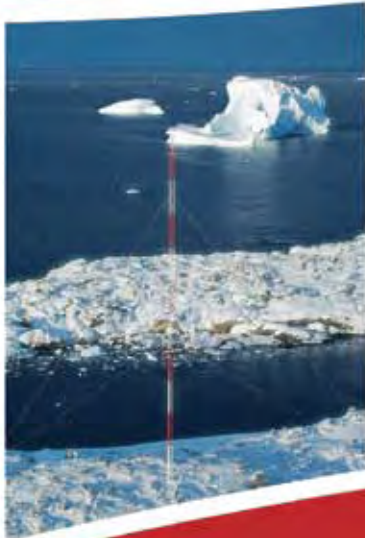


# GUYED TOWERS





## STANDARD 80 SERIES GUYED TOWER



# 80 SERIES

### GENERAL USE

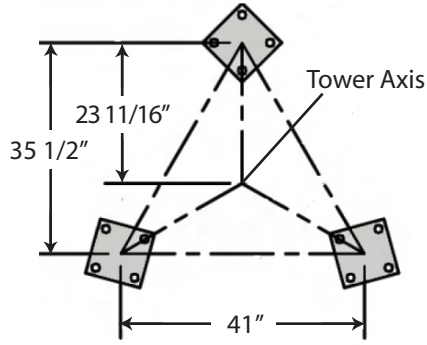
The ROHN Model 80 Guyed Tower is designed with variable sized legs and braces to allow construction to heights of 1000'. This tower uses solid or tubular legs with angle, or tubular braces to support microwave, cellular, PCS, AM/FM or TV applications. The tower is designed on an equilateral triangle of 41" center to center of each leg. The variable leg and brace sizes allow flexibility in design so a tower can be created specifically for your unique requirements.

### FEATURES

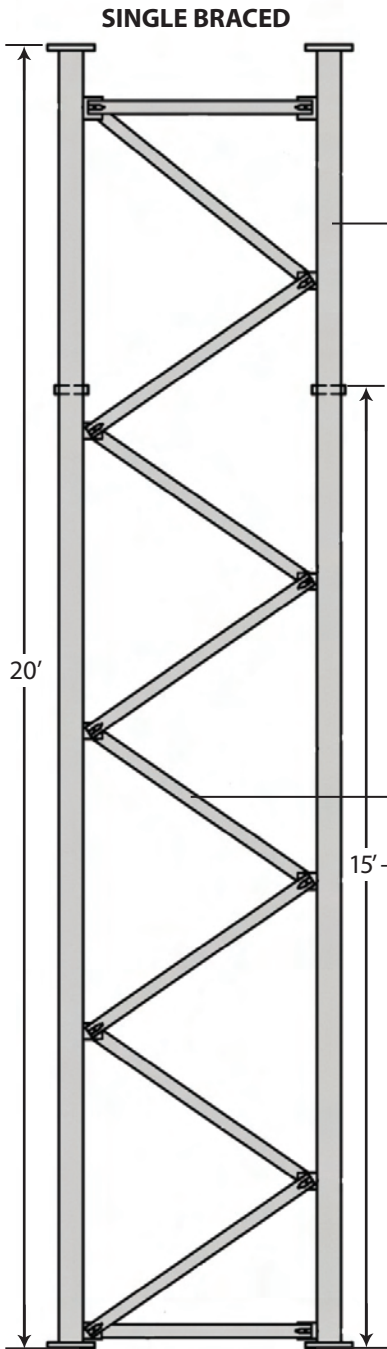
- Solid or Tubular Legs
- Angle or Tubular Braces
- Completely hot-dip galvanized after fabrication



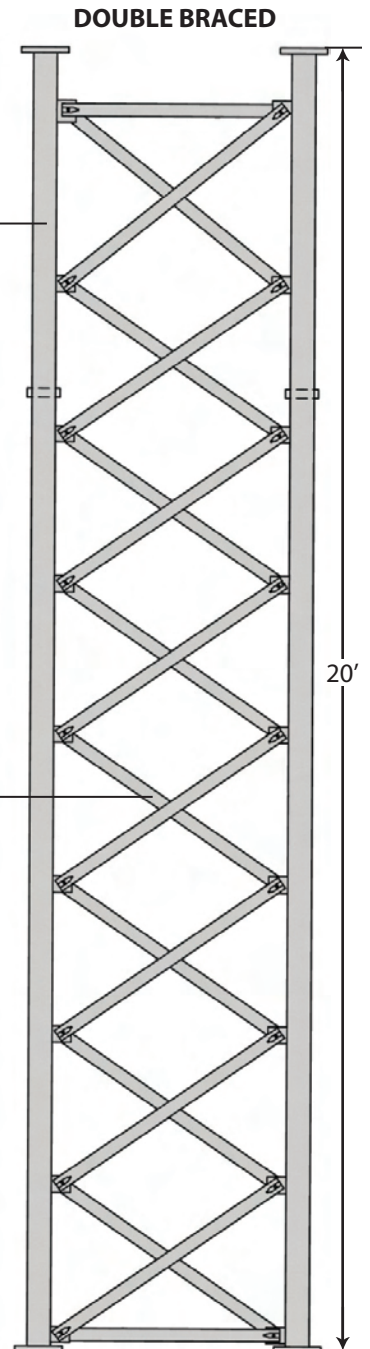
# STANDARD 80 GUYED TOWER SECTIONS



PLAN VIEW



SINGLE BRACED



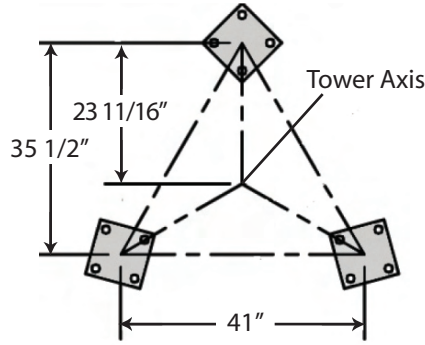
DOUBLE BRACED

Pipe 2" sch 40 - 3" sch 160  
or Round Bar 2" - 3-1/2"

Braces  
Tubing 1-1/2" O.D. x 16GA or 11GA  
or Angle < 1-1/2" x 3/16" - < 2-1/2" x 1/4"

ELEVATION

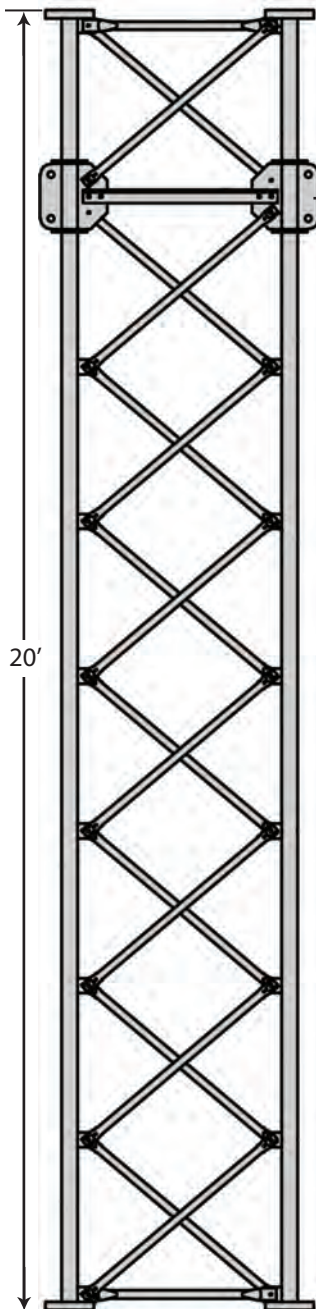
# ROHN MODEL 80 GUYED TOWER GUY LUG & TORQUE LUG SECTIONS



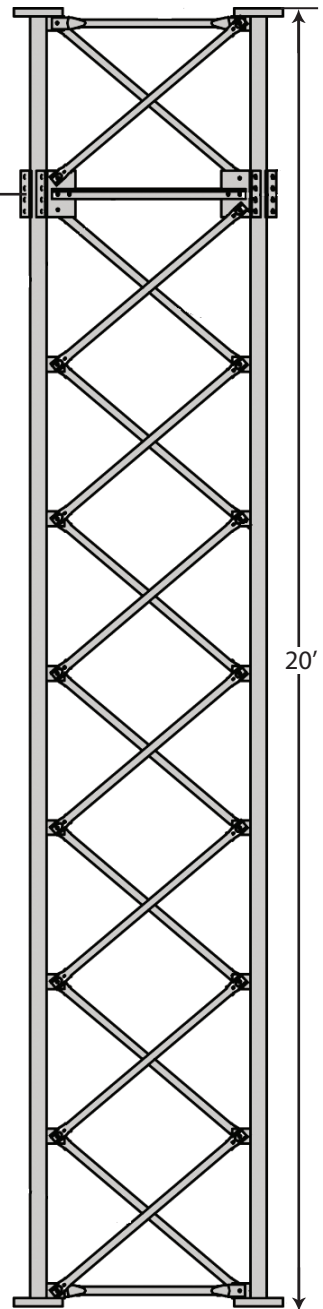
GUY LUG SECTION

PLAN VIEW

TORQUE LUG SECTION



17' Guy Elevation



**Guy Lug Section Notes:**

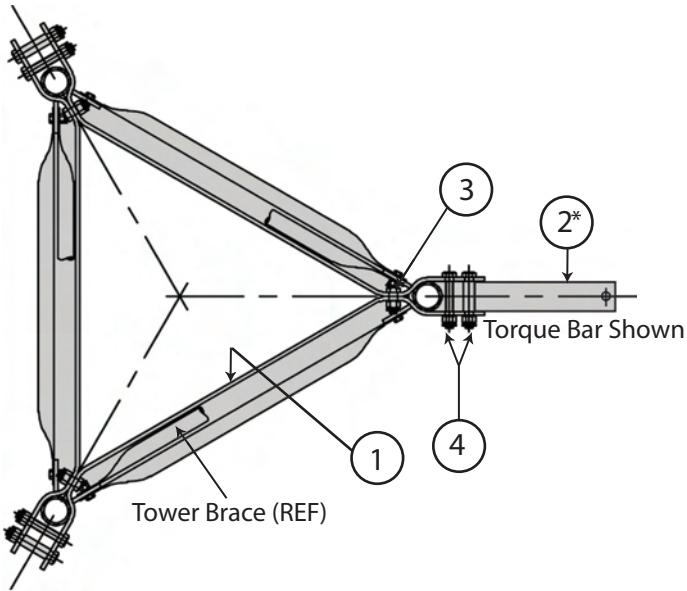
1. Guy lug has 7/8" - 1-1/8" shackle capacity.
2. Section may be installed with 17' (+/-) guy assembly elevation as shown or inverted to obtain a 3' (+/-) guy assembly elevation.

**Torque Lug Section Note:**

1. Section may be installed with 17' (+/-) torque arm elevation as shown or inverted to obtain a 3' (+/-) torque arm elevation.

## ROHN MODEL 80 GUYED TOWER

STANDARD GUYING BRACKETS FOR 83 & 84 SECTIONS



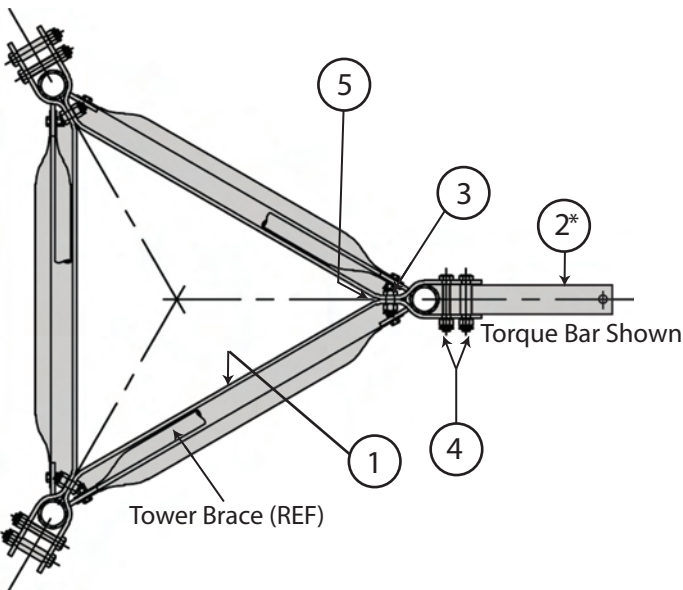
GA80 Bill of Material			
Item	Qty.	Part No.	Description
1	3	R-KC143	Bar Flat Bracket Guy .38x4.5x4.5'
2	3	R-KC145	Bar Flat TA 2.75x.38x1.82'
		R-KC438	Pipe .65STDx2.88" HDG
3	6	R-210047GA	Bolt Assembly 3/4x2 HSB A325
4	9	R-210058GA	Bolt Assembly 3/4x5 HSB A325

\*For Item #2, select part number for either flat bar or pipe.

These guy brackets are designed for 5/8" EHS maximum guy wire at 80% guy radius. For use on ROHN Model 80 tower only.

## ROHN MODEL 80 GUYED TOWER

STANDARD GUYING BRACKETS FOR 85 SECTIONS



GA85 Bill of Material			
Item	Qty.	Part No.	Description
1	3	R-KC144	Bar Flat Bracket Guy .38x5x4.5'
2	3	R-KC465	Bar Flat TA .38x3.5x1.83'
		R-KC439	Pipe .75STDx3.5" LG HDG
3	6	R-210050GA	Bolt Assembly 3/4x2-3/4 HSB A325
4	9	R-210059GA	Bolt Assembly 3/4x5-1/2 HSB A325
5	3	R-KC441	Spacer Bracket Guy .63x3.13x4.5"

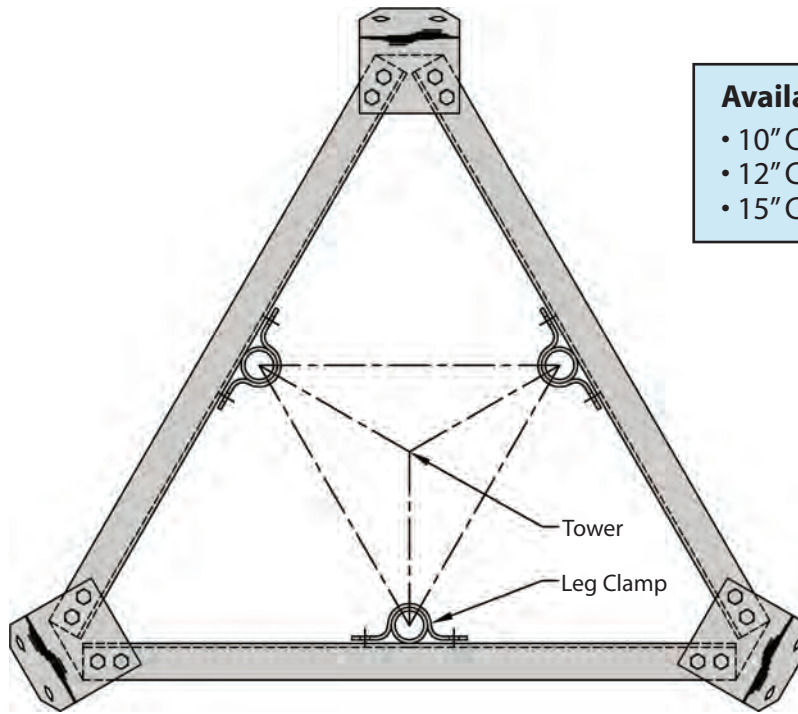
\*For Item #2, select part number for either flat bar or pipe.

These guy brackets are designed for 5/8" EHS maximum guy wire at 80% guy radius. For use on ROHN Model 80 tower only.



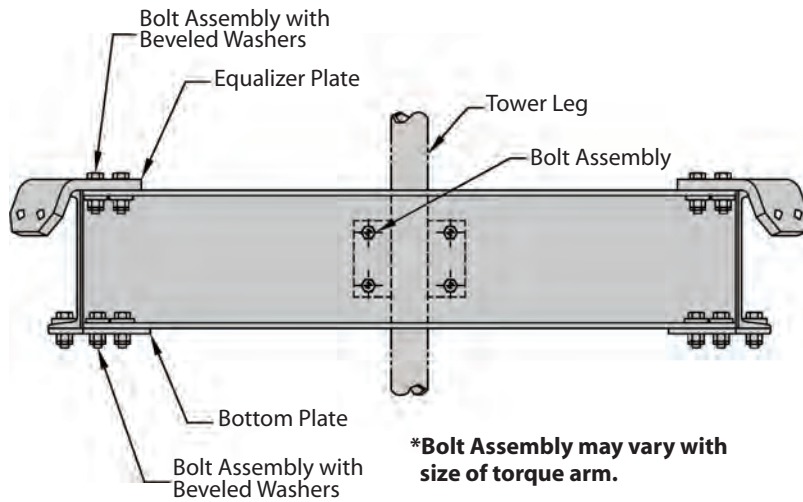
# TORQUE ARM

CHANNEL ASSEMBLY FOR 80 TOWERS



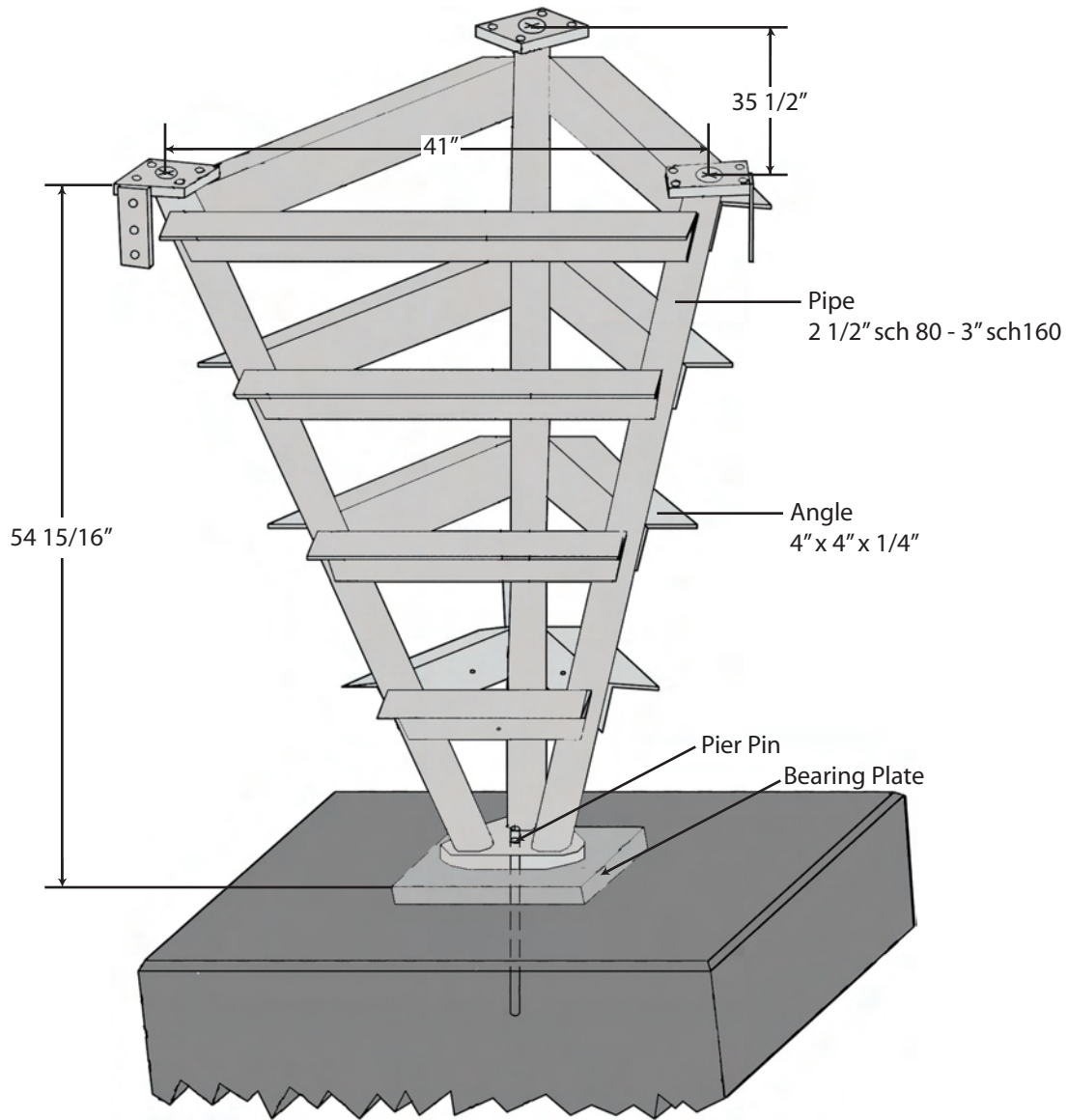
**Available Sizes:**

- 10" Channel (C10x15.3)
- 12" Channel (C12x20.7)
- 15" Channel (C15x33.9)



**NOTE:** Torque arm leg clamp must bear on brace clip above flange plate.

# 80 GUYED TOWER TAPERED BASE





## STANDARD 90 SERIES GUYED TOWER



# 90 SERIES

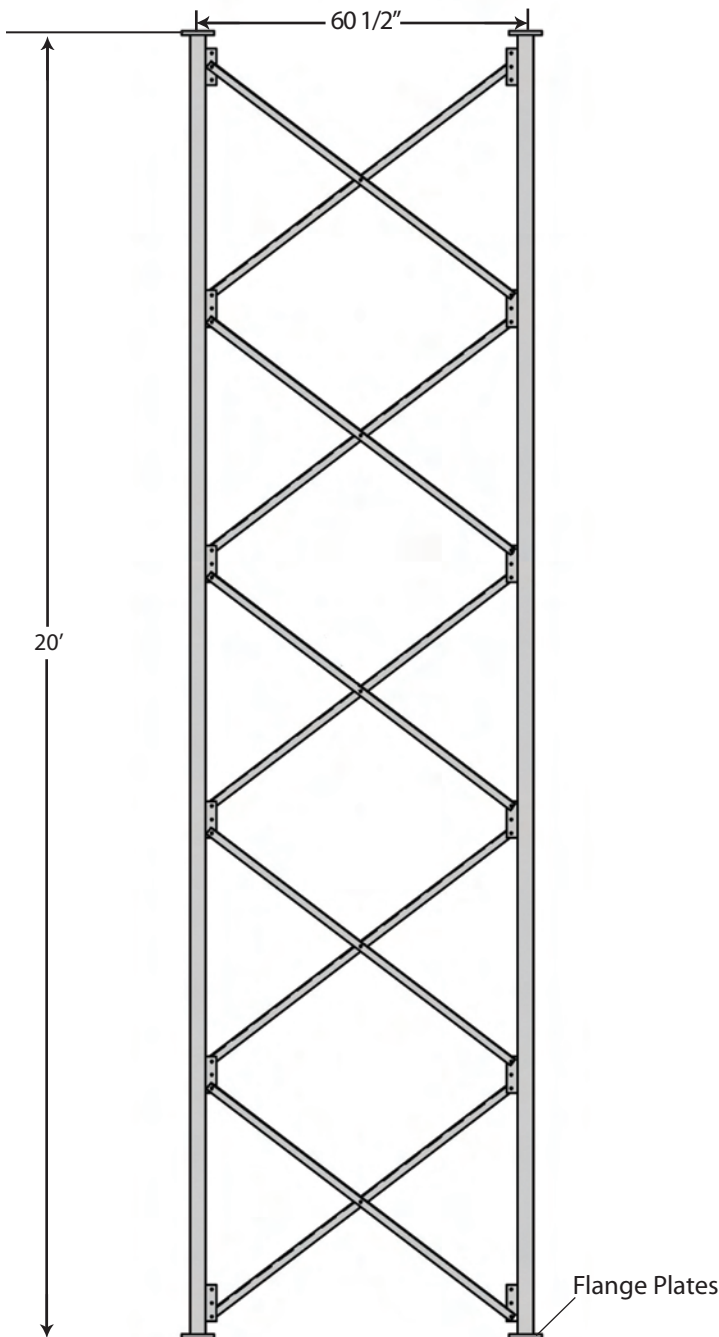
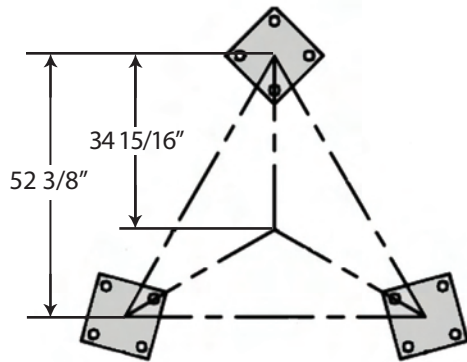
### GENERAL USE

The 90 Series towers are designed specifically for microwave installations, cellular, PCS, other heavy duty communication, TV and FM broadcast, and meteorological equipment installations. This series has a rating for installation up to 1000', using variable size and weight of tubular or solid steel components. The triangular size is 60 - 1/2" on leg centers. The "X" brace design of the 90 Series maximizes strength in critical areas as well as allows for future upgrading of the tower for additional loads.

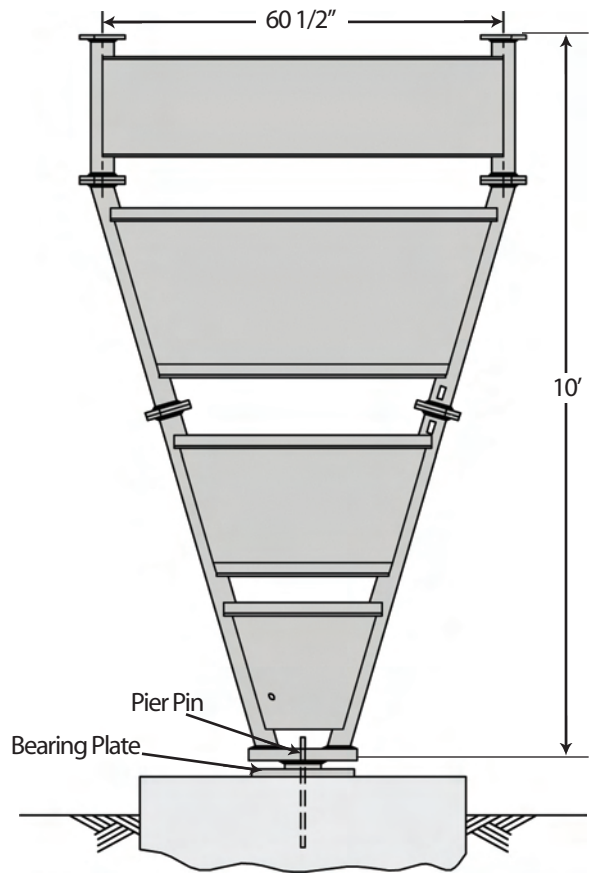
### FEATURES

- Completely hot-dip galvanized after fabrication
- Time tested design
- Steel pipe or solid steel leg design
- Tubular or angle steel cross bracing with bolted construction
- Custom designs, individually engineered

## STANDARD 90 GUYED TOWER SECTIONS



ELEVATION



TAPERED BASE

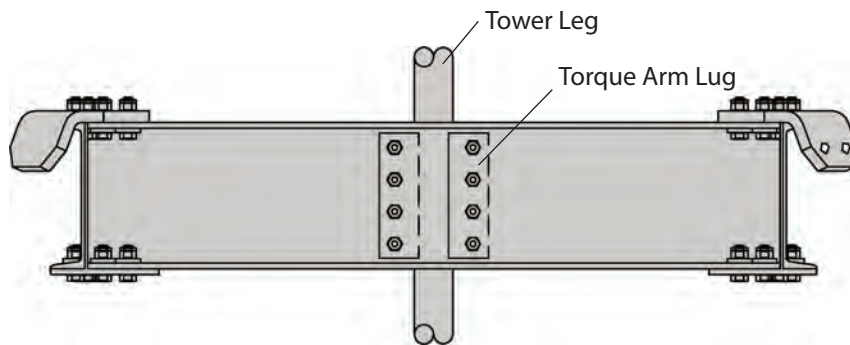
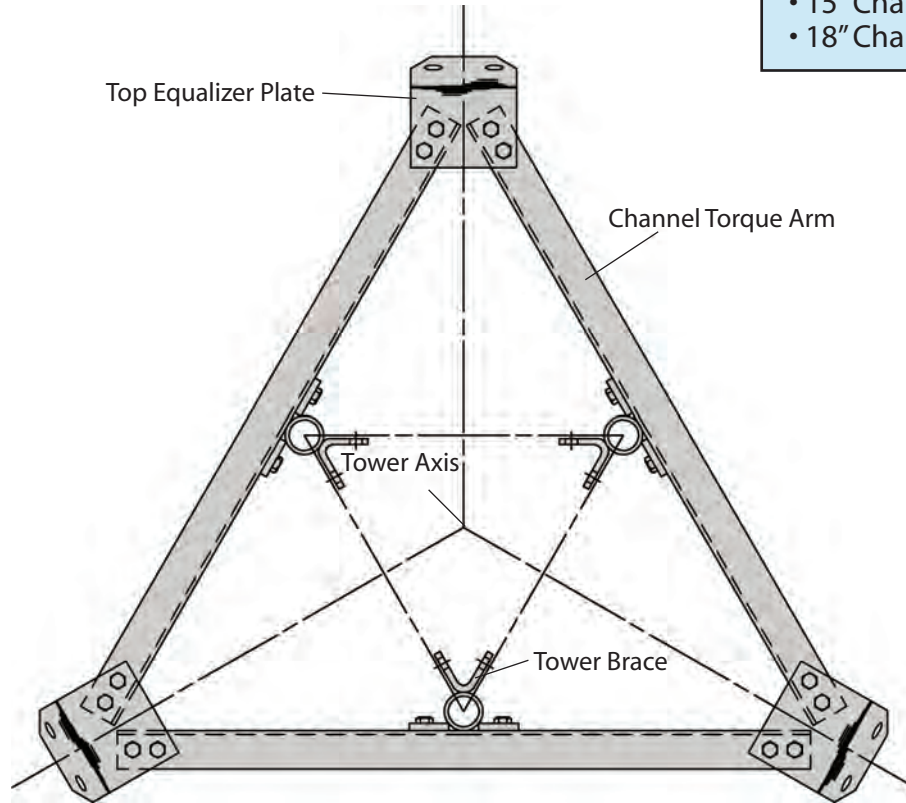
90 Sections have several custom designs available depending on your particular specifications. Sections are available with a variety of different wall thicknesses, bracing patterns and lengths.



# TORQUE ARM CHANNEL ASSEMBLY FOR 90 TOWERS

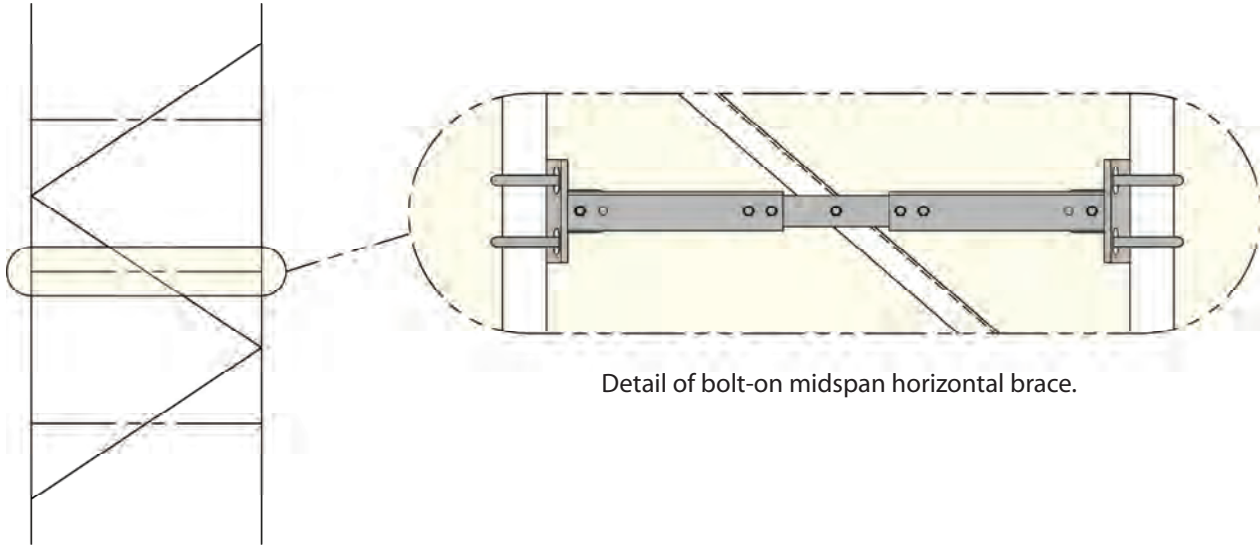
**Available Sizes:**

- 12" Channel
- 15" Channel
- 18" Channel



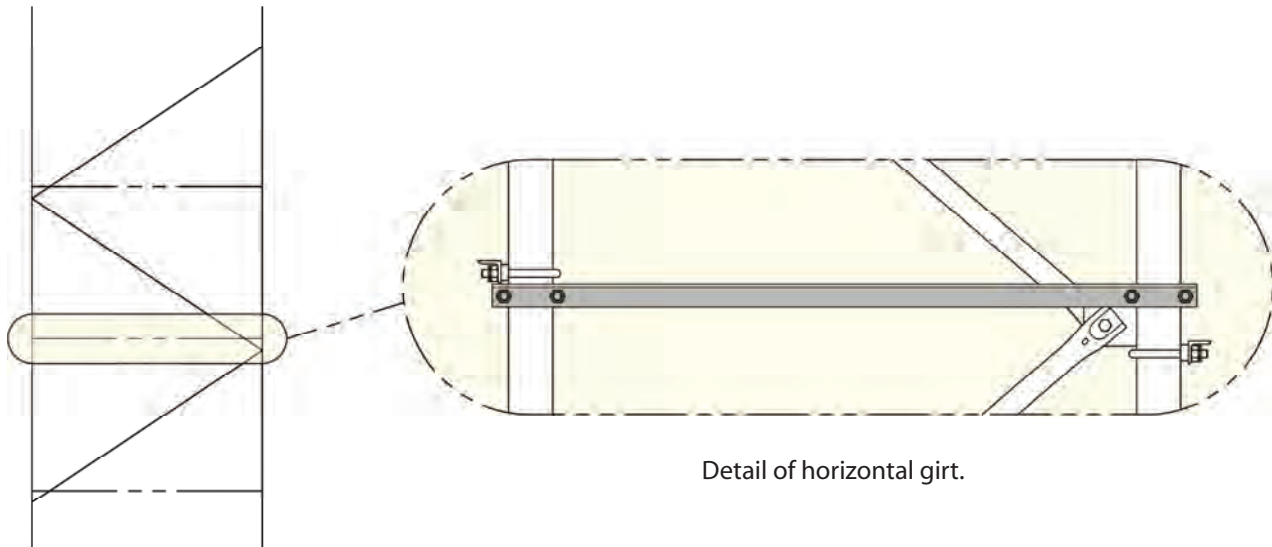
### GUYED REINFORCEMENTS

STANDARD PARTS AVAILABLE FOR TOWER MODIFICATIONS  
AND FIELD REINFORCEMENT



Detail of bolt-on midspan horizontal brace.

For 80 Series towers



Detail of horizontal girt.

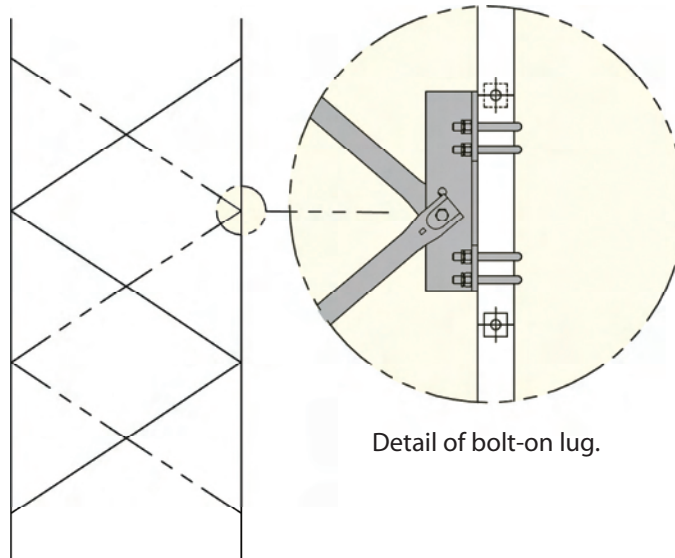
For 80 Series towers

Added braces are shown as a dashed line.  
ELEVATION



## GUYED REINFORCEMENTS

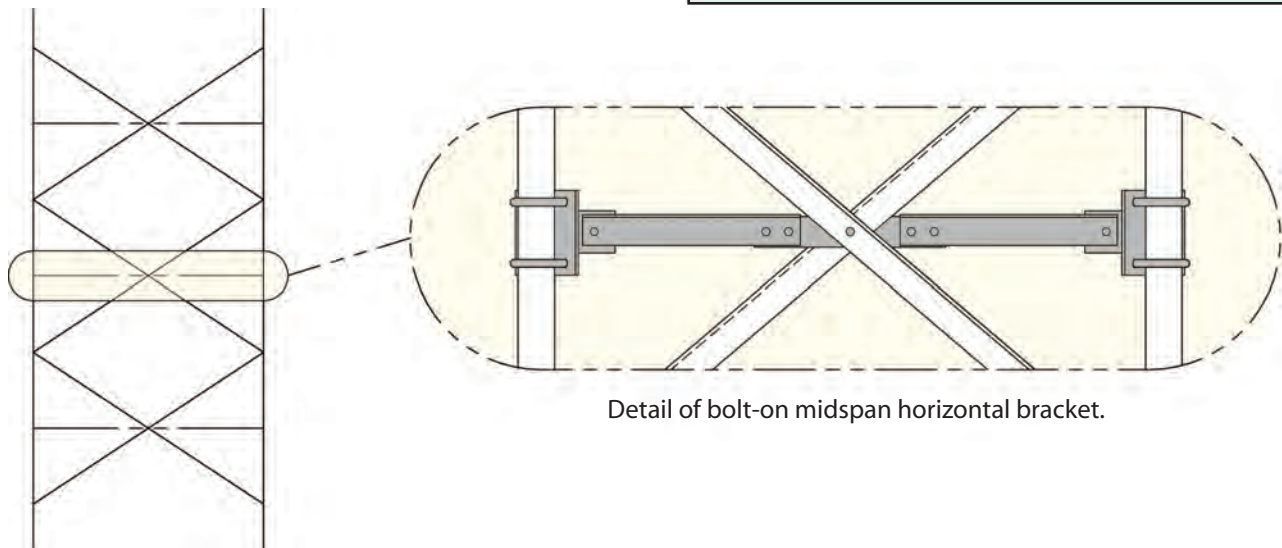
STANDARD PARTS AVAILABLE FOR TOWER MODIFICATIONS  
AND FIELD REINFORCEMENT



Detail of bolt-on lug.

For 80 Series towers

Standard and Heavy Duty replacement braces  
available for model 80 and model 90 towers.



Detail of bolt-on midspan horizontal bracket.

For 80/90 Series towers

Added braces are shown as a dashed line.



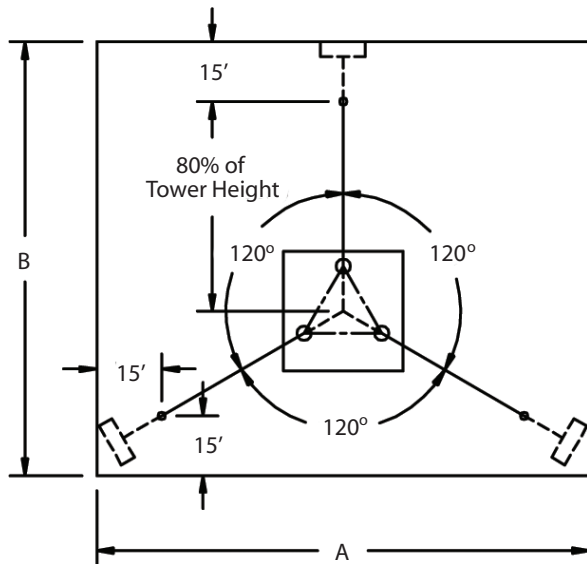
## GUY WIRE & HARDWARE CHART

GUY WIRE SIZE & TYPE	ULTIMATE STRENGTH (LBS)	WORKING STRENGTH (LBS)*	MIN. SIZE TURN-BUCKLE	TURN-BUCKLE SAFE LOAD	ANCHOR RODS SHOWN BELOW ARE RODS THAT CAN BE USED WITH THE MINIMUM TURNBUCKLE SIZES. (CHECK EQUALIZER HEAD THICKNESS AND HOLE DIAMETER ON SPECIAL "KA" ANCHORS FOR PROPER TURNBUCKLE SIZE)							SHACKLE SIZE REQ'D	THIMBLES FOR BIG GRIP (HVY)	BIG GRIP (IN) P/N	GROUNDING CLAMPS W/ NO. 4 SOLID (MAX)
					5/8" ROD	3/16" THICK 2 PLATES	3/8" THK	1/2" THK	3/4" THK	1" THK	1" THK				
3/16EHS*	3990	1995	3/8	3000		GAC305 GAC303						3/8	5/16	3/16 BG2142	340028
1/4EHS	6650	3325	1/2	5500	GAR30	GAC305 GAC303	GAC34					1/2*	3/8	1/4 BG2144	
5/16EHS	11200	5600	5/8	8750	GAR30	GAC305 GAC303	GAC34	GAC56				1/2*	7/16	5/16 BG2146	
3/8EHS*	15400	7700	5/8	8750	GAR30		GAC34	GAC56				5/8	1/2	3/8 BG2147	
7/16EHS	20800	10400	3/4	13000	GAR30		GAC34	GAC56	GAC57			5/8	9/16	7/16 BG2148	
1/2EHS	26900	13450	7/8	18000				GAC56	GAC57			3/4	5/8	1/2 BG2115	SSC25/875
9/16EHS	35000	17500	7/8	18000				GAC56	GAC57			3/4	5/8	9/16 BG2116	
5/8EHS	42400	21200	1	25000					GAC57	GAC58	GAC59	7/8	3/4	5/8 BG2111	
3/4EHS	58300	29150	1-1/4	38000						GAC58	GAC59	1	7/8	3/4 BG2112	
7/8EHS	79700	39850	1-1/2	53500	AS REQUIRED							1-1/8	1	7/8 BGMS7023	9842L
1BS	122000	61000	1-3/4	70000	AS REQUIRED							1-1/4	-	RK0516	
1BGSBG	104500	52250	1-1/2	53500	AS REQUIRED							1-1/4	1-1/4	BGMS7047	

**NOTES:**

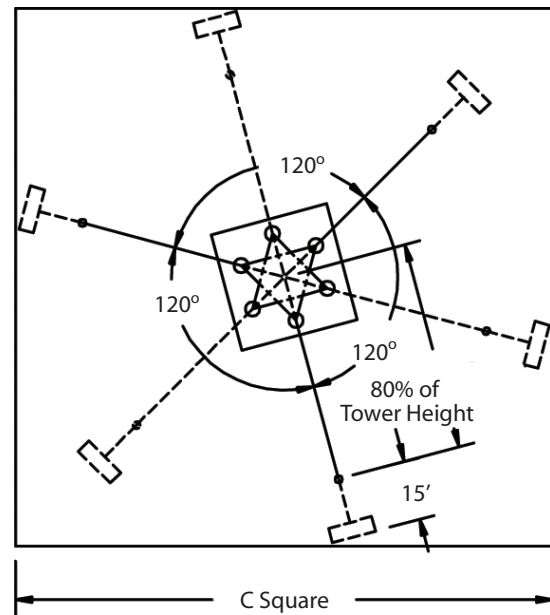
- \* Replace 1/2" shackles with 5/8" shackles when using channel torque arms for 25G, 45G, 55G and 65G towers.
- Factor of safety = 2.0

## LAND AREA REQUIREMENTS FOR 80% GUYED TOWERS



**Layout A**

This is the minimum area of land required. However, this area will not always permit orienting tower into the best position for antenna path direction.



**Layout B**

This is the minimum area of land required to permit orienting tower in any position for antenna path direction.



## LAND AREA REQUIREMENTS FOR 80% GUYED TOWERS

Tower Height	Layout A		Layout B		
	Acres	A	A	Acres	C
20'	0.08	60'	55'	0.10	65'
30'	0.12	75'	70'	0.15	80'
40'	0.17	90'	80'	0.21	95'
50'	0.21	100'	90'	0.28	110'
60'	0.28	115'	105'	0.39	130'
70'	0.35	130'	115'	0.48	145'
80'	0.43	145'	130'	0.59	160'
90'	0.50	155'	140'	0.70	175'
100'	0.59	170'	150'	0.83	190'
110'	0.70	185'	165'	1.01	210'
120'	0.80	200'	175'	1.16	225'
130'	0.94	215'	190'	1.32	240'
140'	1.04	225'	200'	1.49	255'
150'	1.16	240'	210'	1.67	270'
160'	1.32	255'	225'	1.93	290'
170'	1.46	270'	235'	2.14	305'
180'	1.64	285'	250'	2.35	320'
190'	1.76	295'	260'	2.58	335'
200'	1.92	310'	270'	2.81	350'
210'	2.13	325'	285'	3.14	370'
220'	2.31	340'	295'	3.40	385'
230'	2.50	350'	310'	3.67	400'
240'	2.68	365'	320'	3.95	415'
250'	2.88	380'	330'	4.24	430'
260'	3.13	395'	345'	4.65	450'
270'	3.34	410'	355'	4.96	465'
280'	3.57	420'	370'	5.29	480'
290'	3.80	435'	380'	5.63	495'
300'	4.03	450'	390'	5.97	510'
310'	4.33	465'	405'	6.45	530'
320'	4.53	475'	415'	6.82	545'
330'	4.84	490'	430'	7.20	560'

Tower Height	Layout A		Layout B		
	Acres	A	B	Acres	C
340'	5.10	505'	440'	7.59	575'
350'	5.37	520'	450'	8.00	590'
360'	5.71	535'	465'	8.54	610'
370'	5.94	545'	475'	8.97	625'
380'	6.30	560'	490'	9.40	640'
390'	6.60	575'	500'	9.85	655'
400'	6.91	590'	510'	10.31	670'
410'	7.23	600'	525'	10.93	690'
420'	7.55	615'	535'	11.41	705'
430'	7.96	630'	550'	11.90	720'
440'	8.29	645'	560'	12.40	735'
450'	8.64	660'	570'	12.91	750'
460'	9.00	670'	585'	13.61	770'
470'	9.36	685'	595'	14.15	785'
480'	9.80	700'	610'	14.69	800'
490'	10.10	715'	620'	15.25	815'
500'	10.49	725'	630'	15.81	830'
550'	12.59	795'	690'	19.01	910'
600'	14.89	865'	750'	22.50	990'
650'	17.39	935'	810'	26.28	1070'
700'	19.97	1000'	870'	30.36	1150'
750'	22.85	1070'	930'	34.73	1230'
800'	25.91	1140'	990'	39.40	1310'
850'	29.17	1210'	1050'	44.35	1390'
900'	32.62	1280'	1110'	49.61	1470'
950'	36.26	1350'	1170'	55.15	1550'
1000'	40.10	1420'	1230'	61.00	1630'
1050'	43.98	1485'	1290'	67.13	1710'
1100'	48.19	1555'	1350'	73.56	1790'
1150'	52.60	1625'	1410'	80.28	1870'
1200'	57.20	1695'	1470'	87.30	1950'

Note:

1. Due to variables involved in roof and other installations, it shall be the responsibility of the customer or installer to provide structurally adequate supports for pier and anchor connections. It may also be necessary for the customer or installer to secure the service of a local engineer to determine that the installation complies with local building codes.