METROPCS MASSACHUSETTS, LLC NOTICE OF INTENT TO MODIFY AN EXISTING TELECOMMUNICATIONS FACILITY AT 159 WEINGART ROAD, HARWINTON, CONNECTICUT

Pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes § 16-50g et. Seq. ("PUESA"), and Sections 16-50j-72(b) and 16-50j-73 of the Regulations of Connecticut State Agencies ("R.C.S.A") adopted pursuant to the PUESA, Metro PCS, Inc., by and through its agent MetroPCS Massachusetts, LLC ("MetroPCS") and as successor in interest to Pocket Communications hereby notifies the Connecticut Siting Council of its intent to modify an existing facility located at 159 Weingart Road, Harwinton, CT, Connecticut. The telecommunications facility is owned by SBC Tower Holdings, LLC C/O American Tower and leased to MetroPCS.

MetroPCS' Proposed Wireless Modifications

MetroPCS as successor in interest to Pocket Communications achieved an initial exempt modification approval from the Siting Council to install antennas and related ground equipment on January 20, 2009. The facility consists of a One-Hundred and eighty six (186') foot high Monopole telecommunications tower (the "Tower") within a fenced compound. MetroPCS now intends to modify the facility as shown on the enclosed plans prepared by Advanced Engineering Group and annexed hereto as Exhibit 1. The modifications will consist of removing three (3) exiting antennas and replacing them with six (6) new antennas at an AGL of 165'. Also, removing six (6) 1 5/8" coax to be replaced with six (6) 1 5/8" coax and one (1) hybriflex line. On the ground MetroPCS will be swapping one (1) CDMA cabinet for one (1) equipment cabinet and adding one (1) battery cabinet within existing lease area located within fenced area. One GPS antenna to also be added to cable bridge. A structural analysis has been completed for the site. Please see report attached in exhibit 3.

In accordance with R.C.S.A Section 16-50j-73, a copy of this submission is being sent to the Town of Harwinton. A copy of this submission is also being sent to SBC Tower Holdings, LLC C/O American Tower, the property owner on which the tower is located.

MetroPCS' Proposed Wireless Modifications Constitutes An "Exempt Modification"

The proposed modification to the Harwinton, CT Facility constitutes an exempt modification of an existing facility provided for in R.C.S.A Section 16-50j-72(b)(2) and Council regulations promulgated pursuant thereto.

1) The proposed modifications will be to swap the existing MetroPCS antennas at the same AGL of 165'and to add two (2) cabinets on ground. This installation will not result in an increase in the height of the existing tower.
2) The proposed modifications will not require expansion of the site boundaries.
3) The proposed modifications will not increase noise levels at the facility by six decibels or more.

4) MetroPCS' proposed facility will not increase the cumulative radio frequency electromagnetic radiation power density at the Tower site's boundary to or above the standard adopted by the Connecticut Department of Environmental Protection as set forth in Section 22a-162 of the Connecticut General Statutes and MPE limits established by the Federal Communications Commission. A cumulative General Power Density table for MetroPCS' proposed modified facility is included as Exhibit 2.

For all the foregoing reasons, MetroPCS' respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitutes an exempt modification under R.C.S.A Section 16-50j-72(b)(2)

Respectfully submitted,

Karla Hanna

Karla Hanna (978) 852-7520
On behalf of MetroPCS Massachusetts, LLC
c/o Tower Resource Management, Inc.
16 Chestnut Street, Suite 220
Foxboro, MA 02035

cc: **Town of Harwinton, CT**
SBC Tower Holdings, LLC C/O American Tower

Exhibit 1

Site Plan

PROJECT INFORMATION

SCOPE OF WORK:	UNMANNED TELECOMMUNICATIONS FACILITY MODIFICATIONS
SITE ADDRESS:	159 WEINGART ROAD HARWINTON, CT 06791
LATITUDE: LONGITUDE:	41.78775 −73.0925
JURISDICTION:	NATIONAL, STATE & LOCAL CODES OR ORDINANCES
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY
DESIGN GUIDELINE:	5A

SITE NAME: ATC HARWINTON MONOPOLE

159 WEINGART ROAD
HARWINTON, CT 06791
LITCHFIELD COUNTY
SITE NUMBER: NHC0203A
(CTHN517)

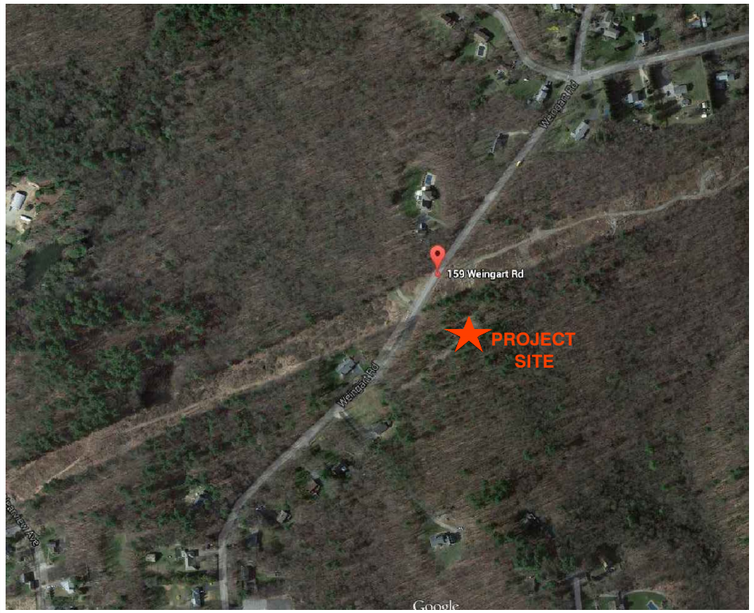
DRAWING INDEX

SIGNATURES

CONSTRUCTION	DATE	OPERATIONS	DATE
RF ENGINEERING	DATE	LAND OWNER	DATE
ZONING / SITE ACQ.	DATE		

STATE OF CONNECTICUT
MARC R. CHRETIEN
No.28307
LICENSED
PROFESSIONAL ENGINEER

LOCUS MAP



GENERAL NOTES

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

CALL
BEFORE YOU DIG
CALL TOLL FREE 811 OR 888−DIG−SAFE

UNDERGROUND SERVICE ALERT

ADVANCED ENGINEERING GROUP, P.C.
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500 NORTH BROADWAY
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SCALE: AS SHOWN | DESIGNED BY: SNA | DRAWN BY: JTG

MetroPCS

TITLE SHEET

JOB NUMBER	DRAWING NUMBER	REV
NHC0203A	T−1	1

GENERAL NOTES

1. THE CONTRACTOR SHALL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES BEARING ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES.

2. THE ARCHITECT/ENGINEER HAVE MADE EVERY EFFORT TO SET FORTH IN THE CONSTRUCTION AND CONTRACT DOCUMENTS THE COMPLETE SCOPE OF WORK. THE CONTRACTOR BIDDING THE JOB IS NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND OR SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS.

3. THE CONTRACTOR OR BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE LESEE/LICENSEE REPRESENTATIVE OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO THE SUBMISSION OF CONTRACTOR'S PROPOSAL OR PERFORMANCE OF WORK. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED IN WRITING OTHERWISE.

4. THE SCOPE OF WORK SHALL INCLUDE FURNISHING ALL MATERIALS, EQUIPMENT, LABOR AND ALL OTHER MATERIALS AND LABOR DEEMED NECESSARY TO COMPLETE THE WORK/PROJECT AS DESCRIBED HEREIN.

5. THE CONTRACTOR SHALL VISIT THE JOB SITE PRIOR TO THE SUBMISSION OF BIDS OR PERFORMING WORK TO FAMILIARIZE HIMSELF WITH THE FIELD CONDITIONS AND TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

6. THE CONTRACTOR SHALL OBTAIN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DRAWINGS / CONTRACT DOCUMENTS.

7. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO THE MANUFACTURER'S / VENDOR'S SPECIFICATIONS UNLESS NOTED OTHERWISE OR WHERE LOCAL CODES OR ORDINANCES TAKE PRECEDENCE.

8. THE CONTRACTOR SHALL PROVIDE A FULL SET OF CONSTRUCTION DOCUMENTS AT THE SITE UPDATED WITH THE LATEST REVISIONS AND ADDENDUMS OR CLARIFICATIONS AVAILABLE FOR THE USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.

9. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS, ESTABLISHING AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS AS SHOWN HEREIN.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.

12. THE CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.

13. THE CONTRACTOR SHALL KEEP THE GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, RUBBISH AND REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY. PREMISES SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.

14. THE CONTRACTOR SHALL COMPLY WITH ALL OSHA REQUIREMENTS AS THEY APPLY TO THIS PROJECT.

15. THE CONTRACTOR SHALL NOTIFY THE LESEE/LICENSEE REPRESENTATIVE WHERE A CONFLICT OCCURS ON ANY OF THE CONTRACT DOCUMENTS. THE CONTRACTOR IS NOT TO ORDER MATERIAL OR CONSTRUCT ANY PORTION OF THE WORK THAT IS IN CONFLICT UNTIL CONFLICT IS RESOLVED BY THE LESEE/LICENSEE REPRESENTATIVE.

16. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, PROPERTY LINES, ETC. ON THE JOB.

17. ALL UNDERGROUND UTILITY INFORMATION WAS DETERMINED FROM SURFACE INVESTIGATIONS AND EXISTING PLANS OF RECORD. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES IN THE FIELD PRIOR TO ANY SITE WORK. CALL THE FOLLOWING FOR ALL PRE-CONSTRUCTION NOTIFICATION 72-HOURS PRIOR TO ANY EXCAVATION ACTIVITY: DIG SAFE SYSTEM (MA, ME, NH, RI, VT): 1-888-344-7233 CALL BEFORE YOU DIG (CT): 1-800-922-4455

18. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL NECESSARY CONSTRUCTION CONTROL SURVEYS AND MAINTAINING ALL LINES AND GRADES REQUIRED TO CONSTRUCT ALL IMPROVEMENTS SHOWN HEREIN.

19. ALL DIMENSIONS SHOWN THUS ± ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS WHICH EFFECT THE CONTRACTORS WORK. CONTRACTOR TO VERIFY ALL DIMENSIONS WITH PROJECT OWNER PRIOR TO CONSTRUCTION.

20. NORTH ARROW SHOWN ON PLANS REFERS TO APPROXIMATE TRUE NORTH. PRIOR TO THE START OF CONSTRUCTION, ORDERING OR FABRICATING OF ANTENNA MOUNTS, CONTRACTOR SHALL CONSULT WITH PROJECT OWNER'S RF ENGINEER AND FIELD VERIFY ALL ANTENNA SECTOR LOCATIONS AND ANTENNA AZIMUTHS.

21. THE CONTRACTOR AND OR HIS SUB CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS WHICH MAY BE REQUIRED FOR THE WORK BY THE ARCHITECT/ENGINEER, THE STATE, COUNTY OR LOCAL GOVERNMENT AUTHORITY.

22. ANTENNA INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND ERECTION OF RADIO ANTENNAS, TRANSMISSION LINES AND SUPPORT STRUCTURES.

23. COAXIAL CABLE CONNECTORS AND TRANSMITTER EQUIPMENT SHALL BE PROVIDED BY THE PROJECT OWNER AND IS NOT INCLUDED IN THESE CONSTRUCTION DOCUMENTS. A SCHEDULE OF PROJECT OWNER SUPPLIED MATERIALS IS ATTACHED TO THE BID DOCUMENTS (SEE EXHIBIT 3). ALL OTHER HARDWARE TO BE PROVIDED BY THE CONTRACTOR. CONNECTION HARDWARE SHALL BE STAINLESS STEEL.

24. WHEN "PAINT TO MATCH" IS SPECIFIED FOR ANTENNA CONCEALMENT, PAINT PRODUCT FOR ANTENNA RADOME SHALL BE SHERWIN WILLIAMS COROTHANE II. SURFACE PREPARATION AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND PROJECT OWNER'S GUIDELINE'S.

25. COORDINATION, LAYOUT, AND FURNISHING OF CONDUIT, CABLE AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

26. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.

27. ALL (E)ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.

28. ALL (E)INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF UTILITY COMPANY ENGINEERING. THE AREAS OF THE PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE EQUIPMENT, DRIVEWAY OR

29. GRAVEL, SHALL BE GRADED TO A UNIFORM SLOPE, FERTILIZED, SEEDED AND COVERED WITH MULCH UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL ESTABLISH AND MAINTAIN SOIL EROSION AND SEDIMENTATION CONTROLS AT ALL TIMES

30. DURING CONSTRUCTION. PER FCC MANDATE, ENHANCED EMERGENCY (E911) SERVICE IS REQUIRED TO MEET NATIONWIDE STANDARDS

31. FOR WIRELESS COMMUNICATIONS SYSTEMS. PROJECT OWNER'S IMPLEMENTATION REQUIRES DEPLOYMENT OF EQUIPMENT AND ANTENNAS GENERALLY DEPICTED ON THIS PLAN, ATTACHED TO OR MOUNTED IN CLOSE PROXIMITY TO THE BTS RADIO CABINETS. PROJECT OWNER RESERVES THE RIGHT TO MAKE REASONABLE MODIFICATIONS TO E911 EQUIPMENT AND LOCATION AS TECHNOLOGY EVOLVES TO MEET REQUIRED SPECIFICATIONS.

32. APPLICABLE BUILDING CODES:
SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

BUILDING CODE:
2009 INTERNATIONAL BUILDING CODE
2005 CT STATE BUILDING CODE
ELECTRICAL CODE: NEC 2014
LIGHTING CODE: NEC 2014

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

MANUAL OF STEEL CONSTRUCTION, ASD, NINTH EDITION;

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, STRUCTURAL STANDARDS FOR STEEL

ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ELECTRICAL AND GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.

2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.

3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.

4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.

5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.

6. BURIED CONDUIT SHALL BE SCHEDULE 40 PVC.

7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHN INSULATION.

8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.

9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE AND GREENLEE CONDUIT MEASURING TAPE IN EACH INSTALLED TELCO CONDUIT.

10. WHERE CONDUIT BETWEEN BTS AND PROJECT OWNER CELL SITE PPC AND BETWEEN BTS AND PROJECT OWNER CELL SITE TELCO SERVICE CABINET ARE UNDERGROUND USE PVC, SCHEDULE 40 CONDUIT. ABOVE THE GROUND PORTION OF THESE CONDUITS SHALL BE PVC CONDUIT.

11. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.

12. PPC SUPPLIED BY PROJECT OWNER.

13. GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTNING PROTECTION SHALL BE DONE IN ACCORDANCE WITH "T-MOBILE BTS SITE GROUNDING STANDARDS".

14. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.

15. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.

16. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.

17. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.

18. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.

19. BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.

20. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.

21. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXISTING TOWER/ (E) MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.

22. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MAXIMUM RESISTANCE REQUIRED.

23.CONTRACTOR SHALL CONDUCT ANTENNA, COAX, AND LNA RETURN-LOSS AND DISTANCE- TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.

STATE OF CONNECTICUT
MARC R. CHRETIEN
No.28307
LICENSED PROFESSIONAL ENGINEER

Marc R. Chretien

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	G.C.	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
AWG	AMERICAN WIRE GAUGE	MGB	MASTER GROUND BUS		
BCW	BARE COPPER WIRE	MIN	MINIMUM	TBD	TO BE DETERMINED
BTS	BASE TRANSCEIVER STATION	(P)	PROPOSED/NEW	TBR	TO BE REMOVED
(E)	EXISTING	N.T.S.	NOT TO SCALE	TBRR	TO BE REMOVED AND REPLACED
EG	EQUIPMENT GROUND	REF	REFERENCE	TYP	TYPICAL
EGR	EQUIPMENT GROUND RING	REQ	REQUIRED		
(F)	FUTURE				

ADVANCED ENGINEERING GROUP, P.C.
Civil Engineering - Site Development Surveying - Telecommunications
500 NORTH BROADWAY PH: (401) 354-2403
EAST PROVIDENCE, RI 02914 FAX: (401) 633-6354

metroPCS
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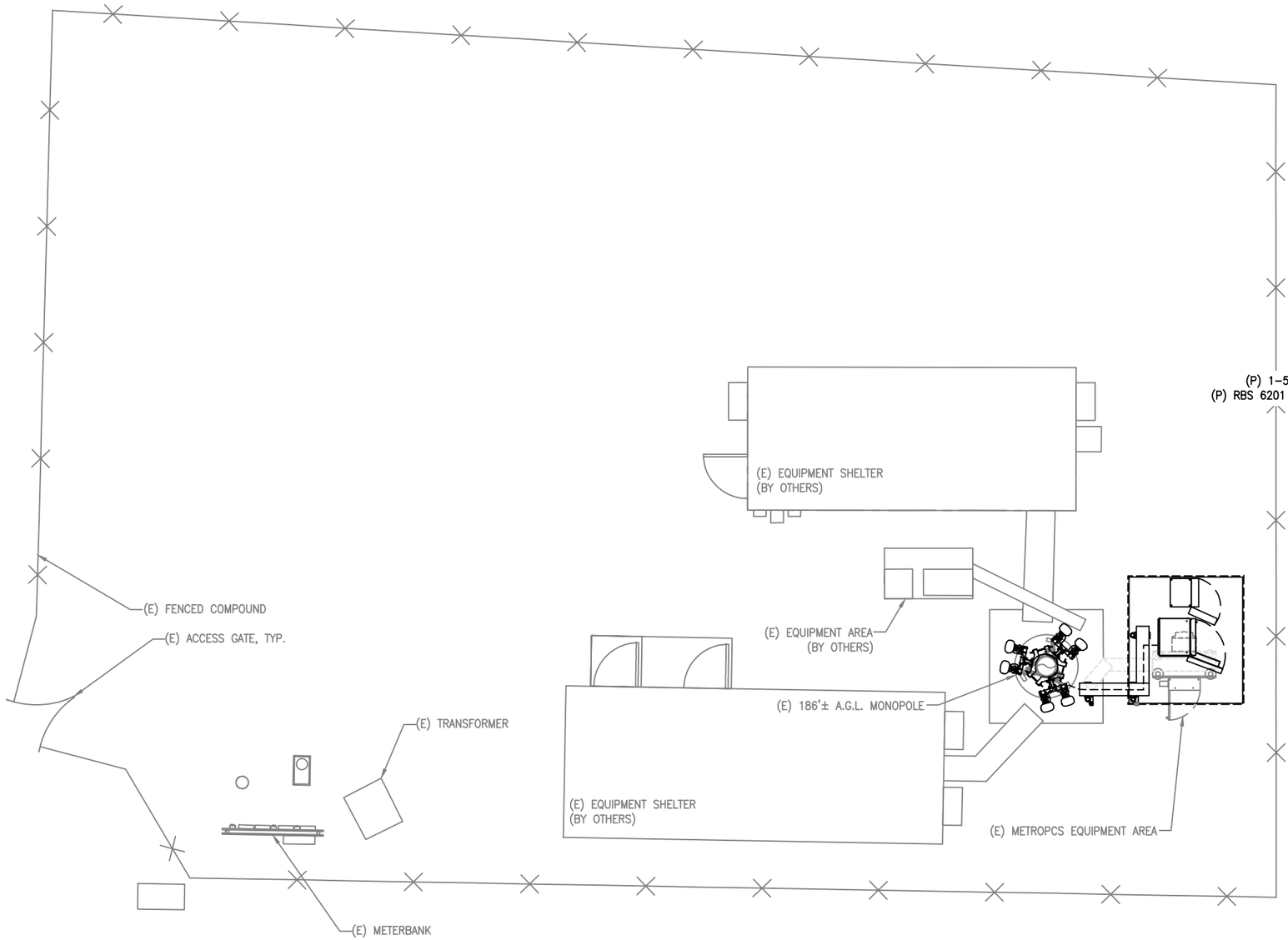
SCALE: AS SHOWN | DESIGNED BY: SNA | DRAWN BY: JTG

MetroPCS

GN-1

JOB NUMBER	DRAWING NUMBER	REV
NHC0203A	GENERAL NOTES	1

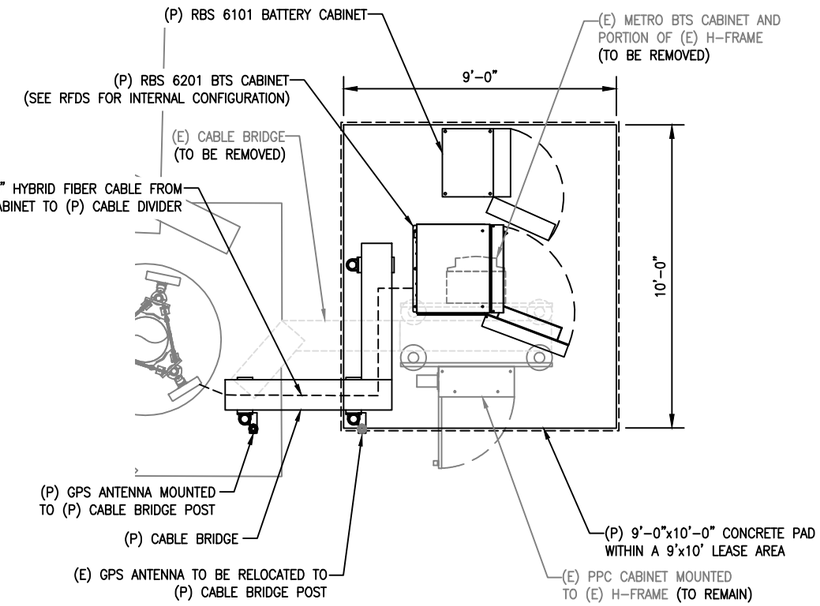


COMPOUND PLAN

1 / A-1

SCALE: 1"=10'-0"

0' 5' 10' 20'



EQUIPMENT PLAN

1 / A-1

SCALE: 1"=5'-0"

0' 2.5' 5' 10'

1 / A-2

STATE OF CONNECTICUT
MARC R. CHRÉTIEN
No.28307
LICENSED PROFESSIONAL ENGINEER

NOTE:

1. A SITE VISIT/SURVEY WAS NOT CONDUCTED BY ADVANCED ENGINEERING GROUP, P.C. SITE INFORMATION AND PLANS ARE BASED UPON INFORMATION PROVIDED BY CLIENT
2. AN ANALYSIS FOR THE CAPACITY OF THE EXISTING STRUCTURE TO SUPPORT THE PROPOSED EQUIPMENT SHALL BE CONDUCTED PRIOR TO CONSTRUCTION (BY OTHERS.) AEG HAS NOT CONDUCTED A STRUCTURAL ANALYSIS.

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SCALE: AS SHOWN | DESIGNED BY: SNA | DRAWN BY: JTG

MetroPCS

COMPOUND & EQUIPMENT PLAN

JOB NUMBER	DRAWING NUMBER	REV
NHC0203A	A-1	1

STATE OF CONNECTICUT
MARC R. CHRETIEN
No.28307
LICENSED
PROFESSIONAL ENGINEER

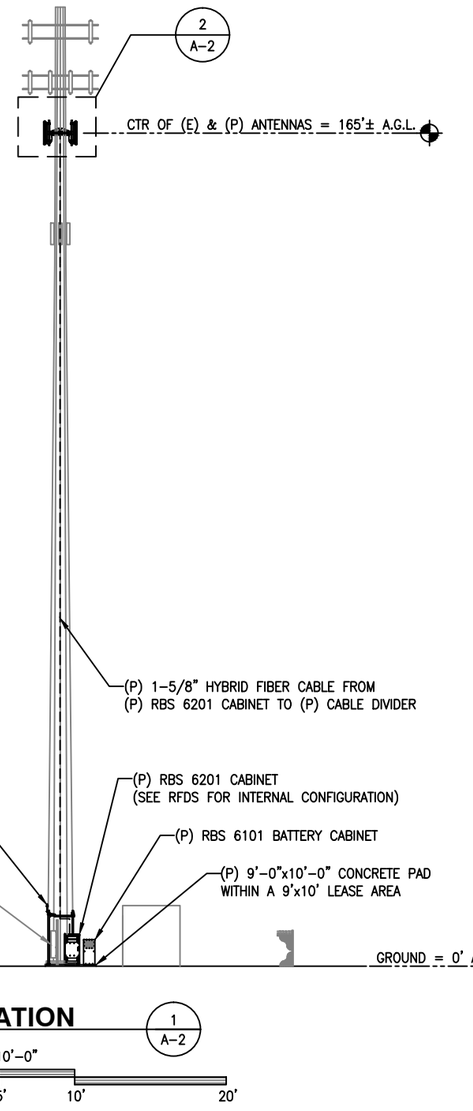
Marc R. Chretien

EXISTING ANTENNA SCHEDULE

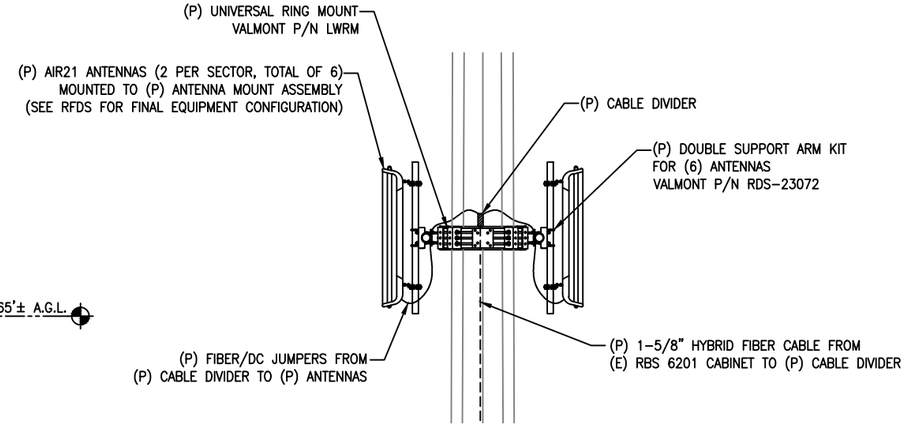
SECTOR	MAKE	MODEL#	SIZE (INCHES)
SECTOR A:	RFS	APXV18-206517S	6.65x3.15x72
SECTOR B:	RFS	APXV18-206517S	6.65x3.15x72
SECTOR C:	RFS	APXV18-206517S	6.65x3.15x72

PROPOSED ANTENNA SCHEDULE

SECTOR	MAKE	MODEL#	SIZE (INCHES)
SECTOR A:	ERICSSON	AIR21 B2A/B4P	12X8X56
	ERICSSON	AIR21 B4A/B2P	12X8X56
SECTOR B:	ERICSSON	AIR21 B2A/B4P	12X8X56
	ERICSSON	AIR21 B4A/B2P	12X8X56
SECTOR C:	ERICSSON	AIR21 B2A/B4P	12X8X56
	ERICSSON	AIR21 B4A/B2P	12X8X56

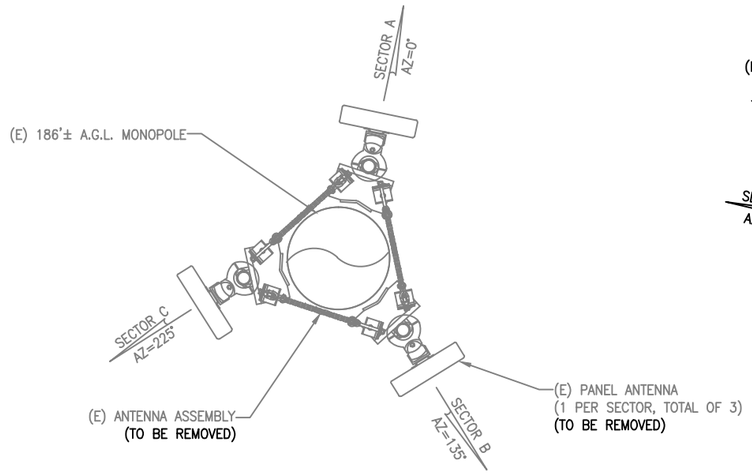


ELEVATION
1
A-2
SCALE: 1"=10'-0"
0' 5' 10' 20'

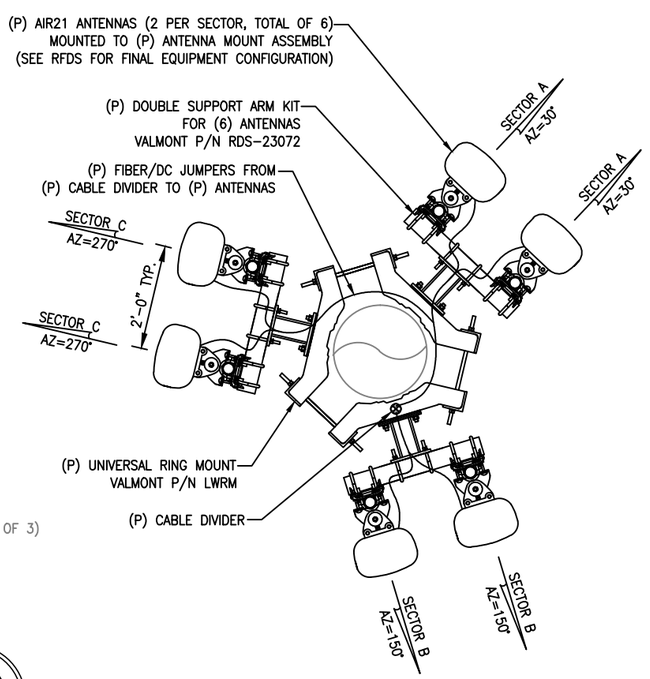


ENLARGED ELEVATION
2
A-2
SCALE: 1"=5'-0"

NOTE:
MOUNT FACE LENGTH TO BE AS SHORTENED
AS REQUIRED FOR INSTALLATION



EXISTING ANTENNA PLAN
3
A-2
SCALE: N.T.S.



PROPOSED ANTENNA PLAN
4
A-2
SCALE: N.T.S.

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CHELMSFORD, MA 01824
TEL: (978) 244-7200
FAX: (978) 244-7240

SITE NUMBER: NHC0203A
SITE NAME: ATC HARWINTON MONOPOLE
159 WEINGART ROAD
HARWINTON, CT 06791
LITCHFIELD COUNTY

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	08/20/14	ISSUED FOR CONSTRUCTION	JTG	SNA	SNA
0	08/04/14	ISSUED FOR REVIEW	JTG	SNA	SNA

SCALE: AS SHOWN | DESIGNED BY: SNA | DRAWN BY: JTG

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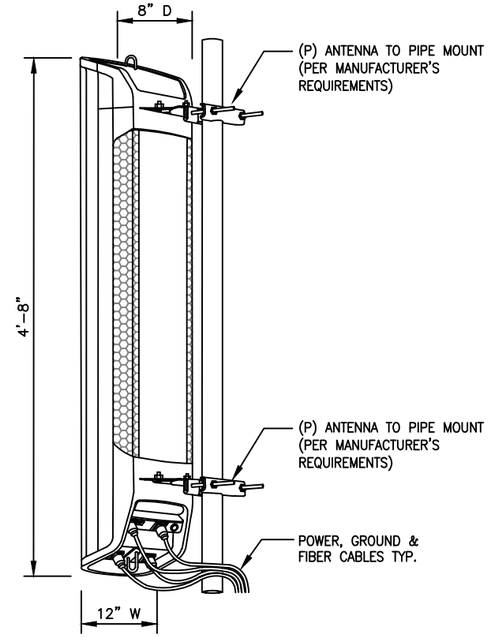
ELEVATION & ANTENNA PLAN

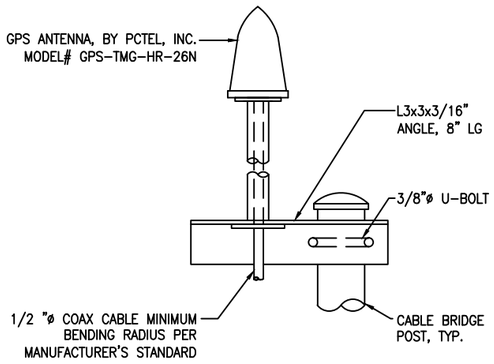
JOB NUMBER	DRAWING NUMBER	REV
NHC0203A	A-2	1



AIR21 ANTENNA TYP.

SCALE: N.T.S.

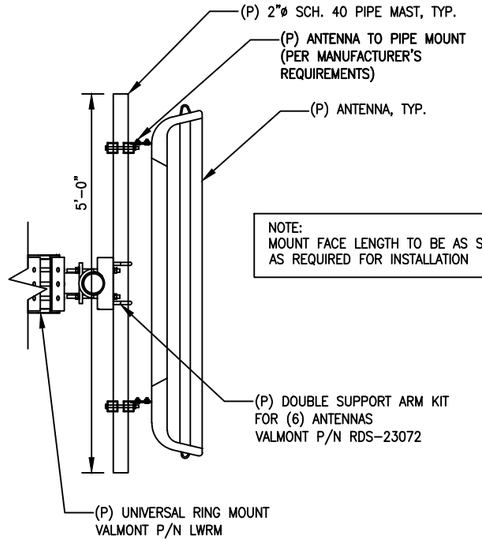
1 / A-3



GPS MOUNTING DETAILS

SCALE: N.T.S.

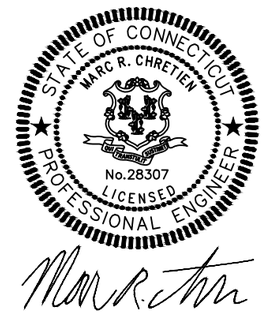
2 / A-3

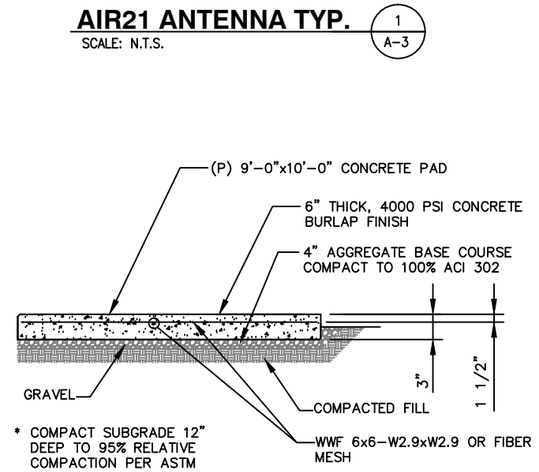


ANTENNA MOUNT TYP.

SCALE: N.T.S.

3 / A-3

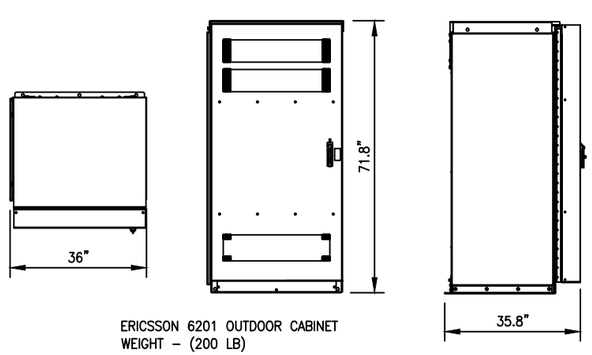




CONCRETE PAD DETAIL

SCALE: N.T.S.

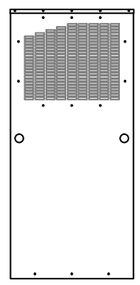
4 / A-3



RBS 6201 CABINET DETAIL

SCALE: N.T.S.

5 / A-3



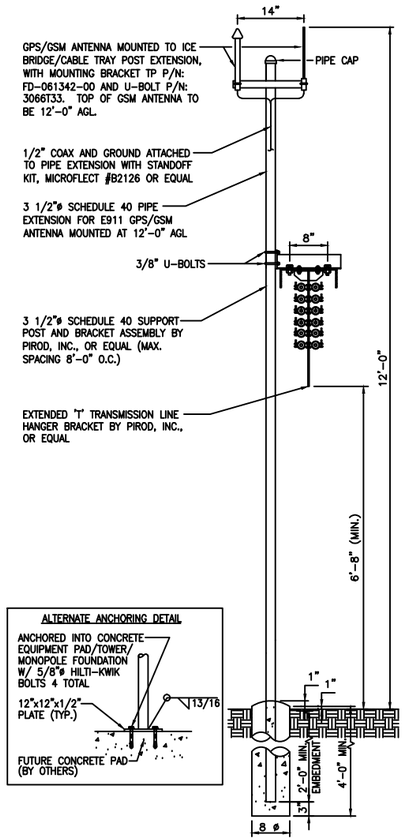
ERICSSON 6101 OUTDOOR BATTERY CABINET (397 LB)

27.5"x27.5"x57"

RBS 6101 BATTERY CABINET

SCALE: N.T.S.

6 / A-3



CABLE BRIDGE DETAIL

SCALE: N.T.S.

7 / A-3

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SCALE: AS SHOWN | DESIGNED BY: SNA | DRAWN BY: JTG

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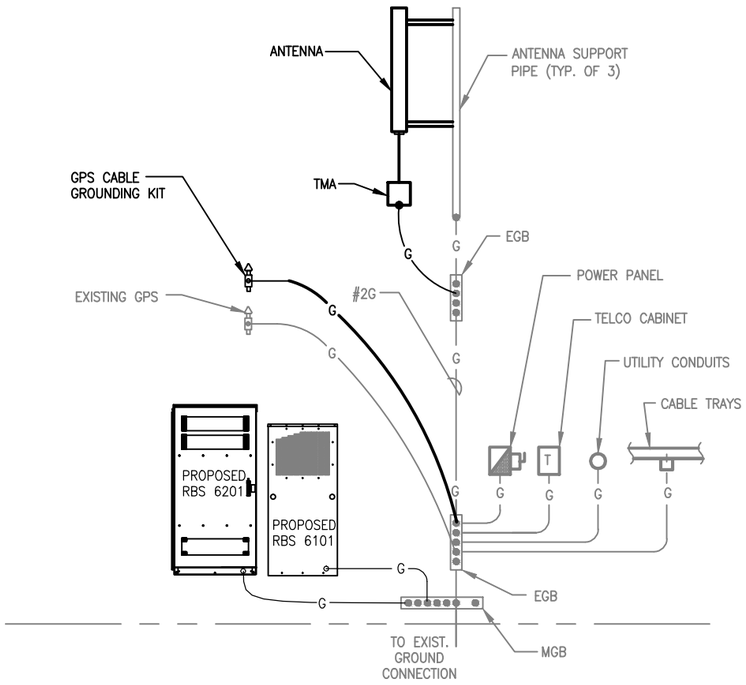
DETAILS

JOB NUMBER	DRAWING NUMBER	REV
NHC0203A	A-3	1

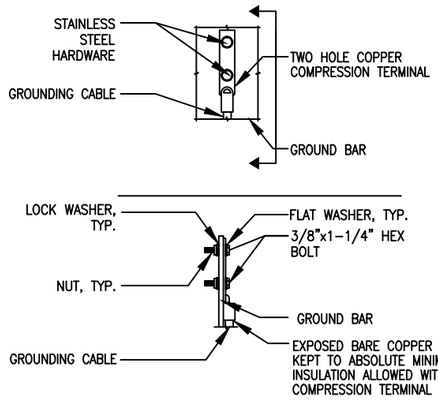


GROUNDING RISER DIAGRAM

1 G-1

SCALE: N.T.S.

NOTE:
1. A SITE VISIT/SURVEY WAS NOT CONDUCTED BY ADVANCED ENGINEERING GROUP, P.C. SITE INFORMATION AND PLANS ARE BASED UPON INFORMATION PROVIDED BY CLIENT CONTRACTOR TO VERIFY IN FIELD

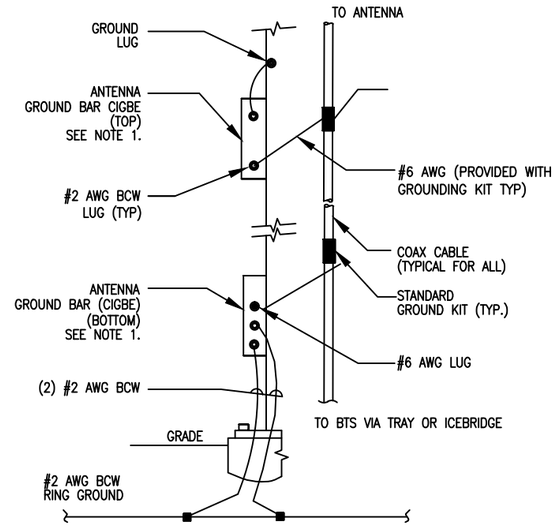


NOTES:
1. "DOUBLING UP" OR "STACKING " OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELD DOWNLEADS FROM UPPER EGB, LOWER EGB, AND MGB.
4. ALL GROUND LUGS MUST BE HEAT SHRUNK AT WIRE/LUG CONNECTION

TYP. GROUND BAR CONNECTION DETAIL

2 G-1

SCALE: N.T.S.

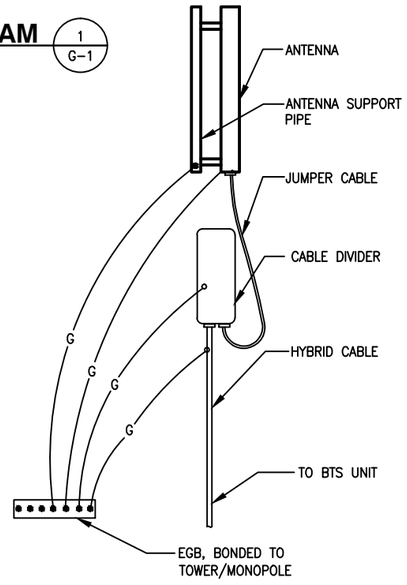


NOTE:
1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF TOWER. ANTENNA LOCATION AND CONNECTION ANTENNA LOCATION AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
2. A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED.

ANTENNA CABLE GROUNDING

3 G-1

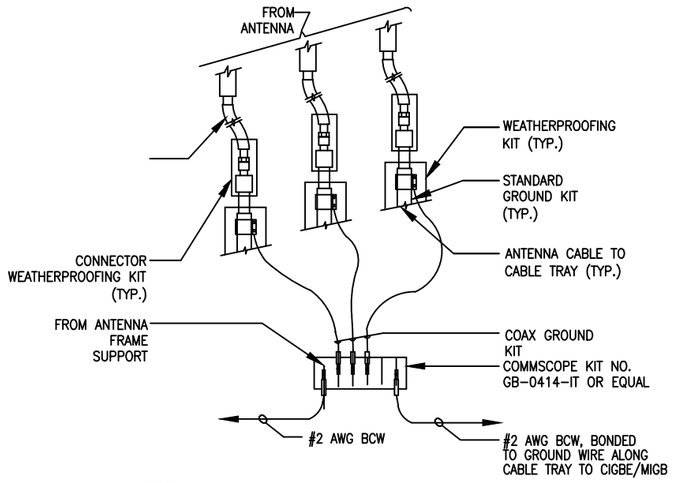
SCALE: N.T.S.



HYBRID CABLE CONNECTION & GROUNDING DETAIL

4 G-1

SCALE: N.T.S.

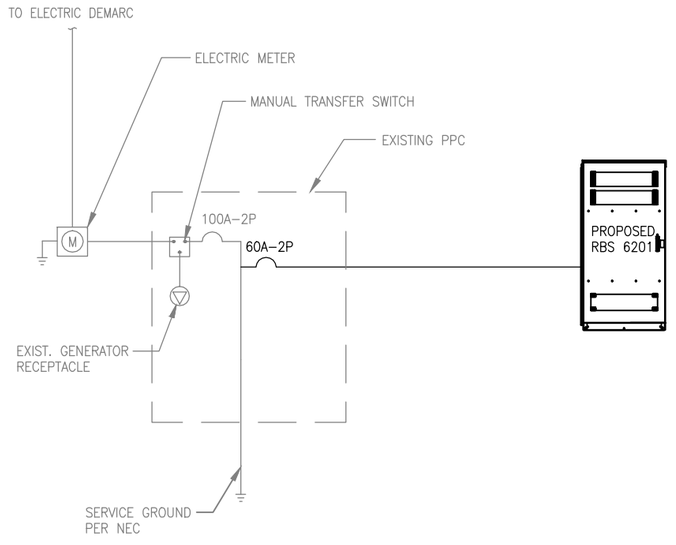


NOTE:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE.

GROUND WIRE TO GROUND BAR CONNECTION DETAIL

5 G-1

SCALE: N.T.S.



ONE-LINE POWER DIAGRAM

6 G-1

SCALE: N.T.S.

HALF SIZE PRINT
THIS DRAWING IS SCALEABLE AT TWICE THE NOTED SCALE

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SCALE: AS SHOWN | DESIGNED BY: SNA | DRAWN BY: JTG

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GROUNDING, ONE-LINE DIAGRAM & DETAILS

JOB NUMBER	DRAWING NUMBER	REV
NHC0203A	G-1	1

Exhibit 2

Power Density Calculation

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

MetroPCS Existing Facility

Site ID: CTNH517A

ATC Harwinton Monopole
159 Weingart Road
Harwinton, CT 06791

September 15, 2014

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general public allowable limit:	**24.18 %**

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

EBI Consulting
environmental | engineering | due diligence

September 15, 2014

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

Emissions Analysis for Site: **CTNH517A – ATC Harwinton Monopole**

EBI Consulting was directed to analyze the proposed MetroPCS facility located at **159 Weingart Road, Harwinton, CT**, for the purpose of determining whether the emissions from the Proposed MetroPCS Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

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

General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general public would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limit for both the PCS and AWS bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed MetroPCS Wireless antenna facility located at **159 Weingart Road, Harwinton, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since MetroPCS is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6 foot person standing at the base of the tower.

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

1) 2 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel

2) 2 UMTS channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

3) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.

4) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

5) For the following calculations the sample point was the top of a six foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications minus 10 dB was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

6) The antennas used in this modeling are the **Ericsson AIR21 B4A/B2P** for 1900 MHz (PCS) and 2100 MHz (AWS) channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The **Ericsson AIR21 B4A/B2P** has a maximum gain of **15.9 dBd** at its main lobe. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

7) The antenna mounting height centerline of the proposed antennas is **165 feet** above ground level (AGL).

8) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

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

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MetroPCS Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	165	Height (AGL):	165	Height (AGL):	165
Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)
Channel Count	2	Channel Count	2	# PCS Channels:	2
Total TX Power:	120	Total TX Power:	120	# AWS Channels:	120
ERP (W):	1,906.06	ERP (W):	1,906.06	ERP (W):	1,906.06
Antenna A1 MPE%	0.66	Antenna B1 MPE%	0.66	Antenna C1 MPE%	0.66
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P	Make / Model:	Ericsson AIR21 B4A/B2P
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	165	Height (AGL):	165	Height (AGL):	165
Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz(PCS) / 2100 MHz (AWS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power:	120	Total TX Power:	120	Total TX Power:	120
ERP (W):	1,906.06	ERP (W):	1,906.06	ERP (W):	1,906.06
Antenna A2 MPE%	0.66	Antenna B2 MPE%	0.66	Antenna C2 MPE%	0.66

Site Composite MPE%	
Carrier	**MPE%**
MetroPCS	**3.98**
AT&T	9.39 %
Clearwire	0.88 %
Verizon Wireless	9.93 %
Site Total MPE %:	**24.18 %**

MetroPCS Sector 1 Total:	1.33 %
MetroPCS Sector 2 Total:	1.33 %
MetroPCS Sector 3 Total:	1.33 %
Site Total:	24.18 %

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Summary

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

The anticipated maximum composite contributions from the MetroPCS facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general public exposure to RF Emissions are shown here:

MetroPCS Sector	Power Density Value (%)
Sector 1:	1.33 %
Sector 2:	1.33 %
Sector 3 :	1.33 %
MetroPCS Total:	3.98 %
Site Total:	24.18 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **24.18%** of the allowable FCC established general public limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

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

Scott Heffernan
RF Engineering Director

EBI Consulting
21 B Street
Burlington, MA 01803

Exhibit 3

Structural Calculations

AMERICAN TOWER®
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Structural Analysis Report

Structure	:	181.9 ft Monopole
ATC Site Name	:	Harwinton, CT
ATC Site Number	:	302502
Engineering Number	:	59131121
Proposed Carrier	:	Metro PCS
Carrier Site Name	:	Harwinton
Carrier Site Number	:	CTNH517A
Site Location	:	159 Weingart Road Harwinton, CT 06791-1109 41.787750,-73.092500
County	:	Litchfield
Date	:	June 20, 2014
Max Usage	:	96%
Result	:	Pass

Zach Graham

Zach Graham

STATE OF CONNECTICUT
WILLIAM GARRETT
No. 23235
LICENSED
PROFESSIONAL ENGINEER

Jun 20 2014 2:18 PM

AMERICAN TOWER®
CORPORATION

Table of Contents

AMERICAN TOWER®
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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 181.9 ft monopole to reflect the change in loading by Metro PCS.

Supporting Documents

Tower Drawings	Mapping by Smith Cullum Inc. Site #CT-0038, dated February 13, 2002
Foundation Drawing	Girard & Co. Engineers Job # 3C237, dated April 24, 1994
Geotechnical Report	Johnson Soils Engineering Co. Report # 14974-H dated January 28, 2002
Modifications	Hutter Trunkina Engineering Project # 03320B, dated August 4, 2003 ATC Project # 42504234, dated February 27, 2009

Analysis

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

Basic Wind Speed:	95 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	40 mph (3-Second Gust) w/ 1" radial ice concurrent
Code:	ANSI/TIA-222-G / 2003 IBC w/ 2005 CT Supplement & 2009 CT Amendment
Structure Class:	II
Exposure Category:	B
Topographic Category:	1

Conclusion

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

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

Existing and Reserved Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
182.0	185.0	1	Andrew ABT-DMDF-ADBH	Platform w/ Handrails	(3) 3" Conduit (12) 1 1/4" Coax (2) 0.78" 8 AWG 6 (1) 0.39" Cable	AT&T Mobility
		6	Powerwave LGP21401			
		6	Ericsson RRUS 11 (Band 12)			
		6	Powerwave 7770.00			
		1	30" x 23" BOB			
		3	KMW AM-X-CD-16-65-00T-RET			
175.0	175.0	6	RFS FD9R6004/2C-3L	Low Profile Platform	(12) 1 5/8" Coax	Verizon
		3	Antel BXA-171063-12BF-EDIN-X			
		3	Antel BXA-70063-6CF-EDIN-X			
		6	Antel LPA-80063/6CF			
145.0	145.0	3	KMW TTA (HB-X-WM-17-65-00T)	Side Arms	(6) 1 5/8" Coax	Clearwire
		3	KMW HB-X-WM-17-65-00T			

Equipment to be Removed

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
165.0	165.0	3	RFS APXV18-206517-C	-	(6) 1 5/8" Coax	Metro PCS

Proposed Equipment

Elevation[1] (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
165.0	165.0	3	Ericsson AIR 21, 1.3M, B2A B4P	Flush	(6) 1 5/8" Coax (1) 1 5/8" Hybriflex	Metro PCS
		3	Ericsson AIR 21, 1.3M, B4A B2P			

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

Install proposed coax inside the pole shaft.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	63%	Pass
Shaft	61%	Pass
Base Plate	57%	Pass
Flanges	25%	Pass
Reinforcement	96%	Pass

Foundations

Reaction Component	Analysis Reactions
Moment (Kips-Ft)	3,521.4
Axial (Kips)	95.4
Shear (Kips)	29.7

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)	Deflection (ft)	Sway (Rotation) (°)
165.0	2.346	1.538

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

AMERICAN TOWER®
CORPORATION

Standard Conditions

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

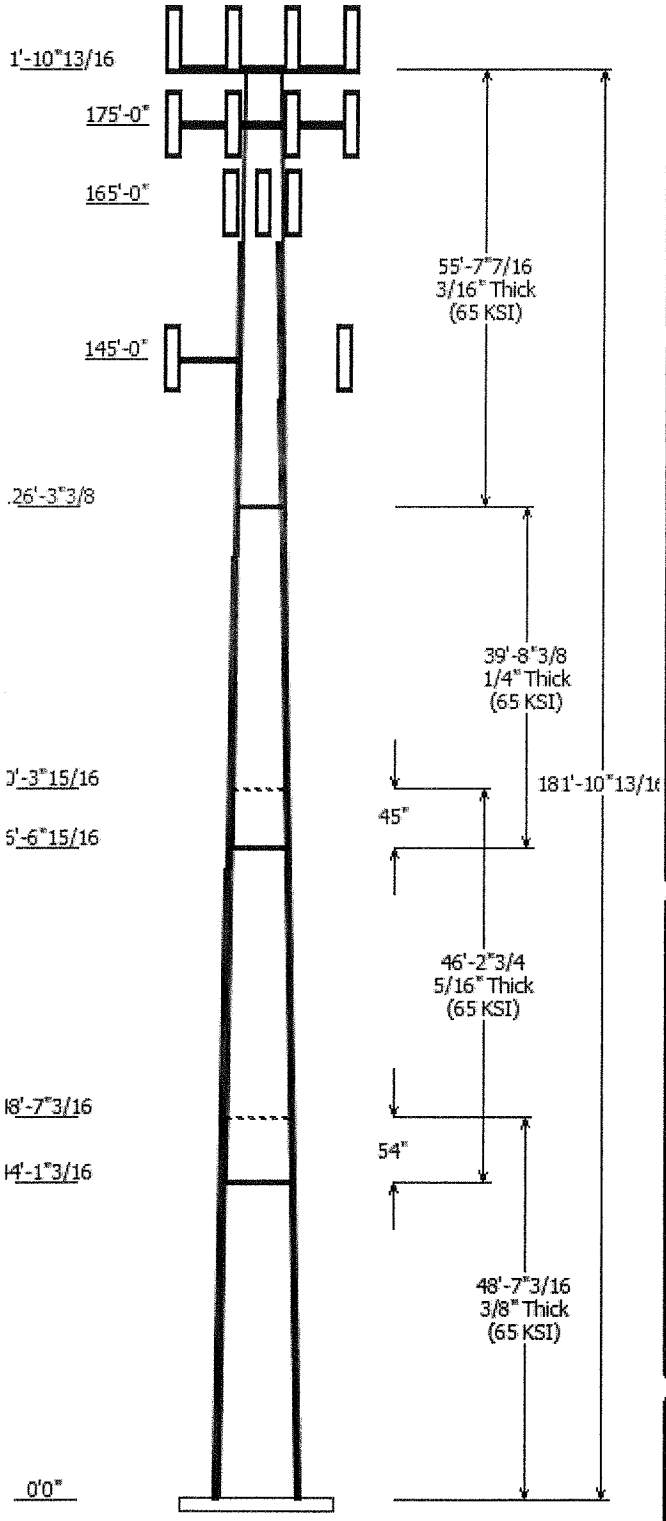
-- Information supplied by the client regarding the structure itself, antenna, mounts and feed line loading on the structure and its components, or other relevant information.

-- Information from drawings in the possession of American Tower Corporation, or generated by field inspections or measurements of the structure.

It is the responsibility of the client to ensure that the information provided to ATC Tower Services, Inc. and used in the performance of our engineering services is correct and complete. In the absence of information to the contrary, we assume that all structures were constructed in accordance with the drawings and specifications and that their capacity has not significantly changed from the "as new" condition.

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

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. ATC Tower Services, Inc. is not responsible for the conclusions, opinions and recommendations made by others based on the information we supply.



Job Information

Pole :	302502	Code:	ANSI/TIA-222 Rev G
Description :	182 ft Monopole		
Client :	AT&T Mobility	Struct Class :	II
Location :	Harwinton, CT		
Shape :	12 Sides	Exposure :	B
Height :	181.90 (ft)	Topo :	1
Base Elev (ft):	0.00		
Taper:	0.16286(in/ft)		

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Accross Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	48.600	35.08	43.00	0.375		0.000	0.162864	65
2	46.230	28.91	36.44	0.313	Slip Joint	54.000	0.162864	65
3	39.700	23.55	30.02	0.250	Slip Joint	45.000	0.162864	65
4	55.620	14.50	23.55	0.188	Butt Joint	0.000	0.162864	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
181.900	185.000	1	30" x 23" BOB
181.900	185.000	1	Andrew ABT-DMDF-ADBH
181.900	185.000	6	Ericsson RRUS 11 (Band 12)
181.900	185.000	3	KMW AM-X-CD-16-65-00T-RET
181.900	185.000	6	Powerwave LGP21401
181.900	181.900	1	Round Platform w/ Handrails
181.900	185.000	6	Powerwave 7770.00
175.000	175.000	6	RFS FD9R6004/2C-3L
175.000	175.000	3	Antel BXA-70063-6CF-EDIN-X
175.000	175.000	3	Antel BXA-171063-12BF-EDIN-X
175.000	175.000	1	Flat Low Profile Platform
175.000	175.000	6	Antel LPA-80063/6CF
165.000	165.000	3	Ericsson AIR 21, 1.3M, B4A B2P
165.000	165.000	3	Ericsson AIR 21, 1.3M, B2A B4P
145.000	145.000	1	Side Arms
145.000	145.000	3	KMW TTA (HB-X-WM-17-65-00T)
145.000	145.000	3	KMW HB-X-WM-17-65-00T

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
140.0	160.0	3" Solid Rod	Yes
120.0	140.0	3.5" Solid Rod	Yes
80.000	120.0	4.0" Solid Rod	Yes
0.000	80.000	4.25" Solid Rod	Yes
0.000	145.0	1 5/8" Coax	Yes
0.000	165.0	1 5/8" Coax	No
0.000	165.0	1 5/8" Hybriflex	No
0.000	175.0	1 5/8" Coax	No
0.000	181.9	0.39" Cable	No
0.000	181.9	0.78" 8 AWG 6	No
0.000	181.9	1 1/4" Coax	No
0.000	181.9	3" Conduit	No

Load Cases

1.2D + 1.6W	95.00 mph with No Ice
0.9D + 1.6W	95.00 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	40.00 mph with 1.00 in Radial Ice

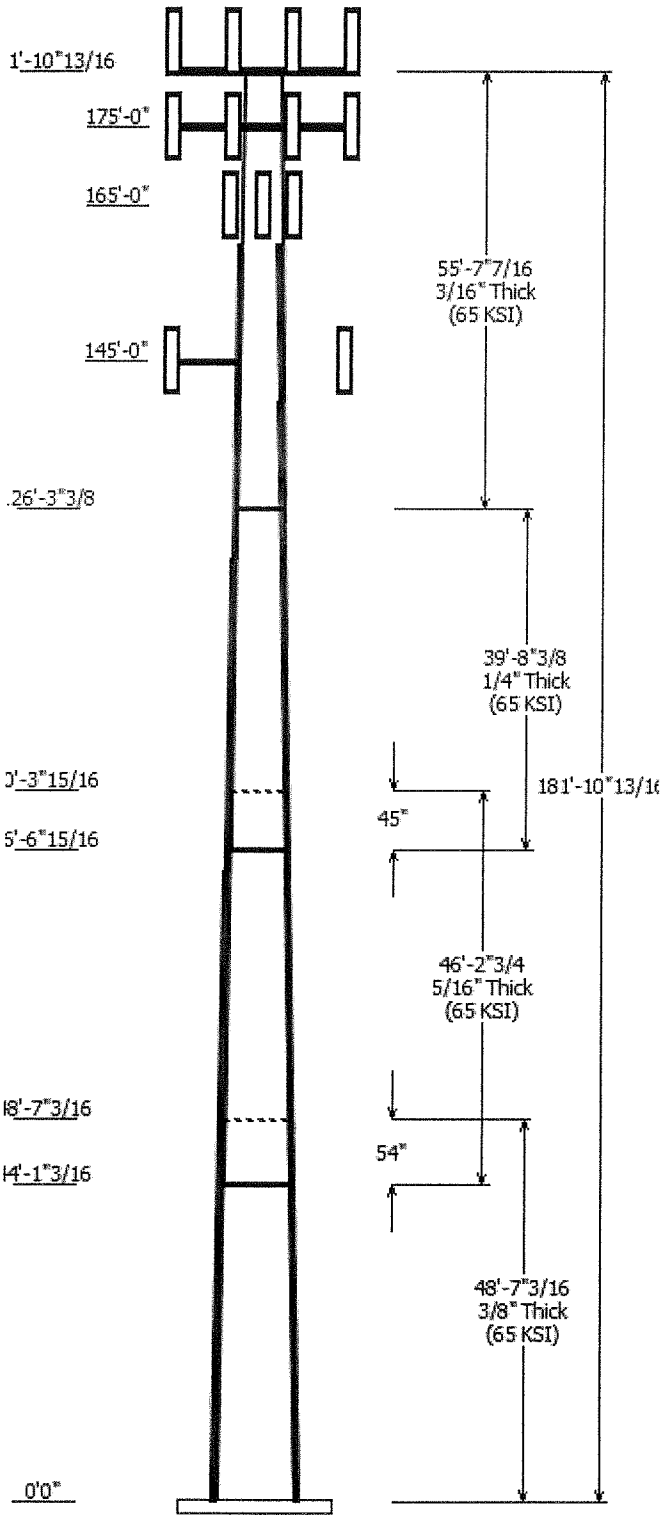
1.0D + 1.0W	60.00 mph Serviceability

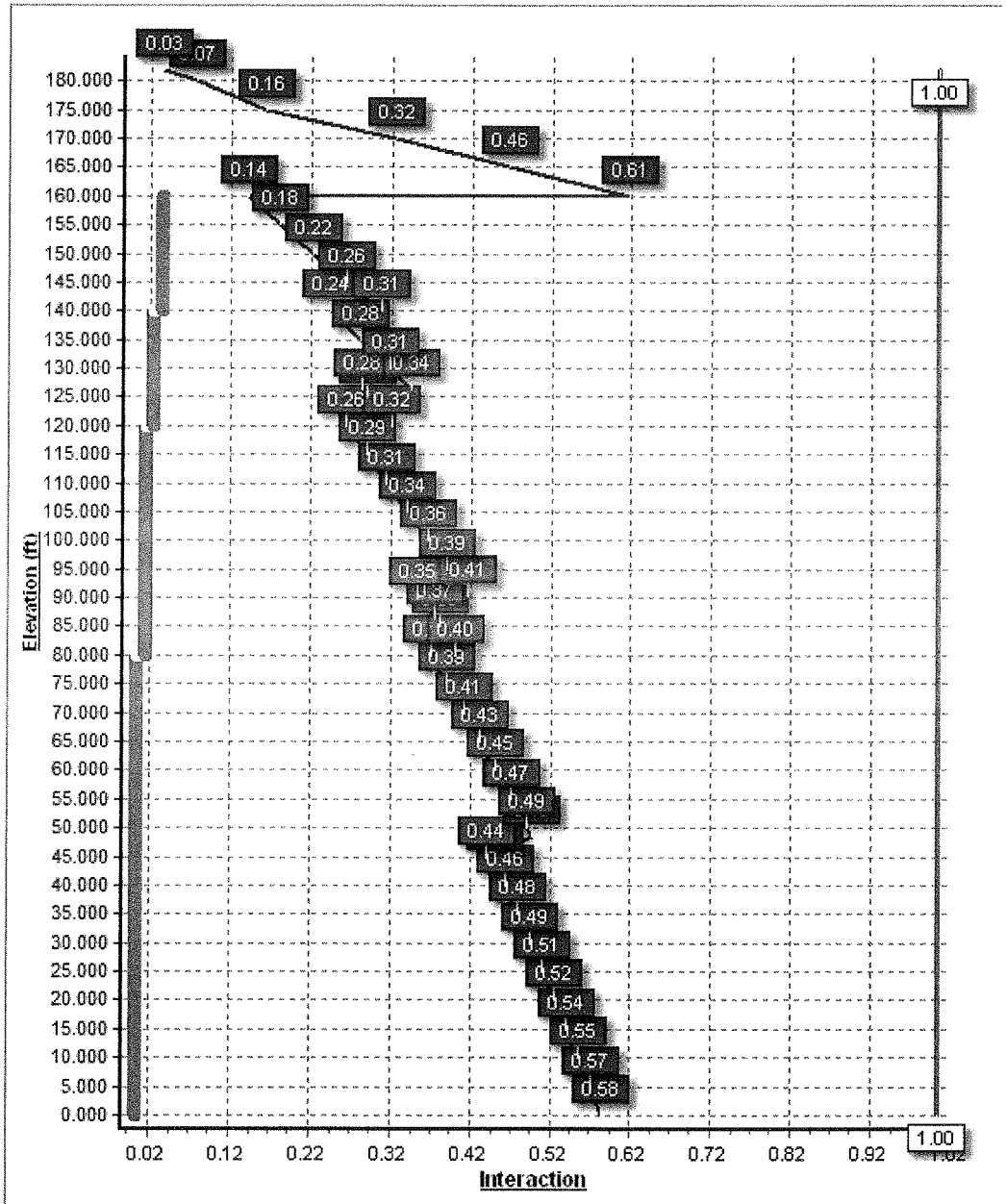
Reactions

Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.6W	3521.44	29.70	59.60
0.9D + 1.6W	3476.30	29.40	49.72
1.2D + 1.0Di + 1.0Wi	620.18	4.67	95.43
1.0D + 1.0W	902.26	7.66	53.07

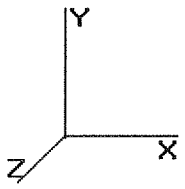
Dish Deflections

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




Elevation (ft)
180.000
175.000
170.000
165.000
160.000
155.000
150.000
145.000
140.000
135.000
130.000
125.000
120.000
115.000
110.000
105.000
100.000
95.000
90.000
85.000
80.000
75.000
70.000
65.000
60.000
55.000
50.000
45.000
40.000
35.000
30.000
25.000
20.000
15.000
10.000
5.000
0.000
0.02
0.12
0.22
0.32
0.42
0.52
0.62
0.72
0.82
0.92
Interaction
1.00
1.00
0.03
0.07
0.16
0.32
0.46
0.61
0.14
0.18
0.22
0.26
0.24
0.31
0.28
0.31
0.28
0.34
0.26
0.32
0.29
0.31
0.34
0.36
0.39
0.35
0.41
0.40
0.39
0.41
0.43
0.45
0.47
0.49
0.44
0.46
0.48
0.49
0.51
0.52
0.54
0.55
0.57
0.58

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:37 PM
Location :	Harwinton, CT	Struct Class : II	
Height :	181.9 (ft)	Exposure Category : B	Page: 1
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Slip Joint Len (in)	Weight (lb)	Bottom Dia (in)	Bottom Elev (ft)	Bottom Area (sqin)	Bottom Ix (in^4)	Bottom W/t Ratio	Bottom D/t Ratio	Top Dia (in)	Top Elev (ft)	Top Area (sqin)	Top Ix (in^4)	Top W/t Ratio	Top D/t Ratio	Taper (in/ft)
1-12	48.600	0.3750	65		0.00	7,722	43.00	0.00	51.47	11936.2	28.05	114.67	35.08	48.60	41.91	6445.1	22.39	93.56	0.162864
2-12	46.230	0.3125	65	Slip	54.00	5,123	36.44	44.10	36.36	6057.6	28.57	116.62	28.91	90.33	28.78	3004.9	22.11	92.52	0.162864
3-12	39.700	0.2500	65	Slip	45.00	2,886	30.02	86.58	23.97	2712.1	29.50	120.10	23.55	126.28	18.76	1301.1	22.57	94.23	0.162864
4-12	55.620	0.1875	65	Butt	0.00	2,153	23.55	126.28	14.11	983.7	30.99	125.65	14.50	181.90	8.64	225.9	18.04	77.33	0.162864
				Shaft Weight		17,884													

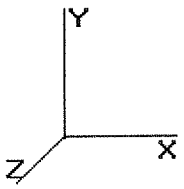
Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice EPAa (sf)	No Ice Orientation Factor	Ice Weight (lb)	Ice EPAa (sf)	Ice Orientation Factor	Distance From Face (ft)	Vert Ecc (ft)
181.90	30" x 23" BOB	1	100.00	5.750	0.50	319.25	7.082	0.50	0.000	3.100
181.90	Andrew ABT-DMDF-ADBH	1	1.10	0.050	0.50	11.34	0.208	0.50	0.000	3.100
181.90	Ericsson RRUS 11 (Band 12)	6	50.00	2.570	0.50	170.52	3.485	0.67	0.000	3.100
181.90	KMW AM-X-CD-16-65-00T-	3	48.50	8.020	0.79	324.05	9.822	0.79	0.000	3.100
181.90	Powerwave 7770.00	6	35.00	5.510	0.77	233.89	6.977	0.77	0.000	3.100
181.90	Powerwave LGP21401	6	14.10	1.100	0.50	66.48	1.758	0.50	0.000	3.100
181.90	Round Platform w/ Handrails	1	2000.00	27.200	1.00	3,764.96	60.495	1.00	0.000	0.000
175.00	Antel BXA-171063-12BF-EDIN-	3	15.00	4.730	0.72	193.69	6.435	0.72	0.000	0.000
175.00	Antel BXA-70063-6CF-EDIN-X	3	17.00	7.570	0.66	261.38	9.309	0.66	0.000	0.000
175.00	Antel LPA-80063/6CF	6	27.00	9.590	0.76	435.27	11.409	0.76	0.000	0.000
175.00	Flat Low Profile Platform	1	1500.00	26.100	1.00	2,379.07	52.004	1.00	0.000	0.000
175.00	RFS FD9R6004/2C-3L	6	3.10	0.360	0.50	31.80	0.702	0.50	0.000	0.000
165.00	Ericsson AIR 21, 1.3M, B2A	3	91.50	6.040	0.70	332.32	7.561	0.70	0.000	0.000
165.00	Ericsson AIR 21, 1.3M, B4A	3	90.40	6.080	0.70	332.27	7.607	0.70	0.000	0.000
145.00	KMW HB-X-WM-17-65-00T	3	30.00	1.920	1.00	190.22	4.560	1.00	0.000	0.000
145.00	KMW TTA (HB-X-WM-17-65-	3	15.90	0.650	0.50	68.24	1.595	0.50	0.000	0.000
145.00	Side Arms	1	560.00	8.500	1.00	1,183.37	17.962	1.00	0.000	0.000
	Totals	56	5861.20			18,392.25			Number of Loadings :	17

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Exposed Width (in)	Exposed To Wind
0.00	181.90	(1) 0.39" Cable	0.00	N
0.00	181.90	(2) 0.78" 8 AWG 6	0.00	N
0.00	181.90	(12) 1 1/4" Coax	0.00	N
0.00	181.90	(3) 3" Conduit	0.00	N
0.00	175.00	(12) 1 5/8" Coax	0.00	N
0.00	165.00	(6) 1 5/8" Coax	0.00	N
0.00	165.00	(1) 1 5/8" Hybriflex	0.00	N
140.00	160.00	(3) 3" Solid Rod	6.00	Y
0.00	145.00	(6) 1 5/8" Coax	0.00	Y
120.00	140.00	(3) 3.5" Solid Rod	7.00	Y
80.00	120.00	(3) 4.0" Solid Rod	8.00	Y
0.00	80.00	(3) 4.25" Solid Rod	8.50	Y

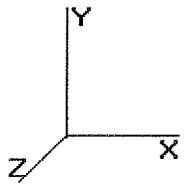
Pole :	302502	Code: ANSI/TIA-222 Rev G			6/20/2014 2:21:37 PM
Location :	Harwinton, CT	Struct Class : II			Page: 2
Height :	181.9 (ft)	Exposure Category : B			
Base Dia :	43.00 (in)	Topographic Category : 1			
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)			
Shape :	12 Sides				
Taper :	0.162864 (in/ft)				



Additional Steel

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	Hole Dia (in)	Linear Weight (lb/ft)	Thick (in)	Weight (lb)	Len (ft)
0.00	80.00	3	SOL 4 1/4" SOLID	50	0.75	0.00	48.27	4.25	11,584.8	240.00
80.00	120.0	3	SOL 4" SOLID	50	0.88	0.00	42.76	4.00	5,131.2	120.00
120.0	140.0	3	SOL 3 1/2" SOLID	50	1.13	0.00	32.74	3.50	1,964.4	60.00
140.0	160.0	3	SOL 3" SOLID	50	1.38	0.00	24.05	3.00	1,443.0	60.00
									20,123.4	480.00

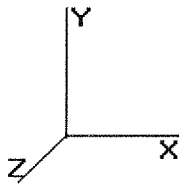
Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:37 PM
Location :	Harwinton, CT	Struct Class : II	
Height :	181.9 (ft)	Exposure Category : B	Page: 3
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Segment Properties (Max Len : 5 ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fy (ksi)	S (in3)	Weight (lb)	Additional Reinforcing Area (in^2)	Ix (in^4)	Weight (lb)
0.00		0.3750	43.000	51.470	11,936.2	28.05	114.67	74.1	536.3	0.0	42.55	12,69	0.0
5.00		0.3750	42.186	50.486	11,265.1	27.46	112.50	74.8	515.9	867.3	42.55	12,27	724.0
10.00		0.3750	41.371	49.503	10,619.6	26.88	110.32	75.4	495.9	850.6	42.55	11,86	724.0
15.00		0.3750	40.557	48.520	9,999.3	26.30	108.15	76.0	476.3	833.9	42.55	11,45	724.0
20.00		0.3750	39.743	47.537	9,403.6	25.72	105.98	76.7	457.1	817.1	42.55	11,05	724.0
25.00		0.3750	38.928	46.553	8,832.0	25.14	103.81	77.3	438.3	800.4	42.55	10,66	724.0
30.00		0.3750	38.114	45.570	8,284.1	24.55	101.64	77.9	419.9	783.7	42.55	10,28	724.0
35.00		0.3750	37.300	44.587	7,759.4	23.97	99.47	78.6	401.9	767.0	42.55	9,907	724.0
40.00		0.3750	36.485	43.603	7,257.2	23.39	97.29	79.2	384.3	750.2	42.55	9,537	724.0
44.10	Bot - Section 2	0.3750	35.818	42.797	6,862.0	22.91	95.51	79.7	370.1	602.7	42.55	9,239	593.7
45.00		0.3750	35.671	42.620	6,777.3	22.81	95.12	79.8	367.0	241.9	42.55	9,452	130.3
48.60	Top - Section 1	0.3125	35.710	35.619	5,696.4	27.94	114.27	74.2	308.2	957.7	42.55	9,192	521.3
50.00		0.3125	35.482	35.389	5,587.1	27.74	113.54	74.5	304.2	169.1	42.55	9,091	202.7
55.00		0.3125	34.667	34.570	5,207.9	27.05	110.94	75.2	290.2	595.1	42.55	8,738	724.0
60.00		0.3125	33.853	33.750	4,846.3	26.35	108.33	76.0	276.6	581.2	42.55	8,391	724.0
65.00		0.3125	33.039	32.931	4,501.8	25.65	105.72	76.7	263.2	567.3	42.55	8,052	724.0
70.00		0.3125	32.225	32.111	4,174.0	24.95	103.12	77.5	250.2	553.3	42.55	7,719	724.0
75.00		0.3125	31.410	31.292	3,862.6	24.25	100.51	78.3	237.6	539.4	42.55	7,394	724.0
80.00	Reinf. Top Reinf	0.3125	30.596	30.473	3,567.0	23.55	97.91	79.0	225.2	525.4	42.55	7,075	724.0
85.00		0.3125	29.782	29.653	3,286.9	22.86	95.30	79.8	213.2	511.5	37.69	5,986	641.4
86.58	Bot - Section 3	0.3125	29.524	29.394	3,201.6	22.64	94.48	80.0	209.5	158.7	37.69	5,901	202.7
90.00		0.3125	28.967	28.834	3,021.9	22.16	92.70	80.5	201.5	615.1	37.69	5,882	438.7
90.33	Top - Section 2	0.2500	29.413	23.477	2,548.6	28.85	117.65	73.3	167.4	58.7	37.69	5,864	42.3
95.00		0.2500	28.653	22.864	2,354.3	28.03	114.61	74.1	158.7	368.2	37.69	5,614	599.1
100.0		0.2500	27.839	22.209	2,157.6	27.16	111.35	75.1	149.7	383.4	37.69	5,354	641.4
105.0		0.2500	27.024	21.553	1,972.1	26.29	108.10	76.0	141.0	372.3	37.69	5,099	641.4
110.0		0.2500	26.210	20.898	1,797.6	25.41	104.84	77.0	132.5	361.1	37.69	4,851	641.4
115.0		0.2500	25.396	20.242	1,633.7	24.54	101.58	78.0	124.3	350.0	37.69	4,608	641.4
120.0	Reinf. Top Reinf	0.2500	24.581	19.587	1,480.1	23.67	98.33	78.9	116.3	338.8	37.69	4,372	641.4
125.0		0.2500	23.767	18.931	1,336.4	22.79	95.07	79.9	108.6	327.7	28.86	3,165	491.1
126.2	Top - Section 3	0.2500	23.559	18.763	1,301.1	22.57	94.23	80.1	106.7	82.1	28.86	3,121	125.7
126.2	Bot - Section 4	0.1875	23.559	14.110	983.7	30.99	125.65	70.9	80.7		28.86	3,121	
130.0		0.1875	22.953	13.744	909.2	30.12	122.41	71.9	76.5	176.3	28.86	2,994	365.4
135.0		0.1875	22.138	13.253	815.1	28.96	118.07	73.1	71.1	229.7	28.86	2,828	491.1
140.0	Reinf. Top Reinf	0.1875	21.324	12.761	727.7	27.79	113.73	74.4	65.9	221.3	28.86	2,666	491.1
145.0		0.1875	20.510	12.270	646.8	26.63	109.39	75.7	60.9	212.9	21.20	1,839	360.8
150.0		0.1875	19.695	11.778	572.1	25.47	105.04	76.9	56.1	204.6	21.20	1,728	360.8
155.0		0.1875	18.881	11.286	503.4	24.30	100.70	78.2	51.5	196.2	21.20	1,620	360.8
160.0	Reinf. Top	0.1875	18.067	10.795	440.4	23.14	96.36	79.5	47.1	187.8	21.20	1,515	360.8
165.0		0.1875	17.252	10.303	383.0	21.98	92.01	80.7	42.9	179.5			
170.0		0.1875	16.438	9.811	330.7	20.81	87.67	81.9	38.9	171.1			
175.0		0.1875	15.624	9.320	283.4	19.65	83.33	81.9	35.0	162.7			
180.0		0.1875	14.809	8.828	240.9	18.48	78.98	81.9	31.4	154.4			
181.9		0.1875	14.500	8.641	225.9	18.04	77.33	81.9	30.1	56.5			
										17,884.1			20,123.

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:37 PM
Location :	Harwinton, CT	Struct Class : II	
Height :	181.9 (ft)	Exposure Category : B	Page: 4
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 27 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

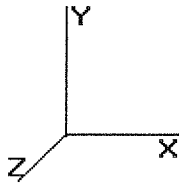
Wind Importance Factor : 1.00

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf		Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	15.364	16.90	294.86	1.000		0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	15.364	16.90	289.27	1.278	*	0.000	5.00	18.373	23.49	635.1	0.0	1,764.9
10.00		1.00	0.70	15.364	16.90	283.69	1.290	*	0.000	5.00	18.022	23.24	628.4	0.0	1,744.8
15.00		1.00	0.70	15.364	16.90	278.10	1.200	*	0.000	5.00	17.671	21.20	573.4	0.0	1,724.7
20.00		1.00	0.70	15.364	16.90	272.52	1.200	*	0.000	5.00	17.319	20.78	562.0	0.0	1,704.6
25.00		1.00	0.70	15.364	16.90	266.94	1.200	*	0.000	5.00	16.968	20.36	550.6	0.0	1,684.5
30.00		1.00	0.70	15.377	16.91	261.46	1.200	*	0.000	5.00	16.617	19.94	539.7	0.0	1,664.5
35.00		1.00	0.73	16.070	17.67	261.57	1.200	*	0.000	5.00	16.265	19.52	552.0	0.0	1,644.4
40.00		1.00	0.76	16.694	18.36	260.79	1.200	*	0.000	5.00	15.914	19.10	561.1	0.0	1,624.3
44.10	Bot - Section 2	1.00	0.78	17.166	18.88	259.61	1.200	*	0.000	4.10	12.788	15.35	463.6	0.0	1,317.0
45.00		1.00	0.78	17.266	18.99	259.30	1.200	*	0.000	0.90	2.824	3.39	103.0	0.0	420.6
48.60	Top - Section 1	1.00	0.80	17.650	19.41	257.85	1.200	*	0.000	3.60	11.182	13.42	416.8	0.0	1,670.6
50.00		1.00	0.81	17.793	19.57	261.83	1.200	*	0.000	1.40	4.299	5.16	161.6	0.0	405.7
55.00		1.00	0.83	18.285	20.11	259.33	1.200	*	0.000	5.00	15.130	18.16	584.3	0.0	1,438.2
60.00		1.00	0.85	18.745	20.61	256.41	1.200	*	0.000	5.00	14.779	17.73	585.1	0.0	1,421.5
65.00		1.00	0.87	19.179	21.09	253.12	1.200	*	0.000	5.00	14.427	17.31	584.4	0.0	1,404.8
70.00		1.00	0.89	19.589	21.54	249.50	1.200	*	0.000	5.00	14.076	16.89	582.4	0.0	1,388.0
75.00		1.00	0.91	19.979	21.97	245.61	1.200	*	0.000	5.00	13.725	16.47	579.1	0.0	1,371.3
80.00	Reinf. Top Reinf	1.00	0.92	20.351	22.38	241.46	1.200	*	0.000	5.00	13.374	16.05	574.8	0.0	1,354.6
85.00		1.00	0.94	20.706	22.77	237.07	1.200	*	0.000	5.00	13.022	15.63	569.5	0.0	1,255.2
86.58	Bot - Section 3	1.00	0.94	20.816	22.89	235.64	1.200	*	0.000	1.58	4.042	4.85	177.7	0.0	393.2
90.00		1.00	0.95	21.047	23.15	232.48	1.200	*	0.000	3.42	8.777	10.53	390.1	0.0	1,176.9
90.33	Top - Section 2	1.00	0.96	21.069	23.17	232.17	1.200	*	0.000	0.33	0.838	1.01	37.3	0.0	112.8
95.00		1.00	0.97	21.375	23.51	231.74	1.200	*	0.000	4.67	11.697	14.04	528.1	0.0	1,040.9
100.0		1.00	0.98	21.690	23.86	226.81	1.200	*	0.000	5.00	12.184	14.62	558.2	0.0	1,101.5
105.0		1.00	1.00	21.995	24.19	221.72	1.200	*	0.000	5.00	11.833	14.20	549.7	0.0	1,088.1
110.0		1.00	1.01	22.289	24.51	216.47	1.200	*	0.000	5.00	11.482	13.78	540.5	0.0	1,074.8
115.0		1.00	1.02	22.574	24.83	211.08	1.200	*	0.000	5.00	11.130	13.36	530.7	0.0	1,061.4
120.0	Reinf. Top Reinf	1.00	1.04	22.850	25.13	205.56	1.200	*	0.000	5.00	10.779	12.93	520.2	0.0	1,048.0
125.0		1.00	1.05	23.118	25.43	199.91	1.200	*	0.000	5.00	10.428	12.51	509.2	0.0	884.3
126.2	Top - Section 3	1.00	1.05	23.186	25.50	198.45	1.200	*	0.000	1.28	2.613	3.14	128.0	0.0	224.2
130.0		1.00	1.06	23.379	25.71	194.15	1.200	*	0.000	3.72	7.464	8.96	368.5	0.0	576.9
135.0		1.00	1.07	23.632	25.99	188.27	1.200	*	0.000	5.00	9.725	11.67	485.4	0.0	766.7
140.0	Reinf. Top Reinf	1.00	1.08	23.879	26.26	182.29	1.200	*	0.000	5.00	9.374	11.25	472.8	0.0	756.7
145.0	Appertunance(s)	1.00	1.09	24.120	26.53	176.21	1.200	*	0.000	5.00	9.023	10.83	459.6	0.0	616.3
150.0		1.00	1.11	24.355	26.79	170.03	1.200	*	0.000	5.00	8.672	10.41	446.0	0.0	606.2
155.0		1.00	1.12	24.584	27.04	163.77	1.200	*	0.000	5.00	8.320	9.98	432.0	0.0	596.2
160.0	Reinf. Top	1.00	1.13	24.808	27.28	157.42	1.200	*	0.000	5.00	7.969	9.56	417.5	0.0	586.2
165.0	Appertunance(s)	1.00	1.14	25.027	27.53	150.99	1.000		0.000	5.00	7.618	7.62	335.5	0.0	215.4
170.0		1.00	1.15	25.241	27.76	144.47	1.000		0.000	5.00	7.266	7.27	322.8	0.0	205.3
175.0	Appertunance(s)	1.00	1.16	25.451	27.99	137.89	1.000		0.000	5.00	6.915	6.92	309.8	0.0	195.3
180.0		1.00	1.16	25.657	28.22	131.23	1.000		0.000	5.00	6.564	6.56	296.4	0.0	185.3
181.9	Appertunance(s)	1.00	1.17	25.734	28.30	128.68	1.000		0.000	1.90	2.402	2.40	108.8	0.0	67.8
							Totals:			181.90			18,731.5	0.0	41,584.3

* = Cf Adjusted By Linear Load Ra Effect

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:37 PM
Location :	Harwinton, CT	Struct Class : II	
Height :	181.9 (ft)	Exposure Category : B	Page: 5
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 27 Iterations

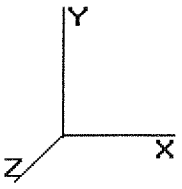
Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Ka	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
145.0	KMW HB-X-WM-17-65-	3	24.120	26.532	1.00	0.80	4.61	0.000	0.000	195.61	0.00	0.00	108.00
145.0	KMW TTA (HB-X-WM-	3	24.120	26.532	0.50	0.80	0.78	0.000	0.000	33.11	0.00	0.00	57.24
145.0	Side Arms	1	24.120	26.532	1.00	1.00	8.50	0.000	0.000	360.83	0.00	0.00	672.00
165.0	Ericsson AIR 21, 1.3	3	25.027	27.530	0.70	1.00	12.68	0.000	0.000	558.70	0.00	0.00	329.40
165.0	Ericsson AIR 21, 1.3	3	25.027	27.530	0.70	1.00	12.77	0.000	0.000	562.40	0.00	0.00	325.44
175.0	Antel LPA-80063/6CF	6	25.451	27.996	0.76	0.80	34.98	0.000	0.000	1,567.09	0.00	0.00	194.40
175.0	Flat Low Profile Pla	1	25.451	27.996	1.00	1.00	26.10	0.000	0.000	1,169.13	0.00	0.00	1,800.00
175.0	Antel BXA-171063-12B	3	25.451	27.996	0.72	0.80	8.17	0.000	0.000	366.12	0.00	0.00	54.00
175.0	Antel BXA-70063-6CF-	3	25.451	27.996	0.66	0.80	11.99	0.000	0.000	537.12	0.00	0.00	61.20
175.0	RFS FD9R6004/2C-3L	6	25.451	27.996	0.50	0.80	0.86	0.000	0.000	38.70	0.00	0.00	22.32
181.9	Powerwave 7770.00	6	25.859	28.444	0.77	0.75	19.09	0.000	3.100	868.90	0.00	2,693.61	252.00
181.9	Round Platform w/ Ha	1	25.734	28.307	1.00	1.00	27.20	0.000	0.000	1,231.93	0.00	0.01	2,400.00
181.9	Powerwave LGP21401	6	25.859	28.444	0.50	0.75	2.48	0.000	3.100	112.64	0.00	349.18	101.52
181.9	KMW AM-X-CD-16-65-	3	25.859	28.444	0.79	0.75	14.26	0.000	3.100	648.79	0.00	2,011.24	174.60
181.9	Ericsson RRUS 11 (Ba	6	25.859	28.444	0.50	0.75	5.78	0.000	3.100	263.17	0.00	815.82	360.00
181.9	Andrew ABT-DMDF-	1	25.859	28.444	0.50	0.75	0.02	0.000	3.100	0.85	0.00	2.65	1.32
181.9	30" x 23" BOB	1	25.859	28.444	0.50	0.75	2.16	0.000	3.100	98.13	0.00	304.21	120.00
										8,613.24			7,033.44

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:37 PM
Location :	Harwinton, CT	Struct Class : II	Page: 6
Height :	181.9 (ft)	Exposure Category : B	
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



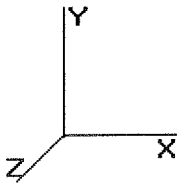
Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 27 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	15.364	0.193	1.278	0.00	29.52
5.00	(3) 4.25" Solid Rod	Yes	5.00	0.000	8.50	3.54	0.00	15.364	0.193	1.278	0.00	0.00
10.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	15.364	0.197	1.290	0.00	29.52
10.00	(3) 4.25" Solid Rod	Yes	5.00	0.000	8.50	3.54	0.00	15.364	0.197	1.290	0.00	0.00
15.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	15.364	0.200	0.000	0.00	29.52
15.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.42	15.364	0.200	0.000	65.32	0.00
20.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	15.364	0.204	0.000	0.00	29.52
20.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.42	15.364	0.204	0.000	65.32	0.00
25.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	15.364	0.209	0.000	0.00	29.52
25.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.42	15.364	0.209	0.000	65.32	0.00
30.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	15.377	0.213	0.000	0.00	29.52
30.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.41	15.377	0.213	0.000	65.35	0.00
35.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	16.070	0.218	0.000	0.00	29.52
35.00	(3) 4.25" Solid Rod	Yes	5.00	0.667	8.50	3.54	2.36	16.070	0.218	0.000	66.80	0.00
40.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	16.694	0.223	0.000	0.00	29.52
40.00	(3) 4.25" Solid Rod	Yes	5.00	0.654	8.50	3.54	2.32	16.694	0.223	0.000	68.09	0.00
44.10	(6) 1 5/8" Coax	Yes	4.10	0.000	0.00	0.00	0.00	17.166	0.227	0.000	0.00	24.20
44.10	(3) 4.25" Solid Rod	Yes	4.10	0.645	8.50	2.90	1.87	17.166	0.227	0.000	56.62	0.00
45.00	(6) 1 5/8" Coax	Yes	0.90	0.000	0.00	0.00	0.00	17.266	0.230	0.000	0.00	5.31
45.00	(3) 4.25" Solid Rod	Yes	0.90	0.643	8.50	0.64	0.41	17.266	0.230	0.000	12.46	0.00
48.60	(6) 1 5/8" Coax	Yes	3.60	0.000	0.00	0.00	0.00	17.650	0.232	0.000	0.00	21.25
48.60	(3) 4.25" Solid Rod	Yes	3.60	0.636	8.50	2.55	1.62	17.650	0.232	0.000	50.41	0.00
50.00	(6) 1 5/8" Coax	Yes	1.40	0.000	0.00	0.00	0.00	17.793	0.231	0.000	0.00	8.26
50.00	(3) 4.25" Solid Rod	Yes	1.40	0.634	8.50	0.99	0.63	17.793	0.231	0.000	19.68	0.00
55.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	18.285	0.234	0.000	0.00	29.52
55.00	(3) 4.25" Solid Rod	Yes	5.00	0.625	8.50	3.54	2.21	18.285	0.234	0.000	71.26	0.00
60.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	18.745	0.240	0.000	0.00	29.52
60.00	(3) 4.25" Solid Rod	Yes	5.00	0.617	8.50	3.54	2.19	18.745	0.240	0.000	72.15	0.00
65.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	19.179	0.245	0.000	0.00	29.52
65.00	(3) 4.25" Solid Rod	Yes	5.00	0.610	8.50	3.54	2.16	19.179	0.245	0.000	72.98	0.00
70.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	19.589	0.252	0.000	0.00	29.52
70.00	(3) 4.25" Solid Rod	Yes	5.00	0.604	8.50	3.54	2.14	19.589	0.252	0.000	73.76	0.00
75.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	19.979	0.258	0.000	0.00	29.52
75.00	(3) 4.25" Solid Rod	Yes	5.00	0.600	8.50	3.54	2.13	19.979	0.258	0.000	74.72	0.00
80.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	20.351	0.265	0.000	0.00	29.52
80.00	(3) 4.25" Solid Rod	Yes	5.00	0.600	8.50	3.54	2.13	20.351	0.265	0.000	76.11	0.00
85.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	20.706	0.256	0.000	0.00	29.52
85.00	(3) 4.0" Solid Rod	Yes	5.00	0.624	8.00	3.33	2.08	20.706	0.256	0.000	75.83	0.00
86.58	(6) 1 5/8" Coax	Yes	1.58	0.000	0.00	0.00	0.00	20.816	0.261	0.000	0.00	9.33
86.58	(3) 4.0" Solid Rod	Yes	1.58	0.623	8.00	1.05	0.66	20.816	0.261	0.000	24.03	0.00
90.00	(6) 1 5/8" Coax	Yes	3.42	0.000	0.00	0.00	0.00	21.047	0.264	0.000	0.00	20.19
90.00	(3) 4.0" Solid Rod	Yes	3.42	0.619	8.00	2.28	1.41	21.047	0.264	0.000	52.29	0.00
90.33	(6) 1 5/8" Coax	Yes	0.33	0.000	0.00	0.00	0.00	21.069	0.267	0.000	0.00	1.95
90.33	(3) 4.0" Solid Rod	Yes	0.33	0.619	8.00	0.22	0.14	21.069	0.267	0.000	5.05	0.00
95.00	(6) 1 5/8" Coax	Yes	4.67	0.000	0.00	0.00	0.00	21.375	0.266	0.000	0.00	27.57
95.00	(3) 4.0" Solid Rod	Yes	4.67	0.614	8.00	3.11	1.91	21.375	0.266	0.000	71.96	0.00
100.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	21.690	0.274	0.000	0.00	29.52
100.0	(3) 4.0" Solid Rod	Yes	5.00	0.610	8.00	3.33	2.03	21.690	0.274	0.000	77.61	0.00
105.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	21.995	0.282	0.000	0.00	29.52
105.0	(3) 4.0" Solid Rod	Yes	5.00	0.606	8.00	3.33	2.02	21.995	0.282	0.000	78.16	0.00
110.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	22.289	0.290	0.000	0.00	29.52

Pole :	302502				Code: ANSI/TIA-222 Rev G					6/20/2014 2:21:37 PM	
Location :	Harwinton, CT				Struct Class : II					Page: 7	
Height :	181.9 (ft)				Exposure Category : B						
Base Dia :	43.00 (in)				Topographic Category : 1						
Top Dia :	14.50 (in)				Base Elev : 0.000 (ft)						
Shape :	12 Sides										
Taper :	0.162864 (in/ft)										



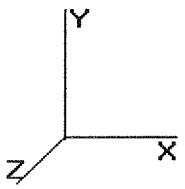
Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 27 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

110.0	(3) 4.0" Solid Rod	Yes	5.00	0.602	8.00	3.33	2.01	22.289	0.290	0.000	78.68	0.00
115.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	22.574	0.299	0.000	0.00	29.52
115.0	(3) 4.0" Solid Rod	Yes	5.00	0.600	8.00	3.33	2.00	22.574	0.299	0.000	79.46	0.00
120.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	22.850	0.309	0.000	0.00	29.52
120.0	(3) 4.0" Solid Rod	Yes	5.00	0.600	8.00	3.33	2.00	22.850	0.309	0.000	80.43	0.00
125.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	23.118	0.280	0.000	0.00	29.52
125.0	(3) 3.5" Solid Rod	Yes	5.00	0.675	7.00	2.92	1.97	23.118	0.280	0.000	80.13	0.00
126.2	(6) 1 5/8" Coax	Yes	1.28	0.000	0.00	0.00	0.00	23.186	0.286	0.000	0.00	7.56
126.2	(3) 3.5" Solid Rod	Yes	1.28	0.674	7.00	0.75	0.50	23.186	0.286	0.000	20.54	0.00
130.0	(6) 1 5/8" Coax	Yes	3.72	0.000	0.00	0.00	0.00	23.379	0.291	0.000	0.00	21.96
130.0	(3) 3.5" Solid Rod	Yes	3.72	0.671	7.00	2.17	1.46	23.379	0.291	0.000	59.95	0.00
135.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	23.632	0.300	0.000	0.00	29.52
135.0	(3) 3.5" Solid Rod	Yes	5.00	0.668	7.00	2.92	1.95	23.632	0.300	0.000	81.01	0.00
140.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	23.879	0.311	0.000	0.00	29.52
140.0	(3) 3.5" Solid Rod	Yes	5.00	0.664	7.00	2.92	1.94	23.879	0.311	0.000	81.43	0.00
145.0	(3) 3" Solid Rod	Yes	5.00	0.771	6.00	2.50	1.93	24.120	0.277	0.000	81.84	0.00
145.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	24.120	0.277	0.000	0.00	29.52
150.0	(3) 3" Solid Rod	Yes	5.00	0.767	6.00	2.50	1.92	24.355	0.288	0.000	82.24	0.00
155.0	(3) 3" Solid Rod	Yes	5.00	0.764	6.00	2.50	1.91	24.584	0.300	0.000	82.63	0.00
160.0	(3) 3" Solid Rod	Yes	5.00	0.760	6.00	2.50	1.90	24.808	0.314	0.000	83.00	0.00
										Totals:	2,252.63	855.98

Pole :	302502	Code: ANSI/TIA-222 Rev G	
Location :	Harwinton, CT	Struct Class : II	6/20/2014 2:21:37 PM
Height :	181.9 (ft)	Exposure Category : B	Page: 8
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



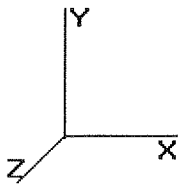
Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 27 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	635.09	2,080.01	0.00	0.00
10.00	628.44	2,059.93	0.00	0.00
15.00	638.71	2,039.86	0.00	0.00
20.00	627.32	2,019.78	0.00	0.00
25.00	615.92	1,999.71	0.00	0.00
30.00	605.00	1,979.63	0.00	0.00
35.00	618.83	1,959.56	0.00	0.00
40.00	629.20	1,939.48	0.00	0.00
44.10	520.24	1,575.40	0.00	0.00
45.00	115.44	477.35	0.00	0.00
48.60	467.23	1,897.47	0.00	0.00
50.00	181.25	493.94	0.00	0.00
55.00	655.54	1,753.37	0.00	0.00
60.00	657.23	1,736.64	0.00	0.00
65.00	657.36	1,719.91	0.00	0.00
70.00	656.11	1,703.18	0.00	0.00
75.00	653.85	1,686.45	0.00	0.00
80.00	650.92	1,669.72	0.00	0.00
85.00	645.32	1,570.34	0.00	0.00
86.58	201.72	492.75	0.00	0.00
90.00	442.43	1,392.45	0.00	0.00
90.33	42.35	133.61	0.00	0.00
95.00	600.02	1,335.27	0.00	0.00
100.0	635.78	1,416.68	0.00	0.00
105.0	627.84	1,403.30	0.00	0.00
110.0	619.18	1,389.91	0.00	0.00
115.0	610.12	1,376.53	0.00	0.00
120.0	600.63	1,363.15	0.00	0.00
125.0	589.28	1,199.46	0.00	0.00
126.2	148.50	304.91	0.00	0.00
130.0	428.47	811.41	0.00	0.00
135.0	566.42	1,081.86	0.00	0.00
140.0	554.20	1,071.82	0.00	0.00
145.0	1,131.03	1,768.67	0.00	0.00
150.0	528.28	891.88	0.00	0.00
155.0	514.62	881.84	0.00	0.00
160.0	500.53	871.80	0.00	0.00
165.0	1,456.64	1,155.85	0.00	0.00
170.0	322.81	453.66	0.00	0.00
175.0	3,987.93	2,575.54	0.00	0.00
180.0	296.40	374.55	0.00	0.00
181.9	3,333.22	3,549.14	0.00	6,176.72
Totals:	29,597.39	59,657.77	0.00	6,176.72

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:37 PM
Location :	Harwinton, CT	Struct Class : II	
Height :	181.9 (ft)	Exposure Category : B	Page: 9
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



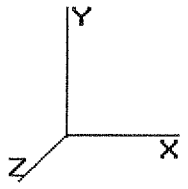
Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 27 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60
Wind Importance 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	-59.60	-29.70	0.00	-3,521.44	0.00	3,521.44	3,433.77	1,716.88	6,036.76	2,981.33	0.00	0.00	0.582
5.00	-57.42	-29.26	0.00	-3,372.92	0.00	3,372.92	3,397.00	1,698.50	5,857.04	2,892.57	0.11	-0.20	0.568
10.00	-55.27	-28.82	0.00	-3,226.60	0.00	3,226.60	3,359.12	1,679.56	5,677.91	2,804.10	0.42	-0.40	0.553
15.00	-53.14	-28.35	0.00	-3,082.51	0.00	3,082.51	3,320.10	1,660.05	5,499.48	2,715.99	0.95	-0.60	0.538
20.00	-51.03	-27.87	0.00	-2,940.78	0.00	2,940.78	3,279.97	1,639.98	5,321.88	2,628.28	1.68	-0.80	0.523
25.00	-48.94	-27.40	0.00	-2,801.42	0.00	2,801.42	3,238.71	1,619.36	5,145.22	2,541.03	2.63	-1.00	0.508
30.00	-46.88	-26.92	0.00	-2,664.44	0.00	2,664.44	3,196.33	1,598.17	4,969.60	2,454.30	3.78	-1.20	0.492
35.00	-44.84	-26.41	0.00	-2,529.86	0.00	2,529.86	3,152.83	1,576.41	4,795.15	2,368.14	5.14	-1.40	0.477
40.00	-42.84	-25.86	0.00	-2,397.81	0.00	2,397.81	3,108.20	1,554.10	4,621.97	2,282.62	6.71	-1.59	0.461
44.10	-41.24	-25.37	0.00	-2,291.77	0.00	2,291.77	3,070.77	1,535.38	4,481.01	2,213.00	8.15	-1.76	0.448
45.00	-40.72	-25.30	0.00	-2,268.94	0.00	2,268.94	3,062.45	1,531.23	4,450.19	2,197.78	8.48	-1.79	0.438
48.60	-38.80	-24.84	0.00	-2,177.85	0.00	2,177.85	2,379.97	1,189.99	3,474.54	1,715.94	9.89	-1.93	0.493
50.00	-38.26	-24.73	0.00	-2,143.08	0.00	2,143.08	2,371.43	1,185.72	3,439.58	1,698.68	10.47	-1.99	0.488
55.00	-36.45	-24.14	0.00	-2,019.44	0.00	2,019.44	2,340.22	1,170.11	3,315.02	1,637.16	12.66	-2.19	0.468
60.00	-34.65	-23.53	0.00	-1,898.75	0.00	1,898.75	2,307.88	1,153.94	3,191.02	1,575.92	15.06	-2.39	0.448
65.00	-32.89	-22.91	0.00	-1,781.10	0.00	1,781.10	2,274.42	1,137.21	3,067.70	1,515.02	17.67	-2.59	0.428
70.00	-31.14	-22.28	0.00	-1,666.54	0.00	1,666.54	2,239.83	1,119.92	2,945.16	1,454.51	20.48	-2.78	0.408
75.00	-29.42	-21.64	0.00	-1,555.13	0.00	1,555.13	2,204.12	1,102.06	2,823.54	1,394.44	23.50	-2.98	0.389
80.00	-27.72	-20.99	0.00	-1,446.91	0.00	1,446.91	2,167.29	1,083.65	2,702.93	1,334.88	26.72	-3.17	0.369
80.00	-27.72	-20.99	0.00	-1,446.91	0.00	1,446.91	2,167.29	1,083.65	2,702.93	1,334.88	26.72	-3.17	0.399
85.00	-26.14	-20.32	0.00	-1,341.94	0.00	1,341.94	2,129.34	1,064.67	2,583.46	1,275.87	30.14	-3.35	0.379
86.58	-25.63	-20.13	0.00	-1,309.84	0.00	1,309.84	2,117.11	1,058.55	2,545.96	1,257.35	31.26	-3.42	0.372
90.00	-24.24	-19.64	0.00	-1,240.98	0.00	1,240.98	2,090.26	1,045.13	2,465.23	1,217.49	33.75	-3.55	0.351
90.33	-24.07	-19.63	0.00	-1,234.50	0.00	1,234.50	1,547.78	773.89	1,862.15	919.65	34.00	-3.57	0.413
95.00	-22.72	-19.02	0.00	-1,142.84	0.00	1,142.84	1,525.71	762.86	1,787.32	882.69	37.57	-3.74	0.389
100.00	-21.29	-18.36	0.00	-1,047.75	0.00	1,047.75	1,501.00	750.50	1,707.51	843.28	41.60	-3.94	0.363
105.00	-19.87	-17.70	0.00	-955.95	0.00	955.95	1,475.16	737.58	1,628.14	804.08	45.82	-4.13	0.337
110.00	-18.48	-17.04	0.00	-867.45	0.00	867.45	1,448.19	724.10	1,549.32	765.15	50.24	-4.31	0.312
115.00	-17.10	-16.38	0.00	-782.26	0.00	782.26	1,420.11	710.05	1,471.16	726.55	54.85	-4.49	0.287
120.00	-15.75	-15.71	0.00	-700.38	0.00	700.38	1,390.90	695.45	1,393.78	688.34	59.64	-4.66	0.262
120.00	-15.75	-15.71	0.00	-700.38	0.00	700.38	1,390.90	695.45	1,393.78	688.34	59.64	-4.66	0.317
125.00	-14.57	-15.05	0.00	-621.81	0.00	621.81	1,360.57	680.28	1,317.29	650.56	64.60	-4.82	0.288
126.28	-14.26	-14.90	0.00	-602.55	0.00	602.55	1,352.62	676.31	1,297.87	640.97	65.90	-4.87	0.281
126.28	-14.26	-14.90	0.00	-602.55	0.00	602.55	900.61	450.31	868.80	429.07	65.90	-4.87	0.343
130.00	-13.44	-14.45	0.00	-547.10	0.00	547.10	888.95	444.47	835.13	412.44	69.75	-5.01	0.315
135.00	-12.37	-13.82	0.00	-474.88	0.00	474.88	872.29	436.14	789.93	390.12	75.08	-5.19	0.278
140.00	-11.32	-13.21	0.00	-405.76	0.00	405.76	854.50	427.25	744.88	367.87	80.61	-5.36	0.241
140.00	-11.32	-13.21	0.00	-405.76	0.00	405.76	854.50	427.25	744.88	367.87	80.61	-5.36	0.305
145.00	-9.63	-11.94	0.00	-339.73	0.00	339.73	835.60	417.80	700.09	345.75	86.31	-5.52	0.261
150.00	-8.76	-11.35	0.00	-280.03	0.00	280.03	815.57	407.78	655.68	323.81	92.18	-5.70	0.220
155.00	-7.91	-10.77	0.00	-223.27	0.00	223.27	794.42	397.21	611.76	302.12	98.22	-5.85	0.179
160.00	-7.07	-10.20	0.00	-169.41	0.00	169.41	772.14	386.07	568.44	280.73	104.42	-5.98	0.140
160.00	-7.07	-10.20	0.00	-169.41	0.00	169.41	772.14	386.07	568.44	280.73	104.42	-5.98	0.613
165.00	-6.04	-8.65	0.00	-118.42	0.00	118.42	748.74	374.37	525.85	259.70	110.73	-6.09	0.465
170.00	-5.58	-8.31	0.00	-75.15	0.00	75.15	723.19	361.60	483.41	238.74	117.30	-6.45	0.323
175.00	-3.47	-4.07	0.00	-33.59	0.00	33.59	686.95	343.48	435.91	215.28	124.18	-6.68	0.161
180.00	-3.13	-3.73	0.00	-13.26	0.00	13.26	650.71	325.36	390.87	193.04	131.23	-6.80	0.074
181.90	0.00	-3.33	0.00	-6.18	0.00	6.18	636.94	318.47	374.40	184.90	133.94	-6.82	0.034

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:37 PM
Location :	Harwinton, CT	Struct Class : II	
Height :	181.9 (ft)	Exposure Category : B	Page: 10
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 26 Iterations

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

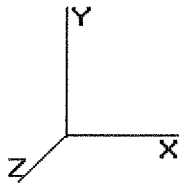
Wind Importance Factor : 1.00

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	15.364	16.90	294.86	1.000	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	15.364	16.90	289.27	1.000 *	0.000	5.00	18.373	18.37	496.8	0.0	1,504.7
10.00		1.00	0.70	15.364	16.90	283.69	1.000 *	0.000	5.00	18.022	18.02	487.3	0.0	1,489.6
15.00		1.00	0.70	15.364	16.90	278.10	1.200 *	0.000	5.00	17.671	21.20	573.4	0.0	1,474.5
20.00		1.00	0.70	15.364	16.90	272.52	1.200 *	0.000	5.00	17.319	20.78	562.0	0.0	1,459.5
25.00		1.00	0.70	15.364	16.90	266.94	1.200 *	0.000	5.00	16.968	20.36	550.6	0.0	1,444.4
30.00		1.00	0.70	15.377	16.91	261.46	1.200 *	0.000	5.00	16.617	19.94	539.7	0.0	1,429.4
35.00		1.00	0.73	16.070	17.67	261.57	1.200 *	0.000	5.00	16.265	19.52	552.0	0.0	1,414.3
40.00		1.00	0.76	16.694	18.36	260.79	1.200 *	0.000	5.00	15.914	19.10	561.1	0.0	1,399.3
44.10	Bot - Section 2	1.00	0.78	17.166	18.88	259.61	1.200 *	0.000	4.10	12.788	15.35	463.6	0.0	1,136.2
45.00		1.00	0.78	17.266	18.99	259.30	1.200 *	0.000	0.90	2.824	3.39	103.0	0.0	348.0
48.60	Top - Section 1	1.00	0.80	17.650	19.41	257.85	1.200 *	0.000	3.60	11.182	13.42	416.8	0.0	1,383.2
50.00		1.00	0.81	17.793	19.57	261.83	1.200 *	0.000	1.40	4.299	5.16	161.6	0.0	355.0
55.00		1.00	0.83	18.285	20.11	259.33	1.200 *	0.000	5.00	15.130	18.16	584.3	0.0	1,259.7
60.00		1.00	0.85	18.745	20.61	256.41	1.200 *	0.000	5.00	14.779	17.73	585.1	0.0	1,247.1
65.00		1.00	0.87	19.179	21.09	253.12	1.200 *	0.000	5.00	14.427	17.31	584.4	0.0	1,234.6
70.00		1.00	0.89	19.589	21.54	249.50	1.200 *	0.000	5.00	14.076	16.89	582.4	0.0	1,222.0
75.00		1.00	0.91	19.979	21.97	245.61	1.200 *	0.000	5.00	13.725	16.47	579.1	0.0	1,209.5
80.00	Reinf. Top Reinf	1.00	0.92	20.351	22.38	241.46	1.200 *	0.000	5.00	13.374	16.05	574.8	0.0	1,196.9
85.00		1.00	0.94	20.706	22.77	237.07	1.200 *	0.000	5.00	13.022	15.63	569.5	0.0	1,101.7
86.58	Bot - Section 3	1.00	0.94	20.816	22.89	235.64	1.200 *	0.000	1.58	4.042	4.85	177.7	0.0	345.5
90.00		1.00	0.95	21.047	23.15	232.48	1.200 *	0.000	3.42	8.777	10.53	390.1	0.0	992.3
90.33	Top - Section 2	1.00	0.96	21.069	23.17	232.17	1.200 *	0.000	0.33	0.838	1.01	37.3	0.0	95.2
95.00		1.00	0.97	21.375	23.51	231.74	1.200 *	0.000	4.67	11.697	14.04	528.1	0.0	930.4
100.0		1.00	0.98	21.690	23.86	226.81	1.200 *	0.000	5.00	12.184	14.62	558.2	0.0	986.5
105.0		1.00	1.00	21.995	24.19	221.72	1.200 *	0.000	5.00	11.833	14.20	549.7	0.0	976.5
110.0		1.00	1.01	22.289	24.51	216.47	1.200 *	0.000	5.00	11.482	13.78	540.5	0.0	966.4
115.0		1.00	1.02	22.574	24.83	211.08	1.200 *	0.000	5.00	11.130	13.36	530.7	0.0	956.4
120.0	Reinf. Top Reinf	1.00	1.04	22.850	25.13	205.56	1.200 *	0.000	5.00	10.779	12.93	520.2	0.0	946.3
125.0		1.00	1.05	23.118	25.43	199.91	1.200 *	0.000	5.00	10.428	12.51	509.2	0.0	786.0
126.2	Top - Section 3	1.00	1.05	23.186	25.50	198.45	1.200 *	0.000	1.28	2.613	3.14	128.0	0.0	199.6
130.0		1.00	1.06	23.379	25.71	194.15	1.200 *	0.000	3.72	7.464	8.96	368.5	0.0	524.0
135.0		1.00	1.07	23.632	25.99	188.27	1.200 *	0.000	5.00	9.725	11.67	485.4	0.0	697.8
140.0	Reinf. Top Reinf	1.00	1.08	23.879	26.26	182.29	1.200 *	0.000	5.00	9.374	11.25	472.8	0.0	690.3
145.0	Appertunance(s)	1.00	1.09	24.120	26.53	176.21	1.200 *	0.000	5.00	9.023	10.83	459.6	0.0	552.4
150.0		1.00	1.11	24.355	26.79	170.03	1.200 *	0.000	5.00	8.672	10.41	446.0	0.0	544.9
155.0		1.00	1.12	24.584	27.04	163.77	1.200 *	0.000	5.00	8.320	9.98	432.0	0.0	537.3
160.0	Reinf. Top	1.00	1.13	24.808	27.28	157.42	1.200 *	0.000	5.00	7.969	9.56	417.5	0.0	529.8
165.0	Appertunance(s)	1.00	1.14	25.027	27.53	150.99	1.000	0.000	5.00	7.618	7.62	335.5	0.0	161.5
170.0		1.00	1.15	25.241	27.76	144.47	1.000	0.000	5.00	7.266	7.27	322.8	0.0	154.0
175.0	Appertunance(s)	1.00	1.16	25.451	27.99	137.89	1.000	0.000	5.00	6.915	6.92	309.8	0.0	146.5
180.0		1.00	1.16	25.657	28.22	131.23	1.000	0.000	5.00	6.564	6.56	296.4	0.0	138.9
181.9	Appertunance(s)	1.00	1.17	25.734	28.30	128.68	1.000	0.000	1.90	2.402	2.40	108.8	0.0	50.8
							Totals:		181.90			18,452.1	0.0	36,219.1

* = Cf Adjusted By Linear Load Ra Effect

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:37 PM
Location :	Harwinton, CT	Struct Class : II	
Height :	181.9 (ft)	Exposure Category : B	Page: 11
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 26 Iterations

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

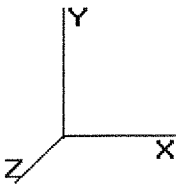
Wind Importance Factor : 1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Orientation Ka	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
145.0	KMW HB-X-WM-17-65-	3	24.120	26.532	1.00	0.80	4.61	0.000	0.000	195.61	0.00	0.00	81.00
145.0	KMW TTA (HB-X-WM-	3	24.120	26.532	0.50	0.80	0.78	0.000	0.000	33.11	0.00	0.00	42.93
145.0	Side Arms	1	24.120	26.532	1.00	1.00	8.50	0.000	0.000	360.83	0.00	0.00	504.00
165.0	Ericsson AIR 21, 1.3	3	25.027	27.530	0.70	1.00	12.68	0.000	0.000	558.70	0.00	0.00	247.05
165.0	Ericsson AIR 21, 1.3	3	25.027	27.530	0.70	1.00	12.77	0.000	0.000	562.40	0.00	0.00	244.08
175.0	Antel LPA-80063/6CF	6	25.451	27.996	0.76	0.80	34.98	0.000	0.000	1,567.09	0.00	0.00	145.80
175.0	Flat Low Profile Pla	1	25.451	27.996	1.00	1.00	26.10	0.000	0.000	1,169.13	0.00	0.00	1,350.00
175.0	Antel BXA-171063-12B	3	25.451	27.996	0.72	0.80	8.17	0.000	0.000	366.12	0.00	0.00	40.50
175.0	Antel BXA-70063-6CF-	3	25.451	27.996	0.66	0.80	11.99	0.000	0.000	537.12	0.00	0.00	45.90
175.0	RFS FD9R6004/2C-3L	6	25.451	27.996	0.50	0.80	0.86	0.000	0.000	38.70	0.00	0.00	16.74
181.9	Powerwave 7770.00	6	25.859	28.444	0.77	0.75	19.09	0.000	3.100	868.90	0.00	2,693.61	189.00
181.9	Round Platform w/ Ha	1	25.734	28.307	1.00	1.00	27.20	0.000	0.000	1,231.93	0.00	0.01	1,800.00
181.9	Powerwave LGP21401	6	25.859	28.444	0.50	0.75	2.48	0.000	3.100	112.64	0.00	349.18	76.14
181.9	KMW AM-X-CD-16-65-	3	25.859	28.444	0.79	0.75	14.26	0.000	3.100	648.79	0.00	2,011.24	130.95
181.9	Ericsson RRUS 11 (Ba	6	25.859	28.444	0.50	0.75	5.78	0.000	3.100	263.17	0.00	815.82	270.00
181.9	Andrew ABT-DMDF-	1	25.859	28.444	0.50	0.75	0.02	0.000	3.100	0.85	0.00	2.65	0.99
181.9	30" x 23" BOB	1	25.859	28.444	0.50	0.75	2.16	0.000	3.100	98.13	0.00	304.21	90.00
										8,613.24			5,275.08

Pole : 302502
Location : Harwinton, CT
Height : 181.9 (ft)
Base Dia : 43.00 (in)
Top Dia : 14.50 (in)
Shape : 12 Sides
Taper : 0.162864 (in/ft)

Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : B
Topographic Category : 1
Base Elev : 0.000 (ft)



Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 26 Iterations

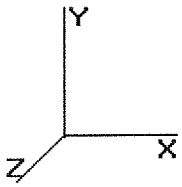
Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	15.364	0.193	1.278	0.00	22.14
5.00	(3) 4.25" Solid Rod	Yes	5.00	0.000	8.50	3.54	0.00	15.364	0.193	1.278	0.00	0.00
10.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	15.364	0.197	1.290	0.00	22.14
10.00	(3) 4.25" Solid Rod	Yes	5.00	0.000	8.50	3.54	0.00	15.364	0.197	1.290	0.00	0.00
15.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	15.364	0.200	0.000	0.00	22.14
15.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.42	15.364	0.200	0.000	65.32	0.00
20.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	15.364	0.204	0.000	0.00	22.14
20.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.42	15.364	0.204	0.000	65.32	0.00
25.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	15.364	0.209	0.000	0.00	22.14
25.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.42	15.364	0.209	0.000	65.32	0.00
30.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	15.377	0.213	0.000	0.00	22.14
30.00	(3) 4.25" Solid Rod	Yes	5.00	0.682	8.50	3.54	2.41	15.377	0.213	0.000	65.35	0.00
35.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	16.070	0.218	0.000	0.00	22.14
35.00	(3) 4.25" Solid Rod	Yes	5.00	0.667	8.50	3.54	2.36	16.070	0.218	0.000	66.80	0.00
40.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	16.694	0.223	0.000	0.00	22.14
40.00	(3) 4.25" Solid Rod	Yes	5.00	0.654	8.50	3.54	2.32	16.694	0.223	0.000	68.09	0.00
44.10	(6) 1 5/8" Coax	Yes	4.10	0.000	0.00	0.00	0.00	17.166	0.227	0.000	0.00	18.15
44.10	(3) 4.25" Solid Rod	Yes	4.10	0.645	8.50	2.90	1.87	17.166	0.227	0.000	56.62	0.00
45.00	(6) 1 5/8" Coax	Yes	0.90	0.000	0.00	0.00	0.00	17.266	0.230	0.000	0.00	3.98
45.00	(3) 4.25" Solid Rod	Yes	0.90	0.643	8.50	0.64	0.41	17.266	0.230	0.000	12.46	0.00
48.60	(6) 1 5/8" Coax	Yes	3.60	0.000	0.00	0.00	0.00	17.650	0.232	0.000	0.00	15.94
48.60	(3) 4.25" Solid Rod	Yes	3.60	0.636	8.50	2.55	1.62	17.650	0.232	0.000	50.41	0.00
50.00	(6) 1 5/8" Coax	Yes	1.40	0.000	0.00	0.00	0.00	17.793	0.231	0.000	0.00	6.20
50.00	(3) 4.25" Solid Rod	Yes	1.40	0.634	8.50	0.99	0.63	17.793	0.231	0.000	19.68	0.00
55.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	18.285	0.234	0.000	0.00	22.14
55.00	(3) 4.25" Solid Rod	Yes	5.00	0.625	8.50	3.54	2.21	18.285	0.234	0.000	71.26	0.00
60.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	18.745	0.240	0.000	0.00	22.14
60.00	(3) 4.25" Solid Rod	Yes	5.00	0.617	8.50	3.54	2.19	18.745	0.240	0.000	72.15	0.00
65.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	19.179	0.245	0.000	0.00	22.14
65.00	(3) 4.25" Solid Rod	Yes	5.00	0.610	8.50	3.54	2.16	19.179	0.245	0.000	72.98	0.00
70.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	19.589	0.252	0.000	0.00	22.14
70.00	(3) 4.25" Solid Rod	Yes	5.00	0.604	8.50	3.54	2.14	19.589	0.252	0.000	73.76	0.00
75.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	19.979	0.258	0.000	0.00	22.14
75.00	(3) 4.25" Solid Rod	Yes	5.00	0.600	8.50	3.54	2.13	19.979	0.258	0.000	74.72	0.00
80.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	20.351	0.265	0.000	0.00	22.14
80.00	(3) 4.25" Solid Rod	Yes	5.00	0.600	8.50	3.54	2.13	20.351	0.265	0.000	76.11	0.00
85.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	20.706	0.256	0.000	0.00	22.14
85.00	(3) 4.0" Solid Rod	Yes	5.00	0.624	8.00	3.33	2.08	20.706	0.256	0.000	75.83	0.00
86.58	(6) 1 5/8" Coax	Yes	1.58	0.000	0.00	0.00	0.00	20.816	0.261	0.000	0.00	7.00
86.58	(3) 4.0" Solid Rod	Yes	1.58	0.623	8.00	1.05	0.66	20.816	0.261	0.000	24.03	0.00
90.00	(6) 1 5/8" Coax	Yes	3.42	0.000	0.00	0.00	0.00	21.047	0.264	0.000	0.00	15.14
90.00	(3) 4.0" Solid Rod	Yes	3.42	0.619	8.00	2.28	1.41	21.047	0.264	0.000	52.29	0.00
90.33	(6) 1 5/8" Coax	Yes	0.33	0.000	0.00	0.00	0.00	21.069	0.267	0.000	0.00	1.46
90.33	(3) 4.0" Solid Rod	Yes	0.33	0.619	8.00	0.22	0.14	21.069	0.267	0.000	5.05	0.00
95.00	(6) 1 5/8" Coax	Yes	4.67	0.000	0.00	0.00	0.00	21.375	0.266	0.000	0.00	20.68
95.00	(3) 4.0" Solid Rod	Yes	4.67	0.614	8.00	3.11	1.91	21.375	0.266	0.000	71.96	0.00
100.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	21.690	0.274	0.000	0.00	22.14
100.0	(3) 4.0" Solid Rod	Yes	5.00	0.610	8.00	3.33	2.03	21.690	0.274	0.000	77.61	0.00
105.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	21.995	0.282	0.000	0.00	22.14
105.0	(3) 4.0" Solid Rod	Yes	5.00	0.606	8.00	3.33	2.02	21.995	0.282	0.000	78.16	0.00
110.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	22.289	0.290	0.000	0.00	22.14

Pole :	302502	Code:	ANSI/TIA-222 Rev G
Location :	Harwinton, CT	Struct Class :	II
Height :	181.9 (ft)	Exposure Category :	B
Base Dia :	43.00 (in)	Topographic Category :	1
Top Dia :	14.50 (in)	Base Elev :	0.000 (ft)
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



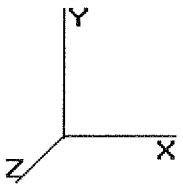
Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 26 Iterations

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

Wind Importance Factor : 1.00

110.0	(3) 4.0" Solid Rod	Yes	5.00	0.602	8.00	3.33	2.01	22.289	0.290	0.000	78.68	0.00
115.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	22.574	0.299	0.000	0.00	22.14
115.0	(3) 4.0" Solid Rod	Yes	5.00	0.600	8.00	3.33	2.00	22.574	0.299	0.000	79.46	0.00
120.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	22.850	0.309	0.000	0.00	22.14
120.0	(3) 4.0" Solid Rod	Yes	5.00	0.600	8.00	3.33	2.00	22.850	0.309	0.000	80.43	0.00
125.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	23.118	0.280	0.000	0.00	22.14
125.0	(3) 3.5" Solid Rod	Yes	5.00	0.675	7.00	2.92	1.97	23.118	0.280	0.000	80.13	0.00
126.2	(6) 1 5/8" Coax	Yes	1.28	0.000	0.00	0.00	0.00	23.186	0.286	0.000	0.00	5.67
126.2	(3) 3.5" Solid Rod	Yes	1.28	0.674	7.00	0.75	0.50	23.186	0.286	0.000	20.54	0.00
130.0	(6) 1 5/8" Coax	Yes	3.72	0.000	0.00	0.00	0.00	23.379	0.291	0.000	0.00	16.47
130.0	(3) 3.5" Solid Rod	Yes	3.72	0.671	7.00	2.17	1.46	23.379	0.291	0.000	59.95	0.00
135.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	23.632	0.300	0.000	0.00	22.14
135.0	(3) 3.5" Solid Rod	Yes	5.00	0.668	7.00	2.92	1.95	23.632	0.300	0.000	81.01	0.00
140.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	23.879	0.311	0.000	0.00	22.14
140.0	(3) 3.5" Solid Rod	Yes	5.00	0.664	7.00	2.92	1.94	23.879	0.311	0.000	81.43	0.00
145.0	(3) 3" Solid Rod	Yes	5.00	0.771	6.00	2.50	1.93	24.120	0.277	0.000	81.84	0.00
145.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	24.120	0.277	0.000	0.00	22.14
150.0	(3) 3" Solid Rod	Yes	5.00	0.767	6.00	2.50	1.92	24.355	0.288	0.000	82.24	0.00
155.0	(3) 3" Solid Rod	Yes	5.00	0.764	6.00	2.50	1.91	24.584	0.300	0.000	82.63	0.00
160.0	(3) 3" Solid Rod	Yes	5.00	0.760	6.00	2.50	1.90	24.808	0.314	0.000	83.00	0.00
										Totals:	2,252.63	641.98

Pole :	302502	Code: ANSI/TIA-222 Rev G	
Location :	Harwinton, CT	Struct Class : II	
Height :	181.9 (ft)	Exposure Category : B	
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 26 Iterations

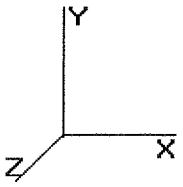
Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60

Wind Importance Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	496.82	1,741.02	0.00	0.00
10.00	487.33	1,725.96	0.00	0.00
15.00	638.71	1,710.91	0.00	0.00
20.00	627.32	1,695.85	0.00	0.00
25.00	615.92	1,680.79	0.00	0.00
30.00	605.00	1,665.74	0.00	0.00
35.00	618.83	1,650.68	0.00	0.00
40.00	629.20	1,635.62	0.00	0.00
44.10	520.24	1,329.98	0.00	0.00
45.00	115.44	390.59	0.00	0.00
48.60	467.23	1,553.43	0.00	0.00
50.00	181.25	421.14	0.00	0.00
55.00	655.54	1,496.04	0.00	0.00
60.00	657.23	1,483.49	0.00	0.00
65.00	657.36	1,470.95	0.00	0.00
70.00	656.11	1,458.40	0.00	0.00
75.00	653.85	1,445.85	0.00	0.00
80.00	650.92	1,433.30	0.00	0.00
85.00	645.32	1,338.11	0.00	0.00
86.58	201.72	420.23	0.00	0.00
90.00	442.43	1,154.02	0.00	0.00
90.33	42.35	110.79	0.00	0.00
95.00	600.02	1,151.22	0.00	0.00
100.0	635.78	1,222.86	0.00	0.00
105.0	627.84	1,212.82	0.00	0.00
110.0	619.18	1,202.78	0.00	0.00
115.0	610.12	1,192.75	0.00	0.00
120.0	600.63	1,182.71	0.00	0.00
125.0	589.28	1,022.37	0.00	0.00
126.2	148.50	260.11	0.00	0.00
130.0	428.47	699.90	0.00	0.00
135.0	566.42	934.17	0.00	0.00
140.0	554.20	926.64	0.00	0.00
145.0	1,131.03	1,416.69	0.00	0.00
150.0	528.28	759.09	0.00	0.00
155.0	514.62	751.57	0.00	0.00
160.0	500.53	744.04	0.00	0.00
165.0	1,456.64	866.89	0.00	0.00
170.0	322.81	340.24	0.00	0.00
175.0	3,987.93	1,931.66	0.00	0.00
180.0	296.40	280.91	0.00	0.00
181.9	3,333.22	2,661.85	0.00	6,176.72
Totals:	29,318.01	49,774.18	0.00	6,176.72

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:38 PM
Location :	Harwinton, CT	Struct Class : II	Page: 15
Height :	181.9 (ft)	Exposure Category : B	
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



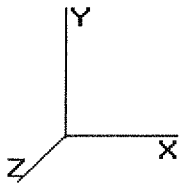
Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 26 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60
Wind Importance Factor : 1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-49.72	-29.40	0.00	-3,476.30	0.00	3,476.30	3,433.77	1,716.88	6,036.76	2,981.33	0.00	0.00	0.573
5.00	-47.88	-29.07	0.00	-3,329.28	0.00	3,329.28	3,397.00	1,698.50	5,857.04	2,892.57	0.11	-0.20	0.559
10.00	-46.06	-28.73	0.00	-3,183.94	0.00	3,183.94	3,359.12	1,679.56	5,677.91	2,804.10	0.42	-0.39	0.544
15.00	-44.26	-28.23	0.00	-3,040.28	0.00	3,040.28	3,320.10	1,660.05	5,499.48	2,715.99	0.94	-0.59	0.529
20.00	-42.48	-27.73	0.00	-2,899.14	0.00	2,899.14	3,279.97	1,639.98	5,321.88	2,628.28	1.66	-0.79	0.514
25.00	-40.71	-27.23	0.00	-2,760.49	0.00	2,760.49	3,238.71	1,619.36	5,145.22	2,541.03	2.59	-0.98	0.499
30.00	-38.97	-26.72	0.00	-2,624.36	0.00	2,624.36	3,196.33	1,598.17	4,969.60	2,454.30	3.73	-1.18	0.484
35.00	-37.24	-26.20	0.00	-2,490.75	0.00	2,490.75	3,152.83	1,576.41	4,795.15	2,368.14	5.07	-1.38	0.468
40.00	-35.54	-25.63	0.00	-2,359.77	0.00	2,359.77	3,108.20	1,554.10	4,621.97	2,282.62	6.62	-1.57	0.453
44.10	-34.19	-25.13	0.00	-2,254.67	0.00	2,254.67	3,070.77	1,535.38	4,481.01	2,213.00	8.04	-1.73	0.440
45.00	-33.76	-25.06	0.00	-2,232.05	0.00	2,232.05	3,062.45	1,531.23	4,450.19	2,197.78	8.37	-1.77	0.430
48.60	-32.18	-24.60	0.00	-2,141.84	0.00	2,141.84	2,379.97	1,189.99	3,474.54	1,715.94	9.75	-1.91	0.484
50.00	-31.71	-24.47	0.00	-2,107.41	0.00	2,107.41	2,371.43	1,185.72	3,439.58	1,698.68	10.32	-1.96	0.479
55.00	-30.16	-23.87	0.00	-1,985.05	0.00	1,985.05	2,340.22	1,170.11	3,315.02	1,637.16	12.48	-2.16	0.459
60.00	-28.62	-23.25	0.00	-1,865.73	0.00	1,865.73	2,307.88	1,153.94	3,191.02	1,575.92	14.85	-2.35	0.439
65.00	-27.11	-22.62	0.00	-1,749.49	0.00	1,749.49	2,274.42	1,137.21	3,067.70	1,515.02	17.42	-2.55	0.420
70.00	-25.61	-21.98	0.00	-1,636.39	0.00	1,636.39	2,239.83	1,119.92	2,945.16	1,454.51	20.19	-2.74	0.400
75.00	-24.12	-21.34	0.00	-1,526.48	0.00	1,526.48	2,204.12	1,102.06	2,823.54	1,394.44	23.16	-2.93	0.381
80.00	-22.66	-20.68	0.00	-1,419.79	0.00	1,419.79	2,167.29	1,083.65	2,702.93	1,334.88	26.33	-3.12	0.361
80.00	-22.66	-20.68	0.00	-1,419.79	0.00	1,419.79	2,167.29	1,083.65	2,702.93	1,334.88	26.33	-3.12	0.391
85.00	-21.32	-20.01	0.00	-1,316.37	0.00	1,316.37	2,129.34	1,064.67	2,583.46	1,275.87	29.69	-3.30	0.370
86.58	-20.88	-19.82	0.00	-1,284.76	0.00	1,284.76	2,117.11	1,058.55	2,545.96	1,257.35	30.79	-3.36	0.364
90.00	-19.73	-19.34	0.00	-1,216.97	0.00	1,216.97	2,090.26	1,045.13	2,465.23	1,217.49	33.25	-3.50	0.344
90.33	-19.59	-19.32	0.00	-1,210.59	0.00	1,210.59	1,547.78	773.89	1,862.15	919.65	33.49	-3.51	0.404
95.00	-18.42	-18.71	0.00	-1,120.37	0.00	1,120.37	1,525.71	762.86	1,787.32	882.69	37.01	-3.68	0.380
100.00	-17.18	-18.05	0.00	-1,026.84	0.00	1,026.84	1,501.00	750.50	1,707.51	843.28	40.97	-3.87	0.355
105.00	-15.96	-17.39	0.00	-936.60	0.00	936.60	1,475.16	737.58	1,628.14	804.08	45.12	-4.06	0.329
110.00	-14.75	-16.73	0.00	-849.66	0.00	849.66	1,448.19	724.10	1,549.32	765.15	49.47	-4.24	0.304
115.00	-13.56	-16.07	0.00	-766.01	0.00	766.01	1,420.11	710.05	1,471.16	726.55	54.00	-4.41	0.280
120.00	-12.38	-15.41	0.00	-685.65	0.00	685.65	1,390.90	695.45	1,393.78	688.34	58.71	-4.58	0.255
120.00	-12.38	-15.41	0.00	-685.65	0.00	685.65	1,390.90	695.45	1,393.78	688.34	58.71	-4.58	0.310
125.00	-11.39	-14.76	0.00	-608.58	0.00	608.58	1,360.57	680.28	1,317.29	650.56	63.58	-4.74	0.281
126.28	-11.12	-14.61	0.00	-589.68	0.00	589.68	1,352.62	676.31	1,297.87	640.97	64.86	-4.78	0.274
126.28	-11.12	-14.61	0.00	-589.68	0.00	589.68	900.61	450.31	868.80	429.07	64.86	-4.78	0.334
130.00	-10.42	-14.16	0.00	-535.32	0.00	535.32	888.95	444.47	835.13	412.44	68.64	-4.92	0.307
135.00	-9.49	-13.54	0.00	-464.54	0.00	464.54	872.29	436.14	789.93	390.12	73.88	-5.10	0.271
140.00	-8.58	-12.93	0.00	-396.84	0.00	396.84	854.50	427.25	744.88	367.87	79.31	-5.27	0.235
140.00	-8.58	-12.93	0.00	-396.84	0.00	396.84	854.50	427.25	744.88	367.87	79.31	-5.27	0.297
145.00	-7.25	-11.69	0.00	-332.20	0.00	332.20	835.60	417.80	700.09	345.75	84.91	-5.42	0.254
150.00	-6.51	-11.11	0.00	-273.75	0.00	273.75	815.57	407.78	655.68	323.81	90.67	-5.59	0.214
155.00	-5.79	-10.54	0.00	-218.20	0.00	218.20	794.42	397.21	611.76	302.12	96.61	-5.75	0.174
160.00	-5.08	-9.97	0.00	-165.51	0.00	165.51	772.14	386.07	568.44	280.73	102.69	-5.88	0.136
160.00	-5.08	-9.97	0.00	-165.51	0.00	165.51	772.14	386.07	568.44	280.73	102.69	-5.88	0.597
165.00	-4.33	-8.45	0.00	-115.64	0.00	115.64	748.74	374.37	525.85	259.70	108.89	-5.98	0.452
170.00	-3.99	-8.12	0.00	-73.37	0.00	73.37	723.19	361.60	483.41	238.74	115.34	-6.33	0.313
175.00	-2.50	-3.94	0.00	-32.78	0.00	32.78	686.95	343.48	435.91	215.28	122.09	-6.56	0.156
180.00	-2.26	-3.62	0.00	-13.06	0.00	13.06	650.71	325.36	390.87	193.04	129.02	-6.67	0.071
181.90	0.00	-3.33	0.00	-6.18	0.00	6.18	636.94	318.47	374.40	184.90	131.67	-6.69	0.034

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:38 PM
Location :	Harwinton, CT	Struct Class : II	
Height :	181.9 (ft)	Exposure Category : B	Page: 16
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Load Case: 1.2D + 1.0Di + 1.0Wi — 40.00 mph with 1.00 in Radial Ice — 25 Iterations

Gust Response Factor : 1.10 — Ice Dead Load Factor : 1.00 — Wind Importance Factor : 1.00

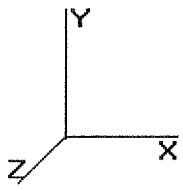
Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)		Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	2.724	2.996	0.000		1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	2.724	2.996	0.000		1.200 *	1.656	5.00	19.753	23.70	71.0	470.0	2,234.9
10.00		1.00	0.70	2.724	2.996	0.000		1.200 *	1.775	5.00	19.501	23.40	70.1	495.7	2,240.5
15.00		1.00	0.70	2.724	2.996	0.000		1.200 *	1.848	5.00	19.211	23.05	69.1	507.3	2,232.0
20.00		1.00	0.70	2.724	2.996	0.000		1.200 *	1.902	5.00	18.905	22.69	68.0	512.7	2,217.3
25.00		1.00	0.70	2.724	2.996	0.000		1.200 *	1.945	5.00	18.589	22.31	66.8	514.5	2,199.1
30.00		1.00	0.70	2.726	2.999	0.000		1.200 *	1.981	5.00	18.268	21.92	65.7	514.0	2,178.5
35.00		1.00	0.73	2.849	3.134	0.000		1.200 *	2.012	5.00	17.942	21.53	67.5	511.7	2,156.1
40.00		1.00	0.76	2.960	3.256	0.000		1.200 *	2.039	5.00	17.613	21.14	68.8	508.2	2,132.5
44.10	Bot - Section 2	1.00	0.78	3.043	3.348	0.000		1.200 *	2.059	4.10	14.194	17.03	57.0	413.7	1,730.7
45.00		1.00	0.78	3.061	3.367	0.000		1.200 *	2.063	0.90	3.133	3.76	12.7	92.2	512.8
48.60	Top - Section 1	1.00	0.80	3.129	3.442	0.000		1.200 *	2.079	3.60	12.429	14.92	51.3	366.0	2,036.5
50.00		1.00	0.81	3.155	3.470	0.000		1.200 *	2.085	1.40	4.786	5.74	19.9	141.9	547.6
55.00		1.00	0.83	3.242	3.566	0.000		1.200 *	2.105	5.00	16.884	20.26	72.2	500.7	1,938.9
60.00		1.00	0.85	3.323	3.656	0.000		1.200 *	2.123	5.00	16.548	19.86	72.6	494.1	1,915.6
65.00		1.00	0.87	3.400	3.740	0.000		1.200 *	2.140	5.00	16.211	19.45	72.8	487.0	1,891.8
70.00		1.00	0.89	3.473	3.820	0.000		1.200 *	2.156	5.00	15.873	19.05	72.8	479.5	1,867.5
75.00		1.00	0.91	3.542	3.896	0.000		1.200 *	2.171	5.00	15.534	18.64	72.6	471.6	1,842.8
80.00	Reinf. Top Reinf	1.00	0.92	3.608	3.969	0.000		1.200 *	2.185	5.00	15.195	18.23	72.4	463.3	1,817.8
85.00		1.00	0.94	3.671	4.038	0.000		1.200 *	2.198	5.00	14.854	17.83	72.0	454.7	1,709.8
86.58	Bot - Section 3	1.00	0.94	3.690	4.059	0.000		1.200 *	2.203	1.58	4.622	5.55	22.5	142.8	536.0
90.00		1.00	0.95	3.731	4.105	0.000		1.200 *	2.211	3.42	10.037	12.04	49.4	309.8	1,486.7
90.33	Top - Section 2	1.00	0.96	3.735	4.109	0.000		1.200 *	2.212	0.33	0.960	1.15	4.7	29.9	142.7
95.00		1.00	0.97	3.789	4.168	0.000		1.200 *	2.223	4.67	13.428	16.11	67.2	414.5	1,455.4
100.0		1.00	0.98	3.845	4.230	0.000		1.200 *	2.234	5.00	14.046	16.86	71.3	434.5	1,536.0
105.0		1.00	1.00	3.899	4.289	0.000		1.200 *	2.245	5.00	13.704	16.44	70.5	424.9	1,513.0
110.0		1.00	1.01	3.952	4.347	0.000		1.200 *	2.256	5.00	13.362	16.03	69.7	415.1	1,489.9
115.0		1.00	1.02	4.002	4.402	0.000		1.200 *	2.266	5.00	13.019	15.62	68.8	405.2	1,466.5
120.0	Reinf. Top Reinf	1.00	1.04	4.051	4.456	0.000		1.200 *	2.276	5.00	12.675	15.21	67.8	395.0	1,443.0
125.0		1.00	1.05	4.099	4.508	0.000		1.200 *	2.285	5.00	12.332	14.80	66.7	384.7	1,269.0
126.2	Top - Section 3	1.00	1.05	4.111	4.522	0.000		1.200 *	2.287	1.28	3.101	3.72	16.8	97.8	322.0
130.0		1.00	1.06	4.145	4.559	0.000		1.200 *	2.294	3.72	8.886	10.66	48.6	278.4	855.4
135.0		1.00	1.07	4.190	4.609	0.000		1.200 *	2.303	5.00	11.644	13.97	64.4	363.6	1,130.3
140.0	Reinf. Top Reinf	1.00	1.08	4.233	4.657	0.000		1.200 *	2.311	5.00	11.300	13.56	63.1	352.9	1,109.5
145.0	Appertunance(s)	1.00	1.09	4.276	4.704	0.000		1.200 *	2.319	5.00	10.955	13.15	61.8	342.0	958.3
150.0		1.00	1.11	4.318	4.749	0.000		1.200 *	2.327	5.00	10.611	12.73	60.5	331.0	937.2
155.0		1.00	1.12	4.358	4.794	0.000		1.200 *	2.335	5.00	10.266	12.32	59.1	319.8	916.0
160.0	Reinf. Top	1.00	1.13	4.398	4.838	0.000		1.200 *	2.342	5.00	9.921	11.90	57.6	308.6	894.8
165.0	Appertunance(s)	1.00	1.14	4.437	4.881	0.000		1.200	2.349	5.00	9.575	11.49	56.1	297.3	512.6
170.0		1.00	1.15	4.475	4.922	0.000		1.200	2.356	5.00	9.230	11.08	54.5	285.8	491.2
175.0	Appertunance(s)	1.00	1.16	4.512	4.963	0.000		1.200	2.363	5.00	8.884	10.66	52.9	274.3	469.6
180.0		1.00	1.16	4.549	5.003	0.000		1.200	2.370	5.00	8.539	10.25	51.3	262.6	447.9
181.9	Appertunance(s)	1.00	1.17	4.562	5.018	0.000		1.200	2.372	1.90	3.153	3.78	19.0	98.1	165.9
* = Cf Adjusted By Linear Load Ra Effect							Totals:			181.90			2,419.7	15,367.4	56,951.7

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:38 PM
Location :	Harwinton, CT	Struct Class : II	
Height :	181.9 (ft)	Exposure Category : B	Page: 17
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Load Case: 1.2D + 1.0Di + 1.0Wi — 40.00 mph with 1.00 in Radial Ice — 25 Iterations

Gust Response Factor : 1.10 — Ice Dead Load Factor : 1.00 — Wind Importance Factor : 1.00

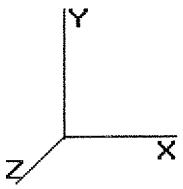
Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Ka	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
145.0	KMW HB-X-WM-17-65-	3	4.276	4.704	1.00	0.80	10.94	0.000	0.000	51.47	0.00	0.00	588.67
145.0	KMW TTA (HB-X-WM-	3	4.276	4.704	0.50	0.80	1.91	0.000	0.000	9.00	0.00	0.00	214.25
145.0	Side Arms	1	4.276	4.704	1.00	1.00	17.96	0.000	0.000	84.49	0.00	0.00	1,175.37
165.0	Ericsson AIR 21, 1.3	3	4.437	4.881	0.70	1.00	15.88	0.000	0.000	77.50	0.00	0.00	1,051.87
165.0	Ericsson AIR 21, 1.3	3	4.437	4.881	0.70	1.00	15.97	0.000	0.000	77.96	0.00	0.00	1,051.04
175.0	Antel LPA-80063/6CF	6	4.512	4.963	0.76	0.80	41.62	0.000	0.000	206.58	0.00	0.00	2,644.00
175.0	Flat Low Profile Pla	1	4.512	4.963	1.00	1.00	52.00	0.000	0.000	258.12	0.00	0.00	2,479.07
175.0	Antel BXA-171063-12B	3	4.512	4.963	0.72	0.80	11.12	0.000	0.000	55.19	0.00	0.00	590.07
175.0	Antel BXA-70063-6CF-	3	4.512	4.963	0.66	0.80	14.74	0.000	0.000	73.18	0.00	0.00	794.35
175.0	RFS FD9R6004/2C-3L	6	4.512	4.963	0.50	0.80	1.69	0.000	0.000	8.37	0.00	0.00	194.50
181.9	Powerwave 7770.00	6	4.584	5.043	0.77	0.75	24.17	0.000	3.100	121.91	0.00	377.91	1,445.35
181.9	Round Platform w/ Ha	1	4.562	5.018	1.00	1.00	60.49	0.000	0.000	303.59	0.00	0.00	3,764.96
181.9	Powerwave LGP21401	6	4.584	5.043	0.50	0.75	3.95	0.000	3.100	19.94	0.00	61.82	415.79
181.9	KMW AM-X-CD-16-65-	3	4.584	5.043	0.79	0.75	17.46	0.000	3.100	88.04	0.00	272.91	1,001.25
181.9	Ericsson RRUS 11 (Ba	6	4.584	5.043	0.67	0.75	10.51	0.000	3.100	52.99	0.00	164.26	1,083.14
181.9	Andrew ABT-DMDF-	1	4.584	5.043	0.50	0.75	0.08	0.000	3.100	0.39	0.00	1.22	11.56
181.9	30" x 23" BOB	1	4.584	5.043	0.50	0.75	2.66	0.000	3.100	13.39	0.00	41.52	339.25
										1,502.11			18,844.49

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:38 PM
Location :	Harwinton, CT	Struct Class : II	Page: 18
Height :	181.9 (ft)	Exposure Category : B	
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Load Case: 1.2D + 1.0Di + 1.0Wi — 40.00 mph with 1.00 in Radial Ice — 25 Iterations

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

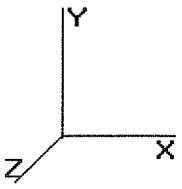
Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	2.724	0.193	1.278	0.00	132.59
5.00	(3) 4.25" Solid Rod	Yes	5.00	0.000	8.50	4.92	0.00	2.724	0.193	1.278	0.00	121.48
10.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	2.724	0.197	1.290	0.00	140.58
10.00	(3) 4.25" Solid Rod	Yes	5.00	0.000	8.50	5.02	0.00	2.724	0.197	1.290	0.00	129.86
15.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	2.724	0.200	0.000	0.00	145.60
15.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.08	6.10	2.724	0.200	0.000	18.27	135.13
20.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	2.724	0.204	0.000	0.00	149.32
20.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.13	6.15	2.724	0.204	0.000	18.43	139.04
25.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	2.724	0.209	0.000	0.00	152.32
25.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.16	6.20	2.724	0.209	0.000	18.56	142.18
30.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	2.726	0.213	0.000	0.00	154.83
30.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.19	6.23	2.726	0.213	0.000	18.69	144.81
35.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	2.849	0.218	0.000	0.00	157.00
35.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.22	6.26	2.849	0.218	0.000	19.62	147.09
40.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	2.960	0.223	0.000	0.00	158.92
40.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.24	6.29	2.960	0.223	0.000	20.47	149.10
44.10	(6) 1 5/8" Coax	Yes	4.10	0.000	0.00	0.00	0.00	3.043	0.227	0.000	0.00	131.48
44.10	(3) 4.25" Solid Rod	Yes	4.10	1.200	8.50	4.31	5.17	3.043	0.227	0.000	17.32	123.48
45.00	(6) 1 5/8" Coax	Yes	0.90	0.000	0.00	0.00	0.00	3.061	0.230	0.000	0.00	28.92
45.00	(3) 4.25" Solid Rod	Yes	0.90	1.200	8.50	0.95	1.14	3.061	0.230	0.000	3.83	27.16
48.60	(6) 1 5/8" Coax	Yes	3.60	0.000	0.00	0.00	0.00	3.129	0.232	0.000	0.00	116.48
48.60	(3) 4.25" Solid Rod	Yes	3.60	1.200	8.50	3.80	4.56	3.129	0.232	0.000	15.68	109.51
50.00	(6) 1 5/8" Coax	Yes	1.40	0.000	0.00	0.00	0.00	3.155	0.231	0.000	0.00	45.42
50.00	(3) 4.25" Solid Rod	Yes	1.40	1.200	8.50	1.48	1.77	3.155	0.231	0.000	6.15	42.71
55.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	3.242	0.234	0.000	0.00	163.64
55.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.30	6.35	3.242	0.234	0.000	22.66	154.04
60.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	3.323	0.240	0.000	0.00	164.96
60.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.31	6.37	3.323	0.240	0.000	23.30	155.43
65.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	3.400	0.245	0.000	0.00	166.20
65.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.33	6.39	3.400	0.245	0.000	23.90	156.72
70.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	3.473	0.252	0.000	0.00	167.35
70.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.34	6.41	3.473	0.252	0.000	24.47	157.92
75.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	3.542	0.258	0.000	0.00	168.43
75.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.35	6.42	3.542	0.258	0.000	25.02	159.06
80.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	3.608	0.265	0.000	0.00	169.46
80.00	(3) 4.25" Solid Rod	Yes	5.00	1.200	8.50	5.36	6.44	3.608	0.265	0.000	25.54	160.13
85.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	3.671	0.256	0.000	0.00	170.43
85.00	(3) 4.0" Solid Rod	Yes	5.00	1.200	8.00	5.17	6.20	3.671	0.256	0.000	25.03	152.15
86.58	(6) 1 5/8" Coax	Yes	1.58	0.000	0.00	0.00	0.00	3.690	0.261	0.000	0.00	53.95
86.58	(3) 4.0" Solid Rod	Yes	1.58	1.200	8.00	1.63	1.96	3.690	0.261	0.000	7.96	48.17
90.00	(6) 1 5/8" Coax	Yes	3.42	0.000	0.00	0.00	0.00	3.731	0.264	0.000	0.00	117.20
90.00	(3) 4.0" Solid Rod	Yes	3.42	1.200	8.00	3.54	4.25	3.731	0.264	0.000	17.44	104.70
90.33	(6) 1 5/8" Coax	Yes	0.33	0.000	0.00	0.00	0.00	3.735	0.267	0.000	0.00	11.31
90.33	(3) 4.0" Solid Rod	Yes	0.33	1.200	8.00	0.34	0.41	3.735	0.267	0.000	1.68	10.11
95.00	(6) 1 5/8" Coax	Yes	4.67	0.000	0.00	0.00	0.00	3.789	0.266	0.000	0.00	160.86
95.00	(3) 4.0" Solid Rod	Yes	4.67	1.200	8.00	4.84	5.81	3.789	0.266	0.000	24.23	143.80
100.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	3.845	0.274	0.000	0.00	173.07
100.0	(3) 4.0" Solid Rod	Yes	5.00	1.200	8.00	5.20	6.23	3.845	0.274	0.000	26.37	154.81
105.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	3.899	0.282	0.000	0.00	173.87
105.0	(3) 4.0" Solid Rod	Yes	5.00	1.200	8.00	5.20	6.25	3.899	0.282	0.000	26.79	155.62
110.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	3.952	0.290	0.000	0.00	174.64

Pole :	302502	Code:	ANSI/TIA-222 Rev G		6/20/2014 2:21:38 PM
Location :	Harwinton, CT	Struct Class :	II		
Height :	181.9 (ft)	Exposure Category :	B		Page: 19
Base Dia :	43.00 (in)	Topographic Category :	1		
Top Dia :	14.50 (in)	Base Elev :	0.000 (ft)		
Shape :	12 Sides				
Taper :	0.162864 (in/ft)				



Load Case: 1.2D + 1.0Di + 1.0Wi — 40.00 mph with 1.00 in Radial Ice — 25 Iterations

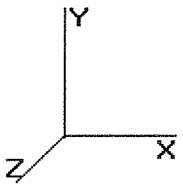
Gust Response Factor : 1.10 — Ice Dead Load Factor : 1.00 — Wind Importance Factor : 1.00

Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

Wind Load Factor : 1.00

110.0	(3) 4.0" Solid Rod	Yes	5.00	1.200	8.00	5.21	6.26	3.952	0.290	0.000	27.19	156.39
115.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	4.002	0.299	0.000	0.00	175.38
115.0	(3) 4.0" Solid Rod	Yes	5.00	1.200	8.00	5.22	6.27	4.002	0.299	0.000	27.58	157.14
120.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	4.051	0.309	0.000	0.00	176.10
120.0	(3) 4.0" Solid Rod	Yes	5.00	1.200	8.00	5.23	6.28	4.051	0.309	0.000	27.96	157.86
125.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	4.099	0.280	0.000	0.00	176.79
125.0	(3) 3.5" Solid Rod	Yes	5.00	1.200	7.00	4.82	5.78	4.099	0.280	0.000	26.08	140.53
126.2	(6) 1 5/8" Coax	Yes	1.28	0.000	0.00	0.00	0.00	4.111	0.286	0.000	0.00	45.30
126.2	(3) 3.5" Solid Rod	Yes	1.28	1.200	7.00	1.23	1.48	4.111	0.286	0.000	6.70	36.02
130.0	(6) 1 5/8" Coax	Yes	3.72	0.000	0.00	0.00	0.00	4.145	0.291	0.000	0.00	132.03
130.0	(3) 3.5" Solid Rod	Yes	3.72	1.200	7.00	3.59	4.31	4.145	0.291	0.000	19.65	105.01
135.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	4.190	0.300	0.000	0.00	178.10
135.0	(3) 3.5" Solid Rod	Yes	5.00	1.200	7.00	4.84	5.80	4.190	0.300	0.000	26.74	141.74
140.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	4.233	0.311	0.000	0.00	178.72
140.0	(3) 3.5" Solid Rod	Yes	5.00	1.200	7.00	4.84	5.81	4.233	0.311	0.000	27.06	142.32
145.0	(3) 3" Solid Rod	Yes	5.00	1.200	6.00	4.43	5.32	4.276	0.277	0.000	25.02	125.29
145.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	4.276	0.277	0.000	0.00	179.33
150.0	(3) 3" Solid Rod	Yes	5.00	1.200	6.00	4.44	5.33	4.318	0.288	0.000	25.30	125.79
155.0	(3) 3" Solid Rod	Yes	5.00	1.200	6.00	4.45	5.33	4.358	0.300	0.000	25.58	126.27
160.0	(3) 3" Solid Rod	Yes	5.00	1.200	6.00	4.45	5.34	4.398	0.314	0.000	25.84	126.74
										Totals:	722.13	9,455.84

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:38 PM
Location :	Harwinton, CT	Struct Class : II	Page: 20
Height :	181.9 (ft)	Exposure Category : B	
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Load Case: 1.2D + 1.0Di + 1.0Wi — 40.00 mph with 1.00 in Radial Ice — 25 Iterations

Gust Response Factor : 1.10 — Ice Dead Load Factor : 1.00 — Wind Importance Factor : 1.00

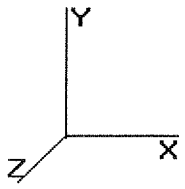
Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

Wind Load Factor : 1.00

Applied Segment Forces Summary

Seg Elev (ft)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	71.02	2,774.58	0.00	0.00
10.00	70.11	2,796.56	0.00	0.00
15.00	87.34	2,798.38	0.00	0.00
20.00	86.40	2,791.35	0.00	0.00
25.00	85.40	2,779.23	0.00	0.00
30.00	84.42	2,763.75	0.00	0.00
35.00	87.09	2,745.88	0.00	0.00
40.00	89.29	2,726.19	0.00	0.00
44.10	74.34	2,219.88	0.00	0.00
45.00	16.49	620.27	0.00	0.00
48.60	67.02	2,468.16	0.00	0.00
50.00	26.08	715.69	0.00	0.00
55.00	94.90	2,542.25	0.00	0.00
60.00	95.89	2,521.65	0.00	0.00
65.00	96.66	2,500.34	0.00	0.00
70.00	97.24	2,478.43	0.00	0.00
75.00	97.65	2,455.98	0.00	0.00
80.00	97.90	2,433.06	0.00	0.00
85.00	97.01	2,318.06	0.00	0.00
86.58	30.47	728.34	0.00	0.00
90.00	66.87	1,903.98	0.00	0.00
90.33	6.42	182.94	0.00	0.00
95.00	91.39	2,026.89	0.00	0.00
100.0	97.67	2,149.51	0.00	0.00
105.0	97.33	2,128.16	0.00	0.00
110.0	96.89	2,106.55	0.00	0.00
115.0	96.36	2,084.69	0.00	0.00
120.0	95.75	2,062.59	0.00	0.00
125.0	92.80	1,871.96	0.00	0.00
126.2	23.52	476.47	0.00	0.00
130.0	68.27	1,304.92	0.00	0.00
135.0	91.14	1,735.79	0.00	0.00
140.0	90.21	1,716.21	0.00	0.00
145.0	231.82	3,526.80	0.00	0.00
150.0	85.77	1,348.64	0.00	0.00
155.0	84.63	1,327.96	0.00	0.00
160.0	83.44	1,307.16	0.00	0.00
165.0	211.54	2,901.19	0.00	0.00
170.0	54.52	739.48	0.00	0.00
175.0	654.35	7,419.89	0.00	0.00
180.0	51.27	637.20	0.00	0.00
181.9	619.24	8,299.11	0.00	919.64
Totals:	4,643.92	95,436.09	0.00	919.64

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:38 PM
Location :	Harwinton, CT	Struct Class : II	
Height :	181.9 (ft)	Exposure Category : B	Page: 21
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Load Case: 1.2D + 1.0Di + 1.0Wi — 40.00 mph with 1.00 in Radial Ice — 25 Iterations

Gust Response Factor : 1.10 — Ice Dead Load Factor : 1.00 — Wind Importance Factor : 1.00

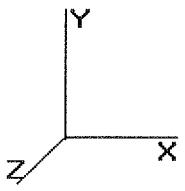
Dead Load Factor : 1.20 — Ice Importance Factor : 1.00

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	-95.43	-4.67	0.00	-620.18	0.00	620.18	3,433.77	1,716.88	6,036.76	2,981.33	0.00	0.00	0.116
5.00	-92.66	-4.66	0.00	-596.82	0.00	596.82	3,397.00	1,698.50	5,857.04	2,892.57	0.02	-0.04	0.114
10.00	-89.86	-4.64	0.00	-573.53	0.00	573.53	3,359.12	1,679.56	5,677.91	2,804.10	0.07	-0.07	0.111
15.00	-87.06	-4.60	0.00	-550.32	0.00	550.32	3,320.10	1,660.05	5,499.48	2,715.99	0.17	-0.11	0.108
20.00	-84.26	-4.56	0.00	-527.31	0.00	527.31	3,279.97	1,639.98	5,321.88	2,628.28	0.30	-0.14	0.106
25.00	-81.48	-4.52	0.00	-504.49	0.00	504.49	3,238.71	1,619.36	5,145.22	2,541.03	0.47	-0.18	0.103
30.00	-78.71	-4.48	0.00	-481.88	0.00	481.88	3,196.33	1,598.17	4,969.60	2,454.30	0.67	-0.21	0.100
35.00	-75.97	-4.43	0.00	-459.50	0.00	459.50	3,152.83	1,576.41	4,795.15	2,368.14	0.91	-0.25	0.098
40.00	-73.24	-4.37	0.00	-437.36	0.00	437.36	3,108.20	1,554.10	4,621.97	2,282.62	1.20	-0.29	0.095
44.10	-71.02	-4.30	0.00	-419.46	0.00	419.46	3,070.77	1,535.38	4,481.01	2,213.00	1.45	-0.32	0.092
45.00	-70.40	-4.30	0.00	-415.59	0.00	415.59	3,062.45	1,531.23	4,450.19	2,197.78	1.51	-0.32	0.090
48.60	-67.93	-4.24	0.00	-400.10	0.00	400.10	2,379.97	1,189.99	3,474.54	1,715.94	1.77	-0.35	0.102
50.00	-67.21	-4.24	0.00	-394.16	0.00	394.16	2,371.43	1,185.72	3,439.58	1,698.68	1.87	-0.36	0.101
55.00	-64.67	-4.17	0.00	-372.96	0.00	372.96	2,340.22	1,170.11	3,315.02	1,637.16	2.27	-0.40	0.097
60.00	-62.14	-4.10	0.00	-352.10	0.00	352.10	2,307.88	1,153.94	3,191.02	1,575.92	2.70	-0.43	0.094
65.00	-59.64	-4.02	0.00	-331.62	0.00	331.62	2,274.42	1,137.21	3,067.70	1,515.02	3.17	-0.47	0.090
70.00	-57.16	-3.94	0.00	-311.53	0.00	311.53	2,239.83	1,119.92	2,945.16	1,454.51	3.68	-0.51	0.086
75.00	-54.70	-3.85	0.00	-291.85	0.00	291.85	2,204.12	1,102.06	2,823.54	1,394.44	4.23	-0.54	0.082
80.00	-52.27	-3.76	0.00	-272.60	0.00	272.60	2,167.29	1,083.65	2,702.93	1,334.88	4.82	-0.58	0.079
80.00	-52.27	-3.76	0.00	-272.60	0.00	272.60	2,167.29	1,083.65	2,702.93	1,334.88	4.82	-0.58	0.085
85.00	-49.95	-3.66	0.00	-253.79	0.00	253.79	2,129.34	1,064.67	2,583.46	1,275.87	5.44	-0.61	0.081
86.58	-49.22	-3.64	0.00	-248.01	0.00	248.01	2,117.11	1,058.55	2,545.96	1,257.35	5.65	-0.62	0.080
90.00	-47.32	-3.56	0.00	-235.57	0.00	235.57	2,090.26	1,045.13	2,465.23	1,217.49	6.10	-0.65	0.075
90.33	-47.13	-3.57	0.00	-234.39	0.00	234.39	1,547.78	773.89	1,862.15	919.65	6.15	-0.65	0.089
95.00	-45.10	-3.48	0.00	-217.73	0.00	217.73	1,525.71	762.86	1,787.32	882.69	6.80	-0.69	0.084
100.00	-42.95	-3.39	0.00	-200.32	0.00	200.32	1,501.00	750.50	1,707.51	843.28	7.54	-0.72	0.079
105.00	-40.83	-3.29	0.00	-183.39	0.00	183.39	1,475.16	737.58	1,628.14	804.08	8.32	-0.76	0.074
110.00	-38.72	-3.18	0.00	-166.96	0.00	166.96	1,448.19	724.10	1,549.32	765.15	9.14	-0.80	0.069
115.00	-36.63	-3.08	0.00	-151.05	0.00	151.05	1,420.11	710.05	1,471.16	726.55	9.99	-0.83	0.063
120.00	-34.57	-2.97	0.00	-135.65	0.00	135.65	1,390.90	695.45	1,393.78	688.34	10.88	-0.86	0.058
120.00	-34.57	-2.97	0.00	-135.65	0.00	135.65	1,390.90	695.45	1,393.78	688.34	10.88	-0.86	0.071
125.00	-32.70	-2.86	0.00	-120.79	0.00	120.79	1,360.57	680.28	1,317.29	650.56	11.80	-0.89	0.065
126.28	-32.22	-2.84	0.00	-117.13	0.00	117.13	1,352.62	676.31	1,297.87	640.97	12.04	-0.90	0.063
126.28	-32.22	-2.84	0.00	-117.13	0.00	117.13	900.61	450.31	868.80	429.07	12.04	-0.90	0.077
130.00	-30.92	-2.77	0.00	-106.55	0.00	106.55	888.95	444.47	835.13	412.44	12.75	-0.93	0.071
135.00	-29.18	-2.67	0.00	-92.71	0.00	92.71	872.29	436.14	789.93	390.12	13.75	-0.97	0.064
140.00	-27.47	-2.56	0.00	-79.37	0.00	79.37	854.50	427.25	744.88	367.87	14.78	-1.00	0.056
140.00	-27.47	-2.56	0.00	-79.37	0.00	79.37	854.50	427.25	744.88	367.87	14.78	-1.00	0.071
145.00	-23.94	-2.28	0.00	-66.55	0.00	66.55	835.60	417.80	700.09	345.75	15.84	-1.03	0.061
150.00	-22.59	-2.19	0.00	-55.14	0.00	55.14	815.57	407.78	655.68	323.81	16.94	-1.07	0.052
155.00	-21.27	-2.09	0.00	-44.21	0.00	44.21	794.42	397.21	611.76	302.12	18.07	-1.10	0.044
160.00	-19.96	-1.99	0.00	-33.78	0.00	33.78	772.14	386.07	568.44	280.73	19.23	-1.12	0.036
160.00	-19.96	-1.99	0.00	-33.78	0.00	33.78	772.14	386.07	568.44	280.73	19.23	-1.12	0.146
165.00	-17.06	-1.73	0.00	-23.85	0.00	23.85	748.74	374.37	525.85	259.70	20.42	-1.14	0.115
170.00	-16.32	-1.68	0.00	-15.19	0.00	15.19	723.19	361.60	483.41	238.74	21.66	-1.22	0.086
175.00	-8.92	-0.87	0.00	-6.80	0.00	6.80	686.95	343.48	435.91	215.28	22.96	-1.26	0.045
180.00	-8.28	-0.81	0.00	-2.45	0.00	2.45	650.71	325.36	390.87	193.04	24.30	-1.29	0.025
181.90	0.00	-0.62	0.00	-0.92	0.00	0.92	636.94	318.47	374.40	184.90	24.81	-1.29	0.005

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:38 PM
Location :	Harwinton, CT	Struct Class : II	
Height :	181.9 (ft)	Exposure Category : B	Page: 22
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 25 Iterations

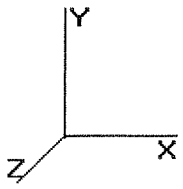
Gust Response Factor : 1.10
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)		Cf	Ice Thick (in)	Tributary (ft)	Ap (sf)	EPAs (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	6.129	6.742	186.22		1.000	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	6.129	6.742	182.70		1.000	* 0.000	5.00	18.373	18.37	123.9	0.0	1,591.4
10.00		1.00	0.70	6.129	6.742	179.17		1.000	* 0.000	5.00	18.022	18.02	121.5	0.0	1,574.7
15.00		1.00	0.70	6.129	6.742	175.64		1.200	* 0.000	5.00	17.671	21.20	143.0	0.0	1,557.9
20.00		1.00	0.70	6.129	6.742	172.12		1.200	* 0.000	5.00	17.319	20.78	140.1	0.0	1,541.2
25.00		1.00	0.70	6.129	6.742	168.59		1.200	* 0.000	5.00	16.968	20.36	137.3	0.0	1,524.5
30.00		1.00	0.70	6.134	6.747	165.13		1.200	* 0.000	5.00	16.617	19.94	134.5	0.0	1,507.7
35.00		1.00	0.73	6.410	7.051	165.20		1.200	* 0.000	5.00	16.265	19.52	137.6	0.0	1,491.0
40.00		1.00	0.76	6.659	7.325	164.71		1.200	* 0.000	5.00	15.914	19.10	139.9	0.0	1,474.3
44.10	Bot - Section 2	1.00	0.78	6.848	7.532	163.96		1.200	* 0.000	4.10	12.788	15.35	115.6	0.0	1,196.4
45.00		1.00	0.78	6.887	7.576	163.76		1.200	* 0.000	0.90	2.824	3.39	25.7	0.0	372.2
48.60	Top - Section 1	1.00	0.80	7.040	7.744	162.85		1.200	* 0.000	3.60	11.182	13.42	103.9	0.0	1,479.0
50.00		1.00	0.81	7.098	7.807	165.37		1.200	* 0.000	1.40	4.299	5.16	40.3	0.0	371.9
55.00		1.00	0.83	7.294	8.023	163.79		1.200	* 0.000	5.00	15.130	18.16	145.7	0.0	1,319.2
60.00		1.00	0.85	7.477	8.225	161.94		1.200	* 0.000	5.00	14.779	17.73	145.9	0.0	1,305.2
65.00		1.00	0.87	7.650	8.415	159.86		1.200	* 0.000	5.00	14.427	17.31	145.7	0.0	1,291.3
70.00		1.00	0.89	7.814	8.595	157.58		1.200	* 0.000	5.00	14.076	16.89	145.2	0.0	1,277.4
75.00		1.00	0.91	7.969	8.766	155.12		1.200	* 0.000	5.00	13.725	16.47	144.4	0.0	1,263.4
80.00	Reinf. Top Reinf	1.00	0.92	8.118	8.930	152.50		1.200	* 0.000	5.00	13.374	16.05	143.3	0.0	1,249.5
85.00		1.00	0.94	8.260	9.086	149.73		1.200	* 0.000	5.00	13.022	15.63	142.0	0.0	1,152.9
86.58	Bot - Section 3	1.00	0.94	8.303	9.133	148.83		1.200	* 0.000	1.58	4.042	4.85	44.3	0.0	361.4
90.00		1.00	0.95	8.396	9.235	146.83		1.200	* 0.000	3.42	8.777	10.53	97.3	0.0	1,053.9
90.33	Top - Section 2	1.00	0.96	8.404	9.245	146.63		1.200	* 0.000	0.33	0.838	1.01	9.3	0.0	101.1
95.00		1.00	0.97	8.526	9.379	146.36		1.200	* 0.000	4.67	11.697	14.04	131.6	0.0	967.3
100.0		1.00	0.98	8.652	9.517	143.25		1.200	* 0.000	5.00	12.184	14.62	139.2	0.0	1,024.8
105.0		1.00	1.00	8.774	9.651	140.03		1.200	* 0.000	5.00	11.833	14.20	137.0	0.0	1,013.7
110.0		1.00	1.01	8.891	9.780	136.72		1.200	* 0.000	5.00	11.482	13.78	134.8	0.0	1,002.5
115.0		1.00	1.02	9.005	9.905	133.31		1.200	* 0.000	5.00	11.130	13.36	132.3	0.0	991.4
120.0	Reinf. Top Reinf	1.00	1.04	9.115	10.02	129.82		1.200	* 0.000	5.00	10.779	12.93	129.7	0.0	980.2
125.0		1.00	1.05	9.222	10.14	126.26		1.200	* 0.000	5.00	10.428	12.51	126.9	0.0	818.8
126.2	Top - Section 3	1.00	1.05	9.249	10.17	125.33		1.200	* 0.000	1.28	2.613	3.14	31.9	0.0	207.8
130.0		1.00	1.06	9.326	10.25	122.62		1.200	* 0.000	3.72	7.464	8.96	91.9	0.0	541.7
135.0		1.00	1.07	9.427	10.36	118.91		1.200	* 0.000	5.00	9.725	11.67	121.0	0.0	720.8
140.0	Reinf. Top Reinf	1.00	1.08	9.525	10.47	115.13		1.200	* 0.000	5.00	9.374	11.25	117.9	0.0	712.4
145.0	Appertunance(s)	1.00	1.09	9.621	10.58	111.29		1.200	* 0.000	5.00	9.023	10.83	114.6	0.0	573.7
150.0		1.00	1.11	9.715	10.68	107.39		1.200	* 0.000	5.00	8.672	10.41	111.2	0.0	565.3
155.0		1.00	1.12	9.806	10.78	103.43		1.200	* 0.000	5.00	8.320	9.98	107.7	0.0	557.0
160.0	Reinf. Top	1.00	1.13	9.896	10.88	99.425		1.200	* 0.000	5.00	7.969	9.56	104.1	0.0	548.6
165.0	Appertunance(s)	1.00	1.14	9.983	10.98	95.362		1.000	0.000	5.00	7.618	7.62	83.7	0.0	179.5
170.0		1.00	1.15	10.069	11.07	91.249		1.000	0.000	5.00	7.266	7.27	80.5	0.0	171.1
175.0	Appertunance(s)	1.00	1.16	10.152	11.16	87.089		1.000	0.000	5.00	6.915	6.92	77.2	0.0	162.7
180.0		1.00	1.16	10.234	11.25	82.882		1.000	0.000	5.00	6.564	6.56	73.9	0.0	154.4
181.9	Appertunance(s)	1.00	1.17	10.265	11.29	81.272		1.000	0.000	1.90	2.402	2.40	27.1	0.0	56.5
* = Cf Adjusted By Linear Load Ra Effect							Totals:			181.90			4,600.3	0.0	38,007.5

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:38 PM
Location :	Harwinton, CT	Struct Class : II	
Height :	181.9 (ft)	Exposure Category : B	Page: 23
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 25 Iterations

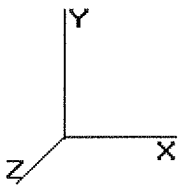
Gust Response Factor : 1.10
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orientation Factor	Ka	Total EPAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
145.0	KMW HB-X-WM-17-65-	3	9.621	10.583	1.00	0.80	4.61	0.000	0.000	48.77	0.00	0.00	90.00
145.0	KMW TTA (HB-X-WM-	3	9.621	10.583	0.50	0.80	0.78	0.000	0.000	8.26	0.00	0.00	47.70
145.0	Side Arms	1	9.621	10.583	1.00	1.00	8.50	0.000	0.000	89.96	0.00	0.00	560.00
165.0	Ericsson AIR 21, 1.3	3	9.983	10.981	0.70	1.00	12.68	0.000	0.000	139.29	0.00	0.00	274.50
165.0	Ericsson AIR 21, 1.3	3	9.983	10.981	0.70	1.00	12.77	0.000	0.000	140.21	0.00	0.00	271.20
175.0	Antel LPA-80063/6CF	6	10.152	11.168	0.76	0.80	34.98	0.000	0.000	390.69	0.00	0.00	162.00
175.0	Flat Low Profile Pla	1	10.152	11.168	1.00	1.00	26.10	0.000	0.000	291.47	0.00	0.00	1,500.00
175.0	Antel BXA-171063-12B	3	10.152	11.168	0.72	0.80	8.17	0.000	0.000	91.28	0.00	0.00	45.00
175.0	Antel BXA-70063-6CF-	3	10.152	11.168	0.66	0.80	11.99	0.000	0.000	133.91	0.00	0.00	51.00
175.0	RFS FD9R6004/2C-3L	6	10.152	11.168	0.50	0.80	0.86	0.000	0.000	9.65	0.00	0.00	18.60
181.9	Powerwave 7770.00	6	10.315	11.346	0.77	0.75	19.09	0.000	3.100	216.62	0.00	671.54	210.00
181.9	Round Platform w/ Ha	1	10.265	11.292	1.00	1.00	27.20	0.000	0.000	307.13	0.00	0.00	2,000.00
181.9	Powerwave LGP21401	6	10.315	11.346	0.50	0.75	2.48	0.000	3.100	28.08	0.00	87.05	84.60
181.9	KMW AM-X-CD-16-65-	3	10.315	11.346	0.79	0.75	14.26	0.000	3.100	161.75	0.00	501.42	145.50
181.9	Ericsson RRUS 11 (Ba	6	10.315	11.346	0.50	0.75	5.78	0.000	3.100	65.61	0.00	203.39	300.00
181.9	Andrew ABT-DMDF-	1	10.315	11.346	0.50	0.75	0.02	0.000	3.100	0.21	0.00	0.66	1.10
181.9	30" x 23" BOB	1	10.315	11.346	0.50	0.75	2.16	0.000	3.100	24.47	0.00	75.84	100.00
										2,147.34			5,861.20

Pole :	302502	Code:	ANSI/TIA-222 Rev G
Location :	Harwinton, CT	Struct Class :	II
Height :	181.9 (ft)	Exposure Category :	B
Base Dia :	43.00 (in)	Topographic Category :	1
Top Dia :	14.50 (in)	Base Elev :	0.000 (ft)
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 25 Iterations

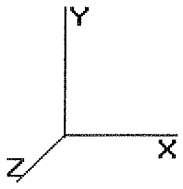
Gust Response Factor : 1.10
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Linear Appurtenance Segment Forces (Factored)

Seg Top Elev (ft)	Description	Exposed To Wind	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	qz (psf)	Ra	Cf Adjust Factor	F X (lb)	Dead Load (lb)
5.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	6.129	0.193	1.278	0.00	24.60
5.00	(3) 4.25" Solid Rod	Yes	5.00	0.000	8.50	3.54	0.00	6.129	0.193	1.278	0.00	0.00
10.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	6.129	0.197	1.290	0.00	24.60
10.00	(3) 4.25" Solid Rod	Yes	5.00	0.000	8.50	3.54	0.00	6.129	0.197	1.290	0.00	0.00
15.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	6.129	0.200	0.000	0.00	24.60
15.00	(3) 4.25" Solid Rod	Yes	5.00	1.080	8.50	3.54	3.82	6.129	0.200	0.000	25.78	0.00
20.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	6.129	0.204	0.000	0.00	24.60
20.00	(3) 4.25" Solid Rod	Yes	5.00	1.080	8.50	3.54	3.82	6.129	0.204	0.000	25.78	0.00
25.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	6.129	0.209	0.000	0.00	24.60
25.00	(3) 4.25" Solid Rod	Yes	5.00	1.080	8.50	3.54	3.82	6.129	0.209	0.000	25.78	0.00
30.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	6.134	0.213	0.000	0.00	24.60
30.00	(3) 4.25" Solid Rod	Yes	5.00	1.079	8.50	3.54	3.82	6.134	0.213	0.000	25.80	0.00
35.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	6.410	0.218	0.000	0.00	24.60
35.00	(3) 4.25" Solid Rod	Yes	5.00	1.056	8.50	3.54	3.74	6.410	0.218	0.000	26.37	0.00
40.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	6.659	0.223	0.000	0.00	24.60
40.00	(3) 4.25" Solid Rod	Yes	5.00	1.036	8.50	3.54	3.67	6.659	0.223	0.000	26.88	0.00
44.10	(6) 1 5/8" Coax	Yes	4.10	0.000	0.00	0.00	0.00	6.848	0.227	0.000	0.00	20.17
44.10	(3) 4.25" Solid Rod	Yes	4.10	1.022	8.50	2.90	2.97	6.848	0.227	0.000	22.35	0.00
45.00	(6) 1 5/8" Coax	Yes	0.90	0.000	0.00	0.00	0.00	6.887	0.230	0.000	0.00	4.43
45.00	(3) 4.25" Solid Rod	Yes	0.90	1.019	8.50	0.64	0.65	6.887	0.230	0.000	4.92	0.00
48.60	(6) 1 5/8" Coax	Yes	3.60	0.000	0.00	0.00	0.00	7.040	0.232	0.000	0.00	17.71
48.60	(3) 4.25" Solid Rod	Yes	3.60	1.008	8.50	2.55	2.57	7.040	0.232	0.000	19.90	0.00
50.00	(6) 1 5/8" Coax	Yes	1.40	0.000	0.00	0.00	0.00	7.098	0.231	0.000	0.00	6.89
50.00	(3) 4.25" Solid Rod	Yes	1.40	1.003	8.50	0.99	1.00	7.098	0.231	0.000	7.77	0.00
55.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	7.294	0.234	0.000	0.00	24.60
55.00	(3) 4.25" Solid Rod	Yes	5.00	0.990	8.50	3.54	3.51	7.294	0.234	0.000	28.13	0.00
60.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	7.477	0.240	0.000	0.00	24.60
60.00	(3) 4.25" Solid Rod	Yes	5.00	0.978	8.50	3.54	3.46	7.477	0.240	0.000	28.48	0.00
65.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	7.650	0.245	0.000	0.00	24.60
65.00	(3) 4.25" Solid Rod	Yes	5.00	0.967	8.50	3.54	3.42	7.650	0.245	0.000	28.81	0.00
70.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	7.814	0.252	0.000	0.00	24.60
70.00	(3) 4.25" Solid Rod	Yes	5.00	0.956	8.50	3.54	3.39	7.814	0.252	0.000	29.11	0.00
75.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	7.969	0.258	0.000	0.00	24.60
75.00	(3) 4.25" Solid Rod	Yes	5.00	0.947	8.50	3.54	3.35	7.969	0.258	0.000	29.40	0.00
80.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	8.118	0.265	0.000	0.00	24.60
80.00	(3) 4.25" Solid Rod	Yes	5.00	0.938	8.50	3.54	3.32	8.118	0.265	0.000	29.68	0.00
85.00	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	8.260	0.256	0.000	0.00	24.60
85.00	(3) 4.0" Solid Rod	Yes	5.00	0.988	8.00	3.33	3.29	8.260	0.256	0.000	29.93	0.00
86.58	(6) 1 5/8" Coax	Yes	1.58	0.000	0.00	0.00	0.00	8.303	0.261	0.000	0.00	7.77
86.58	(3) 4.0" Solid Rod	Yes	1.58	0.986	8.00	1.05	1.04	8.303	0.261	0.000	9.48	0.00
90.00	(6) 1 5/8" Coax	Yes	3.42	0.000	0.00	0.00	0.00	8.396	0.264	0.000	0.00	16.82
90.00	(3) 4.0" Solid Rod	Yes	3.42	0.980	8.00	2.28	2.24	8.396	0.264	0.000	20.64	0.00
90.33	(6) 1 5/8" Coax	Yes	0.33	0.000	0.00	0.00	0.00	8.404	0.267	0.000	0.00	1.62
90.33	(3) 4.0" Solid Rod	Yes	0.33	0.980	8.00	0.22	0.22	8.404	0.267	0.000	1.99	0.00
95.00	(6) 1 5/8" Coax	Yes	4.67	0.000	0.00	0.00	0.00	8.526	0.266	0.000	0.00	22.97
95.00	(3) 4.0" Solid Rod	Yes	4.67	0.973	8.00	3.11	3.03	8.526	0.266	0.000	28.41	0.00
100.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	8.652	0.274	0.000	0.00	24.60
100.0	(3) 4.0" Solid Rod	Yes	5.00	0.966	8.00	3.33	3.22	8.652	0.274	0.000	30.64	0.00
105.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	8.774	0.282	0.000	0.00	24.60
105.0	(3) 4.0" Solid Rod	Yes	5.00	0.959	8.00	3.33	3.20	8.774	0.282	0.000	30.85	0.00
110.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	8.891	0.290	0.000	0.00	24.60

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:39 PM
Location :	Harwinton, CT	Struct Class : II	Page: 25
Height :	181.9 (ft)	Exposure Category : B	
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



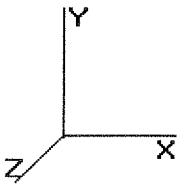
Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 25 Iterations

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

Wind Importance Factor : 1.00

110.0	(3) 4.0" Solid Rod	Yes	5.00	0.953	8.00	3.33	3.18	8.891	0.290	0.000	31.06	0.00
115.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	9.005	0.299	0.000	0.00	24.60
115.0	(3) 4.0" Solid Rod	Yes	5.00	0.947	8.00	3.33	3.16	9.005	0.299	0.000	31.25	0.00
120.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	9.115	0.309	0.000	0.00	24.60
120.0	(3) 4.0" Solid Rod	Yes	5.00	0.941	8.00	3.33	3.14	9.115	0.309	0.000	31.44	0.00
125.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	9.222	0.280	0.000	0.00	24.60
125.0	(3) 3.5" Solid Rod	Yes	5.00	1.069	7.00	2.92	3.12	9.222	0.280	0.000	31.63	0.00
126.2	(6) 1 5/8" Coax	Yes	1.28	0.000	0.00	0.00	0.00	9.249	0.286	0.000	0.00	6.30
126.2	(3) 3.5" Solid Rod	Yes	1.28	1.067	7.00	0.75	0.80	9.249	0.286	0.000	8.11	0.00
130.0	(6) 1 5/8" Coax	Yes	3.72	0.000	0.00	0.00	0.00	9.326	0.291	0.000	0.00	18.30
130.0	(3) 3.5" Solid Rod	Yes	3.72	1.063	7.00	2.17	2.31	9.326	0.291	0.000	23.66	0.00
135.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	9.427	0.300	0.000	0.00	24.60
135.0	(3) 3.5" Solid Rod	Yes	5.00	1.057	7.00	2.92	3.08	9.427	0.300	0.000	31.98	0.00
140.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	9.525	0.311	0.000	0.00	24.60
140.0	(3) 3.5" Solid Rod	Yes	5.00	1.052	7.00	2.92	3.07	9.525	0.311	0.000	32.15	0.00
145.0	(3) 3" Solid Rod	Yes	5.00	1.200	6.00	2.50	3.00	9.621	0.277	0.000	31.75	0.00
145.0	(6) 1 5/8" Coax	Yes	5.00	0.000	0.00	0.00	0.00	9.621	0.277	0.000	0.00	24.60
150.0	(3) 3" Solid Rod	Yes	5.00	1.200	6.00	2.50	3.00	9.715	0.288	0.000	32.06	0.00
155.0	(3) 3" Solid Rod	Yes	5.00	1.200	6.00	2.50	3.00	9.806	0.300	0.000	32.36	0.00
160.0	(3) 3" Solid Rod	Yes	5.00	1.200	6.00	2.50	3.00	9.896	0.314	0.000	32.66	0.00
										Totals:	886.99	713.31

Pole :	302502	Code: ANSI/TIA-222 Rev G	
Location :	Harwinton, CT	Struct Class : II	6/20/2014 2:21:39 PM
Height :	181.9 (ft)	Exposure Category : B	Page: 26
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 25 Iterations

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)	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00	0.00	0.00	0.00	0.00
5.00	123.86	1,854.02	0.00	0.00
10.00	121.49	1,837.29	0.00	0.00
15.00	168.74	1,820.56	0.00	0.00
20.00	165.89	1,803.83	0.00	0.00
25.00	163.05	1,787.10	0.00	0.00
30.00	160.33	1,770.37	0.00	0.00
35.00	163.99	1,753.64	0.00	0.00
40.00	166.77	1,736.91	0.00	0.00
44.10	137.93	1,411.78	0.00	0.00
45.00	30.59	419.51	0.00	0.00
48.60	123.81	1,668.11	0.00	0.00
50.00	48.05	445.41	0.00	0.00
55.00	173.79	1,581.82	0.00	0.00
60.00	174.34	1,567.88	0.00	0.00
65.00	174.50	1,553.93	0.00	0.00
70.00	174.30	1,539.99	0.00	0.00
75.00	173.78	1,526.05	0.00	0.00
80.00	172.98	1,512.11	0.00	0.00
85.00	171.91	1,415.52	0.00	0.00
86.58	53.79	444.41	0.00	0.00
90.00	117.91	1,233.49	0.00	0.00
90.33	11.29	118.40	0.00	0.00
95.00	160.06	1,212.57	0.00	0.00
100.0	169.79	1,287.47	0.00	0.00
105.0	167.89	1,276.31	0.00	0.00
110.0	165.81	1,265.16	0.00	0.00
115.0	163.55	1,254.01	0.00	0.00
120.0	161.13	1,242.85	0.00	0.00
125.0	158.56	1,081.40	0.00	0.00
126.2	40.01	275.05	0.00	0.00
130.0	115.54	737.07	0.00	0.00
135.0	152.99	983.40	0.00	0.00
140.0	150.01	975.03	0.00	0.00
145.0	293.32	1,534.02	0.00	0.00
150.0	143.26	803.36	0.00	0.00
155.0	140.06	794.99	0.00	0.00
160.0	136.75	786.63	0.00	0.00
165.0	363.15	963.21	0.00	0.00
170.0	80.48	378.05	0.00	0.00
175.0	994.22	2,146.28	0.00	0.00
180.0	73.90	312.13	0.00	0.00
181.9	831.00	2,957.61	0.00	1,539.90
Totals:	7,634.59	53,068.71	0.00	1,539.90

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:39 PM
Location :	Harwinton, CT	Struct Class : II	
Height :	181.9 (ft)	Exposure Category : B	Page: 27
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
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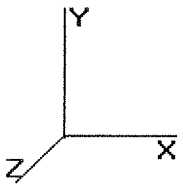


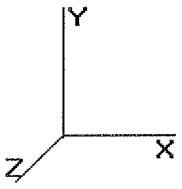
Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 25 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.00
Wind Load Factor : 1.00
Wind Importance 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	-53.07	-7.66	0.00	-902.26	0.00	902.26	3,433.77	1,716.88	6,036.76	2,981.33	0.00	0.00	0.155
5.00	-51.20	-7.58	0.00	-863.97	0.00	863.97	3,397.00	1,698.50	5,857.04	2,892.57	0.03	-0.05	0.151
10.00	-49.36	-7.50	0.00	-826.08	0.00	826.08	3,359.12	1,679.56	5,677.91	2,804.10	0.11	-0.10	0.147
15.00	-47.53	-7.37	0.00	-788.59	0.00	788.59	3,320.10	1,660.05	5,499.48	2,715.99	0.24	-0.15	0.143
20.00	-45.72	-7.24	0.00	-751.74	0.00	751.74	3,279.97	1,639.98	5,321.88	2,628.28	0.43	-0.20	0.139
25.00	-43.93	-7.11	0.00	-715.56	0.00	715.56	3,238.71	1,619.36	5,145.22	2,541.03	0.67	-0.26	0.135
30.00	-42.16	-6.97	0.00	-680.02	0.00	680.02	3,196.33	1,598.17	4,969.60	2,454.30	0.97	-0.31	0.130
35.00	-40.40	-6.84	0.00	-645.15	0.00	645.15	3,152.83	1,576.41	4,795.15	2,368.14	1.32	-0.36	0.126
40.00	-38.66	-6.69	0.00	-610.97	0.00	610.97	3,108.20	1,554.10	4,621.97	2,282.62	1.72	-0.41	0.122
44.10	-37.24	-6.56	0.00	-583.54	0.00	583.54	3,070.77	1,535.38	4,481.01	2,213.00	2.08	-0.45	0.118
45.00	-36.82	-6.54	0.00	-577.64	0.00	577.64	3,062.45	1,531.23	4,450.19	2,197.78	2.17	-0.46	0.116
48.60	-35.15	-6.42	0.00	-554.11	0.00	554.11	2,379.97	1,189.99	3,474.54	1,715.94	2.53	-0.49	0.130
50.00	-34.70	-6.38	0.00	-545.13	0.00	545.13	2,371.43	1,185.72	3,439.58	1,698.68	2.68	-0.51	0.129
55.00	-33.12	-6.22	0.00	-513.21	0.00	513.21	2,340.22	1,170.11	3,315.02	1,637.16	3.24	-0.56	0.123
60.00	-31.55	-6.06	0.00	-482.09	0.00	482.09	2,307.88	1,153.94	3,191.02	1,575.92	3.85	-0.61	0.118
65.00	-29.99	-5.90	0.00	-451.78	0.00	451.78	2,274.42	1,137.21	3,067.70	1,515.02	4.52	-0.66	0.113
70.00	-28.45	-5.73	0.00	-422.30	0.00	422.30	2,239.83	1,119.92	2,945.16	1,454.51	5.23	-0.71	0.107
75.00	-26.92	-5.56	0.00	-393.67	0.00	393.67	2,204.12	1,102.06	2,823.54	1,394.44	6.00	-0.76	0.102
80.00	-25.40	-5.38	0.00	-365.88	0.00	365.88	2,167.29	1,083.65	2,702.93	1,334.88	6.82	-0.81	0.097
80.00	-25.40	-5.38	0.00	-365.88	0.00	365.88	2,167.29	1,083.65	2,702.93	1,334.88	6.82	-0.81	0.105
85.00	-23.99	-5.21	0.00	-338.96	0.00	338.96	2,129.34	1,064.67	2,583.46	1,275.87	7.69	-0.85	0.099
86.58	-23.54	-5.16	0.00	-330.74	0.00	330.74	2,117.11	1,058.55	2,545.96	1,257.35	7.98	-0.87	0.097
90.00	-22.31	-5.03	0.00	-313.10	0.00	313.10	2,090.26	1,045.13	2,465.23	1,217.49	8.62	-0.90	0.092
90.33	-22.19	-5.02	0.00	-311.45	0.00	311.45	1,547.78	773.89	1,862.15	919.65	8.68	-0.91	0.108
95.00	-20.97	-4.86	0.00	-287.99	0.00	287.99	1,525.71	762.86	1,787.32	882.69	9.59	-0.95	0.102
100.00	-19.69	-4.68	0.00	-263.70	0.00	263.70	1,501.00	750.50	1,707.51	843.28	10.61	-1.00	0.095
105.00	-18.41	-4.51	0.00	-240.28	0.00	240.28	1,475.16	737.58	1,628.14	804.08	11.69	-1.05	0.088
110.00	-17.14	-4.33	0.00	-217.73	0.00	217.73	1,448.19	724.10	1,549.32	765.15	12.81	-1.10	0.081
115.00	-15.89	-4.16	0.00	-196.07	0.00	196.07	1,420.11	710.05	1,471.16	726.55	13.98	-1.14	0.075
120.00	-14.65	-3.98	0.00	-175.29	0.00	175.29	1,390.90	695.45	1,393.78	688.34	15.20	-1.18	0.068
120.00	-14.65	-3.98	0.00	-175.29	0.00	175.29	1,390.90	695.45	1,393.78	688.34	15.20	-1.18	0.082
125.00	-13.57	-3.81	0.00	-155.38	0.00	155.38	1,360.57	680.28	1,317.29	650.56	16.46	-1.22	0.075
126.28	-13.29	-3.77	0.00	-150.51	0.00	150.51	1,352.62	676.31	1,297.87	640.97	16.79	-1.23	0.073
126.28	-13.29	-3.77	0.00	-150.51	0.00	150.51	900.61	450.31	868.80	429.07	16.79	-1.23	0.089
130.00	-12.56	-3.64	0.00	-136.50	0.00	136.50	888.95	444.47	835.13	412.44	17.77	-1.27	0.082
135.00	-11.57	-3.48	0.00	-118.29	0.00	118.29	872.29	436.14	789.93	390.12	19.12	-1.32	0.072
140.00	-10.60	-3.31	0.00	-100.90	0.00	100.90	854.50	427.25	744.88	367.87	20.52	-1.36	0.063
140.00	-10.60	-3.31	0.00	-100.90	0.00	100.90	854.50	427.25	744.88	367.87	20.52	-1.36	0.079
145.00	-9.07	-2.99	0.00	-84.34	0.00	84.34	835.60	417.80	700.09	345.75	21.97	-1.40	0.067
150.00	-8.27	-2.83	0.00	-69.40	0.00	69.40	815.57	407.78	655.68	323.81	23.45	-1.44	0.057
155.00	-7.48	-2.68	0.00	-55.25	0.00	55.25	794.42	397.21	611.76	302.12	24.98	-1.48	0.047
160.00	-6.69	-2.52	0.00	-41.87	0.00	41.87	772.14	386.07	568.44	280.73	26.55	-1.51	0.037
160.00	-6.69	-2.52	0.00	-41.87	0.00	41.87	772.14	386.07	568.44	280.73	26.55	-1.51	0.158
165.00	-5.74	-2.14	0.00	-29.26	0.00	29.26	748.74	374.37	525.85	259.70	28.15	-1.54	0.120
170.00	-5.36	-2.06	0.00	-18.57	0.00	18.57	723.19	361.60	483.41	238.74	29.81	-1.63	0.085
175.00	-3.24	-1.00	0.00	-8.29	0.00	8.29	686.95	343.48	435.91	215.28	31.55	-1.68	0.043
180.00	-2.93	-0.92	0.00	-3.29	0.00	3.29	650.71	325.36	390.87	193.04	33.33	-1.71	0.022
181.90	0.00	-0.83	0.00	-1.54	0.00	1.54	636.94	318.47	374.40	184.90	34.01	-1.72	0.008

Pole :	302502	Code: ANSI/TIA-222 Rev G	6/20/2014 2:21:39 PM
Location :	Harwinton, CT	Struct Class : II	Page: 28
Height :	181.9 (ft)	Exposure Category : B	
Base Dia :	43.00 (in)	Topographic Category : 1	
Top Dia :	14.50 (in)	Base Elev : 0.000 (ft)	
Shape :	12 Sides		
Taper :	0.162864 (in/ft)		



Analysis Summary

	Reactions						Max Usage	
Load Case	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	29.70	0.00	59.60	0.00	0.00	3521.44	160.00	0.61
0.9D + 1.6W	29.40	0.00	49.72	0.00	0.00	3476.30	160.00	0.60
1.2D + 1.0Di + 1.0Wi	4.67	0.00	95.43	0.00	0.00	620.18	160.00	0.15
1.0D + 1.0W	7.66	0.00	53.07	0.00	0.00	902.26	160.00	0.16

Additional Steel Summary

Elev From (ft)	Elev To (ft)	Member	Stitch Weld Len (in)	Stitch Weld Spacing (in)	Stitch Weld Size (in)	Stitch Weld Fu (ksi)	Upper Terminal Weld Moment (ft-kips)	Upper Terminal Weld Q (in^3)	Upper Terminal Weld Tot I (in^4)	Upper Terminal Weld Len (in)	Lower Terminal Weld Moment (ft-kips)	Lower Terminal Weld Q (in^3)	Lower Terminal Weld Tot I (in^4)	Lower Terminal Weld Len (in)	Max Member Pu (kip)	Max Member phi Pn (kip)	Max Member Ratio
0.00	80.0	(3) SOL-4 1/4" SOLID	4.00	33.00	0.250	70	1,446.9	257.8	10,643	37.7	3,521.4	345.8	24,627	53.2	602.3	629.7	0.956
80.0	120.	(3) SOL-4" SOLID	4.00	66.00	0.250	70	700.4	190.6	5,853	24.5	1,446.9	228.4	9,830	36.2	408.5	527.1	0.775
120.	140.	(3) SOL-3 1/2" SOLID	4.04	66.00	0.188	70	405.8	130.2	3,394	22.3	700.4	145.9	4,821	30.4	257.5	395.0	0.652
140.	160.	(3) SOL-3" SOLID	4.00	66.00	0.188	70	169.4	84.2	1,956	10.4	405.8	95.7	2,683	20.8	176.0	280.8	0.627

Code Rev.	G	Date	6/20/2014
		Engineer	ZDG
		Site #	302502
Moment	3521.4 k-ft	Carrier	Metro PCS
Axial	59.6 k		

Base/Flange Plate	Plate Type	*Baseplate*	
	Pole Diameter	43	in
	Pole Thickness		in
	Plate Diameter	55	in
	Plate Thickness	2	in
	Plate Fy	50	ksi
	Weld Length	0.25	in
	ϕ_s Resistance	448.17	k-in
	Applied	255.79	k-in
Stiffeners	#	*0*	

Bolts	#	*12*	
	Bolt Circle	49.25	in
	(R)adial / (S)quare	R	
	Diameter	2.25	in
	Hole Diameter	2.625	in
	Type	A615-75	
	Fy	75	ksi
	Fu	100	ksi
	ϕ_s Resistance	259.82	k
	Applied	163.71	k
Reinforcement ●	#	*3*	
	DYW. Circle	59	in
	Offset Angle	105	°
	Type	Other	
	Diameter	2.77	in (equiv. to 4x0.5 HSS)
	Fu	65	ksi
Extra Bolts O	#	*3*	
	Bolt Circle	59	in
	(R)adial / (S)quare	R	
	Offset Angle	15	°
	Diameter	1.41	in (equiv. to (2) 1" bolts)
	Type	A354-BC	
	Fy	105	ksi
	Fu	125	ksi
	ϕ_s Resistance	122.25	k
	Applied	89.01	k

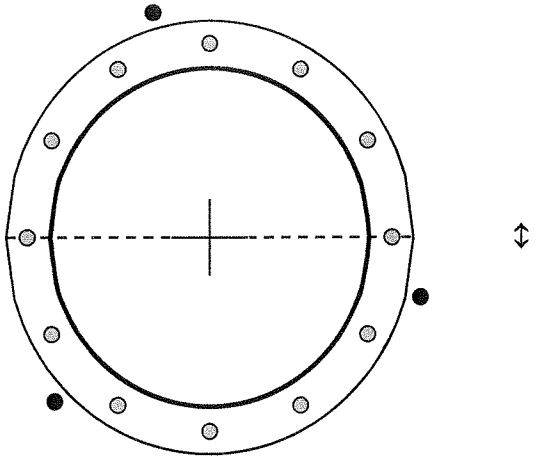


Plate Stress Ratio: 0.57 (Pass)

Bolt Stress Ratio: 0.63 (Pass)

Extra Bolt Stress Ratio: 0.73 (Pass)

Base/Flange Plate	Plate Type	***Flange @ 126.3 ft***
	Pole Diameter	23.558 in
	Pole Thickness	in
	Plate Diameter	30 in
	Plate Thickness	1.3125 in
	Plate Fy	36 ksi
	Weld Length	0.25 in
	ϕ_s Resistance	64.54 k-in
	Applied	12.61 k-in
Stiffeners	#	***0***

Bolts	#	***16***
	Bolt Circle	27 in
	(R)adial / (S)quare	R
	Diameter	1 in
	Hole Diameter	1.125 in
	Type	A325
	Fy	92 ksi
	Fu	120 ksi
	ϕ_s Resistance	54.52 k
	Applied	13.88 k
Reinforcement ●	#	***3***
	DYW. Circle	29.3 in
	Offset Angle	105 °
	Type	Other
	Diameter	3.50
	Fu	65 ksi
Extra Bolts O	#	***0***

Code Rev. ***G***

Date	6/20/2014
Engineer	ZDG
Site #	302502
Carrier	Metro PCS

Moment	602.6 k-ft
Axial	14.3 k

Required Flange Thickness:

0.58 in OK

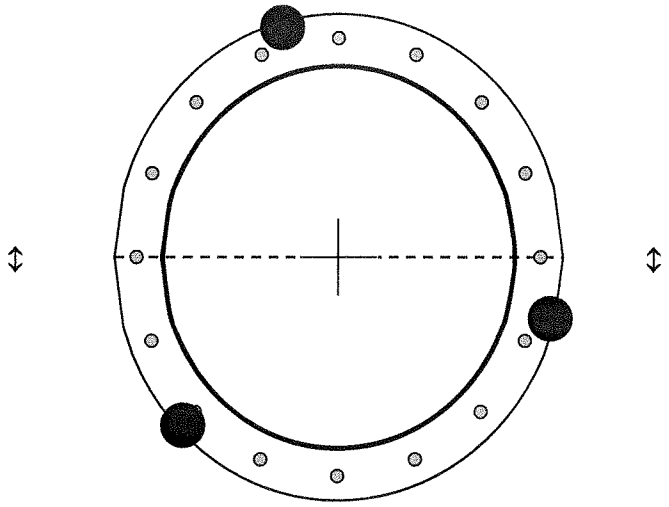


Plate Stress Ratio:

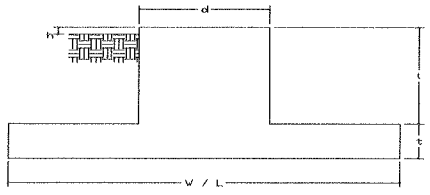
0.20 (Pass)

Bolt Stress Ratio:

0.25 (Pass)

Site Name:	Harwinton, CT
Site Number:	302502
Engineering Number:	59131121
Engineer:	Z. Graham
Date:	06/20/14
Tower Type:	MP

Program Last Updated: *8/4/2011*



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

Foundation Mapped:	N				
Compression/Leg:	59.6	k	Concrete Strength (f'_c):	3000	psi
Uplift/Leg:	0.0	k	Pad Tension Steel Depth:	20.00	in
Total Shear:	29.7	k	ϕ_{Shear}:	0.75	
Moment:	3521.4	k-ft	$\phi_{Flexure\ /\ Tension}$:	0.90	
Tower + Appurtenance Weight:	52.9	k	$\phi_{Compression}$:	0.65	
Depth to Base of Foundation (l + t - h):	6.00	ft	β:	0.85	
Diameter of Pier (d):	10.16	ft	Bottom Pad Rebar Size #:	10	
Height of Pier above Ground (h):	0.50		# of Bottom Pad Rebar:	40	
Width of Pad (W):	20.00	ft	Pad Bottom Steel Area:	50.80	in^2
Length of Pad (L):	20.00	ft	Pad Steel F_y:	60000	psi
Thickness of Pad (t):	2.00	ft	Top Pad Rebar Size #:	5	
Tower Leg Center to Center:	3.58	ft	# of Top Pad Rebar:	40	
Number of Tower Legs:	1.0	(1 if MP or GT)	Pad Top Steel Area:	12.40	in^2
Tower Center from Mat Center:	0.00	ft	Pier Rebar Size #:	11	
Depth Below Ground Surface to Water Table:	20.00	ft	Pier Steel Area (Single Bar):	1.56	in^2
Unit Weight of Concrete:	150.0	pcf	# of Pier Rebar:	52	
Unit Weight of Soil Above Water Table:	120.0	pcf	Pier Steel F_y:	60000	psi
Unit Weight of Water:	62.4	pcf	Pier Cage Diameter:	113.9	in
Unit Weight of Soil Below Water Table:	65.0	pcf	Rebar Strain Limit:	0.008	
Friction Angle of Uplift:	20.0	Degrees	Steel Elastic Modulus:	29000	ksi
Ultimate Coefficient of Shear Friction:	0.35		Tie Rebar Size #:	4	
Ultimate Compressive Bearing Pressure:	12000.0	psf	Tie Steel Area (Single Bar):	0.20	in^2
Ultimate Passive Pressure on Pad Face:	0.0	psf	Tie Spacing:	12	in
$\phi_{Soil\ and\ Concrete\ Weight}$:	0.9		Tie Steel F_y:	60000	psi
ϕ_{Soil}:	0.75				

Overturning Moment Usage

Design OTM:	3714.5	k-ft
OTM Resistance:	3560.5	k-ft
Design OTM / OTM Resistance:	1.04	Result: Acceptable

Soil Bearing Pressure Usage:

Total Weight (Foundation, Soil, Tower):	371.8	k
Net Bearing Pressure:	5943	psf
Nominal Bearing Pressure:	9000	psf
Net Bearing Pressure/Nominal Bearing Pressure:	0.66	Result: OK
Load Direction Controling Design Bearing Pressure:	Diagonal to Pad Edge	

Sliding Factor of Safety

Total Factored Sliding Resistance:	97.6	k
Sliding Design / Sliding Resistance:	0.30	Result: OK

One Way Shear, Flexual Capacity, and Punching Shear

Factored One Way Shear (V_u):	204.5	k
One Way Shear Capacity (ϕV_c):	291.7	k - ACI11.3.1.1
$V_u / \phi V_c$:	0.70	Result: OK
Load Direction Controling Shear Capacity:	Diagonal to Pad Edge	
Lower Steel Pad Factored Moment (M_u):	972.2	k-ft
Lower Steel Pad Moment Capacity (ϕM_n):	3550.5	k-ft - ACI10.3
$M_u / \phi M_n$:	0.27	Result: OK
Load Direction Controling Flexural Capacity:	Diagonal to Pad Edge	
Upper Steel Pad Factored Moment (M_u):	302.4	k-ft
Upper Steel Pad Moment Capacity (ϕM_n):	1087.2	k-ft
$M_u / \phi M_n$:	0.28	Result: OK
Lower Pad Flexural Reinforcement Ratio:	0.0106	OK - Minimum Reinforcement Ratio Met - ACI10.5.1
Upper Pad Flexural Reinforcement Ratio:	0.0026	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 Moment in Pier (M_u):	3655.1	k-ft
Pier Moment Capacity (ϕM_n):	20323.5	k-ft
$M_u / \phi M_n$:	0.18	Result: OK
Factored Shear in Pier (V_u):	29.7	k
Pier Shear Capacity (ϕV_n):	960.7	k
$V_u / \phi V_c$:	0.03	Result: OK
Pier Shear Reinforcement Ratio:	0.0002	No Ties Necessary for Shear - ACI11.5.6.1
Factored Tension in Pier (T_u):	0.0	k
Pier Tension Capacity (ϕT_n):	4380.5	k
$T_u / \phi T_n$:	0.00	Result: OK
Factored Compression in Pier (P_u):	59.6	k
Pier Compression Capacity (ϕP_n):	17889.8	k - ACI10.3.6.2
$P_u / \phi P_n$:	0.00	Result: OK
Pier Compression Reinforcement Ratio:	0.007	OK - Reinforcement Ratio Met - ACI10.9.1 & 10.8.4
$M_u/\phi_B M_n + T_u/\phi_T T_n$:	0.18	Result: OK

Nominal and Design Moment Capacity and Factored Design Loads