

**TECHNICAL
BRIEF**

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**ALLOWABLE TRANSFER WIDTHS
VERSUS RADIUS OF HIGHWAY CURVATURE**

Because a transfer of barrier from the inside to the outside of roadway or the reverse, changes the effective radius of the barrier, it changes the circumference or length of the barrier chain. The patented hinges of the Quickchange[®] Moveable Barrier system are designed to compensate for this change in length within a specific range of highway radii and transfer widths.

Figure 1 shows the breakdown of radius of curvature versus transfer width for allowable transfers, three general classifications exist.

- First classification is “standard”, indicating that the combination of transfer width and radius of curvature are within the capabilities of the standard system.
- Second are the combinations that are available only with special operating restrictions and/or hardware. Barrier Systems engineering offices in Rio Vista, CA, should be contacted before planning any job that falls within this range.
- The third classification are jobs that far exceed the normal range of the system capabilities and must be handled with special restrictions and special/or custom hardware at extra costs. Before undertaking or planning such an application, Barrier Systems engineering should be contacted and a quote should be obtained from Barrier Systems sales.

For any questions or clarifications contact Barrier Systems engineering offices at 180 River Road, Rio Vista, CA 94571, (Phone 707-374-6800).

PERCENTAGE OF ALLOWABLE HINGE DEFLECTIONS
VERSUS
TRANSFER WIDTH AND RADIUS OF CURVATURE

Transfer Width	Radius of Curvature									
	500	1000	1500	2000	2500	3000	3500	4000		
8	126%	63%	42%	31%	25%	21%	18%	16%		
10	157%	79%	52%	39%	31%	26%	22%	20%		
12	189%	94%	63%	47%	38%	31%	27%	24%		
14	220%	110%	73%	55%	44%	37%	31%	28%		
16	252%	126%	84%	63%	50%	42%	36%	31%		
18	283%	142%	94%	71%	57%	47%	40%	35%		
20	315%	157%	105%	79%	63%	52%	45%	39%		
22	346%	173%	115%	87%	69%	58%	49%	43%		
24	378%	189%	126%	94%	76%	63%	54%	47%		
26	409%	205%	136%	102%	82%	68%	58%	51%		
28	441%	220%	147%	110%	88%	73%	63%	55%		
30	472%	236%	157%	118%	94%	79%	67%	59%		
36	567%	283%	189%	142%	113%	94%	81%	71%		
48	756%	378%	252%	189%	151%	126%	108%	94%		

LEGEND

Standard

Available with special operating restrictions/hardware

Only available at extra cost with restrictions and special hardware



HINGE OFFSETS FOR WALL SETTING IN CURVES
VERSUS
TRANSFER WIDTH AND RADIUS OF CURVATURE

*NOTE WELL: OFFSET TOWARDS
COMPRESSION ON INSIDE OF
CURVE, OPPOSITE ON OUTSIDE*

Transfer Width	Radius of Curvature	1000	1500	2000	2500	3000	3500	4000
8	500	3/16	2/16	1/16	1/16	1/16	1/16	1/16
10	500	3/16	2/16	2/16	1/16	1/16	1/16	1/16
12	500	4/16	3/16	2/16	2/16	1/16	1/16	1/16
14	500	4/16	3/16	2/16	2/16	1/16	1/16	1/16
16	500	5/16	3/16	3/16	2/16	2/16	1/16	1/16
18	500	6/16	4/16	3/16	2/16	2/16	2/16	1/16
20	500	6/16	4/16	3/16	3/16	2/16	2/16	2/16
22	500	7/16	5/16	3/16	3/16	2/16	2/16	2/16
24	500	8/16	5/16	4/16	3/16	2/16	2/16	2/16
26	500	8/16	5/16	4/16	3/16	3/16	2/16	2/16
28	500	9/16	6/16	4/16	4/16	3/16	3/16	2/16
30	500	9/16	6/16	5/16	4/16	3/16	3/16	2/16
36	500	11/16	8/16	6/16	5/16	4/16	3/16	3/16
48	500	15/16	10/16	8/16	6/16	5/16	4/16	4/16

LEGEND

Standard

Available with special operating restrictions/hardware

Only available at extra cost with restrictions and special hardware

