

Convex & Concave Guardrail

Rail sections to be installed on curves having a radius of 5 feet to 150 feet can be curved in our fabricating facilities prior to delivery.

Rail can be curved either convex or concave as required. Terms convex or concave refer to the direction curved, inward or outward, relative to the traffic face of the rail.

Step 1: Starting at the last post in the straight run (point A), lay cloth tape along the path that the curved guide rail will follow.

Step 2: Mark-off two points along the curved cloth tape: one at 6'-3" (point B) and the second at 12'-6" (point C).

Step 3: Pull string directly from starting point (point A) to the second mark-off point (point C).

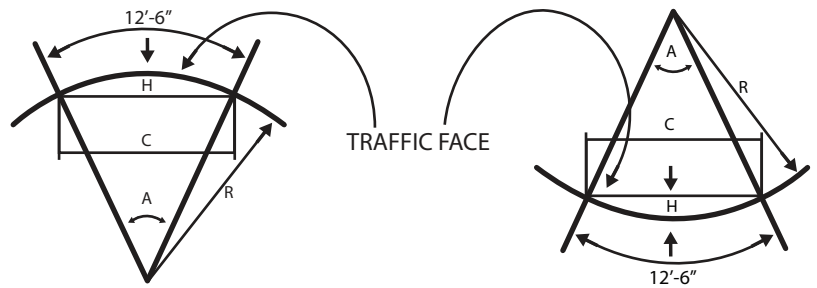
Step 4: Measure from the first mark-off point (point B) over to the mid-point of the taut string. This measurement (H) is the Rise.

Step 5: Check the chart to find the Radius (R), given the Rise (H). Example: a Rise of 37/8" would result in a Radius of 60 feet.

The diagrams & chart provide data for locating posts and curves.

Note: Follow the steps above for each piece of the rail section in the curved run. The arc may not be consistent and each consecutive piece of rail may differ in radius from the previous one.

Functions of 12' - 6" arc for different radii



Radii (R)	Angle (A)	Chord (C)	Rise (H)
5	143° 14'	9'-5 7/8"	3'-5"
10	71° 37'	11'-8 3/8"	1'-10 3/4"
15	47° 45'	12'-1 3/4"	1'-3 3/8"
20	35° 49'	12'-3 5/8"	11 5/8"
25	28° 39'	12'-4 1/2"	9 3/8"
30	23° 52'	12'-4 7/8"	7 3/4"
35	20° 28'	12'-5 1/8"	6 5/8"
40	17° 53'	12'-5 3/8"	5 7/8"
45	15° 55'	12'-5 1/2"	5 1/4"
50	14° 19'	12'-5 5/8"	4 5/8"
55	13° 01'	12'-5 5/8"	4 1/4"
60	11° 56'	12'-5 3/4"	3 7/8"
65	11° 01'	12'-5 3/4"	3 5/8"
70	10° 14'	12'-5 3/4"	3 3/8"
75	9° 33'	12'-5 3/4"	3 1/8"
80	8° 57'	12'-5 7/8"	3"
85	8° 26'	12'-5 7/8"	2 3/4"
90	7° 58'	12'-5 7/8"	2 5/8"
95	7° 32'	12'-5 7/8"	2 1/2"
100	7° 10'	12'-5 7/8"	2 3/8"
110	6° 31'	12'-5 7/8"	2 1/8"
120	5° 58'	12'-6"	2"
130	5° 31'	12'-6"	1 3/4"
140	5° 07'	12'-6"	1 5/8"
150	4° 47'	12'-6"	

