PULLMAN & COMI
ATTORNEYS AT LAW

EM-POCKET-017-080924

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ORIGINAL

September 23, 2008

Via Federal Express

S. Derek Phelps, Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

Re: Notice of Exempt Modification
American Tower Corporation Telecommunications Facility
Willis Street, Bristol, Connecticut

Dear Mr. Phelps:

Youghiogheny Communications-Northeast, LLC, doing business as Pocket Communications ("Pocket"), intends to install antennas and appurtenant equipment at the existing 120-foot monopole facility owned by American Tower Corporation and located at Willis Street, Bristol, Connecticut ("Facility"). Pocket Communications provides prepaid, flat rate wireless voice and data services to more than a quarter of a million subscribers. Pocket is licensed by the Federal Communications Commission (FCC) to provide PCS wireless telecommunications service in the State of Connecticut, which includes the area to be served by the proposed installation. This installation constitutes an exempt modification pursuant to the Public Utility Environmental Standards Act, Connecticut General Statutes Section 16-50g et. seq. (PUESA), and Section 16-50j-72(b)(2) of the Regulations of the Connecticut State Agencies adopted pursuant to PUESA. In accordance with R.C.S.A. Section 16-50j-73, a copy of this notice has been sent to Arthur J. Ward, Mayor, City of Bristol.

The existing Facility consists of a 120-foot self-supporting monopole tower capable of supporting multiple carriers within a fenced compound. The coordinates for the Facility are **Lat: 41°-38'-56" and Long: 72°–56'-52".** The tower is located on South Mountain, in the southern portion of Bristol, roughly 2,000 feet from the Wolcott town line. The Facility is approximately 1,000 feet west of Willis Street, roughly a mile and a half south of Route 72 in downtown Bristol (see Site Map, attached as Exhibit A). The tower currently supports AT&T antennas at the thirty five foot (35') level centerline AGL (above ground level) Sprint antennas at the one hundred ten foot level (110') AGL (above ground level), and AT&T antennas at the one hundred twenty six foot level (126') AGL. Pocket proposes to install three Kathrein 742-213 flush mount antennas on the tower at the one hundred foot centerline (100') AGL, and a Nortel CDMA Micro BTS 3231 cabinet, mounted on an "H-Frame," contained within a six foot by six foot (6'-0" x 6'-0") lease area. A small GPS antenna will be mounted to the H-Frame. An ice bridge will run from

the lease area to the tower. Utilities will be run via a proposed underground conduit from an existing utility backboard, within the southeast corner of the compound (See Design Drawings and Equipment Specifications, attached as Exhibits B and C respectively).

For the following reasons, the proposed modifications to the Willis Street Facility meet the exempt modification criteria set forth in R.C.S.A. Section 16-50j-72(b)(2):

1. The proposed modification will not increase the height of the tower as Pocket's antennas will be installed at a center line height of approximately 100 feet.

2. The installation of Pocket's equipment and shelter will not require an extension of the site boundaries.

3. The proposed modifications will not increase the noise levels at the existing Facility by six decibels or more.

4. The operation of the additional antennas will not increase the total radio frequency (RF) power density, measured at the site boundary, to a level at 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. The worst-case RF power density calculations for the proposed Pocket antennas would be 22.69% of the FCC standard (see general power density calculations table, attached as Exhibit D).

Also attached, Exhibit E, is a structural analysis confirming that the tower can support the existing and proposed antennas and associated equipment.

For the foregoing reasons, Pocket respectfully submits that the proposed antenna installation and equipment at the Bristol Facility constitutes an exempt modification under R.C.S.A. Section 16-50j-72(b)(2).

Respectfully Submitted,

Carrie L. Larson

cc: Arthur J. Ward, Mayor
The Connecticut Light & Power Company, underlying property owner

Exhibit A

Site Map

Pocket Site HFCT0983A

Willis Street

Bristol, Connecticut

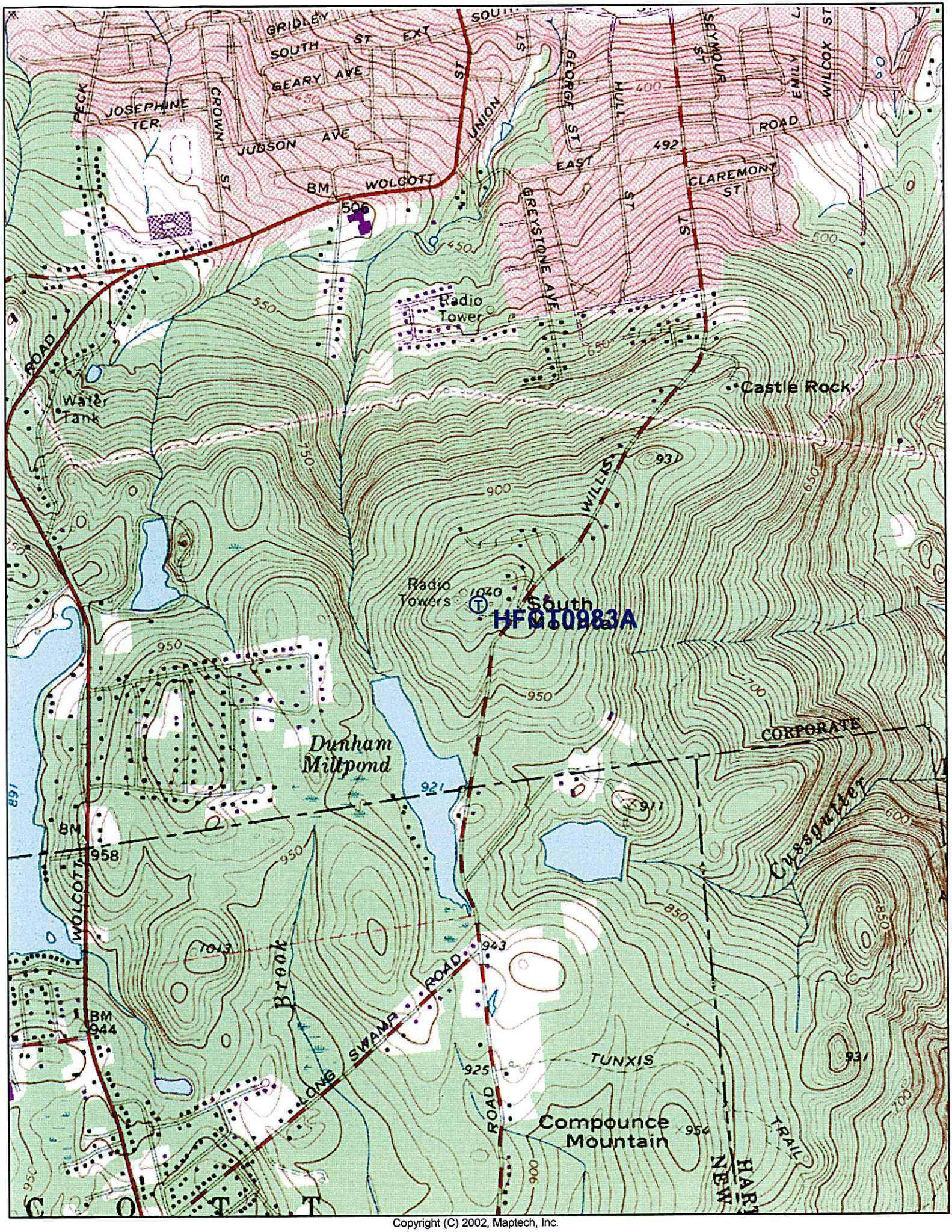


Exhibit B

Design Drawings

Pocket Site HFCT0983A

Willis Street

Bristol, Connecticut

SITE INFORMATION

OWNER:	ATC 10 PRESIDENTIAL WAY WOBURN, MA 01801 CONTACT: HEATHER DOUGLAS PHONE: 781-926-4645
OWNER SITE ID#:	302500
APPLICANT:	YOUGHIOGHENY COMMUNICATIONS-NORTHEAST LLC 2819 NW LOOP 410 SAN ANTONIO, TX 78230
SITE ADDRESS:	790 WILLIS ROAD BRISTOL, CT 06010
COUNTY:	HARTFORD
LATITUDE:	N 41° 38' 56.6"
LONGITUDE:	W 72° 56' 52.7"
ZONING CLASSIFICATION:	N/A
ZONING JURISDICTION:	CONNECTICUT SITING COUNCIL
POWER COMPANY:	CL&P 1-860-947-2121
TELEPHONE COMPANY:	AT&T 1-888-727-8368
DESIGN FIRM:	TRIVIS 180 CHANDALAR PLACE DRIVE PELHAM, AL 35124 PHONE: (205) 621-0106

DRAWING INDEX

APPROVALS

_____ REAL ESTATE

_____ RF

_____ OPS/CONSTRUCTION

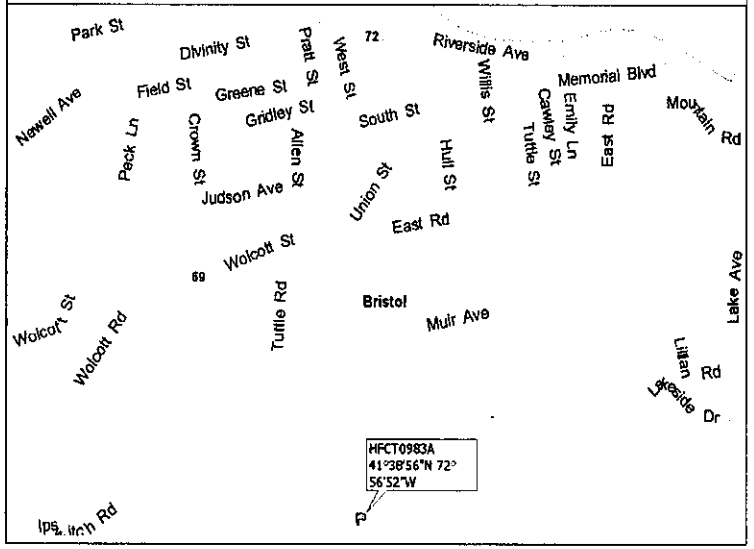
_____ LEGAL/COMPLIANCE

_____ NET DESIGN

pocket™ COMMUNICATIONS

HFCT0983A
ATC 302500
120' MONOPOLE

LOCATION MAP



DRIVING DIRECTIONS

FROM I84 WEST GO RIGHT ONTO CT 72W. CONTINUE ONTO BOHEMIA STREET, TURN RIGHT ONTO W.MAIN STREET. CONTINUE ONTO PINE STREET TO MOUNTAIN STREET. TURN ONTO SOUTH STREET, LEFT ONTO WILLIS STREET. SITE IS IN REAR OF CL&P COMPOUND.

SITE INFORMATION

CONTRACTOR'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.
2005 NEC NFPA 70-/; 2000 IECC CODES AND THE 2004 CITY PUBLIC SERVICE ELECTRICAL SERVICE STANDARDS.

BUILDING CODE:
INTERNATIONAL BUILDING CODE (IBC), 2006

ELECTRICAL CODE:
[NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 70 - 2005, NATIONAL ELECTRICAL CODE
LIGHTNING PROTECTION CODE:
[NFPA 780 – 2005, LIGHTNING PROTECTION CODE]

CONTRACTOR'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-F, STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES:
TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVITY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM
IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT

IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")

TELCORDIA GR-1275, GENERAL INSTALLATION REQUIREMENTS

TELCORDIA GR-1503, COAXIAL CABLE CONNECTIONS

ANSI T1.311, FOR TELECOM – DC POWER SYSTEMS – TELECOM, ENVIRONMENTAL PROTECTION

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

SITE INFORMATION

1. THIS SITE IS UNMANNED AND IS RESTRICTED TO OUTDOOR EQUIPMENT. IT WILL BE USED FOR THE TRANSMISSION OR RADIO SIGNALS FOR THE PURPOSE OF PROVIDING PUBLIC CELLULAR SERVICE.
2. POCKET COMMUNICATIONS CERTIFIES THAT THIS TELEPHONE EQUIPMENT FACILITY WILL BE SERVICED ONLY BY POCKET COMMUNICATIONS EMPLOYEES AND THE WORK ASSOCIATED WITH ANY EQUIPMENT CANNOT BEPERFORMED BY HANDICAPPED PERSONS. THIS FACILITY WILL BE FREQUENTED ONLY BY SERVICE PERSONNEL FOR REPAIR PURPOSES ONLY. THIS FACILITY IS EXEMPT FROM THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), APPENDIX B, SECTION 4.11.(5)(B).
3. NO POTABLE WATER SUPPLY IS TO BE PROVIDED AT THIS LOCATION.
4. NO WASTE WATER WILL BE GENERATED AT THIS LOCATION.
5. NO SOLID WASTE WILL BE GENERATED AT THIS LOCATION.
6. POCKET COMMUNICATIONS MAINTENANCE CREW (TYPICALLY ONE PERSON) WILL MAKE AN AVERAGE OF ONE TRIP PER MONTH AT ONE HOUR PER VISIT.

CALL before you DIG
FOR CT 1-800-922-4455

NO.	DATE	REVISIONS	INT.
A	9-17-08	ISSUED FOR REVIEW & COMMENT	JSW

pocket COMMUNICATIONS

PROJECT NAME: ATC 302500
SHEET DESC: TITLE SHEET

TRIVIS
The Complete Solutions Provider
180 CHANDALAR PLACE DR.
PELHAM, AL 35124
(205) 621-0106

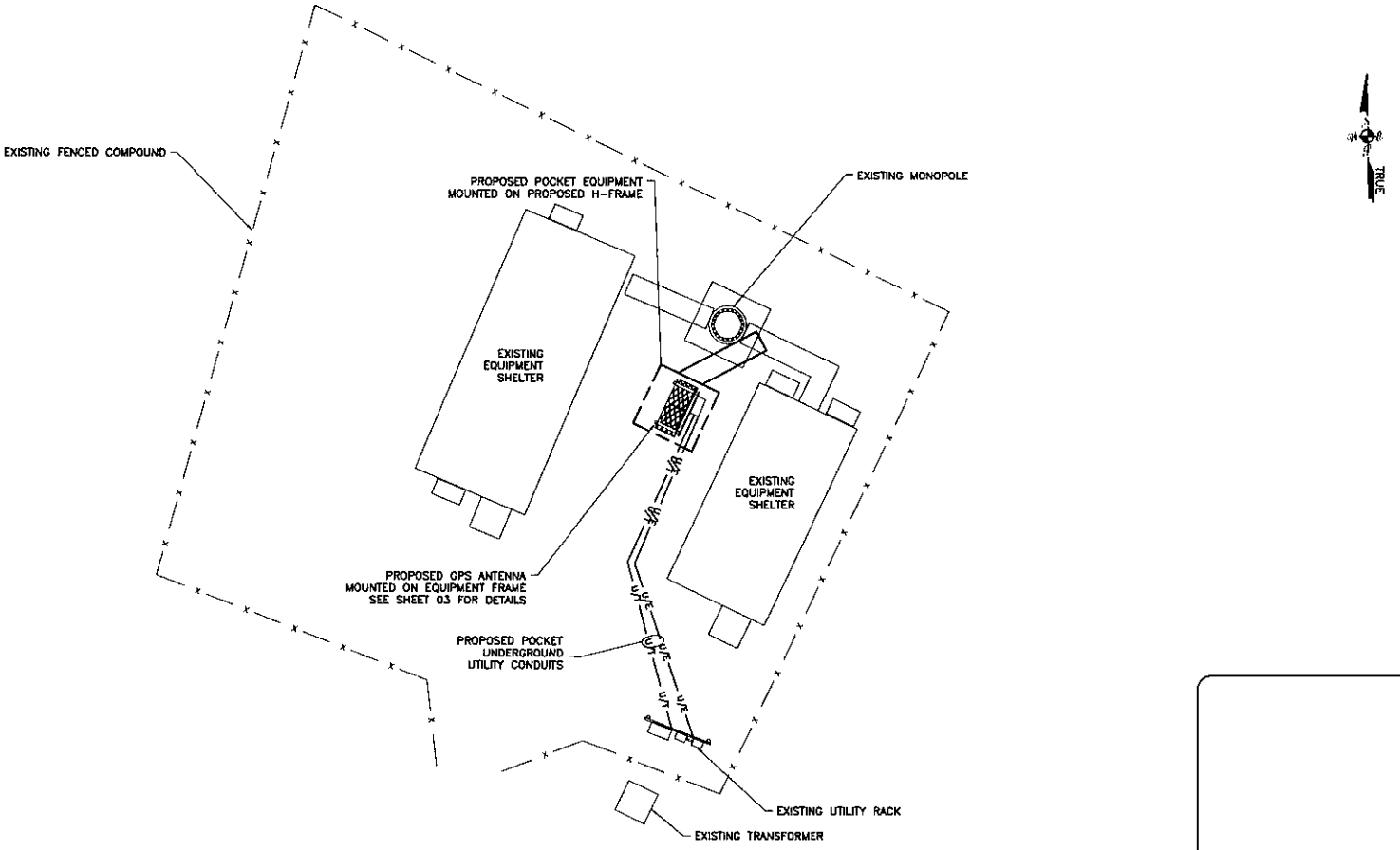
CHECKED BY: JSW
DRAWN BY: JSW
DATE: 9-17-08
JOB NO. 08490
DRG. NO. 01

CONSTRUCTION NOTES

1. FIELD VERIFICATION: CONTRACTOR SHALL FIELD VERIFY SCOPE OF WORK, POCKET COMMUNICATIONS ANTENNA MOUNT LOCATION AND ANTENNAS TO BE INSTALLED.
2. COORDINATION OF WORK: CONTRACTOR SHOULD COORDINATE RF WORK AND PROCEDURES WITH POCKET COMMUNICATIONS.
3. GRAVEL SURFACE IN AREAS OF COMPOUND THAT ARE DISTURBED DURING CONSTRUCTION SHALL BE REPLACED TO ORIGINAL CONDITION BY CONTRACTOR.

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – POCKET COMMUNICATIONS
   OEM – ORIGINAL EQUIPMENT MANUFACTURER
2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.
3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
4. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED EQUIPMENT, ON THE DRAWINGS.
5. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
6. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL.
7. CONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING.
8. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, GROUNDING CABLES AS SHOWN ON THE ELECTRICAL PLAN.
9. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
10. CONTRACTOR TO OBTAIN REQUIRED NOTICE TO PROCEED DOCUMENTS FROM THE TOWER OWNER BEFORE COMMENCING CONSTRUCTION.



SITE PLAN
11x17 SCALE: 3/32"=1'-0"
22x34 SCALE: 3/16"=1'-0"

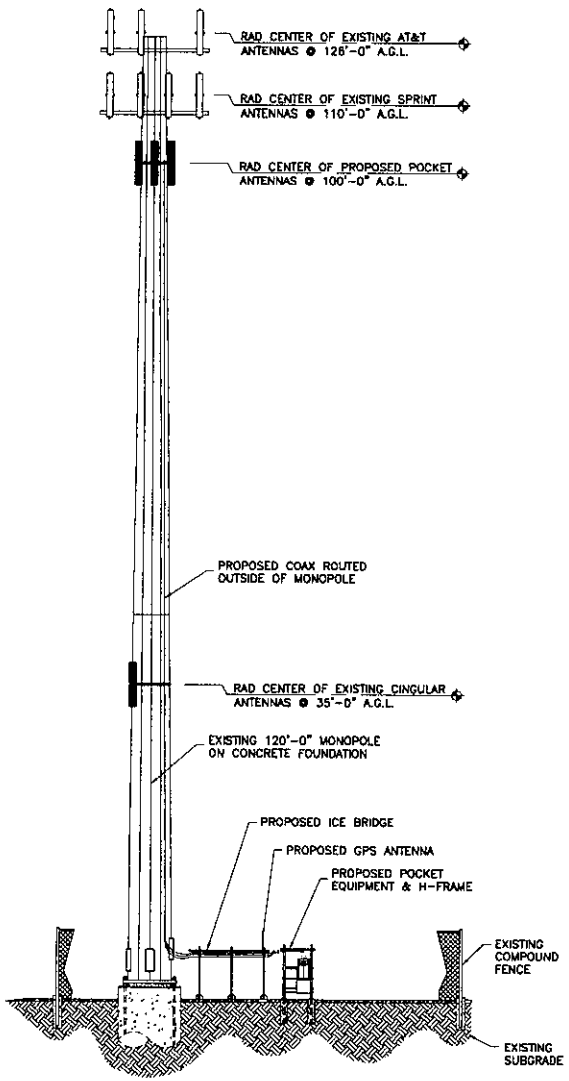
NO.	DATE	REVISIONS	BY
A	9-17-08	ISSUED FOR REVIEW & COMMENT	JSW

pocket COMMUNICATIONS

PROJECT NAME: ATC 302500
SHEET DESC: SITE PLAN

TRIVIS
The Complete Solutions Provider
180 STANDARD PLACE DR.
PELHAM, AL 35124
(205) 620-0105

CHECKED BY: JSW
DRAWN BY: JSW
DATE: 9-17-08
JOB NO. 08490
DWG. NO. 02



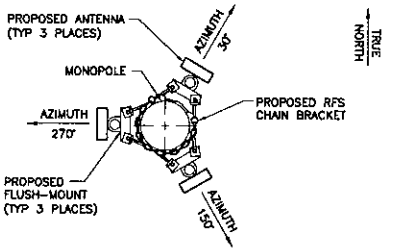
TOWER ELEVATION
SCALE: N.T.S.

ANTENNA KEY

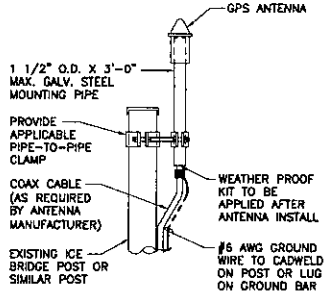
#	ANTENNAS PER SECTOR	ANTENNA NUMBER	COAX COLOR CODE	ANTENNA VENDOR	MODEL NUMBER	AZIMUTH	C/L HEIGHT	MECHANICAL DOWNTILT	COAX SIZE	# COAX PER ANTENNA	COAX VENDOR	COAX LENGTH
ALPHA FACE	1	A-1	(1)-RED BAND	KATHREIN	N/A	30°	100'-0"	0°	1 5/8"	2	COMM-SCOPE	121'-0"
BETA FACE	1	B-1	(1)-BLUE BAND	KATHREIN	N/A	150°	100'-0"	0°	1 5/8"	2	COMM-SCOPE	121'-0"
GAMMA FACE	1	C-1	(1)-GREEN BAND	KATHREIN	N/A	270°	100'-0"	0°	1 5/8"	2	COMM-SCOPE	121'-0"

TOWER NOTES
1. FOR DETAILED TOWER INFORMATION, REFER TO TOWER ERECTION DRAWINGS BY OTHERS. THE TOWER ON THIS SHEET IS SHOWN FOR GENERAL CONFIGURATION PURPOSES ONLY.
2. ANTENNA CONFIGURATION IS SUBJECT TO CHANGE. VERIFY ANTENNA HEIGHT, DOWN-TILT, AND AZIMUTH WITH PROJECT MANAGER PRIOR TO CONSTRUCTION.

ANTENNA NOTES
1. ALL COAX SHALL BE COLOR-CODED AT (3) PLACES EACH: AT ANTENNA, EXTERIOR OF SHELTER, AND THE INTERIOR OF SHELTER.
2. (2) COLOR BANDS DENOTES TRANSMIT.
3. PRIOR TO ORDERING ANY ANTENNAS OR COAX, CONTRACTOR SHALL CONTACT POCKET'S CONSTRUCTION MANAGER AND OBTAIN APPROVAL FOR MATERIALS LISTED. CONTRACTOR IS SOLELY RESPONSIBLE FOR THIS COORDINATION.

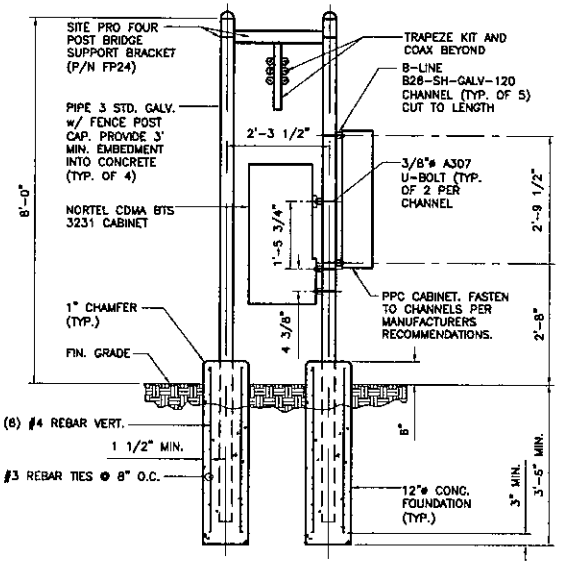


ONE ANTENNA PER SECTOR WITH FLUSH/FACE MONOPOLE MOUNTING
SCALE: N.T.S.

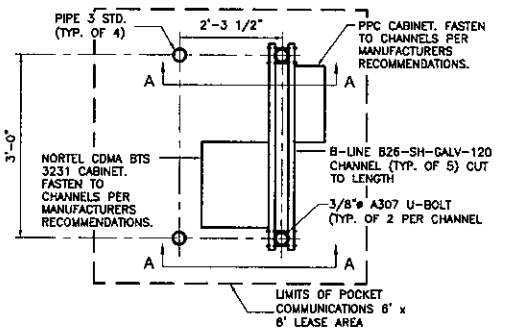


NOTES:
1. LOCATION OF ANTENNA MUST HAVE CLEAR VIEW OF SOUTHERN SKY AND CANNOT HAVE ANY BLOCKAGES EXCEEDING 25% OF THE SURFACE AREA OF A HEMISPHERE AROUND THE GPS ANTENNA.
2. ALL GPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF FOUR (4) SATELLITES. VERIFY WITH HANDHELD GPS BEFORE FINAL LOCATION OF GPS ANTENNA.

GPS ANTENNA PIPE MOUNT
SCALE: N.T.S.



SECTION
SCALE: N.T.S.



PROPOSED H-FRAME FOR NORTEL BTS CABINET
SCALE: N.T.S.

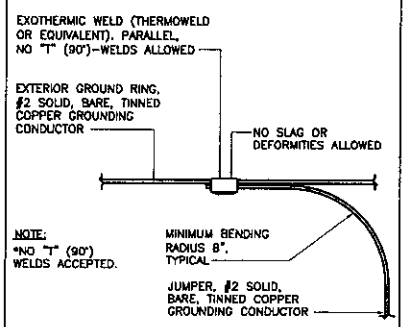
NO.	DATE	REVISIONS	BY
A	9-17-08	ISSUED FOR REVIEW & COMMENT	JSW

pocket COMMUNICATIONS

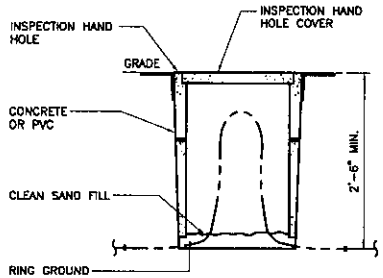
PROJECT NAME: ATC 302500
SHEET TITLE: TOWER, ANTENNA, H-FRAME

TRIVIS
The Complete Solutions Provider
100 CHANDLER PLACE DR.
PELHAM, AL 35124
(205) 621-0110

CHECKED BY: JSW
DRAWN BY: JSW
DATE: 9-17-08
JOB NO. 08490
DWG. NO. 03

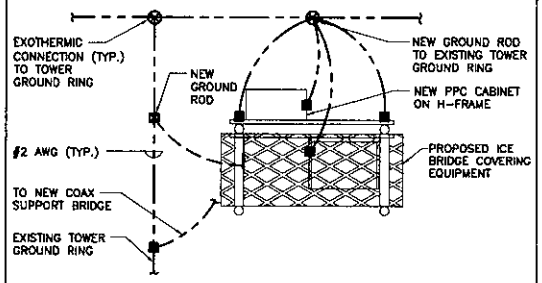


TYPICAL GROUNDING CONNECTION
SCALE: N.T.S.



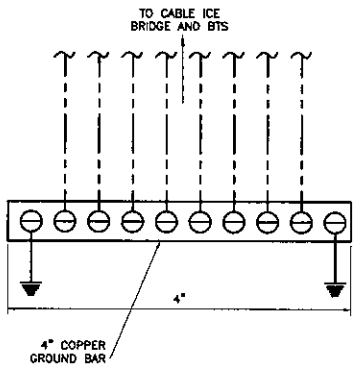
NOTE: INSPECTION HAND HOLE MAY BE CONCRETE OR PVC AND SHALL BE A MINIMUM OF 8" IN WIDTH/DIAMETER

GROUND ROD WITH ACCESS AREA
SCALE: N.T.S.

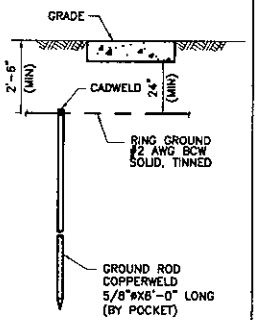


THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

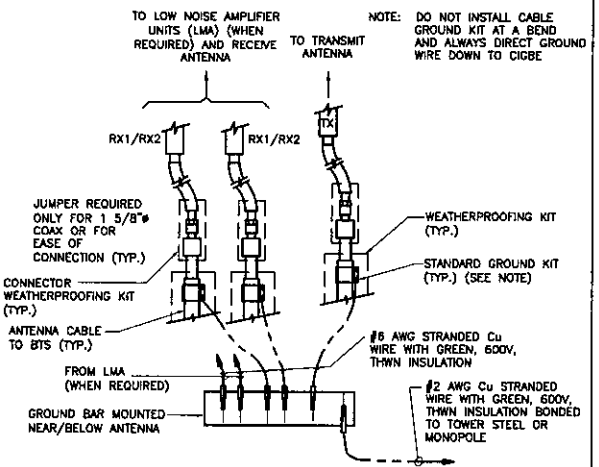
TYPICAL CABINET GROUNDING
SCALE: N.T.S.



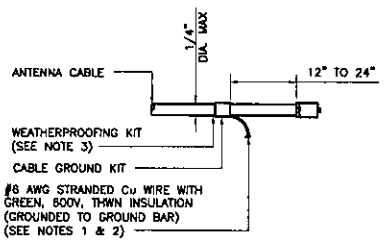
LOWER 4" GROUND BAR
SCALE: N.T.S.



GROUNDING - STANDARD DETAIL GROUND ROD
SCALE: N.T.S.



CONNECTION OF GROUND WIRE TO GROUNDING BAR (CIGBE) TOWER/MONOPOLE
SCALE: N.T.S.

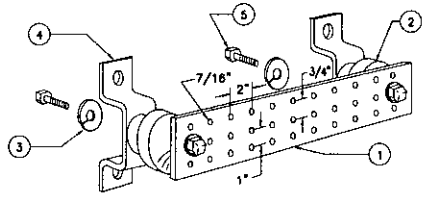


CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE

NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE (TYPE AND PART NUMBER ASSUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.)

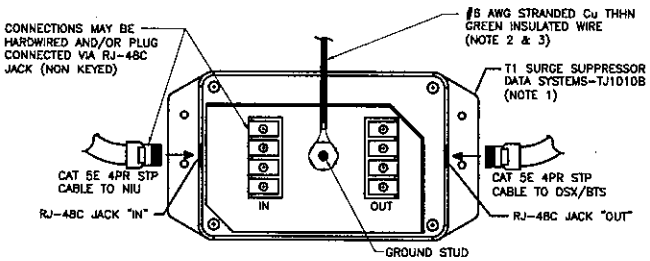
CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE
SCALE: N.T.S.



LEGEND

1- COPPER GROUND BAR, ¼"X 4"X 20", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION
2- INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4
3- 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8
4- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056
5- 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1
6- SECTOR CIGBE GROUND BAR TO BE SIZED FOR (4) ANTENNAS AND (4) BRACKETS OR MASTS ALL OTHER GROUND BARS SHALL BE SIZED TO ACCOMMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY

GROUND BAR (TYP.)
SCALE: N.T.S.



T1 SURGE SUPPRESSOR
SCALE: N.T.S.

NOTES:

1. MOUNT T1-TVSS UNIT ON EQUIPMENT FRAME HOUSING THE DSX UNIT. USE APPROPRIATE STAINLESS STEEL BOLTS WITH FLAT WASHERS AND A LOCK WASHER ON THE NUT SIDE. THE TVSS MAY BE LOCATED ON THE TELCO BACKBOARD. REFER TO MANUFACTURER'S INSTRUCTIONS.
2. ATTACH RING TERMINAL FROM SUPPLIED GROUND CONDUCTOR TO TVSS GROUND STUD SECURELY FASTEN WITH SUPPLIED WASHER AND NUT. REFER TO MANUFACTURER'S INSTRUCTIONS. FOR PROPER PERFORMANCE, THE GROUND CONDUCTOR LENGTH SHOULD BE LIMITED WITH NO SHARP BENDS ON COILS.
3. WHEN TVSS IS MOUNTED ON EQUIPMENT FRAME, BOND THE GROUND CONDUCTOR TO THE EQUIPMENT FRAME GROUND. ENSURE PROPER GROUNDING SURFACES. WHEN TVSS IS MOUNTED ON THE TELCO BACK BOARD, BOND THE GROUND CONDUCTOR TO THE TELCO (BOARD) GROUND BAR OR NEAREST GROUND BAR.

NO.	DATE	REVISIONS	INT.
A	9-17-08	ISSUED FOR REVIEW & COMMENT	JSW

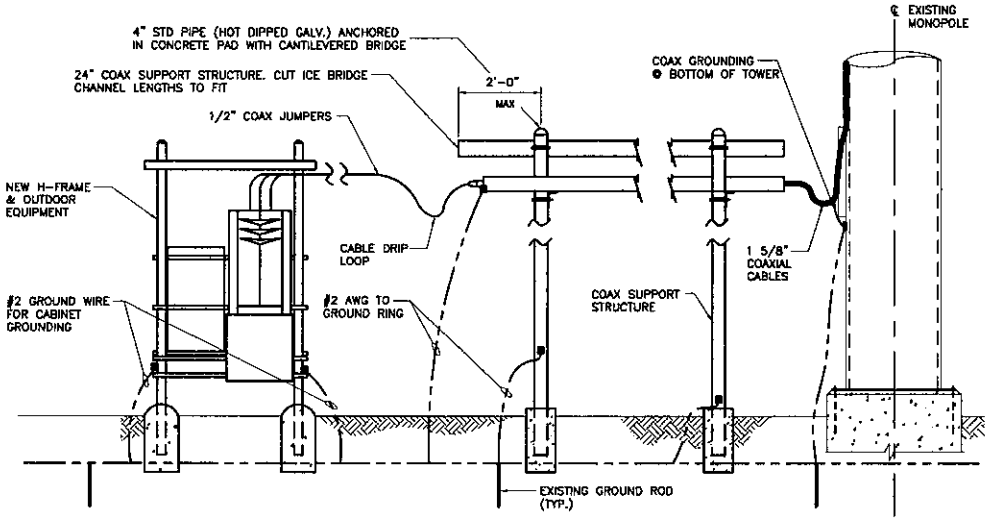
pocket COMMUNICATIONS

PROJECT NAME: ATC 302500

SHEET DESC: GROUNDING PLAN & DETAILS

TRIVIS
The Complete Solutions Provider
1180 CHANDLER PLATE DR.
PELHAM, AL 35124
(205) 621-1116

CHECKED BY: JSW
DRAWN BY: JSW
DATE: 9-17-08
JOB NO. 08490
DRG. NO. 04

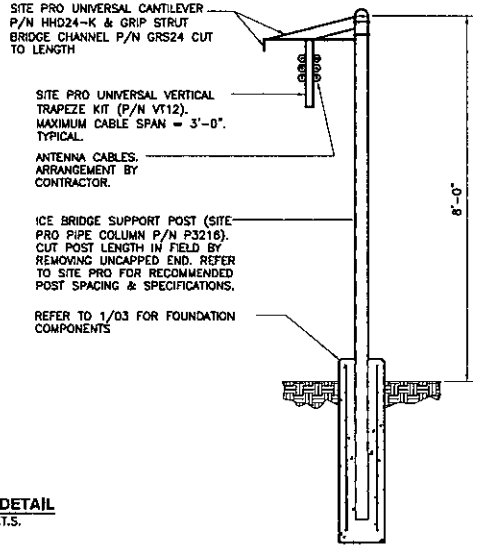


COAX SUPPORT STRUCTURE OUTDOOR EQUIPMENT CABINETS

SCALE: N.T.S.

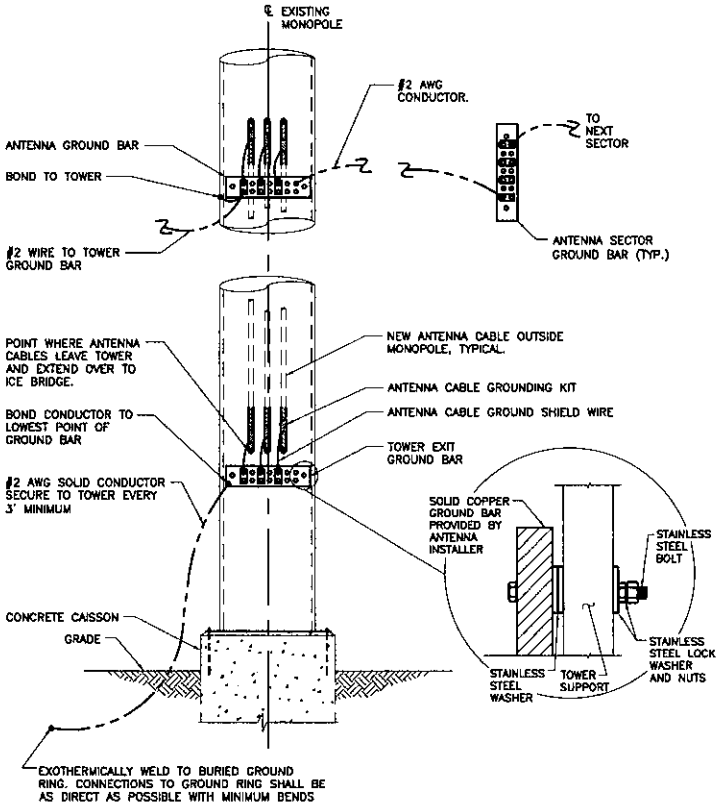
NOTES:

1. WHEN USING COMPONENTS AS SHOWN IN STANDARD DETAILS, MAXIMUM ALLOWABLE SPAN BETWEEN SUPPORTS ON A CONTINUOUS SINGLE SECTION OF BRIDGE CHANNEL SHALL BE 8 FEET FOR 10 FEET BRIDGE CHANNEL.
2. WHEN USING COMPONENTS FOR SPLICING BRIDGE CHANNEL SECTIONS, THE SPLICE SHOULD BE PROVIDED AT THE SUPPORT, IF POSSIBLE, OR AT A MAXIMUM OF 2 FEET FROM THE SUPPORT.
3. WHEN USING COMPONENTS, SUPPORT SHOULD BE PROVIDED AS CLOSE AS POSSIBLE TO THE ENDS OF ICE BRIDGES, WITH A MAXIMUM CANTILEVER DISTANCE OF 2 FEET FROM THE SUPPORT TO THE FREE END OF THE ICE BRIDGE.
4. CUT BRIDGE CHANNEL SECTIONS SHALL HAVE RAW EDGES TREATED WITH A MATERIAL TO RESTORE THESE EDGES TO THE ORIGINAL CHANNEL, OR EQUIVALENT, FINISH.
5. ICE BRIDGES MAY BE CONSTRUCTED WITH COMPONENTS FROM OTHER MANUFACTURERS, PROVIDED THE MANUFACTURER'S INSTALLATION GUIDELINES ARE FOLLOWED.
6. DEVIATIONS FROM STANDARDS FOR COMPONENT INSTALLATIONS ARE PERMITTED WITH THE RESPECTIVE MANUFACTURER'S APPROVAL.
7. DEVIATIONS FROM ICE BRIDGE FOUNDATIONS REQUIRE ENGINEERING APPROVAL.
8. THE DESIGN IS BASED ON ASCE 7-98, 3 SECOND GUST WIND SPEED OF 110 MPH, EXPOSURE C, ELEVATION AT GRADE.
9. THIS DESIGN IS BASED ON 24" WIDE ICE BRIDGE AND (12) 1 5/8" DIA COAX CABLES AND MAX. POST SUPPORT SPACING OF 10'-0".



ICE BRIDGE DETAIL

SCALE: N.T.S.



MONOPOLE GROUNDING DETAIL

SCALE: N.T.S.

NO.	DATE	REVISIONS	BY
A	9-17-08	ISSUED FOR REVIEW & COMMENT	JSW

pocket COMMUNICATIONS

PROJECT NAME: ATC 302500

SHEET DESC: COAX SUPPORT STRUCTURE

TRIVIS
The Company Solutions Provider
180 CHANDLER PLACE DR.
PELHAM, AL 35124
(205) 621-0108

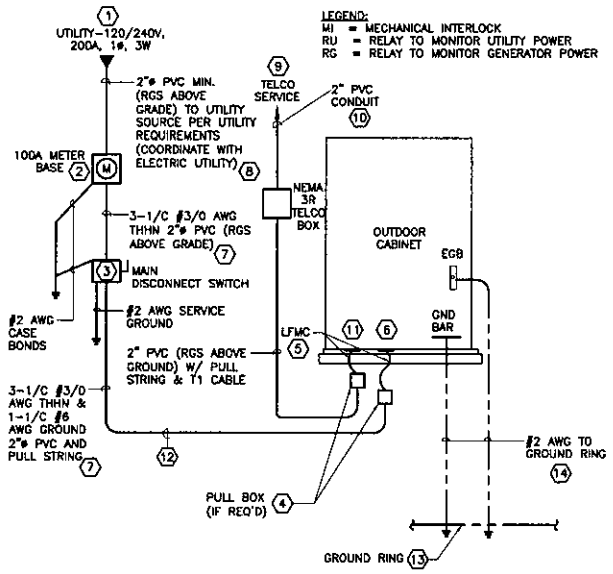
CHECKED BY: JSW
DRAWN BY: JSW
DATE: 9-17-08
JOB NO. 08490
DWG. NO. 05

PANEL "SSC"

LOAD DESCRIPTION	LOAD (kVA)	BRKR SIZE	CCT NO.	PHASE A	PHASE B	CCT NO.	BRKR SIZE	LOAD (kVA)	LOAD DESCRIPTION
BTS CABINET	2.5	30/2	1			2	30/2	2.2	TVSS
	2.5		3			4		2.2	
LIGHTING	.9	10/1	5			6	–	–	SPACE
SPACE	–	–	7			8	–	–	SPACE
SPACE	–	–	9			10	–	–	SPACE
SPACE	–	–	11			12	–	–	SPACE
SPACE	–	–	13			14	–	–	SPACE
SPACE	–	–	15			16	–	–	SPACE
SPACE	–	–	17			18	–	–	SPACE
SPACE	–	–	19			20	–	–	SPACE
SPACE	–	–	21			22	–	–	SPACE
SPACE	–	–	23			24	–	–	SPACE
LOAD SUB-TOTAL	5.6	LOAD TOTAL		10.3 KVA			4.4		LOAD SUB-TOTAL

100A MCB, 120/240V, 1ø, 3W, 65,000 AIC		
TOTAL CONNECTED LOAD	10.3 KW	
25% OF LARGEST CONT. LOAD	1250 W	
TOTAL LOADS	11.5 KW	47.9 AMPS
NOTE: ALL NON-OPTIONAL BREAKERS PROVIDED BY SSC MFR		

PANEL SCHEDULE



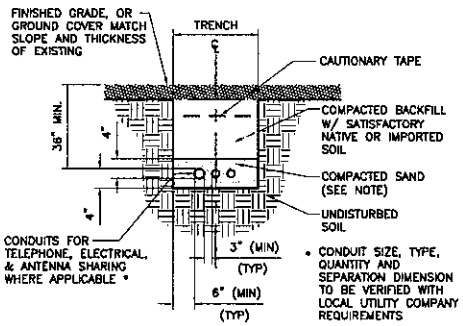
POWER, TELCO & GROUND SINGLE LINE DIAGRAM FOR OUTDOOR CABINET

REFERENCE NOTES

1. ELECTRICAL DEMARCATION POINT. ELECTRICAL CONTRACTOR TO COORDINATE WITH LOCAL POWER FOR SERVICE TO METER.
2. CONTRACTOR TO SUPPLY AND INSTALL A 100A, 120/208/240V 1ø, 3W METER BASE. METER BASE TO BE NEMA 3R RATED AND ACCEPTABLE TO LOCAL UTILITY. PROVIDE WITH MECHANICALLY ATTACHED ENGRAVED IDENTIFICATION LABEL INDICATING "POCKET COMMUNICATIONS METER".
3. CONTRACTOR TO SUPPLY AND INSTALL NEMA 3R 100A FUSIBLE DISCONNECT SWITCH WITH LOCKABLE HANDLE. PROVIDE WITH 100A FUSES. AIC RATING TO COORDINATE WITH LOCAL UTILITY REQUIREMENTS. PROVIDE WITH MECHANICALLY ATTACHED ENGRAVED IDENTIFICATION LABEL INDICATING "POCKET COMMUNICATIONS SERVICE DISCONNECT".
4. WEATHER TIGHT JUNCTION BOX (IF REQUIRED). SIZE TO NEC CODE FOR APPLICATION.
5. LIQUID TIGHT FLEXIBLE METALLIC CONDUIT W/W WEATHER TIGHT FITTINGS AND SUPPORTS. SIZE AND CONTENTS TO MATCH ASSOCIATED USE (POWER OR TELCO)
6. UTILITY POWER ENTRY INTO CABINET. COORDINATE TERMINATION WITH CABINET MANUFACTURER.
7. CONTRACTOR SUPPLY AND INSTALL 2" GRC. AFG AND PVC 24" BFG C/W #3/0 AWG THHN & (1) #6 GRND FOR UTILITY SERVICE
8. CONTRACTOR SUPPLY AND INSTALL 4" GRC. AFG AND PVC 24" BFG C/W #3/0 AWG THHN FOR UTILITY SERVICE
9. TELCO DEMARCATION POINT. ELECTRICAL CONTRACTOR TO COORDINATE WITH LOCAL TELCO FOR SERVICE TO TELCO BOX OR CABINET.
10. CONTRACTOR TO SUPPLY AND INSTALL (1) 2" GRC AFG AND PVC 24" BFG C/W PULL CORDS FOR TELCO SERVICE TO CABINET TERMINATION POINT.
11. TELCO SERVICE ENTRY INTO CABINET. COORDINATE TERMINATION IN WITH CABINET MANUFACTURER.
12. CONTRACTOR TO ARRANGE AND PAY FOR UNDERGROUND UTILITY LOCATION SURVEYS FOR ALL TRENCHING. REUSE NATIVE BACKFILL AND RE-INSTATE TO ORIGINAL CONDITION. INSTALL 6" WIDE METALLIC LINED RED PLASTIC MARKER TAPE 8" ABOVE ALL BURIED CONDUIT.
13. PART OF CABINET BURIED GROUND RING.
14. (1) #2 SOLID BARE TINNED CU GEC BONDED TO 5/8"x10' COPPER CLAD STEEL GROUNDING ELECTRODES. LOCATE GROUNDING ELECTRODE ADJACENT TO "CABINET". BOND GROUNDING ELECTRODE SYSTEM TO CABINET GROUND RING.

GENERAL ELECTRICAL NOTES:

1. ALL ELECTRICAL AND GROUNDING WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL VERIFY ROUTING AND LENGTHS PRIOR TO CONSTRUCTION.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELCORDIA.
4. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
5. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD AGAINST LIFE AND PROPERTY.



NOTE: LEAN CONCRETE, RED-COLORED TOP, MAY BE USED IN PLACE OF COMPACTED SAND.

DIRECT BURIED CONDUIT

SCALE: N.T.S.

NOTES

1. CONTRACTOR SHALL PROVIDE 100AMP, SINGLE PHASE, 120/240 VAC, 60HZ SERVICE FOR SITE.
2. CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANY BEFORE THE START OF CONSTRUCTION. POWER AND TELCO CONDUIT SHALL BE PROVIDED AND INSTALLED PER UTILITY REQUIREMENTS.
3. FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT REFER TO DRAWINGS PROVIDED BY AC OR TELCO PANEL MANUFACTURER.
4. ALL SERVICE EQUIPMENT AND INSTALLATIONS SHALL COMPLY WITH THE N.E.C. AND UTILITY COMPANY AND LOCAL CODE REQUIREMENTS.
5. CONTRACTOR SHALL INSTALL SUFFICIENT LENGTHS OF LFMC INCLUDING ALL CONDUIT FITTINGS (NUTS, REDUCING BUSHINGS, ELBOWS, COUPLINGS, ETC) NECESSARY FOR CONNECTION FROM IMC CONDUIT TO THE PURCELL POWER CABINET.
6. CONTRACTOR SHALL PROVIDE ELECTRICAL SERVICE EQUIPMENT WITH FAULT CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT FROM THE POWER UTILITY.
7. CONTRACTOR SHALL VERIFY THAT THE MAIN BONDING JUMPER AND GROUNDING ELECTRODE CONDUCTOR IS INSTALLED PROPERLY IN MAIN DISCONNECT SWITCH.

NO.	DATE	REVISIONS	INIT.
A	9-17-08	ISSUED FOR REVIEW & COMMENT	JSW

pocket COMMUNICATIONS

PROJECT NAME: ATC 302500

SHEET TITLE: ELECTRICAL PLAN & DETAILS

TRIVIS
The Complete Solutions Provider
104 CHANDLER PLATE DR.
PELHAM, AL 35124
(205) 621-0015

CHECKED BY: JSW
DRAWN BY: JSW
DATE: 9-17-08
JOB NO. 08490
DWG. NO. 06

Exhibit C

Equipment Specifications

Pocket Site HFCT0983A

Willis Street

Bristol, Connecticut

KATHREIN
SCALA DIVISION

742 213

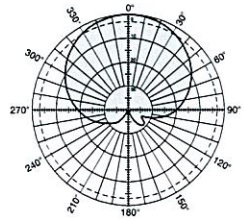
65° Panel Antenna

Kathrein's X-polarized adjustable electrical downtilt antennas offer the wireless carrier the ability to tailor polarization diversity sites for optimum performance. Using variable downtilt, only a few models need be procured to accommodate the needs of widely varying conditions. Remotely controlled downtilt is available as a retrofitable option.

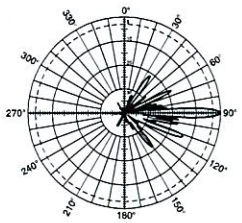
- 0-6° downtilt range.
- UV resistant pulltruded fiberglass radome.
- DC Grounded metallic parts for impulse suppression.
- No moving electrical connections.
- Wideband vector dipole technology.
- Optional remote downtilt Control.
- Will accomodate future 3G / UMTS applications.

General specifications:

Frequency range	1710–2170 MHz
VSWR	< 1.5:1
Impedance	50 ohms
Intermodulation (2x20w)	IM3: <-150 dBc
Polarization	+45° and -45°
Front-to-back ratio (180°±30°)	>30 dB (co-polar) >25 dB (total power)
Maximum input power	300 watts per input (at 50°C)
Electrical downtilt continuously adjustable	0–6 degrees
Connector	2 x 7/16 DIN female
Isolation	>30 dB
Cross polar ratio Main direction 0° Sector ±60°	 25 dB (typical) >10 dB
Weight	22 lb (10 kg)
Dimensions	76.5 x 6.1 x 2.7 inches (1942 x 155 x 69 mm)
Equivalent flat plate area	4.62 ft² (0.429 m²)
Wind survival rating*	120 mph (200 kph)
Shipping dimensions	87.2 x 6.8 x 3.6 inches (2214 x 172 x 92 mm)
Shipping weight	24.3 lb (11 kg)
Mounting	Fixed and tilt mount options are available for 2 to 4.6 inch (50 to 115 mm) OD masts.
See reverse for order information.	



Horizontal pattern
±45°- polarization



Vertical pattern
±45°- polarization

Specifications:	**1710–1880 MHz**	**1850–1990 MHz**	**1920–2170 MHz**
Gain	19 dBi	19.2 dBi	19.5 dBi
+45° and -45° polarization horizontal beamwidth	67° (half-power)	65° (half-power)	63° (half-power)
+45° and -45° polarization vertical beamwidth	4.7° (half-power)	4.5° (half-power)	4.3° (half-power)
Vertical Pattern–sidelobe suppression for first side-lobe above main beam	0° 2° 4° 6° T 18 17 15 15 dB	0° 2° 4° 6° T 18 18 17 15 dB	0° 2° 4° 6° T 18 18 17 15 dB

RoHS Lead-Free

10642-H
936.2074/h

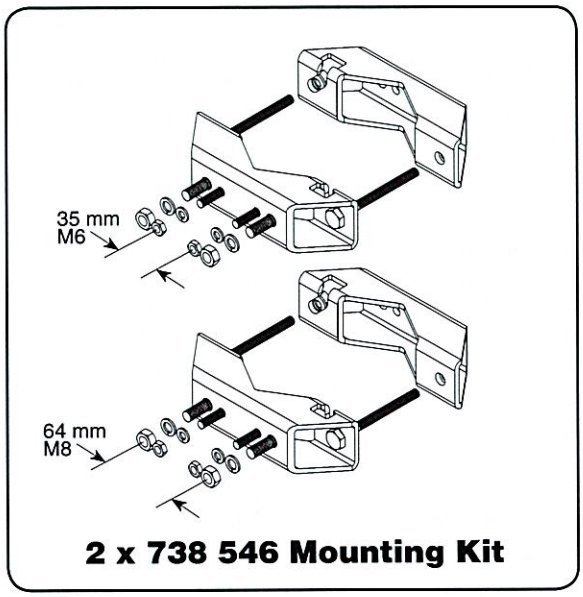
*Mechanical design is based on environmental conditions as stipulated in EIA-222-F (June 1996) and/or ETS 300 019-1-4 which include the static mechanical load imposed on an antenna by wind at maximum velocity. See the Engineering Section of the catalog for further details.

Kathrein Inc., Scala Division Post Office Box 4580 Medford, OR 97501 (USA) Phone: (541) 779-6500 Fax: (541) 779-3991
Email: communications@kathrein.com Internet: www.kathrein-scala.com

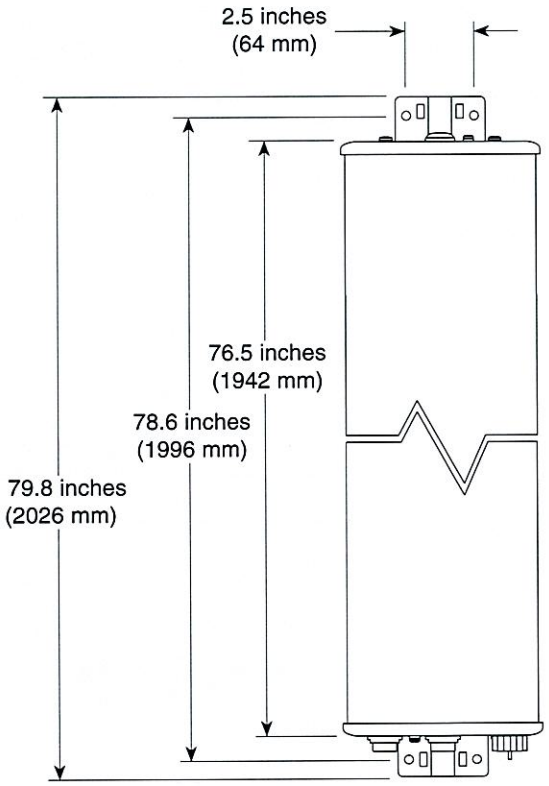
KATHREIN
SCALA DIVISION

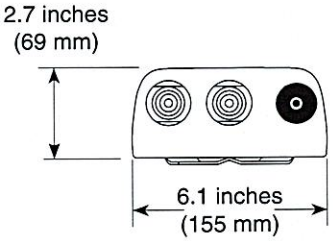
742 213

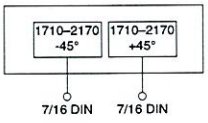
65° Panel Antenna



2 x 738 546 Mounting Kit







Mounting Options:

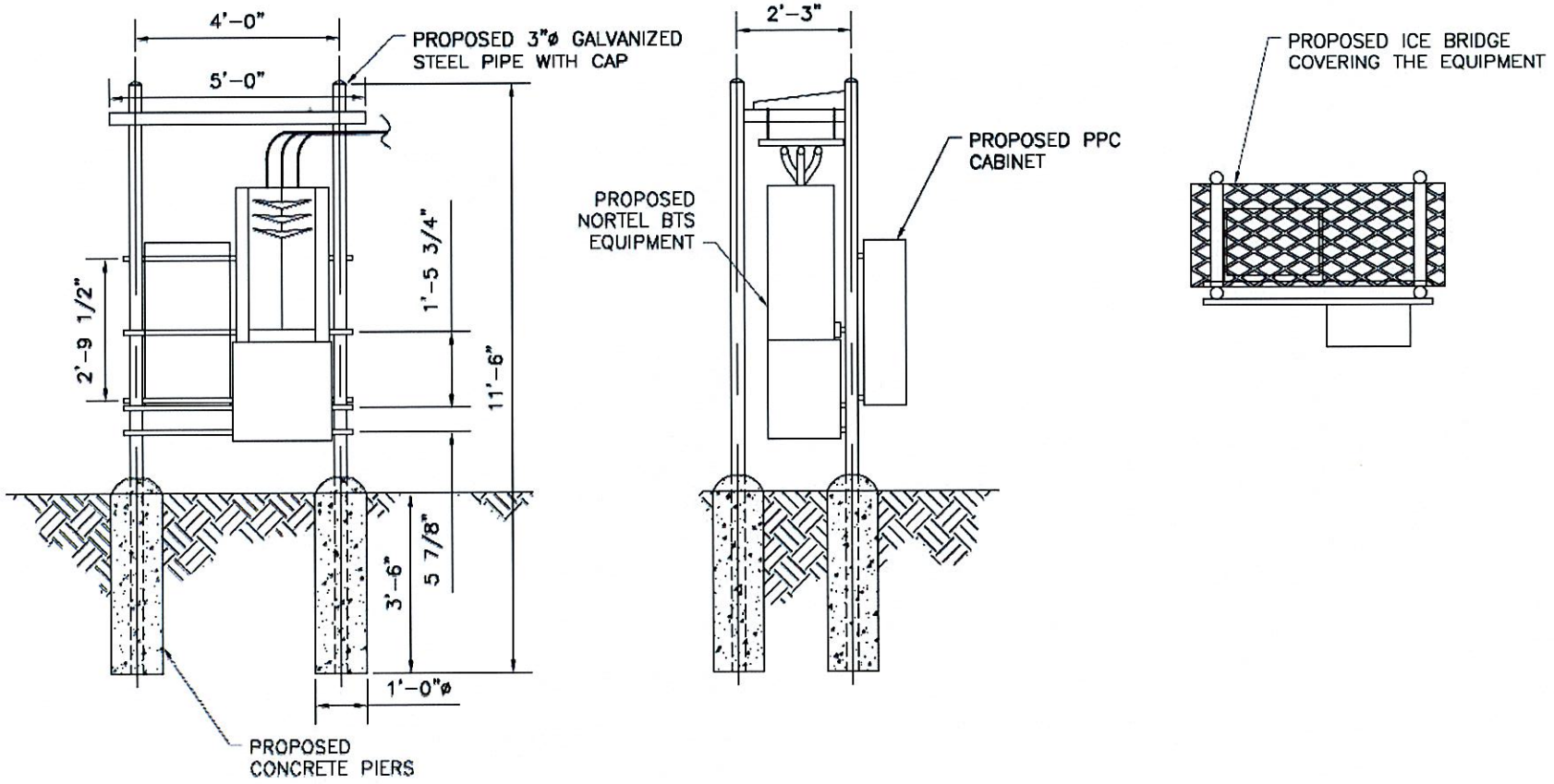
Model	Description
2 x 738 546	Mounting Kit for 2 to 4.6 inch (50 to 115 mm) OD mast.
737 978	Tilt Kit for use with the above mounting kit, 0–11 degrees downtilt angle. (requires 2 x 738 546 Mounting Kit)
742 263	Three-panel Sector Mounting Kit (120 deg. ea.) for 3.5 inch (89 mm) OD mast.

Order Information:

Model	Description
742 213	Antenna with 7/16 DIN connectors 0°–6° adjustable electrical downtilt

All specifications are subject to change without notice. The latest specifications are available at www.kathrein-scala.com.

Kathrein Inc., Scala Division Post Office Box 4580 Medford, OR 97501 (USA) Phone: (541) 779-6500 Fax: (541) 779-3991
Email: communications@kathrein.com Internet: www.kathrein-scala.com



Pocket/Youghiogheny Communications – Northeast, LLC

Rack Detail

>BUSINESS MADE **SIMPLE**

NORTEL

CDMA BTS 3231 AWS 1.7/2.1 GHz (Outdoor/Indoor)

CDMA BTS 3231

Industry's Highest Capacity AWS Micro BTS

The CDMA BTS 3231 is the latest extension to Nortel Networks BTS (Base Transceiver Station) portfolio providing the ideal solution for urban, sub-urban and rural deployments. The CDMA BTS 3231 is a 3-carrier, 3-sector outdoor/indoor BTS operating at the AWS band of 1.7/2.1 GHz supporting IS-95, 1XRTT and 1xEV-DO simultaneously. BTS 3231 provides flexible deployments solutions including floor, rack, and wall mount options. The power consumption of BTS3231 is industry leading consuming only 630W for 3C3S. The BTS 3231 is also very light at 240lbs making it easy to transport to hard to reach locations such as the top of a high rise building.

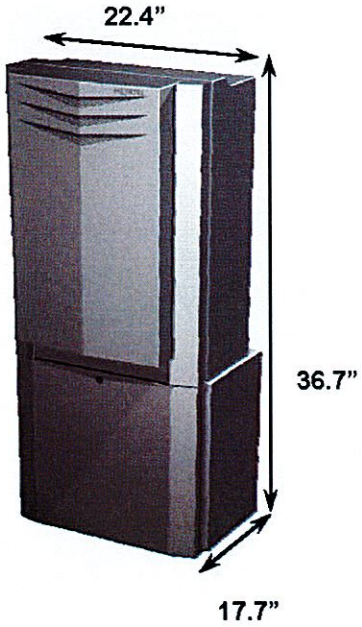


Exhibit D

Power Density Calculations

Pocket Site HFCT0983A

Willis Street

Bristol, Connecticut

C Squared Systems, LLC
920 Candia Road
Manchester, NH 03109
Phone: (603) 657 9702
E-mail:
support@csquaredsystems.com

Calculated Radio Frequency Emissions

CT-0983

Willis Street, Bristol, CT

Table of Contents

List of Tables

1. Introduction

The purpose of this report is to investigate compliance with applicable FCC regulations for the proposed Pocket antennas to be installed on the existing tower at Willis Street, Bristol, CT.

These calculations assume that the antennas are operating at 100 percent capacity, that all antenna channels are transmitting simultaneously, and that the radio transmitters are operating at full power. Obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are much more conservative (higher) than the actual signal levels will be from the finished installation.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter (mW/cm^2). The number of mW/cm^2 emitted is called the power density. The general population exposure limit for the cellular band is 0.567-0.593 mW/cm^2, and the general population exposure limit for the PCS/AWS band is 1.0 mW/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.

The FCC general population / uncontrolled limits set the maximum exposure to which most people may be subjected. General population / uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Higher exposure limits are permitted under the occupational / controlled exposure category, but only for persons who are exposed as a consequence of their employment and who have been made fully aware of the potential for exposure (through training), and they must be able to exercise control over their exposure. General population / uncontrolled limits are five times more stringent than the levels that are acceptable for occupational, or radio frequency trained individuals."

The FCC describes exposure to radio frequency (RF) energy in terms of percentage of maximum permissible exposure (MPE) with 100% being the maximum allowed. Rather than the FCC presenting the user specification in terms of complex power density figures over a specified surface area, this MPE measure is particularly useful, and even more so when considering that power density limits actually vary by frequency because of the different absorptive properties of the human body at different frequencies.

MPE limits are specified as time-averaged exposure limits. This means that exposure can be averaged over 30 minutes for general population / uncontrolled exposure (or 6 minutes for occupational / controlled exposure). However, for the case of exposure of the general public, time averaging is usually not applied because of uncertainties over exact exposure conditions and difficulty in controlling time of exposure. Therefore, the typical conservative approach is to assume that any RF exposure to the general public will be continuous.

Finally, it should be noted that the MPE limits adopted by the FCC for both general population / uncontrolled exposure and for occupational / controlled exposure incorporate a substantial margin of safety and have been established to be well below levels generally accepted as having the potential to cause adverse health effects.

2. FCC Guidelines for Evaluating RF Radiation Exposure Limits

In 1985, the FCC established rules to regulate radio frequency (RF) exposure from FCC licensed antenna facilities. In 1996, the FCC updated these rules, which were further amended in August 1997 by OET Bulletin 65 Edition 97-01. These new rules include limits for Maximum Permissible Exposure (MPE) for transmitters operating between 300 kHz and 100 GHz. The FCC MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP), the exposure limits developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI).

Attachment B contains excerpts from OET Bulletin 65 and defines the Maximum Exposure Limit. As shown in these excerpts, each frequency band has different exposure limits, requiring power density to be reported as a percent of Maximum Permissible Exposure (MPE) when dealing with carriers transmitting in different frequency bands.

3. RF Exposure Prediction Methods

The emission field calculation results displayed in the following figures were generated using the following formula as outlined in FCC bulletin OET 65:

$$\text{Power Density} = \left(\frac{EIRP}{\pi \times R^2} \right) \times \text{Off Beam Loss}$$

Where:

EIRP = Effective Isotropic Radiated Power

R = Radial Distance = $\sqrt{(H^2 + V^2)}$

H = Horizontal Distance from antenna

V = Vertical Distance from bottom of antenna

Off Beam Loss is determined by the selected antenna patterns

4. Calculation Results

Table 1 below outlines the power density information for the site. All information for carriers other than Pocket was obtained from current CSC database[1].

Carrier	Number of Trans.	Effective Radiated Power (ERP) Per Transmitter (Watts)	Antenna Height (Feet)	Operating Frequency (MHz)	Total ERP (Watts)	Power Density (mw/cm^2)	Limit	%MPE
AT&T TDMA	16	100	128	880	1,600	0.0351	0.5867	5.99%
AT&T GSM	2	296	128	880	592	0.0130	0.5867	2.21%
AT&T GSM	2	427	128	1,930	854	0.0187	1.0000	1.87%
AT&T UMTS	1	500	128	1,935	500	0.0110	1.0000	1.10%
Nextel	9	100	110	851	900	0.0267	0.5673	4.71%
BellSouth	1	300	84.3	870	300	0.0152	0.5800	-2.62%
PageNet	1	1000	126	930	1,000	0.0226	0.6200	-3.65%
Pocket	3	631	100	2130-2133.75	1,893	0.0681	1.0000	6.81%
							Total	22.69%

Table 1: Proposed Carrier Information

5. Conclusion

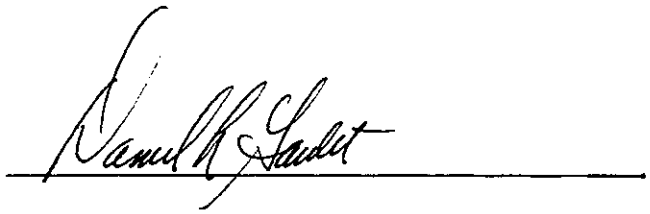
The above analysis verifies that emissions from the proposed site will be well below the maximum power density levels as outlined by the FCC in the OET Bulletin 65 Ed. 97-01. Even when using conservative methods, the cumulative power density from the proposed transmit antennas at the existing facility is well below the limits for the general public. The highest expected percent of Maximum Permissible Exposure at the base of the tower is 22.69% of the FCC limit.

As noted in the introduction, obstructions (trees, buildings etc.) that would normally attenuate the signal are not taken into account. As a result, the predicted signal levels are more conservative (higher) than the actual signal levels will be from the finished installation.

[1] BellSouth and PageNet, currently appear on the CSC database as operating from the Willis Street (SNET) tower. These two carriers were actually constructed on a nearby CL&P Tower on Willis Street. The %MPE values for BellSouth and PageNet should not be incorporated into the cumulative value for Total %MPE for the SNET Tower where Pocket proposes to collocate and therefore have been excluded from the total %MPE value shown above.

6. Statement of Certification

I certify to the best of my knowledge that the statements in this report are true and accurate. The calculations follow guidelines set forth in ANSI/IEEE Std. C95.3, ANSI/IEE Std. C95.1 and FCC OET Bulletin 65 Edition 97-01.



September 10, 2008
Date

Daniel I. Goulet
C Squared Systems, LLC

Attachment A: References

OET Bulletin 65 - Edition 97-01 - August 1997 Federal Communications Commission Office of Engineering & Technology

ANSI C95.1-1982, American National Standard Safety Levels With Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 300 kHz to 100 GHz. IEEE-SA Standards Board

IEEE Std C95.3-1991 (Reaff 1997), IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave. IEEE-SA Standards Board

Attachment B: FCC Limits For Maximum Permissible Exposure (MPE)

(A) Limits for Occupational/Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (E) (A/m)	Power Density (S) (mW/cm^2)	Averaging Time $\|E\|^2$, $\|H\|^2$ or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	($900/f^2$)*	6
30-300	61.4	0.163	1.0	6
300-1500	-	-	f/300	6
1500-100,000	-	-	5	6

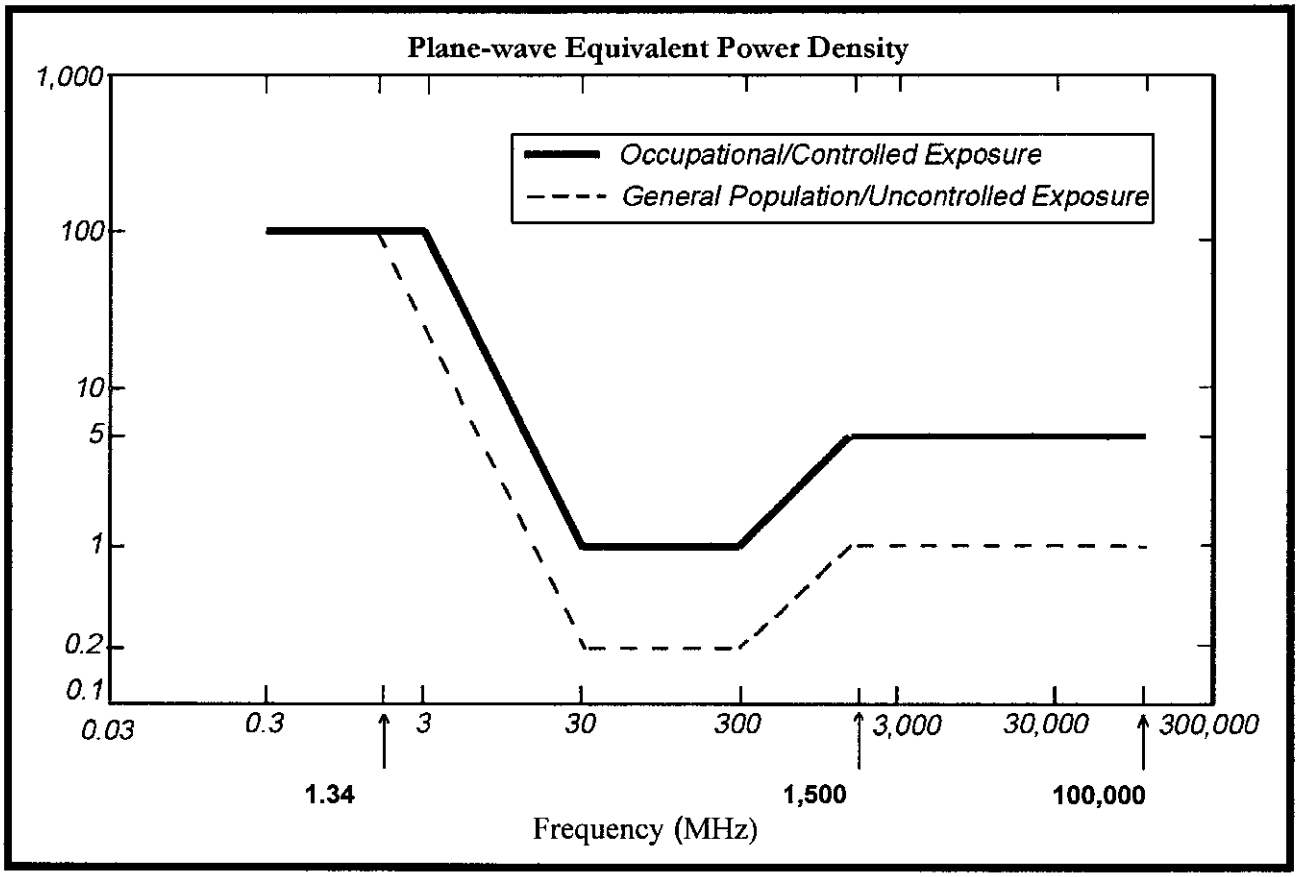
(B) Limits for General Population/Uncontrolled Exposure

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

f = frequency in MHz * Plane-wave equivalent power density

NOTE 1: Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

NOTE 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.



• FCC Limits for Maximum Permissible Exposure (MPE)

KATHREIN
SCALA DIVISION

742 213

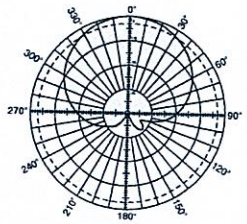
65° Panel Antenna

Kathrein's X-polarized adjustable electrical downtilt antennas offer the wireless carrier the ability to tailor polarization diversity sites for optimum performance. Using variable downtilt, only a few models need be procured to accommodate the needs of widely varying conditions. Remotely controlled downtilt is available as a retrofitable option.

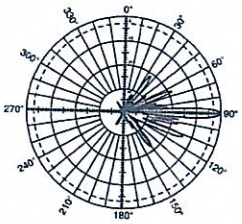
- 0-6° downtilt range.
- UV resistant pulltruded fiberglass radome.
- DC Grounded metallic parts for impulse suppression.
- No moving electrical connections.
- Wideband vector dipole technology.
- Optional remote downtilt Control.
- Will accomodate future 3G / UMTS applications.

General specifications:

Frequency range	1710–2170 MHz
VSWR	< 1.5:1
Impedance	50 ohms
Intermodulation (2x20w)	IM3: <-150 dBc
Polarization	+45° and -45°
Front-to-back ratio (180°±30°)	>30 dB (co-polar) >25 dB (total power)
Maximum input power	300 watts per input (at 50°C)
Electrical downtilt continuously adjustable	0–6 degrees
Connector	2 x 7/16 DIN female
Isolation	>30 dB
Cross polar ratio Main direction 0° Sector ±60°	 25 dB (typical) >10 dB
Weight	22 lb (10 kg)
Dimensions	76.5 x 6.1 x 2.7 inches (1942 x 155 x 69 mm)
Equivalent flat plate area	4.62 ft² (0.429 m²)
Wind survival rating*	120 mph (200 kph)
Shipping dimensions	87.2 x 6.8 x 3.6 inches (2214 x 172 x 92 mm)
Shipping weight	24.3 lb (11 kg)
Mounting	Fixed and tilt mount options are available for 2 to 4.6 inch (50 to 115 mm) OD masts.
See reverse for order information.	



Horizontal pattern
±45°- polarization



Vertical pattern
±45°- polarization

Specifications:	1710–1880 MHz	1850–1990 MHz	1920–2170 MHz
Gain	19 dBi	19.2 dBi	19.5 dBi
+45° and -45° polarization horizontal beamwidth	67° (half-power)	65° (half-power)	63° (half-power)
+45° and -45° polarization vertical beamwidth	4.7° (half-power)	4.5° (half-power)	4.3° (half-power)
Vertical Pattern–sidelobe suppression for first side-lobe above main beam	0° 2° 4° 6° T 18 17 15 15 dB	0° 2° 4° 6° T 18 18 17 15 dB	0° 2° 4° 6° T 18 18 17 15 dB

RoHS Lead-Free

10642-H
936.2074/h

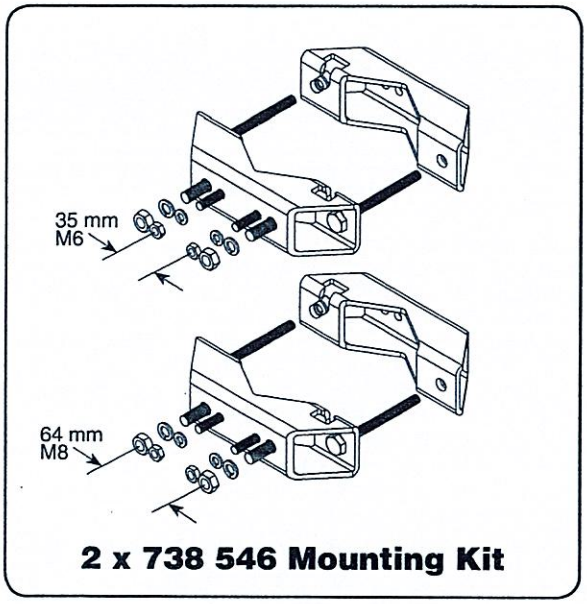
* Mechanical design is based on environmental conditions as stipulated in EIA-222-F (June 1996) and/or ETS 300 019-1-4 which include the static mechanical load imposed on an antenna by wind at maximum velocity. See the Engineering Section of the catalog for further details.

Kathrein Inc., Scala Division Post Office Box 4580 Medford, OR 97501 (USA) Phone: (541) 779-6500 Fax: (541) 779-3991
Email: communications@kathrein.com Internet: www.kathrein-scala.com

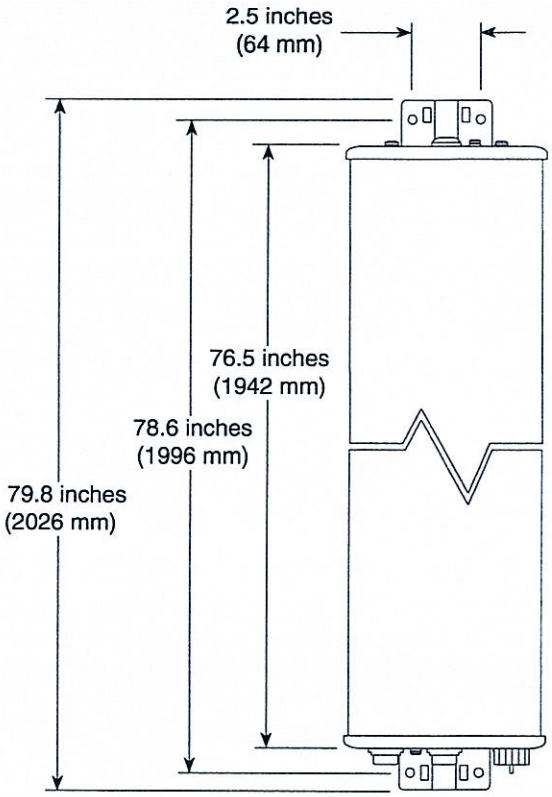
KATHREIN
SCALA DIVISION

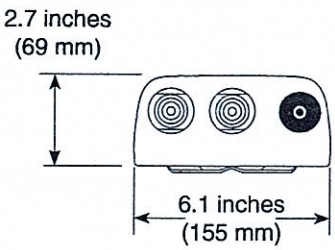
742 213

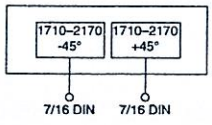
65° Panel Antenna



2 x 738 546 Mounting Kit







Mounting Options:

Model	Description
2 x 738 546	Mounting Kit for 2 to 4.6 inch (50 to 115 mm) OD mast.
737 978	Tilt Kit for use with the above mounting kit, 0–11 degrees downtilt angle. (requires 2 x 738 546 Mounting Kit)
742 263	Three-panel Sector Mounting Kit (120 deg. ea.) for 3.5 inch (89 mm) OD mast.

Order Information:

Model	Description
742 213	Antenna with 7/16 DIN connectors 0°–6° adjustable electrical downtilt

Kathrein Inc., Scala Division Post Office Box 4580 Medford, OR 97501 (USA) Phone: (541) 779-6500 Fax: (541) 779-3991
Email: communications@kathrein.com Internet: www.kathrein-scala.com

Exhibit E

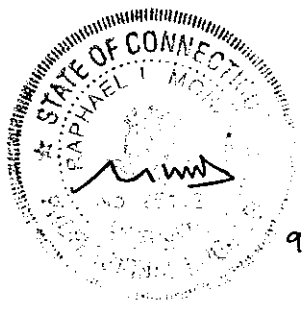
Structural Analysis
Pocket Site HFCT0983A
Willis Street
Bristol, Connecticut

AMERICAN TOWER

Structural Analysis Report

Structure	:	**120 ft Valmont Monopole**
ATC Site Name	:	**Brst Bristol, CT**
ATC Site Number	:	**302500**
Proposed Carrier	:	**Youghiogheny**
Carrier Site Name	:	**CT0983**
Carrier Site Number	:	**CT0983**
County	:	**Hartford**
Eng. Number	:	**42285922**
Date	:	**August 11, 2008**
Usage	:	**89%**
Portholes Required	:	**No**

Submitted by:
Esha Shah, E.I.
Design Engineer



9/2/08

American Tower Engineering Services
400 Regency Forest Drive
Cary, NC 27518
Phone: 919-468-0112

Introduction

The purpose of this report is to summarize results of the structural analysis performed on the 120 ft Valmont Monopole located at 760 Beecher Rd., Bristol, CT 06010, Hartford County (ATC site #302500). The tower was originally designed and manufactured by Valmont (Drawing #DC1671Z, dated December 29, 1993). Modification designed by Spectrasite Communications Inc. (Site # CT 0036, Rev.2, Dated July 22, 2002) have been installed.

Analysis

The tower was analyzed using Semaan Engineering Solutions, Inc., Software. The analysis assumes that the tower is in good, undamaged, and non-corroded condition.

Basic Wind Speed:	95.0 mph (3-Second Gust)
Radial Ice:	50.0 mph (3-Second Gust) w/ 1 1/4" ice
Code:	ANSI/TIA-222-G / 2003 International Building Code w/ 2005 CT Supplements and 2008 CT Amendments

Antenna Loads

The following antenna loads were used in the tower analysis.

Existing Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
126.0	6	Powerwave LGP 2140X	Platform with Handrails	(12) 1 1/4	AT&T Mobility
	6	Powerwave 7770.00			
	6	ADC DD1900			
	3	CSS DUO1417-8670-0			
110.0	3	72" x 12" Panel	T-Arm w/ Platform	(12) 1 5/8	Sprint Nextel
	9	48" x 12" Panel			
32.0	1	Nokia CS72187.01	Flush	(1) 1/2	Cingular

Proposed Antennas

Elev. (ft)	Qty	Antennas	Mount	Coax (in)	Carrier
100.0	3	Kathrein 742 213	Flush	(6) 1 5/8	Youghiogheny

Install proposed coax on outside of monopole.

Results

The maximum structure usage is: 89%

Additional exit and/or entry ports may be required to accommodate the running of the proposed lines to the proposed antennas. These additional ports **may not** be installed without installation drawings providing the location, size and welding requirements of each port.

To ensure compliance with all conditions of this structural analysis, port installation drawings shall be provided by American Tower's Engineering Department under a subsequent project.

Pole Reactions	Original Design Reactions	Factored Design Reactions	Current Analysis Reactions	% Of Design
Moment (ft-kips)	794.0	1,071.9	1,390.6	130
Shear (kips)	10.3	13.9	17.0	122

(*) The percentage is factored by 1.35 per ANSI/TIA-222-G

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.

Conclusion

Based on the analysis results, the structure meets the requirements per ANSI/TIA-222-G and 2003 IBC w/ 2005 CT Supplements and 2008 CT Amendments standards. The tower and foundation can support the existing and proposed antennas with the TX line distribution as described in this report.
If you have any questions or require additional information, please call 919-463-6280.

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:

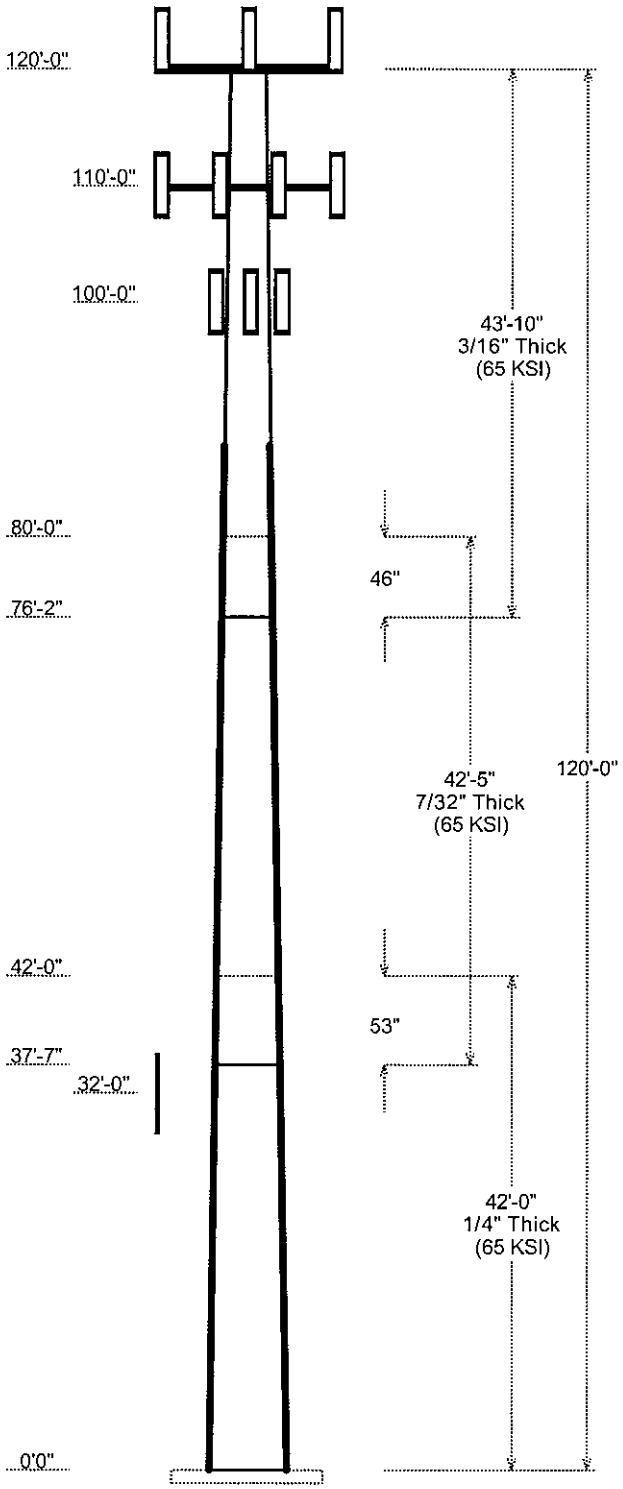
-- Information supplied by the client regarding the structure itself, the antenna and feed line loading on the structure and its components, or other relevant information.

-- 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 Engineering Services 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 are in an un-corroded condition and have not deteriorated; and we, therefore, assume that their capacity has not significantly changed from the "as new" condition.

All services will be performed to the codes specified by the client, and we do not imply to meet any other codes or requirements unless explicitly agreed in writing. 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. In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/EIA-222.

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



Job Information

Pole :	302500	Code: ANSI/TIA-222 Rev G	
Description :	120' Valmont Monopole		Struct Class : II
Client :	Youghiogheny		Exposure : B
Location :	Brst Bristol, CT		Topo : 1
Shape :	12 Sides	Base Elev (ft): 0.00	
Height :	120.00 (ft)	Taper: 0.145033(in/ft)	

Sections Properties

Shaft Section	Length (ft)	Diameter (in) Across Flats Top	Bottom	Thick (in)	Joint Type	Overlap Length (in)	Taper (in/ft)	Steel Grade (ksi)
1	42.000	24.90	31.00	0.250		0.000	0.145033	65
2	42.417	19.83	25.98	0.219	Slip Joint	53.000	0.145033	65
3	43.833	14.41	20.76	0.188	Slip Joint	46.000	0.145033	65

Discrete Appurtenance

Attach Elev (ft)	Force Elev (ft)	Qty	Description
120.000	126.000	6	Powerwave LGP 2140X
120.000	126.000	6	Powerwave 7770.00
120.000	120.000	1	Flat Platform with Handrails
120.000	126.000	6	ADC DD1900
120.000	126.000	3	CSS DUO1417-8670-0
110.000	110.000	3	72" x 12" Panel
110.000	110.000	3	T-Arm w/ working Platform
110.000	110.000	9	48" x 12" Panel
100.000	100.000	3	Kathrein 742 213
32.000	32.000	1	Nokia CS72187.01

Linear Appurtenance

Elev (ft) From	To	Description	Exposed To Wind
0.000	32.000	1/2" Coax	No
0.000	92.000	Reinforce Wind	Yes
0.000	100.0	1 5/8" Coax	Yes
0.000	110.0	1 5/8" Coax	No
0.000	120.0	1 1/4" Coax	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	50.00 mph with 1.25 in Radial Ice
1.0D + 1.0W	60.00 mph Serviceability

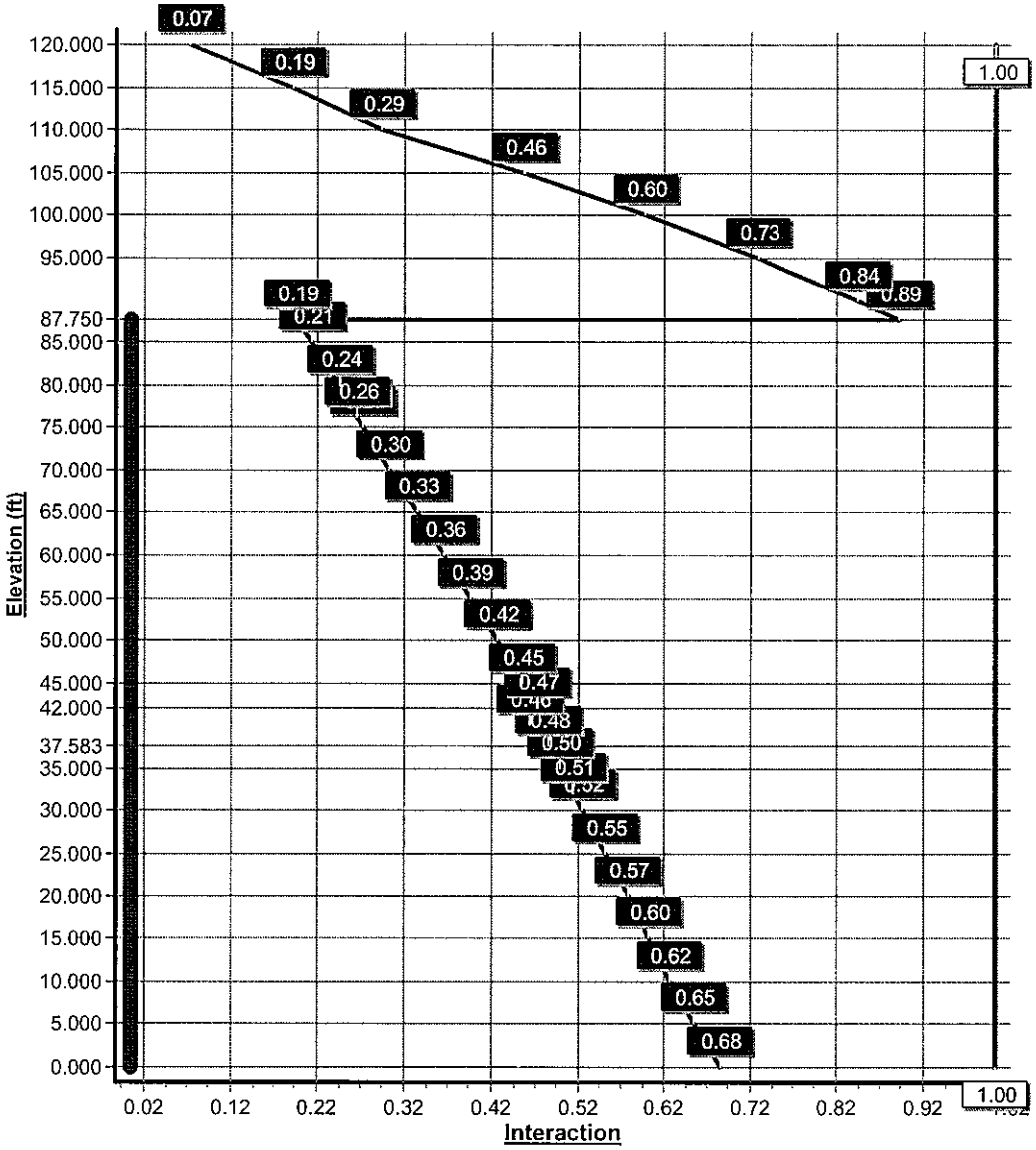
Reactions

Load Case	Moment (Kip-ft)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W	1390.58	17.03	21.77
0.9D + 1.6W	1377.91	17.01	17.78
1.2D + 1.0Di + 1.0Wi	399.48	4.59	45.32
1.0D + 1.0W	354.35	4.43	19.15

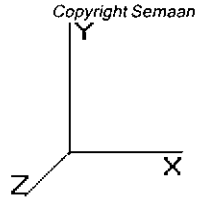
Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
1.0D + 1.0W	0.00	0.000	0.000

Load Case : 1.2D + 1.6W
Max Ratio 88.97% at 87.8ft



Pole :	302500	Code: ANSI/TIA-222 Rev G	
Location :	Brst Bristol, CT	Struct Class : II	
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	



Shaft Section Properties

Sect Num	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	42.000	0.2500	65		0.00	3,187	31.00	0.000	24.75	2987.6	31.08	124.0	24.90	42.00	19.85	1540.6	24.55	99.63	0.14503
2	42.417	0.2190	65	Slip Joint	53.00	2,310	25.98	37.58	18.17	1540.1	29.65	118.6	19.83	80.00	13.83	679.4	22.13	90.57	0.14503
3	43.833	0.1880	65	Slip Joint	46.00	1,571	20.76	76.16	12.46	673.4	27.46	110.4	14.41	120.0	8.61	222.3	18.39	76.65	0.14503
				Shaft Weight		7,068													

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	No Ice Weight (lb)	No Ice CaAa (sf)	No Ice CaAa Factor	Ice Weight (lb)	Ice CaAa (sf)	Ice CaAa Factor	Distance From Face (ft)	Vert Ecc (ft)
120.0	Powerwave LGP 2140X	6	14.10	1.290	0.50	83.28	1.914	0.50	0.000	6.000
120.0	Powerwave 7770.00	6	35.00	5.941	0.75	288.74	7.377	0.75	0.000	6.000
120.0	Flat Platform with Handrails	1	2000.00	42.400	1.00	4321.09	76.652	1.00	0.000	0.000
120.0	ADC DD1900	6	12.10	1.280	0.50	18.98	2.008	0.50	0.000	6.000
120.0	CSS DUO1417-8670-0	3	42.50	6.588	0.83	349.71	7.532	0.83	0.000	6.000
110.0	72" x 12" Panel	3	45.00	8.400	0.75	393.61	10.313	0.75	0.000	0.000
110.0	T-Arm w/ working Platform	3	250.00	12.900	0.67	588.38	26.141	0.67	0.000	0.000
110.0	48" x 12" Panel	9	30.00	5.600	0.75	274.92	6.726	0.75	0.000	0.000
100.0	Kathrein 742 213	3	22.00	5.140	0.78	238.77	7.278	0.78	0.000	0.000
32.00	Nokia CS72187.01	1	20.00	1.429	1.00	82.25	1.429	1.00	0.000	0.000
	Totals	41	3735.70			5392.50			Number of Loadings :	10

Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Exposed Width (in)	Exposed To Wind
0.00	120.00	(12) 1 1/4" Coax	0.00	N
0.00	110.00	(12) 1 5/8" Coax	0.00	N
0.00	100.00	(6) 1 5/8" Coax	1.98	Y
0.00	92.00	(1) Reinforce Wind Area	7.50	Y
0.00	32.00	(1) 1/2" Coax	0.00	N

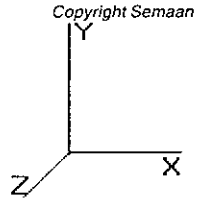
Additional Steel

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	87.75	4	SOL #20 All Thread	80	3.06	0.00	16.70	2.50	5,861.7	351.00
									5,861.7	351.00

Pole : 302500
Location : Brst Bristol, CT
Height : 120.0 (ft)
Shape : 12 Sides
Base Dia : 31.00 (in)
Top Dia : 14.41 (in)
Taper : 0.145033 (in/ft)

Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : B
Topographic Category : 1

Base Elev : 0.000 (ft)



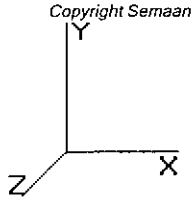
Segment Properties

(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	F'y (ksi)	S (in3)	Weight (lb)	Additional Reinforcing Area (in^2)	Additional Reinforcing Ix (in^4)	Additional Reinforcing Weight (lb)
0.00		0.2500	31.000	24.754	2,987.6	31.08	124.00	63.7	186.2	0.0	19.64	3.945	0.0
5.00		0.2500	30.275	24.170	2,781.1	30.30	121.10	64.5	177.5	416.2	19.64	3.799	334.0
10.00		0.2500	29.550	23.586	2,584.5	29.53	118.20	65.0	169.0	406.3	19.64	3.655	334.0
15.00		0.2500	28.825	23.002	2,397.3	28.75	115.30	65.0	160.7	396.3	19.64	3.514	334.0
20.00		0.2500	28.099	22.419	2,219.4	27.97	112.40	65.0	152.6	386.4	19.64	3.376	334.0
25.00		0.2500	27.374	21.835	2,050.5	27.20	109.50	65.0	144.7	376.5	19.64	3.241	334.0
30.00		0.2500	26.649	21.251	1,890.4	26.42	106.60	65.0	137.0	366.5	19.64	3.109	334.0
32.00		0.2500	26.359	21.018	1,828.7	26.11	105.44	65.0	134.0	143.8	19.64	3.057	133.6
35.00		0.2500	25.924	20.667	1,738.8	25.64	103.70	65.0	129.6	212.8	19.64	2.979	200.4
37.58	Bot - Section 2	0.2500	25.549	20.366	1,663.8	25.24	102.20	65.0	125.8	180.4	19.64	2.913	172.6
40.00		0.2500	25.199	20.084	1,595.6	24.86	100.79	65.0	122.3	314.7	19.64	2.929	161.4
42.00	Top - Section 1	0.2190	25.347	17.719	1,428.0	28.87	115.74	65.0	108.8	257.2	19.64	2,878	133.6
45.00		0.2190	24.911	17.413	1,355.1	28.34	113.75	65.0	105.1	179.3	19.64	2,803	200.4
50.00		0.2190	24.186	16.901	1,239.2	27.45	110.44	65.0	99.0	291.9	19.64	2,680	334.0
55.00		0.2190	23.461	16.390	1,130.1	26.56	107.13	65.0	93.1	283.2	19.64	2,560	334.0
60.00		0.2190	22.736	15.879	1,027.6	25.67	103.82	65.0	87.3	274.5	19.64	2,442	334.0
65.00		0.2190	22.011	15.367	931.5	24.79	100.51	65.0	81.8	265.8	19.64	2,327	334.0
70.00		0.2190	21.286	14.856	841.5	23.90	97.19	65.0	76.4	257.1	19.64	2,215	334.0
75.00		0.2190	20.561	14.344	757.6	23.01	93.88	65.0	71.2	248.4	19.64	2,106	334.0
76.17	Bot - Section 3	0.2190	20.391	14.225	738.8	22.81	93.11	65.0	70.0	56.7	19.64	2,081	77.9
80.00	Top - Section 2	0.1880	20.211	12.121	620.3	26.66	107.51	65.0	59.3	343.3	19.64	2.055	256.1
85.00		0.1880	19.486	11.682	555.3	25.63	103.65	65.0	55.1	202.5	19.64	1.950	334.0
87.75	Reinf. Top	0.1880	19.087	11.441	521.6	25.06	101.53	65.0	52.8	108.2	19.64	1.893	183.7
90.00		0.1880	18.761	11.243	495.0	24.60	99.79	65.0	51.0	86.8			
95.00		0.1880	18.036	10.804	439.3	23.56	95.94	65.0	47.1	187.6			
100.0		0.1880	17.311	10.365	387.9	22.53	92.08	65.0	43.3	180.1			
105.0		0.1880	16.586	9.926	340.7	21.50	88.22	65.0	39.7	172.6			
110.0		0.1880	15.860	9.487	297.4	20.46	84.36	65.0	36.2	165.2			
115.0		0.1880	15.135	9.048	258.0	19.43	80.51	65.0	32.9	157.7			
120.0		0.1880	14.410	8.609	222.3	18.39	76.65	65.0	29.8	150.2			
										7,068.1			5,861.7

Pole : 302500
Location : Brst Bristol, CT
Height : 120.0 (ft)
Shape : 12 Sides
Base Dia : 31.00 (in)
Top Dia : 14.41 (in)
Taper : 0.145033 (in/ft)

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



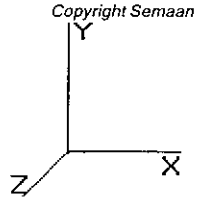
Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 23 Iterations

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)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	15.364	16.90	212.57	1.000	0.00	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	15.364	16.90	207.60	1.200 *	0.00	5.00	13.216	15.86	428.8	0.0	833.4
10.00		1.00	0.70	15.364	16.90	202.62	1.200 *	0.00	5.00	12.903	15.48	418.7	0.0	821.5
15.00		1.00	0.70	15.364	16.90	197.65	1.200 *	0.00	5.00	12.590	15.11	408.5	0.0	809.6
20.00		1.00	0.70	15.364	16.90	192.68	1.200 *	0.00	5.00	12.277	14.73	398.4	0.0	797.7
25.00		1.00	0.70	15.364	16.90	187.71	1.200 *	0.00	5.00	11.965	14.36	388.2	0.0	785.8
30.00		1.00	0.70	15.377	16.91	182.81	1.200 *	0.00	5.00	11.652	13.98	378.4	0.0	773.8
32.00	Appertunance(s)	1.00	0.71	15.663	17.23	182.50	1.200 *	0.00	2.00	4.573	5.49	151.3	0.0	306.2
35.00		1.00	0.73	16.070	17.67	181.80	1.200 *	0.00	3.00	6.766	8.12	229.6	0.0	455.7
37.58	Bot - Section 2	1.00	0.74	16.400	18.04	181.00	1.200 *	0.00	2.58	5.736	6.88	198.7	0.0	389.0
40.00		1.00	0.76	16.694	18.36	180.11	1.200 *	0.00	2.42	5.382	6.46	189.7	0.0	539.1
42.00	Top - Section 1	1.00	0.77	16.929	18.62	179.29	1.200 *	0.00	2.00	4.398	5.28	157.3	0.0	442.2
45.00		1.00	0.78	17.266	18.99	181.08	1.200 *	0.00	3.00	6.504	7.80	237.2	0.0	415.6
50.00		1.00	0.81	17.793	19.57	178.48	1.200 *	0.00	5.00	10.590	12.71	398.0	0.0	684.3
55.00		1.00	0.83	18.285	20.11	175.50	1.200 *	0.00	5.00	10.277	12.33	396.9	0.0	673.8
60.00		1.00	0.85	18.745	20.61	172.20	1.200 *	0.00	5.00	9.964	11.96	394.5	0.0	663.4
65.00		1.00	0.87	19.179	21.09	168.63	1.200 *	0.00	5.00	9.651	11.58	390.9	0.0	653.0
70.00		1.00	0.89	19.589	21.54	164.81	1.200 *	0.00	5.00	9.338	11.21	386.3	0.0	642.5
75.00		1.00	0.91	19.979	21.97	160.77	1.200 *	0.00	5.00	9.025	10.83	380.8	0.0	632.1
76.17	Bot - Section 3	1.00	0.91	20.067	22.07	159.80	1.200 *	0.00	1.17	2.061	2.47	87.3	0.0	146.0
80.00	Top - Section 2	1.00	0.92	20.351	22.38	156.53	1.200 *	0.00	3.83	6.776	8.13	291.2	0.0	668.0
85.00		1.00	0.94	20.706	22.77	155.12	1.200 *	0.00	5.00	8.562	10.27	374.4	0.0	577.0
87.75	Reinf. Top	1.00	0.95	20.896	22.98	152.63	1.200 *	0.00	2.75	4.576	5.49	201.9	0.0	313.5
90.00		1.00	0.95	21.047	23.15	150.57	1.200 *	0.00	2.25	3.673	4.41	163.3	0.0	104.2
95.00		1.00	0.97	21.375	23.51	145.87	1.200 *	0.00	5.00	7.936	9.52	358.3	0.0	225.1
100.0	Appertunance(s)	1.00	0.98	21.690	23.86	141.04	1.025 *	0.00	5.00	7.624	7.81	298.2	0.0	216.1
105.0		1.00	1.00	21.995	24.19	136.07	1.000	0.00	5.00	7.311	7.31	283.0	0.0	207.1
110.0	Appertunance(s)	1.00	1.01	22.289	24.51	130.99	1.000	0.00	5.00	6.998	7.00	274.5	0.0	198.2
115.0		1.00	1.02	22.574	24.83	125.80	1.000	0.00	5.00	6.685	6.69	265.6	0.0	189.2
120.0	Appertunance(s)	1.00	1.04	22.850	25.13	120.50	1.000	0.00	5.00	6.372	6.37	256.3	0.0	180.3
* = Cf Adjusted By Linear Load Ra Effect							Totals:		120.00			8,786.4	0.0	14,343.4

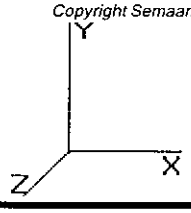


Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 23 Iterations

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)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
32.00	Nokia CS72187.01	1	15.663	17.230	1.00	1.00	1.43	0.000	0.000	39.39	0.00	0.00	24.00
100.0	Kathrein 742 213	3	21.690	23.860	0.62	0.80	9.62	0.000	0.000	367.33	0.00	0.00	79.20
110.0	72" x 12" Panel	3	22.289	24.518	0.60	0.80	15.12	0.000	0.000	593.14	0.00	0.00	162.00
110.0	T-Arm w/ working Pla	3	22.289	24.518	0.50	0.75	19.45	0.000	0.000	762.88	0.00	0.00	900.00
110.0	48" x 12" Panel	9	22.289	24.518	0.60	0.80	30.24	0.000	0.000	1,186.29	0.00	0.00	324.00
120.0	Powerwave LGP	6	23.171	25.488	0.40	0.80	3.10	0.000	6.000	126.26	0.00	757.55	101.52
120.0	Powerwave 7770.00	6	23.171	25.488	0.60	0.80	21.39	0.000	6.000	872.21	0.00	5,233.26	252.00
120.0	Flat Platform with H	1	22.850	25.135	1.00	1.00	42.40	0.000	0.000	1,705.18	0.00	0.00	2,400.00
120.0	ADC DD1900	6	23.171	25.488	0.40	0.80	3.07	0.000	6.000	125.28	0.00	751.68	87.12
120.0	CSS DUO1417-8670-0	3	23.171	25.488	0.66	0.80	13.12	0.000	6.000	535.18	0.00	3,211.10	153.00
										6,313.14			4,482.84



Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 23 Iterations

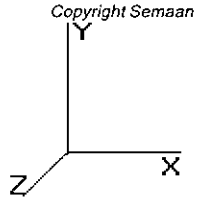
Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

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	1.200	1.98	0.82	0.99	15.364	0.299	0.000	26.77	29.52
5.00	(1) Reinforce Wind Area	Yes	5.00	0.773	7.50	3.13	2.42	15.364	0.299	0.000	65.32	0.00
10.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	15.364	0.306	0.000	26.77	29.52
10.00	(1) Reinforce Wind Area	Yes	5.00	0.773	7.50	3.13	2.42	15.364	0.306	0.000	65.32	0.00
15.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	15.364	0.314	0.000	26.77	29.52
15.00	(1) Reinforce Wind Area	Yes	5.00	0.773	7.50	3.13	2.42	15.364	0.314	0.000	65.32	0.00
20.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	15.364	0.322	0.000	26.77	29.52
20.00	(1) Reinforce Wind Area	Yes	5.00	0.773	7.50	3.13	2.42	15.364	0.322	0.000	65.32	0.00
25.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	15.364	0.330	0.000	26.77	29.52
25.00	(1) Reinforce Wind Area	Yes	5.00	0.773	7.50	3.13	2.42	15.364	0.330	0.000	65.32	0.00
30.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	15.377	0.339	0.000	26.79	29.52
30.00	(1) Reinforce Wind Area	Yes	5.00	0.773	7.50	3.13	2.41	15.377	0.339	0.000	65.35	0.00
32.00	(6) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	15.663	0.345	0.000	10.92	11.81
32.00	(1) Reinforce Wind Area	Yes	2.00	0.766	7.50	1.25	0.96	15.663	0.345	0.000	26.38	0.00
35.00	(6) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	16.070	0.350	0.000	16.80	17.71
35.00	(1) Reinforce Wind Area	Yes	3.00	0.756	7.50	1.88	1.42	16.070	0.350	0.000	40.08	0.00
37.58	(6) 1 5/8" Coax	Yes	2.58	1.200	1.98	0.43	0.51	16.400	0.356	0.000	14.76	15.25
37.58	(1) Reinforce Wind Area	Yes	2.58	0.748	7.50	1.61	1.21	16.400	0.356	0.000	34.87	0.00
40.00	(6) 1 5/8" Coax	Yes	2.42	1.200	1.98	0.40	0.48	16.694	0.361	0.000	14.06	14.27
40.00	(1) Reinforce Wind Area	Yes	2.42	0.742	7.50	1.51	1.12	16.694	0.361	0.000	32.91	0.00
42.00	(6) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	16.929	0.365	0.000	11.80	11.81
42.00	(1) Reinforce Wind Area	Yes	2.00	0.736	7.50	1.25	0.92	16.929	0.365	0.000	27.43	0.00
45.00	(6) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	17.266	0.364	0.000	18.05	17.71
45.00	(1) Reinforce Wind Area	Yes	3.00	0.729	7.50	1.88	1.37	17.266	0.364	0.000	41.55	0.00
50.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	17.793	0.373	0.000	31.00	29.52
50.00	(1) Reinforce Wind Area	Yes	5.00	0.718	7.50	3.13	2.24	17.793	0.373	0.000	70.30	0.00
55.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	18.285	0.384	0.000	31.86	29.52
55.00	(1) Reinforce Wind Area	Yes	5.00	0.709	7.50	3.13	2.21	18.285	0.384	0.000	71.26	0.00
60.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	18.745	0.396	0.000	32.66	29.52
60.00	(1) Reinforce Wind Area	Yes	5.00	0.700	7.50	3.13	2.19	18.745	0.396	0.000	72.15	0.00
65.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	19.179	0.409	0.000	33.42	29.52
65.00	(1) Reinforce Wind Area	Yes	5.00	0.692	7.50	3.13	2.16	19.179	0.409	0.000	72.98	0.00
70.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	19.589	0.423	0.000	34.13	29.52
70.00	(1) Reinforce Wind Area	Yes	5.00	0.685	7.50	3.13	2.14	19.589	0.423	0.000	73.76	0.00
75.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	19.979	0.438	0.000	34.81	29.52
75.00	(1) Reinforce Wind Area	Yes	5.00	0.678	7.50	3.13	2.12	19.979	0.438	0.000	74.49	0.00
76.17	(6) 1 5/8" Coax	Yes	1.17	1.200	1.98	0.19	0.23	20.067	0.447	0.000	8.16	6.89
76.17	(1) Reinforce Wind Area	Yes	1.17	0.676	7.50	0.73	0.49	20.067	0.447	0.000	17.42	0.00
80.00	(6) 1 5/8" Coax	Yes	3.83	1.200	1.98	0.63	0.76	20.351	0.455	0.000	27.19	22.63
80.00	(1) Reinforce Wind Area	Yes	3.83	0.672	7.50	2.40	1.61	20.351	0.455	0.000	57.64	0.00
85.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.83	0.99	20.706	0.461	0.000	36.08	29.52
85.00	(1) Reinforce Wind Area	Yes	5.00	0.666	7.50	3.13	2.08	20.706	0.461	0.000	75.83	0.00
87.75	(6) 1 5/8" Coax	Yes	2.75	1.200	1.98	0.45	0.54	20.896	0.475	0.000	20.02	16.23
87.75	(1) Reinforce Wind Area	Yes	2.75	0.663	7.50	1.72	1.14	20.896	0.475	0.000	41.90	0.00
90.00	(6) 1 5/8" Coax	Yes	2.25	1.200	1.98	0.37	0.45	21.047	0.484	0.000	16.50	13.28
90.00	(1) Reinforce Wind Area	Yes	2.25	0.660	7.50	1.41	0.93	21.047	0.484	0.000	34.40	0.00
95.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	21.375	0.261	0.000	37.24	29.52
95.00	(1) Reinforce Wind Area	Yes	2.00	0.655	7.50	1.25	0.82	21.375	0.261	0.000	30.82	0.00
100.0	(6) 1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	21.690	0.108	1.025	0.00	29.52

Pole :	302500	Code: ANSI/TIA-222 Rev G	
Location :	Brst Bristol, CT	Struct Class : II	
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	

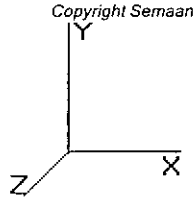


Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 23 Iterations

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

Wind Importance Factor : 1.00

Totals:	1,878.21	590.33



Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 23 Iterations

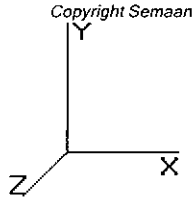
Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

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	520.94	968.23	0.00	0.00
10.00	510.79	956.31	0.00	0.00
15.00	500.63	944.39	0.00	0.00
20.00	490.48	932.47	0.00	0.00
25.00	480.33	920.56	0.00	0.00
30.00	470.55	908.64	0.00	0.00
32.00	227.98	384.12	0.00	0.00
35.00	286.51	536.06	0.00	0.00
37.58	248.30	458.17	0.00	0.00
40.00	236.72	603.83	0.00	0.00
42.00	196.49	495.77	0.00	0.00
45.00	296.76	495.92	0.00	0.00
50.00	499.25	818.19	0.00	0.00
55.00	499.98	807.75	0.00	0.00
60.00	499.28	797.31	0.00	0.00
65.00	497.32	786.87	0.00	0.00
70.00	494.23	776.43	0.00	0.00
75.00	490.13	765.99	0.00	0.00
76.17	112.92	177.22	0.00	0.00
80.00	376.06	770.68	0.00	0.00
85.00	486.35	710.91	0.00	0.00
87.75	263.86	387.17	0.00	0.00
90.00	214.20	164.46	0.00	0.00
95.00	426.34	358.97	0.00	0.00
100.0	665.53	429.21	0.00	0.00
105.0	283.01	311.53	0.00	0.00
110.0	2,816.84	1,688.57	0.00	0.00
115.0	265.61	234.57	0.00	0.00
120.0	3,620.39	3,219.25	0.00	9,953.59
Totals:	16,977.77	21,809.54	0.00	9,953.59

Pole :	302500	Code: ANSI/TIA-222 Rev G	
Location :	Brst Bristol, CT	Struct Class : II	
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	



Load Case: 1.2D + 1.6W — 95.00 mph with No Ice — 23 Iterations

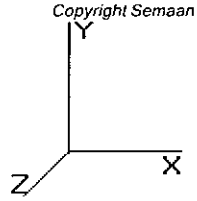
Gust Response Factor : 1.10
Dead Load Factor : 1.20
Wind Load Factor : 1.60

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	-21.77	-17.03	0.00	-1,390.58	0.00	1,390.58	1,419.98	709.99	1,802.11	890.00	0.00	0.00	0.682
5.00	-20.72	-16.61	0.00	-1,305.43	0.00	1,305.43	1,403.09	701.54	1,738.35	858.50	0.15	-0.28	0.651
10.00	-19.69	-16.18	0.00	-1,222.40	0.00	1,222.40	1,379.79	689.90	1,667.86	823.69	0.59	-0.55	0.623
15.00	-18.68	-15.76	0.00	-1,141.48	0.00	1,141.48	1,345.64	672.82	1,585.98	783.26	1.31	-0.82	0.599
20.00	-17.69	-15.33	0.00	-1,062.69	0.00	1,062.69	1,311.49	655.75	1,506.17	743.84	2.31	-1.08	0.574
25.00	-16.71	-14.91	0.00	-986.02	0.00	986.02	1,277.34	638.67	1,428.41	705.44	3.59	-1.34	0.549
30.00	-15.77	-14.46	0.00	-911.48	0.00	911.48	1,243.19	621.60	1,352.71	668.05	5.13	-1.60	0.523
32.00	-15.36	-14.26	0.00	-882.55	0.00	882.55	1,229.54	614.77	1,323.01	653.39	5.82	-1.70	0.513
35.00	-14.80	-13.99	0.00	-839.77	0.00	839.77	1,209.05	604.52	1,279.08	631.69	6.94	-1.85	0.497
37.58	-14.32	-13.76	0.00	-803.63	0.00	803.63	1,191.40	595.70	1,241.84	613.30	7.98	-1.98	0.483
40.00	-13.70	-13.53	0.00	-770.37	0.00	770.37	1,174.90	587.45	1,207.50	596.34	9.01	-2.10	0.462
42.00	-13.18	-13.34	0.00	-743.32	0.00	743.32	1,036.59	518.29	1,074.39	530.60	9.91	-2.19	0.471
45.00	-12.66	-13.06	0.00	-703.30	0.00	703.30	1,018.64	509.32	1,037.35	512.31	11.34	-2.33	0.454
50.00	-11.81	-12.58	0.00	-637.98	0.00	637.98	988.73	494.36	977.05	482.53	13.91	-2.56	0.424
55.00	-10.98	-12.08	0.00	-575.10	0.00	575.10	958.81	479.40	918.56	453.64	16.71	-2.78	0.394
60.00	-10.17	-11.58	0.00	-514.70	0.00	514.70	928.89	464.45	861.88	425.65	19.74	-2.99	0.364
65.00	-9.37	-11.07	0.00	-456.80	0.00	456.80	898.98	449.49	807.00	398.55	22.98	-3.19	0.333
70.00	-8.59	-10.56	0.00	-401.45	0.00	401.45	869.06	434.53	753.93	372.34	26.42	-3.38	0.302
75.00	-7.84	-10.04	0.00	-348.65	0.00	348.65	839.15	419.57	702.66	347.02	30.06	-3.55	0.270
76.17	-7.66	-9.93	0.00	-336.94	0.00	336.94	832.17	416.08	690.96	341.24	30.93	-3.59	0.263
80.00	-6.89	-9.52	0.00	-298.89	0.00	298.89	709.10	354.55	585.27	289.04	33.87	-3.72	0.244
85.00	-6.20	-9.00	0.00	-251.29	0.00	251.29	683.42	341.71	543.46	268.39	37.84	-3.86	0.212
87.75	-5.82	-8.71	0.00	-226.55	0.00	226.55	683.42	341.71	543.46	268.39	40.08	-3.93	0.194
87.75	-5.82	-8.71	0.00	-226.55	0.00	226.55	683.42	341.71	543.46	268.39	40.08	-3.93	0.890
90.00	-5.62	-8.52	0.00	-206.94	0.00	206.94	657.74	328.87	503.19	248.51	41.95	-3.99	0.842
95.00	-5.23	-8.11	0.00	-164.35	0.00	164.35	632.06	316.03	464.48	229.39	46.42	-4.53	0.725
100.00	-4.80	-7.45	0.00	-123.78	0.00	123.78	606.37	303.19	427.31	211.03	51.41	-4.99	0.595
105.00	-4.47	-7.17	0.00	-86.52	0.00	86.52	580.69	290.35	391.69	193.44	56.84	-5.38	0.456
110.00	-3.05	-4.21	0.00	-50.69	0.00	50.69	555.01	277.51	357.63	176.62	62.63	-5.66	0.293
115.00	-2.83	-3.93	0.00	-29.62	0.00	29.62	529.33	264.67	325.11	160.56	68.67	-5.86	0.190
120.00	0.00	-3.62	0.00	-9.95	0.00	9.95	503.65	251.83	294.14	145.27	74.85	-5.96	0.069

Pole :	302500	Code: ANSI/TIA-222 Rev G	
Location :	Brst Bristol, CT	Struct Class : II	
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	



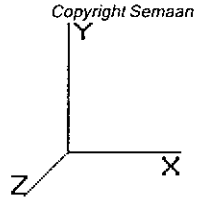
Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 23 Iterations

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)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	15.364	16.90	212.57	1.000	0.00	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	15.364	16.90	207.60	1.200 *	0.00	5.00	13.216	15.86	428.8	0.0	708.6
10.00		1.00	0.70	15.364	16.90	202.62	1.200 *	0.00	5.00	12.903	15.48	418.7	0.0	699.6
15.00		1.00	0.70	15.364	16.90	197.65	1.200 *	0.00	5.00	12.590	15.11	408.5	0.0	690.7
20.00		1.00	0.70	15.364	16.90	192.68	1.200 *	0.00	5.00	12.277	14.73	398.4	0.0	681.8
25.00		1.00	0.70	15.364	16.90	187.71	1.200 *	0.00	5.00	11.965	14.36	388.2	0.0	672.8
30.00		1.00	0.70	15.377	16.91	182.81	1.200 *	0.00	5.00	11.652	13.98	378.4	0.0	663.9
32.00	Appertunance(s)	1.00	0.71	15.663	17.23	182.50	1.200 *	0.00	2.00	4.573	5.49	151.3	0.0	263.0
35.00		1.00	0.73	16.070	17.67	181.80	1.200 *	0.00	3.00	6.766	8.12	229.6	0.0	391.9
37.58	Bot - Section 2	1.00	0.74	16.400	18.04	181.00	1.200 *	0.00	2.58	5.736	6.88	198.7	0.0	334.9
40.00		1.00	0.76	16.694	18.36	180.11	1.200 *	0.00	2.42	5.382	6.46	189.7	0.0	444.7
42.00	Top - Section 1	1.00	0.77	16.929	18.62	179.29	1.200 *	0.00	2.00	4.398	5.28	157.3	0.0	365.1
45.00		1.00	0.78	17.266	18.99	181.08	1.200 *	0.00	3.00	6.504	7.80	237.2	0.0	361.8
50.00		1.00	0.81	17.793	19.57	178.48	1.200 *	0.00	5.00	10.590	12.71	398.0	0.0	596.7
55.00		1.00	0.83	18.285	20.11	175.50	1.200 *	0.00	5.00	10.277	12.33	396.9	0.0	588.9
60.00		1.00	0.85	18.745	20.61	172.20	1.200 *	0.00	5.00	9.964	11.96	394.5	0.0	581.1
65.00		1.00	0.87	19.179	21.09	168.63	1.200 *	0.00	5.00	9.651	11.58	390.9	0.0	573.2
70.00		1.00	0.89	19.589	21.54	164.81	1.200 *	0.00	5.00	9.338	11.21	386.3	0.0	565.4
75.00		1.00	0.91	19.979	21.97	160.77	1.200 *	0.00	5.00	9.025	10.83	380.8	0.0	557.6
76.17	Bot - Section 3	1.00	0.91	20.067	22.07	159.80	1.200 *	0.00	1.17	2.061	2.47	87.3	0.0	129.0
80.00	Top - Section 2	1.00	0.92	20.351	22.38	156.53	1.200 *	0.00	3.83	6.776	8.13	291.2	0.0	565.0
85.00		1.00	0.94	20.706	22.77	155.12	1.200 *	0.00	5.00	8.562	10.27	374.4	0.0	516.3
87.75	Reinf. Top	1.00	0.95	20.896	22.98	152.63	1.200 *	0.00	2.75	4.576	5.49	201.9	0.0	281.1
90.00		1.00	0.95	21.047	23.15	150.57	1.200 *	0.00	2.25	3.673	4.41	163.3	0.0	78.2
95.00		1.00	0.97	21.375	23.51	145.87	1.200 *	0.00	5.00	7.936	9.52	358.3	0.0	168.8
100.0	Appertunance(s)	1.00	0.98	21.690	23.86	141.04	1.000 *	0.00	5.00	7.624	7.62	291.0	0.0	162.1
105.0		1.00	1.00	21.995	24.19	136.07	1.000	0.00	5.00	7.311	7.31	283.0	0.0	155.4
110.0	Appertunance(s)	1.00	1.01	22.289	24.51	130.99	1.000	0.00	5.00	6.998	7.00	274.5	0.0	148.6
115.0		1.00	1.02	22.574	24.83	125.80	1.000	0.00	5.00	6.685	6.69	265.6	0.0	141.9
120.0	Appertunance(s)	1.00	1.04	22.850	25.13	120.50	1.000	0.00	5.00	6.372	6.37	256.3	0.0	135.2
* = Cf Adjusted By Linear Load Ra Effect							Totals:		120.00			8,779.2	0.0	12,223.0



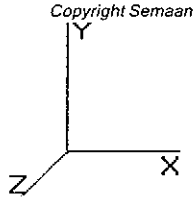
Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 23 Iterations

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)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
32.00	Nokia CS72187.01	1	15.663	17.230	1.00	1.00	1.43	0.000	0.000	39.39	0.00	0.00	18.00
100.0	Kathrein 742 213	3	21.690	23.860	0.62	0.80	9.62	0.000	0.000	367.33	0.00	0.00	59.40
110.0	72" x 12" Panel	3	22.289	24.518	0.60	0.80	15.12	0.000	0.000	593.14	0.00	0.00	121.50
110.0	T-Arm w/ working Pla	3	22.289	24.518	0.50	0.75	19.45	0.000	0.000	762.88	0.00	0.00	675.00
110.0	48" x 12" Panel	9	22.289	24.518	0.60	0.80	30.24	0.000	0.000	1,186.29	0.00	0.00	243.00
120.0	Powerwave LGP	6	23.171	25.488	0.40	0.80	3.10	0.000	6.000	126.26	0.00	757.55	76.14
120.0	Powerwave 7770.00	6	23.171	25.488	0.60	0.80	21.39	0.000	6.000	872.21	0.00	5,233.26	189.00
120.0	Flat Platform with H	1	22.850	25.135	1.00	1.00	42.40	0.000	0.000	1,705.18	0.00	0.00	1,800.00
120.0	ADC DD1900	6	23.171	25.488	0.40	0.80	3.07	0.000	6.000	125.28	0.00	751.68	65.34
120.0	CSS DUO1417-8670-0	3	23.171	25.488	0.66	0.80	13.12	0.000	6.000	535.18	0.00	3,211.10	114.75
										6,313.14			3,362.13

Pole :	302500	Code: ANSI/TIA-222 Rev G	
Location :	Brst Bristol, CT	Struct Class : II	
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	



Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 23 Iterations

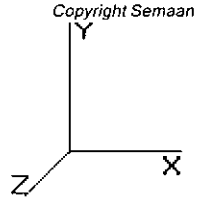
Gust Response Factor : 1.10
Dead Load Factor : 0.90
Wind Load Factor : 1.60

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	1.200	1.98	0.82	0.99	15.364	0.299	0.000	26.77	22.14
5.00	(1) Reinforce Wind Area	Yes	5.00	0.773	7.50	3.13	2.42	15.364	0.299	0.000	65.32	0.00
10.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	15.364	0.306	0.000	26.77	22.14
10.00	(1) Reinforce Wind Area	Yes	5.00	0.773	7.50	3.13	2.42	15.364	0.306	0.000	65.32	0.00
15.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	15.364	0.314	0.000	26.77	22.14
15.00	(1) Reinforce Wind Area	Yes	5.00	0.773	7.50	3.13	2.42	15.364	0.314	0.000	65.32	0.00
20.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	15.364	0.322	0.000	26.77	22.14
20.00	(1) Reinforce Wind Area	Yes	5.00	0.773	7.50	3.13	2.42	15.364	0.322	0.000	65.32	0.00
25.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	15.364	0.330	0.000	26.77	22.14
25.00	(1) Reinforce Wind Area	Yes	5.00	0.773	7.50	3.13	2.42	15.364	0.330	0.000	65.32	0.00
30.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	15.377	0.339	0.000	26.79	22.14
30.00	(1) Reinforce Wind Area	Yes	5.00	0.773	7.50	3.13	2.41	15.377	0.339	0.000	65.35	0.00
32.00	(6) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	15.663	0.345	0.000	10.92	8.85
32.00	(1) Reinforce Wind Area	Yes	2.00	0.766	7.50	1.25	0.96	15.663	0.345	0.000	26.38	0.00
35.00	(6) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	16.070	0.350	0.000	16.80	13.28
35.00	(1) Reinforce Wind Area	Yes	3.00	0.756	7.50	1.88	1.42	16.070	0.350	0.000	40.08	0.00
37.58	(6) 1 5/8" Coax	Yes	2.58	1.200	1.98	0.43	0.51	16.400	0.356	0.000	14.76	11.44
37.58	(1) Reinforce Wind Area	Yes	2.58	0.748	7.50	1.61	1.21	16.400	0.356	0.000	34.87	0.00
40.00	(6) 1 5/8" Coax	Yes	2.42	1.200	1.98	0.40	0.48	16.694	0.361	0.000	14.06	10.70
40.00	(1) Reinforce Wind Area	Yes	2.42	0.742	7.50	1.51	1.12	16.694	0.361	0.000	32.91	0.00
42.00	(6) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	16.929	0.365	0.000	11.80	8.85
42.00	(1) Reinforce Wind Area	Yes	2.00	0.736	7.50	1.25	0.92	16.929	0.365	0.000	27.43	0.00
45.00	(6) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	17.266	0.364	0.000	18.05	13.28
45.00	(1) Reinforce Wind Area	Yes	3.00	0.729	7.50	1.88	1.37	17.266	0.364	0.000	41.55	0.00
50.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	17.793	0.373	0.000	31.00	22.14
50.00	(1) Reinforce Wind Area	Yes	5.00	0.718	7.50	3.13	2.24	17.793	0.373	0.000	70.30	0.00
55.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	18.285	0.384	0.000	31.86	22.14
55.00	(1) Reinforce Wind Area	Yes	5.00	0.709	7.50	3.13	2.21	18.285	0.384	0.000	71.26	0.00
60.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	18.745	0.396	0.000	32.66	22.14
60.00	(1) Reinforce Wind Area	Yes	5.00	0.700	7.50	3.13	2.19	18.745	0.396	0.000	72.15	0.00
65.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	19.179	0.409	0.000	33.42	22.14
65.00	(1) Reinforce Wind Area	Yes	5.00	0.692	7.50	3.13	2.16	19.179	0.409	0.000	72.98	0.00
70.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	19.589	0.423	0.000	34.13	22.14
70.00	(1) Reinforce Wind Area	Yes	5.00	0.685	7.50	3.13	2.14	19.589	0.423	0.000	73.76	0.00
75.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	19.979	0.438	0.000	34.81	22.14
75.00	(1) Reinforce Wind Area	Yes	5.00	0.678	7.50	3.13	2.12	19.979	0.438	0.000	74.49	0.00
76.17	(6) 1 5/8" Coax	Yes	1.17	1.200	1.98	0.19	0.23	20.067	0.447	0.000	8.16	5.17
76.17	(1) Reinforce Wind Area	Yes	1.17	0.676	7.50	0.73	0.49	20.067	0.447	0.000	17.42	0.00
80.00	(6) 1 5/8" Coax	Yes	3.83	1.200	1.98	0.63	0.76	20.351	0.455	0.000	27.19	16.97
80.00	(1) Reinforce Wind Area	Yes	3.83	0.672	7.50	2.40	1.61	20.351	0.455	0.000	57.64	0.00
85.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.83	0.99	20.706	0.461	0.000	36.08	22.14
85.00	(1) Reinforce Wind Area	Yes	5.00	0.666	7.50	3.13	2.08	20.706	0.461	0.000	75.83	0.00
87.75	(6) 1 5/8" Coax	Yes	2.75	1.200	1.98	0.45	0.54	20.896	0.475	0.000	20.02	12.18
87.75	(1) Reinforce Wind Area	Yes	2.75	0.663	7.50	1.72	1.14	20.896	0.475	0.000	41.90	0.00
90.00	(6) 1 5/8" Coax	Yes	2.25	1.200	1.98	0.37	0.45	21.047	0.484	0.000	16.50	9.96
90.00	(1) Reinforce Wind Area	Yes	2.25	0.660	7.50	1.41	0.93	21.047	0.484	0.000	34.40	0.00
95.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	21.375	0.261	0.000	37.24	22.14
95.00	(1) Reinforce Wind Area	Yes	2.00	0.655	7.50	1.25	0.82	21.375	0.261	0.000	30.82	0.00
100.0	(6) 1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	21.690	0.108	1.025	0.00	22.14

Pole :	302500	Code: ANSI/TIA-222 Rev G	
Location :	Brst Bristol, CT	Struct Class : II	
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	



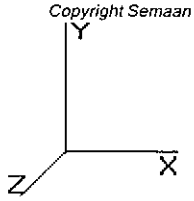
Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 23 Iterations

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

Wind Importance Factor : 1.00

Totals:	1,878.21	442.75

Pole :	302500	Code: ANSI/TIA-222 Rev G	8/11/2008 4:47:26 PM
Location :	Brst Bristol, CT	Struct Class : II	Page: 13
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	



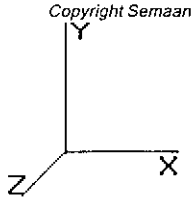
Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 23 Iterations

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	520.94	809.67	0.00	0.00
10.00	510.79	800.73	0.00	0.00
15.00	500.63	791.79	0.00	0.00
20.00	490.48	782.86	0.00	0.00
25.00	480.33	773.92	0.00	0.00
30.00	470.55	764.98	0.00	0.00
32.00	227.98	321.49	0.00	0.00
35.00	286.51	452.15	0.00	0.00
37.58	248.30	386.77	0.00	0.00
40.00	236.72	493.23	0.00	0.00
42.00	196.49	405.23	0.00	0.00
45.00	296.76	422.04	0.00	0.00
50.00	499.25	697.14	0.00	0.00
55.00	499.98	689.31	0.00	0.00
60.00	499.28	681.48	0.00	0.00
65.00	497.32	673.65	0.00	0.00
70.00	494.23	665.82	0.00	0.00
75.00	490.13	657.99	0.00	0.00
76.17	112.92	152.39	0.00	0.00
80.00	376.06	642.03	0.00	0.00
85.00	486.35	616.68	0.00	0.00
87.75	263.86	336.30	0.00	0.00
90.00	214.20	123.35	0.00	0.00
95.00	426.34	269.23	0.00	0.00
100.0	658.36	321.91	0.00	0.00
105.0	283.01	233.65	0.00	0.00
110.0	2,816.84	1,266.43	0.00	0.00
115.0	265.61	175.93	0.00	0.00
120.0	3,620.39	2,414.44	0.00	9,953.59
Totals:	16,970.60	17,822.57	0.00	9,953.59

Pole :	302500	Code:	ANSI/TIA-222 Rev G
Location :	Brst Bristol, CT	Struct Class :	II
Height :	120.0 (ft)	Exposure Category :	B
Shape :	12 Sides	Topographic Category :	1
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev :	0.000 (ft)



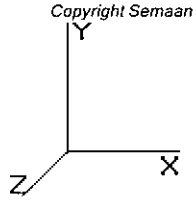
Load Case: 0.9D + 1.6W — 95.00 mph with No Ice (Reduced DL) — 23 Iterations

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	-17.78	-17.01	0.00	-1,377.91	0.00	1,377.91	1,419.98	709.99	1,802.11	890.00	0.00	0.00	0.675
5.00	-16.89	-16.57	0.00	-1,292.84	0.00	1,292.84	1,403.09	701.54	1,738.35	858.50	0.15	-0.27	0.644
10.00	-16.02	-16.13	0.00	-1,209.99	0.00	1,209.99	1,379.79	689.90	1,667.86	823.69	0.58	-0.54	0.615
15.00	-15.16	-15.69	0.00	-1,129.34	0.00	1,129.34	1,345.64	672.82	1,585.98	783.26	1.30	-0.81	0.591
20.00	-14.32	-15.25	0.00	-1,050.89	0.00	1,050.89	1,311.49	655.75	1,506.17	743.84	2.29	-1.07	0.567
25.00	-13.49	-14.82	0.00	-974.63	0.00	974.63	1,277.34	638.67	1,428.41	705.44	3.55	-1.33	0.541
30.00	-12.69	-14.36	0.00	-900.56	0.00	900.56	1,243.19	621.60	1,352.71	668.05	5.08	-1.58	0.516
32.00	-12.35	-14.15	0.00	-871.83	0.00	871.83	1,229.54	614.77	1,323.01	653.39	5.76	-1.68	0.505
35.00	-11.87	-13.88	0.00	-829.36	0.00	829.36	1,209.05	604.52	1,279.08	631.69	6.87	-1.83	0.489
37.58	-11.46	-13.65	0.00	-793.50	0.00	793.50	1,191.40	595.70	1,241.84	613.30	7.90	-1.96	0.476
40.00	-10.96	-13.41	0.00	-760.52	0.00	760.52	1,174.90	587.45	1,207.50	596.34	8.92	-2.08	0.455
42.00	-10.53	-13.22	0.00	-733.70	0.00	733.70	1,036.59	518.29	1,074.39	530.60	9.81	-2.17	0.464
45.00	-10.08	-12.94	0.00	-694.03	0.00	694.03	1,018.64	509.32	1,037.35	512.31	11.22	-2.31	0.447
50.00	-9.36	-12.45	0.00	-629.33	0.00	629.33	988.73	494.36	977.05	482.53	13.76	-2.53	0.417
55.00	-8.65	-11.95	0.00	-567.08	0.00	567.08	958.81	479.40	918.56	453.64	16.53	-2.75	0.388
60.00	-7.95	-11.45	0.00	-507.33	0.00	507.33	928.89	464.45	861.88	425.65	19.52	-2.96	0.357
65.00	-7.27	-10.94	0.00	-450.10	0.00	450.10	898.98	449.49	807.00	398.55	22.73	-3.15	0.327
70.00	-6.60	-10.43	0.00	-395.42	0.00	395.42	869.06	434.53	753.93	372.34	26.13	-3.34	0.296
75.00	-5.95	-9.91	0.00	-343.28	0.00	343.28	839.15	419.57	702.66	347.02	29.72	-3.51	0.265
76.17	-5.79	-9.80	0.00	-331.72	0.00	331.72	832.17	416.08	690.96	341.24	30.58	-3.55	0.258
80.00	-5.16	-9.39	0.00	-294.17	0.00	294.17	709.10	354.55	585.27	289.04	33.48	-3.67	0.239
85.00	-4.56	-8.87	0.00	-247.22	0.00	247.22	683.42	341.71	543.46	268.39	37.40	-3.81	0.207
87.75	-4.23	-8.59	0.00	-222.81	0.00	222.81	683.42	341.71	543.46	268.39	39.62	-3.88	0.190
87.75	-4.23	-8.59	0.00	-222.81	0.00	222.81	683.42	341.71	543.46	268.39	39.62	-3.88	0.873
90.00	-4.08	-8.39	0.00	-203.48	0.00	203.48	657.74	328.87	503.19	248.51	41.46	-3.94	0.826
95.00	-3.77	-7.98	0.00	-161.52	0.00	161.52	632.06	316.03	464.48	229.39	45.87	-4.47	0.711
100.00	-3.45	-7.32	0.00	-121.62	0.00	121.62	606.37	303.19	427.31	211.03	50.80	-4.92	0.583
105.00	-3.20	-7.04	0.00	-85.00	0.00	85.00	580.69	290.35	391.69	193.44	56.16	-5.30	0.446
110.00	-2.19	-4.12	0.00	-49.81	0.00	49.81	555.01	277.51	357.63	176.62	61.87	-5.58	0.286
115.00	-2.03	-3.85	0.00	-29.19	0.00	29.19	529.33	264.67	325.11	160.56	67.81	-5.77	0.186
120.00	0.00	-3.62	0.00	-9.95	0.00	9.95	503.65	251.83	294.14	145.27	73.92	-5.88	0.069

Pole :	302500	Code: ANSI/TIA-222 Rev G	8/11/2008 4:47:27 PM
Location :	Brst Bristol, CT	Struct Class : II	Page: 15
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	

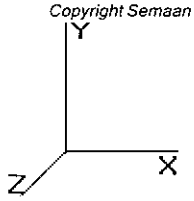


Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 23 Iterations

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)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	4.256	4.682	0.000	1.200		0.00	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	4.256	4.682	0.000	1.200	*	2.07	5.00	14.941	17.93	83.9	433.1	1,266.5
10.00		1.00	0.70	4.256	4.682	0.000	1.200	*	2.21	5.00	14.752	17.70	82.9	455.8	1,277.3
15.00		1.00	0.70	4.256	4.682	0.000	1.200	*	2.31	5.00	14.516	17.42	81.5	465.1	1,274.7
20.00		1.00	0.70	4.256	4.682	0.000	1.200	*	2.37	5.00	14.259	17.11	80.1	468.5	1,266.2
25.00		1.00	0.70	4.256	4.682	0.000	1.200	*	2.43	5.00	13.991	16.79	78.6	468.5	1,254.2
30.00		1.00	0.70	4.260	4.686	0.000	1.200	*	2.47	5.00	13.715	16.46	77.1	466.1	1,240.0
32.00	Appertunance(s)	1.00	0.71	4.339	4.773	0.000	1.200	*	2.49	2.00	5.404	6.48	30.9	185.9	492.1
35.00		1.00	0.73	4.451	4.897	0.000	1.200	*	2.51	3.00	8.023	9.63	47.1	277.3	733.0
37.58	Bot - Section 2	1.00	0.74	4.543	4.997	0.000	1.200	*	2.53	2.58	6.826	8.19	40.9	237.5	626.5
40.00		1.00	0.76	4.625	5.087	0.000	1.200	*	2.54	2.42	6.408	7.69	39.1	224.4	763.5
42.00	Top - Section 1	1.00	0.77	4.689	5.158	0.000	1.200	*	2.56	2.00	5.252	6.30	32.5	184.7	626.9
45.00		1.00	0.78	4.783	5.261	0.000	1.200	*	2.57	3.00	7.793	9.35	49.2	274.8	690.4
50.00		1.00	0.81	4.929	5.422	0.000	1.200	*	2.60	5.00	12.761	15.31	83.0	451.1	1,135.4
55.00		1.00	0.83	5.065	5.572	0.000	1.200	*	2.63	5.00	12.469	14.96	83.4	443.5	1,117.3
60.00		1.00	0.85	5.193	5.712	0.000	1.200	*	2.65	5.00	12.176	14.61	83.5	435.2	1,098.6
65.00		1.00	0.87	5.313	5.844	0.000	1.200	*	2.67	5.00	11.881	14.26	83.3	426.5	1,079.5
70.00		1.00	0.89	5.426	5.969	0.000	1.200	*	2.69	5.00	11.584	13.90	83.0	417.4	1,059.9
75.00		1.00	0.91	5.534	6.088	0.000	1.200	*	2.71	5.00	11.287	13.54	82.5	407.8	1,039.9
76.17	Bot - Section 3	1.00	0.91	5.559	6.115	0.000	1.200	*	2.71	1.17	2.589	3.11	19.0	94.6	240.6
80.00	Top - Section 2	1.00	0.92	5.637	6.201	0.000	1.200	*	2.73	3.83	8.521	10.23	63.4	310.2	978.2
85.00		1.00	0.94	5.736	6.309	0.000	1.200	*	2.74	5.00	10.852	13.02	82.2	394.4	971.4
87.75	Reinf. Top	1.00	0.95	5.788	6.367	0.000	1.200	*	2.75	2.75	5.839	7.01	44.6	213.8	527.3
90.00		1.00	0.95	5.830	6.413	0.000	1.200	*	2.76	2.25	4.710	5.65	36.2	172.8	277.0
95.00		1.00	0.97	5.921	6.513	0.000	1.200	*	2.77	5.00	10.252	12.30	80.1	373.2	598.3
100.0	Appertunance(s)	1.00	0.98	6.008	6.609	0.000	1.200	*	2.79	5.00	9.951	11.94	78.9	362.3	578.4
105.0		1.00	1.00	6.093	6.702	0.000	1.200		2.80	5.00	9.650	11.58	77.6	351.1	558.2
110.0	Appertunance(s)	1.00	1.01	6.174	6.792	0.000	1.200		2.82	5.00	9.348	11.22	76.2	339.7	537.9
115.0		1.00	1.02	6.253	6.879	0.000	1.200		2.83	5.00	9.046	10.85	74.7	328.1	517.3
120.0	Appertunance(s)	1.00	1.04	6.330	6.963	0.000	1.200		2.84	5.00	8.743	10.49	73.0	316.4	496.6
* = Cf Adjusted By Linear Load Ra Effect								Totals:		120.00			1,928.6	9,979.5	24,322.9



Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 23 Iterations

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

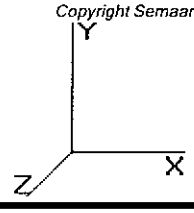
Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
32.00	Nokia CS72187.01	1	4.339	4.773	1.00	1.00	1.43	0.000	0.000	6.82	0.00	0.00	86.25
100.0	Kathrein 742 213	3	6.008	6.609	0.62	0.80	13.62	0.000	0.000	90.05	0.00	0.00	729.50
110.0	72" x 12" Panel	3	6.174	6.792	0.60	0.80	18.56	0.000	0.000	126.08	0.00	0.00	1,207.83
110.0	T-Arm w/ working Pla	3	6.174	6.792	0.50	0.75	39.41	0.000	0.000	267.65	0.00	0.00	1,723.15
110.0	48" x 12" Panel	9	6.174	6.792	0.60	0.80	36.32	0.000	0.000	246.70	0.00	0.00	2,528.24
120.0	Powerwave LGP	6	6.419	7.060	0.40	0.80	4.59	0.000	6.000	32.43	0.00	194.59	516.63
120.0	Powerwave 7770.00	6	6.419	7.060	0.60	0.80	26.56	0.000	6.000	187.51	0.00	1,125.08	1,774.47
120.0	Flat Platform with H	1	6.330	6.963	1.00	1.00	76.65	0.000	0.000	533.71	0.00	0.00	4,271.09
120.0	ADC DD1900	6	6.419	7.060	0.40	0.80	4.82	0.000	6.000	34.03	0.00	204.17	3.02
120.0	CSS DUO1417-8670-0	3	6.419	7.060	0.66	0.80	15.00	0.000	6.000	105.94	0.00	635.64	1,074.62
										1,630.91			13,914.80

Pole :	302500	Code: ANSI/TIA-222 Rev G	
Location :	Brst Bristol, CT	Struct Class : II	
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	



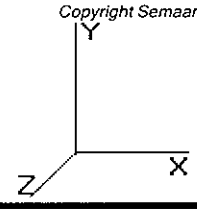
Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 23 Iterations

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

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	1.200	1.98	2.55	3.06	4.256	0.299	0.000	14.33	161.15
5.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	4.85	5.82	4.256	0.299	0.000	27.25	26.18
10.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.67	3.21	4.256	0.306	0.000	15.02	171.90
10.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	4.97	5.97	4.256	0.306	0.000	27.94	30.07
15.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.75	3.30	4.256	0.314	0.000	15.45	178.68
15.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	5.05	6.06	4.256	0.314	0.000	28.37	32.61
20.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.81	3.37	4.256	0.322	0.000	15.77	183.73
20.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	5.11	6.13	4.256	0.322	0.000	28.69	34.54
25.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.85	3.42	4.256	0.330	0.000	16.02	187.79
25.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	5.15	6.18	4.256	0.330	0.000	28.94	36.12
30.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	2.89	3.47	4.260	0.339	0.000	16.24	191.19
30.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	5.19	6.23	4.260	0.339	0.000	29.17	37.46
32.00	(6) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.16	1.39	4.339	0.345	0.000	6.65	76.97
32.00	(1) Reinforce Wind Area	Yes	2.00	1.200	7.50	2.08	2.50	4.339	0.345	0.000	11.92	15.18
35.00	(6) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.75	2.10	4.451	0.350	0.000	10.30	116.49
35.00	(1) Reinforce Wind Area	Yes	3.00	1.200	7.50	3.13	3.76	4.451	0.350	0.000	18.41	23.18
37.58	(6) 1 5/8" Coax	Yes	2.58	1.200	1.98	1.52	1.82	4.543	0.356	0.000	9.10	101.02
37.58	(1) Reinforce Wind Area	Yes	2.58	1.200	7.50	2.71	3.25	4.543	0.356	0.000	16.22	20.25
40.00	(6) 1 5/8" Coax	Yes	2.42	1.200	1.98	1.43	1.71	4.625	0.361	0.000	8.70	95.10
40.00	(1) Reinforce Wind Area	Yes	2.42	1.200	7.50	2.54	3.04	4.625	0.361	0.000	15.49	19.18
42.00	(6) 1 5/8" Coax	Yes	2.00	1.200	1.98	1.18	1.42	4.689	0.365	0.000	7.33	79.09
42.00	(1) Reinforce Wind Area	Yes	2.00	1.200	7.50	2.10	2.52	4.689	0.365	0.000	13.02	16.03
45.00	(6) 1 5/8" Coax	Yes	3.00	1.200	1.98	1.78	2.14	4.783	0.364	0.000	11.27	119.46
45.00	(1) Reinforce Wind Area	Yes	3.00	1.200	7.50	3.16	3.80	4.783	0.364	0.000	19.98	24.37
50.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.00	3.60	4.929	0.373	0.000	19.50	201.22
50.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	5.30	6.36	4.929	0.373	0.000	34.46	41.49
55.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.02	3.62	5.065	0.384	0.000	20.17	203.17
55.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	5.32	6.38	5.065	0.384	0.000	35.55	42.29
60.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.04	3.64	5.193	0.396	0.000	20.81	204.98
60.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	5.34	6.40	5.193	0.396	0.000	36.58	43.03
65.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.05	3.67	5.313	0.409	0.000	21.42	206.66
65.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	5.35	6.43	5.313	0.409	0.000	37.55	43.72
70.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.07	3.69	5.426	0.423	0.000	22.00	208.23
70.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	5.37	6.45	5.426	0.423	0.000	38.47	44.38
75.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.09	3.70	5.534	0.438	0.000	22.55	209.71
75.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	5.39	6.46	5.534	0.438	0.000	39.35	44.99
76.17	(6) 1 5/8" Coax	Yes	1.17	1.200	1.98	0.72	0.87	5.559	0.447	0.000	5.29	49.01
76.17	(1) Reinforce Wind Area	Yes	1.17	1.200	7.50	1.26	1.51	5.559	0.447	0.000	9.23	10.53
80.00	(6) 1 5/8" Coax	Yes	3.83	1.200	1.98	2.38	2.85	5.637	0.455	0.000	17.69	161.85
80.00	(1) Reinforce Wind Area	Yes	3.83	1.200	7.50	4.14	4.97	5.637	0.455	0.000	30.81	34.94
85.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.12	3.74	5.736	0.461	0.000	23.59	212.43
85.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	5.42	6.50	5.736	0.461	0.000	41.00	46.13
87.75	(6) 1 5/8" Coax	Yes	2.75	1.200	1.98	1.72	2.06	5.788	0.475	0.000	13.12	117.22
87.75	(1) Reinforce Wind Area	Yes	2.75	1.200	7.50	2.98	3.58	5.788	0.475	0.000	22.79	25.53
90.00	(6) 1 5/8" Coax	Yes	2.25	1.200	1.98	1.41	1.69	5.830	0.484	0.000	10.83	96.16
90.00	(1) Reinforce Wind Area	Yes	2.25	1.200	7.50	2.44	2.93	5.830	0.484	0.000	18.80	21.00
95.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	3.14	3.77	5.921	0.261	0.000	24.55	214.88
95.00	(1) Reinforce Wind Area	Yes	2.00	1.200	7.50	2.18	2.61	5.921	0.261	0.000	17.01	18.87
100.0	(6) 1 5/8" Coax	Yes	5.00	0.000	1.98	3.15	0.00	6.008	0.108	1.025	0.00	216.03

Pole :	302500	Code:	ANSI/TIA-222 Rev G
Location :	Brst Bristol, CT	Struct Class :	II
Height :	120.0 (ft)	Exposure Category :	B
Shape :	12 Sides	Topographic Category :	1
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev :	0.000 (ft)

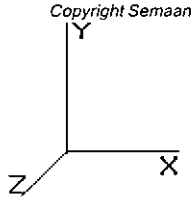


Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 23 Iterations

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

Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

Totals:	994.67	4,696.14



Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 23 Iterations

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

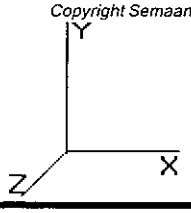
Ice Dead Load Factor : 1.00

Wind Importance Factor : 1.00
Ice Importance Factor : 1.00

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	125.51	1,559.10	0.00	0.00
10.00	125.84	1,584.55	0.00	0.00
15.00	125.37	1,591.28	0.00	0.00
20.00	124.56	1,589.74	0.00	0.00
25.00	123.56	1,583.41	0.00	0.00
30.00	122.53	1,573.92	0.00	0.00
32.00	56.34	712.60	0.00	0.00
35.00	75.85	935.32	0.00	0.00
37.58	66.25	801.65	0.00	0.00
40.00	63.30	928.19	0.00	0.00
42.00	52.86	763.81	0.00	0.00
45.00	80.44	896.87	0.00	0.00
50.00	136.99	1,482.47	0.00	0.00
55.00	139.09	1,467.14	0.00	0.00
60.00	140.84	1,451.03	0.00	0.00
65.00	142.28	1,434.24	0.00	0.00
70.00	143.44	1,416.87	0.00	0.00
75.00	144.35	1,398.97	0.00	0.00
76.17	33.52	324.48	0.00	0.00
80.00	111.92	1,255.01	0.00	0.00
85.00	146.75	1,334.35	0.00	0.00
87.75	80.52	727.46	0.00	0.00
90.00	65.88	441.11	0.00	0.00
95.00	121.68	936.42	0.00	0.00
100.0	168.97	1,628.28	0.00	0.00
105.0	77.61	662.60	0.00	0.00
110.0	716.61	6,101.47	0.00	0.00
115.0	74.66	562.68	0.00	0.00
120.0	966.67	8,181.79	0.00	2,159.49
Totals:	4,554.22	45,326.80	0.00	2,159.49

Pole :	302500	Code: ANSI/TIA-222 Rev G	8/11/2008 4:47:28 PM
Location :	Brst Bristol, CT	Struct Class : II	Page: 20
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	



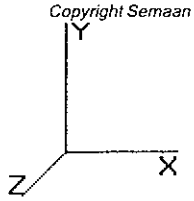
Load Case: 1.2D + 1.0Di + 1.0Wi — 50.00 mph with 1.25 in Radial Ice — 23 Iterations

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	-45.32	-4.59	0.00	-399.48	0.00	399.48	1,419.98	709.99	1,802.11	890.00	0.00	0.00	0.211
5.00	-43.76	-4.52	0.00	-376.55	0.00	376.55	1,403.09	701.54	1,738.35	858.50	0.04	-0.08	0.203
10.00	-42.17	-4.45	0.00	-353.95	0.00	353.95	1,379.79	689.90	1,667.86	823.69	0.17	-0.16	0.195
15.00	-40.57	-4.37	0.00	-331.71	0.00	331.71	1,345.64	672.82	1,585.98	783.26	0.38	-0.24	0.188
20.00	-38.98	-4.29	0.00	-309.84	0.00	309.84	1,311.49	655.75	1,506.17	743.84	0.67	-0.31	0.181
25.00	-37.39	-4.21	0.00	-288.38	0.00	288.38	1,277.34	638.67	1,428.41	705.44	1.04	-0.39	0.174
30.00	-35.81	-4.11	0.00	-267.34	0.00	267.34	1,243.19	621.60	1,352.71	668.05	1.49	-0.46	0.166
32.00	-35.10	-4.07	0.00	-259.13	0.00	259.13	1,229.54	614.77	1,323.01	653.39	1.69	-0.49	0.163
35.00	-34.16	-4.01	0.00	-246.92	0.00	246.92	1,209.05	604.52	1,279.08	631.69	2.01	-0.54	0.159
37.58	-33.36	-3.95	0.00	-236.57	0.00	236.57	1,191.40	595.70	1,241.84	613.30	2.31	-0.58	0.154
40.00	-32.43	-3.90	0.00	-227.01	0.00	227.01	1,174.90	587.45	1,207.50	596.34	2.61	-0.61	0.148
42.00	-31.66	-3.86	0.00	-219.22	0.00	219.22	1,036.59	518.29	1,074.39	530.60	2.88	-0.64	0.152
45.00	-30.76	-3.80	0.00	-207.65	0.00	207.65	1,018.64	509.32	1,037.35	512.31	3.29	-0.68	0.146
50.00	-29.28	-3.67	0.00	-188.67	0.00	188.67	988.73	494.36	977.05	482.53	4.04	-0.75	0.137
55.00	-27.81	-3.55	0.00	-170.29	0.00	170.29	958.81	479.40	918.56	453.64	4.86	-0.81	0.128
60.00	-26.36	-3.41	0.00	-152.56	0.00	152.56	928.89	464.45	861.88	425.65	5.75	-0.88	0.119
65.00	-24.92	-3.27	0.00	-135.50	0.00	135.50	898.98	449.49	807.00	398.55	6.70	-0.93	0.109
70.00	-23.50	-3.13	0.00	-119.14	0.00	119.14	869.06	434.53	753.93	372.34	7.71	-0.99	0.100
75.00	-22.10	-2.97	0.00	-103.51	0.00	103.51	839.15	419.57	702.66	347.02	8.77	-1.04	0.090
76.17	-21.78	-2.94	0.00	-100.05	0.00	100.05	832.17	416.08	690.96	341.24	9.03	-1.05	0.088
80.00	-20.53	-2.82	0.00	-88.78	0.00	88.78	709.10	354.55	585.27	289.04	9.89	-1.09	0.082
85.00	-19.19	-2.66	0.00	-74.69	0.00	74.69	683.42	341.71	543.46	268.39	11.05	-1.13	0.072
87.75	-18.47	-2.57	0.00	-67.38	0.00	67.38	683.42	341.71	543.46	268.39	11.71	-1.16	0.067
87.75	-18.47	-2.57	0.00	-67.38	0.00	67.38	683.42	341.71	543.46	268.39	11.71	-1.16	0.289
90.00	-18.02	-2.52	0.00	-61.60	0.00	61.60	657.74	328.87	503.19	248.51	12.26	-1.17	0.275
95.00	-17.08	-2.42	0.00	-49.00	0.00	49.00	632.06	316.03	464.48	229.39	13.58	-1.33	0.241
100.00	-15.45	-2.25	0.00	-36.88	0.00	36.88	606.37	303.19	427.31	211.03	15.05	-1.47	0.200
105.00	-14.79	-2.18	0.00	-25.63	0.00	25.63	580.69	290.35	391.69	193.44	16.65	-1.58	0.158
110.00	-8.71	-1.30	0.00	-14.73	0.00	14.73	555.01	277.51	357.63	176.62	18.36	-1.67	0.099
115.00	-8.15	-1.21	0.00	-8.23	0.00	8.23	529.33	264.67	325.11	160.56	20.14	-1.72	0.067
120.00	0.00	-0.97	0.00	-2.16	0.00	2.16	503.65	251.83	294.14	145.27	21.96	-1.75	0.015

Pole :	302500	Code: ANSI/TIA-222 Rev G	8/11/2008 4:47:28 PM
Location :	Brst Bristol, CT	Struct Class : II	Page: 21
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	



Load Case: 1.2D + 1.0E — Dead Load with Seismic — 0 Iterations

Gust Response Factor : 1.10		Sds : 0.26	Ss : 0.25
Dead Load Factor : 1.20	Seismic Load Factor : 1.00	Sd1 : 0.10	S1 : 0.06
Wind Load Factor : 0.00	Structure Frequency : 0.2633	SA : 0.03	Seismic Importance Factor : 1.00

Total Segment Forces (Factored)

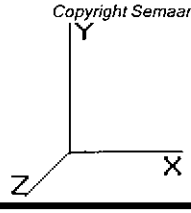
R : 1.50

Seg Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)
0.00		0.00	0.00	0.00	0.00	0.00
5.00		416.19	0.00	0.04	0.02	15.64
10.00		406.26	0.01	0.06	0.03	20.21
15.00		396.33	0.03	0.08	0.04	23.21
20.00		386.40	0.05	0.10	0.05	27.55
25.00		376.46	0.08	0.13	0.05	34.79
30.00		366.53	0.12	0.18	0.05	45.46
32.00	Appertunance(s)	228.43	0.13	0.20	0.05	31.86
35.00		212.77	0.16	0.24	0.06	35.13
37.58	Bot - Section 2	180.35	0.19	0.29	0.06	34.07
40.00		314.73	0.21	0.33	0.06	66.72
42.00	Top - Section 1	257.17	0.23	0.37	0.07	59.46
45.00		179.32	0.27	0.43	0.08	46.55
50.00		291.91	0.33	0.55	0.09	88.49
55.00		283.21	0.40	0.66	0.11	96.02
60.00		274.51	0.47	0.77	0.13	100.07
65.00		265.81	0.55	0.85	0.15	100.40
70.00		257.11	0.64	0.90	0.17	96.91
75.00		248.40	0.74	0.91	0.19	89.70
76.17	Bot - Section 3	56.71	0.76	0.91	0.19	20.14
80.00	Top - Section 2	343.30	0.84	0.88	0.21	113.35
85.00		202.50	0.95	0.80	0.23	57.87
87.75	Reinf. Top	108.19	1.01	0.74	0.25	27.82
90.00		86.84	1.06	0.69	0.27	20.19
95.00		187.56	1.18	0.57	0.31	33.53
100.0	Appertunance(s)	264.69	1.31	0.47	0.37	36.28
105.0		172.62	1.45	0.47	0.47	20.92
110.0	Appertunance(s)	2459.75	1.59	0.63	0.61	352.02
115.0		157.68	1.74	1.09	0.83	33.13
120.0	Appertunance(s)	2644.91	1.89	1.98	1.14	859.21
	Totals:	12,026.63				2,586.70

Total Wind : 16,977.8

Seismic Base Shear Is Less Than 50% Of Wind Force - Analysis Not Required

Pole :	302500	Code: ANSI/TIA-222 Rev G	8/11/2008 4:47:28 PM
Location :	Brst Bristol, CT	Struct Class : II	Page: 22
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	



Load Case: 0.9D + 1.0E — Dead Load with Seismic (Reduced DL) — 0 Iterations

Gust Response Factor : 1.10		Sds : 0.26	Ss : 0.25
Dead Load Factor : 0.90	Seismic Load Factor : 1.00	Sd1 : 0.10	S1 : 0.06
Wind Load Factor : 0.00	Structure Frequency : 0.2633	SA : 0.03	Seismic Importance Factor : 1.00

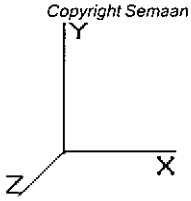
Total Segment Forces (Factored)

R : 1.50

Seg Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)
0.00		0.00	0.00	0.00	0.00	0.00
5.00		416.19	0.00	0.04	0.02	15.64
10.00		406.26	0.01	0.06	0.03	20.21
15.00		396.33	0.03	0.08	0.04	23.21
20.00		386.40	0.05	0.10	0.05	27.55
25.00		376.46	0.08	0.13	0.05	34.79
30.00		366.53	0.12	0.18	0.05	45.46
32.00	Appertunance(s)	228.43	0.13	0.20	0.05	31.86
35.00		212.77	0.16	0.24	0.06	35.13
37.58	Bot - Section 2	180.35	0.19	0.29	0.06	34.07
40.00		314.73	0.21	0.33	0.06	66.72
42.00	Top - Section 1	257.17	0.23	0.37	0.07	59.46
45.00		179.32	0.27	0.43	0.08	46.55
50.00		291.91	0.33	0.55	0.09	88.49
55.00		283.21	0.40	0.66	0.11	96.02
60.00		274.51	0.47	0.77	0.13	100.07
65.00		265.81	0.55	0.85	0.15	100.40
70.00		257.11	0.64	0.90	0.17	96.91
75.00		248.40	0.74	0.91	0.19	89.70
76.17	Bot - Section 3	56.71	0.76	0.91	0.19	20.14
80.00	Top - Section 2	343.30	0.84	0.88	0.21	113.35
85.00		202.50	0.95	0.80	0.23	57.87
87.75	Reinf. Top	108.19	1.01	0.74	0.25	27.82
90.00		86.84	1.06	0.69	0.27	20.19
95.00		187.56	1.18	0.57	0.31	33.53
100.0	Appertunance(s)	264.69	1.31	0.47	0.37	36.28
105.0		172.62	1.45	0.47	0.47	20.92
110.0	Appertunance(s)	2459.75	1.59	0.63	0.61	352.02
115.0		157.68	1.74	1.09	0.83	33.13
120.0	Appertunance(s)	2644.91	1.89	1.98	1.14	859.21
	Totals:	12,026.63				2,586.70

Total Wind : 16,977.8

Seismic Base Shear Is Less Than 50% Of Wind Force - Analysis Not Required



Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 22 Iterations

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

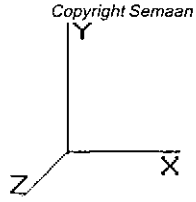
Shaft Segment Forces (Factored)

Seg Top Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.70	6.129	6.742	134.25	1.000	0.00	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.70	6.129	6.742	131.11	1.200 *	0.00	5.00	13.216	15.86	106.9	0.0	750.2
10.00		1.00	0.70	6.129	6.742	127.97	1.200 *	0.00	5.00	12.903	15.48	104.4	0.0	740.3
15.00		1.00	0.70	6.129	6.742	124.83	1.200 *	0.00	5.00	12.590	15.11	101.9	0.0	730.3
20.00		1.00	0.70	6.129	6.742	121.69	1.200 *	0.00	5.00	12.277	14.73	99.3	0.0	720.4
25.00		1.00	0.70	6.129	6.742	118.55	1.200 *	0.00	5.00	11.965	14.36	96.8	0.0	710.5
30.00		1.00	0.70	6.134	6.747	115.46	1.200 *	0.00	5.00	11.652	13.98	94.3	0.0	700.5
32.00	Appertunance(s)	1.00	0.71	6.248	6.873	115.26	1.200 *	0.00	2.00	4.573	5.49	37.7	0.0	277.4
35.00		1.00	0.73	6.410	7.051	114.82	1.200 *	0.00	3.00	6.766	8.12	57.2	0.0	413.2
37.58	Bot - Section 2	1.00	0.74	6.542	7.196	114.31	1.200 *	0.00	2.58	5.736	6.88	49.5	0.0	352.9
40.00		1.00	0.76	6.659	7.325	113.75	1.200 *	0.00	2.42	5.382	6.46	47.3	0.0	476.2
42.00	Top - Section 1	1.00	0.77	6.753	7.428	113.23	1.200 *	0.00	2.00	4.398	5.28	39.2	0.0	390.8
45.00		1.00	0.78	6.887	7.576	114.37	1.200 *	0.00	3.00	6.504	7.80	59.1	0.0	379.7
50.00		1.00	0.81	7.098	7.807	112.72	1.200 *	0.00	5.00	10.590	12.71	99.2	0.0	625.9
55.00		1.00	0.83	7.294	8.023	110.84	1.200 *	0.00	5.00	10.277	12.33	98.9	0.0	617.2
60.00		1.00	0.85	7.477	8.225	108.76	1.200 *	0.00	5.00	9.964	11.96	98.3	0.0	608.5
65.00		1.00	0.87	7.650	8.415	106.50	1.200 *	0.00	5.00	9.651	11.58	97.5	0.0	599.8
70.00		1.00	0.89	7.814	8.595	104.09	1.200 *	0.00	5.00	9.338	11.21	96.3	0.0	591.1
75.00		1.00	0.91	7.969	8.766	101.54	1.200 *	0.00	5.00	9.025	10.83	94.9	0.0	582.4
76.17	Bot - Section 3	1.00	0.91	8.005	8.805	100.92	1.200 *	0.00	1.17	2.061	2.47	21.8	0.0	134.6
80.00	Top - Section 2	1.00	0.92	8.118	8.930	98.867	1.200 *	0.00	3.83	6.776	8.13	72.6	0.0	599.4
85.00		1.00	0.94	8.260	9.086	97.971	1.200 *	0.00	5.00	8.562	10.27	93.4	0.0	536.5
87.75	Reinf. Top	1.00	0.95	8.335	9.169	96.404	1.200 *	0.00	2.75	4.576	5.49	50.3	0.0	291.9
90.00		1.00	0.95	8.396	9.235	95.099	1.200 *	0.00	2.25	3.673	4.41	40.7	0.0	86.8
95.00		1.00	0.97	8.526	9.379	92.132	1.200 *	0.00	5.00	7.936	9.52	89.3	0.0	187.6
100.0	Appertunance(s)	1.00	0.98	8.652	9.517	89.078	1.000 *	0.00	5.00	7.624	7.62	72.6	0.0	180.1
105.0		1.00	1.00	8.774	9.651	85.943	1.000	0.00	5.00	7.311	7.31	70.6	0.0	172.6
110.0	Appertunance(s)	1.00	1.01	8.891	9.780	82.733	1.000	0.00	5.00	6.998	7.00	68.4	0.0	165.2
115.0		1.00	1.02	9.005	9.905	79.454	1.000	0.00	5.00	6.685	6.69	66.2	0.0	157.7
120.0	Appertunance(s)	1.00	1.04	9.115	10.02	76.108	1.000	0.00	5.00	6.372	6.37	63.9	0.0	150.2
* = Cf Adjusted By Linear Load Ra Effect							Totals:		360.00			36,144.3	0.0	39,496.2

Pole : 302500
Location : Brst Bristol, CT
Height : 120.0 (ft)
Shape : 12 Sides
Base Dia : 31.00 (in)
Top Dia : 14.41 (in)
Taper : 0.145033 (in/ft)

Code: ANSI/TIA-222 Rev G
Struct Class : II
Exposure Category : B
Topographic Category : 1

Base Elev : 0.000 (ft)



Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 22 Iterations

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

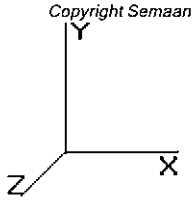
Wind Importance Factor : 1.00

Discrete Appurtenance Segment Forces (Factored)

Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	CaAa Factor	Ka	Total CaAa (sf)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)	Dead Load (lb)
32.00	Nokia CS72187.01	1	6.248	6.873	1.00	1.00	1.43	0.000	0.000	9.82	0.00	0.00	20.00
100.0	Kathrein 742 213	3	8.652	9.517	0.62	0.80	9.62	0.000	0.000	91.58	0.00	0.00	66.00
110.0	72" x 12" Panel	3	8.891	9.780	0.60	0.80	15.12	0.000	0.000	147.88	0.00	0.00	135.00
110.0	T-Arm w/ working Pla	3	8.891	9.780	0.50	0.75	19.45	0.000	0.000	190.19	0.00	0.00	750.00
110.0	48" x 12" Panel	9	8.891	9.780	0.60	0.80	30.24	0.000	0.000	295.75	0.00	0.00	270.00
120.0	Powerwave LGP	6	9.243	10.167	0.40	0.80	3.10	0.000	6.000	31.48	0.00	188.86	84.60
120.0	Powerwave 7770.00	6	9.243	10.167	0.60	0.80	21.39	0.000	6.000	217.45	0.00	1,304.69	210.00
120.0	Flat Platform with H	1	9.115	10.026	1.00	1.00	42.40	0.000	0.000	425.11	0.00	0.00	2,000.00
120.0	ADC DD1900	6	9.243	10.167	0.40	0.80	3.07	0.000	6.000	31.23	0.00	187.40	72.60
120.0	CSS DUO1417-8670-0	3	9.243	10.167	0.66	0.80	13.12	0.000	6.000	133.43	0.00	800.55	127.50
										1,573.91			3,735.70

Pole : 302500
Location : Brst Bristol, CT
Height : 120.0 (ft)
Shape : 12 Sides
Base Dia : 31.00 (in)
Top Dia : 14.41 (in)
Taper : 0.145033 (in/ft)

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



Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 22 Iterations

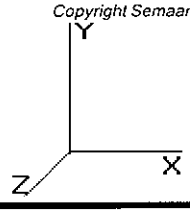
Gust Response Factor : 1.10
Dead Load Factor : 1.00
Wind Load Factor : 1.00

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	1.200	1.98	0.82	0.99	6.129	0.299	0.000	6.67	24.60
5.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	3.13	3.75	6.129	0.299	0.000	25.28	0.00
10.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.306	0.000	6.67	24.60
10.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	3.13	3.75	6.129	0.306	0.000	25.28	0.00
15.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.314	0.000	6.67	24.60
15.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	3.13	3.75	6.129	0.314	0.000	25.28	0.00
20.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.322	0.000	6.67	24.60
20.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	3.13	3.75	6.129	0.322	0.000	25.28	0.00
25.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.129	0.330	0.000	6.67	24.60
25.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	3.13	3.75	6.129	0.330	0.000	25.28	0.00
30.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	6.134	0.339	0.000	6.68	24.60
30.00	(1) Reinforce Wind Area	Yes	5.00	1.200	7.50	3.13	3.75	6.134	0.339	0.000	25.30	0.00
32.00	(6) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	6.248	0.345	0.000	2.72	9.84
32.00	(1) Reinforce Wind Area	Yes	2.00	1.200	7.50	1.25	1.50	6.248	0.345	0.000	10.31	0.00
35.00	(6) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	6.410	0.350	0.000	4.19	14.76
35.00	(1) Reinforce Wind Area	Yes	3.00	1.197	7.50	1.88	2.24	6.410	0.350	0.000	15.82	0.00
37.58	(6) 1 5/8" Coax	Yes	2.58	1.200	1.98	0.43	0.51	6.542	0.356	0.000	3.68	12.71
37.58	(1) Reinforce Wind Area	Yes	2.58	1.185	7.50	1.61	1.91	6.542	0.356	0.000	13.76	0.00
40.00	(6) 1 5/8" Coax	Yes	2.42	1.200	1.98	0.40	0.48	6.659	0.361	0.000	3.51	11.89
40.00	(1) Reinforce Wind Area	Yes	2.42	1.174	7.50	1.51	1.77	6.659	0.361	0.000	12.99	0.00
42.00	(6) 1 5/8" Coax	Yes	2.00	1.200	1.98	0.33	0.40	6.753	0.365	0.000	2.94	9.84
42.00	(1) Reinforce Wind Area	Yes	2.00	1.166	7.50	1.25	1.46	6.753	0.365	0.000	10.83	0.00
45.00	(6) 1 5/8" Coax	Yes	3.00	1.200	1.98	0.50	0.59	6.887	0.364	0.000	4.50	14.76
45.00	(1) Reinforce Wind Area	Yes	3.00	1.155	7.50	1.88	2.16	6.887	0.364	0.000	16.40	0.00
50.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	7.098	0.373	0.000	7.73	24.60
50.00	(1) Reinforce Wind Area	Yes	5.00	1.137	7.50	3.13	3.55	7.098	0.373	0.000	27.75	0.00
55.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	7.294	0.384	0.000	7.94	24.60
55.00	(1) Reinforce Wind Area	Yes	5.00	1.122	7.50	3.13	3.51	7.294	0.384	0.000	28.13	0.00
60.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	7.477	0.396	0.000	8.14	24.60
60.00	(1) Reinforce Wind Area	Yes	5.00	1.108	7.50	3.13	3.46	7.477	0.396	0.000	28.48	0.00
65.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	7.650	0.409	0.000	8.33	24.60
65.00	(1) Reinforce Wind Area	Yes	5.00	1.095	7.50	3.13	3.42	7.650	0.409	0.000	28.81	0.00
70.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	7.814	0.423	0.000	8.51	24.60
70.00	(1) Reinforce Wind Area	Yes	5.00	1.084	7.50	3.13	3.39	7.814	0.423	0.000	29.11	0.00
75.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	7.969	0.438	0.000	8.68	24.60
75.00	(1) Reinforce Wind Area	Yes	5.00	1.073	7.50	3.13	3.35	7.969	0.438	0.000	29.40	0.00
76.17	(6) 1 5/8" Coax	Yes	1.17	1.200	1.98	0.19	0.23	8.005	0.447	0.000	2.03	5.74
76.17	(1) Reinforce Wind Area	Yes	1.17	1.071	7.50	0.73	0.78	8.005	0.447	0.000	6.88	0.00
80.00	(6) 1 5/8" Coax	Yes	3.83	1.200	1.98	0.63	0.76	8.118	0.455	0.000	6.78	18.86
80.00	(1) Reinforce Wind Area	Yes	3.83	1.063	7.50	2.40	2.55	8.118	0.455	0.000	22.75	0.00
85.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.83	0.99	8.260	0.461	0.000	8.99	24.60
85.00	(1) Reinforce Wind Area	Yes	5.00	1.054	7.50	3.13	3.29	8.260	0.461	0.000	29.93	0.00
87.75	(6) 1 5/8" Coax	Yes	2.75	1.200	1.98	0.45	0.54	8.335	0.475	0.000	4.99	13.53
87.75	(1) Reinforce Wind Area	Yes	2.75	1.049	7.50	1.72	1.80	8.335	0.475	0.000	16.54	0.00
90.00	(6) 1 5/8" Coax	Yes	2.25	1.200	1.98	0.37	0.45	8.396	0.484	0.000	4.11	11.07
90.00	(1) Reinforce Wind Area	Yes	2.25	1.046	7.50	1.41	1.47	8.396	0.484	0.000	13.58	0.00
95.00	(6) 1 5/8" Coax	Yes	5.00	1.200	1.98	0.82	0.99	8.526	0.261	0.000	9.29	24.60
95.00	(1) Reinforce Wind Area	Yes	2.00	1.038	7.50	1.25	1.30	8.526	0.261	0.000	12.17	0.00
100.0	(6) 1 5/8" Coax	Yes	5.00	0.000	1.98	0.82	0.00	8.652	0.108	1.025	0.00	24.60

Pole :	302500	Code: ANSI/TIA-222 Rev G	
Location :	Brst Bristol, CT	Struct Class : II	
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	



Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 22 Iterations

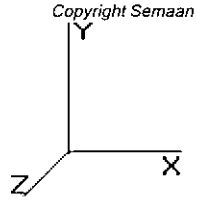
Gust Response Factor : 1.10
Dead Load Factor : 1.00
Wind Load Factor : 1.00

Wind Importance Factor : 1.00

Totals:	652.46	491.94

Pole :	302500
Location :	Brst Bristol, CT
Height :	120.0 (ft)
Shape :	12 Sides
Base Dia :	31.00 (in)
Top Dia :	14.41 (in)
Taper :	0.145033 (in/ft)

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



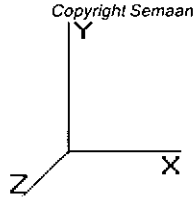
Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 22 Iterations

Gust Response Factor : 1.10
Dead Load Factor : 1.00
Wind Load Factor : 1.00
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	138.87	862.52	0.00	0.00
10.00	136.34	852.59	0.00	0.00
15.00	133.81	842.66	0.00	0.00
20.00	131.28	832.73	0.00	0.00
25.00	128.75	822.80	0.00	0.00
30.00	126.32	812.86	0.00	0.00
32.00	60.57	342.36	0.00	0.00
35.00	77.26	480.12	0.00	0.00
37.58	66.97	410.57	0.00	0.00
40.00	63.80	530.09	0.00	0.00
42.00	52.97	435.41	0.00	0.00
45.00	80.03	446.67	0.00	0.00
50.00	134.69	737.49	0.00	0.00
55.00	135.01	728.79	0.00	0.00
60.00	134.97	720.09	0.00	0.00
65.00	134.60	711.39	0.00	0.00
70.00	133.94	702.69	0.00	0.00
75.00	133.03	693.99	0.00	0.00
76.17	30.68	160.67	0.00	0.00
80.00	102.14	684.91	0.00	0.00
85.00	132.28	648.09	0.00	0.00
87.75	71.87	353.26	0.00	0.00
90.00	58.40	137.05	0.00	0.00
95.00	110.77	299.14	0.00	0.00
100.0	164.13	357.67	0.00	0.00
105.0	70.56	259.61	0.00	0.00
110.0	702.26	1,407.14	0.00	0.00
115.0	66.22	195.48	0.00	0.00
120.0	902.59	2,682.71	0.00	2,481.50
Totals:	4,415.11	19,151.56	0.00	2,481.50

Pole :	302500	Code: ANSI/TIA-222 Rev G	8/11/2008 4:47:29 PM
Location :	Brst Bristol, CT	Struct Class : II	Page: 28
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	



Load Case: 1.0D + 1.0W — 60.00 mph Serviceability — 22 Iterations

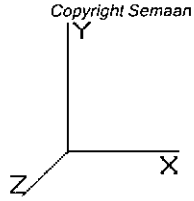
Gust Response Factor : 1.10
Dead Load Factor : 1.00
Wind Load Factor : 1.00

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	-19.15	-4.43	0.00	-354.35	0.00	354.35	1,419.98	709.99	1,802.11	890.00	0.00	0.00	0.179
5.00	-18.28	-4.31	0.00	-332.22	0.00	332.22	1,403.09	701.54	1,738.35	858.50	0.04	-0.07	0.171
10.00	-17.42	-4.19	0.00	-310.67	0.00	310.67	1,379.79	689.90	1,667.86	823.69	0.15	-0.14	0.163
15.00	-16.58	-4.08	0.00	-289.71	0.00	289.71	1,345.64	672.82	1,585.98	783.26	0.33	-0.21	0.157
20.00	-15.74	-3.96	0.00	-269.33	0.00	269.33	1,311.49	655.75	1,506.17	743.84	0.59	-0.28	0.150
25.00	-14.91	-3.84	0.00	-249.54	0.00	249.54	1,277.34	638.67	1,428.41	705.44	0.91	-0.34	0.143
30.00	-14.10	-3.72	0.00	-230.32	0.00	230.32	1,243.19	621.60	1,352.71	668.05	1.30	-0.41	0.136
32.00	-13.75	-3.67	0.00	-222.88	0.00	222.88	1,229.54	614.77	1,323.01	653.39	1.48	-0.43	0.133
35.00	-13.27	-3.59	0.00	-211.88	0.00	211.88	1,209.05	604.52	1,279.08	631.69	1.76	-0.47	0.129
37.58	-12.86	-3.53	0.00	-202.59	0.00	202.59	1,191.40	595.70	1,241.84	613.30	2.03	-0.50	0.126
40.00	-12.33	-3.47	0.00	-194.06	0.00	194.06	1,174.90	587.45	1,207.50	596.34	2.29	-0.53	0.120
42.00	-11.89	-3.42	0.00	-187.13	0.00	187.13	1,036.59	518.29	1,074.39	530.60	2.52	-0.56	0.122
45.00	-11.44	-3.34	0.00	-176.87	0.00	176.87	1,018.64	509.32	1,037.35	512.31	2.88	-0.59	0.118
50.00	-10.71	-3.21	0.00	-160.17	0.00	160.17	988.73	494.36	977.05	482.53	3.53	-0.65	0.110
55.00	-9.98	-3.08	0.00	-144.12	0.00	144.12	958.81	479.40	918.56	453.64	4.24	-0.70	0.102
60.00	-9.25	-2.94	0.00	-128.74	0.00	128.74	928.89	464.45	861.88	425.65	5.00	-0.76	0.094
65.00	-8.54	-2.80	0.00	-114.04	0.00	114.04	898.98	449.49	807.00	398.55	5.82	-0.81	0.086
70.00	-7.84	-2.66	0.00	-100.03	0.00	100.03	869.06	434.53	753.93	372.34	6.69	-0.85	0.078
75.00	-7.15	-2.52	0.00	-86.71	0.00	86.71	839.15	419.57	702.66	347.02	7.61	-0.90	0.070
76.17	-6.99	-2.49	0.00	-83.77	0.00	83.77	832.17	416.08	690.96	341.24	7.83	-0.91	0.068
80.00	-6.30	-2.38	0.00	-74.21	0.00	74.21	709.10	354.55	585.27	289.04	8.57	-0.94	0.063
85.00	-5.65	-2.24	0.00	-62.29	0.00	62.29	683.42	341.71	543.46	268.39	9.57	-0.97	0.055
87.75	-5.30	-2.17	0.00	-56.12	0.00	56.12	683.42	341.71	543.46	268.39	10.14	-0.99	0.050
87.75	-5.30	-2.17	0.00	-56.12	0.00	56.12	683.42	341.71	543.46	268.39	10.14	-0.99	0.226
90.00	-5.16	-2.11	0.00	-51.24	0.00	51.24	657.74	328.87	503.19	248.51	10.61	-1.01	0.214
95.00	-4.86	-2.01	0.00	-40.67	0.00	40.67	632.06	316.03	464.48	229.39	11.73	-1.14	0.185
100.00	-4.50	-1.84	0.00	-30.64	0.00	30.64	606.37	303.19	427.31	211.03	12.99	-1.25	0.153
105.00	-4.24	-1.77	0.00	-21.41	0.00	21.41	580.69	290.35	391.69	193.44	14.35	-1.35	0.118
110.00	-2.85	-1.04	0.00	-12.54	0.00	12.54	555.01	277.51	357.63	176.62	15.81	-1.42	0.076
115.00	-2.66	-0.97	0.00	-7.34	0.00	7.34	529.33	264.67	325.11	160.56	17.32	-1.47	0.051
120.00	0.00	-0.90	0.00	-2.48	0.00	2.48	503.65	251.83	294.14	145.27	18.87	-1.49	0.017

Pole :	302500	Code: ANSI/TIA-222 Rev G	
Location :	Brst Bristol, CT	Struct Class : II	
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	



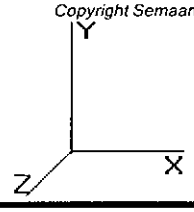
Analysis Summary

	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	17.03	0.00	21.77	0.00	0.00	1390.58	90.00	0.84
0.9D + 1.6W	17.01	0.00	17.78	0.00	0.00	1377.91	90.00	0.83
1.2D + 1.0Di + 1.0Wi	4.59	0.00	45.32	0.00	0.00	399.48	90.00	0.28
1.0D + 1.0W	4.43	0.00	19.15	0.00	0.00	354.35	90.00	0.21

Additional Steel Summary

			Stitch Weld				Upper Terminal Weld				Lower Terminal Weld				Max Member		
Elev From (ft)	Elev To (ft)	Member	Len (in)	Spacing (in)	Size (in)	Fu (ksi)	Moment (ft-kips)	Q (in^3)	Tot I (in^4)	Len (in)	Moment (ft-kips)	Q (in^3)	Tot I (in^4)	Len (in)	Pu (kip)	phi Pn (kip)	Ratio
0.00	87.7	(4) SOL-#20 All Thre	4.00	30.00	0.188	70	226.6	68.0	2,415	9.17	1,390.6	98.3	6,933	28.3	239.1	336.1	0.71

Pole :	302500	Code: ANSI/TIA-222 Rev G	
Location :	Brst Bristol, CT	Struct Class : II	
Height :	120.0 (ft)	Exposure Category : B	
Shape :	12 Sides	Topographic Category : 1	
Base Dia :	31.00 (in)		
Top Dia :	14.41 (in)		
Taper :	0.145033 (in/ft)	Base Elev : 0.000 (ft)	



Base Summary

Reactions

Original Design			Analysis			
Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment (kip-ft)	Axial (kip)	Shear (kip)	Moment Design %
794.00	9.62	10.32	1,390.58	45.32	17.03	175.14

Base Plate

Yield (ksi)	Thick (in)	Width (in)	Style	Poly Sides	Clip Len (in)	Effective Len (in)	Mu (kip-in)	Phi Mn (kip-in)	Ratio
60.0	2.125	44.590	Polygon	12	0.00	12.460	842.01	759.55	1.11

Anchor Bolts

Bolt Circle	Num Bolts	Bolt Type	Bolt Dia (in)	Yield (ksi)	Ultimate (ksi)	Arrange	Cluster Dist (in)	Start Angle (deg)	Compression Force (kip)	Compression Allow (kip)	Compression Ratio	Tension Force (kip)	Tension Allow (kip)	Tension Ratio
38.59	08	2.25" 18J	2.25	75.00	100.00	Radial	0.00	0.0	221.87	260.00	0.87	210.54	260.00	0.83

Base/Flange Plate	Plate Type	***Baseplate***	
	Pole Diameter	31	in
	Pole Thickness	0.25	in
	Plate Diameter	44.59	in
	Plate Thickness	2.125	in
	Plate Fy	60	ksi
	Weld Length	0.375	in
	ϕ_s Resistance	1228.47	k-in
	Applied	309.72	k-in
Stiffeners	#	***8***	***Show***
	Thickness	0.625	in
	Length	6	in
	Height	6	in
	Chamfer	0	in
	Offset Angle	0	°
	Fy	60	ksi

Bolts	#	***8***	
	Bolt Circle	38.59	in
	(R)adial / (S)quare	R	
	Diameter	2.25	in
	Hole Diameter	2.375	in
	Type	#18J	
	Fy	75	ksi
	Fu	100	ksi
	ϕ_s Resistance	259.82	k
	Applied	138.73	k
Reinforcement ?	#	***4***	
	DYW. Circle	34	in
	Offset Angle	40	°
	Type	#20	
	Diameter	2.5	in
	Fu	105	ksi
Extra Bolts 0	#	***0***	

Code Rev. ***G***

Moment 1390.6 k-ft

Axial 21.8 k

Date	8/11/2008
Engineer	ESS
Site #	302500
Carrier	Youghiogheny

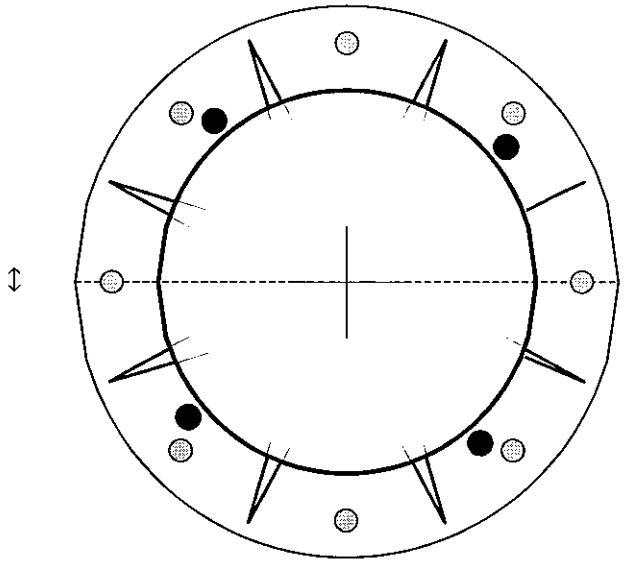


Plate Stress Ratio:

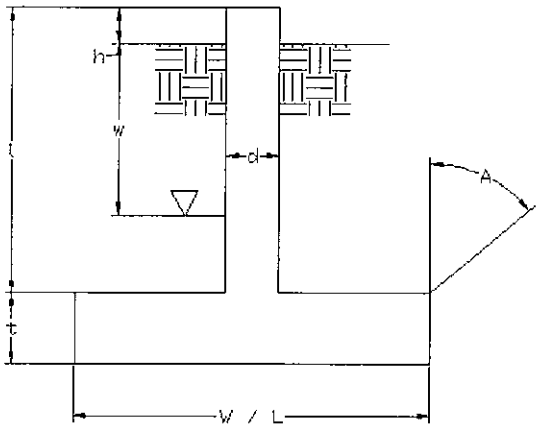
0.25 (Pass)

Bolt Stress Ratio:

0.53 (Pass)

FOUNDATION TYPE: PAD & PIER

Site Name:	Brst Bristol, CT
Site Number:	302500
Engineer:	ESS
Date:	8/11/2008



Design Loads (Factored)

O.T. Moment:	1390.58	k-ft
Compression:	21.77	k
Shear:	17.03	k

Tower Type:	MP	
Code Revision:	G	
Allowable Capacity Increase (Transient Loads):	1.33	
Pedestal Shape - (R)ound / (S)quare	S	
Width of Prismatic Portion of Pedestal (d):	6	ft
Length of Pedestal (l):	6.7	ft
Height of Pedestal above Ground (h):	2.7	ft
Length of Pad (L):	17.5	ft
Width of Pad (W):	18.4	ft
Thickness of Pad (t):	2.5	ft
Depth Below Ground Surface to Water Table (w):	25	ft
Unit Weight of Soil Above Water Table:	110	pcf
Friction Angle of Uplift (A):	25	°
Friction Coefficient:	0.3	
Ultimate Cohesion of Soil:	0	psf
Allowable Concrete Compressive Strength:	3000	psi
Unit Weight of Water:	62.4	pcf
Unit Weight of Concrete:	150	pcf
Ultimate Compressive Bearing Pressure:	16000	psf

Volume of Concrete:	1046.2	ft^3
Volume of Soil:	1426.4	ft^3
Weight of Concrete (Buoyancy Effect Considered):	156.9	k
Weight of Soil (Buoyancy Effect Considered):	156.9	k
Weight of Soil (Buoyancy Effect, w/o Friction Angle Cone):	125.8	k

q_{ult}:	3007.07 psf			
q_{net}:	2292.07 psf			
Eccentricity:	5.08 ft	>	2.92 ft	(L/6)
	Resultant is Outside Middle Third of Pad			
L-Prime:	11.01 ft			

One-Way Shear Check

Top of Concrete to Middle of Bottom Rebar Mat:	27.00	in
Factored Shear at Face of Pier:	245.58	k
Phi*V_n, Concrete 1-way Shear Resistance:	559.01	k

Mat Thickness is Acceptable

Overturning Check

Overturning Moment at Foundation Base:	1547.26	k-ft
Increment	271.03	psf/ft
Lateral Bearing Resistance	91.61	k
Overturning Moment Capacity:	3128.53	k-ft
Total Vertical Load:	304.54	k

Bearing Design Load / Bearing Capacity:	0.19	Acceptable
O.T. Design / O.T. Capacity:	0.66	Acceptable