

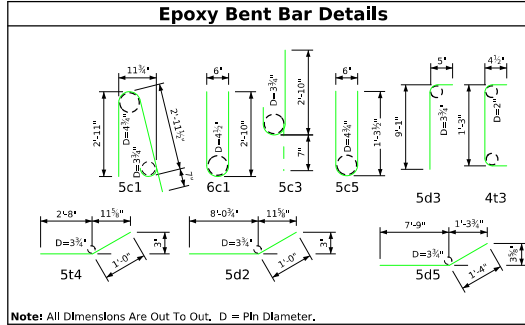
Epoxy Reinforcing Steel - Two Barrier Rails

Epoxy Reinforcing Steel - Two Barrier Rails																														
Bridge Length				70'-0"			80'-0"			90'-0"			100'-0"			110'-0"			120'-0"			130'-0"			140'-0"			150'-0"		
Section	Bar	Location	Shape	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight
2 Std.Sec.	5c1	Vertical		124	6'-8"	862	144	6'-8"	1001	166	6'-8"	1154	186	6'-8"	1293	206	6'-8"	1432	226	6'-8"	1507	246	6'-8"	1640	266	6'-8"	1850	286	6'-8"	1989
	5d1	Long.		36	36'-6"	1371	54	28'-10"	1624	54	32'-1"	1807	54	35'-5"	1995	54	38'-9"	2182	72	32'-4"	2428	72	34'-10"	2616	72	37'-4"	2804	72	39'-10"	2991
4 End.Sec.	6c1	Rail Vertical		48	5'-11"	427	48	5'-11"	427	48	5'-11"	427	48	5'-11"	427	48	5'-11"	427	48	5'-11"	427	48	5'-11"	427	48	5'-11"	427	48	5'-11"	427
	5c3	Rail Vertical (Traffic Face)		12	3'-5"	43	12	3'-5"	43	12	3'-5"	43	12	3'-5"	43	12	3'-5"	43	12	3'-5"	43	12	3'-5"	43	12	3'-5"	43	12	3'-5"	43
	5c5	Rail Vertical (End)		16	3'-1"	51	16	3'-1"	51	16	3'-1"	51	16	3'-1"	51	16	3'-1"	51	16	3'-1"	51	16	3'-1"	51	16	3'-1"	51	16	3'-1"	51
	5d1	Rail Horiz (Back Face)		24	9'-1"	227	24	9'-1"	227	24	9'-1"	227	24	9'-1"	227	24	9'-1"	227	24	9'-1"	227	24	9'-1"	227	24	9'-1"	227	24	9'-1"	227
	5d2	Rail Horiz (Traffic Face)		12	9'-1"	114	12	9'-1"	114	12	9'-1"	114	12	9'-1"	114	12	9'-1"	114	12	9'-1"	114	12	9'-1"	114	12	9'-1"	114	12	9'-1"	114
	5d3	Rail Horiz (Traffic Face)		12	9'-6"	120	12	9'-6"	120	12	9'-6"	120	12	9'-6"	120	12	9'-6"	120	12	9'-6"	120	12	9'-6"	120	12	9'-6"	120	12	9'-6"	120
	5d4	Rail Horiz (Traffic Face)		8	6'-3"	52	8	6'-3"	52	8	6'-3"	52	8	6'-3"	52	8	6'-3"	52	8	6'-3"	52	8	6'-3"	52	8	6'-3"	52	8	6'-3"	52
	5d5	Rail Horiz (Top)		8	9'-1"	76	8	9'-1"	76	8	9'-1"	76	8	9'-1"	76	8	9'-1"	76	8	9'-1"	76	8	9'-1"	76	8	9'-1"	76	8	9'-1"	76
	4t3	Rail Abut Wing Tie Bars		24	2'-0"	32	24	2'-0"	32	24	2'-0"	32	24	2'-0"	32	24	2'-0"	32	24	2'-0"	32	24	2'-0"	32	24	2'-0"	32	24	2'-0"	32
	5t4	Wing Horiz (Tie Bars)		8	3'-8"	31	8	3'-8"	31	8	3'-8"	31	8	3'-8"	31	8	3'-8"	31	8	3'-8"	31	8	3'-8"	31	8	3'-8"	31	8	3'-8"	31
		Epoxy Reinforced Total Weight (lbs)				Total	3406		Total	3798		Total	4134		Total	4461		Total	4787		Total	5108		Total	5429		Total	5827		Total

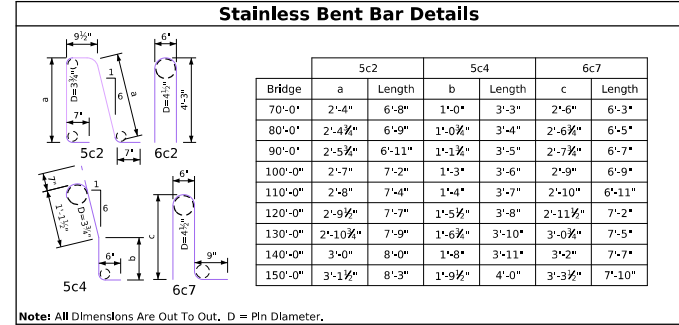
Stainless Steel Reinforcing Steel - Two Barrier Rails

Stainless Steel Reinforcing Steel - Two Barrier Rails																														
Bridge Length				70'-0"			80'-0"			90'-0"			100'-0"			110'-0"			120'-0"			130'-0"			140'-0"			150'-0"		
Section	Bar	Location	Shape	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight
2 Std. Sec	5c2	Vertical		124	6'-8"	862	144	6'-9"	1014	166	6'-11"	1198	186	7'-2"	1390	206	7'-4"	1576	226	7'-7"	1788	246	7'-9"	1988	266	8'-0"	2220	286	8'-3"	2461
4 End Sec	6c2	Rail, Vertical		20	9'-0"	270	20	9'-0"	270	20	9'-0"	270	20	9'-0"	270	20	9'-0"	270	20	9'-0"	270	20	9'-0"	270	20	9'-0"	270	20	9'-0"	270
	5c4	Rail Vertical (Traffic Face)		24	3'-3"	81	24	3'-4"	83	24	3'-5"	86	24	3'-6"	88	24	3'-7"	90	24	3'-8"	92	24	3'-10"	96	24	3'-11"	98	24	4'-0"	100
	5c6	Rail, Vertical (End)		32	5'-8"	189	32	5'-8"	189	32	5'-8"	189	32	5'-8"	189	32	5'-8"	189	32	5'-8"	189	32	5'-8"	189	32	5'-8"	189	32	5'-8"	189
	6c7	Rail, Vertical (Slab/Abut.)		28	6'-3"	263	28	6'-5"	270	28	6'-7"	277	28	6'-9"	284	28	6'-11"	291	28	7'-2"	301	28	7'-5"	312	28	7'-7"	319	28	7'-10"	329
Stainless Steel Reinforced Total Weight (lbs)				Total 1665			Total 1826			Total 2020			Total 2221			Total 2416			Total 2640			Total 2855			Total 3096			Total 3349		

Epoxy Bent Bar Details



Stainless Bent Bar Details



Concrete Placement Summary

Bridge Length	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"
Standard Section * 2 x "B" @ 0.1301 cu.yd. per ft.	8.2	9.6	10.9	12.2	13.5	14.8	16.1	17.4	18.7
End Section 4 @ 1.00 cu.yd.				4.0					
Total (cu.yd.)	12.2	13.6	14.9	16.2	17.5	18.8	20.1	21.4	22.7

* For Rail Single-Slope Barrier - Dimension "B", see J40-47-25
Concrete Quantities shown are based on 45° skew bid lengths.

Concrete Barrier Rail Quantities

Bridge Length	70'-0"	80'-0"	90'-0"	100'-0"	110'-0"	120'-0"	130'-0"	140'-0"	150'-0"
Concrete Barrier Railing 0° Skew	162.0	182.0	202.0	222.0	242.0	262.0	282.0	302.0	322.0
Concrete Barrier Railing 15° Skew	162.2	182.2	202.2	222.2	242.2	262.2	282.2	302.2	322.2
Concrete Barrier Railing 30° Skew	162.9	182.9	202.9	222.9	242.9	262.9	282.9	302.9	322.9
Concrete Barrier Railing 45° Skew	164.5	184.5	204.5	224.5	244.5	264.5	284.5	304.5	324.5

Note:
For Rail Single-Slope Barrier -
Details, see Sheet J40-47-25.

Latest Revision Date Approved by Bridge Engineer	IOWA DOT Standard Design-40'-0" Roadway, 3 Span Bridge Continuous Concrete Slab Bridge July, 2025	
	Rail Single-Slope Barrier - Quantities	J40-48-25