116.50	337	1.140	-0.045	0.213	-0.006	-2	290
34	112.53	562	1.064	-0.088	0.165	-0.026	-13	484
33	110.03	7	1.017	-0.105	0.140	-0.037	0	6
32	107.50	700	0.971	-0.116	0.117	-0.046	-28	603
31	103.25	496	0.895	-0.122	0.086	-0.056	-24	428
30	100.75	255	0.853	-0.119	0.070	-0.060	-13	220
29	99.00	343	0.823	-0.116	0.061	-0.061	-18	296
28	96.50	528	0.782	-0.108	0.049	-0.062	-28	455
27	93.05	692	0.727	-0.095	0.035	-0.059	-35	596
26	90.55	196	0.689	-0.083	0.028	-0.054	-9	169
25	87.50	899	0.643	-0.068	0.020	-0.046	-36	774
24	82.50	909	0.572	-0.043	0.012	-0.027	-21	784
23	77.50	920	0.505	-0.018	0.007	-0.005	-4	793
22	74.28	268	0.463	-0.003	0.006	0.010	2	231
21	71.80	969	0.433	0.007	0.006	0.020	17	835
20	70.03	11	0.412	0.014	0.006	0.027	0	9
19	67.50	1,027	0.383	0.023	0.007	0.035	31	885
18	62.50	1,040	0.328	0.039	0.010	0.048	43	896
17	57.50	1,053	0.278	0.050	0.014	0.055	50	908
16	52.50	1,067	0.232	0.058	0.019	0.058	54	919
15	47.50	1,080	0.190	0.064	0.025	0.059	55	931
14	42.50	1,094	0.152	0.068	0.030	0.058	55	942
13	38.00	885	0.121	0.070	0.034	0.057	44	762
12	35.83	73	0.108	0.071	0.036	0.056	4	63
11	35.33	236	0.105	0.071	0.037	0.056	12	203
10	34.50	353	0.100	0.071	0.037	0.056	17	304
9	32.75	887	0.090	0.071	0.038	0.056	43	764
8	31.25	123	0.082	0.072	0.039	0.055	6	106
7	30.50	245	0.078	0.072	0.040	0.055	12	211
6	27.50	1,236	0.064	0.072	0.041	0.054	58	1,065
5	22.50	1,252	0.043	0.070	0.042	0.053	57	1,078
4	17.50	1,268	0.026	0.067	0.040	0.050	55	1,092
3	12.50	1,284	0.013	0.059	0.034	0.046	51	1,106
2	7.50	1,300	0.005	0.044	0.025	0.037	42	1,120
1	2.50	1,307	0.001	0.018	0.010	0.018	21	1,126
Powerwave Allgon 702	150.00	13	1.890	1.980	1.140	0.361	4	11
Kaelus DBCT108F1V92-	150.00	42	1.890	1.980	1.140	0.361	13	36
Powerwave Allgon LGP	150.00	85	1.890	1.980	1.140	0.361	26	73
Raycap DC6-48-60-18-	150.00	40	1.890	1.980	1.140	0.361	13	34
Raycap DC6-48-60-18-	150.00	20	1.890	1.980	1.140	0.361	6	17
Ericsson Radio 8843	150.00	216	1.890	1.980	1.140	0.361	67	186
Ericsson RRUS 4449 B	150.00	213	1.890	1.980	1.140	0.361	67	184
Ericsson RRUS 4478 B	150.00	178	1.890	1.980	1.140	0.361	56	154
Stand Off	150.00	225	1.890	1.980	1.140	0.361	70	194

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number:OAA745293\_C3\_03

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Ericsson RRUS-32 (77	150.00	231	1.890	1.980	1.140	0.361	72	199
Powerwave Allgon 777	150.00	81	1.890	1.980	1.140	0.361	25	70
CCI OPA-65R-LCUU-H6	150.00	219	1.890	1.980	1.140	0.361	68	189
Kathrein Scala 80010	150.00	586	1.890	1.980	1.140	0.361	183	505
Round Platform w/ Ha	150.00	2,000	1.890	1.980	1.140	0.361	625	1,723
Round T-Arm	141.00	750	1.670	1.012	0.769	0.227	148	646
RFS IBC1900HG-2A	138.00	66	1.600	0.778	0.670	0.189	11	57
RFS IBC1900BB-1	138.00	66	1.600	0.778	0.670	0.189	11	57
Alcatel-Lucent 4X40W	138.00	178	1.600	0.778	0.670	0.189	29	154
Alcatel-Lucent 800 M	138.00	185	1.600	0.778	0.670	0.189	30	160
Alcatel-Lucent TD-RR	138.00	210	1.600	0.778	0.670	0.189	34	181
RFS APXVTM14-C-I20	138.00	159	1.600	0.778	0.670	0.189	26	137
RFS APXV9ERR18-C-A20	138.00	124	1.600	0.778	0.670	0.189	20	107
RFS APXVSPP18-C-A20	138.00	57	1.600	0.778	0.670	0.189	9	49
Ericsson AIR 21, 1.3	128.00	271	1.376	0.240	0.408	0.081	19	234
Ericsson AIR32 B66Aa	128.00	397	1.376	0.240	0.408	0.081	28	342
Round T-Arm	128.00	750	1.376	0.240	0.408	0.081	52	646
Andrew LNX-6515DS-A1	128.00	149	1.376	0.240	0.408	0.081	10	129
Generic 12" x 12" Ju	119.00	10	1.190	-0.005	0.247	0.010	0	9
DragonWave Horizon C	118.00	32	1.170	-0.022	0.233	0.003	0	27
DragonWave A-ANT-23G	118.00	15	1.170	-0.022	0.233	0.003	0	13
NextNet BTS-2500	118.00	105	1.170	-0.022	0.233	0.003	0	90
Argus LLPX310R	118.00	86	1.170	-0.022	0.233	0.003	0	74
DragonWave A-ANT-23G	118.00	25	1.170	-0.022	0.233	0.003	0	21
Collar	115.00	560	1.111	-0.064	0.194	-0.014	-7	482
Alcatel-Lucent RRH2X	98.00	138	0.807	-0.113	0.056	-0.062	-7	119
Alcatel-Lucent RRH2x	98.00	170	0.807	-0.113	0.056	-0.062	-9	147
Alcatel-Lucent RRH2X	98.00	165	0.807	-0.113	0.056	-0.062	-9	142
RFS DB-T1-6Z-8AB-0Z	98.00	88	0.807	-0.113	0.056	-0.062	-5	76
Andrew SBNHH-1D65B	98.00	608	0.807	-0.113	0.056	-0.062	-33	524
Generic Flat Light S	98.00	1,500	0.807	-0.113	0.056	-0.062	-80	1,292
Stand-off	36.00	50	0.109	0.071	0.036	0.057	2	43
Generic GPS	35.00	10	0.103	0.071	0.037	0.056	0	9
Generic GPS	34.00	10	0.097	0.071	0.038	0.056	0	9
Stand-off	31.00	50	0.081	0.072	0.040	0.055	2	43
		38,142	91.623	41.668	33.685	8.962	2,340	32,863



Load Case (1.2 + 0.2Sds) \* DL + E EMAM Seismic Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-45.62	-2.33	0.00	-303.79	0.00	303.79	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.088
5.00	-44.01	-2.31	0.00	-292.13	0.00	292.13	3,113.28	1,556.64	4,641.42	2,292.22	0.02	-0.03	0.087
10.00	-42.41	-2.29	0.00	-280.56	0.00	280.56	3,069.45	1,534.72	4,476.09	2,210.57	0.07	-0.07	0.085
15.00	-40.84	-2.25	0.00	-269.12	0.00	269.12	3,024.57	1,512.28	4,312.14	2,129.61	0.16	-0.10	0.084
20.00	-39.29	-2.22	0.00	-257.86	0.00	257.86	2,978.65	1,489.33	4,149.68	2,049.37	0.28	-0.14	0.082
25.00	-37.76	-2.18	0.00	-246.77	0.00	246.77	2,931.70	1,465.85	3,988.78	1,969.91	0.44	-0.17	0.081
30.00	-37.46	-2.18	0.00	-235.88	0.00	235.88	2,873.79	1,436.89	3,816.40	1,884.77	0.64	-0.21	0.080
31.00	-37.24	-2.17	0.00	-233.70	0.00	233.70	2,859.85	1,429.93	3,779.26	1,866.44	0.69	-0.21	0.080
31.50	-36.14	-2.13	0.00	-232.60	0.00	232.60	2,852.84	1,426.42	3,760.64	1,857.24	0.71	-0.22	0.079
34.00	-35.69	-2.12	0.00	-227.28	0.00	227.28	2,818.05	1,409.02	3,668.95	1,811.96	0.83	-0.24	0.078
35.00	-35.39	-2.11	0.00	-225.15	0.00	225.15	2,804.11	1,402.06	3,632.54	1,793.98	0.88	-0.24	0.078
35.67	-35.30	-2.11	0.00	-223.74	0.00	223.74	2,247.39	1,123.70	2,971.54	1,467.53	0.91	-0.25	0.089
36.00	-34.14	-2.07	0.00	-223.04	0.00	223.04	2,245.17	1,122.59	2,963.78	1,463.70	0.93	-0.25	0.089
40.00	-32.79	-2.03	0.00	-214.76	0.00	214.76	2,217.94	1,108.97	2,870.05	1,417.41	1.15	-0.28	0.087
45.00	-31.45	-1.99	0.00	-204.62	0.00	204.62	2,182.97	1,091.48	2,753.70	1,359.95	1.47	-0.32	0.085
50.00	-30.12	-1.95	0.00	-194.68	0.00	194.68	2,146.96	1,073.48	2,638.35	1,302.98	1.82	-0.36	0.083
55.00	-28.82	-1.91	0.00	-184.95	0.00	184.95	2,109.91	1,054.96	2,524.10	1,246.56	2.22	-0.40	0.081
60.00	-27.53	-1.88	0.00	-175.41	0.00	175.41	2,071.82	1,035.91	2,411.06	1,190.73	2.65	-0.44	0.078
65.00	-26.26	-1.85	0.00	-166.03	0.00	166.03	2,032.70	1,016.35	2,299.33	1,135.55	3.13	-0.48	0.076
70.00	-26.24	-1.86	0.00	-156.77	0.00	156.77	1,981.31	990.65	2,176.68	1,074.98	3.66	-0.52	0.075
70.05	-25.04	-1.84	0.00	-156.67	0.00	156.67	1,980.69	990.35	2,175.31	1,074.30	3.66	-0.52	0.074
73.55	-24.71	-1.84	0.00	-150.23	0.00	150.23	1,473.36	736.68	1,622.77	801.43	4.05	-0.55	0.085
75.00	-23.57	-1.85	0.00	-147.56	0.00	147.56	1,465.95	732.98	1,600.80	790.57	4.22	-0.56	0.084
80.00	-22.44	-1.87	0.00	-138.33	0.00	138.33	1,439.68	719.84	1,525.22	753.25	4.83	-0.60	0.080
85.00	-21.33	-1.91	0.00	-128.96	0.00	128.96	1,412.37	706.19	1,450.29	716.24	5.48	-0.64	0.077
90.00	-21.08	-1.93	0.00	-119.39	0.00	119.39	1,384.02	692.01	1,376.10	679.61	6.18	-0.69	0.073
91.10	-20.22	-1.96	0.00	-117.26	0.00	117.26	1,377.65	688.82	1,359.89	671.60	6.34	-0.70	0.072
91.10	-20.22	-1.96	0.00	-117.26	0.00	117.26	1,377.65	688.82	1,359.89	671.60	6.34	-0.70	0.072
95.00	-19.57	-1.99	0.00	-109.61	0.00	109.61	1,354.64	677.32	1,302.77	643.39	6.92	-0.73	0.069
98.00	-15.84	-2.11	0.00	-103.64	0.00	103.64	1,336.51	668.25	1,259.21	621.88	7.39	-0.75	0.065
100.00	-15.52	-2.12	0.00	-99.42	0.00	99.42	1,324.21	662.11	1,230.38	607.64	7.71	-0.77	0.063
101.50	-14.90	-2.14	0.00	-96.23	0.00	96.23	1,314.88	657.44	1,208.86	597.01	7.95	-0.78	0.061
101.50	-14.90	-2.14	0.00	-96.23	0.00	96.23	1,314.88	657.44	1,208.86	597.01	7.95	-0.78	0.100
105.00	-14.04	-2.17	0.00	-88.73	0.00	88.73	1,293.27	646.64	1,159.51	572.64	8.54	-0.81	0.095
110.00	-14.03	-2.18	0.00	-77.87	0.00	77.87	1,246.82	623.41	1,077.26	532.02	9.42	-0.87	0.089
110.00	-14.03	-2.18	0.00	-77.87	0.00	77.87	1,246.82	623.41	1,077.26	532.02	9.42	-0.87	0.099
110.05	-13.33	-2.19	0.00	-77.75	0.00	77.75	1,246.32	623.16	1,076.40	531.59	9.43	-0.88	0.099
110.05	-13.33	-2.19	0.00	-77.75	0.00	77.75	852.93	426.46	741.03	365.97	9.43	-0.88	0.129
115.00	-12.22	-2.19	0.00	-66.92	0.00	66.92	834.88	417.44	698.45	344.94	10.38	-0.94	0.116
118.00	-11.82	-2.19	0.00	-60.35	0.00	60.35	823.44	411.72	672.79	332.27	10.98	-0.99	0.107
118.50	-11.77	-2.19	0.00	-59.25	0.00	59.25	821.50	410.75	668.53	330.16	11.09	-1.00	0.106
118.50	-11.77	-2.19	0.00	-59.25	0.00	59.25	821.50	410.75	668.53	330.16	11.09	-1.00	0.194
119.00	-11.66	-2.19	0.00	-58.15	0.00	58.15	819.55	409.77	664.27	328.06	11.19	-1.00	0.192
120.00	-11.19	-2.19	0.00	-55.96	0.00	55.96	815.61	407.80	655.76	323.86	11.41	-1.03	0.187
125.00	-10.92	-2.19	0.00	-45.02	0.00	45.02	795.30	397.65	613.53	303.00	12.56	-1.16	0.162
128.00	-8.81	-2.03	0.00	-38.46	0.00	38.46	782.61	391.31	588.45	290.61	13.31	-1.23	0.144
130.00	-8.41	-2.00	0.00	-34.39	0.00	34.39	773.95	386.97	571.85	282.42	13.83	-1.27	0.133
135.00	-8.17	-1.98	0.00	-24.40	0.00	24.40	751.56	375.78	530.84	262.16	15.22	-1.37	0.104
138.00	-6.73	-1.75	0.00	-18.47	0.00	18.47	737.63	368.82	506.58	250.18	16.09	-1.41	0.083
140.00	-6.66	-1.74	0.00	-14.96	0.00	14.96	728.14	364.07	490.58	242.28	16.69	-1.44	0.071
141.00	-5.45	-1.52	0.00	-13.22	0.00	13.22	721.90	360.95	481.67	237.88	16.99	-1.45	0.063
145.00	-5.10	-1.43	0.00	-7.16	0.00	7.16	694.03	347.02	445.00	219.77	18.22	-1.49	0.040
150.00	0.00	-1.30	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	19.79	-1.50	0.000

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Site Number: 302473

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:45 AM

Customer: AT&T MOBILITY

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

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-31.74	-2.33	0.00	-295.09	0.00	295.09	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.083
5.00	-30.62	-2.30	0.00	-283.45	0.00	283.45	3,113.28	1,556.64	4,641.42	2,292.22	0.02	-0.03	0.082
10.00	-29.51	-2.27	0.00	-271.94	0.00	271.94	3,069.45	1,534.72	4,476.09	2,210.57	0.07	-0.06	0.080
15.00	-28.42	-2.23	0.00	-260.61	0.00	260.61	3,024.57	1,512.28	4,312.14	2,129.61	0.15	-0.10	0.079
20.00	-27.34	-2.18	0.00	-249.48	0.00	249.48	2,978.65	1,489.33	4,149.68	2,049.37	0.27	-0.13	0.077
25.00	-26.27	-2.14	0.00	-238.56	0.00	238.56	2,931.70	1,465.85	3,988.78	1,969.91	0.43	-0.17	0.076
30.00	-26.06	-2.13	0.00	-227.87	0.00	227.87	2,873.79	1,436.89	3,816.40	1,884.77	0.62	-0.20	0.075
31.00	-25.91	-2.13	0.00	-225.74	0.00	225.74	2,859.85	1,429.93	3,779.26	1,866.44	0.66	-0.21	0.075
31.50	-25.14	-2.09	0.00	-224.67	0.00	224.67	2,852.84	1,426.42	3,760.64	1,857.24	0.69	-0.21	0.074
34.00	-24.83	-2.07	0.00	-219.45	0.00	219.45	2,818.05	1,409.02	3,668.95	1,811.96	0.80	-0.23	0.073
35.00	-24.62	-2.06	0.00	-217.38	0.00	217.38	2,804.11	1,402.06	3,632.54	1,793.98	0.85	-0.23	0.073
35.67	-24.56	-2.06	0.00	-216.00	0.00	216.00	2,247.39	1,123.70	2,971.54	1,467.53	0.88	-0.24	0.084
36.00	-23.75	-2.02	0.00	-215.32	0.00	215.32	2,245.17	1,122.59	2,963.78	1,463.70	0.90	-0.24	0.083
40.00	-22.81	-1.97	0.00	-207.24	0.00	207.24	2,217.94	1,108.97	2,870.05	1,417.41	1.12	-0.27	0.082
45.00	-21.88	-1.93	0.00	-197.38	0.00	197.38	2,182.97	1,091.48	2,753.70	1,359.95	1.42	-0.31	0.080
50.00	-20.96	-1.88	0.00	-187.75	0.00	187.75	2,146.96	1,073.48	2,638.35	1,302.98	1.76	-0.35	0.078
55.00	-20.05	-1.84	0.00	-178.34	0.00	178.34	2,109.91	1,054.96	2,524.10	1,246.56	2.15	-0.38	0.076
60.00	-19.15	-1.80	0.00	-169.14	0.00	169.14	2,071.82	1,035.91	2,411.06	1,190.73	2.57	-0.42	0.074
65.00	-18.26	-1.78	0.00	-160.12	0.00	160.12	2,032.70	1,016.35	2,299.33	1,135.55	3.03	-0.46	0.071
70.00	-18.25	-1.78	0.00	-151.24	0.00	151.24	1,981.31	990.65	2,176.68	1,074.98	3.54	-0.50	0.070
70.05	-17.42	-1.76	0.00	-151.14	0.00	151.14	1,980.69	990.35	2,175.31	1,074.30	3.54	-0.50	0.070
73.55	-17.19	-1.77	0.00	-144.97	0.00	144.97	1,473.36	736.68	1,622.77	801.43	3.92	-0.53	0.080
75.00	-16.39	-1.77	0.00	-142.41	0.00	142.41	1,465.95	732.98	1,600.80	790.57	4.08	-0.54	0.078
80.00	-15.61	-1.79	0.00	-133.57	0.00	133.57	1,439.68	719.84	1,525.22	753.25	4.67	-0.58	0.075
85.00	-14.83	-1.83	0.00	-124.60	0.00	124.60	1,412.37	706.19	1,450.29	716.24	5.30	-0.62	0.072
90.00	-14.66	-1.85	0.00	-115.43	0.00	115.43	1,384.02	692.01	1,376.10	679.61	5.97	-0.66	0.069
91.10	-14.07	-1.88	0.00	-113.40	0.00	113.40	1,377.65	688.82	1,359.89	671.60	6.13	-0.67	0.068
91.10	-14.07	-1.88	0.00	-113.40	0.00	113.40	1,377.65	688.82	1,359.89	671.60	6.13	-0.67	0.068
95.00	-13.61	-1.91	0.00	-106.07	0.00	106.07	1,354.64	677.32	1,302.77	643.39	6.69	-0.70	0.065
98.00	-11.01	-2.04	0.00	-100.35	0.00	100.35	1,336.51	668.25	1,259.21	621.88	7.14	-0.73	0.061
100.00	-10.79	-2.05	0.00	-96.27	0.00	96.27	1,324.21	662.11	1,230.38	607.64	7.45	-0.75	0.059
101.50	-10.36	-2.08	0.00	-93.18	0.00	93.18	1,314.88	657.44	1,208.86	597.01	7.69	-0.76	0.058
101.50	-10.36	-2.08	0.00	-93.18	0.00	93.18	1,314.88	657.44	1,208.86	597.01	7.69	-0.76	0.058
105.00	-9.76	-2.10	0.00	-85.92	0.00	85.92	1,293.27	646.64	1,159.51	572.64	8.25	-0.78	0.090
110.00	-9.75	-2.11	0.00	-75.40	0.00	75.40	1,246.82	623.41	1,077.26	532.02	9.11	-0.85	0.084
110.00	-9.75	-2.11	0.00	-75.40	0.00	75.40	1,246.82	623.41	1,077.26	532.02	9.11	-0.85	0.094
110.05	-9.26	-2.12	0.00	-75.29	0.00	75.29	1,246.32	623.16	1,076.40	531.59	9.12	-0.85	0.094
110.05	-9.26	-2.12	0.00	-75.29	0.00	75.29	852.93	426.46	741.03	365.97	9.12	-0.85	0.122
115.00	-8.49	-2.13	0.00	-64.80	0.00	64.80	834.88	417.44	698.45	344.94	10.03	-0.91	0.110
118.00	-8.21	-2.12	0.00	-58.42	0.00	58.42	823.44	411.72	672.79	332.27	10.62	-0.96	0.102
118.50	-8.18	-2.12	0.00	-57.36	0.00	57.36	821.50	410.75	668.53	330.16	10.72	-0.96	0.100
118.50	-8.18	-2.12	0.00	-57.36	0.00	57.36	821.50	410.75	668.53	330.16	10.72	-0.96	0.184
119.00	-8.11	-2.12	0.00	-56.30	0.00	56.30	819.55	409.77	664.27	328.06	10.82	-0.97	0.182
120.00	-7.78	-2.12	0.00	-54.18	0.00	54.18	815.61	407.80	655.76	323.86	11.03	-1.00	0.177
125.00	-7.58	-2.11	0.00	-43.59	0.00	43.59	795.30	397.65	613.53	303.00	12.14	-1.12	0.153
128.00	-6.12	-1.97	0.00	-37.25	0.00	37.25	782.61	391.31	588.45	290.61	12.86	-1.19	0.136
130.00	-5.84	-1.94	0.00	-33.31	0.00	33.31	773.95	386.97	571.85	282.42	13.37	-1.23	0.126
135.00	-5.67	-1.91	0.00	-23.63	0.00	23.63	751.56	375.78	530.84	262.16	14.71	-1.32	0.098
138.00	-4.67	-1.70	0.00	-17.90	0.00	17.90	737.63	368.82	506.58	250.18	15.56	-1.37	0.078
140.00	-4.62	-1.69	0.00	-14.50	0.00	14.50	728.14	364.07	490.58	242.28	16.13	-1.39	0.066
141.00	-3.78	-1.47	0.00	-12.81	0.00	12.81	721.90	360.95	481.67	237.88	16.43	-1.40	0.059
145.00	-3.54	-1.39	0.00	-6.94	0.00	6.94	694.03	347.02	445.00	219.77	17.62	-1.44	0.037
150.00	0.00	-1.30	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	19.14	-1.46	0.000

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: OAA745293\_C3\_03

1/30/2019 11:18:45 AM

Customer: AT&T MOBILITY

Analysis Summary

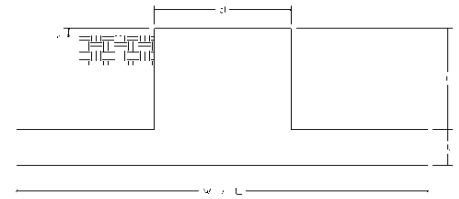
Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	30.41	0.00	45.68	0.00	0.00	3202.42	118.50	0.96
0.9D + 1.6W	30.20	0.00	34.24	0.00	0.00	3123.17	118.50	0.92
1.2D + 1.0Di + 1.0Wi	7.71	0.00	94.85	0.00	0.00	978.50	118.50	0.40
(1.2 + 0.2Sds) * DL + E ELFM	1.49	0.00	45.62	0.00	0.00	193.19	118.50	0.08
(1.2 + 0.2Sds) * DL + E EMAM	2.33	0.00	45.62	0.00	0.00	303.79	118.50	0.19
(0.9 - 0.2Sds) * DL + E ELFM	1.49	0.00	31.74	0.00	0.00	188.19	118.50	0.08
(0.9 - 0.2Sds) * DL + E EMAM	2.33	0.00	31.74	0.00	0.00	295.09	118.50	0.18
1.0D + 1.0W	7.36	0.00	38.14	0.00	0.00	763.82	118.50	0.24

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors			Upper Termination Connectors				Lower Termination Connectors				Max Member		
			VQ/I (lb/in)	Applied (kips)	phiVn (kips)	MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Pu (kip)	phiPn (kip)	Ratio
0.00	91.1	(4) SOL-#20 All Thre	429.1	12.9	16.8	0.0	12.0	0	0	0.0	12.0	0	0	335.6	330.5	1.015
91.1	101.	(4) SOL-#20 All Thre	433.4	13.0	16.8	150.3	12.0	13	12	0.0	12.0	0	0	190.3	330.5	0.576
101.	110.	(4) PL-PL 3" x 1"	294.2	7.1	38.3	102.9	38.3	3	6	121.8	38.3	4	6	123.1	111.5	1.104
110.	118.	(3) PL-PL 1" x 3"	387.0	9.3	38.3	0.0	38.3	0	6	0.0	38.3	0	6	121.7	111.5	1.092

Site Name: E H F R - Prestige Park, CT  
 Site Number: 302473  
 Engineering Number: OAA745293  
 Engineer: Jennifer.Yu  
 Date: 01/30/19  
 Tower Type: MP

Program Last Updated: 5/13/2014



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

Design / Analysis / Mapping:

Compression/Leg:	45.7 k	Concrete Strength ( $f'_c$ ):	4000 psi
Uplift/Leg:	0 k	Pad Tension Steel Depth:	32.0 in
Total Shear:	30.4 k	$\phi_{\text{Shear}}$ :	0.75
Moment:	3202.4 k-ft	$\phi_{\text{Flexure / Tension}}$ :	0.9
Tower + Appurtenance Weight:	45.7 k	$\phi_{\text{Compression}}$ :	0.65
Depth to Base of Foundation (l + t - h):	8 ft	$\beta$ :	0.85
Diameter of Pier (d):	5.5 ft	Bottom Pad Rebar Size #:	10
Length of Pier (l):	5.5 ft	Dead Load Factor:	1.2
Height of Pier above Ground (h):	0.5 ft	# of Bottom Pad Rebar:	36
Width of Pad (W):	18 ft	Pad Bottom Steel Area:	45.72 in <sup>2</sup>
Length of Pad (L):	18 ft	Pad Steel $F_y$ :	60000 psi
Thickness of Pad (t):	3 ft	Top Pad Rebar Size #:	5
Tower Leg Center to Center:	0 ft	# of Top Pad Rebar:	36
Number of Tower Legs:	1 (1 if MP or GT)	Pad Top Steel Area:	11.16 in <sup>2</sup>
Tower Center from Mat Center:	0 ft	Pier Rebar Size #:	11
Depth Below Ground Surface to Water Table:	12 ft	Pier Steel Area (Single Bar):	1.56 in <sup>2</sup>
Unit Weight of Concrete:	150 pcf	# of Pier Rebar:	52
Unit Weight of Soil Above Water Table:	121 pcf	Pier Steel $F_y$ :	60000 psi
Unit Weight of Water:	62.4 pcf	Pier Cage Diameter:	58.0 in
Unit Weight of Soil Below Water Table:	58.6 pcf	Rebar Strain Limit:	0.008
Friction Angle of Uplift:	15 Degrees	Steel Elastic Modulus:	29000 ksi
Ultimate Coefficient of Shear Friction:	0.4	Tie Rebar Size #:	4
Ultimate Compressive Bearing Pressure:	39000 psf	Tie Steel Area (Single Bar):	0.2 in <sup>2</sup>
Ultimate Passive Pressure on Pad Face:	2600 psf	Tie Spacing:	12 in
$\phi_{\text{Soil and Concrete Weight}}$ :	0.9	Tie Steel $F_y$ :	60000 psi
$\phi_{\text{Soil}}$ :	0.75		

**Overturning Moment Usage**

Design OTM:	3460.9 k-ft
OTM Resistance:	3619.9 k-ft
Design OTM / OTM Resistance:	0.96 Result: OK

**Soil Bearing Pressure Usage**

Net Bearing Pressure:	7523 psf
Factored Nominal Bearing Pressure:	29250 psf
Net Bearing Pressure/Factored Nominal Bearing Pressure:	0.26 Result: OK
Load Direction Controlling Design Bearing Pressure:	Diagonal to Pad Edge

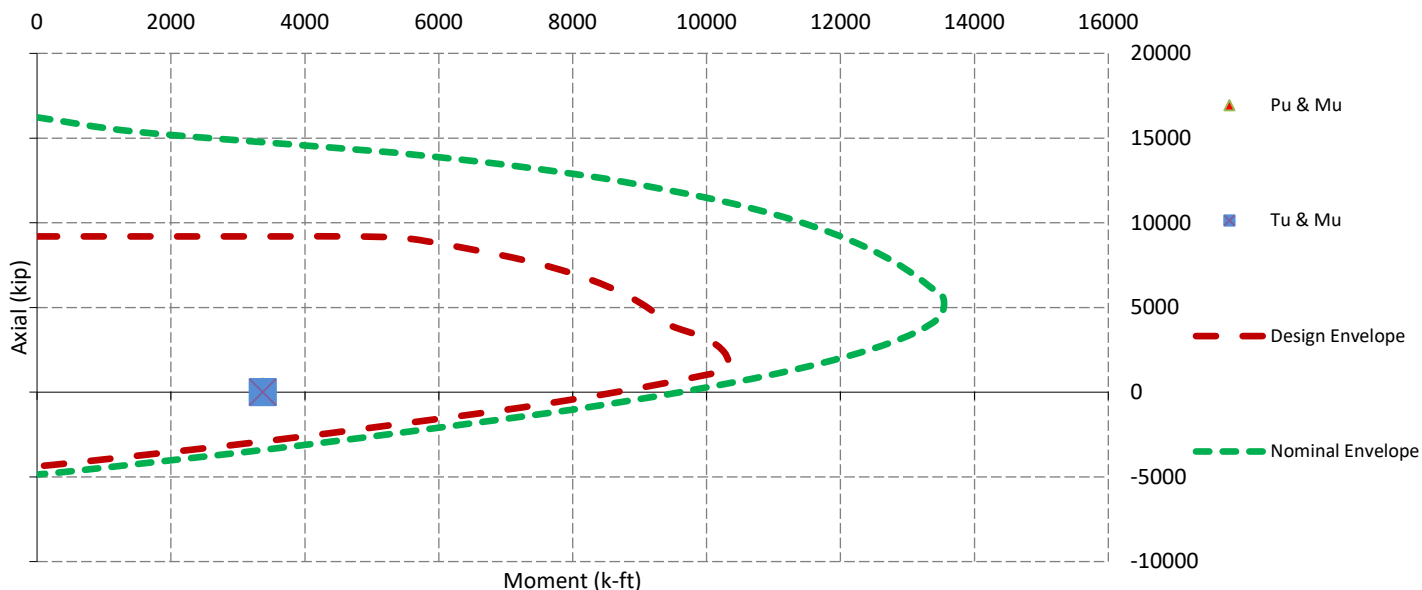
**Sliding Factor of Safety**

Total Factored Sliding Resistance:	210.3 k
Sliding Design / Sliding Resistance:	0.14 Result: OK

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

Factored One Way Shear ( $V_u$ ):	236.6 k
One Way Shear Capacity ( $\phi V_c$ ):	532.7 k - ACI11.3.1.1
$V_u / \phi V_c$ :	0.44 Result: OK
Load Direction Controlling Shear Capacity:	Diagonal to Pad Edge
Lower Steel Pad Factored Moment ( $M_u$ ):	1330.9 k-ft
Lower Steel Pad Moment Capacity ( $\phi M_n$ ):	6257.1 k-ft - ACI10.3
$M_u / \phi M_n$ :	0.21 Result: OK
Load Direction Controlling Flexural Capacity:	Parallel to Pad Edge
Upper Steel Pad Factored Moment ( $M_u$ ):	593.4 k-ft
Upper Steel Pad Moment Capacity ( $\phi M_n$ ):	1587.6 k-ft
$M_u / \phi M_n$ :	0.37 Result: OK
Lower Pad Flexural Reinforcement Ratio:	0.0066 OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Upper Pad Flexural Reinforcement Ratio:	0.0016 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 ( $V_u$ ):	0.0 k
Nominal Punching Shear Capacity ( $\phi_c V_n$ ):	1869.3 k - ACI11.12.2.1
$V_u / \phi V_c$ :	0.00 Result: OK
Factored Moment in Pier ( $M_u$ ):	3369.7 k-ft
Pier Moment Capacity ( $\phi M_n$ ):	10352.3 k-ft
$M_u / \phi M_n$ :	0.33 Result: OK
Factored Shear in Pier ( $V_u$ ):	30.4 k
Pier Shear Capacity ( $\phi V_n$ ):	326.7 k
$V_u / \phi V_c$ :	0.09 Result: OK
Pier Shear Reinforcement Ratio:	0.0006 No Ties Necessary for Shear - ACI11.5.6.1
Factored Tension in Pier ( $T_u$ ):	0.0 k
Pier Tension Capacity ( $\phi T_n$ ):	4380.5 k
$T_u / \phi T_n$ :	0.00 Result: OK
Factored Compression in Pier ( $P_u$ ):	45.7 k
Pier Compression Capacity ( $\phi P_n$ ):	5905.3 k - ACI10.3.6.2
$P_u / \phi P_n$ :	0.01 Result: OK
Pier Compression Reinforcement Ratio:	0.024 OK - Reinforcement Ratio Met - ACI10.9.1 & 10.8.4
$M_u / \phi_B M_n + T_u / \phi_T T_n$ :	0.33 Result: OK

Nominal and Design Moment Capacity and Factored Design Loads





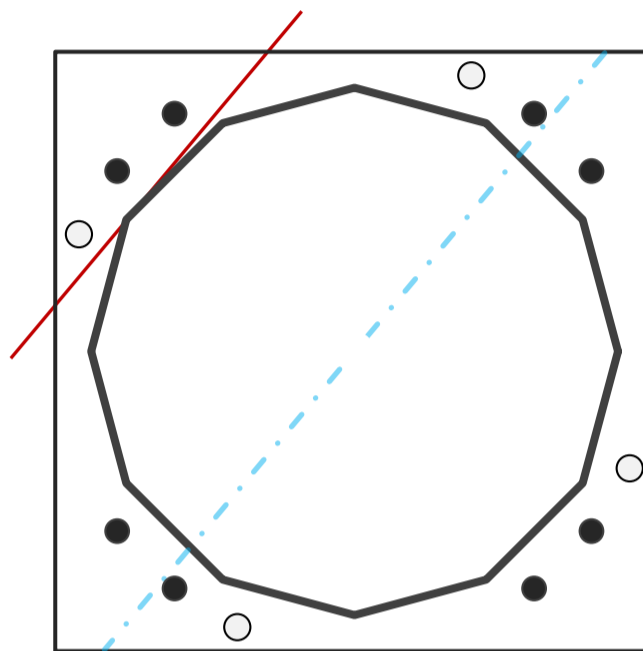
## Base Plate & Anchor Rod Analysis

Pole Dimensions		
Number of Sides	12	-
Diameter	37.36	in
Thickness	0.375	in
Orientation Offset		°

Base Reactions			
Moment, Mu	3202.4	k-ft	
Axial, Pu	45.7	k	
Shear, Vu	30.4	k	
Neutral Axis	50	°	

Report Capacities		
Component	Capacity	Result
Base Plate	72%	Pass
Anchor Rods	103%	Pass
Dwyidag	85%	Pass

Base Plate		
Shape	Square	-
Width	44.25	in
Thickness	2 1/2	in
Grade	Other	-
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	80	ksi
Clip	0	in
Orientation Offset		°
Anchor Rod Detail	c	$\eta=0.55$
Clear Distance	N/A	in
Applied Moment, Mu	1536.4	k
Bending Stress, $\phi Mn$	2127.8	k



Dwyidag Reinforcement		
Quantity	4	-
Bar Size	#20	in
Diameter, $\phi$	2.5	in
Bracket Type	Angle	-
Circle	44.24	in
Orientation Offset	-23	°
Applied Force, Pu	332.2	k
Dwyidag Bar, $\phi Pn$	392.7	k

Original Anchor Rods		
Arrangement	Cluster	-
Quantity	8	-
Diameter, $\phi$	2 1/4	in
Bolt Circle	44	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	6.0	in
Orientation Offset	0	°
Applied Force, Pu	267.0	k
Anchor Rods, $\phi Pn$	259.8	k

# Calculations for Monopole Base Plate & Anchor Rod Analysis

## Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	30.4	1937.3	0.60
Anchor Rod Forces	30.4	1937.3	0.60
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	1265.1	0.40
Stiffener Forces	0.0	0.0	0.00

## Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in <sup>2</sup>	in <sup>2</sup>	in <sup>4</sup>	#	in <sup>4</sup>
Pole	43.0759	3.5897	0.1691		7367.42
Bolt	3.9761	3.2477	0.8393	4.5	6294.24
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	4.9087	4.9087	1.9175		4811.31
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate		
Shape	Square	-
Width, W	44.25	in
Thickness, t	2.5	in
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	80	ksi
Base Plate Chord	23.713	in
Detail Type	c	-
Detail Factor	0.55	-
Clear Distance	N/A	-

Anchor Rods		
Anchor Rod Quantity, N	8	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	44	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	267.0	k
Applied Shear, Vu	0.3	k
Compressive Capacity, φPn	259.8	k
Tensile Capacity, φRnt	1.028	OK
Interaction Capacity	1.030	OK

External Base Plate		
Chord Length AA	24.969	in
Additional AA	0.250	in
Section Modulus, Z	39.405	in <sup>3</sup>
Applied Moment, Mu	1536.4	k-ft
Bending Capacity, φMn	2127.8	k-ft
Capacity, Mu/φMn	0.722	OK

Chord Length AB	23.642	in
Additional AB	0.250	in
Section Modulus, Z	37.332	in <sup>3</sup>
Applied Moment, Mu	1186.3	k-ft
Bending Capacity, φMn	2015.9	k-ft
Capacity, Mu/φMn	0.588	OK

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

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in <sup>3</sup>
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, φMn	0.0	k-ft
Capacity, Mu/φMn		

Dywidag Reinforcement		
Dywidag Quantity, N	4	-
Dywidag Diameter, d	2.5	in
Bolt Circle, BC	44.24	in
Yield Strength, Fy	80	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	332.2	k
Compressive Capacity, φPn	392.7	k
Capacity, Pu/φPn	0.846	OK



<b>Base/Flange Plate</b>	Plate Type	<b>Flange @ 110.0 ft</b>
	Pole Diameter	21.2543 in
	Pole Thickness	0.1875 in
	Plate Diameter	28 in
	Plate Thickness	1 in
	Plate Fy	50 ksi
	Weld Length	0.3125 in
	$\phi_s$ Resistance	183.84 k-in
	Applied	91.79 k-in
<b>Stiffeners</b>	#	<b>12 Show</b>
	Thickness	0.5 in
	Length	3.875 in
	Height	5 in
	Chamfer	1 in
	Offset Angle	0°
	Fy	36 ksi

Code Rev. **G**

Date 1/30/2019  
 Engineer Jennifer.Yu  
 Site # 302473  
 Carrier AT&T MOBILITY

Moment 437.0 k-ft  
 Axial 11.8 k

<b>Bolts</b>	#	<b>12</b>
	Bolt Circle (R)adial / (S)quare	25.75 in R
	Diameter	1 in
	Hole Diameter	1.125 in
	Type	A325
	Fy	92 ksi
	Fu	120 ksi
	$\phi_s$ Resistance	54.52 k
	Applied	66.86 k
	<b>Reinforcement</b>	#
<b>Extra Bolts</b>	#	<b>0</b>

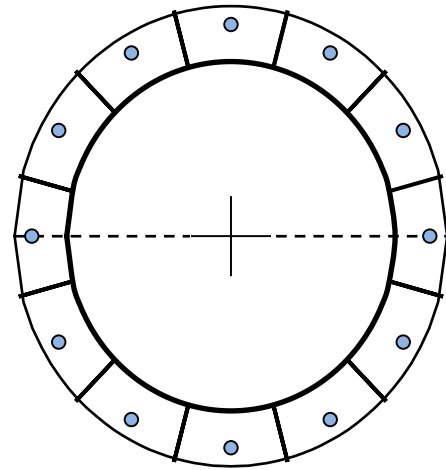


Plate Stress Ratio: **0.50** (Pass)

Bolt Stress Ratio: **1.23** (Fail)



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CORPORATION

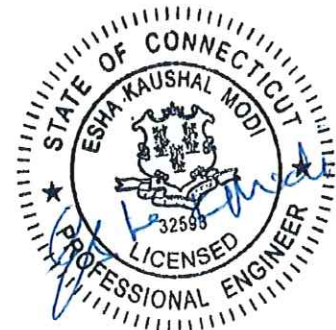
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## Post – Modification Structural Analysis Report

**Structure** : 150 ft Monopole  
**ATC Site Name** : E H F R - Prestige Park, CT  
**ATC Site Number** : 302473  
**Engineering Number** : OAA745293\_C4\_05  
**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  
41.788300,-72.600600  
**County** : Hartford  
**Date** : April 26, 2019  
**Max Usage** : 103%  
**Result** : Pass

Prepared By:  
Jennifer Yu  
Structural Engineer I

Reviewed By:



Authorized by "EOR"  
Apr 29 2019 5:17 PM

COA: PEC.0001553



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## Introduction

The purpose of this report is to summarize results of a post – modification 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, 2002
<b>Foundation Drawing</b>	Southern New England Telephone Job #38904, dated April 20, 1983
<b>Geotechnical Report</b>	GeoTechnologies Project #1-02-1122-EA, dated September 6, 2002
<b>Modifications</b>	SpectraSite Site#CT-0009, dated March 19, 2003 ATC Project #51574133, dated January 17, 2013 ATC Project #63706335, dated October 19, 2015 ATC Project #OAA696438_C6_05, dated July 11, 2017 ATC Project #OAA745293_C6_06, dated April 1, 2019 (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>	97 mph (3-Second Gust, Vasd) / 125 mph (3-Second Gust, Vult)
<b>Basic Wind Speed w/ Ice:</b>	50 mph (3-Second Gust) w/ 1" radial ice concurrent
<b>Code:</b>	ANSI/TIA-222-G / 2015 IBC / 2018 Connecticut State Building Code
<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. If the pending modifications cited in the Supporting Documents table are not completed, the results of this analysis are no longer valid, and AT&T MOBILITY should contact American Tower's Site Manager for further direction on how to proceed.

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**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
153.0	6	Powerwave Allgon LGP21401	Platform with Handrails	(4) 0.78" (19.7mm) 8 AWG 6 (1) 3/8" (0.38"- 9.5mm) RET Control Cable (12) 7/8" Coax	AT&T Mobility
	6	Powerwave Allgon 7020.00 Dual Band RET			
	2	Raycap DC6-48-60-18-8F			
	3	CCI OPA-65R-LCUU-H6			
	3	Powerwave Allgon 7770.00 (27 lbs)			
	3	Ericsson RRUS-32 (77 lbs)			
138.0	3	Alcatel-Lucent 800 MHz RRH w/ Notch Filter	T-Arm	(3) 1 1/4" Hybriflex Cable	Sprint Nextel
	3	RFS IBC1900HG-2A			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	RFS APXVTM14-C-I20			
	2	RFS APXV9ERR18-C-A20			
	1	RFS APXVSP18-C-A20			
	3	RFS IBC1900BB-1			
	3	Alcatel-Lucent 4X40W RRH			
128.0	3	Ericsson AIR 21, 1.3M, B4A B2P (90.4 lbs)	T-Arm	(6) 1 5/8" Coax (1) 1 5/8" Hybriflex (1) 1/2" Coax	Metro PCS Inc
	3	Ericsson AIR32 B66Aa/B2a			
	3	Andrew LNX-6515DS-A1M			
119.0	1	Generic 12" x 12" Junction Box	Collar	(1) 2" conduit (3) 1/2" Coax (6) 5/16" (0.31"- 7.9mm) Coax	Clearwire Corporation
118.0	3	NextNet BTS-2500			
	2	DragonWave A-ANT-23G-2-C			
	3	Argus LLPX310R			
	1	DragonWave A-ANT-23G-1-C			
	3	DragonWave Horizon Compact			
98.0	3	Alcatel-Lucent RRH2X60-1900A-4R	Sector Frame	(2) 1.58" (40.1mm) Hybrid	Verizon Wireless
	3	Alcatel-Lucent RRH2x60 700			
	3	Alcatel-Lucent RRH2X60-AWS Band 4			
	2	RFS DB-T1-6Z-8AB-OZ			
	12	Andrew SBNHH-1D65B			
35.0	1	Generic GPS	Stand-Off	(1) 1/2" Coax	AT&T Mobility
34.0	1	Generic GPS	Stand-Off	(1) 1/2" Coax	Sprint Nextel

**Equipment to be Removed**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
153.0	3	Ericsson RRUS 12 w/ RRUS A2	-	-	AT&T Mobility
	3	Powerwave Allgon 7770.00 (27 lbs)			
	3	Ericsson RRUS 11 (Band 12) (55 lb)			



**Proposed Equipment**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
153.0	1	Raycap DC6-48-60-18-8F	Platform with Handrails	(2) 0.78" (19.7mm) 8 AWG 6 (2) 0.39" (10mm) Fiber Trunk	AT&T Mobility
	3	Ericsson Radio 8843 - B2 + B66A			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 4478 B14			
	3	Kaelus DBCT108F1V92-1			
	6	Kathrein Scala 80010965			

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

Install proposed lines inside the pole shaft.

**Structure Usages**

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	78%	Pass
Shaft	98%	Pass
Base Plate	53%	Pass
Flanges	101%	Pass
Reinforcement	103%	Pass

**Foundations**

Reaction Component	Analysis Reactions	% of Usage
Moment (Kips-Ft)	3,367.3	100%
Axial (Kips)	98.7	28%
Shear (Kips)	32.0	48%

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) (°)
153.0	Kaelus DBCT108F1V92-1	AT&T MOBILITY	0.000	0.000
	Raycap DC6-48-60-18-8F			
	Ericsson Radio 8843 - B2 + B66A			
	Ericsson RRUS 4449 B5, B12			
	Ericsson RRUS 4478 B14			
	Kathrein Scala 80010965			
118.0	DragonWave A-ANT-23G-1-C	CLEARWIRE CORPORATIO	1.921	1.753
	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 performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

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

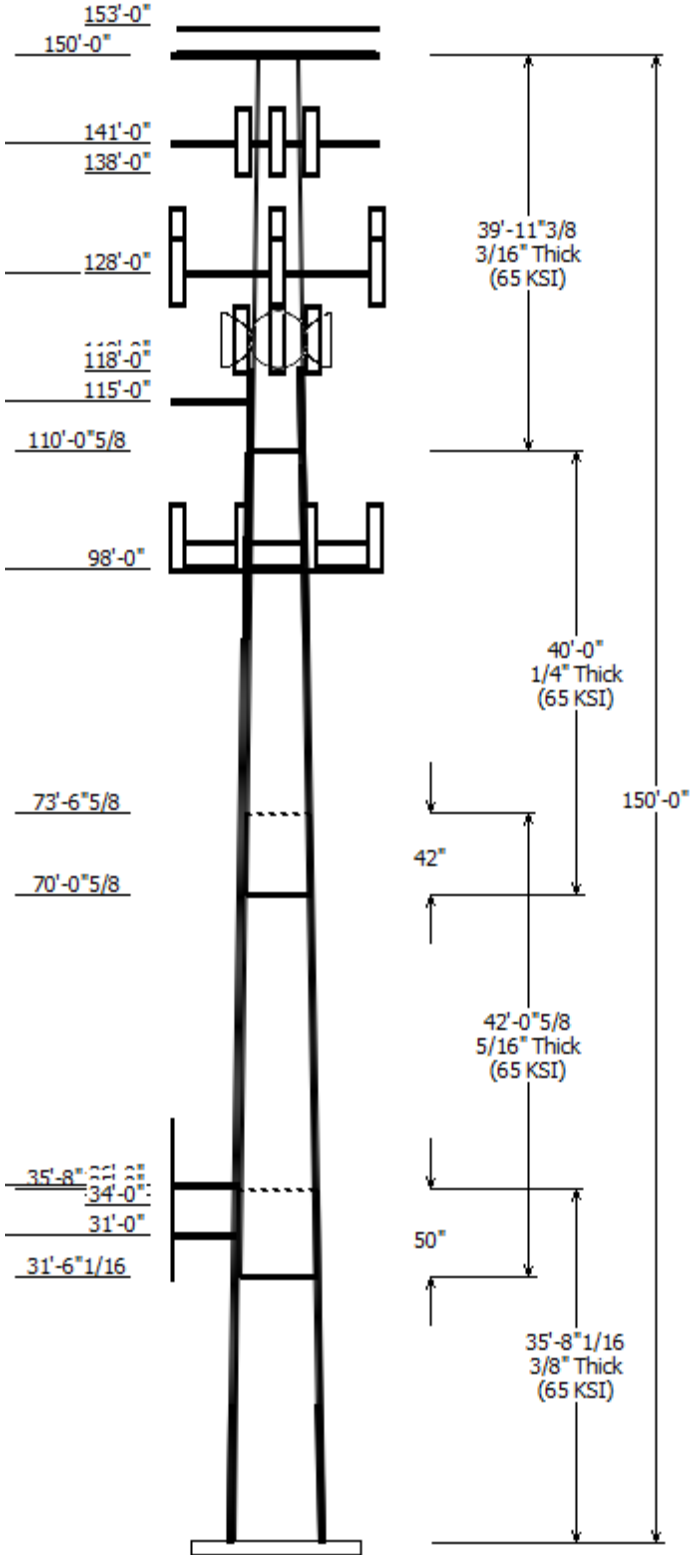
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

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

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

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

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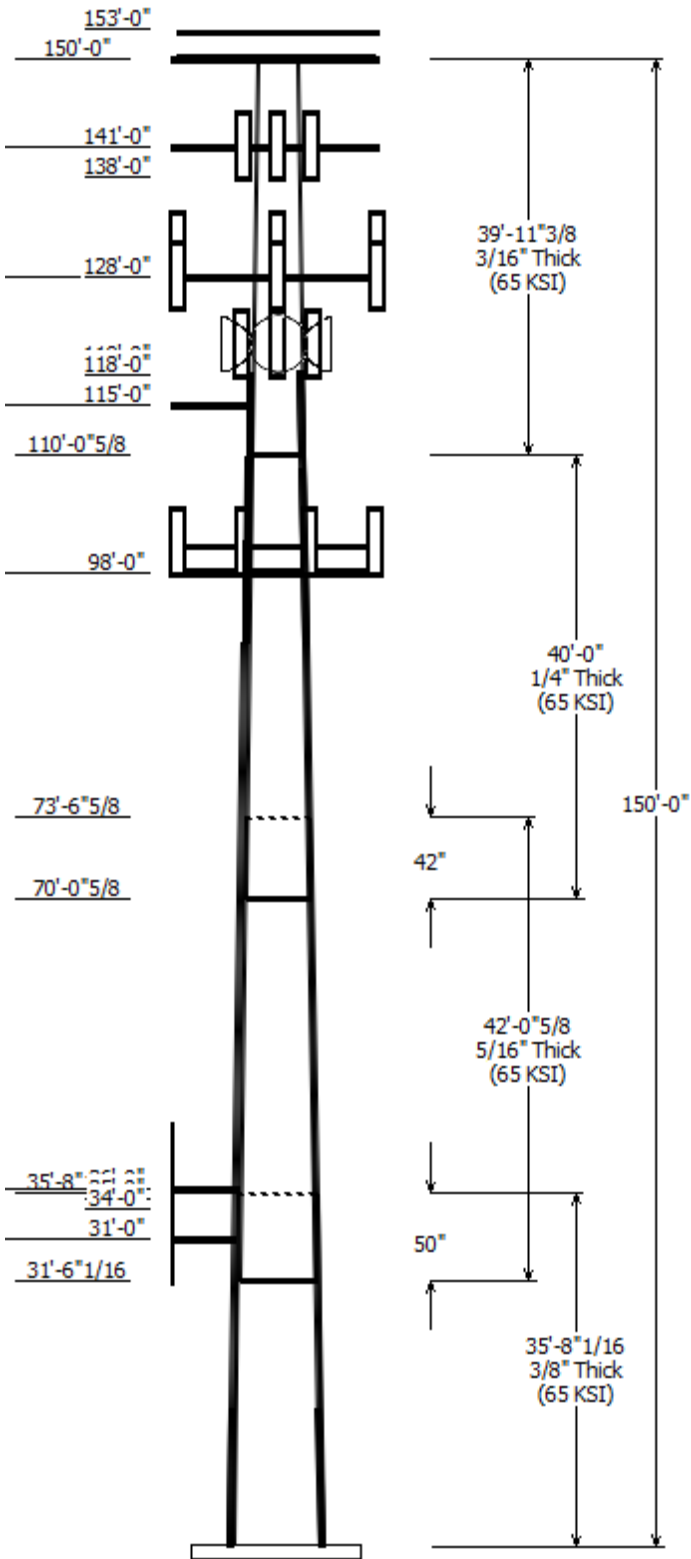
Job Information	
Pole : 302473	Code: ANSI/TIA-222-G
Location : E H F R - Prestige Park, CT	
Description : 150' ITT Meyer Type "B" Monopole	
Client : AT&T MOBILITY	Struct Class : II
Shape : 12 Sides	Exposure : B
Height : 150.00 (ft)	Topo : 1
Base Elev (ft): 0.00	
Taper: 0.15656 (in/ft)	

Sections Properties						
Shaft Section	Length (ft)	Diameter (in)		Joint Type	Overlap Length (in)	Steel Grade
		Across Flats Top	Across Flats Bottom			
1	35.670	31.77	37.36	0.375	0.000	12 Sides 65
2	42.050	26.46	33.05	0.313 Slip Joint	50.000	12 Sides 65
3	40.000	21.25	27.51	0.250 Slip Joint	42.000	12 Sides 65
4	39.947	15.00	21.25	0.188 Butt Joint	0.000	12 Sides 65

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
153.000	153.000	6	Kathrein Scala 80010965
153.000	156.000	3	CCI OPA-65R-LCUU-H6
153.000	156.000	3	Powerwave Allgon 7770.00 (27
153.000	156.000	3	Ericsson RRUS-32 (77 lbs)
153.000	153.000	3	Ericsson RRUS 4478 B14
153.000	153.000	3	Ericsson RRUS 4449 B5, B12
153.000	153.000	3	Ericsson Radio 8843 - B2 + B66
153.000	156.000	1	Raycap DC6-48-60-18-8F
153.000	156.000	2	Raycap DC6-48-60-18-8F
153.000	156.000	6	Powerwave Allgon LGP21401
153.000	153.000	3	Kaelus DBCT108F1V92-1
153.000	153.000	6	Powerwave Allgon 7020.00
150.000	150.000	3	Generic Round Side Arm
150.000	150.000	1	Round Platform w/ Handrails
141.000	141.000	3	Round T-Arm
138.000	142.000	3	RFS IBC1900BB-1
138.000	142.000	3	RFS IBC1900HG-2A
138.000	142.000	2	RFS APXV9ERR18-C-A20
138.000	142.000	1	RFS APXVSP18-C-A20
138.000	142.000	3	RFS APXVTM14-C-I20
138.000	142.000	3	Alcatel-Lucent TD-RRH8x20-25
138.000	142.000	3	Alcatel-Lucent 800 MHz RRH
138.000	142.000	3	Alcatel-Lucent 4X40W RRH
128.000	128.000	3	Round T-Arm
128.000	128.000	3	RFS APXVAARR24_43-U-NA20
128.000	129.000	3	Ericsson AIR32 B66Aa/B2a
128.000	128.000	3	Ericsson AIR 21
128.000	128.000	3	Ericsson Radio 4449 B12,B71
119.000	119.000	1	Generic 12" x 12" Junction Box
118.000	120.000	2	DragonWave A-ANT-23G-2-C
118.000	120.000	3	Argus LLPX310R
118.000	120.000	3	NextNet BTS-2500
118.000	120.000	1	DragonWave A-ANT-23G-1-C
118.000	120.000	3	DragonWave Horizon Compact
115.000	115.000	1	Collar
98.000	98.000	3	Generic Flat Light Sector Fram
98.000	101.000	12	Andrew SBNHH-1D65B
98.000	101.000	2	RFS DB-T1-6Z-8AB-0Z
98.000	101.000	3	Alcatel-Lucent RRH2X60-AWS
98.000	98.000	3	Alcatel-Lucent RRH2x60 700
98.000	101.000	3	Alcatel-Lucent RRH2X60-1900A-
36.000	36.000	1	Stand-off
35.000	32.000	1	Generic GPS
34.000	37.000	1	Generic GPS



31.000 31.000 1 Stand-off



Linear Appurtenance			
Elev (ft)		Description	Exposed To Wind
From	To		
110.0	120.0	Reinforcing Plate	Yes
110.0	120.0	Reinforcing Plate	Yes
110.0	120.0	Reinforcing Plate	Yes
106.0	110.0	Reinforcing Plate	Yes
106.0	110.0	Reinforcing Plate	Yes
106.0	110.0	Reinforcing Plate	Yes
106.0	110.0	Reinforcing Plate	Yes
90.000	120.0	Flat Plate 4 x 1.25	Yes
90.000	120.0	Flat Plate 4 x 1.25	Yes
90.000	120.0	Flat Plate 4 x 1.25	Yes
90.000	120.0	Flat Plate 4 x 1.25	Yes
0.000	118.0	1/2" Coax	No
0.000	118.0	5/16" (0.31")	No
0.000	119.0	2" conduit	No
0.000	22.500	#20 Dywidag Bars	Yes
0.000	22.500	#20 Dywidag Bars	Yes
0.000	22.500	#20 Dywidag Bars	Yes
0.000	22.500	#20 Dywidag Bars	Yes
0.000	34.000	1/2" Coax	Yes
0.000	35.000	1/2" Coax	Yes
0.000	98.000	1.58" (40.1mm)	Yes
0.000	106.0	#20 Dywidag Bars	Yes
0.000	106.0	#20 Dywidag Bars	Yes
0.000	106.0	#20 Dywidag Bars	Yes
0.000	106.0	#20 Dywidag Bars	Yes
0.000	128.0	1 5/8" (1.63")	No
0.000	138.0	1 1/4" Hybriflex	No
0.000	142.0	5/8" Hybriflex	No
0.000	153.0	0.39" (10mm)	No
0.000	153.0	0.78" (19.7mm) 8	No
0.000	153.0	0.78" (19.7mm) 8	No
0.000	153.0	3/8" (0.38")	No
0.000	153.0	7/8" Coax	No
0.000	156.0	1 5/8" Coax	No
0.000	156.0	3" conduit	No

Load Cases	
1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 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	3367.32	31.98	49.20
0.9D + 1.6W	3300.94	31.95	36.88
1.2D + 1.0Di + 1.0Wi	1116.15	9.68	98.73
(1.2 + 0.2Sds) * DL + E ELFM	171.19	1.40	46.45
(1.2 + 0.2Sds) * DL + E EMAM	198.62	1.69	46.45
(0.9 - 0.2Sds) * DL + E ELFM	167.56	1.40	32.32
(0.9 - 0.2Sds) * DL + E EMAM	193.94	1.69	32.32

1.0D + 1.0W

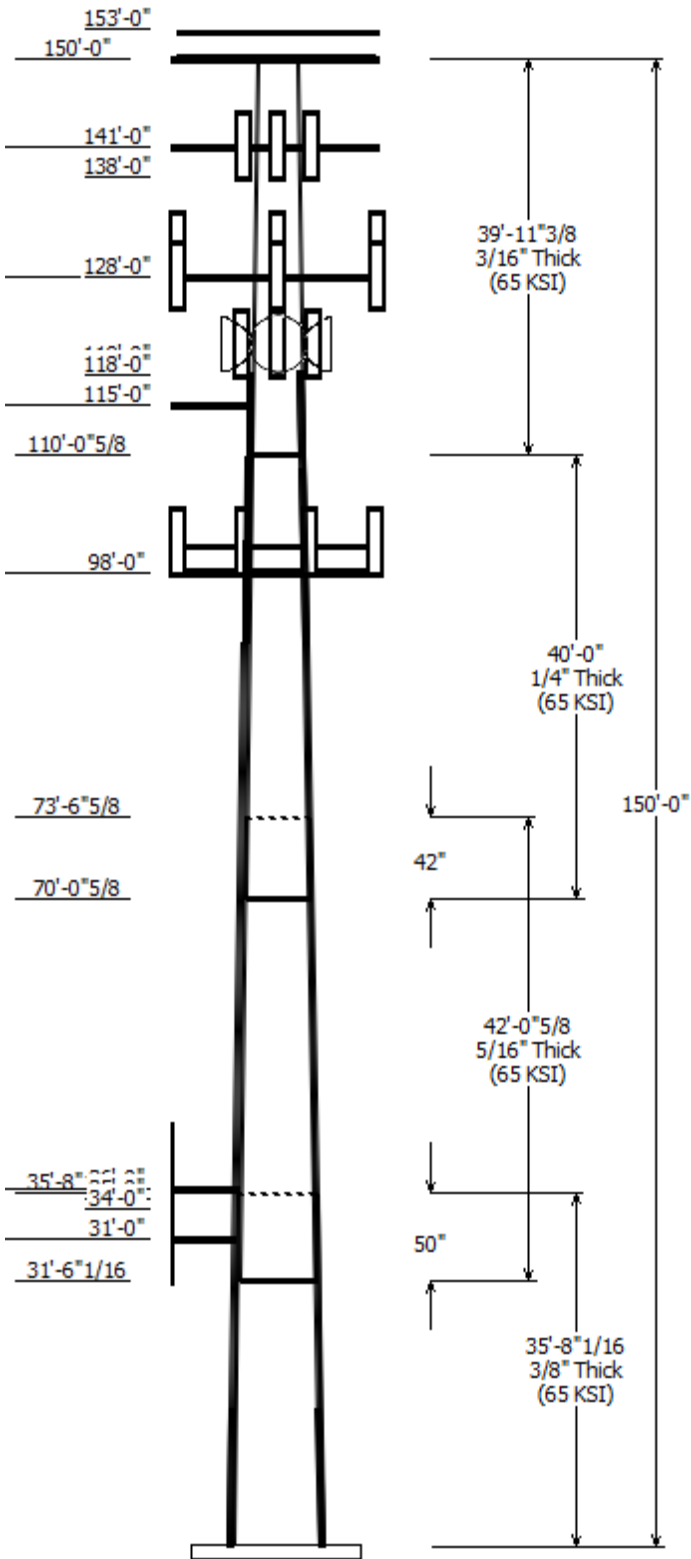
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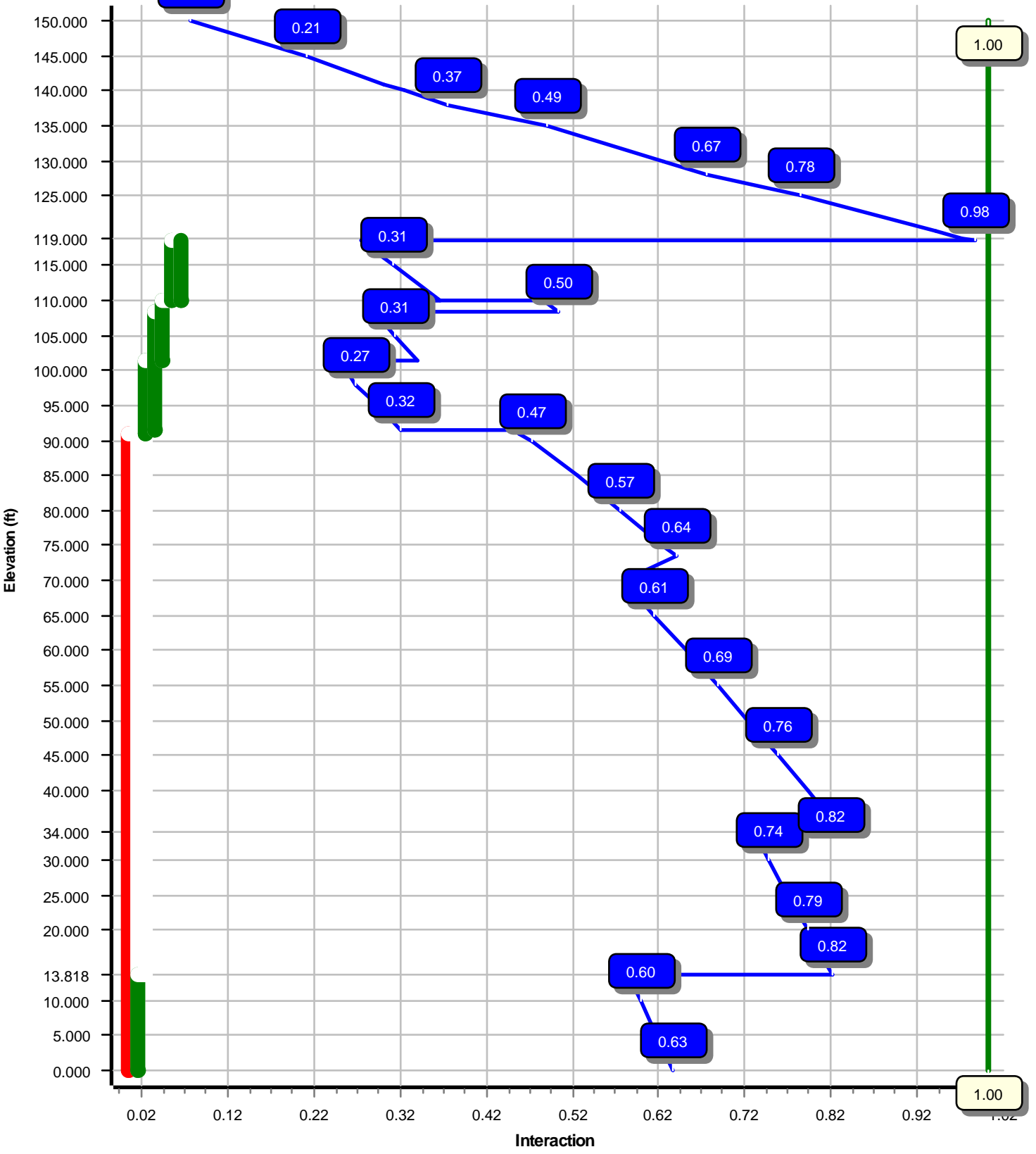
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### Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	118.00	23.056	1.753
1.0D + 1.0W	118.00	23.056	1.753



Load Case : 1.2D + 1.6W  
Max Ratio 98.43% at 118.5 ft



Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

4/26/2019 3:59:07 PM

Customer: METRO PCS INC

Analysis Parameters

Location :	HARTFORD County, CT	Height (ft) :	150
Code :	ANSI/TIA-222-G	Base Diameter (in) :	37.36
Shape :	12 Sides	Top Diameter (in) :	15.00
Pole Type :	Taper	Taper (in/ft) :	0.157
Pole Manufacturer :	ITT Meyer	Rotation (deg) :	0.00

Ice & Wind Parameters

Structure Class:	II	Design Wind Speed Without Ice:	97 mph
Exposure Category:	B	Design Wind Speed With Ice:	50 mph
Topographic Category:	1	Operational Wind Speed:	60 mph
Crest Height:	0 ft	Design Ice Thickness:	1.00 in

Seismic Parameters

Analysis Method:	Equivalent Modal Analysis & Equivalent Lateral Force Methods		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	3.06		
T <sub>L</sub> (sec):	6	p:	1.3
S <sub>s</sub> :	0.180	S <sub>1</sub> :	0.060
F <sub>a</sub> :	1.600	F <sub>v</sub> :	2.400
S <sub>ds</sub> :	0.192	S <sub>d1</sub> :	0.096
		C <sub>s</sub> :	0.030
		C <sub>s</sub> Max:	0.030
		C <sub>s</sub> Min:	0.030

Load Cases

1.2D + 1.6W	97 mph with No Ice
0.9D + 1.6W	97 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice
(1.2 + 0.2S <sub>ds</sub> ) * DL + E ELFM	Seismic Equivalent Lateral Forces Method
(1.2 + 0.2S <sub>ds</sub> ) * DL + E EMAM	Seismic Equivalent Modal Analysis Method
(0.9 - 0.2S <sub>ds</sub> ) * DL + E ELFM	Seismic (Reduced DL) Equivalent Lateral Forces Method
(0.9 - 0.2S <sub>ds</sub> ) * DL + E EMAM	Seismic (Reduced DL) Equivalent Modal Analysis Method
1.0D + 1.0W	Serviceability 60 mph

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

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Customer: METRO PCS INC

**Shaft Section Properties**

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Slip		Weight (lb)	Bottom						Top						
				Joint Type	Joint Len (in)		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	24.02	99.63	31.77	35.67	37.92	4771.7	20.02	84.73	0.156567
2-12	42.050	0.3125	65	Slip	50.00	4,240	33.05	31.50	32.94	4507.5	25.66	105.77	26.46	73.55	26.32	2298.4	20.02	84.70	0.156567
3-12	40.000	0.2500	65	Slip	42.00	2,645	27.51	70.05	21.95	2083.0	26.81	110.07	21.25	110.05	16.91	952.2	20.10	85.02	0.156567
4-12	39.947	0.1875	65	Butt	0.00	1,472	21.25	110.05	12.72	720.5	27.69	113.36	15.00	150.00	8.94	250.5	18.76	80.00	0.156567
Shaft Weight						13,368													

**Discrete Appurtenance Properties**

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	Weight (lb)	No Ice EPAa (sf)	Orientation Factor	Weight (lb)	Ice EPAa (sf)	Orientation Factor
153.00	Powerwave Allgon 7020.00 Dual	6	0.75	0.000	2.20	0.340	0.50	15.83	0.888	0.50
153.00	Kaelus DBCT108F1V92-1	3	0.75	0.000	13.90	0.630	0.50	47.47	1.354	0.50
153.00	Powerwave Allgon LGP21401	6	0.75	3.000	14.10	1.100	0.50	47.38	2.049	0.50
153.00	Raycap DC6-48-60-18-8F	2	0.75	3.000	20.00	1.260	0.90	90.23	2.138	0.90
153.00	Raycap DC6-48-60-18-8F	1	0.75	3.000	20.00	1.260	0.90	90.23	2.138	0.90
153.00	Ericsson Radio 8843 - B2 + B66A	3	0.75	0.000	71.90	1.650	0.50	154.08	2.780	0.50
153.00	Ericsson RRUS 4449 B5, B12	3	0.75	0.000	71.00	1.970	0.50	156.96	3.215	0.50
153.00	Ericsson RRUS 4478 B14	3	0.75	0.000	59.40	2.020	0.50	141.26	3.278	0.50
153.00	Ericsson RRUS-32 (77 lbs)	3	0.75	3.000	77.00	3.310	0.50	206.72	5.020	0.50
153.00	Powerwave Allgon 7770.00 (27	3	0.75	3.000	27.00	5.510	0.65	178.61	8.346	0.65
153.00	CCI OPA-65R-LCUU-H6	3	0.75	3.000	73.00	9.660	0.66	344.47	13.358	0.66
153.00	Kathrein Scala 80010965	6	0.75	0.000	97.60	13.810	0.62	453.20	17.878	0.62
150.00	Generic Round Side Arm	3	1.00	0.000	75.00	2.500	0.67	123.78	4.242	0.67
150.00	Round Platform w/ Handrails	1	1.00	0.000	2,000.00	27.200	1.00	3,728.35	59.804	1.00
141.00	Round T-Arm	3	0.75	0.000	250.00	9.700	0.67	527.41	20.643	0.67
138.00	RFS IBC1900HG-2A	3	0.80	4.000	22.00	0.970	0.50	57.72	1.849	0.50
138.00	RFS IBC1900BB-1	3	0.80	4.000	22.00	0.970	0.50	57.72	1.849	0.50
138.00	Alcatel-Lucent 4X40W RRH	3	0.80	4.000	59.50	2.320	0.50	166.10	3.749	0.50
138.00	Alcatel-Lucent 800 MHz RRH w/	3	0.80	4.000	61.80	2.500	0.50	181.46	3.881	0.50
138.00	Alcatel-Lucent TD-RRH8x20-25	3	0.80	4.000	70.00	4.050	0.50	195.08	5.809	0.50
138.00	RFS APXVTM14-C-I20	3	0.80	4.000	52.90	6.340	0.66	235.13	9.222	0.66
138.00	RFS APXVSP18-C-A20	1	0.80	4.000	57.00	8.020	0.69	285.31	11.710	0.69
138.00	RFS APXV9ERR18-C-A20	2	0.80	4.000	62.00	8.020	0.78	301.70	11.710	0.78
128.00	Ericsson Radio 4449 B12,B71	3	0.80	0.000	74.00	1.640	0.50	147.54	2.749	0.50
128.00	Ericsson AIR 21	3	0.80	0.000	91.00	6.050	0.70	281.69	8.890	0.70
128.00	Ericsson AIR32 B66Aa/B2a	3	0.80	1.000	132.20	6.510	0.71	341.84	9.387	0.71
128.00	Round T-Arm	3	0.75	0.000	250.00	9.700	0.67	524.52	20.529	0.67
128.00	RFS APXVAARR24_43-U-NA20	3	0.80	0.000	127.90	20.240	0.63	643.56	25.111	0.63
119.00	Generic 12" x 12" Junction Box	1	1.00	0.000	10.00	1.200	0.90	64.37	2.147	0.90
118.00	DragonWave Horizon Compact	3	0.80	2.000	10.60	0.720	0.50	39.89	1.460	0.50
118.00	DragonWave A-ANT-23G-1-C	1	1.00	2.000	15.00	1.610	1.00	61.03	2.596	1.00
118.00	NextNet BTS-2500	3	0.80	2.000	35.00	1.820	0.50	95.42	3.016	0.50
118.00	Argus LLPX310R	3	0.80	2.000	28.60	4.290	0.63	146.00	6.443	0.63
118.00	DragonWave A-ANT-23G-2-C	2	1.00	2.000	12.30	4.690	0.50	139.53	6.350	0.50
115.00	Collar	1	1.00	0.000	560.00	8.500	1.00	1,167.76	17.725	1.00
98.00	Alcatel-Lucent RRH2X60-1900A-	3	0.80	3.000	46.00	1.870	0.50	118.39	3.066	0.50
98.00	Alcatel-Lucent RRH2x60 700	3	0.80	0.000	56.70	2.150	0.50	143.71	3.431	0.50
98.00	Alcatel-Lucent RRH2X60-AWS	3	0.80	3.000	55.00	3.350	0.50	158.16	5.200	0.50
98.00	RFS DB-T1-6Z-8AB-0Z	2	0.80	3.000	44.00	4.800	0.69	204.90	6.617	0.69
98.00	Andrew SBNHH-1D65B	12	0.80	3.000	50.70	8.170	0.69	275.03	11.786	0.69
98.00	Generic Flat Light Sector Frame	3	0.75	0.000	500.00	17.900	0.67	980.93	37.190	0.67
36.00	Stand-off	1	1.00	0.000	50.00	2.000	0.90	90.33	3.613	0.90
35.00	Generic GPS	1	1.00	-3.000	10.00	0.900	0.90	43.75	1.638	0.90
34.00	Generic GPS	1	1.00	3.000	10.00	0.900	0.90	43.57	1.634	0.90
31.00	Stand-off	1	1.00	0.000	50.00	2.000	0.90	89.69	3.587	0.90

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

4/26/2019 3:59:07 PM

Customer: METRO PCS INC

Totals Num Loadings:45 129 11,590.60 32,722.74

Linear Appurtenance Properties Load Case Azimuth (deg) :

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Max Flat	Coax / Row	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
0.00	156.00	3	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	156.00	2	3" conduit	3.50	7.58	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	153.00	2	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	153.00	4	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	153.00	2	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	153.00	1	3/8" (0.38" - 9.5mm)	0.38	0.23	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	153.00	12	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	142.00	1	5/8" Hybriflex	0.84	0.70	N	0	0.00	0.00	0	0.00	N	SPRINT NEXTEL
0.00	138.00	3	1 1/4" Hybriflex Cable	1.54	1.00	N	0	0.00	0.00	0	0.00	N	SPRINT NEXTEL
0.00	128.00	3	1 5/8" (1.63"-41.3mm)	1.63	1.61	N	0	0.00	0.00	0	0.00	N	METRO PCS INC
90.00	120.00	1	Flat Plate 4 x 1.25	5.00	0.00	N	1	0.00	0.00	60	0.00	Y	--
90.00	120.00	1	Flat Plate 4 x 1.25	5.00	0.00	N	1	0.00	0.00	150	0.00	Y	--
90.00	120.00	1	Flat Plate 4 x 1.25	5.00	0.00	N	1	0.00	0.00	240	0.00	Y	--
90.00	120.00	1	Flat Plate 4 x 1.25	5.00	0.00	N	1	0.00	0.00	330	0.00	Y	--
110.00	120.00	1	Reinforcing Plate	4.00	0.00	Y	1	0.00	0.00	0	0.00	Y	--
110.00	120.00	1	Reinforcing Plate	4.00	0.00	Y	1	0.00	0.00	120	0.00	Y	--
110.00	120.00	1	Reinforcing Plate	4.00	0.00	Y	1	0.00	0.00	240	0.00	Y	--
0.00	119.00	1	2" conduit	2.38	3.65	N	0	0.00	0.00	0	0.00	N	CLEARWIRE
0.00	118.00	3	1/2" Coax	0.63	0.15	N	0	0.00	0.00	0	0.00	N	CLEARWIRE
0.00	118.00	6	5/16" (0.31"-7.9mm)	0.31	0.05	N	0	0.00	0.00	0	0.00	N	CLEARWIRE
106.00	110.00	1	Reinforcing Plate 4 x 1	1.00	0.00	Y	1	0.00	0.00	30	0.00	Y	--
106.00	110.00	1	Reinforcing Plate 4 x 1	1.00	0.00	Y	1	0.00	0.00	120	0.00	Y	--
106.00	110.00	1	Reinforcing Plate 4 x 1	1.00	0.00	Y	1	0.00	0.00	210	0.00	Y	--
106.00	110.00	1	Reinforcing Plate 4 x 1	1.00	0.00	Y	1	0.00	0.00	300	0.00	Y	--
0.00	106.00	1	#20 Dywidag Bars	4.00	0.00	N	1	0.00	0.00	0	0.00	Y	--
0.00	106.00	1	#20 Dywidag Bars	4.00	0.00	N	1	0.00	0.00	90	0.00	Y	--
0.00	106.00	1	#20 Dywidag Bars	4.00	0.00	N	1	0.00	0.00	180	0.00	Y	--
0.00	106.00	1	#20 Dywidag Bars	4.00	0.00	N	1	0.00	0.00	270	0.00	Y	--
0.00	98.00	2	1.58" (40.1mm) Hybrid	1.58	1.61	N	2	0.00	0.00	0	0.00	Y	VERIZON WIRELESS
0.00	35.00	1	1/2" Coax	0.63	0.15	N	1	0.00	0.00	0	0.00	Y	AT&T MOBILITY
0.00	34.00	1	1/2" Coax	0.63	0.15	N	1	0.00	0.00	210	0.00	Y	SPRINT NEXTEL
0.00	22.50	1	#20 Dywidag Bars	4.00	0.00	N	1	0.00	0.00	45	0.00	Y	--
0.00	22.50	1	#20 Dywidag Bars	4.00	0.00	N	1	0.00	0.00	135	0.00	Y	--
0.00	22.50	1	#20 Dywidag Bars	4.00	0.00	N	1	0.00	0.00	225	0.00	Y	--
0.00	22.50	1	#20 Dywidag Bars	4.00	0.00	N	1	0.00	0.00	315	0.00	Y	--

Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	Intermediate Connections			Connectors	Continuation?
					Description	Spacing (in)	Len (in)			
0.00	91.10	4	SOL #20 All Thread	80	2.19	6" Angle Bracket	30.0	3.31	5/8" A36 U-Bolt	No
0.00	13.82	4	SOL #20 All Thread	80	2.19	6" Angle Bracket	30.0	3.31	5/8" A36 U-Bolt	No

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Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

4/26/2019 3:59:07 PM

Customer: METRO PCS INC

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91.10	101.5	4	SOL	#20 All Thread	80	2.19	6" Angle Bracket	30.0	3.31	5/8" A36 U-Bolt	Yes
91.50	108.5	4	PL	PL 4 x 1.25	43	0.00	AJAX M20 Class	24.0	3.00	AJAX M20 Class	No
101.5	110.0	4	PL	PL 3" x 1"	49	0.00	AJAX M20 Class	24.0	3.00	AJAX M20 Class	No
110.0	118.5	3	PL	PL 3" x 1"	49	0.00	AJAX M20 Class	24.0	3.00	AJAX M20 Class	No
110.0	118.5	3	PL	PL 5" x 1.25"	34	0.00	AJAX M20 Class	24.0	3.00	AJAX M20 Class	No

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	F'y (ksi)	S (in <sup>3</sup> )	Z (in <sup>3</sup> )	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	24.02	99.63	78.5	403.2	0.0	0.0	39.28	9,908	0.0
5.00		0.3750	36.577	43.714	7,312.7	23.46	97.54	79.1	386.2	0.0	751.8	39.28	9,554	668.0
10.00		0.3750	35.794	42.769	6,848.5	22.90	95.45	79.7	369.6	0.0	735.7	39.28	9,207	668.0
13.82	Reinf. Top	0.3750	35.197	42.047	6,507.6	22.47	93.86	80.2	357.2	0.0	550.9	39.28	8,946	510.0
15.00		0.3750	35.012	41.824	6,404.4	22.34	93.36	80.4	353.4	0.0	168.7	19.64	4,433	79.0
20.00		0.3750	34.229	40.878	5,979.9	21.78	91.28	81.0	337.5	0.0	703.5	19.64	4,265	334.0
25.00		0.3750	33.446	39.933	5,574.5	21.22	89.19	81.6	322.0	0.0	687.5	19.64	4,101	334.0
30.00		0.3750	32.663	38.988	5,188.0	20.66	87.10	81.9	306.8	0.0	671.4	19.64	3,940	334.0
31.00		0.3750	32.506	38.799	5,112.9	20.55	86.68	81.9	303.9	0.0	132.3	19.64	3,908	66.8
31.50	Bot - Section 2	0.3750	32.428	38.704	5,075.3	20.49	86.47	81.9	302.4	0.0	66.4	19.64	3,892	33.6
34.00		0.3750	32.037	38.232	4,891.9	20.21	85.43	81.9	295.0	0.0	605.0	19.64	3,940	166.8
35.00		0.3750	31.880	38.042	4,819.7	20.10	85.01	81.9	292.1	0.0	240.3	19.64	3,908	66.8
35.67	Top - Section 1	0.3125	32.400	32.288	4,243.4	25.10	103.68	77.3	253.0	0.0	160.3	19.64	3,887	44.8
36.00		0.3125	32.349	32.236	4,222.9	25.06	103.52	77.4	252.2	0.0	36.2	19.64	3,876	22.0
40.00		0.3125	31.722	31.606	3,980.1	24.52	101.51	78.0	242.4	0.0	434.5	19.64	3,751	267.2
45.00		0.3125	30.940	30.818	3,689.8	23.85	99.01	78.7	230.4	0.0	531.0	19.64	3,597	334.0
50.00		0.3125	30.157	30.031	3,414.1	23.18	96.50	79.4	218.7	0.0	517.6	19.64	3,447	334.0
55.00		0.3125	29.374	29.243	3,152.4	22.51	94.00	80.2	207.3	0.0	504.2	19.64	3,299	334.0
60.00		0.3125	28.591	28.455	2,904.4	21.84	91.49	80.9	196.2	0.0	490.8	19.64	3,155	334.0
65.00		0.3125	27.808	27.668	2,669.8	21.16	88.99	81.6	185.5	0.0	477.4	19.64	3,014	334.0
70.00		0.3125	27.025	26.880	2,448.2	20.49	86.48	81.9	175.0	0.0	464.0	19.64	2,877	334.0
70.05	Bot - Section 3	0.3125	27.017	26.871	2,445.9	20.49	86.45	81.9	174.9	0.0	4.9	19.64	2,875	3.6
73.55	Top - Section 2	0.2500	26.969	21.509	1,959.9	26.23	107.88	76.1	140.4	0.0	575.5	19.64	2,867	233.8
75.00		0.2500	26.743	21.326	1,910.5	25.98	106.97	76.4	138.0	0.0	105.4	19.64	2,828	96.6
80.00		0.2500	25.960	20.696	1,746.1	25.14	103.84	77.3	129.9	0.0	357.5	19.64	2,695	334.0
85.00		0.2500	25.177	20.066	1,591.4	24.30	100.71	78.2	122.1	0.0	346.8	19.64	2,565	334.0
90.00		0.2500	24.394	19.436	1,446.1	23.47	97.58	79.1	114.5	0.0	336.0	19.64	2,438	334.0
91.10	Reinf. Top Reinf	0.2500	24.222	19.297	1,415.4	23.28	96.89	79.3	112.9	0.0	72.5	19.64	2,438	334.0
91.50	Reinf Bottom	0.2500	24.159	19.247	1,404.3	23.21	96.64	79.4	112.3	0.0	26.2	19.64	2,400	26.7
95.00		0.2500	23.611	18.806	1,310.0	22.63	94.44	80.0	107.2	0.0	226.6	39.64	3,874	471.9
98.00		0.2500	23.141	18.428	1,232.5	22.12	92.57	80.6	102.9	0.0	190.0	39.64	3,744	404.5
100.0		0.2500	22.828	18.176	1,182.7	21.79	91.31	81.0	100.1	0.0	124.6	39.64	3,658	269.7
101.5	Reinf. Top Reinf	0.2500	22.593	17.987	1,146.1	21.54	90.37	81.2	98.0	0.0	92.3	39.64	3,630	235.7
105.0		0.2500	22.046	17.545	1,063.9	20.95	88.18	81.9	93.2	0.0	211.6	32.00	2,173	381.1
108.5	Reinf. Top	0.2500	21.498	17.104	985.6	20.36	85.99	81.9	88.6	0.0	206.3	32.00	2,072	381.1
110.0	Reinf. Top Reinf	0.2500	21.263	16.915	953.3	20.11	85.05	81.9	86.6	0.0	86.8	12.00	748.4	61.3
110.0	Top - Section 3	0.2500	21.254	16.908	952.2	20.10	85.02	81.9	86.5	0.0	3.1	27.75	1,768	5.0
110.0	Bot - Section 4	0.1875	21.254	12.719	720.5	27.69	113.36	74.5	65.5	0.0		27.75	1,768	
115.0		0.1875	20.480	12.251	643.9	26.59	109.23	75.7	60.7	0.0	210.2	27.75	1,650	467.6
118.0		0.1875	20.010	11.968	600.2	25.92	106.72	76.4	57.9	0.0	123.6	27.75	1,580	283.6
118.5	Reinf. Top Reinf.	0.1875	19.932	11.921	593.2	25.80	106.30	76.6	57.5	0.0	20.3	27.75	1,569	47.3
119.0		0.1875	19.854	11.873	586.1	25.69	105.89	76.7	57.0	0.0	20.2			
120.0		0.1875	19.697	11.779	572.2	25.47	105.05	76.9	56.1	0.0	40.2			
125.0		0.1875	18.914	11.306	506.1	24.35	100.88	78.2	51.7	0.0	196.4			
128.0		0.1875	18.444	11.023	469.0	23.68	98.37	78.9	49.1	0.0	114.0			
130.0		0.1875	18.131	10.834	445.2	23.23	96.70	79.4	47.4	0.0	74.4			
135.0		0.1875	17.349	10.361	389.5	22.11	92.53	80.6	43.4	0.0	180.3			
138.0		0.1875	16.879	10.077	358.4	21.44	90.02	81.3	41.0	0.0	104.3			
140.0		0.1875	16.566	9.888	338.6	20.99	88.35	81.8	39.5	0.0	67.9			
141.0		0.1875	16.409	9.794	328.9	20.77	87.52	81.9	38.7	0.0	33.5			
145.0		0.1875	15.783	9.416	292.3	19.88	84.18	81.9	35.8	0.0	130.7			
150.0		0.1875	15.000	8.943	250.5	18.76	80.00	81.9	32.3	0.0	156.2			
											13,368.2			
												10,304.		



<b>Load Case: 1.2D + 1.6W</b>	<b>97 mph with No Ice</b>	<b>28 Iterations</b>
Gust Response Factor :1.10		Wind Importance Factor :1.00
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		269.7	0.0					0.0	0.0	269.7	0.0	0.0	0.0
5.00		533.8	902.1					112.8	1,053.1	646.5	1,955.3	0.0	0.0
10.00		461.8	882.8					112.8	1,053.1	574.5	1,936.0	0.0	0.0
13.82	Reinf. Top	258.3	661.1					86.1	804.1	344.4	1,465.2	0.0	0.0
15.00		313.2	202.5					26.7	154.2	339.8	356.7	0.0	0.0
20.00		499.5	844.2					112.8	652.3	612.3	1,496.6	0.0	0.0
25.00		488.1	824.9					112.8	652.3	600.8	1,477.3	0.0	0.0
30.00		289.0	805.6					112.8	652.3	401.8	1,458.0	0.0	0.0
31.00	Appurtenance(s)	72.0	158.8	51.3	0.0	0.0	60.0	22.7	130.5	145.9	349.3	0.0	0.0
31.50	Bot - Section 2	147.0	79.6					11.5	65.7	158.5	145.3	0.0	0.0
34.00	Appurtenance(s)	172.4	726.0	24.3	0.0	72.8	12.0	57.8	325.7	254.4	1,063.7	0.0	0.0
35.00	Appurtenance(s)	82.8	288.3	23.3	0.0	-69.8	12.0	23.5	130.3	129.6	430.6	0.0	0.0
35.67	Top - Section 1	49.7	192.4					15.8	87.2	65.5	279.6	0.0	0.0
36.00	Appurtenance(s)	216.6	43.5	53.5	0.0	0.0	60.0	7.8	42.9	278.0	146.4	0.0	0.0
40.00		453.0	521.4					96.6	520.4	549.6	1,041.8	0.0	0.0
45.00		507.1	637.3					124.7	650.5	631.8	1,287.8	0.0	0.0
50.00		509.4	621.2					128.7	650.5	638.1	1,271.7	0.0	0.0
55.00		509.9	605.1					132.4	650.5	642.4	1,255.6	0.0	0.0
60.00		508.9	589.0					135.9	650.5	644.8	1,239.5	0.0	0.0
65.00		506.4	572.9					139.2	650.5	645.6	1,223.4	0.0	0.0
70.00		255.1	556.8					142.3	650.5	397.4	1,207.4	0.0	0.0
70.05	Bot - Section 3	181.4	5.9					1.5	6.9	182.9	12.8	0.0	0.0
73.55	Top - Section 2	252.2	690.6					101.4	455.4	353.6	1,146.0	0.0	0.0
75.00		325.9	126.5					42.3	188.2	368.2	314.7	0.0	0.0
80.00		501.7	429.0					148.0	650.5	649.7	1,079.5	0.0	0.0
85.00		495.0	416.1					150.7	650.5	645.7	1,066.6	0.0	0.0
90.00		299.3	403.2					153.2	650.5	452.5	1,053.8	0.0	0.0
91.10	Reinf. Top Reinf	73.0	87.0					31.6	455.7	104.6	542.7	0.0	0.0
91.50	Reinf Bottom	188.2	31.5					11.5	52.0	199.8	83.5	0.0	0.0
95.00		311.8	271.9					101.2	741.1	413.0	1,013.0	0.0	0.0
98.00	Appurtenance(s)	237.4	228.1	3,791.4	0.0	7,864.6	3,203.4	87.4	635.3	4,116.2	4,066.7	0.0	0.0
100.00		164.8	149.5					58.4	415.8	223.2	565.2	0.0	0.0
101.50	Reinf. Top Reinf	232.7	110.7					43.9	351.9	276.7	462.7	0.0	0.0
105.00		322.4	253.9					102.8	618.6	425.1	872.5	0.0	0.0
108.50	Reinf. Top	227.7	247.6					103.2	618.6	330.9	866.2	0.0	0.0
110.00	Reinf. Top Reinf	70.2	104.2					30.6	142.6	100.8	246.8	0.0	0.0
110.05	Top - Section 3	222.4	3.7					1.5	8.5	223.9	12.2	0.0	0.0
115.00	Appurtenance(s)	350.7	252.2	352.1	0.0	0.0	672.0	143.7	789.1	846.5	1,713.3	0.0	0.0
118.00	Appurtenance(s)	152.3	148.3	663.9	0.0	1,327.8	314.6	89.2	478.5	905.3	941.5	0.0	0.0
118.50	Reinf. Top Reinf.	43.1	24.4					15.0	79.3	58.1	103.7	0.0	0.0
119.00	Appurtenance(s)	64.4	24.3	45.2	0.0	0.0	12.0	15.0	22.6	124.6	58.9	0.0	0.0
120.00		218.5	48.3					30.2	40.8	248.7	89.1	0.0	0.0
125.00		278.5	235.7					0.0	204.0	278.5	439.7	0.0	0.0
128.00	Appurtenance(s)	170.4	136.8	2,924.4	0.0	474.8	2,430.4	0.0	122.4	3,094.9	2,689.5	0.0	0.0
130.00		232.6	89.2					0.0	70.0	232.6	159.3	0.0	0.0
135.00		261.4	216.4					0.0	175.0	261.4	391.4	0.0	0.0
138.00	Appurtenance(s)	159.4	125.2	1,647.6	0.0	6,590.3	1,254.7	0.0	105.0	1,807.0	1,484.9	0.0	0.0
140.00		94.3	81.5					0.0	62.8	94.3	144.3	0.0	0.0

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

4/26/2019 3:59:18 PM

Customer: METRO PCS INC

Load Case: 1.2D + 1.6W

97 mph with No Ice

28 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

141.00	Appurtenance(s)	153.6	40.2	642.0	0.0	0.0	900.0	0.0	31.4	795.6	971.6	0.0	0.0
145.00		270.1	156.9					0.0	123.1	270.1	280.0	0.0	0.0
150.00	Appurtenance(s)	147.6	187.4	1,440.1	0.0	0.0	2,670.0	0.0	152.8	1,587.7	3,010.2	0.0	0.0
Totals:										28,643.5	46,969.3	0.00	0.00

**Load Case: 1.2D + 1.6W**

97 mph with No Ice

28 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

**Calculated Forces**

Seg	Pu	Vu	Tu	Mu	Mu	Resultant	phi	phi	phi	phi	Total		
Elev	FY (-)	FX (-)	MY	MZ	MX	Moment	Pn	Vn	Tn	Mn	Deflect	Rotation	Ratio
(ft)	(kips)	(kips)	(ft-kips)	(ft-kips)	(ft-kips)	(ft-kips)	(kips)	(kips)	(ft-kips)	(ft-kips)	(in)	(deg)	
0.00	-49.20	-31.98	0.00	-3,367.32	0.00	3,367.32	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.633
5.00	-47.10	-31.55	0.00	-3,207.42	0.00	3,207.42	3,113.28	1,556.64	4,641.42	2,292.22	0.14	-0.26	0.615
10.00	-45.04	-31.14	0.00	-3,049.69	0.00	3,049.69	3,069.45	1,534.72	4,476.09	2,210.57	0.56	-0.53	0.597
13.82	-43.51	-30.88	0.00	-2,930.80	0.00	2,930.80	3,035.27	1,517.64	4,350.78	2,148.69	1.07	-0.73	0.582
13.82	-43.51	-30.88	0.00	-2,930.80	0.00	2,930.80	3,035.27	1,517.64	4,350.78	2,148.69	1.07	-0.73	0.819
15.00	-43.04	-30.70	0.00	-2,894.29	0.00	2,894.29	3,024.57	1,512.28	4,312.14	2,129.61	1.26	-0.79	0.813
20.00	-41.36	-30.33	0.00	-2,740.79	0.00	2,740.79	2,978.65	1,489.33	4,149.68	2,049.37	2.29	-1.16	0.790
25.00	-39.71	-29.95	0.00	-2,589.14	0.00	2,589.14	2,931.70	1,465.85	3,988.78	1,969.91	3.70	-1.53	0.767
30.00	-38.15	-29.65	0.00	-2,439.38	0.00	2,439.38	2,873.79	1,436.89	3,816.40	1,884.77	5.51	-1.90	0.745
31.00	-37.77	-29.53	0.00	-2,409.72	0.00	2,409.72	2,859.85	1,429.93	3,779.26	1,866.44	5.91	-1.98	0.741
31.50	-37.58	-29.45	0.00	-2,394.86	0.00	2,394.86	2,852.84	1,426.42	3,760.64	1,857.24	6.12	-2.02	0.739
34.00	-36.46	-29.23	0.00	-2,321.27	0.00	2,321.27	2,818.05	1,409.02	3,668.95	1,811.96	7.23	-2.20	0.719
35.00	-36.00	-29.13	0.00	-2,292.04	0.00	2,292.04	2,804.11	1,402.06	3,632.54	1,793.98	7.70	-2.28	0.714
35.67	-35.70	-29.07	0.00	-2,272.52	0.00	2,272.52	2,247.39	1,123.70	2,971.54	1,467.53	8.02	-2.33	0.819
36.00	-35.48	-28.89	0.00	-2,262.93	0.00	2,262.93	2,245.17	1,122.59	2,963.78	1,463.70	8.18	-2.35	0.817
40.00	-34.30	-28.51	0.00	-2,147.35	0.00	2,147.35	2,217.94	1,108.97	2,870.05	1,417.41	10.29	-2.66	0.790
45.00	-32.86	-28.03	0.00	-2,004.82	0.00	2,004.82	2,182.97	1,091.48	2,753.70	1,359.95	13.28	-3.04	0.756
50.00	-31.44	-27.53	0.00	-1,864.66	0.00	1,864.66	2,146.96	1,073.48	2,638.35	1,302.98	16.67	-3.42	0.722
55.00	-30.06	-27.00	0.00	-1,727.02	0.00	1,727.02	2,109.91	1,054.96	2,524.10	1,246.56	20.45	-3.79	0.686
60.00	-28.70	-26.46	0.00	-1,592.01	0.00	1,592.01	2,071.82	1,035.91	2,411.06	1,190.73	24.62	-4.16	0.650
65.00	-27.37	-25.89	0.00	-1,459.73	0.00	1,459.73	2,032.70	1,016.35	2,299.33	1,135.55	29.17	-4.52	0.612
70.00	-26.12	-25.47	0.00	-1,330.29	0.00	1,330.29	1,981.31	990.65	2,176.68	1,074.98	34.08	-4.87	0.577
70.05	-26.07	-25.35	0.00	-1,328.94	0.00	1,328.94	1,980.69	990.35	2,175.31	1,074.30	34.14	-4.87	0.577
73.55	-24.88	-24.97	0.00	-1,240.23	0.00	1,240.23	1,473.36	736.68	1,622.77	801.43	37.79	-5.11	0.638
75.00	-24.51	-24.67	0.00	-1,204.11	0.00	1,204.11	1,465.95	732.98	1,600.80	790.57	39.36	-5.21	0.624
80.00	-23.35	-24.06	0.00	-1,080.77	0.00	1,080.77	1,439.68	719.84	1,525.22	753.25	44.99	-5.55	0.574
85.00	-22.23	-23.43	0.00	-960.49	0.00	960.49	1,412.37	706.19	1,450.29	716.24	50.97	-5.88	0.523
90.00	-21.15	-22.94	0.00	-843.34	0.00	843.34	1,384.02	692.01	1,376.10	679.61	57.29	-6.19	0.471
91.10	-20.61	-22.79	0.00	-818.11	0.00	818.11	1,377.65	688.82	1,359.89	671.60	58.72	-6.25	0.456
91.10	-20.61	-22.79	0.00	-818.11	0.00	818.11	1,377.65	688.82	1,359.89	671.60	58.72	-6.25	0.459
91.50	-20.50	-22.63	0.00	-808.99	0.00	808.99	1,375.32	687.66	1,354.01	668.69	59.24	-6.28	0.455
95.00	-19.48	-22.16	0.00	-729.80	0.00	729.80	1,354.64	677.32	1,302.77	643.39	63.91	-6.48	0.292
98.00	-15.88	-17.63	0.00	-655.47	0.00	655.47	1,336.51	668.25	1,259.21	621.88	68.02	-6.59	0.266
100.00	-15.33	-17.36	0.00	-620.22	0.00	620.22	1,324.21	662.11	1,230.38	607.64	70.79	-6.67	0.254
101.50	-14.87	-17.05	0.00	-594.18	0.00	594.18	1,314.88	657.44	1,208.86	597.01	72.89	-6.72	0.243
101.50	-14.87	-17.05	0.00	-594.18	0.00	594.18	1,314.88	657.44	1,208.86	597.01	72.89	-6.72	0.338
105.00	-14.02	-16.56	0.00	-534.49	0.00	534.49	1,293.27	646.64	1,159.51	572.64	77.85	-6.84	0.311
108.50	-13.17	-16.15	0.00	-476.53	0.00	476.53	1,260.75	630.38	1,101.62	544.05	82.91	-6.99	0.287
108.50	-13.17	-16.15	0.00	-476.53	0.00	476.53	1,260.75	630.38	1,101.62	544.05	82.91	-6.99	0.500
110.00	-12.92	-16.03	0.00	-452.30	0.00	452.30	1,246.82	623.41	1,077.26	532.02	85.11	-7.06	0.483
110.00	-12.92	-16.03	0.00	-452.30	0.00	452.30	1,246.82	623.41	1,077.26	532.02	85.11	-7.06	0.302
110.05	-12.91	-15.83	0.00	-451.45	0.00	451.45	1,246.32	623.16	1,076.40	531.59	85.19	-7.06	0.302
110.05	-12.91	-15.83	0.00	-451.45	0.00	451.45	852.93	426.46	741.03	365.97	85.19	-7.06	0.363
115.00	-11.27	-14.81	0.00	-373.13	0.00	373.13	834.88	417.44	698.45	344.94	92.61	-7.28	0.309
118.00	-10.43	-13.81	0.00	-327.37	0.00	327.37	823.44	411.72	672.79	332.27	97.21	-7.41	0.276
118.50	-10.33	-13.74	0.00	-320.47	0.00	320.47	821.50	410.75	668.53	330.16	97.99	-7.43	0.271
118.50	-10.33	-13.74	0.00	-320.47	0.00	320.47	821.50	410.75	668.53	330.16	97.99	-7.43	0.984
119.00	-10.27	-13.62	0.00	-313.60	0.00	313.60	819.55	409.77	664.27	328.06	98.76	-7.45	0.970
120.00	-10.12	-13.44	0.00	-299.97	0.00	299.97	815.61	407.80	655.76	323.86	100.34	-7.60	0.940
125.00	-9.61	-13.19	0.00	-232.77	0.00	232.77	795.30	397.65	613.53	303.00	108.63	-8.26	0.781
128.00	-7.35	-9.77	0.00	-192.73	0.00	192.73	782.61	391.31	588.45	290.61	113.92	-8.62	0.673

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

4/26/2019 3:59:18 PM

Customer: METRO PCS INC

Load Case: 1.2D + 1.6W

97 mph with No Ice

28 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.20

Wind Load Factor :1.60

130.00	-7.17	-9.56	0.00	-173.20	0.00	173.20	773.95	386.97	571.85	282.42	117.57	-8.84	0.623
135.00	-6.77	-9.28	0.00	-125.40	0.00	125.40	751.56	375.78	530.84	262.16	127.05	-9.32	0.488
138.00	-5.58	-7.27	0.00	-90.96	0.00	90.96	737.63	368.82	506.58	250.18	132.96	-9.56	0.372
140.00	-5.44	-7.17	0.00	-76.41	0.00	76.41	728.14	364.07	490.58	242.28	136.98	-9.69	0.323
141.00	-4.60	-6.23	0.00	-69.25	0.00	69.25	721.90	360.95	481.67	237.88	139.00	-9.76	0.298
145.00	-4.35	-5.93	0.00	-44.33	0.00	44.33	694.03	347.02	445.00	219.77	147.23	-9.95	0.208
150.00	0.00	-5.08	0.00	-14.70	0.00	14.70	659.19	329.60	401.19	198.13	157.68	-10.10	0.074

<b>Load Case: 0.9D + 1.6W</b>	<b>97 mph with No Ice (Reduced DL)</b>	<b>28 Iterations</b>
Gust Response Factor :1.10		Wind Importance Factor :1.00
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		269.7	0.0					0.0	0.0	269.7	0.0	0.0	0.0
5.00		533.8	676.6					112.8	789.8	646.5	1,466.4	0.0	0.0
10.00		461.8	662.1					112.8	789.8	574.5	1,452.0	0.0	0.0
13.82	Reinf. Top	258.3	495.8					86.1	603.1	344.4	1,098.9	0.0	0.0
15.00		313.2	151.8					26.7	115.7	339.8	267.5	0.0	0.0
20.00		499.5	633.2					112.8	489.2	612.3	1,122.4	0.0	0.0
25.00		488.1	618.7					112.8	489.2	600.8	1,107.9	0.0	0.0
30.00		289.0	604.2					112.8	489.2	401.8	1,093.5	0.0	0.0
31.00	Appurtenance(s)	72.0	119.1	51.3	0.0	0.0	45.0	22.7	97.8	145.9	262.0	0.0	0.0
31.50	Bot - Section 2	147.0	59.7					11.5	49.2	158.5	109.0	0.0	0.0
34.00	Appurtenance(s)	172.4	544.5	24.3	0.0	72.8	9.0	57.8	244.3	254.4	797.8	0.0	0.0
35.00	Appurtenance(s)	82.8	216.2	23.3	0.0	-69.8	9.0	23.5	97.7	129.6	323.0	0.0	0.0
35.67	Top - Section 1	49.7	144.3					15.8	65.4	65.5	209.7	0.0	0.0
36.00	Appurtenance(s)	216.6	32.6	53.5	0.0	0.0	45.0	7.8	32.2	278.0	109.8	0.0	0.0
40.00		453.0	391.0					96.6	390.3	549.6	781.3	0.0	0.0
45.00		507.1	477.9					124.7	487.9	631.8	965.8	0.0	0.0
50.00		509.4	465.9					128.7	487.9	638.1	953.8	0.0	0.0
55.00		509.9	453.8					132.4	487.9	642.4	941.7	0.0	0.0
60.00		508.9	441.8					135.9	487.9	644.8	929.6	0.0	0.0
65.00		506.4	429.7					139.2	487.9	645.6	917.6	0.0	0.0
70.00		255.1	417.6					142.3	487.9	397.4	905.5	0.0	0.0
70.05	Bot - Section 3	181.4	4.4					1.5	5.2	182.9	9.6	0.0	0.0
73.55	Top - Section 2	252.2	518.0					101.4	341.5	353.6	859.5	0.0	0.0
75.00		325.9	94.9					42.3	141.2	368.2	236.1	0.0	0.0
80.00		501.7	321.7					148.0	487.9	649.7	809.6	0.0	0.0
85.00		495.0	312.1					150.7	487.9	645.7	800.0	0.0	0.0
90.00		299.3	302.4					153.2	487.9	452.5	790.3	0.0	0.0
91.10	Reinf. Top Reinf	73.0	65.2					31.6	341.8	104.6	407.0	0.0	0.0
91.50	Reinf Bottom	188.2	23.6					11.5	39.0	199.8	62.6	0.0	0.0
95.00		311.8	203.9					101.2	555.8	413.0	759.8	0.0	0.0
98.00	Appurtenance(s)	237.4	171.0	3,791.4	0.0	7,864.6	2,402.5	87.4	476.4	4,116.2	3,050.0	0.0	0.0
100.00		164.8	112.1					58.4	311.8	223.2	423.9	0.0	0.0
101.50	Reinf. Top Reinf	232.7	83.1					43.9	263.9	276.7	347.0	0.0	0.0
105.00		322.4	190.4					102.8	463.9	425.1	654.4	0.0	0.0
108.50	Reinf. Top	227.7	185.7					103.2	463.9	330.9	649.6	0.0	0.0
110.00	Reinf. Top Reinf	70.2	78.1					30.6	107.0	100.8	185.1	0.0	0.0
110.05	Top - Section 3	222.4	2.8					1.5	6.4	223.9	9.1	0.0	0.0
115.00	Appurtenance(s)	350.7	189.1	352.1	0.0	0.0	504.0	143.7	591.8	846.5	1,284.9	0.0	0.0
118.00	Appurtenance(s)	152.3	111.3	663.9	0.0	1,327.8	236.0	89.2	358.9	905.3	706.1	0.0	0.0
118.50	Reinf. Top Reinf.	43.1	18.3					15.0	59.5	58.1	77.8	0.0	0.0
119.00	Appurtenance(s)	64.4	18.2	45.2	0.0	0.0	9.0	15.0	16.9	124.6	44.2	0.0	0.0
120.00		218.5	36.2					30.2	30.6	248.7	66.8	0.0	0.0
125.00		278.5	176.7					0.0	153.0	278.5	329.7	0.0	0.0
128.00	Appurtenance(s)	170.4	102.6	2,924.4	0.0	474.8	1,822.8	0.0	91.8	3,094.9	2,017.1	0.0	0.0
130.00		232.6	66.9					0.0	52.5	232.6	119.4	0.0	0.0
135.00		261.4	162.3					0.0	131.3	261.4	293.5	0.0	0.0
138.00	Appurtenance(s)	159.4	93.9	1,647.6	0.0	6,590.3	941.0	0.0	78.8	1,807.0	1,113.7	0.0	0.0
140.00		94.3	61.1					0.0	47.1	94.3	108.3	0.0	0.0

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

4/26/2019 3:59:28 PM

Customer: METRO PCS INC

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

28 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

141.00	Appurtenance(s)	153.6	30.1	642.0	0.0	0.0	675.0	0.0	23.6	795.6	728.7	0.0	0.0
145.00		270.1	117.7					0.0	92.3	270.1	210.0	0.0	0.0
150.00	Appurtenance(s)	147.6	140.6	1,440.1	0.0	0.0	2,002.5	0.0	114.6	1,587.7	2,257.7	0.0	0.0
Totals:										28,643.5	35,226.9	0.00	0.00

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

97 mph with No Ice (Reduced DL)

28 Iterations

Gust Response Factor :1.10  
 Dead Load Factor :0.90  
 Wind Load Factor :1.60

Wind Importance Factor :1.00

**Calculated Forces**

Seg	Pu	Vu	Tu	Mu	Mu	Resultant	phi	phi	phi	phi	Total		
Elev	FY (-)	FX (-)	MY	MZ	MX	Moment	Pn	Vn	Tn	Mn	Deflect	Rotation	Ratio
(ft)	(kips)	(kips)	(ft-kips)	(ft-kips)	(ft-kips)	(ft-kips)	(kips)	(kips)	(ft-kips)	(ft-kips)	(in)	(deg)	
0.00	-36.88	-31.95	0.00	-3,300.94	0.00	3,300.94	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.619
5.00	-35.28	-31.46	0.00	-3,141.19	0.00	3,141.19	3,113.28	1,556.64	4,641.42	2,292.22	0.14	-0.26	0.600
10.00	-33.71	-31.01	0.00	-2,983.90	0.00	2,983.90	3,069.45	1,534.72	4,476.09	2,210.57	0.55	-0.52	0.582
13.82	-32.54	-30.73	0.00	-2,865.52	0.00	2,865.52	3,035.27	1,517.64	4,350.78	2,148.69	1.05	-0.71	0.568
13.82	-32.54	-30.73	0.00	-2,865.52	0.00	2,865.52	3,035.27	1,517.64	4,350.78	2,148.69	1.05	-0.71	0.798
15.00	-32.17	-30.50	0.00	-2,829.19	0.00	2,829.19	3,024.57	1,512.28	4,312.14	2,129.61	1.23	-0.78	0.793
20.00	-30.86	-30.07	0.00	-2,676.68	0.00	2,676.68	2,978.65	1,489.33	4,149.68	2,049.37	2.24	-1.14	0.770
25.00	-29.58	-29.63	0.00	-2,526.34	0.00	2,526.34	2,931.70	1,465.85	3,988.78	1,969.91	3.62	-1.50	0.746
30.00	-28.39	-29.30	0.00	-2,378.21	0.00	2,378.21	2,873.79	1,436.89	3,816.40	1,884.77	5.39	-1.86	0.724
31.00	-28.11	-29.17	0.00	-2,348.91	0.00	2,348.91	2,859.85	1,429.93	3,779.26	1,866.44	5.79	-1.93	0.720
31.50	-27.95	-29.07	0.00	-2,334.22	0.00	2,334.22	2,852.84	1,426.42	3,760.64	1,857.24	5.99	-1.97	0.718
34.00	-27.10	-28.84	0.00	-2,261.58	0.00	2,261.58	2,818.05	1,409.02	3,668.95	1,811.96	7.07	-2.15	0.698
35.00	-26.75	-28.73	0.00	-2,232.74	0.00	2,232.74	2,804.11	1,402.06	3,632.54	1,793.98	7.53	-2.23	0.694
35.67	-26.52	-28.67	0.00	-2,213.49	0.00	2,213.49	2,247.39	1,123.70	2,971.54	1,467.53	7.85	-2.27	0.795
36.00	-26.34	-28.47	0.00	-2,204.03	0.00	2,204.03	2,245.17	1,122.59	2,963.78	1,463.70	8.00	-2.30	0.793
40.00	-25.42	-28.03	0.00	-2,090.17	0.00	2,090.17	2,217.94	1,108.97	2,870.05	1,417.41	10.06	-2.60	0.767
45.00	-24.31	-27.51	0.00	-1,950.01	0.00	1,950.01	2,182.97	1,091.48	2,753.70	1,359.95	12.98	-2.97	0.733
50.00	-23.22	-26.97	0.00	-1,812.45	0.00	1,812.45	2,146.96	1,073.48	2,638.35	1,302.98	16.29	-3.34	0.699
55.00	-22.16	-26.41	0.00	-1,677.60	0.00	1,677.60	2,109.91	1,054.96	2,524.10	1,246.56	19.98	-3.70	0.664
60.00	-21.12	-25.84	0.00	-1,545.54	0.00	1,545.54	2,071.82	1,035.91	2,411.06	1,190.73	24.04	-4.06	0.629
65.00	-20.10	-25.24	0.00	-1,416.37	0.00	1,416.37	2,032.70	1,016.35	2,299.33	1,135.55	28.47	-4.40	0.592
70.00	-19.15	-24.83	0.00	-1,290.15	0.00	1,290.15	1,981.31	990.65	2,176.68	1,074.98	33.26	-4.74	0.558
70.05	-19.11	-24.69	0.00	-1,288.82	0.00	1,288.82	1,980.69	990.35	2,175.31	1,074.30	33.31	-4.75	0.558
73.55	-18.21	-24.32	0.00	-1,202.41	0.00	1,202.41	1,473.36	736.68	1,622.77	801.43	36.88	-4.98	0.617
75.00	-17.92	-24.00	0.00	-1,167.23	0.00	1,167.23	1,465.95	732.98	1,600.80	790.57	38.40	-5.07	0.603
80.00	-17.04	-23.37	0.00	-1,047.25	0.00	1,047.25	1,439.68	719.84	1,525.22	753.25	43.89	-5.41	0.554
85.00	-16.18	-22.74	0.00	-930.39	0.00	930.39	1,412.37	706.19	1,450.29	716.24	49.71	-5.72	0.504
90.00	-15.37	-22.26	0.00	-816.70	0.00	816.70	1,384.02	692.01	1,376.10	679.61	55.86	-6.02	0.454
91.10	-14.96	-22.12	0.00	-792.22	0.00	792.22	1,377.65	688.82	1,359.89	671.60	57.25	-6.09	0.440
91.10	-14.96	-22.12	0.00	-792.22	0.00	792.22	1,377.65	688.82	1,359.89	671.60	57.25	-6.09	0.443
91.50	-14.88	-21.94	0.00	-783.37	0.00	783.37	1,375.32	687.66	1,354.01	668.69	57.76	-6.11	0.439
95.00	-14.11	-21.49	0.00	-706.56	0.00	706.56	1,354.64	677.32	1,302.77	643.39	62.30	-6.30	0.282
98.00	-11.51	-17.08	0.00	-634.23	0.00	634.23	1,336.51	668.25	1,259.21	621.88	66.29	-6.41	0.256
100.00	-11.10	-16.82	0.00	-600.08	0.00	600.08	1,324.21	662.11	1,230.38	607.64	68.99	-6.49	0.245
101.50	-10.76	-16.52	0.00	-574.85	0.00	574.85	1,314.88	657.44	1,208.86	597.01	71.03	-6.54	0.234
101.50	-10.76	-16.52	0.00	-574.85	0.00	574.85	1,314.88	657.44	1,208.86	597.01	71.03	-6.54	0.326
105.00	-10.12	-16.05	0.00	-517.02	0.00	517.02	1,293.27	646.64	1,159.51	572.64	75.86	-6.65	0.300
108.50	-9.49	-15.66	0.00	-460.85	0.00	460.85	1,260.75	630.38	1,101.62	544.05	80.78	-6.80	0.276
108.50	-9.49	-15.66	0.00	-460.85	0.00	460.85	1,260.75	630.38	1,101.62	544.05	80.78	-6.80	0.482
110.00	-9.31	-15.54	0.00	-437.36	0.00	437.36	1,246.82	623.41	1,077.26	532.02	82.93	-6.86	0.466
110.00	-9.31	-15.54	0.00	-437.36	0.00	437.36	1,246.82	623.41	1,077.26	532.02	82.93	-6.86	0.291
110.05	-9.29	-15.34	0.00	-436.53	0.00	436.53	1,246.32	623.16	1,076.40	531.59	83.00	-6.87	0.291
110.05	-9.29	-15.34	0.00	-436.53	0.00	436.53	852.93	426.46	741.03	365.97	83.00	-6.87	0.350
115.00	-8.08	-14.37	0.00	-360.66	0.00	360.66	834.88	417.44	698.45	344.94	90.21	-7.07	0.298
118.00	-7.48	-13.39	0.00	-316.23	0.00	316.23	823.44	411.72	672.79	332.27	94.69	-7.20	0.266
118.50	-7.40	-13.32	0.00	-309.54	0.00	309.54	821.50	410.75	668.53	330.16	95.44	-7.22	0.261
118.50	-7.40	-13.32	0.00	-309.54	0.00	309.54	821.50	410.75	668.53	330.16	95.44	-7.22	0.948
119.00	-7.35	-13.21	0.00	-302.88	0.00	302.88	819.55	409.77	664.27	328.06	96.20	-7.24	0.933
120.00	-7.23	-13.00	0.00	-289.67	0.00	289.67	815.61	407.80	655.76	323.86	97.73	-7.38	0.904
125.00	-6.83	-12.74	0.00	-224.67	0.00	224.67	795.30	397.65	613.53	303.00	105.79	-8.02	0.751
128.00	-5.23	-9.41	0.00	-185.97	0.00	185.97	782.61	391.31	588.45	290.61	110.93	-8.37	0.647

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

4/26/2019 3:59:29 PM

Customer: METRO PCS INC

Load Case: 0.9D + 1.6W

97 mph with No Ice (Reduced DL)

28 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :0.90

Wind Load Factor :1.60

130.00	-5.09	-9.20	0.00	-167.15	0.00	167.15	773.95	386.97	571.85	282.42	114.47	-8.58	0.599
135.00	-4.79	-8.92	0.00	-121.16	0.00	121.16	751.56	375.78	530.84	262.16	123.68	-9.05	0.469
138.00	-3.95	-6.97	0.00	-87.80	0.00	87.80	737.63	368.82	506.58	250.18	129.42	-9.28	0.357
140.00	-3.85	-6.87	0.00	-73.86	0.00	73.86	728.14	364.07	490.58	242.28	133.32	-9.41	0.310
141.00	-3.25	-5.97	0.00	-66.99	0.00	66.99	721.90	360.95	481.67	237.88	135.29	-9.47	0.286
145.00	-3.07	-5.68	0.00	-43.10	0.00	43.10	694.03	347.02	445.00	219.77	143.27	-9.66	0.201
150.00	0.00	-5.08	0.00	-14.70	0.00	14.70	659.19	329.60	401.19	198.13	153.42	-9.80	0.074



<b>Load Case:</b> 1.2D + 1.0Di + 1.0Wi	50 mph with 1.00 in Radial Ice	29 Iterations
Gust Response Factor :1.10	Ice Dead Load Factor :1.00	Wind Importance Factor :1.00
Dead Load Factor :1.20		Ice Importance Factor :1.00
Wind Load Factor :1.00		

**Applied Segment Forces Summary**

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		48.4	0.0					0.0	0.0	48.4	0.0	0.0	0.0
5.00		96.3	1,283.4					119.0	1,276.9	215.3	2,560.3	0.0	0.0
10.00		84.0	1,301.6					119.0	1,308.6	203.0	2,610.2	0.0	0.0
13.82	Reinf. Top	47.1	991.3					90.3	1,010.5	137.5	2,001.8	0.0	0.0
15.00		57.4	306.3					27.9	219.7	85.3	525.9	0.0	0.0
20.00		91.8	1,282.8					117.5	935.7	209.4	2,218.4	0.0	0.0
25.00		90.2	1,265.4					116.9	886.2	207.1	2,151.7	0.0	0.0
30.00		53.5	1,245.6					114.6	832.4	168.2	2,078.0	0.0	0.0
31.00	Appurtenance(s)	13.4	247.4	15.3	0.0	0.0	149.7	22.9	167.0	51.5	564.0	0.0	0.0
31.50	Bot - Section 2	27.3	124.2					11.6	84.1	38.9	208.3	0.0	0.0
34.00	Appurtenance(s)	32.0	949.8	7.3	0.0	21.9	55.6	58.0	417.7	97.3	1,423.0	0.0	0.0
35.00	Appurtenance(s)	15.4	378.0	7.0	0.0	-21.1	55.7	23.5	165.3	45.9	599.1	0.0	0.0
35.67	Top - Section 1	9.2	252.5					15.8	109.4	25.1	361.8	0.0	0.0
36.00	Appurtenance(s)	40.4	73.1	16.1	0.0	0.0	150.3	7.9	53.9	64.3	277.3	0.0	0.0
40.00		84.6	875.7					96.9	654.2	181.5	1,529.9	0.0	0.0
45.00		95.1	1,075.0					123.6	820.1	218.7	1,895.1	0.0	0.0
50.00		95.9	1,053.6					126.0	822.5	221.9	1,876.0	0.0	0.0
55.00		96.4	1,031.5					127.9	824.6	224.4	1,856.1	0.0	0.0
60.00		96.6	1,008.8					129.6	826.6	226.2	1,835.4	0.0	0.0
65.00		96.6	985.7					130.9	828.4	227.5	1,814.1	0.0	0.0
70.00		48.8	962.1					131.9	830.1	180.7	1,792.2	0.0	0.0
70.05	Bot - Section 3	34.7	10.2					1.4	8.9	36.2	19.1	0.0	0.0
73.55	Top - Section 2	48.3	975.6					92.8	582.1	141.2	1,557.7	0.0	0.0
75.00		62.7	243.8					38.9	240.8	101.6	484.6	0.0	0.0
80.00		96.9	825.2					134.6	833.3	231.5	1,658.5	0.0	0.0
85.00		96.1	803.9					135.1	834.7	231.1	1,638.6	0.0	0.0
90.00		58.3	782.3					135.3	836.0	193.6	1,618.4	0.0	0.0
91.10	Reinf. Top Reinf	14.3	170.1					37.1	533.0	51.4	703.2	0.0	0.0
91.50	Reinf Bottom	36.9	61.7					13.5	80.2	50.4	141.9	0.0	0.0
95.00		61.2	531.2					118.5	988.0	179.7	1,519.2	0.0	0.0
98.00	Appurtenance(s)	46.7	447.1	1,027.1	0.0	1,894.9	11,117.1	101.9	847.7	1,175.7	12,411.9	0.0	0.0
100.00		32.5	294.1					30.5	538.3	63.0	832.4	0.0	0.0
101.50	Reinf. Top Reinf	46.1	218.4					23.2	444.0	69.3	662.4	0.0	0.0
105.00		64.1	500.2					55.2	834.1	119.2	1,334.2	0.0	0.0
108.50	Reinf. Top	45.4	489.2					41.2	793.7	86.6	1,282.9	0.0	0.0
110.00	Reinf. Top Reinf	14.0	206.9					15.5	210.8	29.5	417.8	0.0	0.0
110.05	Top - Section 3	44.7	7.3					0.8	11.4	45.4	18.8	0.0	0.0
115.00	Appurtenance(s)	70.6	580.8	121.9	0.0	0.0	1,839.8	71.9	1,061.8	264.4	3,482.3	0.0	0.0
118.00	Appurtenance(s)	30.8	344.3	167.5	0.0	335.0	1,498.7	45.2	644.6	243.5	2,487.5	0.0	0.0
118.50	Reinf. Top Reinf.	8.7	57.0					7.6	107.0	16.4	164.0	0.0	0.0
119.00	Appurtenance(s)	13.1	56.8	13.4	0.0	0.0	76.4	7.7	50.3	34.2	183.5	0.0	0.0
120.00		51.7	112.9					15.5	96.3	67.1	209.2	0.0	0.0
125.00		68.3	547.8					0.0	204.0	68.3	751.8	0.0	0.0
128.00	Appurtenance(s)	42.1	320.5	731.8	0.0	113.7	8,247.8	0.0	122.4	773.9	8,690.7	0.0	0.0
130.00		57.8	210.2					0.0	70.0	57.8	280.2	0.0	0.0
135.00		65.3	507.9					0.0	175.0	65.3	682.9	0.0	0.0
138.00	Appurtenance(s)	40.1	296.5	410.9	0.0	1,643.8	4,823.1	0.0	105.0	451.1	5,224.5	0.0	0.0
140.00		23.8	194.1					0.0	62.8	23.8	256.9	0.0	0.0

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

4/26/2019 3:59:39 PM

Customer: METRO PCS INC

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

29 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

141.00	Appurtenance(s)	39.1	96.1	226.9	0.0	0.0	2,482.2	0.0	31.4	266.0	2,609.7	0.0	0.0
145.00		69.2	373.3					0.0	123.1	69.2	496.4	0.0	0.0
150.00	Appurtenance(s)	38.0	447.1	507.1	0.0	0.0	6,769.7	0.0	152.8	545.1	7,369.6	0.0	0.0
Totals:										8,829.09	89,369.3	0.00	0.00

**Load Case: 1.2D + 1.0Di + 1.0Wi**

50 mph with 1.00 in Radial Ice

29 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

**Calculated Forces**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-98.73	-9.68	0.00	-1,116.15	0.00	1,116.15	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.224
5.00	-96.15	-9.61	0.00	-1,067.73	0.00	1,067.73	3,113.28	1,556.64	4,641.42	2,292.22	0.05	-0.09	0.218
10.00	-93.53	-9.53	0.00	-1,019.66	0.00	1,019.66	3,069.45	1,534.72	4,476.09	2,210.57	0.19	-0.18	0.213
13.82	-91.52	-9.46	0.00	-983.27	0.00	983.27	3,035.27	1,517.64	4,350.78	2,148.69	0.35	-0.24	0.208
13.82	-91.52	-9.46	0.00	-983.27	0.00	983.27	3,035.27	1,517.64	4,350.78	2,148.69	0.35	-0.24	0.292
15.00	-90.98	-9.49	0.00	-972.09	0.00	972.09	3,024.57	1,512.28	4,312.14	2,129.61	0.42	-0.26	0.290
20.00	-88.75	-9.46	0.00	-924.65	0.00	924.65	2,978.65	1,489.33	4,149.68	2,049.37	0.76	-0.39	0.284
25.00	-86.58	-9.42	0.00	-877.36	0.00	877.36	2,931.70	1,465.85	3,988.78	1,969.91	1.24	-0.51	0.276
30.00	-84.49	-9.35	0.00	-830.24	0.00	830.24	2,873.79	1,436.89	3,816.40	1,884.77	1.84	-0.64	0.270
31.00	-83.92	-9.32	0.00	-820.90	0.00	820.90	2,859.85	1,429.93	3,779.26	1,866.44	1.98	-0.67	0.269
31.50	-83.71	-9.33	0.00	-816.21	0.00	816.21	2,852.84	1,426.42	3,760.64	1,857.24	2.05	-0.68	0.268
34.00	-82.28	-9.28	0.00	-792.89	0.00	792.89	2,818.05	1,409.02	3,668.95	1,811.96	2.42	-0.74	0.262
35.00	-81.68	-9.26	0.00	-783.61	0.00	783.61	2,804.11	1,402.06	3,632.54	1,793.98	2.58	-0.77	0.260
35.67	-81.31	-9.24	0.00	-777.41	0.00	777.41	2,247.39	1,123.70	2,971.54	1,467.53	2.69	-0.78	0.299
36.00	-81.03	-9.26	0.00	-774.36	0.00	774.36	2,245.17	1,122.59	2,963.78	1,463.70	2.74	-0.79	0.298
40.00	-79.48	-9.22	0.00	-737.33	0.00	737.33	2,217.94	1,108.97	2,870.05	1,417.41	3.45	-0.90	0.290
45.00	-77.57	-9.15	0.00	-691.24	0.00	691.24	2,182.97	1,091.48	2,753.70	1,359.95	4.47	-1.03	0.279
50.00	-75.68	-9.06	0.00	-645.51	0.00	645.51	2,146.96	1,073.48	2,638.35	1,302.98	5.62	-1.16	0.268
55.00	-73.81	-8.96	0.00	-600.21	0.00	600.21	2,109.91	1,054.96	2,524.10	1,246.56	6.90	-1.29	0.256
60.00	-71.96	-8.85	0.00	-555.41	0.00	555.41	2,071.82	1,035.91	2,411.06	1,190.73	8.32	-1.42	0.244
65.00	-70.13	-8.73	0.00	-511.16	0.00	511.16	2,032.70	1,016.35	2,299.33	1,135.55	9.87	-1.54	0.232
70.00	-68.34	-8.57	0.00	-467.53	0.00	467.53	1,981.31	990.65	2,176.68	1,074.98	11.56	-1.67	0.220
70.05	-68.31	-8.58	0.00	-467.07	0.00	467.07	1,980.69	990.35	2,175.31	1,074.30	11.57	-1.67	0.220
73.55	-66.75	-8.47	0.00	-437.03	0.00	437.03	1,473.36	736.68	1,622.77	801.43	12.83	-1.75	0.245
75.00	-66.26	-8.44	0.00	-424.78	0.00	424.78	1,465.95	732.98	1,600.80	790.57	13.36	-1.79	0.240
80.00	-64.59	-8.29	0.00	-382.58	0.00	382.58	1,439.68	719.84	1,525.22	753.25	15.30	-1.91	0.223
85.00	-62.94	-8.13	0.00	-341.14	0.00	341.14	1,412.37	706.19	1,450.29	716.24	17.36	-2.02	0.205
90.00	-61.32	-7.94	0.00	-300.51	0.00	300.51	1,384.02	692.01	1,376.10	679.61	19.54	-2.13	0.187
91.10	-60.62	-7.88	0.00	-291.77	0.00	291.77	1,377.65	688.82	1,359.89	671.60	20.03	-2.16	0.182
91.10	-60.62	-7.88	0.00	-291.77	0.00	291.77	1,377.65	688.82	1,359.89	671.60	20.03	-2.16	0.183
91.50	-60.48	-7.87	0.00	-288.62	0.00	288.62	1,375.32	687.66	1,354.01	668.69	20.21	-2.16	0.181
95.00	-58.96	-7.69	0.00	-261.07	0.00	261.07	1,354.64	677.32	1,302.77	643.39	21.83	-2.24	0.117
98.00	-46.60	-6.05	0.00	-236.10	0.00	236.10	1,336.51	668.25	1,259.21	621.88	23.25	-2.28	0.105
100.00	-45.77	-5.98	0.00	-223.99	0.00	223.99	1,324.21	662.11	1,230.38	607.64	24.21	-2.30	0.101
101.50	-45.10	-5.90	0.00	-215.03	0.00	215.03	1,314.88	657.44	1,208.86	597.01	24.93	-2.32	0.097
101.50	-45.10	-5.90	0.00	-215.03	0.00	215.03	1,314.88	657.44	1,208.86	597.01	24.93	-2.32	0.133
105.00	-43.77	-5.77	0.00	-194.36	0.00	194.36	1,293.27	646.64	1,159.51	572.64	26.65	-2.37	0.124
108.50	-42.49	-5.66	0.00	-174.17	0.00	174.17	1,260.75	630.38	1,101.62	544.05	28.41	-2.42	0.115
108.50	-42.49	-5.66	0.00	-174.17	0.00	174.17	1,260.75	630.38	1,101.62	544.05	28.41	-2.42	0.200
110.00	-42.07	-5.62	0.00	-165.68	0.00	165.68	1,246.82	623.41	1,077.26	532.02	29.18	-2.45	0.194
110.00	-42.07	-5.62	0.00	-165.68	0.00	165.68	1,246.82	623.41	1,077.26	532.02	29.18	-2.45	0.122
110.05	-42.05	-5.60	0.00	-165.39	0.00	165.39	1,246.32	623.16	1,076.40	531.59	29.20	-2.45	0.122
110.05	-42.05	-5.60	0.00	-165.39	0.00	165.39	852.93	426.46	741.03	365.97	29.20	-2.45	0.146
115.00	-38.58	-5.23	0.00	-137.66	0.00	137.66	834.88	417.44	698.45	344.94	31.78	-2.53	0.126
118.00	-36.10	-4.89	0.00	-121.64	0.00	121.64	823.44	411.72	672.79	332.27	33.38	-2.57	0.114
118.50	-35.94	-4.88	0.00	-119.19	0.00	119.19	821.50	410.75	668.53	330.16	33.65	-2.58	0.112
118.50	-35.94	-4.88	0.00	-119.19	0.00	119.19	821.50	410.75	668.53	330.16	33.65	-2.58	0.405
119.00	-35.75	-4.85	0.00	-116.75	0.00	116.75	819.55	409.77	664.27	328.06	33.93	-2.59	0.400
120.00	-35.53	-4.87	0.00	-111.90	0.00	111.90	815.61	407.80	655.76	323.86	34.47	-2.65	0.389
125.00	-34.77	-4.88	0.00	-87.53	0.00	87.53	795.30	397.65	613.53	303.00	37.38	-2.89	0.333
128.00	-26.12	-3.71	0.00	-72.77	0.00	72.77	782.61	391.31	588.45	290.61	39.24	-3.03	0.284

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

4/26/2019 3:59:39 PM

Customer: METRO PCS INC

Load Case: 1.2D + 1.0Di + 1.0Wi

50 mph with 1.00 in Radial Ice

29 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Wind Importance Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

130.00	-25.84	-3.70	0.00	-65.35	0.00	65.35	773.95	386.97	571.85	282.42	40.53	-3.11	0.265
135.00	-25.15	-3.65	0.00	-46.86	0.00	46.86	751.56	375.78	530.84	262.16	43.89	-3.29	0.212
138.00	-19.96	-2.92	0.00	-34.25	0.00	34.25	737.63	368.82	506.58	250.18	45.98	-3.38	0.164
140.00	-19.70	-2.90	0.00	-28.41	0.00	28.41	728.14	364.07	490.58	242.28	47.41	-3.43	0.144
141.00	-17.11	-2.49	0.00	-25.51	0.00	25.51	721.90	360.95	481.67	237.88	48.13	-3.46	0.131
145.00	-16.62	-2.41	0.00	-15.56	0.00	15.56	694.03	347.02	445.00	219.77	51.06	-3.53	0.095
150.00	0.00	-1.37	0.00	-3.53	0.00	3.53	659.19	329.60	401.19	198.13	54.78	-3.57	0.018

<b>Load Case:</b> 1.0D + 1.0W	<b>Serviceability 60 mph</b>	<b>26 Iterations</b>
Gust Response Factor :1.10		Wind Importance Factor :1.00
Dead Load Factor :1.00		
Wind Load Factor :1.00		

**Applied Segment Forces Summary**

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		64.5	0.0					0.0	0.0	64.5	0.0	0.0	0.0
5.00		127.6	751.8					27.0	877.6	154.6	1,629.4	0.0	0.0
10.00		110.4	735.7					27.0	877.6	137.4	1,613.3	0.0	0.0
13.82	Reinf. Top	61.8	550.9					20.6	670.1	82.4	1,221.0	0.0	0.0
15.00		74.9	168.7					6.4	128.5	81.3	297.2	0.0	0.0
20.00		119.4	703.5					27.0	543.6	146.4	1,247.1	0.0	0.0
25.00		116.7	687.5					27.0	543.6	143.7	1,231.1	0.0	0.0
30.00		69.1	671.4					27.0	543.6	96.1	1,215.0	0.0	0.0
31.00	Appurtenance(s)	17.2	132.3	12.3	0.0	0.0	50.0	5.4	108.7	34.9	291.1	0.0	0.0
31.50	Bot - Section 2	35.2	66.4					2.7	54.7	37.9	121.1	0.0	0.0
34.00	Appurtenance(s)	41.2	605.0	5.8	0.0	17.4	10.0	13.8	271.4	60.8	886.5	0.0	0.0
35.00	Appurtenance(s)	19.8	240.3	5.6	0.0	-16.7	10.0	5.6	108.6	31.0	358.8	0.0	0.0
35.67	Top - Section 1	11.9	160.3					3.8	72.6	15.7	233.0	0.0	0.0
36.00	Appurtenance(s)	51.8	36.2	12.8	0.0	0.0	50.0	1.9	35.8	66.5	122.0	0.0	0.0
40.00		108.3	434.5					23.1	433.7	131.4	868.2	0.0	0.0
45.00		121.3	531.0					29.8	542.1	151.1	1,073.1	0.0	0.0
50.00		121.8	517.6					30.8	542.1	152.6	1,059.7	0.0	0.0
55.00		121.9	504.2					31.7	542.1	153.6	1,046.3	0.0	0.0
60.00		121.7	490.8					32.5	542.1	154.2	1,032.9	0.0	0.0
65.00		121.1	477.4					33.3	542.1	154.4	1,019.5	0.0	0.0
70.00		61.0	464.0					34.0	542.1	95.0	1,006.1	0.0	0.0
70.05	Bot - Section 3	43.4	4.9					0.4	5.8	43.7	10.7	0.0	0.0
73.55	Top - Section 2	60.3	575.5					24.2	379.5	84.6	955.0	0.0	0.0
75.00		77.9	105.4					10.1	156.8	88.0	262.3	0.0	0.0
80.00		120.0	357.5					35.4	542.1	155.4	899.6	0.0	0.0
85.00		118.4	346.8					36.0	542.1	154.4	888.9	0.0	0.0
90.00		71.6	336.0					36.6	542.1	108.2	878.1	0.0	0.0
91.10	Reinf. Top Reinf	17.4	72.5					8.1	379.8	25.6	452.3	0.0	0.0
91.50	Reinf Bottom	45.0	26.2					3.0	43.4	48.0	69.6	0.0	0.0
95.00		74.6	226.6					26.1	617.6	100.7	844.2	0.0	0.0
98.00	Appurtenance(s)	56.8	190.0	906.6	0.0	1,880.7	2,669.5	22.6	529.4	986.0	3,388.9	0.0	0.0
100.00		39.4	124.6					15.2	346.5	54.6	471.0	0.0	0.0
101.50	Reinf. Top Reinf	55.7	92.3					11.4	293.3	67.1	385.5	0.0	0.0
105.00		77.1	211.6					26.9	515.5	104.0	727.1	0.0	0.0
108.50	Reinf. Top	54.5	206.3					27.2	515.5	81.6	721.8	0.0	0.0
110.00	Reinf. Top Reinf	16.8	86.8					9.3	118.9	26.1	205.7	0.0	0.0
110.05	Top - Section 3	53.2	3.1					0.4	7.1	53.6	10.2	0.0	0.0
115.00	Appurtenance(s)	83.9	210.2	84.2	0.0	0.0	560.0	38.8	657.6	206.8	1,427.7	0.0	0.0
118.00	Appurtenance(s)	36.4	123.6	158.8	0.0	317.5	262.2	24.1	398.8	219.3	784.6	0.0	0.0
118.50	Reinf. Top Reinf.	10.3	20.3					4.1	66.1	14.4	86.4	0.0	0.0
119.00	Appurtenance(s)	15.4	20.2	10.8	0.0	0.0	10.0	4.1	18.8	30.3	49.1	0.0	0.0
120.00		52.2	40.2					8.2	34.0	60.4	74.2	0.0	0.0
125.00		66.6	196.4					0.0	170.0	66.6	366.4	0.0	0.0
128.00	Appurtenance(s)	40.8	114.0	699.3	0.0	113.5	2,025.3	0.0	102.0	740.1	2,241.3	0.0	0.0
130.00		55.6	74.4					0.0	58.3	55.6	132.7	0.0	0.0
135.00		62.5	180.3					0.0	145.9	62.5	326.2	0.0	0.0
138.00	Appurtenance(s)	38.1	104.3	394.0	0.0	1,576.0	1,045.6	0.0	87.5	432.1	1,237.4	0.0	0.0
140.00		22.5	67.9					0.0	52.3	22.5	120.3	0.0	0.0

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

4/26/2019 3:59:48 PM

Customer: METRO PCS INC

Load Case: 1.0D + 1.0W

Serviceability 60 mph

26 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

141.00	Appurtenance(s)	36.7	33.5	153.5	0.0	0.0	750.0	0.0	26.2	190.3	809.7	0.0	0.0
145.00		64.6	130.7					0.0	102.6	64.6	233.3	0.0	0.0
150.00	Appurtenance(s)	35.3	156.2	344.4	0.0	0.0	2,225.0	0.0	127.4	379.7	2,508.5	0.0	0.0
Totals:										6,872.06	39,141.0	0.00	0.00

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

Serviceability 60 mph

26 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

**Calculated Forces**

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-41.06	-7.66	0.00	-799.56	0.00	799.56	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.155
5.00	-39.42	-7.55	0.00	-761.24	0.00	761.24	3,113.28	1,556.64	4,641.42	2,292.22	0.03	-0.06	0.151
10.00	-37.80	-7.45	0.00	-723.49	0.00	723.49	3,069.45	1,534.72	4,476.09	2,210.57	0.13	-0.13	0.146
13.82	-36.58	-7.38	0.00	-695.05	0.00	695.05	3,035.27	1,517.64	4,350.78	2,148.69	0.25	-0.17	0.142
13.82	-36.58	-7.38	0.00	-695.05	0.00	695.05	3,035.27	1,517.64	4,350.78	2,148.69	0.25	-0.17	0.200
15.00	-36.27	-7.33	0.00	-686.33	0.00	686.33	3,024.57	1,512.28	4,312.14	2,129.61	0.30	-0.19	0.199
20.00	-35.02	-7.23	0.00	-649.66	0.00	649.66	2,978.65	1,489.33	4,149.68	2,049.37	0.54	-0.28	0.193
25.00	-33.77	-7.14	0.00	-613.49	0.00	613.49	2,931.70	1,465.85	3,988.78	1,969.91	0.88	-0.36	0.187
30.00	-32.55	-7.06	0.00	-577.81	0.00	577.81	2,873.79	1,436.89	3,816.40	1,884.77	1.31	-0.45	0.182
31.00	-32.26	-7.03	0.00	-570.75	0.00	570.75	2,859.85	1,429.93	3,779.26	1,866.44	1.40	-0.47	0.181
31.50	-32.14	-7.01	0.00	-567.21	0.00	567.21	2,852.84	1,426.42	3,760.64	1,857.24	1.45	-0.48	0.180
34.00	-31.25	-6.96	0.00	-549.70	0.00	549.70	2,818.05	1,409.02	3,668.95	1,811.96	1.72	-0.52	0.175
35.00	-30.89	-6.93	0.00	-542.74	0.00	542.74	2,804.11	1,402.06	3,632.54	1,793.98	1.83	-0.54	0.174
35.67	-30.65	-6.92	0.00	-538.10	0.00	538.10	2,247.39	1,123.70	2,971.54	1,467.53	1.90	-0.55	0.200
36.00	-30.53	-6.87	0.00	-535.82	0.00	535.82	2,245.17	1,122.59	2,963.78	1,463.70	1.94	-0.56	0.199
40.00	-29.65	-6.77	0.00	-508.34	0.00	508.34	2,217.94	1,108.97	2,870.05	1,417.41	2.44	-0.63	0.193
45.00	-28.57	-6.65	0.00	-474.48	0.00	474.48	2,182.97	1,091.48	2,753.70	1,359.95	3.15	-0.72	0.185
50.00	-27.50	-6.53	0.00	-441.21	0.00	441.21	2,146.96	1,073.48	2,638.35	1,302.98	3.95	-0.81	0.176
55.00	-26.45	-6.40	0.00	-408.57	0.00	408.57	2,109.91	1,054.96	2,524.10	1,246.56	4.85	-0.90	0.168
60.00	-25.41	-6.27	0.00	-376.57	0.00	376.57	2,071.82	1,035.91	2,411.06	1,190.73	5.84	-0.99	0.159
65.00	-24.38	-6.13	0.00	-345.24	0.00	345.24	2,032.70	1,016.35	2,299.33	1,135.55	6.92	-1.07	0.150
70.00	-23.37	-6.03	0.00	-314.59	0.00	314.59	1,981.31	990.65	2,176.68	1,074.98	8.08	-1.15	0.141
70.05	-23.36	-6.00	0.00	-314.27	0.00	314.27	1,980.69	990.35	2,175.31	1,074.30	8.09	-1.15	0.141
73.55	-22.40	-5.91	0.00	-293.27	0.00	293.27	1,473.36	736.68	1,622.77	801.43	8.96	-1.21	0.157
75.00	-22.14	-5.84	0.00	-284.72	0.00	284.72	1,465.95	732.98	1,600.80	790.57	9.33	-1.23	0.153
80.00	-21.24	-5.69	0.00	-255.53	0.00	255.53	1,439.68	719.84	1,525.22	753.25	10.67	-1.31	0.141
85.00	-20.34	-5.54	0.00	-227.07	0.00	227.07	1,412.37	706.19	1,450.29	716.24	12.09	-1.39	0.129
90.00	-19.46	-5.43	0.00	-199.35	0.00	199.35	1,384.02	692.01	1,376.10	679.61	13.58	-1.46	0.116
91.10	-19.01	-5.39	0.00	-193.38	0.00	193.38	1,377.65	688.82	1,359.89	671.60	13.92	-1.48	0.113
91.10	-19.01	-5.39	0.00	-193.38	0.00	193.38	1,377.65	688.82	1,359.89	671.60	13.92	-1.48	0.113
91.50	-18.94	-5.35	0.00	-191.22	0.00	191.22	1,375.32	687.66	1,354.01	668.69	14.05	-1.49	0.112
95.00	-18.10	-5.24	0.00	-172.49	0.00	172.49	1,354.64	677.32	1,302.77	643.39	15.16	-1.53	0.072
98.00	-14.73	-4.17	0.00	-154.88	0.00	154.88	1,336.51	668.25	1,259.21	621.88	16.13	-1.56	0.065
100.00	-14.26	-4.11	0.00	-146.53	0.00	146.53	1,324.21	662.11	1,230.38	607.64	16.79	-1.58	0.062
101.50	-13.88	-4.03	0.00	-140.37	0.00	140.37	1,314.88	657.44	1,208.86	597.01	17.28	-1.59	0.060
101.50	-13.88	-4.03	0.00	-140.37	0.00	140.37	1,314.88	657.44	1,208.86	597.01	17.28	-1.59	0.083
105.00	-13.15	-3.92	0.00	-126.25	0.00	126.25	1,293.27	646.64	1,159.51	572.64	18.46	-1.62	0.076
108.50	-12.43	-3.82	0.00	-112.54	0.00	112.54	1,260.75	630.38	1,101.62	544.05	19.66	-1.66	0.070
108.50	-12.43	-3.82	0.00	-112.54	0.00	112.54	1,260.75	630.38	1,101.62	544.05	19.66	-1.66	0.122
110.00	-12.23	-3.79	0.00	-106.81	0.00	106.81	1,246.82	623.41	1,077.26	532.02	20.19	-1.67	0.118
110.00	-12.23	-3.79	0.00	-106.81	0.00	106.81	1,246.82	623.41	1,077.26	532.02	20.19	-1.67	0.074
110.05	-12.22	-3.74	0.00	-106.61	0.00	106.61	1,246.32	623.16	1,076.40	531.59	20.20	-1.67	0.074
110.05	-12.22	-3.74	0.00	-106.61	0.00	106.61	852.93	426.46	741.03	365.97	20.20	-1.67	0.089
115.00	-10.79	-3.50	0.00	-88.09	0.00	88.09	834.88	417.44	698.45	344.94	21.96	-1.72	0.076
118.00	-10.01	-3.26	0.00	-77.27	0.00	77.27	823.44	411.72	672.79	332.27	23.06	-1.75	0.068
118.50	-9.93	-3.25	0.00	-75.64	0.00	75.64	821.50	410.75	668.53	330.16	23.24	-1.76	0.067
118.50	-9.93	-3.25	0.00	-75.64	0.00	75.64	821.50	410.75	668.53	330.16	23.24	-1.76	0.241
119.00	-9.88	-3.22	0.00	-74.02	0.00	74.02	819.55	409.77	664.27	328.06	23.42	-1.76	0.238
120.00	-9.80	-3.17	0.00	-70.80	0.00	70.80	815.61	407.80	655.76	323.86	23.80	-1.80	0.231
125.00	-9.43	-3.11	0.00	-54.95	0.00	54.95	795.30	397.65	613.53	303.00	25.77	-1.95	0.193
128.00	-7.21	-2.30	0.00	-45.50	0.00	45.50	782.61	391.31	588.45	290.61	27.02	-2.04	0.166

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

4/26/2019 3:59:49 PM

Customer: METRO PCS INC

Load Case: 1.0D + 1.0W

Serviceability 60 mph

26 Iterations

Gust Response Factor :1.10

Wind Importance Factor :1.00

Dead Load Factor :1.00

Wind Load Factor :1.00

130.00	-7.08	-2.25	0.00	-40.89	0.00	40.89	773.95	386.97	571.85	282.42	27.89	-2.09	0.154
135.00	-6.75	-2.19	0.00	-29.62	0.00	29.62	751.56	375.78	530.84	262.16	30.14	-2.20	0.122
138.00	-5.53	-1.71	0.00	-21.48	0.00	21.48	737.63	368.82	506.58	250.18	31.54	-2.26	0.093
140.00	-5.41	-1.69	0.00	-18.06	0.00	18.06	728.14	364.07	490.58	242.28	32.50	-2.29	0.082
141.00	-4.61	-1.47	0.00	-16.37	0.00	16.37	721.90	360.95	481.67	237.88	32.98	-2.31	0.075
145.00	-4.38	-1.40	0.00	-10.50	0.00	10.50	694.03	347.02	445.00	219.77	34.93	-2.35	0.054
150.00	0.00	-1.21	0.00	-3.51	0.00	3.51	659.19	329.60	401.19	198.13	37.42	-2.39	0.018



### Equivalent Lateral Forces Method Analysis

(Based on ASCE7-10 Chapters 11, 12, 15)

Spectral Response Acceleration for Short Period ( $S_s$ ):	0.18
Spectral Response Acceleration at 1.0 Second Period ( $S_1$ ):	0.06
Long-Period Transition Period ( $T_L$ ):	6
Importance Factor ( $I_E$ ):	1.00
Site Coefficient $F_a$ :	1.60
Site Coefficient $F_v$ :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.19
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.10
Seismic Response Coefficient ( $C_s$ ):	0.03
Upper Limit $C_s$	0.03
Lower Limit $C_s$	0.03
Period based on Rayleigh Method (sec):	3.06
Redundancy Factor ( $\rho$ ):	1.30
Seismic Force Distribution Exponent (k):	2.00
Total Unfactored Dead Load:	41.06 k
Seismic Base Shear (E):	1.60 k

#### Load Case (1.2 + 0.2Sds) \* DL + E ELFM      Seismic Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	$W_z$ (lb-ft)	$C_{vx}$	Horizontal Force (lb)	Vertical Force (lb)
50	147.50	284	6,168	0.018	28	351
49	143.00	233	4,771	0.014	22	289
48	140.50	60	1,178	0.003	5	74
47	139.00	120	2,324	0.007	11	149
46	136.50	192	3,574	0.010	16	238
45	132.50	326	5,726	0.016	26	404
44	129.00	133	2,208	0.006	10	164
43	126.50	216	3,456	0.010	16	267
42	122.50	366	5,498	0.016	25	454
41	119.50	74	1,060	0.003	5	92
40	118.75	39	551	0.002	3	48
39	118.25	86	1,208	0.003	6	107
38	116.50	522	7,090	0.020	32	647
37	112.53	868	10,987	0.031	50	1,075
36	110.03	10	123	0.000	1	13
35	109.25	206	2,455	0.007	11	255
34	106.75	722	8,225	0.023	38	894
33	103.25	727	7,751	0.022	35	900
32	100.75	386	3,914	0.011	18	477
31	99.00	471	4,617	0.013	21	583
30	96.50	719	6,699	0.019	31	891
29	93.25	844	7,341	0.021	34	1,045
28	91.30	70	580	0.002	3	86

27	90.55	452	3,708	0.011	17	560
26	87.50	878	6,723	0.019	31	1,087
25	82.50	889	6,050	0.017	28	1,101
24	77.50	900	5,403	0.015	25	1,114
23	74.28	262	1,447	0.004	7	325
22	71.80	955	4,924	0.014	22	1,183
21	70.03	11	52	0.000	0	13
20	67.50	1,006	4,584	0.013	21	1,246
19	62.50	1,020	3,983	0.011	18	1,263
18	57.50	1,033	3,415	0.010	16	1,279
17	52.50	1,046	2,884	0.008	13	1,296
16	47.50	1,060	2,391	0.007	11	1,312
15	42.50	1,073	1,938	0.006	9	1,329
14	38.00	868	1,254	0.004	6	1,075
13	35.83	72	92	0.000	0	89
12	35.33	233	291	0.001	1	288
11	34.50	349	415	0.001	2	432
10	32.75	876	940	0.003	4	1,085
9	31.25	121	118	0.000	1	150
8	30.50	241	224	0.001	1	299
7	27.50	1,215	919	0.003	4	1,505
6	22.50	1,231	623	0.002	3	1,525
5	17.50	1,247	382	0.001	2	1,544
4	14.41	297	62	0.000	0	368
3	11.91	1,221	173	0.000	1	1,512
2	7.50	1,613	91	0.000	0	1,998
1	2.50	1,629	10	0.000	0	2,018
Powerwave Allgon 702	153.00	13	309	0.001	1	16
Kaelus DBCT108F1V92-	153.00	42	976	0.003	4	52
Powerwave Allgon LGP	153.00	85	1,980	0.006	9	105
Raycap DC6-48-60-18-	153.00	40	936	0.003	4	50
Raycap DC6-48-60-18-	153.00	20	468	0.001	2	25
Ericsson Radio 8843	153.00	216	5,049	0.014	23	267
Ericsson RRUS 4449 B	153.00	213	4,986	0.014	23	264
Ericsson RRUS 4478 B	153.00	178	4,171	0.012	19	221
Ericsson RRUS-32 (77	153.00	231	5,407	0.015	25	286
Powerwave Allgon 777	153.00	81	1,896	0.005	9	100
CCI OPA-65R-LCUU-H6	153.00	219	5,127	0.015	23	271
Kathrein Scala 80010	153.00	586	13,708	0.039	63	725
Generic Round Side A	150.00	225	5,063	0.014	23	279
Round Platform w/ Ha	150.00	2,000	45,000	0.128	206	2,477
Round T-Arm	141.00	750	14,911	0.043	68	929
RFS IBC1900HG-2A	138.00	66	1,257	0.004	6	82
RFS IBC1900BB-1	138.00	66	1,257	0.004	6	82
Alcatel-Lucent 4X40W	138.00	178	3,399	0.010	16	221
Alcatel-Lucent 800 M	138.00	185	3,531	0.010	16	230
Alcatel-Lucent TD-RR	138.00	210	3,999	0.011	18	260
RFS APXVTM14-C-I20	138.00	159	3,022	0.009	14	197
RFS APXVSP18-C-A20	138.00	57	1,086	0.003	5	71
RFS APXV9ERR18-C-A20	138.00	124	2,361	0.007	11	154
Ericsson Radio 4449	128.00	222	3,637	0.010	17	275
Ericsson AIR 21	128.00	273	4,473	0.013	20	338
Ericsson AIR32 B66Aa	128.00	397	6,498	0.019	30	491
Round T-Arm	128.00	750	12,288	0.035	56	929
RFS APXVAARR24_43-U-	128.00	384	6,287	0.018	29	475
Generic 12" x 12" Ju	119.00	10	142	0.000	1	12
DragonWave Horizon C	118.00	32	443	0.001	2	39
DragonWave A-ANT-23G	118.00	15	209	0.001	1	19
NextNet BTS-2500	118.00	105	1,462	0.004	7	130
Argus LLPX310R	118.00	86	1,195	0.003	5	106
DragonWave A-ANT-23G	118.00	25	343	0.001	2	30
Collar	115.00	560	7,406	0.021	34	694
Alcatel-Lucent RRH2X	98.00	138	1,325	0.004	6	171
Alcatel-Lucent RRH2x	98.00	170	1,634	0.005	7	211

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

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Customer: METRO PCS INC

Alcatel-Lucent RRH2X	98.00	165	1,585	0.005	7	204
RFS DB-T1-6Z-8AB-0Z	98.00	88	845	0.002	4	109
Andrew SBNHH-1D65B	98.00	608	5,843	0.017	27	753
Generic Flat Light S	98.00	1,500	14,406	0.041	66	1,858
Stand-off	36.00	50	65	0.000	0	62
Generic GPS	35.00	10	12	0.000	0	12
Generic GPS	34.00	10	12	0.000	0	12
Stand-off	31.00	50	48	0.000	0	62
		41,064	350,660	1.000	1,601	50,854

Load Case (0.9 - 0.2Sds) \* DL + E ELFM

Seismic (Reduced DL) Equivalent Lateral Forces Method

Segment	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
50	147.50	284	6,168	0.018	28	244
49	143.00	233	4,771	0.014	22	201
48	140.50	60	1,178	0.003	5	51
47	139.00	120	2,324	0.007	11	104
46	136.50	192	3,574	0.010	16	165
45	132.50	326	5,726	0.016	26	281
44	129.00	133	2,208	0.006	10	114
43	126.50	216	3,456	0.010	16	186
42	122.50	366	5,498	0.016	25	316
41	119.50	74	1,060	0.003	5	64
40	118.75	39	551	0.002	3	34
39	118.25	86	1,208	0.003	6	74
38	116.50	522	7,090	0.020	32	450
37	112.53	868	10,987	0.031	50	748
36	110.03	10	123	0.000	1	9
35	109.25	206	2,455	0.007	11	177
34	106.75	722	8,225	0.023	38	622
33	103.25	727	7,751	0.022	35	626
32	100.75	386	3,914	0.011	18	332
31	99.00	471	4,617	0.013	21	406
30	96.50	719	6,699	0.019	31	620
29	93.25	844	7,341	0.021	34	727
28	91.30	70	580	0.002	3	60
27	90.55	452	3,708	0.011	17	390
26	87.50	878	6,723	0.019	31	757
25	82.50	889	6,050	0.017	28	766
24	77.50	900	5,403	0.015	25	775
23	74.28	262	1,447	0.004	7	226
22	71.80	955	4,924	0.014	22	823
21	70.03	11	52	0.000	0	9
20	67.50	1,006	4,584	0.013	21	867
19	62.50	1,020	3,983	0.011	18	878
18	57.50	1,033	3,415	0.010	16	890
17	52.50	1,046	2,884	0.008	13	902
16	47.50	1,060	2,391	0.007	11	913
15	42.50	1,073	1,938	0.006	9	925
14	38.00	868	1,254	0.004	6	748
13	35.83	72	92	0.000	0	62
12	35.33	233	291	0.001	1	201
11	34.50	349	415	0.001	2	301
10	32.75	876	940	0.003	4	755
9	31.25	121	118	0.000	1	104
8	30.50	241	224	0.001	1	208
7	27.50	1,215	919	0.003	4	1,047
6	22.50	1,231	623	0.002	3	1,061
5	17.50	1,247	382	0.001	2	1,075

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

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Customer: METRO PCS INC

4	14.41	297	62	0.000	0	256
3	11.91	1,221	173	0.000	1	1,052
2	7.50	1,613	91	0.000	0	1,390
1	2.50	1,629	10	0.000	0	1,404
Powerwave Allgon 702	153.00	13	309	0.001	1	11
Kaelus DBCT108F1V92-	153.00	42	976	0.003	4	36
Powerwave Allgon LGP	153.00	85	1,980	0.006	9	73
Raycap DC6-48-60-18-	153.00	40	936	0.003	4	34
Raycap DC6-48-60-18-	153.00	20	468	0.001	2	17
Ericsson Radio 8843	153.00	216	5,049	0.014	23	186
Ericsson RRUS 4449 B	153.00	213	4,986	0.014	23	184
Ericsson RRUS 4478 B	153.00	178	4,171	0.012	19	154
Ericsson RRUS-32 (77	153.00	231	5,407	0.015	25	199
Powerwave Allgon 777	153.00	81	1,896	0.005	9	70
CCI OPA-65R-LCUU-H6	153.00	219	5,127	0.015	23	189
Kathrein Scala 80010	153.00	586	13,708	0.039	63	505
Generic Round Side A	150.00	225	5,063	0.014	23	194
Round Platform w/ Ha	150.00	2,000	45,000	0.128	206	1,723
Round T-Arm	141.00	750	14,911	0.043	68	646
RFS IBC1900HG-2A	138.00	66	1,257	0.004	6	57
RFS IBC1900BB-1	138.00	66	1,257	0.004	6	57
Alcatel-Lucent 4X40W	138.00	178	3,399	0.010	16	154
Alcatel-Lucent 800 M	138.00	185	3,531	0.010	16	160
Alcatel-Lucent TD-RR	138.00	210	3,999	0.011	18	181
RFS APXVTM14-C-I20	138.00	159	3,022	0.009	14	137
RFS APXVSP18-C-A20	138.00	57	1,086	0.003	5	49
RFS APXV9ERR18-C-A20	138.00	124	2,361	0.007	11	107
Ericsson Radio 4449	128.00	222	3,637	0.010	17	191
Ericsson AIR 21	128.00	273	4,473	0.013	20	235
Ericsson AIR32 B66Aa	128.00	397	6,498	0.019	30	342
Round T-Arm	128.00	750	12,288	0.035	56	646
RFS APXVAARR24_43-U-	128.00	384	6,287	0.018	29	331
Generic 12" x 12" Ju	119.00	10	142	0.000	1	9
DragonWave Horizon C	118.00	32	443	0.001	2	27
DragonWave A-ANT-23G	118.00	15	209	0.001	1	13
NextNet BTS-2500	118.00	105	1,462	0.004	7	90
Argus LLPX310R	118.00	86	1,195	0.003	5	74
DragonWave A-ANT-23G	118.00	25	343	0.001	2	21
Collar	115.00	560	7,406	0.021	34	482
Alcatel-Lucent RRH2X	98.00	138	1,325	0.004	6	119
Alcatel-Lucent RRH2x	98.00	170	1,634	0.005	7	147
Alcatel-Lucent RRH2X	98.00	165	1,585	0.005	7	142
RFS DB-T1-6Z-8AB-0Z	98.00	88	845	0.002	4	76
Andrew SBNHH-1D65B	98.00	608	5,843	0.017	27	524
Generic Flat Light S	98.00	1,500	14,406	0.041	66	1,292
Stand-off	36.00	50	65	0.000	0	43
Generic GPS	35.00	10	12	0.000	0	9
Generic GPS	34.00	10	12	0.000	0	9
Stand-off	31.00	50	48	0.000	0	43
		41,064	350,660	1.000	1,601	35,381

Load Case (1.2 + 0.2Sds) \* DL + E ELFM Seismic Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-46.45	-1.40	0.00	-171.19	0.00	171.19	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.040
5.00	-44.46	-1.41	0.00	-164.18	0.00	164.18	3,113.28	1,556.64	4,641.42	2,292.22	0.01	-0.01	0.039
10.00	-42.94	-1.42	0.00	-157.13	0.00	157.13	3,069.45	1,534.72	4,476.09	2,210.57	0.03	-0.03	0.038
13.82	-42.58	-1.42	0.00	-151.72	0.00	151.72	3,035.27	1,517.64	4,350.78	2,148.69	0.05	-0.04	0.037
13.82	-42.58	-1.42	0.00	-151.72	0.00	151.72	3,035.27	1,517.64	4,350.78	2,148.69	0.05	-0.04	0.051
15.00	-41.03	-1.43	0.00	-150.04	0.00	150.04	3,024.57	1,512.28	4,312.14	2,129.61	0.06	-0.04	0.051
20.00	-39.51	-1.44	0.00	-142.90	0.00	142.90	2,978.65	1,489.33	4,149.68	2,049.37	0.12	-0.06	0.050
25.00	-38.00	-1.44	0.00	-135.71	0.00	135.71	2,931.70	1,465.85	3,988.78	1,969.91	0.19	-0.08	0.048
30.00	-37.70	-1.45	0.00	-128.49	0.00	128.49	2,873.79	1,436.89	3,816.40	1,884.77	0.28	-0.10	0.047
31.00	-37.49	-1.45	0.00	-127.04	0.00	127.04	2,859.85	1,429.93	3,779.26	1,866.44	0.30	-0.10	0.047
31.50	-36.40	-1.45	0.00	-126.31	0.00	126.31	2,852.84	1,426.42	3,760.64	1,857.24	0.32	-0.10	0.047
34.00	-35.96	-1.45	0.00	-122.70	0.00	122.70	2,818.05	1,409.02	3,668.95	1,811.96	0.37	-0.11	0.046
35.00	-35.66	-1.45	0.00	-121.25	0.00	121.25	2,804.11	1,402.06	3,632.54	1,793.98	0.40	-0.12	0.046
35.67	-35.57	-1.45	0.00	-120.28	0.00	120.28	2,247.39	1,123.70	2,971.54	1,467.53	0.41	-0.12	0.053
36.00	-34.43	-1.45	0.00	-119.80	0.00	119.80	2,245.17	1,122.59	2,963.78	1,463.70	0.42	-0.12	0.052
40.00	-33.10	-1.45	0.00	-114.01	0.00	114.01	2,217.94	1,108.97	2,870.05	1,417.41	0.53	-0.14	0.051
45.00	-31.79	-1.44	0.00	-106.78	0.00	106.78	2,182.97	1,091.48	2,753.70	1,359.95	0.69	-0.16	0.049
50.00	-30.49	-1.44	0.00	-99.56	0.00	99.56	2,146.96	1,073.48	2,638.35	1,302.98	0.87	-0.18	0.047
55.00	-29.21	-1.43	0.00	-92.38	0.00	92.38	2,109.91	1,054.96	2,524.10	1,246.56	1.07	-0.20	0.044
60.00	-27.95	-1.41	0.00	-85.24	0.00	85.24	2,071.82	1,035.91	2,411.06	1,190.73	1.28	-0.22	0.042
65.00	-26.70	-1.40	0.00	-78.17	0.00	78.17	2,032.70	1,016.35	2,299.33	1,135.55	1.52	-0.24	0.040
70.00	-26.69	-1.40	0.00	-71.19	0.00	71.19	1,981.31	990.65	2,176.68	1,074.98	1.78	-0.26	0.038
70.05	-25.51	-1.38	0.00	-71.12	0.00	71.12	1,980.69	990.35	2,175.31	1,074.30	1.79	-0.26	0.038
73.55	-25.18	-1.37	0.00	-66.30	0.00	66.30	1,473.36	736.68	1,622.77	801.43	1.98	-0.27	0.043
75.00	-24.07	-1.35	0.00	-64.32	0.00	64.32	1,465.95	732.98	1,600.80	790.57	2.06	-0.27	0.041
80.00	-22.97	-1.32	0.00	-57.58	0.00	57.58	1,439.68	719.84	1,525.22	753.25	2.36	-0.29	0.038
85.00	-21.88	-1.29	0.00	-50.98	0.00	50.98	1,412.37	706.19	1,450.29	716.24	2.68	-0.31	0.035
90.00	-21.32	-1.27	0.00	-44.52	0.00	44.52	1,384.02	692.01	1,376.10	679.61	3.01	-0.33	0.032
91.10	-21.23	-1.27	0.00	-43.12	0.00	43.12	1,377.65	688.82	1,359.89	671.60	3.09	-0.33	0.031
91.10	-21.23	-1.27	0.00	-43.12	0.00	43.12	1,377.65	688.82	1,359.89	671.60	3.09	-0.33	0.031
91.50	-20.19	-1.23	0.00	-42.61	0.00	42.61	1,375.32	687.66	1,354.01	668.69	3.11	-0.33	0.031
95.00	-19.30	-1.20	0.00	-38.29	0.00	38.29	1,354.64	677.32	1,302.77	643.39	3.36	-0.34	0.020
98.00	-15.41	-1.04	0.00	-34.69	0.00	34.69	1,336.51	668.25	1,259.21	621.88	3.58	-0.35	0.017
100.00	-14.93	-1.02	0.00	-32.60	0.00	32.60	1,324.21	662.11	1,230.38	607.64	3.73	-0.35	0.017
101.50	-14.03	-0.98	0.00	-31.07	0.00	31.07	1,314.88	657.44	1,208.86	597.01	3.84	-0.36	0.016
101.50	-14.03	-0.98	0.00	-31.07	0.00	31.07	1,314.88	657.44	1,208.86	597.01	3.84	-0.36	0.021
105.00	-13.14	-0.94	0.00	-27.64	0.00	27.64	1,293.27	646.64	1,159.51	572.64	4.10	-0.36	0.019
108.50	-12.88	-0.93	0.00	-24.34	0.00	24.34	1,260.75	630.38	1,101.62	544.05	4.37	-0.37	0.018
108.50	-12.88	-0.93	0.00	-24.34	0.00	24.34	1,260.75	630.38	1,101.62	544.05	4.37	-0.37	0.031
110.00	-12.87	-0.93	0.00	-22.95	0.00	22.95	1,246.82	623.41	1,077.26	532.02	4.48	-0.37	0.030
110.00	-12.87	-0.93	0.00	-22.95	0.00	22.95	1,246.82	623.41	1,077.26	532.02	4.48	-0.37	0.019
110.05	-11.80	-0.87	0.00	-22.90	0.00	22.90	1,246.32	623.16	1,076.40	531.59	4.49	-0.37	0.019
110.05	-11.80	-0.87	0.00	-22.90	0.00	22.90	852.93	426.46	741.03	365.97	4.49	-0.37	0.022
115.00	-10.46	-0.80	0.00	-18.59	0.00	18.59	834.88	417.44	698.45	344.94	4.88	-0.38	0.019
118.00	-10.02	-0.77	0.00	-16.19	0.00	16.19	823.44	411.72	672.79	332.27	5.12	-0.39	0.017
118.50	-9.98	-0.77	0.00	-15.80	0.00	15.80	821.50	410.75	668.53	330.16	5.16	-0.39	0.017
118.50	-9.98	-0.77	0.00	-15.80	0.00	15.80	821.50	410.75	668.53	330.16	5.16	-0.39	0.060
119.00	-9.87	-0.77	0.00	-15.42	0.00	15.42	819.55	409.77	664.27	328.06	5.21	-0.39	0.059
120.00	-9.42	-0.74	0.00	-14.65	0.00	14.65	815.61	407.80	655.76	323.86	5.29	-0.40	0.057
125.00	-9.15	-0.73	0.00	-10.94	0.00	10.94	795.30	397.65	613.53	303.00	5.72	-0.43	0.048
128.00	-6.48	-0.55	0.00	-8.76	0.00	8.76	782.61	391.31	588.45	290.61	6.00	-0.45	0.038
130.00	-6.08	-0.52	0.00	-7.67	0.00	7.67	773.95	386.97	571.85	282.42	6.19	-0.46	0.035
135.00	-5.84	-0.50	0.00	-5.07	0.00	5.07	751.56	375.78	530.84	262.16	6.68	-0.48	0.027
138.00	-4.39	-0.39	0.00	-3.56	0.00	3.56	737.63	368.82	506.58	250.18	6.98	-0.49	0.020
140.00	-4.32	-0.38	0.00	-2.78	0.00	2.78	728.14	364.07	490.58	242.28	7.19	-0.49	0.017
141.00	-3.10	-0.28	0.00	-2.40	0.00	2.40	721.90	360.95	481.67	237.88	7.29	-0.49	0.014

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Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

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Customer: METRO PCS INC

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145.00	-2.75	-0.25	0.00	-1.26	0.00	1.26	694.03	347.02	445.00	219.77	7.71	-0.50	0.010
150.00	0.00	-0.23	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	8.24	-0.50	0.000

Load Case (0.9 - 0.2Sds) \* DL + E ELMF

Seismic (Reduced DL) Equivalent Lateral Forces Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-32.32	-1.40	0.00	-167.56	0.00	167.56	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.037
5.00	-30.93	-1.41	0.00	-160.56	0.00	160.56	3,113.28	1,556.64	4,641.42	2,292.22	0.01	-0.01	0.036
10.00	-29.88	-1.41	0.00	-153.53	0.00	153.53	3,069.45	1,534.72	4,476.09	2,210.57	0.03	-0.03	0.035
13.82	-29.62	-1.41	0.00	-148.15	0.00	148.15	3,035.27	1,517.64	4,350.78	2,148.69	0.05	-0.04	0.034
13.82	-29.62	-1.41	0.00	-148.15	0.00	148.15	3,035.27	1,517.64	4,350.78	2,148.69	0.05	-0.04	0.048
15.00	-28.55	-1.42	0.00	-146.48	0.00	146.48	3,024.57	1,512.28	4,312.14	2,129.61	0.06	-0.04	0.047
20.00	-27.49	-1.42	0.00	-139.40	0.00	139.40	2,978.65	1,489.33	4,149.68	2,049.37	0.11	-0.06	0.046
25.00	-26.44	-1.42	0.00	-132.29	0.00	132.29	2,931.70	1,465.85	3,988.78	1,969.91	0.19	-0.08	0.045
30.00	-26.23	-1.43	0.00	-125.16	0.00	125.16	2,873.79	1,436.89	3,816.40	1,884.77	0.28	-0.10	0.044
31.00	-26.08	-1.43	0.00	-123.73	0.00	123.73	2,859.85	1,429.93	3,779.26	1,866.44	0.30	-0.10	0.044
31.50	-25.33	-1.43	0.00	-123.02	0.00	123.02	2,852.84	1,426.42	3,760.64	1,857.24	0.31	-0.10	0.043
34.00	-25.02	-1.43	0.00	-119.45	0.00	119.45	2,818.05	1,409.02	3,668.95	1,811.96	0.36	-0.11	0.042
35.00	-24.81	-1.43	0.00	-118.03	0.00	118.03	2,804.11	1,402.06	3,632.54	1,793.98	0.39	-0.12	0.042
35.67	-24.75	-1.43	0.00	-117.07	0.00	117.07	2,247.39	1,123.70	2,971.54	1,467.53	0.40	-0.12	0.048
36.00	-23.95	-1.42	0.00	-116.60	0.00	116.60	2,245.17	1,122.59	2,963.78	1,463.70	0.41	-0.12	0.048
40.00	-23.03	-1.42	0.00	-110.91	0.00	110.91	2,217.94	1,108.97	2,870.05	1,417.41	0.52	-0.14	0.047
45.00	-22.12	-1.41	0.00	-103.82	0.00	103.82	2,182.97	1,091.48	2,753.70	1,359.95	0.67	-0.16	0.045
50.00	-21.21	-1.40	0.00	-96.76	0.00	96.76	2,146.96	1,073.48	2,638.35	1,302.98	0.85	-0.17	0.043
55.00	-20.32	-1.39	0.00	-89.73	0.00	89.73	2,109.91	1,054.96	2,524.10	1,246.56	1.04	-0.19	0.041
60.00	-19.45	-1.38	0.00	-82.77	0.00	82.77	2,071.82	1,035.91	2,411.06	1,190.73	1.25	-0.21	0.039
65.00	-18.58	-1.36	0.00	-75.88	0.00	75.88	2,032.70	1,016.35	2,299.33	1,135.55	1.49	-0.23	0.037
70.00	-18.57	-1.36	0.00	-69.08	0.00	69.08	1,981.31	990.65	2,176.68	1,074.98	1.74	-0.25	0.035
70.05	-17.75	-1.34	0.00	-69.01	0.00	69.01	1,980.69	990.35	2,175.31	1,074.30	1.74	-0.25	0.035
73.55	-17.52	-1.33	0.00	-64.33	0.00	64.33	1,473.36	736.68	1,622.77	801.43	1.93	-0.26	0.039
75.00	-16.74	-1.31	0.00	-62.40	0.00	62.40	1,465.95	732.98	1,600.80	790.57	2.01	-0.27	0.038
80.00	-15.98	-1.28	0.00	-55.86	0.00	55.86	1,439.68	719.84	1,525.22	753.25	2.30	-0.29	0.035
85.00	-15.22	-1.25	0.00	-49.45	0.00	49.45	1,412.37	706.19	1,450.29	716.24	2.61	-0.30	0.032
90.00	-14.83	-1.23	0.00	-43.19	0.00	43.19	1,384.02	692.01	1,376.10	679.61	2.93	-0.32	0.029
91.10	-14.77	-1.23	0.00	-41.83	0.00	41.83	1,377.65	688.82	1,359.89	671.60	3.01	-0.32	0.028
91.10	-14.77	-1.23	0.00	-41.83	0.00	41.83	1,377.65	688.82	1,359.89	671.60	3.01	-0.32	0.028
91.50	-14.04	-1.20	0.00	-41.34	0.00	41.34	1,375.32	687.66	1,354.01	668.69	3.03	-0.32	0.028
95.00	-13.42	-1.16	0.00	-37.15	0.00	37.15	1,354.64	677.32	1,302.77	643.39	3.27	-0.33	0.018
98.00	-10.72	-1.01	0.00	-33.66	0.00	33.66	1,336.51	668.25	1,259.21	621.88	3.49	-0.34	0.016
100.00	-10.39	-0.99	0.00	-31.64	0.00	31.64	1,324.21	662.11	1,230.38	607.64	3.63	-0.34	0.015
101.50	-9.76	-0.95	0.00	-30.15	0.00	30.15	1,314.88	657.44	1,208.86	597.01	3.74	-0.35	0.014
101.50	-9.76	-0.95	0.00	-30.15	0.00	30.15	1,314.88	657.44	1,208.86	597.01	3.74	-0.35	0.020
105.00	-9.14	-0.91	0.00	-26.81	0.00	26.81	1,293.27	646.64	1,159.51	572.64	3.99	-0.35	0.018
108.50	-8.96	-0.90	0.00	-23.62	0.00	23.62	1,260.75	630.38	1,101.62	544.05	4.25	-0.36	0.016
108.50	-8.96	-0.90	0.00	-23.62	0.00	23.62	1,260.75	630.38	1,101.62	544.05	4.25	-0.36	0.029
110.00	-8.95	-0.90	0.00	-22.26	0.00	22.26	1,246.82	623.41	1,077.26	532.02	4.37	-0.36	0.028
110.00	-8.95	-0.90	0.00	-22.26	0.00	22.26	1,246.82	623.41	1,077.26	532.02	4.37	-0.36	0.017
110.05	-8.21	-0.85	0.00	-22.22	0.00	22.22	1,246.32	623.16	1,076.40	531.59	4.37	-0.36	0.017
110.05	-8.21	-0.85	0.00	-22.22	0.00	22.22	852.93	426.46	741.03	365.97	4.37	-0.36	0.021
115.00	-7.27	-0.78	0.00	-18.02	0.00	18.02	834.88	417.44	698.45	344.94	4.75	-0.37	0.017
118.00	-6.97	-0.75	0.00	-15.70	0.00	15.70	823.44	411.72	672.79	332.27	4.99	-0.38	0.016
118.50	-6.94	-0.75	0.00	-15.32	0.00	15.32	821.50	410.75	668.53	330.16	5.03	-0.38	0.015
118.50	-6.94	-0.75	0.00	-15.32	0.00	15.32	821.50	410.75	668.53	330.16	5.03	-0.38	0.055
119.00	-6.87	-0.74	0.00	-14.95	0.00	14.95	819.55	409.77	664.27	328.06	5.07	-0.38	0.054
120.00	-6.55	-0.72	0.00	-14.20	0.00	14.20	815.61	407.80	655.76	323.86	5.15	-0.39	0.052
125.00	-6.37	-0.70	0.00	-10.60	0.00	10.60	795.30	397.65	613.53	303.00	5.57	-0.42	0.043
128.00	-4.51	-0.53	0.00	-8.49	0.00	8.49	782.61	391.31	588.45	290.61	5.84	-0.44	0.035
130.00	-4.23	-0.50	0.00	-7.43	0.00	7.43	773.95	386.97	571.85	282.42	6.02	-0.44	0.032
135.00	-4.06	-0.49	0.00	-4.91	0.00	4.91	751.56	375.78	530.84	262.16	6.50	-0.46	0.024
138.00	-3.06	-0.38	0.00	-3.45	0.00	3.45	737.63	368.82	506.58	250.18	6.80	-0.47	0.018
140.00	-3.01	-0.37	0.00	-2.70	0.00	2.70	728.14	364.07	490.58	242.28	7.00	-0.48	0.015
141.00	-2.16	-0.27	0.00	-2.32	0.00	2.32	721.90	360.95	481.67	237.88	7.10	-0.48	0.013

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Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

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Customer: METRO PCS INC

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145.00	-1.92	-0.24	0.00	-1.22	0.00	1.22	694.03	347.02	445.00	219.77	7.50	-0.49	0.008
150.00	0.00	-0.23	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	8.01	-0.49	0.000



### Equivalent Modal Analysis Method

(Based on ASCE7-10 Chapters 11, 12 & 15 and ANSI/TIA-G, section 2.7)

Spectral Response Acceleration for Short Period ( $S_s$ ):	0.18
Spectral Response Acceleration at 1.0 Second Period ( $S_1$ ):	0.06
Importance Factor ( $I_E$ ):	1.00
Site Coefficient $F_a$ :	1.60
Site Coefficient $F_v$ :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.19
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.10
Period Based on Rayleigh Method (sec):	3.06
Redundancy Factor ( $\rho$ ):	1.30

### Load Case (1.2 + 0.2Sds) \* DL + E EMAM      Seismic Equivalent Modal Analysis Method

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
50	147.50	284	1.828	1.667	1.025	0.321	79	351
49	143.00	233	1.718	1.191	0.842	0.255	52	289
48	140.50	60	1.658	0.970	0.752	0.221	11	74
47	139.00	120	1.623	0.851	0.702	0.201	21	149
46	136.50	192	1.565	0.674	0.624	0.171	28	238
45	132.50	326	1.475	0.441	0.513	0.125	35	404
44	129.00	133	1.398	0.280	0.430	0.090	10	164
43	126.50	216	1.344	0.186	0.377	0.067	13	267
42	122.50	366	1.261	0.069	0.302	0.035	11	454
41	119.50	74	1.200	0.004	0.254	0.013	1	92
40	118.75	39	1.185	-0.009	0.243	0.008	0	48
39	118.25	86	1.175	-0.018	0.236	0.005	0	107
38	116.50	522	1.140	-0.045	0.213	-0.006	-2	647
37	112.53	868	1.064	-0.088	0.165	-0.026	-20	1,075
36	110.03	10	1.017	-0.105	0.140	-0.037	0	13
35	109.25	206	1.003	-0.109	0.133	-0.040	-7	255
34	106.75	722	0.957	-0.118	0.111	-0.048	-30	894
33	103.25	727	0.895	-0.122	0.086	-0.056	-35	900
32	100.75	386	0.853	-0.119	0.070	-0.060	-20	477
31	99.00	471	0.823	-0.116	0.061	-0.061	-25	583
30	96.50	719	0.782	-0.108	0.049	-0.061	-38	891
29	93.25	844	0.730	-0.096	0.036	-0.058	-43	1,045
28	91.30	70	0.700	-0.087	0.030	-0.055	-3	86
27	90.55	452	0.689	-0.083	0.028	-0.053	-21	560
26	87.50	878	0.643	-0.068	0.020	-0.045	-34	1,087
25	82.50	889	0.572	-0.043	0.012	-0.027	-21	1,101
24	77.50	900	0.505	-0.018	0.007	-0.004	-3	1,114
23	74.28	262	0.463	-0.003	0.006	0.010	2	325
22	71.80	955	0.433	0.007	0.006	0.020	17	1,183
21	70.03	11	0.412	0.014	0.006	0.027	0	13
20	67.50	1,006	0.383	0.023	0.007	0.035	31	1,246
19	62.50	1,020	0.328	0.039	0.010	0.047	42	1,263
18	57.50	1,033	0.278	0.050	0.014	0.055	49	1,279
17	52.50	1,046	0.232	0.058	0.019	0.058	52	1,296

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

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Customer: METRO PCS INC

16	47.50	1,060	0.190	0.064	0.025	0.059	54	1,312
15	42.50	1,073	0.152	0.068	0.030	0.058	54	1,329
14	38.00	868	0.121	0.070	0.034	0.057	43	1,075
13	35.83	72	0.108	0.071	0.036	0.056	4	89
12	35.33	233	0.105	0.071	0.037	0.056	11	288
11	34.50	349	0.100	0.071	0.037	0.056	17	432
10	32.75	876	0.090	0.071	0.038	0.055	42	1,085
9	31.25	121	0.082	0.072	0.039	0.055	6	150
8	30.50	241	0.078	0.072	0.040	0.055	11	299
7	27.50	1,215	0.064	0.072	0.041	0.054	57	1,505
6	22.50	1,231	0.043	0.070	0.042	0.053	56	1,525
5	17.50	1,247	0.026	0.067	0.040	0.050	54	1,544
4	14.41	297	0.017	0.062	0.037	0.048	12	368
3	11.91	1,221	0.012	0.057	0.033	0.045	48	1,512
2	7.50	1,613	0.005	0.044	0.025	0.037	52	1,998
1	2.50	1,629	0.001	0.018	0.010	0.018	26	2,018
Powerwave Allgon 702	153.00	13	1.966	2.408	1.291	0.412	5	16
Kaelus DBCT108F1V92-	153.00	42	1.966	2.408	1.291	0.412	15	52
Powerwave Allgon LGP	153.00	85	1.966	2.408	1.291	0.412	30	105
Raycap DC6-48-60-18-	153.00	40	1.966	2.408	1.291	0.412	14	50
Raycap DC6-48-60-18-	153.00	20	1.966	2.408	1.291	0.412	7	25
Ericsson Radio 8843	153.00	216	1.966	2.408	1.291	0.412	77	267
Ericsson RRUS 4449 B	153.00	213	1.966	2.408	1.291	0.412	76	264
Ericsson RRUS 4478 B	153.00	178	1.966	2.408	1.291	0.412	64	221
Ericsson RRUS-32 (77	153.00	231	1.966	2.408	1.291	0.412	82	286
Powerwave Allgon 777	153.00	81	1.966	2.408	1.291	0.412	29	100
CCI OPA-65R-LCUU-H6	153.00	219	1.966	2.408	1.291	0.412	78	271
Kathrein Scala 80010	153.00	586	1.966	2.408	1.291	0.412	209	725
Generic Round Side A	150.00	225	1.890	1.980	1.140	0.361	70	279
Round Platform w/ Ha	150.00	2,000	1.890	1.980	1.140	0.361	626	2,477
Round T-Arm	141.00	750	1.670	1.012	0.769	0.227	148	929
RFS IBC1900HG-2A	138.00	66	1.600	0.778	0.670	0.189	11	82
RFS IBC1900BB-1	138.00	66	1.600	0.778	0.670	0.189	11	82
Alcatel-Lucent 4X40W	138.00	178	1.600	0.778	0.670	0.189	29	221
Alcatel-Lucent 800 M	138.00	185	1.600	0.778	0.670	0.189	30	230
Alcatel-Lucent TD-RR	138.00	210	1.600	0.778	0.670	0.189	34	260
RFS APXVTM14-C-I20	138.00	159	1.600	0.778	0.670	0.189	26	197
RFS APXVSP18-C-A20	138.00	57	1.600	0.778	0.670	0.189	9	71
RFS APXV9ERR18-C-A20	138.00	124	1.600	0.778	0.670	0.189	20	154
Ericsson Radio 4449	128.00	222	1.376	0.240	0.408	0.081	16	275
Ericsson AIR 21	128.00	273	1.376	0.240	0.408	0.081	19	338
Ericsson AIR32 B66Aa	128.00	397	1.376	0.240	0.408	0.081	28	491
Round T-Arm	128.00	750	1.376	0.240	0.408	0.081	52	929
RFS APXVAARR24_43-U-	128.00	384	1.376	0.240	0.408	0.081	27	475
Generic 12" x 12" Ju	119.00	10	1.190	-0.005	0.247	0.010	0	12
DragonWave Horizon C	118.00	32	1.170	-0.022	0.233	0.004	0	39
DragonWave A-ANT-23G	118.00	15	1.170	-0.022	0.233	0.004	0	19
NextNet BTS-2500	118.00	105	1.170	-0.022	0.233	0.004	0	130
Argus LLPX310R	118.00	86	1.170	-0.022	0.233	0.004	0	106
DragonWave A-ANT-23G	118.00	25	1.170	-0.022	0.233	0.004	0	30
Collar	115.00	560	1.111	-0.064	0.194	-0.014	-7	694
Alcatel-Lucent RRH2X	98.00	138	0.807	-0.113	0.056	-0.061	-7	171
Alcatel-Lucent RRH2x	98.00	170	0.807	-0.113	0.056	-0.061	-9	211
Alcatel-Lucent RRH2X	98.00	165	0.807	-0.113	0.056	-0.061	-9	204
RFS DB-T1-6Z-8AB-0Z	98.00	88	0.807	-0.113	0.056	-0.061	-5	109
Andrew SBNHH-1D65B	98.00	608	0.807	-0.113	0.056	-0.061	-32	753
Generic Flat Light S	98.00	1,500	0.807	-0.113	0.056	-0.061	-80	1,858
Stand-off	36.00	50	0.109	0.071	0.036	0.056	2	62
Generic GPS	35.00	10	0.103	0.071	0.037	0.056	0	12
Generic GPS	34.00	10	0.097	0.071	0.038	0.056	0	12
Stand-off	31.00	50	0.081	0.072	0.040	0.055	2	62
		41,064	95.624	46.902	36.095	9.611	2,400	50,854

**Load Case (0.9 - 0.2Sds) \* DL + E EMAM**

**Seismic (Reduced DL) Equivalent Modal Analysis Method**

Segment	Height Above Base (ft)	Weight (lb)	a	b	c	Saz	Horizontal Force (lb)	Vertical Force (lb)
50	147.50	284	1.828	1.667	1.025	0.321	79	244
49	143.00	233	1.718	1.191	0.842	0.255	52	201
48	140.50	60	1.658	0.970	0.752	0.221	11	51
47	139.00	120	1.623	0.851	0.702	0.201	21	104
46	136.50	192	1.565	0.674	0.624	0.171	28	165
45	132.50	326	1.475	0.441	0.513	0.125	35	281
44	129.00	133	1.398	0.280	0.430	0.090	10	114
43	126.50	216	1.344	0.186	0.377	0.067	13	186
42	122.50	366	1.261	0.069	0.302	0.035	11	316
41	119.50	74	1.200	0.004	0.254	0.013	1	64
40	118.75	39	1.185	-0.009	0.243	0.008	0	34
39	118.25	86	1.175	-0.018	0.236	0.005	0	74
38	116.50	522	1.140	-0.045	0.213	-0.006	-2	450
37	112.53	868	1.064	-0.088	0.165	-0.026	-20	748
36	110.03	10	1.017	-0.105	0.140	-0.037	0	9
35	109.25	206	1.003	-0.109	0.133	-0.040	-7	177
34	106.75	722	0.957	-0.118	0.111	-0.048	-30	622
33	103.25	727	0.895	-0.122	0.086	-0.056	-35	626
32	100.75	386	0.853	-0.119	0.070	-0.060	-20	332
31	99.00	471	0.823	-0.116	0.061	-0.061	-25	406
30	96.50	719	0.782	-0.108	0.049	-0.061	-38	620
29	93.25	844	0.730	-0.096	0.036	-0.058	-43	727
28	91.30	70	0.700	-0.087	0.030	-0.055	-3	60
27	90.55	452	0.689	-0.083	0.028	-0.053	-21	390
26	87.50	878	0.643	-0.068	0.020	-0.045	-34	757
25	82.50	889	0.572	-0.043	0.012	-0.027	-21	766
24	77.50	900	0.505	-0.018	0.007	-0.004	-3	775
23	74.28	262	0.463	-0.003	0.006	0.010	2	226
22	71.80	955	0.433	0.007	0.006	0.020	17	823
21	70.03	11	0.412	0.014	0.006	0.027	0	9
20	67.50	1,006	0.383	0.023	0.007	0.035	31	867
19	62.50	1,020	0.328	0.039	0.010	0.047	42	878
18	57.50	1,033	0.278	0.050	0.014	0.055	49	890
17	52.50	1,046	0.232	0.058	0.019	0.058	52	902
16	47.50	1,060	0.190	0.064	0.025	0.059	54	913
15	42.50	1,073	0.152	0.068	0.030	0.058	54	925
14	38.00	868	0.121	0.070	0.034	0.057	43	748
13	35.83	72	0.108	0.071	0.036	0.056	4	62
12	35.33	233	0.105	0.071	0.037	0.056	11	201
11	34.50	349	0.100	0.071	0.037	0.056	17	301
10	32.75	876	0.090	0.071	0.038	0.055	42	755
9	31.25	121	0.082	0.072	0.039	0.055	6	104
8	30.50	241	0.078	0.072	0.040	0.055	11	208
7	27.50	1,215	0.064	0.072	0.041	0.054	57	1,047
6	22.50	1,231	0.043	0.070	0.042	0.053	56	1,061
5	17.50	1,247	0.026	0.067	0.040	0.050	54	1,075
4	14.41	297	0.017	0.062	0.037	0.048	12	256
3	11.91	1,221	0.012	0.057	0.033	0.045	48	1,052
2	7.50	1,613	0.005	0.044	0.025	0.037	52	1,390
1	2.50	1,629	0.001	0.018	0.010	0.018	26	1,404
Powerwave Allgon 702	153.00	13	1.966	2.408	1.291	0.412	5	11
Kaelus DBCT108F1V92-	153.00	42	1.966	2.408	1.291	0.412	15	36
Powerwave Allgon LGP	153.00	85	1.966	2.408	1.291	0.412	30	73
Raycap DC6-48-60-18-	153.00	40	1.966	2.408	1.291	0.412	14	34
Raycap DC6-48-60-18-	153.00	20	1.966	2.408	1.291	0.412	7	17
Ericsson Radio 8843	153.00	216	1.966	2.408	1.291	0.412	77	186

Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

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Customer: METRO PCS INC

Ericsson RRUS 4449 B	153.00	213	1.966	2.408	1.291	0.412	76	184
Ericsson RRUS 4478 B	153.00	178	1.966	2.408	1.291	0.412	64	154
Ericsson RRUS-32 (77	153.00	231	1.966	2.408	1.291	0.412	82	199
Powerwave Allgon 777	153.00	81	1.966	2.408	1.291	0.412	29	70
CCI OPA-65R-LCUU-H6	153.00	219	1.966	2.408	1.291	0.412	78	189
Kathrein Scala 80010	153.00	586	1.966	2.408	1.291	0.412	209	505
Generic Round Side A	150.00	225	1.890	1.980	1.140	0.361	70	194
Round Platform w/ Ha	150.00	2,000	1.890	1.980	1.140	0.361	626	1,723
Round T-Arm	141.00	750	1.670	1.012	0.769	0.227	148	646
RFS IBC1900HG-2A	138.00	66	1.600	0.778	0.670	0.189	11	57
RFS IBC1900BB-1	138.00	66	1.600	0.778	0.670	0.189	11	57
Alcatel-Lucent 4X40W	138.00	178	1.600	0.778	0.670	0.189	29	154
Alcatel-Lucent 800 M	138.00	185	1.600	0.778	0.670	0.189	30	160
Alcatel-Lucent TD-RR	138.00	210	1.600	0.778	0.670	0.189	34	181
RFS APXVTM14-C-I20	138.00	159	1.600	0.778	0.670	0.189	26	137
RFS APXVSP18-C-A20	138.00	57	1.600	0.778	0.670	0.189	9	49
RFS APXV9ERR18-C-A20	138.00	124	1.600	0.778	0.670	0.189	20	107
Ericsson Radio 4449	128.00	222	1.376	0.240	0.408	0.081	16	191
Ericsson AIR 21	128.00	273	1.376	0.240	0.408	0.081	19	235
Ericsson AIR32 B66Aa	128.00	397	1.376	0.240	0.408	0.081	28	342
Round T-Arm	128.00	750	1.376	0.240	0.408	0.081	52	646
RFS APXVAARR24_43-U-	128.00	384	1.376	0.240	0.408	0.081	27	331
Generic 12" x 12" Ju	119.00	10	1.190	-0.005	0.247	0.010	0	9
DragonWave Horizon C	118.00	32	1.170	-0.022	0.233	0.004	0	27
DragonWave A-ANT-23G	118.00	15	1.170	-0.022	0.233	0.004	0	13
NextNet BTS-2500	118.00	105	1.170	-0.022	0.233	0.004	0	90
Argus LLPX310R	118.00	86	1.170	-0.022	0.233	0.004	0	74
DragonWave A-ANT-23G	118.00	25	1.170	-0.022	0.233	0.004	0	21
Collar	115.00	560	1.111	-0.064	0.194	-0.014	-7	482
Alcatel-Lucent RRH2X	98.00	138	0.807	-0.113	0.056	-0.061	-7	119
Alcatel-Lucent RRH2x	98.00	170	0.807	-0.113	0.056	-0.061	-9	147
Alcatel-Lucent RRH2X	98.00	165	0.807	-0.113	0.056	-0.061	-9	142
RFS DB-T1-6Z-8AB-0Z	98.00	88	0.807	-0.113	0.056	-0.061	-5	76
Andrew SBNHH-1D65B	98.00	608	0.807	-0.113	0.056	-0.061	-32	524
Generic Flat Light S	98.00	1,500	0.807	-0.113	0.056	-0.061	-80	1,292
Stand-off	36.00	50	0.109	0.071	0.036	0.056	2	43
Generic GPS	35.00	10	0.103	0.071	0.037	0.056	0	9
Generic GPS	34.00	10	0.097	0.071	0.038	0.056	0	9
Stand-off	31.00	50	0.081	0.072	0.040	0.055	2	43
		41,064	95.624	46.902	36.095	9.611	2,400	35,381

Load Case (1.2 + 0.2Sds) \* DL + E EMAM Seismic Equivalent Modal Analysis Method

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-46.45	-1.69	0.00	-198.62	0.00	198.62	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.045
5.00	-44.46	-1.65	0.00	-190.15	0.00	190.15	3,113.28	1,556.64	4,641.42	2,292.22	0.01	-0.02	0.043
10.00	-42.94	-1.61	0.00	-181.89	0.00	181.89	3,069.45	1,534.72	4,476.09	2,210.57	0.03	-0.03	0.042
13.82	-42.58	-1.61	0.00	-175.72	0.00	175.72	3,035.27	1,517.64	4,350.78	2,148.69	0.06	-0.04	0.042
13.82	-42.58	-1.61	0.00	-175.72	0.00	175.72	3,035.27	1,517.64	4,350.78	2,148.69	0.06	-0.04	0.058
15.00	-41.03	-1.56	0.00	-173.82	0.00	173.82	3,024.57	1,512.28	4,312.14	2,129.61	0.07	-0.05	0.057
20.00	-39.51	-1.52	0.00	-166.01	0.00	166.01	2,978.65	1,489.33	4,149.68	2,049.37	0.14	-0.07	0.056
25.00	-38.00	-1.48	0.00	-158.41	0.00	158.41	2,931.70	1,465.85	3,988.78	1,969.91	0.22	-0.09	0.055
30.00	-37.70	-1.47	0.00	-151.03	0.00	151.03	2,873.79	1,436.89	3,816.40	1,884.77	0.33	-0.11	0.054
31.00	-37.49	-1.47	0.00	-149.56	0.00	149.56	2,859.85	1,429.93	3,779.26	1,866.44	0.35	-0.12	0.054
31.50	-36.40	-1.43	0.00	-148.82	0.00	148.82	2,852.84	1,426.42	3,760.64	1,857.24	0.37	-0.12	0.054
34.00	-35.96	-1.41	0.00	-145.26	0.00	145.26	2,818.05	1,409.02	3,668.95	1,811.96	0.43	-0.13	0.053
35.00	-35.66	-1.40	0.00	-143.84	0.00	143.84	2,804.11	1,402.06	3,632.54	1,793.98	0.46	-0.14	0.053
35.67	-35.57	-1.40	0.00	-142.90	0.00	142.90	2,247.39	1,123.70	2,971.54	1,467.53	0.48	-0.14	0.061
36.00	-34.43	-1.36	0.00	-142.44	0.00	142.44	2,245.17	1,122.59	2,963.78	1,463.70	0.49	-0.14	0.060
40.00	-33.10	-1.31	0.00	-137.00	0.00	137.00	2,217.94	1,108.97	2,870.05	1,417.41	0.62	-0.16	0.059
45.00	-31.79	-1.27	0.00	-130.43	0.00	130.43	2,182.97	1,091.48	2,753.70	1,359.95	0.80	-0.19	0.057
50.00	-30.49	-1.23	0.00	-124.08	0.00	124.08	2,146.96	1,073.48	2,638.35	1,302.98	1.01	-0.21	0.056
55.00	-29.21	-1.19	0.00	-117.94	0.00	117.94	2,109.91	1,054.96	2,524.10	1,246.56	1.25	-0.24	0.055
60.00	-27.95	-1.15	0.00	-112.01	0.00	112.01	2,071.82	1,035.91	2,411.06	1,190.73	1.51	-0.26	0.053
65.00	-26.70	-1.13	0.00	-106.26	0.00	106.26	2,032.70	1,016.35	2,299.33	1,135.55	1.80	-0.29	0.052
70.00	-26.69	-1.13	0.00	-100.62	0.00	100.62	1,981.31	990.65	2,176.68	1,074.98	2.11	-0.31	0.051
70.05	-25.51	-1.11	0.00	-100.56	0.00	100.56	1,980.69	990.35	2,175.31	1,074.30	2.12	-0.31	0.050
73.55	-25.18	-1.12	0.00	-96.66	0.00	96.66	1,473.36	736.68	1,622.77	801.43	2.35	-0.33	0.058
75.00	-24.07	-1.12	0.00	-95.05	0.00	95.05	1,465.95	732.98	1,600.80	790.57	2.46	-0.34	0.057
80.00	-22.97	-1.14	0.00	-89.45	0.00	89.45	1,439.68	719.84	1,525.22	753.25	2.83	-0.37	0.055
85.00	-21.88	-1.18	0.00	-83.73	0.00	83.73	1,412.37	706.19	1,450.29	716.24	3.23	-0.40	0.053
90.00	-21.32	-1.21	0.00	-77.82	0.00	77.82	1,384.02	692.01	1,376.10	679.61	3.66	-0.42	0.050
91.10	-21.23	-1.21	0.00	-76.49	0.00	76.49	1,377.65	688.82	1,359.89	671.60	3.75	-0.43	0.049
91.10	-21.23	-1.21	0.00	-76.49	0.00	76.49	1,377.65	688.82	1,359.89	671.60	3.75	-0.43	0.050
91.50	-20.19	-1.25	0.00	-76.01	0.00	76.01	1,375.32	687.66	1,354.01	668.69	3.79	-0.43	0.049
95.00	-19.30	-1.28	0.00	-71.64	0.00	71.64	1,354.64	677.32	1,302.77	643.39	4.11	-0.45	0.033
98.00	-15.40	-1.42	0.00	-67.79	0.00	67.79	1,336.51	668.25	1,259.21	621.88	4.40	-0.46	0.031
100.00	-14.93	-1.44	0.00	-64.94	0.00	64.94	1,324.21	662.11	1,230.38	607.64	4.60	-0.47	0.030
101.50	-14.03	-1.47	0.00	-62.78	0.00	62.78	1,314.88	657.44	1,208.86	597.01	4.75	-0.48	0.029
101.50	-14.03	-1.47	0.00	-62.78	0.00	62.78	1,314.88	657.44	1,208.86	597.01	4.75	-0.48	0.039
105.00	-13.13	-1.50	0.00	-57.63	0.00	57.63	1,293.27	646.64	1,159.51	572.64	5.10	-0.49	0.037
108.50	-12.88	-1.50	0.00	-52.39	0.00	52.39	1,260.75	630.38	1,101.62	544.05	5.46	-0.51	0.035
108.50	-12.88	-1.50	0.00	-52.39	0.00	52.39	1,260.75	630.38	1,101.62	544.05	5.46	-0.51	0.060
110.00	-12.86	-1.51	0.00	-50.14	0.00	50.14	1,246.82	623.41	1,077.26	532.02	5.62	-0.51	0.059
110.00	-12.86	-1.51	0.00	-50.14	0.00	50.14	1,246.82	623.41	1,077.26	532.02	5.62	-0.51	0.037
110.05	-11.79	-1.52	0.00	-50.06	0.00	50.06	1,246.32	623.16	1,076.40	531.59	5.63	-0.51	0.037
110.05	-11.79	-1.52	0.00	-50.06	0.00	50.06	852.93	426.46	741.03	365.97	5.63	-0.51	0.044
115.00	-10.45	-1.52	0.00	-42.55	0.00	42.55	834.88	417.44	698.45	344.94	6.17	-0.54	0.038
118.00	-10.02	-1.51	0.00	-38.00	0.00	38.00	823.44	411.72	672.79	332.27	6.52	-0.55	0.035
118.50	-9.97	-1.51	0.00	-37.24	0.00	37.24	821.50	410.75	668.53	330.16	6.57	-0.55	0.035
118.50	-9.97	-1.51	0.00	-37.24	0.00	37.24	821.50	410.75	668.53	330.16	6.57	-0.55	0.125
119.00	-9.86	-1.51	0.00	-36.48	0.00	36.48	819.55	409.77	664.27	328.06	6.63	-0.56	0.123
120.00	-9.41	-1.51	0.00	-34.97	0.00	34.97	815.61	407.80	655.76	323.86	6.75	-0.57	0.120
125.00	-9.14	-1.50	0.00	-27.43	0.00	27.43	795.30	397.65	613.53	303.00	7.39	-0.65	0.102
128.00	-6.47	-1.32	0.00	-22.93	0.00	22.93	782.61	391.31	588.45	290.61	7.82	-0.69	0.087
130.00	-6.06	-1.29	0.00	-20.29	0.00	20.29	773.95	386.97	571.85	282.42	8.11	-0.72	0.080
135.00	-5.83	-1.26	0.00	-13.87	0.00	13.87	751.56	375.78	530.84	262.16	8.90	-0.77	0.061
138.00	-4.38	-1.05	0.00	-10.09	0.00	10.09	737.63	368.82	506.58	250.18	9.39	-0.80	0.046
140.00	-4.31	-1.04	0.00	-8.00	0.00	8.00	728.14	364.07	490.58	242.28	9.73	-0.82	0.039
141.00	-3.09	-0.82	0.00	-6.96	0.00	6.96	721.90	360.95	481.67	237.88	9.91	-0.82	0.034

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Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

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Customer: METRO PCS INC

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145.00	-2.74	-0.74	0.00	-3.68	0.00	3.68	694.03	347.02	445.00	219.77	10.60	-0.84	0.021
150.00	0.00	-0.70	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	11.49	-0.85	0.000

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

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-32.32	-1.69	0.00	-193.94	0.00	193.94	3,156.09	1,578.04	4,808.01	2,374.50	0.00	0.00	0.041
5.00	-30.93	-1.65	0.00	-185.48	0.00	185.48	3,113.28	1,556.64	4,641.42	2,292.22	0.01	-0.02	0.040
10.00	-29.88	-1.61	0.00	-177.25	0.00	177.25	3,069.45	1,534.72	4,476.09	2,210.57	0.03	-0.03	0.039
13.82	-29.62	-1.60	0.00	-171.11	0.00	171.11	3,035.27	1,517.64	4,350.78	2,148.69	0.06	-0.04	0.039
13.82	-29.62	-1.60	0.00	-171.11	0.00	171.11	3,035.27	1,517.64	4,350.78	2,148.69	0.06	-0.04	0.054
15.00	-28.55	-1.55	0.00	-169.22	0.00	169.22	3,024.57	1,512.28	4,312.14	2,129.61	0.07	-0.05	0.053
20.00	-27.48	-1.50	0.00	-161.48	0.00	161.48	2,978.65	1,489.33	4,149.68	2,049.37	0.13	-0.07	0.052
25.00	-26.44	-1.45	0.00	-153.97	0.00	153.97	2,931.70	1,465.85	3,988.78	1,969.91	0.22	-0.09	0.051
30.00	-26.23	-1.45	0.00	-146.70	0.00	146.70	2,873.79	1,436.89	3,816.40	1,884.77	0.32	-0.11	0.050
31.00	-26.08	-1.44	0.00	-145.25	0.00	145.25	2,859.85	1,429.93	3,779.26	1,866.44	0.34	-0.12	0.050
31.50	-25.33	-1.40	0.00	-144.53	0.00	144.53	2,852.84	1,426.42	3,760.64	1,857.24	0.36	-0.12	0.050
34.00	-25.02	-1.39	0.00	-141.03	0.00	141.03	2,818.05	1,409.02	3,668.95	1,811.96	0.42	-0.13	0.049
35.00	-24.81	-1.38	0.00	-139.64	0.00	139.64	2,804.11	1,402.06	3,632.54	1,793.98	0.45	-0.13	0.049
35.67	-24.75	-1.37	0.00	-138.72	0.00	138.72	2,247.39	1,123.70	2,971.54	1,467.53	0.47	-0.14	0.056
36.00	-23.95	-1.33	0.00	-138.27	0.00	138.27	2,245.17	1,122.59	2,963.78	1,463.70	0.48	-0.14	0.056
40.00	-23.03	-1.28	0.00	-132.95	0.00	132.95	2,217.94	1,108.97	2,870.05	1,417.41	0.60	-0.16	0.055
45.00	-22.12	-1.24	0.00	-126.54	0.00	126.54	2,182.97	1,091.48	2,753.70	1,359.95	0.78	-0.18	0.053
50.00	-21.21	-1.19	0.00	-120.36	0.00	120.36	2,146.96	1,073.48	2,638.35	1,302.98	0.98	-0.21	0.052
55.00	-20.32	-1.15	0.00	-114.42	0.00	114.42	2,109.91	1,054.96	2,524.10	1,246.56	1.21	-0.23	0.051
60.00	-19.45	-1.11	0.00	-108.70	0.00	108.70	2,071.82	1,035.91	2,411.06	1,190.73	1.47	-0.25	0.049
65.00	-18.58	-1.08	0.00	-103.16	0.00	103.16	2,032.70	1,016.35	2,299.33	1,135.55	1.75	-0.28	0.048
70.00	-18.57	-1.09	0.00	-97.75	0.00	97.75	1,981.31	990.65	2,176.68	1,074.98	2.05	-0.30	0.047
70.05	-17.75	-1.07	0.00	-97.69	0.00	97.69	1,980.69	990.35	2,175.31	1,074.30	2.06	-0.31	0.047
73.55	-17.52	-1.07	0.00	-93.96	0.00	93.96	1,473.36	736.68	1,622.77	801.43	2.29	-0.32	0.054
75.00	-16.74	-1.07	0.00	-92.41	0.00	92.41	1,465.95	732.98	1,600.80	790.57	2.39	-0.33	0.053
80.00	-15.98	-1.10	0.00	-87.06	0.00	87.06	1,439.68	719.84	1,525.22	753.25	2.75	-0.36	0.051
85.00	-15.22	-1.13	0.00	-81.58	0.00	81.58	1,412.37	706.19	1,450.29	716.24	3.14	-0.38	0.049
90.00	-14.83	-1.15	0.00	-75.92	0.00	75.92	1,384.02	692.01	1,376.10	679.61	3.55	-0.41	0.047
91.10	-14.77	-1.16	0.00	-74.65	0.00	74.65	1,377.65	688.82	1,359.89	671.60	3.65	-0.42	0.046
91.10	-14.77	-1.16	0.00	-74.65	0.00	74.65	1,377.65	688.82	1,359.89	671.60	3.65	-0.42	0.046
91.50	-14.04	-1.20	0.00	-74.19	0.00	74.19	1,375.32	687.66	1,354.01	668.69	3.68	-0.42	0.046
95.00	-13.42	-1.24	0.00	-70.00	0.00	70.00	1,354.64	677.32	1,302.77	643.39	4.00	-0.44	0.031
98.00	-10.71	-1.38	0.00	-66.29	0.00	66.29	1,336.51	668.25	1,259.21	621.88	4.28	-0.45	0.029
100.00	-10.38	-1.40	0.00	-63.53	0.00	63.53	1,324.21	662.11	1,230.38	607.64	4.47	-0.46	0.028
101.50	-9.76	-1.43	0.00	-61.42	0.00	61.42	1,314.88	657.44	1,208.86	597.01	4.61	-0.46	0.027
101.50	-9.76	-1.43	0.00	-61.42	0.00	61.42	1,314.88	657.44	1,208.86	597.01	4.61	-0.46	0.037
105.00	-9.13	-1.46	0.00	-56.41	0.00	56.41	1,293.27	646.64	1,159.51	572.64	4.96	-0.47	0.035
108.50	-8.96	-1.47	0.00	-51.30	0.00	51.30	1,260.75	630.38	1,101.62	544.05	5.31	-0.49	0.033
108.50	-8.96	-1.47	0.00	-51.30	0.00	51.30	1,260.75	630.38	1,101.62	544.05	5.31	-0.49	0.057
110.00	-8.95	-1.47	0.00	-49.10	0.00	49.10	1,246.82	623.41	1,077.26	532.02	5.47	-0.50	0.056
110.00	-8.95	-1.47	0.00	-49.10	0.00	49.10	1,246.82	623.41	1,077.26	532.02	5.47	-0.50	0.035
110.05	-8.20	-1.48	0.00	-49.02	0.00	49.02	1,246.32	623.16	1,076.40	531.59	5.47	-0.50	0.035
110.05	-8.20	-1.48	0.00	-49.02	0.00	49.02	852.93	426.46	741.03	365.97	5.47	-0.50	0.042
115.00	-7.27	-1.49	0.00	-41.69	0.00	41.69	834.88	417.44	698.45	344.94	6.00	-0.52	0.037
118.00	-6.96	-1.48	0.00	-37.23	0.00	37.23	823.44	411.72	672.79	332.27	6.34	-0.54	0.033
118.50	-6.93	-1.48	0.00	-36.49	0.00	36.49	821.50	410.75	668.53	330.16	6.39	-0.54	0.033
118.50	-6.93	-1.48	0.00	-36.49	0.00	36.49	821.50	410.75	668.53	330.16	6.39	-0.54	0.119
119.00	-6.86	-1.48	0.00	-35.75	0.00	35.75	819.55	409.77	664.27	328.06	6.45	-0.54	0.117
120.00	-6.54	-1.47	0.00	-34.26	0.00	34.26	815.61	407.80	655.76	323.86	6.56	-0.56	0.114
125.00	-6.35	-1.47	0.00	-26.89	0.00	26.89	795.30	397.65	613.53	303.00	7.19	-0.63	0.097
128.00	-4.50	-1.30	0.00	-22.49	0.00	22.49	782.61	391.31	588.45	290.61	7.60	-0.68	0.083
130.00	-4.21	-1.26	0.00	-19.90	0.00	19.90	773.95	386.97	571.85	282.42	7.89	-0.70	0.076
135.00	-4.05	-1.23	0.00	-13.61	0.00	13.61	751.56	375.78	530.84	262.16	8.66	-0.76	0.057
138.00	-3.05	-1.03	0.00	-9.91	0.00	9.91	737.63	368.82	506.58	250.18	9.14	-0.78	0.044
140.00	-2.99	-1.02	0.00	-7.85	0.00	7.85	728.14	364.07	490.58	242.28	9.47	-0.80	0.037
141.00	-2.15	-0.81	0.00	-6.84	0.00	6.84	721.90	360.95	481.67	237.88	9.64	-0.80	0.032

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Site Number: 302473

Code: ANSI/TIA-222-G

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

Engineering Number: 12927130\_C3\_01

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Customer: METRO PCS INC

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145.00	-1.91	-0.72	0.00	-3.62	0.00	3.62	694.03	347.02	445.00	219.77	10.32	-0.82	0.019
150.00	0.00	-0.70	0.00	0.00	0.00	0.00	659.19	329.60	401.19	198.13	11.19	-0.83	0.000



Site Number: 302473

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

Engineering Number: 12927130\_C3\_01

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Customer: METRO PCS INC

### Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.6W	31.98	0.00	49.20	0.00	0.00	3367.32	118.50	0.98
0.9D + 1.6W	31.95	0.00	36.88	0.00	0.00	3300.94	118.50	0.95
1.2D + 1.0Di + 1.0Wi	9.68	0.00	98.73	0.00	0.00	1116.15	118.50	0.40
(1.2 + 0.2Sds) * DL + E ELFM	1.40	0.00	46.45	0.00	0.00	171.19	118.50	0.06
(1.2 + 0.2Sds) * DL + E EMAM	1.69	0.00	46.45	0.00	0.00	198.62	118.50	0.12
(0.9 - 0.2Sds) * DL + E ELFM	1.40	0.00	32.32	0.00	0.00	167.56	118.50	0.05
(0.9 - 0.2Sds) * DL + E EMAM	1.69	0.00	32.32	0.00	0.00	193.94	118.50	0.12
1.0D + 1.0W	7.66	0.00	41.06	0.00	0.00	799.56	118.50	0.24

Site Number: 302473

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

Engineering Number: 12927130\_C3\_01

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Customer: METRO PCS INC

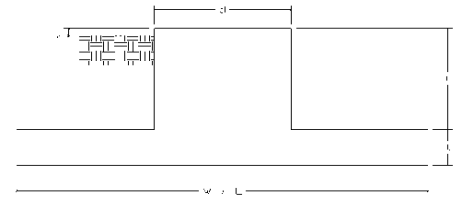
Additional Steel Summary

			Intermediate Connectors				Max Member		
Elev From (ft)	Elev To (ft)	Member	VQ/I (lb/in)	Shear Applied (kips)	Shear phiVn (kips)	Ratio	Pu (kip)	phiPn (kip)	Ratio
0.00	91.10	(4) SOL-#20 All Thread Bar	456.9	13.7	16.8	0.815	338.8	330.5	1.025
0.00	13.82	(4) SOL-#20 All Thread Bar	209.2	6.3	16.8	0.373	254.4	330.5	0.770
91.10	101.50	(4) SOL-#20 All Thread Bar	457.5	13.7	16.8	0.817	199.7	330.5	0.604
91.50	108.50	(4) PL-PL 4 x 1.25	300.4	7.2	38.3	0.188	125.7	180.0	0.698
101.50	110.00	(4) PL-PL 3" x 1"	314.6	7.5	38.3	0.197	111.6	116.3	0.960
110.00	118.50	(3) PL-PL 3" x 1"	208.0	5.0	38.3	0.130	67.4	116.3	0.580
110.00	118.50	(3) PL-PL 5" x 1.25"	438.4	10.5	38.3	0.275	142.0	180.0	0.789

			Upper Termination Connectors					Lower Termination Connectors				
Elev From (ft)	Elev To (ft)	Member	MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Ratio	MQ/I (kips)	phiVn (kips)	Num Reqd	Num Actual	Ratio
0.00	91.10	(4) SOL-#20 All Thread Bar	0.0	12.0	0	0	0.000	0.0	12.0	0	0	0.000
0.00	13.82	(4) SOL-#20 All Thread Bar	238.3	12.0	20	24	0.827	0.0	12.0	0	0	0.000
91.10	101.50	(4) SOL-#20 All Thread Bar	109.4	12.0	10	14	0.651	0.0	12.0	0	0	0.000
91.50	108.50	(4) PL-PL 4 x 1.25	106.3	38.3	3	6	0.463	113.5	38.3	3	6	0.494
101.50	110.00	(4) PL-PL 3" x 1"	106.5	38.3	3	6	0.464	73.7	38.3	2	6	0.321
110.00	118.50	(3) PL-PL 3" x 1"	0.0	38.3	0	6	0.000	0.0	38.3	0	6	0.000
110.00	118.50	(3) PL-PL 5" x 1.25"	117.7	38.3	4	8	0.385	140.2	38.3	4	8	0.458

Site Name: E H F R - Prestige Park, CT  
 Site Number: 302473  
 Engineering Number: Structural  
 Engineer: Jennifer.Yu  
 Date: 04/26/19  
 Tower Type: MP

Program Last Updated: 5/13/2014



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

Design / Analysis / Mapping:	Analysis		
Compression/Leg:	49.2 k	Concrete Strength ( $f'_c$ ):	4000 psi
Uplift/Leg:	0 k	Pad Tension Steel Depth:	32.0 in
Total Shear:	32.0 k	$\phi_{\text{Shear}}$ :	0.75
Moment:	3367.3 k-ft	$\phi_{\text{Flexure / Tension}}$ :	0.9
Tower + Appurtenance Weight:	49.2 k	$\phi_{\text{Compression}}$ :	0.65
Depth to Base of Foundation (l + t - h):	8 ft	$\beta$ :	0.85
Diameter of Pier (d):	5.5 ft	Bottom Pad Rebar Size #:	10
Length of Pier (l):	5.5 ft	Dead Load Factor:	1.2
Height of Pier above Ground (h):	0.5 ft	# of Bottom Pad Rebar:	36
Width of Pad (W):	18 ft	Pad Bottom Steel Area:	45.72 in <sup>2</sup>
Length of Pad (L):	18 ft	Pad Steel $F_y$ :	60000 psi
Thickness of Pad (t):	3 ft	Top Pad Rebar Size #:	5
Tower Leg Center to Center:	0 ft	# of Top Pad Rebar:	36
Number of Tower Legs:	1 (1 if MP or GT)	Pad Top Steel Area:	11.16 in <sup>2</sup>
Tower Center from Mat Center:	0 ft	Pier Rebar Size #:	11
Depth Below Ground Surface to Water Table:	12 ft	Pier Steel Area (Single Bar):	1.56 in <sup>2</sup>
Unit Weight of Concrete:	150 pcf	# of Pier Rebar:	52
Unit Weight of Soil Above Water Table:	121 pcf	Pier Steel $F_y$ :	60000 psi
Unit Weight of Water:	62.4 pcf	Pier Cage Diameter:	58.0 in
Unit Weight of Soil Below Water Table:	58.6 pcf	Rebar Strain Limit:	0.008
Friction Angle of Uplift:	15 Degrees	Steel Elastic Modulus:	29000 ksi
Ultimate Coefficient of Shear Friction:	0.4	Tie Rebar Size #:	4
Ultimate Compressive Bearing Pressure:	39000 psf	Tie Steel Area (Single Bar):	0.2 in <sup>2</sup>
Ultimate Passive Pressure on Pad Face:	2600 psf	Tie Spacing:	12 in
$\phi_{\text{Soil and Concrete Weight}}$ :	0.9	Tie Steel $F_y$ :	60000 psi
$\phi_{\text{Soil}}$ :	0.75		

**Overturning Moment Usage**

Design OTM:	3639.2 k-ft
OTM Resistance:	3643.7 k-ft
Design OTM / OTM Resistance:	1.00 Result: OK

**Soil Bearing Pressure Usage**

Net Bearing Pressure:	8301 psf
Factored Nominal Bearing Pressure:	29250 psf
Net Bearing Pressure/Factored Nominal Bearing Pressure:	0.28 Result: OK
Load Direction Controlling Design Bearing Pressure:	Diagonal to Pad Edge

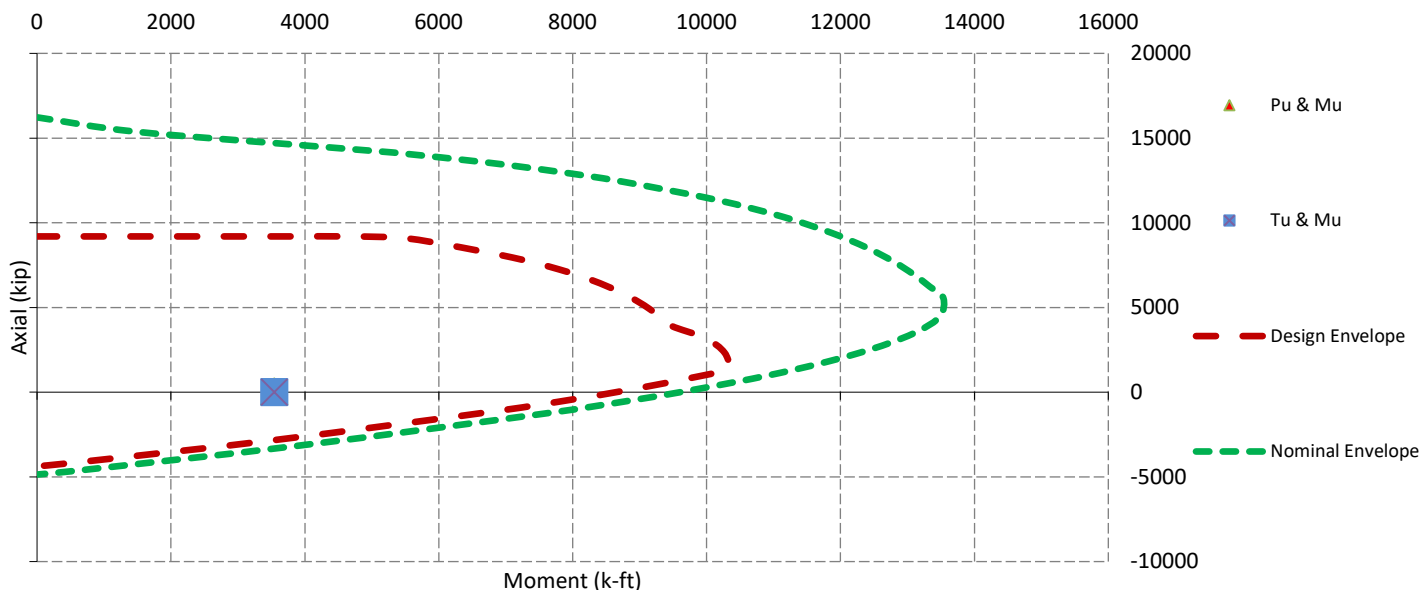
**Sliding Factor of Safety**

Total Factored Sliding Resistance:	211.2 k
Sliding Design / Sliding Resistance:	0.15 Result: OK

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

Factored One Way Shear ( $V_u$ ):	257.0 k
One Way Shear Capacity ( $\phi V_c$ ):	532.7 k - ACI11.3.1.1
$V_u / \phi V_c$ :	0.48 Result: OK
Load Direction Controlling Shear Capacity:	Diagonal to Pad Edge
Lower Steel Pad Factored Moment ( $M_u$ ):	1456.0 k-ft
Lower Steel Pad Moment Capacity ( $\phi M_n$ ):	6257.1 k-ft - ACI10.3
$M_u / \phi M_n$ :	0.23 Result: OK
Load Direction Controlling Flexural Capacity:	Parallel to Pad Edge
Upper Steel Pad Factored Moment ( $M_u$ ):	593.4 k-ft
Upper Steel Pad Moment Capacity ( $\phi M_n$ ):	1587.6 k-ft
$M_u / \phi M_n$ :	0.37 Result: OK
Lower Pad Flexural Reinforcement Ratio:	0.0066 OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Upper Pad Flexural Reinforcement Ratio:	0.0016 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 ( $V_u$ ):	0.0 k
Nominal Punching Shear Capacity ( $\phi_c V_n$ ):	1869.3 k - ACI11.12.2.1
$V_u / \phi V_c$ :	0.00 Result: OK
Factored Moment in Pier ( $M_u$ ):	3543.2 k-ft
Pier Moment Capacity ( $\phi M_n$ ):	10352.3 k-ft
$M_u / \phi M_n$ :	0.34 Result: OK
Factored Shear in Pier ( $V_u$ ):	32.0 k
Pier Shear Capacity ( $\phi V_n$ ):	326.9 k
$V_u / \phi V_c$ :	0.10 Result: OK
Pier Shear Reinforcement Ratio:	0.0006 No Ties Necessary for Shear - ACI11.5.6.1
Factored Tension in Pier ( $T_u$ ):	0.0 k
Pier Tension Capacity ( $\phi T_n$ ):	4380.5 k
$T_u / \phi T_n$ :	0.00 Result: OK
Factored Compression in Pier ( $P_u$ ):	49.2 k
Pier Compression Capacity ( $\phi P_n$ ):	5905.3 k - ACI10.3.6.2
$P_u / \phi P_n$ :	0.01 Result: OK
Pier Compression Reinforcement Ratio:	0.024 OK - Reinforcement Ratio Met - ACI10.9.1 & 10.8.4
$M_u / \phi_B M_n + T_u / \phi_T T_n$ :	0.34 Result: OK

Nominal and Design Moment Capacity and Factored Design Loads





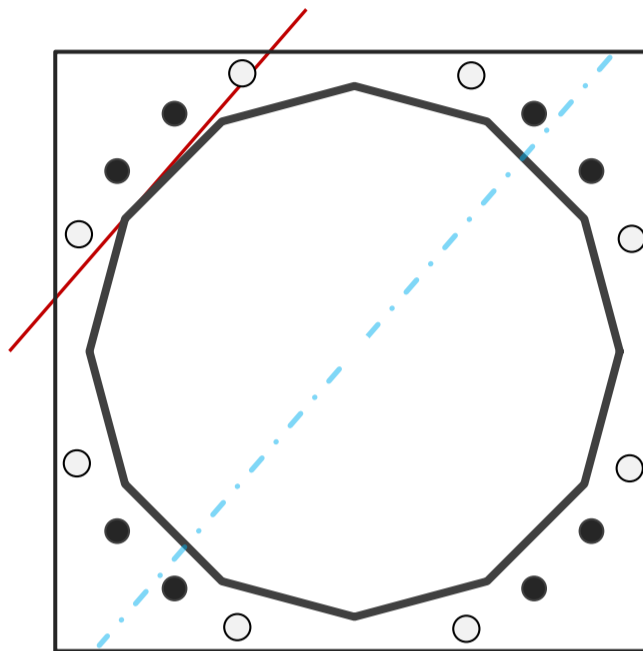
## Base Plate & Anchor Rod Analysis

Pole Dimensions		
Number of Sides	12	-
Diameter	37.36	in
Thickness	0.375	in
Orientation Offset		°

Base Reactions		
Moment, Mu	3367.3	k-ft
Axial, Pu	49.2	k
Shear, Vu	32.0	k
Neutral Axis	49	°

Report Capacities		
Component	Capacity	Result
Base Plate	53%	Pass
Anchor Rods	78%	Pass
Dwyidag	63%	Pass

Base Plate		
Shape	Square	-
Width	44.25	in
Thickness	2 1/2	in
Grade	Other	-
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	80	ksi
Clip	0	in
Orientation Offset		°
Anchor Rod Detail	c	$\eta=0.55$
Clear Distance	N/A	in
Applied Moment, Mu	1121.6	k
Bending Stress, $\phi Mn$	2106.8	k



Dwyidag Reinforcement		
Quantity	8	-
Bar Size	#20	in
Diameter, $\phi$	2.5	in
Bracket Type	Angle	-
Circle	44.24	in
Orientation Offset	-23	°
Applied Force, Pu	249.1	k
Dwyidag Bar, $\phi Pn$	392.7	k

Original Anchor Rods		
Arrangement	Cluster	-
Quantity	8	-
Diameter, $\phi$	2 1/4	in
Bolt Circle	44	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	6.0	in
Orientation Offset		°
Applied Force, Pu	201.1	k
Anchor Rods, $\phi Pn$	259.8	k

# Calculations for Monopole Base Plate & Anchor Rod Analysis

## Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	32.0	1460.2	0.43
Anchor Rod Forces	32.0	1460.2	0.43
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	1907.1	0.57
Stiffener Forces	0.0	0.0	0.00

## Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in <sup>2</sup>	in <sup>2</sup>	in <sup>4</sup>	#	in <sup>4</sup>
Pole	43.0759	3.5897	0.1691		7367.42
Bolt	3.9761	3.2477	0.8393	4.5	6294.24
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	4.9087	4.9087	1.9175		9622.61
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate		
Shape	Square	-
Width, W	44.25	in
Thickness, t	2.5	in
Yield Strength, Fy	60	ksi
Tensile Strength, Fu	80	ksi
Base Plate Chord	23.713	in
Detail Type	c	-
Detail Factor	0.55	-
Clear Distance	N/A	-

Anchor Rods		
Anchor Rod Quantity, N	8	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	44	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	201.1	k
Applied Shear, Vu	0.5	k
Compressive Capacity, $\phi P_n$	259.8	k
Tensile Capacity, $\phi R_n$	0.774	OK
Interaction Capacity	0.777	OK

External Base Plate		
Chord Length AA	24.719	in
Additional AA	0.250	in
Section Modulus, Z	39.014	in <sup>3</sup>
Applied Moment, Mu	1121.6	k-ft
Bending Capacity, $\phi M_n$	2106.8	k-ft
Capacity, Mu/ $\phi M_n$	0.532	OK
Chord Length AB	23.383	in
Additional AB	0.250	in
Section Modulus, Z	36.927	in <sup>3</sup>
Applied Moment, Mu	855.5	k-ft
Bending Capacity, $\phi M_n$	1994.1	k-ft
Capacity, Mu/ $\phi M_n$	0.429	OK
Bend Line Length	0.000	in
Additional Bend Line	0.000	in
Section Modulus, Z	0.000	in <sup>3</sup>
Applied Moment, Mu	0.0	k-ft
Bending Capacity, $\phi M_n$	0.0	k-ft
Capacity, Mu/ $\phi M_n$		

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in <sup>3</sup>
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, $\phi M_n$	0.0	k-ft
Capacity, Mu/ $\phi M_n$		

Dywidag Reinforcement		
Dywidag Quantity, N	8	-
Dywidag Diameter, d	2.5	in
Bolt Circle, BC	44.24	in
Yield Strength, Fy	80	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	249.1	k
Compressive Capacity, $\phi P_n$	392.7	k
Capacity, Pu/ $\phi P_n$	0.634	OK

<b>Base/Flange Plate</b>	Plate Type	<b>Flange @ 110.0 ft</b>
	Pole Diameter	21.2543 in
	Pole Thickness	0.1875 in
	Plate Diameter	28 in
	Plate Thickness	1 in
	Plate Fy	50 ksi
	Weld Length	0.3125 in
	$\phi_s$ Resistance	183.84 k-in
	Applied	94.74 k-in
<b>Stiffeners</b>	#	<b>12 Show</b>
	Thickness	0.5 in
	Length	3.875 in
	Height	5 in
	Chamfer	1 in
	Offset Angle	0°
	Fy	36 ksi

Code Rev. **G**

Date **4/26/2019**  
 Engineer **Jennifer.Yu**  
 Site # **302473**  
 Carrier **AT&T MOBILITY**

Moment **451.5 k-ft**  
 Axial **12.9 k**

<b>Bolts</b>	#	<b>12</b>
	Bolt Circle (R)adial / (S)quare	25.75 in R
	Diameter	1 in
	Hole Diameter	1.125 in
	Type	A490
	Fy	130 ksi
	Fu	150 ksi
	$\phi_s$ Resistance	68.15 k
	Applied	69.01 k
	<b>Reinforcement</b>	#
<b>Extra Bolts</b>	#	<b>0</b>

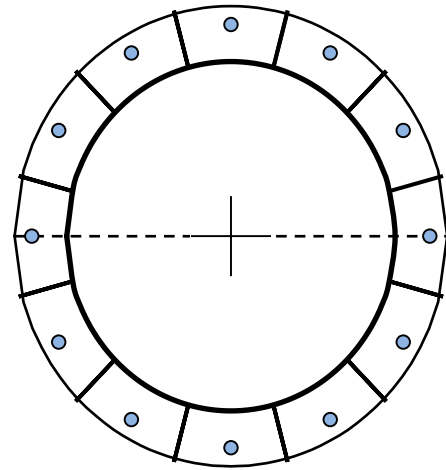


Plate Stress Ratio:  
**0.52** (Pass)

Bolt Stress Ratio:  
**1.01** (Acceptable Overstress)



0.55 ac

6.2 ac

613

3.05 ac

645

0.91 ac

0.89 ac

673

0.98 ac

683

664

0.13 ac

0.37 ac

678

665

682

115

111

0.43 ac

105

97

3.05 ac

0.38 ac

704

710

0.26 ac

714

304

4.85 ac

Prestige Park Rd

Goodwin St

732

Prestige Park Rd

Prestige Park Rd

Prestige Park Rd

Prestige Park Cir

3.01 ac

311

10.22 ac

0.2 ac

739

Town Boundary

Schools

Buildings

Building

Cement

Foundation

Greenhouse

Tank

Parcels

Paved Features

Driveway

Road Edge

Parking Lot

Sidewalk

Trail

Tunnel

Unpaved

Water Features Arc

Perennial Stream

Draining Ditch

Culvert

Spillway

Headwall

Dam

Directional Flow Arrow

Water Features Poly

Open Water

Swamp

Pier

CT Highways

Interstate

US Highway

State Highway

Abutting Town Labels

Abutting Towns

Streets

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0 200 400 ft

Printed on 01/03/2020 at 10:40 AM

East Hartford MapsOnline



# 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		



11576 03/29/2016

<b>OWNER OF RECORD</b>
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>	\$1,430,830.00	<b>IMPROVEMENTS:</b>	\$1,247,470.00	<b>LAND:</b>	\$183,360.00
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### ASSESSING HISTORY

FISCAL YEAR	TOTAL VALUE	IMPROVEMENT VALUE	LAND VALUE
4000	\$1,430,830.00	\$1,247,470.00	\$183,360.00
2018	\$1,430,830.00	\$1,247,470.00	\$183,360.00
2017	\$1,430,830.00	\$1,247,470.00	\$183,360.00
2016	\$1,430,830.00	\$1,247,470.00	\$183,360.00
2015	\$1,336,330.00	\$1,152,970.00	\$183,360.00

# 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		

### 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</b>	null	<b>% ATTIC FINISH</b>	null
<b>BSMT GARAGE</b>	null	<b>FIREPLACES</b>	null



11576 03/29/2016

### 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.)

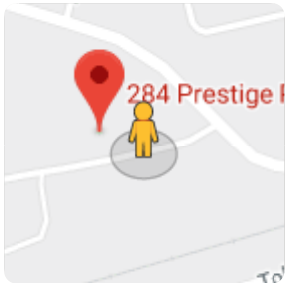


Image capture: Jun 2019 © 2020 Google

East Hartford, Connecticut



Street View





# Your package has been delivered

Tracking # 777671690130

Ship date:  
**Mon, 2/3/2020**

**Margie Weber**  
NB+C  
BLUE BELL, PA 19422  
US



Delivery date:  
**Wed, 2/5/2020 9:00 am**

**Maria A. LeClerc, Mayor**  
Town of East Hartford  
740 Main Street  
EAST HARTFORD, CT 06108  
US

## Shipment Facts

Our records indicate that the following package has been delivered.


**Tracking number:** [777671690130](#)

**Status:** Delivered: 02/05/2020 09:00 AM  
Signed for By: Signature Release on file

**Reference:** 100322 / 302473

**Signed for by:** Signature Release on file

<b>Delivery location:</b>	EAST HARTFORD, CT
<b>Service type:</b>	FedEx 2Day® AM
<b>Packaging type:</b>	FedEx® Pak
<b>Number of pieces:</b>	1
<b>Weight:</b>	2.00 lb.
<b>Special handling/Services:</b>	Deliver Weekday
<b>Standard transit:</b>	2/5/2020 by 10:30 am

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All weights are estimated.

To track the latest status of your shipment, click on the tracking number above.

Standard transit is the date and time the package is scheduled to be delivered by, based on the selected service, destination and ship date. Limitations and exceptions may apply. Please see the FedEx Service Guide for terms and conditions of service, including the FedEx Money-Back Guarantee, or contact your FedEx Customer Support representative.

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Thank you for your business.



# Your package has been delivered

Tracking # 777671719073

Ship date:

Mon, 2/3/2020

**Margie Weber**

NB+C

BLUE BELL, PA 19422

US



Delivered

Delivery date:

Wed, 2/5/2020 9:00 am

**Eileen Buckheit, Dev. Director**

Town of East Hartford

740 Main Street

EAST HARTFORD, CT 06108

US

## Shipment Facts

Our records indicate that the following package has been delivered.

**Tracking number:**

[777671719073](#)

**Status:**

Delivered: 02/05/2020 09:00  
AM Signed for By: Signature  
Release on file


**Reference:**

100322 / 302473

**Signed for by:**

Signature Release on file

<b>Delivery location:</b>	EAST HARTFORD, CT
<b>Service type:</b>	FedEx 2Day® AM
<b>Packaging type:</b>	FedEx® Pak
<b>Number of pieces:</b>	1
<b>Weight:</b>	2.00 lb.
<b>Special handling/Services:</b>	Deliver Weekday
<b>Standard transit:</b>	2/5/2020 by 10:30 am

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Thank you for your business.

# Your package has been delivered

Tracking # 777671760493

Ship date:

Mon, 2/3/2020

**Margie Weber**

NB+C

BLUE BELL, PA 19422

US



Delivery date:

Wed, 2/5/2020 10:25  
am

**co Fremont Management LLC**

Fremont Prestige II, LLC

65 LaSalle Road

Suite 202

WEST HARTFORD, CT 06107

US



## Shipment Facts

Our records indicate that the following package has been delivered.

**Tracking number:** [777671760493](#)

**Status:** Delivered: 02/05/2020 10:25  
AM Signed for By:  
B.BOSHEA

**Reference:** 100322 / 302473

**Signed for by:** B.BOSHEA

**Delivery location:** WEST HARTFORD, CT

**Delivered to:** Receptionist/Front Desk

**Service type:** FedEx 2Day® AM

**Packaging type:** FedEx® Pak


**Number of pieces:** 1

**Weight:** 2.00 lb.

**Special handling/Services:** Deliver Weekday

**Standard transit:** 2/5/2020 by 10:30 am



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