STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@po.state.ct.us
Web Site: www.state.ct.us/csc/index.htm

March 20, 2001

Kenneth C. Baldwin
Robinson & Cole
280 Trumbull Street
Hartford, CT 06103-3597

RE: **EM-VER-011-010228** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at the Talcott Mountain Science Center for Student Involvement, Inc., Bloomfield, Connecticut. (Docket No. 107)

Dear Attorney Baldwin:

At a public meeting held on March 15, 2001, the Connecticut Siting Council (Council) acknowledged your notice to modify this existing telecommunications facility, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated February 28, 2001. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to an existing facility site that would not increase tower height, extend the boundaries of the tower site, increase noise levels at the tower site boundary by six decibels, and increase the total radio frequencies electromagnetic radiation power density measured at the tower site boundary to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. This facility has also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower.

This decision is under the exclusive jurisdiction of the Council. Any additional change to this facility will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

Mortimer A. Gelston
Chairman

MAG/RKE/laf

c: Honorable Faith McMahon, Mayor, Town of Bloomfield
Mr. Louie Chapman, Jr., Town Manager, Town of Bloomfield
Mr. Thomas B. Hooper, Director of Planning, Town of Bloomfield

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square
New Britain, Connecticut 06051
Phone: (860) 827-2935
Fax: (860) 827-2950

March 7, 2001

Honorable Faith McMahon
Mayor
Town of Bloomfield
Town Hall
800 Bloomfield Avenue
P. O. Box 337
Bloomfield, CT 06002-0337

RE: **EM-VER-011-010228** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at the Talcott Mountain Science Center for Student Involvement, Inc., Bloomfield, Connecticut. (Docket No. 107)

Dear Mayor McMahon:

The Connecticut Siting Council (Council) received this request to modify an existing telecommunications facility, pursuant to Regulations of Connecticut State Agencies Section 16-50j-72.

The Council will consider this item at the next meeting scheduled for March 15, 2001, at 1:30 p.m. in Hearing Room Two, Ten Franklin Square, New Britain, Connecticut.

Please call me or inform the Council if you have any questions or comments regarding this proposal.

Thank you for your cooperation and consideration.

Very truly yours,

Joel M. Rinebold
Executive Director

JMR/RKE/grg

Enclosure: Notice of Intent

c: Mr. Louie Chapman, Jr., Town Manager, Town of Bloomfield
Mr. Thomas B. Hooper, Director of Planning, Town of Bloomfield

ROBINSON & COLE LLP
HARTFORD • STAMFORD • GREENWICH • NEW YORK • BOSTON

LAW OFFICES

280 Trumbull Street
Hartford, CT 06103-3597
860-275-8200
Fax 860-275-8299

Kenneth C. Baldwin
860-275-8345
Internet: kbaldwin@rc.com

February 28, 2001

Via Hand Delivery

Mr. Joel M. Rinebold
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: Notice of Exempt Modification
Siting Council Docket No. 107
Talcott Mountain Science Center for Student Involvement, Inc.
Bloomfield, Connecticut

Dear Mr. Rinebold:

On July 9, 1989, the Siting Council approved Docket No. 107 submitted by Metro Mobile CTS of Hartford, Inc. to permit the shared use of an existing 60-foot tower and related facility at the Talcott Mountain Science Center for Student Involvement, Inc. (the "Science Center") in Bloomfield, Connecticut. A copy of the Council's Decision and Order in Docket No. 107 is attached. The tower is owned and operated by the Science Center and currently supports the WFSB weather dome, at the top, four Cellco panel antennas at the 55-foot level and two, six-foot dish antennas, one at the 35-foot level and the other at the 28-foot level. As a part of its on-going system performance improvement plan, Cellco now intends to remove two of its four panel antennas (Model ALP110-11N) and replace them with two panel antennas (Model ALP-E-6014) at the same height on the tower. The specification for the ALP-E-6014 antenna is attached. No modifications are proposed to any ground-mounted equipment or structures.

Please accept this letter of notification pursuant to R.C.S.A. § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to the Bloomfield Town Manager, Louie Chapman, Jr.

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

1. The replacement of Cellco's panel antennas will not increase the overall height of the existing tower. Cellco's replacement antennas will be mounted at the same level, 55 feet above ground level, on the existing 60-foot tower.

2. The replacement of Cellco's panel antennas on the tower, does not effect any ground level equipment and therefore will not require an extension of the site boundaries.

3. The replacement of Cellco's panel antennas will not increase the noise levels at the existing facility by six decibels or more.

4. The proposed modifications will not result in an increase in the existing radio frequency (RF) power density levels at this site. Updated RF calculations are therefore not performed.

Also enclosed is a structural analysis verifying that the tower is capable of supporting the replacement antennas.

For the foregoing reasons, Cellco respectfully submits that the proposed addition of antennas and equipment at the Science Center facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Kenneth C. Baldwin

KCB/kmd
cc: Louie Chapman, Jr., Bloomfield Town Manager
Sandy M. Carter

An application of Metro Mobile CTS of Hartford, Inc., for a Certificate of Environmental Compatibility and Public Need for cellular telephone antennas and associated equipment in the Town of Bloomfield, Connecticut.	:	Docket No. 107 Connecticut Siting Council 6 July 1989

DECISION AND ORDER

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council finds that the effects associated with the construction, operation, and maintenance of a cellular telephone facility at the proposed Bloomfield site, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not significant either alone or cumulatively with other effects, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by Section 16-50k of the General Statutes of Connecticut (CGS), be issued to Metro Mobile CTS Hartford, Inc., for the construction, operation, and maintenance of a cellular telephone site and associated equipment at the proposed Bloomfield site in Bloomfield, Connecticut.

The facility shall be constructed, operated, and maintained substantially as specified in the Council's record in this matter, and subject to the following conditions:

1. The cellular antennas shall be located on the existing tower no higher than necessary to provide the proposed service, and in no event shall they be attached higher than the 59-foot level of the tower.

2. The facility shall be constructed in accordance with the State of Connecticut Basic Building Code.

3. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of State Agencies. The D&M plan shall include detailed plans for relocation of the proposed building within the leased portion of the parcel to reduce the amount of existing vegetation to be removed, erosion and sediment control, and landscaping at the proposed site. The eastern red cedars shall not be removed without consultation with the Talcott Mountain Science Center for Student Involvement, Inc.

4. The Certificate Holder shall erect a fence, if requested to do so by the Talcott Mountain Science Center for Student Involvement, Inc., and construct a crushed stone accessway to the building.

5. The Certificate Holder shall comply with any future radio frequency (RF) standard, promulgated by State or federal regulatory agencies. Upon the establishment of any new governmental RF standards, the facility granted in this Decision and Order shall be brought into compliance with such standards.

6. Unless otherwise approved by the Council, this Decision and Order shall be void if all construction authorized herein is not completed within three years of the issuance of this Decision and Order, or within three years after the completion of any appeal to this Decision and Order.

Pursuant to Section 15-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below. A notice of issuance shall be published in the Hartford Courant.

By this Decision and Order, the Council disposes of the legal rights, duties, and privileges of each party named or admitted to the proceeding in accordance with section 16-50j-17 of the Regulations of State Agencies.

CERTIFICATION

The undersigned members of the Connecticut Siting Council hereby certify that they have heard this case in Docket No. 107 or read the record thereof, and that we voted as follows:

Dated at New Britain, Connecticut the 6th day of July, 1989.

Council Members	Vote Cast
Gloria Dibble Pond Chairperson	Absent
Commissioner Peter Boucher Designee: Robert A. Pulito	Yes
Commissioner Leslie Carothers Designee: Brian Emerick	Yes
Mortimer A. Gelston	Yes
Harry E. Covey	Yes
Daniel P. Lynch, Jr.	Yes
Paulann H. Sheets	Yes
William H. Smith	Absent
Colin C. Tait	Yes

2856E-2

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

136 Main Street, Suite 401
New Britain, Connecticut 06051
Phone : 827-7682

CERTIFICATE

OF

ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED

Pursuant to section 16-50k of the General Statutes of Connecticut, as amended, the Connecticut Siting Council hereby issues a Certificate of Environmental Compatibility and Public Need to Docket No. 107 - An application of Metro Mobile CTS of Hartford, Inc., for a Certificate of Environmental Compatibility and Public Need for cellular telephone antennas and associated equipment in the Town of Bloomfield, Connecticut. This Certificate is issued in accordance with and subject to the terms and conditions set forth in the Decision and Order of the Council on July 6, 1989.

By order of the Council,

Colin C. Tait, Acting Chairperson

July 6, 1989

02856-5

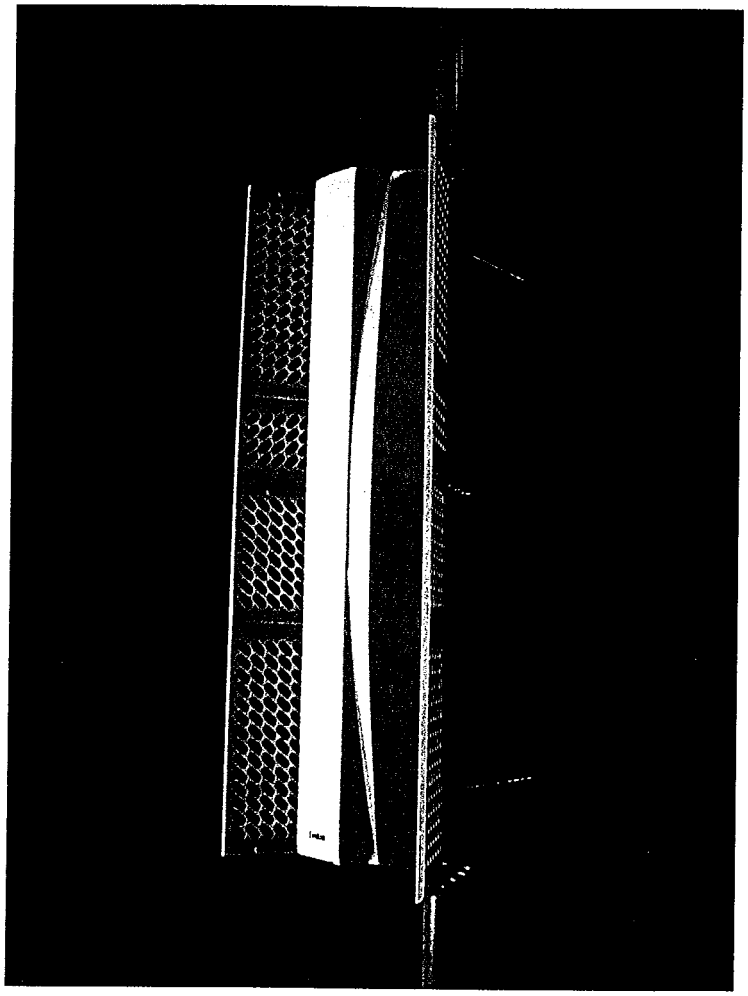
Swedcom

ALP-E 6014-Din

Enhanced Log-Periodic Antenna

Features:

- ❑ Small Size
- ❑ Aesthetically Pleasing
- ❑ Suitable For TDMA/CDMA/GSM
- ❑ High Return Loss
- ❑ Low Intermodulation
- ❑ High FTB
- ❑ Broadbanded
- ❑ Side-lobe Suppression
- ❑ Sturdy Design
- ❑ Down-Tilt Brackets Incl.



Electrical Specification

Frequency Range:	**800-900 MHz**
Impedance:	**50 ohm**
Connector Type:	**7/16 Din**
Return Loss:	**20 dB**
Polarization:	**Vertical**
Gain:	**> 13 dBd**
Front To Back Ratio:	**> 30 dB**
Side-Lobe Suppression:	**18 dB**
Intermodulation (2x25W):	**IM3 > 146 dB**
	IM5 > 153 dB
	IM7/9 > 163 dB
Power Rating:	**500 W**
H-Plane (-3 dB point):	**56 - 60°**
V-Plane (-3 dB point):	**16 - 18°**
Lightning Protection:	**DC Grounded**

Mechanical Specification

Overall Height:	**43 in**	**[1092 mm]**
Width:	**16 in**	**[406 mm]**
Depth:	**11.5 in**	**[290 mm]**
Weight Including Tilt-Brackets:	**27 lbs**	**[12.3 Kg]**
Wind load measured up to:	**150 mph**	**[240 Km/h]**
Wind Area (Side of antenna):	**4.7 sq. ft.**	**[0.44 sq.m]**
Lateral Thrust At 113 mph/ 180Km/h (Worst Case):	**241 lbs**	**[1070 N]**

Materials

Radiating Elements:	**Aluminum**
Extrusion:	**Aluminum**
Radome:	**Grey PVC**
Tilt-Bracket:	**Hot Dip Galvanized Steel**
Antenna Bolts:	**Stainless Steel**

The ALP-E 6014-Din is made in U.S.A.

MANZI ENGINEERING
ANTHONY P. MANZI
REGISTERED PROFESSIONAL ENGINEER

3 CIFRE LANE
PLAISTOW, NH 03865
(603) 382-6219 (978) 960-4147
(603) 382-0523 FAX apmanzi@aol.com

SPECIALIZING IN TELECOMMUNICATIONS
RELATED STRUCTURAL ENGINEERING

January 27, 2001

BELL ATLANTIC MOBIL
20 Alexander Drive
P.O. Box 5029
Wallingford, CT 06492-2430
ATTN. Mark Gauger

Dear Mark:

Per your January 4th request I am providing you with the enclosed analysis of the 60-ft. self-supporting tower at Talcott Mountain, CT. This analysis is based on your request to replace 2 of the existing Swedcom ALP110-11 panels with 2 Swedcom ALP-E-6014 panels. The analysis was done in accordance with the EIA/TIA-222-F "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures". Wind loads were generated for a basic design wind speed of 80 mph as specified for Hartford County.

The tower is a 3-legged structure that currently supports a circular radome containing a weather radar system at the top. It also supports 2 microwave dish antennas and 4 cellular panels. It is made up of a straight 40 ft top section and a sloped 20 ft base section. All pertinent tower information has obtained by field measuring.

The analysis conservatively assumes standard pipe section legs and uses A-36 steel and ASTM A325 bolts.

PROPOSED FINAL CONFIGURATION:

- **2 EXISTING ALP110-11N PANELS ~ 55' AGL**
- **2 NEW (replacement) ALP-E-6014 PANELS ~ 55' AGL**
- **1 EXISTING TOP MOUNTED WEATHER DOME**
- **1 EXISTING 6 FT HIGH PERFORMANCE DISH @ ~ 35' AGL**
- **1 EXISTING 6 FT GRID ANTENNA @ ~ 28' AGL**

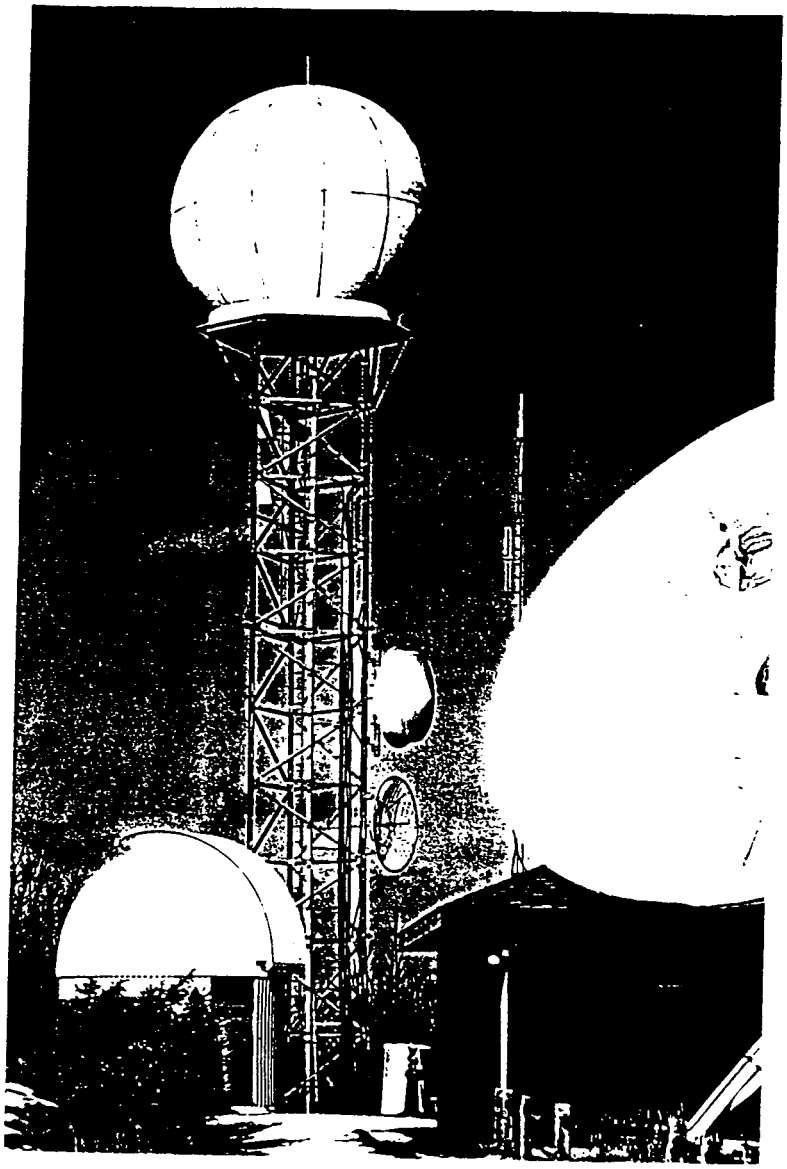
RESULTS: TO MEET ALL REQUIREMENTS OF EIA/TIA-222-F IT IS RECOMMENDED THAT A HORIZONTAL MEMBER BE ADDED TO THE TOWER AT MIDSPAN OF THE SECOND BAY. (SEE ENCLOSED SKETCHES)

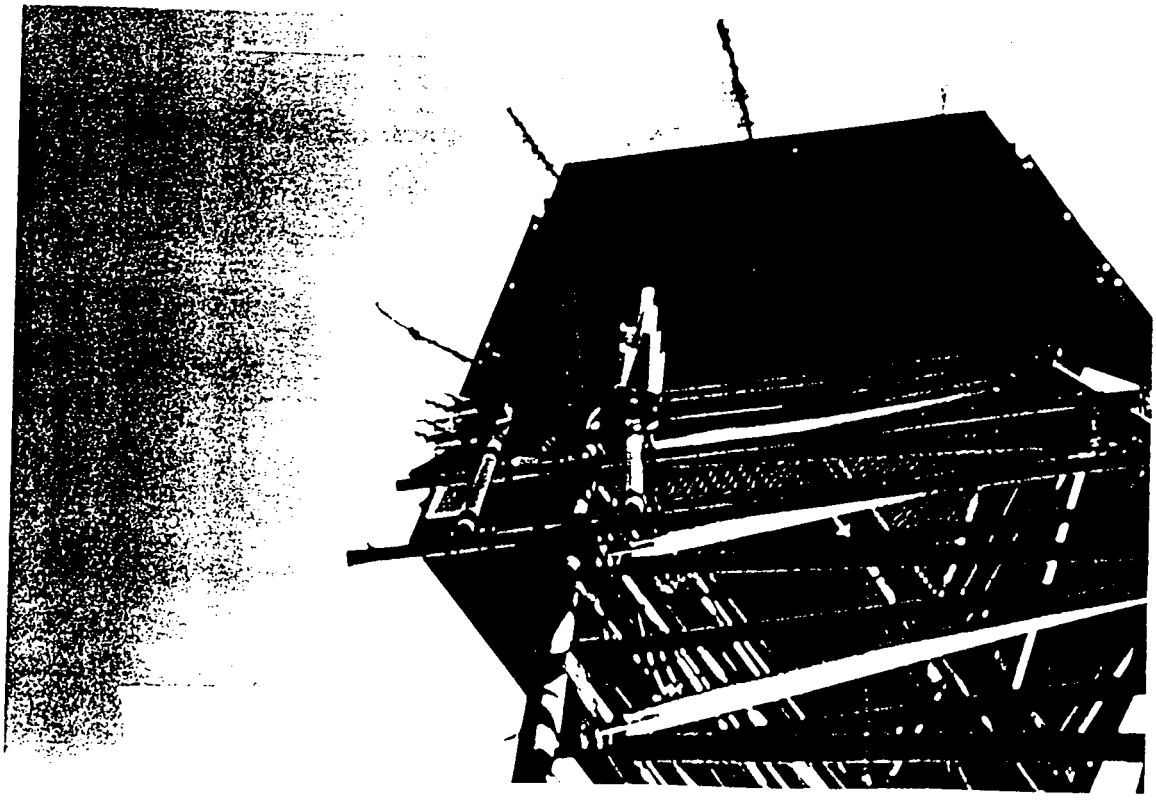
I appreciate this opportunity to assist you and look forward to working with you in the future. If you have any questions please call me at (603) 382-6219.

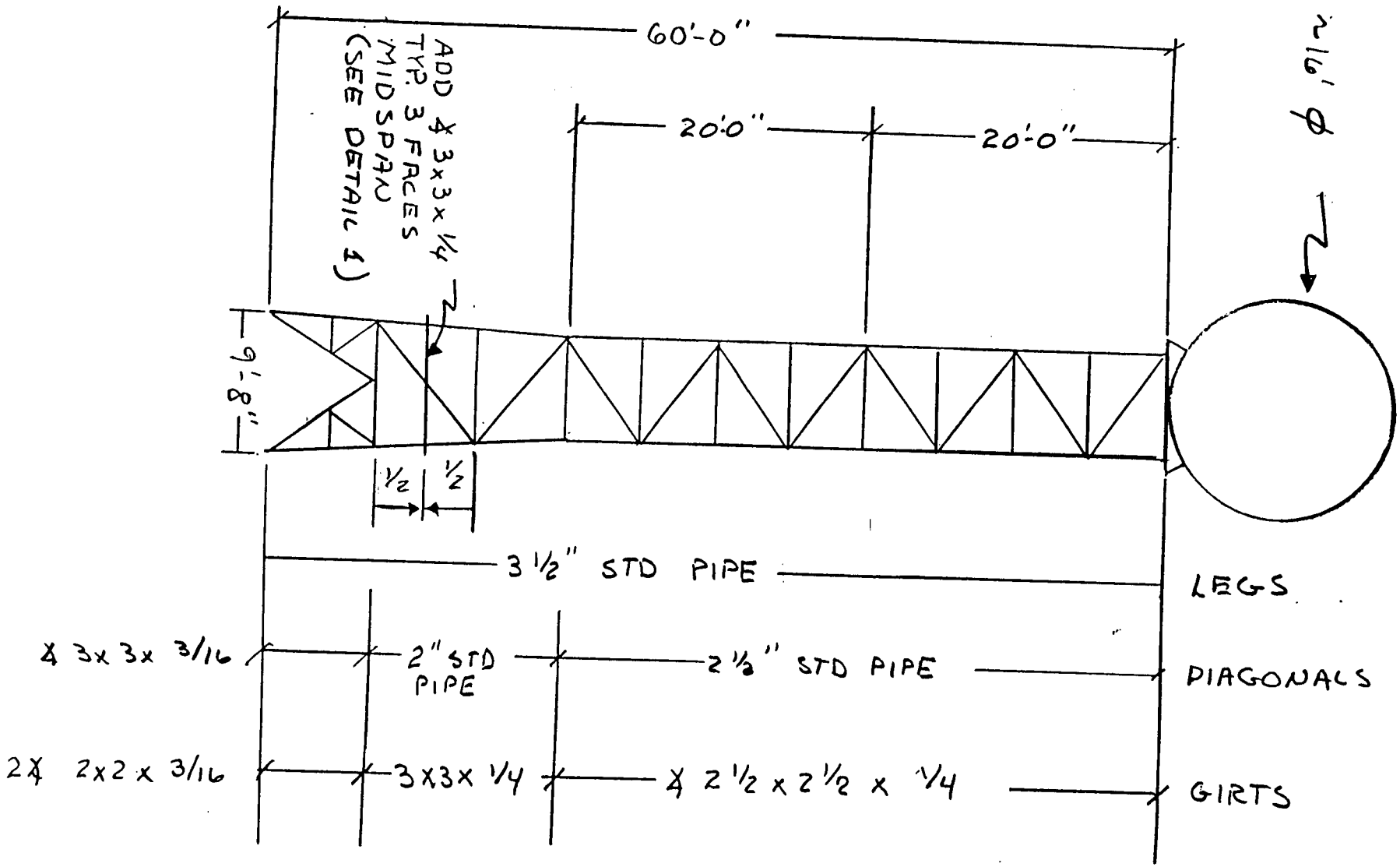
Sincerely,

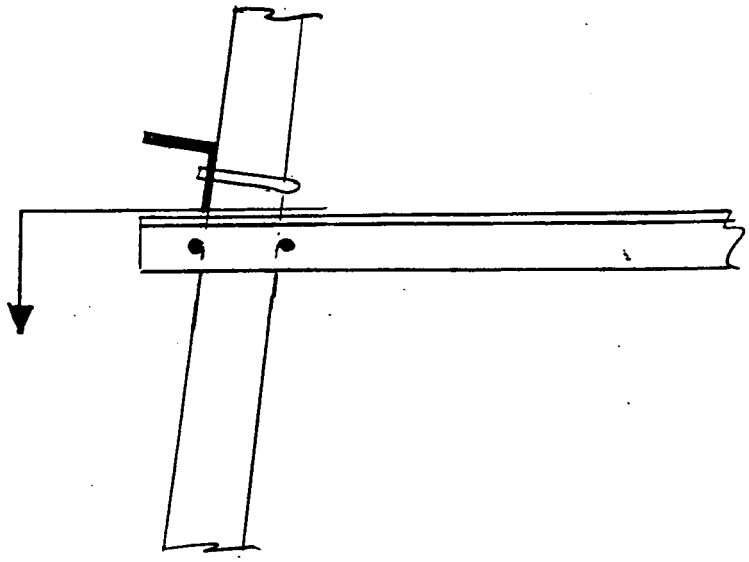
STATE OF CONNECTICUT
ANTHONY P. MANZI
No. 14291
LICENSED
PROFESSIONAL ENGINEER

Anthony P. Manzi
Professional Engineer

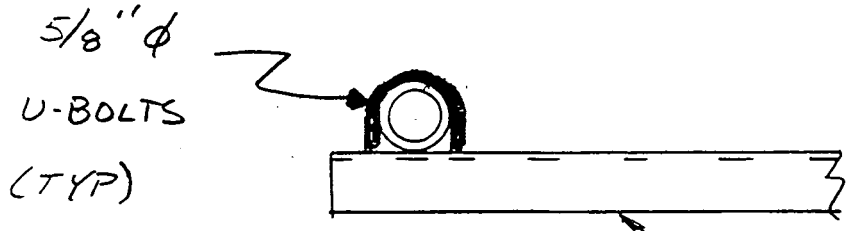








DETAIL 1



∠ 3 x 3 x 1/4 by 10'-0"
FIELD LOCATE &
FIELD DRILL

TALCOTT, CT - TOWER LEGS - JANUARY, 2001

PANEL	TOWER LEG MEMBER SIZE	SPLICE BOLTS *(in)*	AREA *(IN^2)*	r	LENGTH *(in)*	KL/r	Fa *(ksi)*	AXIAL ALLOW *(kips)*	SPLICE *(kips)*	1/3 INC ALLOW *(kips)*	ACTUAL LOAD *(kips)*	COMMENTS
60.00												
	3 1/2" STD PIPE		2.23	1.16	60.00	51.72	18.19	40.57		54.10	12.00	
50.00												
	3 1/2" STD PIPE	4 @ 1" DIAM.	2.23	1.16	60.00	51.72	18.19	40.57		54.10	20.94	
40.00									138.40			
	3 1/2" STD PIPE		2.23	1.16	60.00	51.72	18.19	40.57		54.10	31.57	
30.00												
	3 1/2" STD PIPE	4 @ 1" DIAM.	2.23	1.16	60.00	51.72	18.19	40.57		54.10	44.26	
20.00									138.40			
	3 1/2" STD PIPE		2.23	1.16	72.00	62.07	17.22	38.41		51.21	49.46	
14.00												
	3 1/2" STD PIPE		2.23	1.16	76.00	65.52	16.88	37.65		50.20	54.47	
7.66												
	3 1/2" STD PIPE		2.23	1.16	46.00	39.66	19.21	42.85		57.13	56.54	
0.00												

TALCOTT, CT - DIAGONALS - JANUARY, 2001

PANEL	DIAGONAL MEMBER SIZE	BOLT Diameter (in)	AREA (IN^2)	rz	rx	ry	LENGTH Lz (in)	LENGTH Lx (in)	LENGTH Ly (in)	KL/r (max)	KL/r (design)	Fa (ksi)	AXIAL ALLOW (kips)	1/3 INC ALLOW (kips)	CONNECT ALLOW (kips) shear	ACTUAL LOAD (kips)	COMMENTS
60.00																	
	2 1/2" STD PIPE	0.875	1.70		0.947	0.947		109.20	109.20	115.31	115.31	10.93	18.59	24.78	24.0	8.53	
50.00																	
	2 1/2" STD PIPE	0.875	1.70		0.947	0.947		109.20	109.20	115.31	115.31	10.93	18.59	24.78	24.0	5.34	
40.00																	
	2 1/2" STD PIPE	0.875	1.70		0.947	0.947		109.20	109.20	115.31	115.31	10.93	18.59	24.78	24.0	6.74	
30.00																	
	2" STD PIPE	0.875	1.07		0.787	0.787		119.20	119.20	151.46	151.46	6.51	6.97	9.29	24.0	5.16	
20.00																	
	2" STD PIPE	0.875	1.07		0.787	0.787		127.80	119.20	162.39	162.39	5.66	6.06	8.08	24.0	5.33	
14.00																	
	L 3x3x3/16	0.875	1.09	0.596	0.939	0.939	54.40	108.80	54.40	115.87	117.93	10.57	11.52	15.35	24.0	4.20	
7.66																	
0.00																	

TALCOTT, CT - HORIZONTALS - JANUARY, 2001

PANEL HGT	HORIZONTAL MEMBER SIZE	BOLT Diameter (in)	AREA (IN^2)	rz	rx	ry	LENGTH Lz (in)	LENGTH Lx (in)	LENGTH Ly (in)	KL/r (max)	KL/r (design)	Fa (ksi)	AXIAL ALLOW (kips)	1/3 INC ALLOW (kips)	CONNECT ALLOW (kips) shear	ACTUAL LOAD (kips)	COMMENTS
60.00	L 2 1/2 x 2 1/2 x 1/4	0.500	1.19	0.491	0.769	0.769	91.25	91.25	91.25	185.85	185.85	4.32	5.15	6.86	7.9	4.11	
50.00	L 2 1/2 x 2 1/2 x 1/4	0.500	1.19	0.491	0.769	0.769	91.25	91.25	91.25	185.85	185.85	4.32	5.15	6.86	7.9	0.49	
40.00	L 2 1/2 x 2 1/2 x 1/4	0.500	1.19	0.491	0.769	0.769	91.25	91.25	91.25	185.85	185.85	4.32	5.15	6.86	7.9	0.66	
30.00	L 2 1/2 x 2 1/2 x 1/4	0.500	1.19	0.491	0.769	0.769	91.25	91.25	91.25	185.85	185.85	4.32	5.15	6.86	7.9	0.33	
20.00	L 2 1/2 x 2 1/2 x 1/4	0.500	1.19	0.491	0.769	0.769	91.25	91.25	91.25	185.85	185.85	4.32	5.15	6.86	7.9	1.58	
14.00	L 3x3x1/4	0.500	1.44	0.592	0.930	0.930	98.75	98.75	98.75	166.81	166.81	5.37	7.73	10.30	7.9	0.22	
7.66	2L 2x2x3/16	0.500	1.43		0.617	0.977		53.34	53.34	86.44	86.44	14.62	20.90	27.87	7.9	4.23	

FOUNDATION

MAX LOADS ON PIER

$P_{DOWN} = 61.5^K$

$P_{UP} = 53.3^K$

$V = 6.27^K$

ACCORDING TO SUPPLIED DRAWING,

4 - 1⅛"ϕ ANCHOR BOLTS

UPLIFT CAP = $(4)(.6F_y)(1.33)(\pi D^2/4) = 114.5^K$

WIND LOADS

WEATHER ANTENNA

$\phi \cong 16.0'$

$\mathcal{E}$ HGT $\cong 68'$

FOR BLOOMFIELD, CT (HARTFORD COUNTY)

$V_{BASIC} = 80$ mph

$q_z = .00256\, K_z\, V^2$ $\qquad K_z = (h/33)^{2/7} = 1.229$

$q_z = 20.14$ psf

$F = q_z\, G_H\, (CA)$

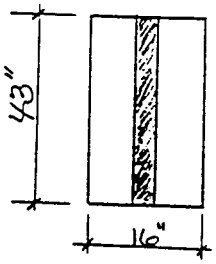
$G_H = 0.65 + 0.60/(h_z/33)^{1/7} = 1.20$

$C = 0.80$

$A = \pi D^2/4 = 201\ Ft^2$

$F = (20.14)(1.20)(0.80)(201) = 3.9^K \sim$ USE 4.0^K

CELLULAR ANTENNAS (ALP-E 6014-DIN)



$A = 4.7\ Ft^2$

$h \cong 55'$ (2) $\rightarrow$ $K_z = (h/33)^{2/7} = 1.16$

$h \cong 50'$ (2) $\qquad C_A = 1.4$

$q_z = .00256\,(1.16)(80)^2 = 19.0$ psf

$P = (19.0\text{psf})(1.4)(4.7)(2) = 0.25^K$, $DW = 0.10^K$

(2) 2-ANTS

WIND ON EXISTING DISHES

DISHFORCE run - TALCOTT, CT (60' SS, 80MPH, NO ICE)(1/01)

WIND LOADING

HEIGHT OF STRUCTURE ft	WIND SPEED MPH	WIND PRESS psf	WIND AZIMUTHS START_AT deg	STOP_AT deg	INTERVAL deg	EXPOS TYPE	No.of ZONES	ICE RAD in
60.00	80.00	.00	.00	360.00	30.00	1	0	.00

Exposure Type :

1 - Kz & Gz from EIA 222 E 2 - Kz=1 ; Gh = 1
3 - Kz & Gh from EIA 222 C 4 - Exposure factors by user

If EXPOSURE TYPE is 4 then user is expected to supply exposure factors in zones. Up to 50 zones may be input. Four values per zone : bottom & top elevations and bottom & top values of Kz*Gh.

ANTENNAS

LOCATION ELEV ft	LOCATION AZI	ANTENNA DIAMETER ft	DIST TO BACK OF DISH DISTANCE ft	DIST TO BACK OF DISH AZIMUTH	MAXIMUM SHLDNG percent	ANTENNA TYPE
35.0	.0	6.00	5.40	.00	.00	hp
28.0	.0	6.00	5.40	.00	.00	grid

ANTENNA FORCES

WIND AZI deg	ANTENNA GEOMETRY ELEV ft	ANTENNA GEOMETRY AZI deg	ANTENNA GEOMETRY SIZE ft	ANTENNA GEOMETRY TYPE	FORCES wrt ANTENNA FRONT kip	FORCES wrt ANTENNA SIDE kip	FORCES wrt ANTENNA TORSN ft-kip	FORCES w.r.t. WIND ALONG kip	FORCES w.r.t. WIND ACROSS kip	FORCES w.r.t. WIND TORSN ft-kip
.0	35.0	.0	6.0	HP	.7	.0	.0	.7	.0	.0
	28.0	.0	6.0	GRID	.3	.0	.0	.3	.0	.0
30.0	35.0	.0	6.0	HP	.6	.1	-.2	.6	-.2	.5
	28.0	.0	6.0	GRID	.2	.1	.1	.3	.0	.9
60.0	35.0	.0	6.0	HP	.5	.2	.0	.4	-.3	1.0
	28.0	.0	6.0	GRID	.1	.2	.2	.2	.0	1.1

90.0	35.0	.0	6.0	HP	-.1	.3	.3	.3	.1	2.1
	28.0	.0	6.0	GRID	.0	.1	.1	.1	.0	.9
120.0	35.0	.0	6.0	HP	-.4	.2	.3	.4	.2	1.4
	28.0	.0	6.0	GRID	-.1	.2	.2	.2	.0	1.1
150.0	35.0	.0	6.0	HP	-.5	.1	.2	.5	.2	.5
	28.0	.0	6.0	GRID	-.2	.1	.1	.3	.0	.7
180.0	35.0	.0	6.0	HP	-.6	.0	.0	.6	.0	.0
	28.0	.0	6.0	GRID	-.3	.0	.0	.3	.0	.0
210.0	35.0	.0	6.0	HP	-.5	-.1	-.2	.5	-.2	-.5
	28.0	.0	6.0	GRID	-.2	-.1	-.1	.3	.0	-.7
240.0	35.0	.0	6.0	HP	-.4	-.2	-.3	.4	-.2	-1.4
	28.0	.0	6.0	GRID	-.1	-.2	-.2	.2	.0	-1.1
270.0	35.0	.0	6.0	HP	-.1	-.3	-.3	.3	-.1	-2.1
	28.0	.0	6.0	GRID	.0	-.1	-.1	.1	.0	-.9
300.0	35.0	.0	6.0	HP	.5	-.2	.0	.4	.3	-1.0
	28.0	.0	6.0	GRID	.1	-.2	-.2	.2	.0	-1.1
330.0	35.0	.0	6.0	HP	.6	-.1	.2	.6	.2	-.5
	28.0	.0	6.0	GRID	.2	-.1	-.1	.3	.0	-.9

MAXIMUM VALUES

ELEV	ALONG kip	WIND AZI	ACROSS kip	WIND AZI	TOTAL kip	WIND AZI	TORSN ft-kip	WIND AZI
	....HORIZONTAL TOWER FORCES wrt					WIND...		
35.0	.7	.0	-.3	60.0	.7	.0	2.1	90.0
28.0	.3	180.0	.0	240.0	.3	180.0	1.1	60.0

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ELAPSED CPU TIME 10.16 SECONDS.

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ORIGINAL DATA FILE : tal-dsh.in

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DISHFORCE run - TALCOTT, CT (60' SS, 80MPH, NO ICE)(1/01)
60,80,0,0,360,30,1,0,0
35,0,6,5.4,0,0,hp
28,0,6,5.4,0,0,grid
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END OF FILE

RESULTS

MAXIMUM MAST DISPLACEMENTS:

ELEV ft	-----DEFLECTIONS (ft)---- NORTH	EAST	DOWN	--TILTS (DEG)-- NORTH	EAST	TWIST DEG
60.0	.209 G	.205 J	.002 F	.295 G	.290 J	.076 D
55.0	.181 G	-.177 D	.002 F	.292 G	.287 J	.078 D
50.0	.155 G	.152 J	.002 F	.283 G	.278 J	.074 D
45.0	.130 G	-.127 D	.002 D	.271 G	.266 J	.073 D
40.0	.106 G	-.103 D	.002 D	.256 G	.251 J	.066 D
35.0	.083 G	-.081 D	.001 D	.236 G	.231 J	.065 D
30.0	.062 G	-.061 D	.001 F	.212 G	.207 J	.056 D
25.0	.044 G	-.042 D	.001 D	.183 G	.179 J	.053 D
20.0	.028 G	.027 J	.001 F	.148 G	-.145 D	-.042 J
14.0	.013 G	-.012 D	.001 D	.104 G	.102 J	.032 D
7.7	.002 G	.002 J	.000 D	.057 G	.056 J	.013 D
.0	.000 A	.000 A	.000 A	.000 A	.000 A	.000 A

MAXIMUM ANTENNA ROTATIONS:

ELEV ft	ANT AZI	ANT TYPE	------BEAM DEFLECTIONS (DEG)------ ROLL	YAW	PITCH	TOTAL
35.0	.0	HP	-.231 J	.065 D	-.236 G	.238 G
28.0	.0	GRID	-.196 J	.055 D	-.200 G	.202 G

MAXIMUM TENSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
60.0	----------		4.11 E	.00 A
	2.95 F	8.53 L		
55.0	----------		2.32 K	.00 A
	8.17 I	4.16 F		
50.0	----------		.48 E	.00 A
	12.18 E	4.91 L		
45.0	----------		.18 A	.00 A
	16.44 I	5.34 F		
40.0	----------		.18 E	.00 A

	21.08 E	5.76 L		
35.0	----------		.60 I	.00 A
	26.28 I	6.61 F		
30.0	----------		.35 F	.00 A
	31.86 E	7.36 L		
25.0	----------		.29 I	.00 A
	37.95 I	7.83 F		
20.0	----------		1.35 E	.00 A
	42.93 E	5.27 L		
14.0	----------		.20 L	.00 A
	47.12 A	5.22 F		
7.7	----------		4.29 L	.00 F
	48.74 A	4.20 L		
.0	----------		.00 A	.00 A

MAXIMUM COMPRESSION IN MAST MEMBERS (kip)

ELEV ft	LEGS	DIAG	HORIZ	BRACE
60.0	----------		-4.11 K	.00 A
	-6.43 L	-8.53 F		
55.0	----------		-2.32 E	.00 A
	-12.00 G	-4.17 L		
50.0	----------		-.49 K	.00 A
	-16.31 K	-4.91 F		
45.0	----------		-.19 G	.00 A
	-20.94 G	-5.34 L		
40.0	----------		-.19 K	.00 A
	-25.91 K	-5.76 F		
35.0	----------		-.66 C	.00 A
	-31.57 G	-6.74 L		
30.0	----------		-.33 L	.00 A
	-37.51 K	-7.25 F		
25.0	----------		-.28 C	.00 A
	-44.26 G	-7.93 L		
20.0	----------		-1.58 K	.00 A
	-49.46 K	-5.16 F		
14.0	----------		-.22 G	.00 A
	-54.47 G	-5.33 L		
7.7	----------		-4.23 F	.00 A
	-56.54 G	-4.20 L		
.0	----------		.00 A	.00 A

MAXIMUM INDIVIDUAL FOUNDATION LOADS: (kip)

LOAD COMPONENTS				TOTAL
NORTH	EAST	DOWN	UPLIFT	SHEAR
6.27 G	-5.18 C	61.49 G	-53.34 A	6.27 G

MAXIMUM TOTAL LOADS ON FOUNDATION : (kip & kip-ft)

HORIZONTAL			DOWN	OVERTURNING			TORSION
NORTH	EAST	TOTAL @ .0		NORTH	EAST	TOTAL @ .0	
10.5 G	10.0 J	10.5 G	10.9 L	485.7 G	-471.8 D	485.7 G	7.8 D

ORIGINAL DATA FILE : talcott2.in

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TOWER - 60' TALCOTT, CT (80mph, no ice)(1/01)
MAST GEOMETRY
s 3 55.0 60.0 7.60 7.60 5.0
z 3 50.0 55.0 7.60 7.60 5.0
s 3 45.0 50.0 7.60 7.60 5.0
z 3 40.0 45.0 7.60 7.60 5.0
s 3 35.0 40.0 7.60 7.60 5.0
z 3 30.0 35.0 7.60 7.60 5.0
s 3 25.0 30.0 7.60 7.60 5.0
z 3 20.0 25.0 7.60 7.60 5.0
s 3 14.0 20.0 8.23 7.60 6.0
z 3 7.67 14.0 8.89 8.23 6.33
a 3 .0 7.67 9.69 8.89 7.67
MEMBER PROPERTIES
LE .0 60.0 2.68 .0 29000. .0
DI 20.0 60.0 1.704 .0 29000. .0
DI 7.67 20.0 1.075 .0 29000. .0
DI .0 7.67 1.09 .0 29000. .0
HO 20.0 60.0 1.187 .0 29000. .0
HO 7.67 20.0 1.437 .0 29000. .0
HO .0 7.67 1.43 .0 29000. .0
load at 0 deg on face V=80 code=EIA 222F
MAST LOADING
D  55. 0 258.7 0 .0843 .0893 .0259 -.062
D  60. 0 258.7 0 .0843 .0893 .0259 -.062
D  45. 0 250.61 0 .0846 .0902 .0277 -.0626
D  55. 0 250.61 0 .0871 .0902 .0277 -.0644
D  40. 0 250.61 0 .082 .0902 .0277 -.0606
D  45. 0 250.61 0 .082 .0902 .0277 -.0606
D  35. 0 250.61 0 .0791 .0902 .0277 -.0585
D  40. 0 250.61 0 .0791 .0902 .0277 -.0585
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 D  30. 0 243.63 0 .0805 .0911 .03 -.06
 D  35. 0 243.63 0 .0805 .0911 .03 -.06
 D  25. 0 239.96 0 .0831 .0916 .0315 -.0621
 D  30. 0 239.96 0 .0831 .0916 .0315 -.0621
 D  20. 0 237.71 0 .0848 .092 .0326 -.0635
 D  25. 0 237.71 0 .0848 .092 .0326 -.0635
 D  14. 0 239.37 0 .0826 .0783 .0331 -.0654
 D  20. 0 239.37 0 .0826 .0783 .0331 -.0654
 D  7.6667 0 242.62 0 .0695 .0742 .0217 -.0437
 D  14. 0 242.62 0 .0695 .0742 .0217 -.0437
 D  0 0 180. 0 .0756 .1137 0 0
 D  7.6667 0 180. 0 .0756 .1137 0 0
c,68.0,0,0,0,4.0,5.0,0,0
c,55.0,4.4,0,0,0.25,0.10,0,0
c,50.0,4.4,0,0,0.25,0.10,0,0
antenna loading
HP      35.00      .00     5.40      .00      .677      .000      .200      .00
GRID    28.00      .00     5.40      .00      .272      .000      .075      .00
 load at 30 deg V=80 code=EIA 222F
 MAST LOADING
 D  55. 0 258.7 30. .0844 .0893 .0259 -.0214
 D  60. 0 258.7 30. .0844 .0893 .0259 -.0214
 D  45. 0 250.61 30. .0847 .0902 .0277 -.0125
 D  55. 0 250.61 30. .0872 .0902 .0277 -.0129
 D  40. 0 250.61 30. .0821 .0902 .0277 -.0121
 D  45. 0 250.61 30. .0821 .0902 .0277 -.0121
 D  35. 0 250.61 30. .0792 .0902 .0277 -.0117
 D  40. 0 250.61 30. .0792 .0902 .0277 -.0117
 D  30. 0 243.63 30. .0806 .0911 .03 -.0043
 D  35. 0 243.63 30. .0806 .0911 .03 -.0043
 D  25. 0 239.96 30. .0832 .0916 .0315 -.0001
 D  30. 0 239.96 30. .0832 .0916 .0315 -.0001
 D  20. 0 237.71 30. .0849 .092 .0326 .0027
 D  25. 0 237.71 30. .0849 .092 .0326 .0027
 D  14. 0 239.37 30. .0828 .0783 .0331 .0009
 D  20. 0 239.37 30. .0828 .0783 .0331 .0009
 D  7.6667 0 242.62 30. .0699 .0742 .0217 -.0017
 D  14. 0 242.62 30. .0699 .0742 .0217 -.0017
 D  0 0 180. 30. .0781 .1137 0 0
 D  7.6667 0 180. 30. .0781 .1137 0 0
c,68.0,0,0,30,4.0,5.0,0,0
c,55.0,4.4,0,30,0.25,0.10,0,0
c,50.0,4.4,0,30,0.25,0.10,0,0
antenna loading
HP      35.00      .00     5.40      .00      .643      .125      .200     -.16
GRID    28.00      .00     5.40      .00      .238      .139      .075      .13
 load at 60 deg V=80 code=EIA 222F
 MAST LOADING
 D  55. 0 258.7 60. .0906 .0893 .0259 .0094
 D  60. 0 258.7 60. .0906 .0893 .0259 .0094
 D  45. 0 250.61 60. .0905 .0902 .0277 .0263
 D  55. 0 250.61 60. .0932 .0902 .0277 .027
 D  40. 0 250.61 60. .0877 .0902 .0277 .0254
 D  45. 0 250.61 60. .0877 .0902 .0277 .0254
 D  35. 0 250.61 60. .0846 .0902 .0277 .0246
 D  40. 0 250.61 60. .0846 .0902 .0277 .0246
 D  30. 0 243.63 60. .0859 .0911 .03 .0393
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 D  35. 0 243.63 60. .0859 .0911 .03 .0393
 D  25. 0 239.96 60. .0885 .0916 .0315 .0487
 D  30. 0 239.96 60. .0885 .0916 .0315 .0487
 D  20. 0 237.71 60. .0902 .092 .0326 .0549
 D  25. 0 237.71 60. .0902 .092 .0326 .0549
 D  14. 0 239.37 60. .0881 .0783 .0331 .0531
 D  20. 0 239.37 60. .0881 .0783 .0331 .0531
 D  7.6667 0 242.62 60. .0743 .0742 .0217 .0312
 D  14. 0 242.62 60. .0743 .0742 .0217 .0312
 D  0 0 180. 60. .0856 .1137 0 0
 D  7.6667 0 180. 60. .0856 .1137 0 0
 c,68.0,0,0,60,4.0,5.0,0,0
 c,55.0,4.4,0,60,0.25,0.10,0,0
 c,50.0,4.4,0,60,0.25,0.10,0,0
 antenna loading
 HP      35.00      .00     5.40      .00      .495      .198      .200     -.02
 GRID    28.00      .00     5.40      .00      .119      .167      .075      .19
  load at 90 deg V=80 code=EIA 222F
  MAST LOADING
 D  55. 0 258.7 90. .0891 .0893 .0259 .0395
 D  60. 0 258.7 90. .0891 .0893 .0259 .0395
 D  45. 0 250.61 90. .0892 .0902 .0277 .0597
 D  55. 0 250.61 90. .0917 .0902 .0277 .0614
 D  40. 0 250.61 90. .0864 .0902 .0277 .0578
 D  45. 0 250.61 90. .0864 .0902 .0277 .0578
 D  35. 0 250.61 90. .0833 .0902 .0277 .0558
 D  40. 0 250.61 90. .0833 .0902 .0277 .0558
 D  30. 0 243.63 90. .0846 .0911 .03 .0739
 D  35. 0 243.63 90. .0846 .0911 .03 .0739
 D  25. 0 239.96 90. .0872 .0916 .0315 .0859
 D  30. 0 239.96 90. .0872 .0916 .0315 .0859
 D  20. 0 237.71 90. .0889 .092 .0326 .094
 D  25. 0 237.71 90. .0889 .092 .0326 .094
 D  14. 0 239.37 90. .0868 .0783 .0331 .0929
 D  20. 0 239.37 90. .0868 .0783 .0331 .0929
 D  7.6667 0 242.62 90. .0724 .0742 .0217 .0571
 D  14. 0 242.62 90. .0724 .0742 .0217 .0571
 D  0 0 180. 90. .0781 .1137 0 0
 D  7.6667 0 180. 90. .0781 .1137 0 0
 c,68.0,0,0,90,4.0,5.0,0,0
 c,55.0,4.4,0,90,0.25,0.10,0,0
 c,50.0,4.4,0,90,0.25,0.10,0,0
 antenna loading
 HP      35.00      .00     5.40      .00     -.068      .323      .200      .31
 GRID    28.00      .00     5.40      .00     -.024      .139      .075      .14
  load at 120 deg V=80 code=EIA 222F
  MAST LOADING
 D  55. 0 258.7 120. .0862 .0893 .0259 .0626
 D  60. 0 258.7 120. .0862 .0893 .0259 .0626
 D  45. 0 250.61 120. .084 .0902 .0277 .0699
 D  55. 0 250.61 120. .0865 .0902 .0277 .0719
 D  40. 0 250.61 120. .0814 .0902 .0277 .0677
 D  45. 0 250.61 120. .0814 .0902 .0277 .0677
 D  35. 0 250.61 120. .0785 .0902 .0277 .0653
 D  40. 0 250.61 120. .0785 .0902 .0277 .0653
 D  30. 0 243.63 120. .0779 .0911 .03 .0726
 D  35. 0 243.63 120. .0779 .0911 .03 .0726
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 D  25. 0 239.96 120. .0791 .0916 .0315 .0783
 D  30. 0 239.96 120. .0791 .0916 .0315 .0783
 D  20. 0 237.71 120. .08 .092 .0326 .0821
 D  25. 0 237.71 120. .08 .092 .0326 .0821
 D  14. 0 239.37 120. .0778 .0783 .0331 .0822
 D  20. 0 239.37 120. .0778 .0783 .0331 .0822
 D  7.6667 0 242.62 120. .0665 .0742 .0217 .052
 D  14. 0 242.62 120. .0665 .0742 .0217 .052
 D  0 0 180. 120. .0756 .1137 0 0
 D  7.6667 0 180. 120. .0756 .1137 0 0
c,68.0,0,0,120,4.0,5.0,0,0
c,55.0,4.4,0,120,0.25,0.10,0,0
c,50.0,4.4,0,120,0.25,0.10,0,0
antenna loading
HP      35.00      .00     5.40      .00     -.396      .209      .200      .32
GRID    28.00      .00     5.40      .00     -.127      .167      .075      .18
 load at 150 deg V=80 code=EIA 222F
 MAST LOADING
 D  55. 0 258.7 150. .0891 .0893 .0259 .0797
 D  60. 0 258.7 150. .0891 .0893 .0259 .0797
 D  45. 0 250.61 150. .0892 .0902 .0277 .09
 D  55. 0 250.61 150. .0917 .0902 .0277 .0926
 D  40. 0 250.61 150. .0864 .0902 .0277 .0872
 D  45. 0 250.61 150. .0864 .0902 .0277 .0872
 D  35. 0 250.61 150. .0833 .0902 .0277 .0841
 D  40. 0 250.61 150. .0833 .0902 .0277 .0841
 D  30. 0 243.63 150. .0846 .0911 .03 .0942
 D  35. 0 243.63 150. .0846 .0911 .03 .0942
 D  25. 0 239.96 150. .0872 .0916 .0315 .1021
 D  30. 0 239.96 150. .0872 .0916 .0315 .1021
 D  20. 0 237.71 150. .0889 .092 .0326 .1073
 D  25. 0 237.71 150. .0889 .092 .0326 .1073
 D  14. 0 239.37 150. .0868 .0783 .0331 .1087
 D  20. 0 239.37 150. .0868 .0783 .0331 .1087
 D  7.6667 0 242.62 150. .0724 .0742 .0217 .0703
 D  14. 0 242.62 150. .0724 .0742 .0217 .0703
 D  0 0 180. 150. .0781 .1137 0 0
 D  7.6667 0 180. 150. .0781 .1137 0 0
c,68.0,0,0,150,4.0,5.0,0,0
c,55.0,4.4,0,150,0.25,0.10,0,0
c,50.0,4.4,0,150,0.25,0.10,0,0
antenna loading
HP      35.00      .00     5.40      .00     -.531      .068      .200      .17
GRID    28.00      .00     5.40      .00     -.246      .114      .075      .12
 load at 180 deg V=80 code=EIA 222F
 MAST LOADING
 D  55. 0 258.7 180. .0881 .0893 .0259 .062
 D  60. 0 258.7 180. .0881 .0893 .0259 .062
 D  45. 0 250.61 180. .0881 .0902 .0277 .0626
 D  55. 0 250.61 180. .0907 .0902 .0277 .0644
 D  40. 0 250.61 180. .0854 .0902 .0277 .0606
 D  45. 0 250.61 180. .0854 .0902 .0277 .0606
 D  35. 0 250.61 180. .0824 .0902 .0277 .0585
 D  40. 0 250.61 180. .0824 .0902 .0277 .0585
 D  30. 0 243.63 180. .0837 .0911 .03 .06
 D  35. 0 243.63 180. .0837 .0911 .03 .06
 D  25. 0 239.96 180. .0863 .0916 .0315 .0621
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 D  30. 0 239.96 180. .0863 .0916 .0315 .0621
 D  20. 0 237.71 180. .088 .092 .0326 .0635
 D  25. 0 237.71 180. .088 .092 .0326 .0635
 D  14. 0 239.37 180. .0859 .0783 .0331 .0654
 D  20. 0 239.37 180. .0859 .0783 .0331 .0654
 D  7.6667 0 242.62 180. .0729 .0742 .0217 .0437
 D  14. 0 242.62 180. .0729 .0742 .0217 .0437
 D  0 0 180. 180. .0856 .1137 0 0
 D  7.6667 0 180. 180. .0856 .1137 0 0
 c,68.0,0,0,180,4.0,5.0,0,0
 c,55.0,4.4,0,180,0.25,0.10,0,0
 c,50.0,4.4,0,180,0.25,0.10,0,0
 antenna loading
 HP     35.00     .00    5.40     .00    -.571     .000     .200     .00
 GRID   28.00     .00    5.40     .00    -.310     .000     .075     .00
  load at 210 deg V=80 code=EIA 222F
  MAST LOADING
 D  55. 0 258.7 210. .0844 .0893 .0259 .0214
 D  60. 0 258.7 210. .0844 .0893 .0259 .0214
 D  45. 0 250.61 210. .0847 .0902 .0277 .0125
 D  55. 0 250.61 210. .0872 .0902 .0277 .0129
 D  40. 0 250.61 210. .0821 .0902 .0277 .0121
 D  45. 0 250.61 210. .0821 .0902 .0277 .0121
 D  35. 0 250.61 210. .0792 .0902 .0277 .0117
 D  40. 0 250.61 210. .0792 .0902 .0277 .0117
 D  30. 0 243.63 210. .0806 .0911 .03 .0043
 D  35. 0 243.63 210. .0806 .0911 .03 .0043
 D  25. 0 239.96 210. .0832 .0916 .0315 .0001
 D  30. 0 239.96 210. .0832 .0916 .0315 .0001
 D  20. 0 237.71 210. .0849 .092 .0326 -.0027
 D  25. 0 237.71 210. .0849 .092 .0326 -.0027
 D  14. 0 239.37 210. .0828 .0783 .0331 -.0009
 D  20. 0 239.37 210. .0828 .0783 .0331 -.0009
 D  7.6667 0 242.62 210. .0699 .0742 .0217 .0017
 D  14. 0 242.62 210. .0699 .0742 .0217 .0017
 D  0 0 180. 210. .0781 .1137 0 0
 D  7.6667 0 180. 210. .0781 .1137 0 0
 c,68.0,0,0,210,4.0,5.0,0,0
 c,55.0,4.4,0,210,0.25,0.10,0,0
 c,50.0,4.4,0,210,0.25,0.10,0,0
 antenna loading
 HP     35.00     .00    5.40     .00    -.531    -.068     .200    -.17
 GRID   28.00     .00    5.40     .00    -.246    -.114     .075    -.12
  load at 240 deg V=80 code=EIA 222F
  MAST LOADING
 D  55. 0 258.7 240. .0868 .0893 .0259 -.0094
 D  60. 0 258.7 240. .0868 .0893 .0259 -.0094
 D  45. 0 250.61 240. .087 .0902 .0277 -.0263
 D  55. 0 250.61 240. .0895 .0902 .0277 -.027
 D  40. 0 250.61 240. .0843 .0902 .0277 -.0254
 D  45. 0 250.61 240. .0843 .0902 .0277 -.0254
 D  35. 0 250.61 240. .0813 .0902 .0277 -.0246
 D  40. 0 250.61 240. .0813 .0902 .0277 -.0246
 D  30. 0 243.63 240. .0827 .0911 .03 -.0393
 D  35. 0 243.63 240. .0827 .0911 .03 -.0393
 D  25. 0 239.96 240. .0853 .0916 .0315 -.0487
 D  30. 0 239.96 240. .0853 .0916 .0315 -.0487
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```
 D  20. 0 237.71 240. .087 .092 .0326 -.0549
 D  25. 0 237.71 240. .087 .092 .0326 -.0549
 D  14. 0 239.37 240. .0848 .0783 .0331 -.0531
 D  20. 0 239.37 240. .0848 .0783 .0331 -.0531
 D  7.6667 0 242.62 240. .0709 .0742 .0217 -.0312
 D  14. 0 242.62 240. .0709 .0742 .0217 -.0312
 D  0 0 180. 240. .0756 .1137 0 0
 D  7.6667 0 180. 240. .0756 .1137 0 0
 c,68.0,0,0,240,4.0,5.0,0,0
 c,55.0,4.4,0,240,0.25,0.10,0,0
 c,50.0,4.4,0,240,0.25,0.10,0,0
 antenna loading
 HP      35.00      .00     5.40      .00     -.396     -.209      .200     -.32
 GRID    28.00      .00     5.40      .00     -.127     -.167      .075     -.18
  load at 270 deg V=80 code=EIA 222F
  MAST LOADING
 D  55. 0 258.7 270. .0891 .0893 .0259 -.0395
 D  60. 0 258.7 270. .0891 .0893 .0259 -.0395
 D  45. 0 250.61 270. .0892 .0902 .0277 -.0597
 D  55. 0 250.61 270. .0917 .0902 .0277 -.0614
 D  40. 0 250.61 270. .0864 .0902 .0277 -.0578
 D  45. 0 250.61 270. .0864 .0902 .0277 -.0578
 D  35. 0 250.61 270. .0833 .0902 .0277 -.0558
 D  40. 0 250.61 270. .0833 .0902 .0277 -.0558
 D  30. 0 243.63 270. .0846 .0911 .03 -.0739
 D  35. 0 243.63 270. .0846 .0911 .03 -.0739
 D  25. 0 239.96 270. .0872 .0916 .0315 -.0859
 D  30. 0 239.96 270. .0872 .0916 .0315 -.0859
 D  20. 0 237.71 270. .0889 .092 .0326 -.094
 D  25. 0 237.71 270. .0889 .092 .0326 -.094
 D  14. 0 239.37 270. .0868 .0783 .0331 -.0929
 D  20. 0 239.37 270. .0868 .0783 .0331 -.0929
 D  7.6667 0 242.62 270. .0724 .0742 .0217 -.0571
 D  14. 0 242.62 270. .0724 .0742 .0217 -.0571
 D  0 0 180. 270. .0781 .1137 0 0
 D  7.6667 0 180. 270. .0781 .1137 0 0
 c,68.0,0,0,270,4.0,5.0,0,0
 c,55.0,4.4,0,270,0.25,0.10,0,0
 c,50.0,4.4,0,270,0.25,0.10,0,0
 antenna loading
 HP      35.00      .00     5.40      .00     -.068     -.323      .200     -.31
 GRID    28.00      .00     5.40      .00     -.024     -.139      .075     -.14
  load at 300 deg V=80 code=EIA 222F
  MAST LOADING
 D  55. 0 258.7 300. .09 .0893 .0259 -.0626
 D  60. 0 258.7 300. .09 .0893 .0259 -.0626
 D  45. 0 250.61 300. .0876 .0902 .0277 -.0699
 D  55. 0 250.61 300. .0901 .0902 .0277 -.0719
 D  40. 0 250.61 300. .0848 .0902 .0277 -.0677
 D  45. 0 250.61 300. .0848 .0902 .0277 -.0677
 D  35. 0 250.61 300. .0818 .0902 .0277 -.0653
 D  40. 0 250.61 300. .0818 .0902 .0277 -.0653
 D  30. 0 243.63 300. .0811 .0911 .03 -.0726
 D  35. 0 243.63 300. .0811 .0911 .03 -.0726
 D  25. 0 239.96 300. .0823 .0916 .0315 -.0783
 D  30. 0 239.96 300. .0823 .0916 .0315 -.0783
 D  20. 0 237.71 300. .0832 .092 .0326 -.0821
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 D  25. 0 237.71 300. .0832 .092 .0326 -.0821
 D  14. 0 239.37 300. .0811 .0783 .0331 -.0822
 D  20. 0 239.37 300. .0811 .0783 .0331 -.0822
 D  7.6667 0 242.62 300. .0699 .0742 .0217 -.052
 D  14. 0 242.62 300. .0699 .0742 .0217 -.052
 D  0 0 180. 300. .0856 .1137 0 0
 D  7.6667 0 180. 300. .0856 .1137 0 0
 c,68.0,0,0,300,4.0,5.0,0,0
 c,55.0,4.4,0,300,0.25,0.10,0,0
 c,50.0,4.4,0,300,0.25,0.10,0,0
 antenna loading
 HP      35.00      .00     5.40      .00      .495     -.198      .200      .02
 GRID    28.00      .00     5.40      .00      .119     -.167      .075     -.19
  load at 330 deg V=80 code=EIA 222F
  MAST LOADING
 D  55. 0 258.7 330. .0891 .0893 .0259 -.0797
 D  60. 0 258.7 330. .0891 .0893 .0259 -.0797
 D  45. 0 250.61 330. .0892 .0902 .0277 -.09
 D  55. 0 250.61 330. .0917 .0902 .0277 -.0926
 D  40. 0 250.61 330. .0864 .0902 .0277 -.0872
 D  45. 0 250.61 330. .0864 .0902 .0277 -.0872
 D  35. 0 250.61 330. .0833 .0902 .0277 -.0841
 D  40. 0 250.61 330. .0833 .0902 .0277 -.0841
 D  30. 0 243.63 330. .0846 .0911 .03 -.0942
 D  35. 0 243.63 330. .0846 .0911 .03 -.0942
 D  25. 0 239.96 330. .0872 .0916 .0315 -.1021
 D  30. 0 239.96 330. .0872 .0916 .0315 -.1021
 D  20. 0 237.71 330. .0889 .092 .0326 -.1073
 D  25. 0 237.71 330. .0889 .092 .0326 -.1073
 D  14. 0 239.37 330. .0868 .0783 .0331 -.1087
 D  20. 0 239.37 330. .0868 .0783 .0331 -.1087
 D  7.6667 0 242.62 330. .0724 .0742 .0217 -.0703
 D  14. 0 242.62 330. .0724 .0742 .0217 -.0703
 D  0 0 180. 330. .0781 .1137 0 0
 D  7.6667 0 180. 330. .0781 .1137 0 0
 c,68.0,0,0,330,4.0,5.0,0,0
 c,55.0,4.4,0,330,0.25,0.10,0,0
 c,50.0,4.4,0,330,0.25,0.10,0,0
 antenna loading
 HP      35.00      .00     5.40      .00      .643     -.125      .200      .16
 GRID    28.00      .00     5.40      .00      .238     -.139      .075     -.13

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 END OF FILE


 ELAPSED CPU TIME      14.89 SECONDS.

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PARTIAL MASTLOD OUTPUT

CLIMBING LADDER, COAX LADDER & COAX INCLUDED

TOWER - 60' TALCOTT, CT (80mph, no ice)(1/01)

MAST GEOMETRY (ft)

PANEL TYPE	NO.OF LEGS	SUB DIVIDE	..ELEVATION OF.. BOTTOM	TOP	..FACE WIDTH AT.. BOTTOM	TOP	TYPICAL PANEL HEIGHT
s	3	0	55.00	60.00	7.60	7.60	5.00
z	3	0	50.00	55.00	7.60	7.60	5.00
s	3	0	45.00	50.00	7.60	7.60	5.00
z	3	0	40.00	45.00	7.60	7.60	5.00
s	3	0	35.00	40.00	7.60	7.60	5.00
z	3	0	30.00	35.00	7.60	7.60	5.00
s	3	0	25.00	30.00	7.60	7.60	5.00
z	3	0	20.00	25.00	7.60	7.60	5.00
s	3	0	14.00	20.00	8.23	7.60	6.00
z	3	0	7.67	14.00	8.89	8.23	6.33
a	3	1	.00	7.67	9.69	8.89	7.67

PANEL PROPERTIES

BOTTOM ELEV ft	TOP ELEV ft	.....TYPE OF MATERIALS USED IN..... LEGS	DIAGS	HORIZ	INTRNL BRACING	SUB DIAGS	SUB HORIZ	GUSSET
20.00	60.00	1	3	5	0	0	0	0
7.67	20.00	1	2	6	0	0	0	0
.00	7.67	1	4	7	5	8	8	0

MATERIAL TYPES

TYPE OF SHAPE	TYPE NO	NO OF ELEMENTS &	ORIENT-ATION deg	PROJECTION.ALONG VERT in	HORIZ in	#	THICK-NESS in	*	DENSITY pcf
rhs	1	1	.0	4.00	4.00		.226		490.0
rhs	2	1	.0	2.38	2.38		.154		490.0
rhs	3	1	.0	2.88	2.88		.203		490.0
l	4	1	.0	3.00	3.00		.188		490.0
l	5	1	.0	2.50	2.50		.250		490.0
l	6	1	.0	3.00	3.00		.250		490.0
l	7	2	.0	2.00	2.00		.188		490.0
l	8	1	.0	2.00	2.00		.188		490.0
sr	9	1	.0	.75	.75		.188		490.0
l	10	1	.0	1.50	1.50		.125		490.0

& - With respect to vertical # - Web in WF,C & T sections
* - Flange thickness in WF,C & T sections

LADDER GEOMETRY
==========

.ELEVATION.OF. BOTTOM ft	TOP ft	.....SIZE.... WIDTH in	STEP in	.....POSITION..... DIST * ft	AZI deg	ORIENT & deg	...MATERIALS.... RAIL	RUNG	SAFE T-RAIL
10.00	60.00	30.00	36.00	4.00	10.00	120.00	10	9	0
10.00	60.00	30.00	12.00	-12.00	120.00	30.00	10	9	0

* if negative a constant distance from face based on bottom elevation
& if negative orientation is disregarded in calculation of loads

TRANSMISSION LINES
==========

TYPE OF LINE	..ELEVATION OF.. BOTTOM ft	TOP ft	NO.OF LINES	.....POSITION..... DISTANCE * ft	AZI deg	ORIENT & deg
fh0.875	10.00	60.00	2	4.50	.00	.00
fh0.875	10.00	55.00	2	4.75	10.00	120.00
fh0.875	10.00	35.00	2	4.75	10.00	120.00
fh0.875	10.00	28.00	2	4.75	10.00	120.00

* if negative a constant distance from face based on bottom elevation
& if negative orientation is disregarded in calculation of loads

==========

LOADING CONDITION A ==========

load at 0 deg on face V=80 code=EIA 222F

WIND LOADING
==========

.....WIND LOADING..... AZI deg	SPEED mph	REF.VEL. PRESS. psf	..ICE LOADING... RADIUS in	DENSITY pcf	EXPOSURE TYPE	STANDARD
.00	80.00	.00	.00	.00	1	1

Exposure types: 1 - Wind profile (Kz) based on EIA 222 E (Mar.1991)
2 - Wind profile Kz = 1 ; Gh = 1
3 - Wind profile (Kz) based on EIA 222 C (Mar.1976)
4 - Wind factors supplied by user (Gh=1)
5 - Wind profile UBC (May.1988) Exposure C
6 - Wind profile UBC (May.1988) Exposure B

STANDARD : 1 - EIA - 222 E (March 1991)
2 - EIA - 222 C (March 1976)
3 - UBC - 88 (May 1 1988)

SUPPRESS PRINTING
==========

....LOAD SUMMARY FOR....				.....LOAD COMPONENTS.....			
MAST	GUYMAST	PANEL POINTS	PANELS	LADDERS	TX-LINES	OTHER MOUNTINGS	INDIVIDUAL ELEMENTS
no	yes	no	no	no	no	no	no

MAST LOADING
==========

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
D	60.0	.00	258.7	.0	.0843	.0893	.0259	-.0620
D	55.0	.00	258.7	.0	.0843	.0893	.0259	-.0620
D	55.0	.00	250.6	.0	.0871	.0902	.0277	-.0644
D	45.0	.00	250.6	.0	.0846	.0902	.0277	-.0626
D	45.0	.00	250.6	.0	.0820	.0902	.0277	-.0606
D	40.0	.00	250.6	.0	.0820	.0902	.0277	-.0606
D	40.0	.00	250.6	.0	.0791	.0902	.0277	-.0585
D	35.0	.00	250.6	.0	.0791	.0902	.0277	-.0585
D	35.0	.00	243.6	.0	.0805	.0911	.0300	-.0600
D	30.0	.00	243.6	.0	.0805	.0911	.0300	-.0600
D	30.0	.00	240.0	.0	.0831	.0916	.0315	-.0621
D	25.0	.00	240.0	.0	.0831	.0916	.0315	-.0621
D	25.0	.00	237.7	.0	.0848	.0920	.0326	-.0635
D	20.0	.00	237.7	.0	.0848	.0920	.0326	-.0635
D	20.0	.00	239.4	.0	.0826	.0783	.0331	-.0654
D	14.0	.00	239.4	.0	.0826	.0783	.0331	-.0654
D	14.0	.00	242.6	.0	.0695	.0742	.0217	-.0437
D	7.7	.00	242.6	.0	.0695	.0742	.0217	-.0437
D	7.7	.00	180.0	.0	.0756	.1137	.0000	.0000
D	.0	.00	180.0	.0	.0756	.1137	.0000	.0000

LOADS AT PANEL POINTS

LOAD TYPE	ELEV ft	.....FORCES (kip)..... NORTH	EAST	DOWN	...MOMENTS (ft.kips)... NORTH	EAST	TORSION
C	60.00	-.2108	.0000	.2233	.0127	.0635	-.1549
C	55.00	-.4284	.0000	.4488	.0357	.1288	-.3159
C	50.00	-.4291	.0000	.4510	.0460	.1306	-.3175
C	45.00	-.4164	.0000	.4510	.0460	.1306	-.3081
C	40.00	-.4026	.0000	.4510	.0460	.1306	-.2979
C	35.00	-.3990	.0000	.4532	.0563	.1324	-.2962
C	30.00	-.4091	.0000	.4567	.0727	.1353	-.3051
C	25.00	-.4198	.0000	.4589	.0830	.1372	-.3139
C	20.00	-.4600	.0000	.4649	.0942	.1545	-.3550
C	14.00	-.4680	.0000	.4699	.0822	.1464	-.3347
C	7.67	-.5097	.0000	.6709	.0315	.0609	-.1384
C	.00	-.2897	.0000	.4360	.0000	.0000	.0000

PANEL LOADING

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	57.5	.00	258.7	.0	.4216	.4466	.1295	-.3098
C	52.5	.00	250.6	.0	.4353	.4510	.1385	-.3221
C	47.5	.00	250.6	.0	.4230	.4510	.1385	-.3130
C	42.5	.00	250.6	.0	.4098	.4510	.1385	-.3032
C	37.5	.00	250.6	.0	.3954	.4510	.1385	-.2925
C	32.5	.00	243.6	.0	.4027	.4554	.1498	-.2998
C	27.5	.00	240.0	.0	.4155	.4581	.1576	-.3104
C	22.5	.00	237.7	.0	.4241	.4598	.1631	-.3175
C	17.0	.00	239.4	.0	.4959	.4700	.1988	-.3924
C	10.8	.00	242.6	.0	.4402	.4698	.1372	-.2769
C	3.8	.00	180.0	.0	.5793	.8719	.0000	.0000

LOADS DUE TO LADDER

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
D	60.0	.00	267.5	.0	.0276	.0097	.0254	-.0620
D	45.0	.00	267.5	.0	.0261	.0097	.0254	-.0587
D	45.0	.00	267.5	.0	.0253	.0097	.0254	-.0568
D	40.0	.00	267.5	.0	.0253	.0097	.0254	-.0568
D	40.0	.00	267.5	.0	.0244	.0097	.0254	-.0548
D	35.0	.00	267.5	.0	.0244	.0097	.0254	-.0548
D	35.0	.00	267.5	.0	.0235	.0097	.0254	-.0529

D	20.0	.00	267.5	.0	.0235	.0097	.0254	-.0529
D	20.0	.00	268.8	.0	.0235	.0097	.0263	-.0548
D	14.0	.00	268.8	.0	.0235	.0097	.0263	-.0548
D	14.0	.00	271.1	.0	.0149	.0061	.0179	-.0370
D	7.7	.00	271.1	.0	.0149	.0061	.0179	-.0370
D	7.7	.00	180.0	180.0	.0000	.0000	.0000	.0000
D	.0	.00	180.0	180.0	.0000	.0000	.0000	.0000

LOADS DUE TO TRANSMISSION LINES

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
D	60.0	.00	180.0	.0	.0025	.0009	.0040	.0000
D	55.0	.00	180.0	.0	.0025	.0009	.0040	.0000
D	55.0	.00	185.1	.0	.0074	.0018	.0081	-.0040
D	45.0	.00	185.1	.0	.0071	.0018	.0081	-.0039
D	45.0	.00	185.1	.0	.0069	.0018	.0081	-.0038
D	40.0	.00	185.1	.0	.0069	.0018	.0081	-.0038
D	40.0	.00	185.1	.0	.0067	.0018	.0081	-.0037
D	35.0	.00	185.1	.0	.0067	.0018	.0081	-.0037
D	35.0	.00	186.8	.0	.0107	.0026	.0123	-.0071
D	30.0	.00	186.8	.0	.0107	.0026	.0123	-.0071
D	30.0	.00	187.3	.0	.0133	.0032	.0148	-.0092
D	25.0	.00	187.3	.0	.0133	.0032	.0148	-.0092
D	25.0	.00	187.6	.0	.0150	.0035	.0165	-.0106
D	14.0	.00	187.6	.0	.0150	.0035	.0165	-.0106
D	14.0	.00	187.6	.0	.0095	.0022	.0104	-.0067
D	7.7	.00	187.6	.0	.0095	.0022	.0104	-.0067
D	7.7	.00	180.0	180.0	.0000	.0000	.0000	.0000
D	.0	.00	180.0	180.0	.0000	.0000	.0000	.0000

INDIVIDUAL ELEMENT LOADS

TYPE NO	MATERIAL TYPE	.....BARE LOADS..... GRAVITY	WIND AREA	...CURRENT LOADING... GRAVITY	WIND AREA
		plf	ft.sq/ft	plf	ft.sq/ft
1	rhs	9.118	.333	9.118	.400
2	rhs	3.656	.198	3.656	.237
3	rhs	5.798	.240	5.798	.287

4	l	3.708	.250	3.708	.500
5	l	4.041	.208	4.041	.417
6	l	4.891	.250	4.891	.500
7	l	4.865	.167	4.865	.333
8	l	2.432	.167	2.432	.333
9	sr	1.503	.063	1.503	.075
10	l	1.223	.125	1.223	.250
	fh0.875	.880	.183	.880	.110
	fh0.875	.880	.183	.880	.220
	fh0.875	.880	.183	.880	.220
	fh0.875	.880	.183	.880	.220

==========

LOADING CONDITION B ==========

load at 30 deg V=80 code=EIA 222F

WIND LOADING
============

.....WIND LOADING..... AZI	SPEED	REF.VEL. PRESS.	..ICE LOADING... RADIUS	DENSITY	EXPOSURE TYPE	STANDARD
deg	mph	psf	in	pcf		
30.00	80.00	.00	.00	.00	1	1

Exposure types: 1 - Wind profile (Kz) based on EIA 222 E (Mar.1991)
2 - Wind profile Kz = 1 ; Gh = 1
3 - Wind profile (Kz) based on EIA 222 C (Mar.1976)
4 - Wind factors supplied by user (Gh=1)
5 - Wind profile UBC (May.1988) Exposure C
6 - Wind profile UBC (May.1988) Exposure B

STANDARD : 1 - EIA - 222 E (March 1991)
2 - EIA - 222 C (March 1976)
3 - UBC - 88 (May 1 1988)

SUPPRESS PRINTING
=================

....LOAD SUMMARY FOR.... MAST	GUYMAST	PANEL POINTS	.....LOAD COMPONENTS..... PANELS	LADDERS	TX-LINES	OTHER MOUNTINGS	INDIVIDUAL ELEMENTS
no	yes	no	no	no	no	no	no

MAST LOADING
============

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL

	ft	ft			kip	kip	ft-kip	ft-kip
D	60.0	.00	258.7	30.0	.0844	.0893	.0259	-.0214
D	55.0	.00	258.7	30.0	.0844	.0893	.0259	-.0214
D	55.0	.00	250.6	30.0	.0872	.0902	.0277	-.0129
D	45.0	.00	250.6	30.0	.0847	.0902	.0277	-.0125
D	45.0	.00	250.6	30.0	.0821	.0902	.0277	-.0121
D	40.0	.00	250.6	30.0	.0821	.0902	.0277	-.0121
D	40.0	.00	250.6	30.0	.0792	.0902	.0277	-.0117
D	35.0	.00	250.6	30.0	.0792	.0902	.0277	-.0117
D	35.0	.00	243.6	30.0	.0806	.0911	.0300	-.0043
D	30.0	.00	243.6	30.0	.0806	.0911	.0300	-.0043
D	30.0	.00	240.0	30.0	.0832	.0916	.0315	-.0001
D	25.0	.00	240.0	30.0	.0832	.0916	.0315	-.0001
D	25.0	.00	237.7	30.0	.0849	.0920	.0326	.0027
D	20.0	.00	237.7	30.0	.0849	.0920	.0326	.0027
D	20.0	.00	239.4	30.0	.0828	.0783	.0331	.0009
D	14.0	.00	239.4	30.0	.0828	.0783	.0331	.0009
D	14.0	.00	242.6	30.0	.0699	.0742	.0217	-.0017
D	7.7	.00	242.6	30.0	.0699	.0742	.0217	-.0017
D	7.7	.00	180.0	30.0	.0781	.1137	.0000	.0000
D	.0	.00	180.0	30.0	.0781	.1137	.0000	.0000

LOADS AT PANEL POINTS
==========

LOAD TYPE	ELEV ft	.....FORCES (kip)..... NORTH	EAST	DOWN	...MOMENTS (ft.kips)... NORTH	EAST	TORSION
C	60.00	-.1828	-.1055	.2233	.0127	.0635	-.0534
C	55.00	-.3715	-.2145	.4488	.0357	.1288	-.0856
C	50.00	-.3721	-.2149	.4510	.0460	.1306	-.0634
C	45.00	-.3611	-.2085	.4510	.0460	.1306	-.0615
C	40.00	-.3491	-.2016	.4510	.0460	.1306	-.0595
C	35.00	-.3460	-.1998	.4532	.0563	.1324	-.0400
C	30.00	-.3547	-.2048	.4567	.0727	.1353	-.0110
C	25.00	-.3640	-.2102	.4589	.0830	.1372	.0064
C	20.00	-.3989	-.2303	.4649	.0942	.1545	.0095
C	14.00	-.4068	-.2349	.4699	.0822	.1464	-.0026
C	7.67	-.4509	-.2603	.6709	.0315	.0609	-.0054
C	.00	-.2592	-.1496	.4360	.0000	.0000	.0000

PANEL LOADING
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL

	ft	ft			kip	kip	ft-kip	ft-kip
C	57.5	.00	258.7	30.0	.4222	.4466	.1295	-.1069
C	52.5	.00	250.6	30.0	.4359	.4510	.1385	-.0643
C	47.5	.00	250.6	30.0	.4236	.4510	.1385	-.0625
C	42.5	.00	250.6	30.0	.4103	.4510	.1385	-.0606
C	37.5	.00	250.6	30.0	.3959	.4510	.1385	-.0584
C	32.5	.00	243.6	30.0	.4032	.4554	.1498	-.0215
C	27.5	.00	240.0	30.0	.4161	.4581	.1576	-.0006
C	22.5	.00	237.7	30.0	.4246	.4598	.1631	.0134
C	17.0	.00	239.4	30.0	.4966	.4700	.1988	.0055
C	10.8	.00	242.6	30.0	.4428	.4698	.1372	-.0108
C	3.8	.00	180.0	30.0	.5985	.8719	.0000	.0000

LOADS DUE TO LADDER
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
D	60.0	.00	267.5	30.0	.0242	.0097	.0254	-.0327
D	45.0	.00	267.5	30.0	.0229	.0097	.0254	-.0310
D	45.0	.00	267.5	30.0	.0222	.0097	.0254	-.0300
D	40.0	.00	267.5	30.0	.0222	.0097	.0254	-.0300
D	40.0	.00	267.5	30.0	.0214	.0097	.0254	-.0289
D	35.0	.00	267.5	30.0	.0214	.0097	.0254	-.0289
D	35.0	.00	267.5	30.0	.0207	.0097	.0254	-.0279
D	20.0	.00	267.5	30.0	.0207	.0097	.0254	-.0279
D	20.0	.00	268.8	30.0	.0207	.0097	.0263	-.0297
D	14.0	.00	268.8	30.0	.0207	.0097	.0263	-.0297
D	14.0	.00	271.1	30.0	.0131	.0061	.0179	-.0211
D	7.7	.00	271.1	30.0	.0131	.0061	.0179	-.0211
D	7.7	.00	180.0	180.0	.0000	.0000	.0000	.0000
D	.0	.00	180.0	180.0	.0000	.0000	.0000	.0000

LOADS DUE TO TRANSMISSION LINES
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
D	60.0	.00	180.0	30.0	.0050	.0009	.0040	.0113
D	55.0	.00	180.0	30.0	.0050	.0009	.0040	.0113
D	55.0	.00	185.1	30.0	.0098	.0018	.0081	.0190
D	45.0	.00	185.1	30.0	.0095	.0018	.0081	.0185
D	45.0	.00	185.1	30.0	.0092	.0018	.0081	.0179

D	40.0	.00	185.1	30.0	.0092	.0018	.0081	.0179
D	40.0	.00	185.1	30.0	.0089	.0018	.0081	.0173
D	35.0	.00	185.1	30.0	.0089	.0018	.0081	.0173
D	35.0	.00	186.8	30.0	.0129	.0026	.0123	.0236
D	30.0	.00	186.8	30.0	.0129	.0026	.0123	.0236
D	30.0	.00	187.3	30.0	.0155	.0032	.0148	.0278
D	25.0	.00	187.3	30.0	.0155	.0032	.0148	.0278
D	25.0	.00	187.6	30.0	.0172	.0035	.0165	.0306
D	14.0	.00	187.6	30.0	.0172	.0035	.0165	.0306
D	14.0	.00	187.6	30.0	.0109	.0022	.0104	.0193
D	7.7	.00	187.6	30.0	.0109	.0022	.0104	.0193
D	7.7	.00	180.0	180.0	.0000	.0000	.0000	.0000
D	.0	.00	180.0	180.0	.0000	.0000	.0000	.0000

INDIVIDUAL ELEMENT LOADS

TYPE NO	MATERIAL TYPE	.....BARE LOADS..... GRAVITY plf	WIND AREA ft.sq/ft	...CURRENT LOADING... GRAVITY plf	WIND AREA ft.sq/ft
1	rhs	9.118	.333	9.118	.400
2	rhs	3.656	.198	3.656	.237
3	rhs	5.798	.240	5.798	.287
4	l	3.708	.250	3.708	.500
5	l	4.041	.208	4.041	.417
6	l	4.891	.250	4.891	.500
7	l	4.865	.167	4.865	.333
8	l	2.432	.167	2.432	.333
9	sr	1.503	.063	1.503	.075
10	l	1.223	.125	1.223	.250
	fh0.875	.880	.183	.880	.220
	fh0.875	.880	.183	.880	.220
	fh0.875	.880	.183	.880	.220
	fh0.875	.880	.183	.880	.220

LOADING CONDITION C

load at 60 deg V=80 code=EIA 222F

WIND LOADING

.....WIND LOADING..... AZI	SPEED	REF.VEL.	..ICE LOADING... RADIUS	DENSITY	EXPOSURE TYPE	STANDARD

MAST OUTPUT

80 MPH W/O ICE

TOWER - 60' TALCOTT, CT (80mph, no ice)(1/01)

MAST GEOMETRY (ft)

PANEL TYPE	NO.OF LEGS	ELEV.AT BOTTOM	ELEV.AT TOP	F.W..AT BOTTOM	F.W..AT TOP	TYPICAL PANEL HEIGHT
s	3	55.00	60.00	7.60	7.60	5.00
z	3	50.00	55.00	7.60	7.60	5.00
s	3	45.00	50.00	7.60	7.60	5.00
z	3	40.00	45.00	7.60	7.60	5.00
s	3	35.00	40.00	7.60	7.60	5.00
z	3	30.00	35.00	7.60	7.60	5.00
s	3	25.00	30.00	7.60	7.60	5.00
z	3	20.00	25.00	7.60	7.60	5.00
s	3	14.00	20.00	8.23	7.60	6.00
z	3	7.67	14.00	8.89	8.23	6.33
a	3	.00	7.67	9.69	8.89	7.67

MEMBER PROPERTIES

MEMBER TYPE	BOTTOM ELEV ft	TOP ELEV ft	X-SECTN AREA in.sq	RADIUS OF GYRAT in	ELASTIC MODULUS ksi	THERMAL EXPANSN /C deg
LE	.00	60.00	2.680	.000	29000.	.0000000
DI	20.00	60.00	1.704	.000	29000.	.0000000
DI	7.67	20.00	1.075	.000	29000.	.0000000
DI	.00	7.67	1.090	.000	29000.	.0000000
HO	20.00	60.00	1.187	.000	29000.	.0000000
HO	7.67	20.00	1.437	.000	29000.	.0000000
HO	.00	7.67	1.430	.000	29000.	.0000000

LOADING CONDITION A

load at 0 deg on face V=80 code=EIA 222F

MAST LOADING

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip

C	68.0	.00	.0	.0	4.00	5.00	.00	.00
C	55.0	4.40	.0	.0	.25	.10	.00	.00
C	50.0	4.40	.0	.0	.25	.10	.00	.00
D	60.0	.00	258.7	.0	.08	.09	.03	-.06
D	55.0	.00	258.7	.0	.08	.09	.03	-.06
D	55.0	.00	250.6	.0	.09	.09	.03	-.06
D	45.0	.00	250.6	.0	.08	.09	.03	-.06
D	45.0	.00	250.6	.0	.08	.09	.03	-.06
D	40.0	.00	250.6	.0	.08	.09	.03	-.06
D	40.0	.00	250.6	.0	.08	.09	.03	-.06
D	35.0	.00	250.6	.0	.08	.09	.03	-.06
D	35.0	.00	243.6	.0	.08	.09	.03	-.06
D	30.0	.00	243.6	.0	.08	.09	.03	-.06
D	30.0	.00	240.0	.0	.08	.09	.03	-.06
D	25.0	.00	240.0	.0	.08	.09	.03	-.06
D	25.0	.00	237.7	.0	.08	.09	.03	-.06
D	20.0	.00	237.7	.0	.08	.09	.03	-.06
D	20.0	.00	239.4	.0	.08	.08	.03	-.07
D	14.0	.00	239.4	.0	.08	.08	.03	-.07
D	14.0	.00	242.6	.0	.07	.07	.02	-.04
D	7.7	.00	242.6	.0	.07	.07	.02	-.04
D	7.7	.00	180.0	.0	.08	.11	.00	.00
D	.0	.00	180.0	.0	.08	.11	.00	.00

ANTENNA LOADING
==========

.....ANTENNA.....			ATTACHMENT		.....ANTENNA FORCES.....			
TYPE	ELEV	AZI	RAD	AZI	AXIAL	SHEAR	GRAVITY	TORSION
	ft		ft		kip	kip	kip	ft-kip
HP	35.0	.0	5.4	.0	.68	.00	.20	.00
GRID	28.0	.0	5.4	.0	.27	.00	.08	.00

SUPPRESS PRINTING
==========

	...FOR THIS LOADING..			....MAXIMUMS.....			
LOADS INPUT	DISPL	MEMBER FORCES	FOUNDN LOADS	ALL	DISPL	MEMBER FORCES	FOUNDN LOADS
no	yes	yes	yes	no	no	no	no

==========

LOADING CONDITION B ==========

load at 30 deg V=80 code=EIA 222F

MAST LOADING
==========

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	68.0	.00	.0	30.0	4.00	5.00	.00	.00
C	55.0	4.40	.0	30.0	.25	.10	.00	.00
C	50.0	4.40	.0	30.0	.25	.10	.00	.00
D	60.0	.00	258.7	30.0	.08	.09	.03	-.02
D	55.0	.00	258.7	30.0	.08	.09	.03	-.02
D	55.0	.00	250.6	30.0	.09	.09	.03	-.01
D	45.0	.00	250.6	30.0	.08	.09	.03	-.01
D	45.0	.00	250.6	30.0	.08	.09	.03	-.01
D	40.0	.00	250.6	30.0	.08	.09	.03	-.01
D	40.0	.00	250.6	30.0	.08	.09	.03	-.01
D	35.0	.00	250.6	30.0	.08	.09	.03	-.01
D	35.0	.00	243.6	30.0	.08	.09	.03	.00
D	30.0	.00	243.6	30.0	.08	.09	.03	.00
D	30.0	.00	240.0	30.0	.08	.09	.03	.00
D	25.0	.00	240.0	30.0	.08	.09	.03	.00
D	25.0	.00	237.7	30.0	.08	.09	.03	.00
D	20.0	.00	237.7	30.0	.08	.09	.03	.00
D	20.0	.00	239.4	30.0	.08	.08	.03	.00
D	14.0	.00	239.4	30.0	.08	.08	.03	.00
D	14.0	.00	242.6	30.0	.07	.07	.02	.00
D	7.7	.00	242.6	30.0	.07	.07	.02	.00
D	7.7	.00	180.0	30.0	.08	.11	.00	.00
D	.0	.00	180.0	30.0	.08	.11	.00	.00

ANTENNA LOADING
==========

.....ANTENNA..... TYPE	ELEV ft	AZI	ATTACHMENT RAD ft	AZI	.....ANTENNA FORCES..... AXIAL kip	SHEAR kip	GRAVITY kip	TORSION ft-kip
HP	35.0	.0	5.4	.0	.64	.13	.20	-.16
GRID	28.0	.0	5.4	.0	.24	.14	.08	.13

SUPPRESS PRINTING
==========

LOADS INPUT	...FOR THIS LOADING.. DISPL	MEMBER FORCES	FOUNDN LOADS	.....MAXIMUMS..... ALL	DISPL	MEMBER FORCES	FOUNDN LOADS
no	yes	yes	yes	no	no	no	no

==========

LOADING CONDITION C ==========

load at 60 deg V=80 code=EIA 222F

MAST LOADING
============

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	68.0	.00	.0	60.0	4.00	5.00	.00	.00
C	55.0	4.40	.0	60.0	.25	.10	.00	.00
C	50.0	4.40	.0	60.0	.25	.10	.00	.00
D	60.0	.00	258.7	60.0	.09	.09	.03	.01
D	55.0	.00	258.7	60.0	.09	.09	.03	.01
D	55.0	.00	250.6	60.0	.09	.09	.03	.03
D	45.0	.00	250.6	60.0	.09	.09	.03	.03
D	45.0	.00	250.6	60.0	.09	.09	.03	.03
D	40.0	.00	250.6	60.0	.09	.09	.03	.03
D	40.0	.00	250.6	60.0	.08	.09	.03	.02
D	35.0	.00	250.6	60.0	.08	.09	.03	.02
D	35.0	.00	243.6	60.0	.09	.09	.03	.04
D	30.0	.00	243.6	60.0	.09	.09	.03	.04
D	30.0	.00	240.0	60.0	.09	.09	.03	.05
D	25.0	.00	240.0	60.0	.09	.09	.03	.05
D	25.0	.00	237.7	60.0	.09	.09	.03	.05
D	20.0	.00	237.7	60.0	.09	.09	.03	.05
D	20.0	.00	239.4	60.0	.09	.08	.03	.05
D	14.0	.00	239.4	60.0	.09	.08	.03	.05
D	14.0	.00	242.6	60.0	.07	.07	.02	.03
D	7.7	.00	242.6	60.0	.07	.07	.02	.03
D	7.7	.00	180.0	60.0	.09	.11	.00	.00
D	.0	.00	180.0	60.0	.09	.11	.00	.00

ANTENNA LOADING
===============

.....ANTENNA..... TYPE	ELEV ft	AZI	ATTACHMENT RAD ft	AZI	.....ANTENNA FORCES..... AXIAL kip	SHEAR kip	GRAVITY kip	TORSION ft-kip
HP	35.0	.0	5.4	.0	.50	.20	.20	-.02
GRID	28.0	.0	5.4	.0	.12	.17	.08	.19

SUPPRESS PRINTING
=================

LOADS INPUT	...FOR THIS LOADING.. DISPL	MEMBER FORCES	FOUNDN LOADS	.....MAXIMUMS..... ALL	DISPL	MEMBER FORCES	FOUNDN LOADS
no	yes	yes	yes	no	no	no	no

==========

LOADING CONDITION D ==========

load at 90 deg V=80 code=EIA 222F

MAST LOADING
============

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	68.0	.00	.0	90.0	4.00	5.00	.00	.00
C	55.0	4.40	.0	90.0	.25	.10	.00	.00
C	50.0	4.40	.0	90.0	.25	.10	.00	.00
D	60.0	.00	258.7	90.0	.09	.09	.03	.04
D	55.0	.00	258.7	90.0	.09	.09	.03	.04
D	55.0	.00	250.6	90.0	.09	.09	.03	.06
D	45.0	.00	250.6	90.0	.09	.09	.03	.06
D	45.0	.00	250.6	90.0	.09	.09	.03	.06
D	40.0	.00	250.6	90.0	.09	.09	.03	.06
D	40.0	.00	250.6	90.0	.08	.09	.03	.06
D	35.0	.00	250.6	90.0	.08	.09	.03	.06
D	35.0	.00	243.6	90.0	.08	.09	.03	.07
D	30.0	.00	243.6	90.0	.08	.09	.03	.07
D	30.0	.00	240.0	90.0	.09	.09	.03	.09
D	25.0	.00	240.0	90.0	.09	.09	.03	.09
D	25.0	.00	237.7	90.0	.09	.09	.03	.09
D	20.0	.00	237.7	90.0	.09	.09	.03	.09
D	20.0	.00	239.4	90.0	.09	.08	.03	.09
D	14.0	.00	239.4	90.0	.09	.08	.03	.09
D	14.0	.00	242.6	90.0	.07	.07	.02	.06
D	7.7	.00	242.6	90.0	.07	.07	.02	.06
D	7.7	.00	180.0	90.0	.08	.11	.00	.00
D	.0	.00	180.0	90.0	.08	.11	.00	.00

ANTENNA LOADING
===============

.....ANTENNA..... TYPE	ELEV	AZI	ATTACHMENT RAD	AZI	.....ANTENNA FORCES..... AXIAL	SHEAR	GRAVITY	TORSION
	ft		ft		kip	kip	kip	ft-kip
HP	35.0	.0	5.4	.0	-.07	.32	.20	.31
GRID	28.0	.0	5.4	.0	-.02	.14	.08	.14

SUPPRESS PRINTING
=================

LOADS INPUT	...FOR THIS LOADING.. DISPL	MEMBER FORCES	FOUNDN LOADS	.....MAXIMUMS..... ALL	DISPL	MEMBER FORCES	FOUNDN LOADS
no	yes	yes	yes	no	no	no	no

LOADING CONDITION E

load at 120 deg V=80 code=EIA 222F

MAST LOADING

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	68.0	.00	.0	120.0	4.00	5.00	.00	.00
C	55.0	4.40	.0	120.0	.25	.10	.00	.00
C	50.0	4.40	.0	120.0	.25	.10	.00	.00
D	60.0	.00	258.7	120.0	.09	.09	.03	.06
D	55.0	.00	258.7	120.0	.09	.09	.03	.06
D	55.0	.00	250.6	120.0	.09	.09	.03	.07
D	45.0	.00	250.6	120.0	.08	.09	.03	.07
D	45.0	.00	250.6	120.0	.08	.09	.03	.07
D	40.0	.00	250.6	120.0	.08	.09	.03	.07
D	40.0	.00	250.6	120.0	.08	.09	.03	.07
D	35.0	.00	250.6	120.0	.08	.09	.03	.07
D	35.0	.00	243.6	120.0	.08	.09	.03	.07
D	30.0	.00	243.6	120.0	.08	.09	.03	.07
D	30.0	.00	240.0	120.0	.08	.09	.03	.08
D	25.0	.00	240.0	120.0	.08	.09	.03	.08
D	25.0	.00	237.7	120.0	.08	.09	.03	.08
D	20.0	.00	237.7	120.0	.08	.09	.03	.08
D	20.0	.00	239.4	120.0	.08	.08	.03	.08
D	14.0	.00	239.4	120.0	.08	.08	.03	.08
D	14.0	.00	242.6	120.0	.07	.07	.02	.05
D	7.7	.00	242.6	120.0	.07	.07	.02	.05
D	7.7	.00	180.0	120.0	.08	.11	.00	.00
D	.0	.00	180.0	120.0	.08	.11	.00	.00

ANTENNA LOADING

.....ANTENNA..... TYPE	ELEV ft	AZI	ATTACHMENT RAD ft	AZI	.....ANTENNA FORCES..... AXIAL kip	SHEAR kip	GRAVITY kip	TORSION ft-kip
HP	35.0	.0	5.4	.0	-.40	.21	.20	.32
GRID	28.0	.0	5.4	.0	-.13	.17	.08	.18

SUPPRESS PRINTING

...FOR THIS LOADING.. LOADS	DISPL	MEMBER	FOUNDN	.....MAXIMUMS..... ALL	DISPL	MEMBER	FOUNDN

INPUT		FORCES	LOADS		FORCES	LOADS	
no	yes	yes	yes	no	no	no	no

LOADING CONDITION F

load at 150 deg V=80 code=EIA 222F

MAST LOADING

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	68.0	.00	.0	150.0	4.00	5.00	.00	.00
C	55.0	4.40	.0	150.0	.25	.10	.00	.00
C	50.0	4.40	.0	150.0	.25	.10	.00	.00
D	60.0	.00	258.7	150.0	.09	.09	.03	.08
D	55.0	.00	258.7	150.0	.09	.09	.03	.08
D	55.0	.00	250.6	150.0	.09	.09	.03	.09
D	45.0	.00	250.6	150.0	.09	.09	.03	.09
D	45.0	.00	250.6	150.0	.09	.09	.03	.09
D	40.0	.00	250.6	150.0	.09	.09	.03	.09
D	40.0	.00	250.6	150.0	.08	.09	.03	.08
D	35.0	.00	250.6	150.0	.08	.09	.03	.08
D	35.0	.00	243.6	150.0	.08	.09	.03	.09
D	30.0	.00	243.6	150.0	.08	.09	.03	.09
D	30.0	.00	240.0	150.0	.09	.09	.03	.10
D	25.0	.00	240.0	150.0	.09	.09	.03	.10
D	25.0	.00	237.7	150.0	.09	.09	.03	.11
D	20.0	.00	237.7	150.0	.09	.09	.03	.11
D	20.0	.00	239.4	150.0	.09	.08	.03	.11
D	14.0	.00	239.4	150.0	.09	.08	.03	.11
D	14.0	.00	242.6	150.0	.07	.07	.02	.07
D	7.7	.00	242.6	150.0	.07	.07	.02	.07
D	7.7	.00	180.0	150.0	.08	.11	.00	.00
D	.0	.00	180.0	150.0	.08	.11	.00	.00

ANTENNA LOADING

.....ANTENNA..... TYPE	ELEV ft	AZI	ATTACHMENT RAD ft	AZI	.....ANTENNA FORCES..... AXIAL kip	SHEAR kip	GRAVITY kip	TORSION ft-kip
HP	35.0	.0	5.4	.0	-.53	.07	.20	.17
GRID	28.0	.0	5.4	.0	-.25	.11	.08	.12

SUPPRESS PRINTING

==========

LOADS INPUT	...FOR THIS LOADING.. DISPL	MEMBER FORCES	FOUNDN LOADS	.....MAXIMUMS..... ALL	DISPL	MEMBER FORCES	FOUNDN LOADS
no	yes	yes	yes	no	no	no	no

==========

LOADING CONDITION G ==========

load at 180 deg V=80 code=EIA 222F

MAST LOADING
==========

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	68.0	.00	.0	180.0	4.00	5.00	.00	.00
C	55.0	4.40	.0	180.0	.25	.10	.00	.00
C	50.0	4.40	.0	180.0	.25	.10	.00	.00
D	60.0	.00	258.7	180.0	.09	.09	.03	.06
D	55.0	.00	258.7	180.0	.09	.09	.03	.06
D	55.0	.00	250.6	180.0	.09	.09	.03	.06
D	45.0	.00	250.6	180.0	.09	.09	.03	.06
D	45.0	.00	250.6	180.0	.09	.09	.03	.06
D	40.0	.00	250.6	180.0	.09	.09	.03	.06
D	40.0	.00	250.6	180.0	.08	.09	.03	.06
D	35.0	.00	250.6	180.0	.08	.09	.03	.06
D	35.0	.00	243.6	180.0	.08	.09	.03	.06
D	30.0	.00	243.6	180.0	.08	.09	.03	.06
D	30.0	.00	240.0	180.0	.09	.09	.03	.06
D	25.0	.00	240.0	180.0	.09	.09	.03	.06
D	25.0	.00	237.7	180.0	.09	.09	.03	.06
D	20.0	.00	237.7	180.0	.09	.09	.03	.06
D	20.0	.00	239.4	180.0	.09	.08	.03	.07
D	14.0	.00	239.4	180.0	.09	.08	.03	.07
D	14.0	.00	242.6	180.0	.07	.07	.02	.04
D	7.7	.00	242.6	180.0	.07	.07	.02	.04
D	7.7	.00	180.0	180.0	.09	.11	.00	.00
D	.0	.00	180.0	180.0	.09	.11	.00	.00

ANTENNA LOADING
==========

.....ANTENNA..... TYPE	ELEV ft	AZI	ATTACHMENT RAD ft	AZI	.....ANTENNA FORCES..... AXIAL kip	SHEAR kip	GRAVITY kip	TORSION ft-kip

HP	35.0	.0	5.4	.0	-.57	.00	.20	.00
GRID	28.0	.0	5.4	.0	-.31	.00	.08	.00

SUPPRESS PRINTING
==========

	...FOR THIS LOADING..			ALL	.....MAXIMUMS.....		
LOADS INPUT	DISPL	MEMBER FORCES	FOUNDN LOADS		DISPL	MEMBER FORCES	FOUNDN LOADS
no	yes	yes	yes	no	no	no	no

==========

LOADING CONDITION H ==========

load at 210 deg V=80 code=EIA 222F

MAST LOADING
==========

LOAD TYPE	ELEV	APPLY..LOAD..AT RADIUS	AZI	LOAD AZI	.....FORCES..... HORIZ	DOWN	.....MOMENTS..... VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	68.0	.00	.0	210.0	4.00	5.00	.00	.00
C	55.0	4.40	.0	210.0	.25	.10	.00	.00
C	50.0	4.40	.0	210.0	.25	.10	.00	.00
D	60.0	.00	258.7	210.0	.08	.09	.03	.02
D	55.0	.00	258.7	210.0	.08	.09	.03	.02
D	55.0	.00	250.6	210.0	.09	.09	.03	.01
D	45.0	.00	250.6	210.0	.08	.09	.03	.01
D	45.0	.00	250.6	210.0	.08	.09	.03	.01
D	40.0	.00	250.6	210.0	.08	.09	.03	.01
D	40.0	.00	250.6	210.0	.08	.09	.03	.01
D	35.0	.00	250.6	210.0	.08	.09	.03	.01
D	35.0	.00	243.6	210.0	.08	.09	.03	.00
D	30.0	.00	243.6	210.0	.08	.09	.03	.00
D	30.0	.00	240.0	210.0	.08	.09	.03	.00
D	25.0	.00	240.0	210.0	.08	.09	.03	.00
D	25.0	.00	237.7	210.0	.08	.09	.03	.00
D	20.0	.00	237.7	210.0	.08	.09	.03	.00
D	20.0	.00	239.4	210.0	.08	.08	.03	.00
D	14.0	.00	239.4	210.0	.08	.08	.03	.00
D	14.0	.00	242.6	210.0	.07	.07	.02	.00
D	7.7	.00	242.6	210.0	.07	.07	.02	.00
D	7.7	.00	180.0	210.0	.08	.11	.00	.00
D	.0	.00	180.0	210.0	.08	.11	.00	.00

ANTENNA LOADING
==========

.....ANTENNA.....			ATTACHMENT		.....ANTENNA FORCES.....			
TYPE	ELEV ft	AZI	RAD ft	AZI	AXIAL kip	SHEAR kip	GRAVITY kip	TORSION ft-kip
HP	35.0	.0	5.4	.0	-.53	-.07	.20	-.17
GRID	28.0	.0	5.4	.0	-.25	-.11	.08	-.12

SUPPRESS PRINTING
==========

	...FOR THIS LOADING..			.....MAXIMUMS.....			
LOADS INPUT	DISPL	MEMBER FORCES	FOUNDN LOADS	ALL	DISPL	MEMBER FORCES	FOUNDN LOADS
no	yes	yes	yes	no	no	no	no

==========

LOADING CONDITION I ==========

load at 240 deg V=80 code=EIA 222F

MAST LOADING
==========

LOAD TYPE	ELEV ft	APPLY..LOAD..AT RADIUS ft	AZI	LOAD AZI	.....FORCES..... HORIZ kip	DOWN kip	.....MOMENTS..... VERTICAL ft-kip	TORSNAL ft-kip
C	68.0	.00	.0	240.0	4.00	5.00	.00	.00
C	55.0	4.40	.0	240.0	.25	.10	.00	.00
C	50.0	4.40	.0	240.0	.25	.10	.00	.00
D	60.0	.00	258.7	240.0	.09	.09	.03	-.01
D	55.0	.00	258.7	240.0	.09	.09	.03	-.01
D	55.0	.00	250.6	240.0	.09	.09	.03	-.03
D	45.0	.00	250.6	240.0	.09	.09	.03	-.03
D	45.0	.00	250.6	240.0	.08	.09	.03	-.03
D	40.0	.00	250.6	240.0	.08	.09	.03	-.03
D	40.0	.00	250.6	240.0	.08	.09	.03	-.02
D	35.0	.00	250.6	240.0	.08	.09	.03	-.02
D	35.0	.00	243.6	240.0	.08	.09	.03	-.04
D	30.0	.00	243.6	240.0	.08	.09	.03	-.04
D	30.0	.00	240.0	240.0	.09	.09	.03	-.05
D	25.0	.00	240.0	240.0	.09	.09	.03	-.05
D	25.0	.00	237.7	240.0	.09	.09	.03	-.05
D	20.0	.00	237.7	240.0	.09	.09	.03	-.05
D	20.0	.00	239.4	240.0	.08	.08	.03	-.05
D	14.0	.00	239.4	240.0	.08	.08	.03	-.05
D	14.0	.00	242.6	240.0	.07	.07	.02	-.03
D	7.7	.00	242.6	240.0	.07	.07	.02	-.03
D	7.7	.00	180.0	240.0	.08	.11	.00	.00
D	.0	.00	180.0	240.0	.08	.11	.00	.00

ANTENNA LOADING
==========

.....ANTENNA.....			ATTACHMENT		.....ANTENNA FORCES.....			
TYPE	ELEV	AZI	RAD	AZI	AXIAL	SHEAR	GRAVITY	TORSION
	ft		ft		kip	kip	kip	ft-kip
HP	35.0	.0	5.4	.0	-.40	-.21	.20	-.32
GRID	28.0	.0	5.4	.0	-.13	-.17	.08	-.18

SUPPRESS PRINTING
==========

	...FOR THIS LOADING..			....MAXIMUMS.....			
LOADS INPUT	DISPL	MEMBER FORCES	FOUNDN LOADS	ALL	DISPL	MEMBER FORCES	FOUNDN LOADS
no	yes	yes	yes	no	no	no	no

==========

LOADING CONDITION J ==========

load at 270 deg V=80 code=EIA 222F

MAST LOADING
==========

LOAD	ELEV	APPLY..LOAD..AT		LOAD	.....FORCES.....		....MOMENTS.....	
TYPE		RADIUS	AZI	AZI	HORIZ	DOWN	VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	68.0	.00	.0	270.0	4.00	5.00	.00	.00
C	55.0	4.40	.0	270.0	.25	.10	.00	.00
C	50.0	4.40	.0	270.0	.25	.10	.00	.00
D	60.0	.00	258.7	270.0	.09	.09	.03	-.04
D	55.0	.00	258.7	270.0	.09	.09	.03	-.04
D	55.0	.00	250.6	270.0	.09	.09	.03	-.06
D	45.0	.00	250.6	270.0	.09	.09	.03	-.06
D	45.0	.00	250.6	270.0	.09	.09	.03	-.06
D	40.0	.00	250.6	270.0	.09	.09	.03	-.06
D	40.0	.00	250.6	270.0	.08	.09	.03	-.06
D	35.0	.00	250.6	270.0	.08	.09	.03	-.06
D	35.0	.00	243.6	270.0	.08	.09	.03	-.07
D	30.0	.00	243.6	270.0	.08	.09	.03	-.07
D	30.0	.00	240.0	270.0	.09	.09	.03	-.09
D	25.0	.00	240.0	270.0	.09	.09	.03	-.09
D	25.0	.00	237.7	270.0	.09	.09	.03	-.09
D	20.0	.00	237.7	270.0	.09	.09	.03	-.09
D	20.0	.00	239.4	270.0	.09	.08	.03	-.09
D	14.0	.00	239.4	270.0	.09	.08	.03	-.09

D	14.0	.00	242.6	270.0	.07	.07	.02	-.06
D	7.7	.00	242.6	270.0	.07	.07	.02	-.06
D	7.7	.00	180.0	270.0	.08	.11	.00	.00
D	.0	.00	180.0	270.0	.08	.11	.00	.00

ANTENNA LOADING
==========

.....ANTENNA.....			ATTACHMENT		.....ANTENNA FORCES.....			
TYPE	ELEV	AZI	RAD	AZI	AXIAL	SHEAR	GRAVITY	TORSION
	ft		ft		kip	kip	kip	ft-kip
HP	35.0	.0	5.4	.0	-.07	-.32	.20	-.31
GRID	28.0	.0	5.4	.0	-.02	-.14	.08	-.14

SUPPRESS PRINTING
==========

	...FOR THIS LOADING..			....MAXIMUMS.....			
LOADS INPUT	DISPL	MEMBER FORCES	FOUNDN LOADS	ALL	DISPL	MEMBER FORCES	FOUNDN LOADS
no	yes	yes	yes	no	no	no	no

==========

LOADING CONDITION K ==========

load at 300 deg V=80 code=EIA 222F

MAST LOADING
==========

LOAD	ELEV	APPLY..LOAD..AT		LOAD	.....FORCES.....		.....MOMENTS.....	
TYPE		RADIUS	AZI	AZI	HORIZ	DOWN	VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	68.0	.00	.0	300.0	4.00	5.00	.00	.00
C	55.0	4.40	.0	300.0	.25	.10	.00	.00
C	50.0	4.40	.0	300.0	.25	.10	.00	.00
D	60.0	.00	258.7	300.0	.09	.09	.03	-.06
D	55.0	.00	258.7	300.0	.09	.09	.03	-.06
D	55.0	.00	250.6	300.0	.09	.09	.03	-.07
D	45.0	.00	250.6	300.0	.09	.09	.03	-.07
D	45.0	.00	250.6	300.0	.08	.09	.03	-.07
D	40.0	.00	250.6	300.0	.08	.09	.03	-.07
D	40.0	.00	250.6	300.0	.08	.09	.03	-.07
D	35.0	.00	250.6	300.0	.08	.09	.03	-.07
D	35.0	.00	243.6	300.0	.08	.09	.03	-.07
D	30.0	.00	243.6	300.0	.08	.09	.03	-.07
D	30.0	.00	240.0	300.0	.08	.09	.03	-.08
D	25.0	.00	240.0	300.0	.08	.09	.03	-.08

D	25.0	.00	237.7	300.0	.08	.09	.03	-.08
D	20.0	.00	237.7	300.0	.08	.09	.03	-.08
D	20.0	.00	239.4	300.0	.08	.08	.03	-.08
D	14.0	.00	239.4	300.0	.08	.08	.03	-.08
D	14.0	.00	242.6	300.0	.07	.07	.02	-.05
D	7.7	.00	242.6	300.0	.07	.07	.02	-.05
D	7.7	.00	180.0	300.0	.09	.11	.00	.00
D	.0	.00	180.0	300.0	.09	.11	.00	.00

ANTENNA LOADING
==========

.....ANTENNA.....			ATTACHMENT		.....ANTENNA FORCES.....			
TYPE	ELEV	AZI	RAD	AZI	AXIAL	SHEAR	GRAVITY	TORSION
	ft		ft		kip	kip	kip	ft-kip
HP	35.0	.0	5.4	.0	.50	-.20	.20	.02
GRID	28.0	.0	5.4	.0	.12	-.17	.08	-.19

SUPPRESS PRINTING
==========

	...FOR THIS LOADING..			..... MAXIMUMS			
LOADS INPUT	DISPL	MEMBER FORCES	FOUNDN LOADS	ALL	DISPL	MEMBER FORCES	FOUNDN LOADS
no	yes	yes	yes	no	no	no	no

==========

LOADING CONDITION L ==========

load at 330 deg V=80 code=EIA 222F

MAST LOADING
==========

LOAD	ELEV	APPLY..LOAD..AT		LOAD	.....FORCES.....		.....MOMENTS.....	
TYPE		RADIUS	AZI	AZI	HORIZ	DOWN	VERTICAL	TORSNAL
	ft	ft			kip	kip	ft-kip	ft-kip
C	68.0	.00	.0	330.0	4.00	5.00	.00	.00
C	55.0	4.40	.0	330.0	.25	.10	.00	.00
C	50.0	4.40	.0	330.0	.25	.10	.00	.00
D	60.0	.00	258.7	330.0	.09	.09	.03	-.08
D	55.0	.00	258.7	330.0	.09	.09	.03	-.08
D	55.0	.00	250.6	330.0	.09	.09	.03	-.09
D	45.0	.00	250.6	330.0	.09	.09	.03	-.09
D	45.0	.00	250.6	330.0	.09	.09	.03	-.09
D	40.0	.00	250.6	330.0	.09	.09	.03	-.09
D	40.0	.00	250.6	330.0	.08	.09	.03	-.08
D	35.0	.00	250.6	330.0	.08	.09	.03	-.08

D	35.0	.00	243.6	330.0	.08	.09	.03	-.09
D	30.0	.00	243.6	330.0	.08	.09	.03	-.09
D	30.0	.00	240.0	330.0	.09	.09	.03	-.10
D	25.0	.00	240.0	330.0	.09	.09	.03	-.10
D	25.0	.00	237.7	330.0	.09	.09	.03	-.11
D	20.0	.00	237.7	330.0	.09	.09	.03	-.11
D	20.0	.00	239.4	330.0	.09	.08	.03	-.11
D	14.0	.00	239.4	330.0	.09	.08	.03	-.11
D	14.0	.00	242.6	330.0	.07	.07	.02	-.07
D	7.7	.00	242.6	330.0	.07	.07	.02	-.07
D	7.7	.00	180.0	330.0	.08	.11	.00	.00
D	.0	.00	180.0	330.0	.08	.11	.00	.00

ANTENNA LOADING
==========

.....ANTENNA.....			ATTACHMENT		.....ANTENNA FORCES.....			
TYPE	ELEV ft	AZI	RAD ft	AZI	AXIAL kip	SHEAR kip	GRAVITY kip	TORSION ft-kip
HP	35.0	.0	5.4	.0	.64	-.13	.20	.16
GRID	28.0	.0	5.4	.0	.24	-.14	.08	-.13

SUPPRESS PRINTING
==========

	...FOR THIS LOADING..			....MAXIMUMS.....			
LOADS INPUT	DISPL	MEMBER FORCES	FOUNDN LOADS	ALL	DISPL	MEMBER FORCES	FOUNDN LOADS
no	yes	yes	yes	no	no	no	no

TOWER - 60' TALCOTT, CT (80mph, no ice)(1/01)

LOADING CONDITION A ==========

load at 0 deg on face V=80 code=EIA 222F

LOADING CONDITION B ==========

load at 30 deg V=80 code=EIA 222F

LOADING CONDITION C ==========

load at 60 deg V=80 code=EIA 222F

LOADING CONDITION D ==========

load at 90 deg V=80 code=EIA 222F

LOADING CONDITION E ==========

load at 120 deg V=80 code=EIA 222F

LOADING CONDITION F ==========

load at 150 deg V=80 code=EIA 222F

LOADING CONDITION G ==========

load at 180 deg V=80 code=EIA 222F

LOADING CONDITION H ==========

load at 210 deg V=80 code=EIA 222F

LOADING CONDITION I ==========

load at 240 deg V=80 code=EIA 222F

LOADING CONDITION J ==========

load at 270 deg V=80 code=EIA 222F

LOADING CONDITION K ==========

load at 300 deg V=80 code=EIA 222F