Epoxy Steel Reinforcing for Superstructure-150' Bridge

	Degree Skew		0			15			30			45		
Location	Shape	Bar	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight	No.	Length	Weight
Slab Longitudinal Bottom		10a1	53	28'-5"	6481	53	28'-5"	6481	53	28'-5"	6481	53	28'-5"	6481
Slab Longitudinal Bottom		10a2	53	46'-10"	10,681	53	46'-10"	10,681	53	46'-10"	10,681	53	46'-10"	10,681
Slab Longitudinal Bottom		10a3	53	48'-1"	10,966	53	48'-1"	10,966	53	48'-1"	10,966	53	48'-1"	10,966
Slab Longitudinal Bottom		9a4	52	34'-8"	6130	52	34'-8"	6130	52	34'-8"	6130	52	34'-8"	6130
Slab Longitudinal Bottom		9a5	26	38'-10"	3433	26	38'-10"	3433	26	38'-10"	3433	26	38'-10"	3433
Slab Longitudinal Bottom, at Rail		9a6	8	45'-2"	1229	8	45'-2"	1229	8	45'-2"	1229	8	45'-2"	1229
Slab Longitudinal Bottom, at Rail		9a7	4	57'-10"	787	4	57'-10"	787	4	57'-10"	787	4	57'-10"	787
Slab Longitudinal Bottom, at Rail		10a8	8	32'-4"	1114	8	32'-4"	1114	8	32'-4"	1114	8	32'-4"	1114
Slab Longitudinal Bottom, at Rail		10a9	4	42'-7"	733	4	42'-7"	733	4	42'-7"	733	4	42'-7"	733
Slab Longitudinal Bottom, at Rail		9a10	8	12'-4"	336	8	12'-4"	336	8	12'-4"	336	8	12'-4"	336
Slab Longitudinal Top		8b1	53	6'-7"	932	53	6'-7"	932	53	6'-7"	932	53	6'-7"	932
Slab Longitudinal Top		11b2	53	25'-2"	7087	53	25'-2"	7087	53	25'-2"	7087	53	25'-2"	7087
Slab Longitudinal Top		11b3	53	27'-5"	7721	53	27'-5"	7721	53	27'-5"	7721	53	27'-5"	7721
Slab Longitudinal Top		11b4	52	24'-6"	6769	52	24'-6"	6769	52	24'-6"	6769	52	24'-6"	6769
Slab Longitudinal Top		6b5	26	42'-6"	1660	26	42'-6"	1660	26	42'-6"	1660	26	42'-6"	1660
Slab Longitudinal Top		7b6	53	31'-8"	3431	53	31'-8"	3431	53	31'-8"	3431	53	31'-8"	3431
Slab Longitudinal Top, at Rail		6b8	8	39'-3"	472	8	39'-3"	472	8	39'-3"	472	8	39'-3"	472
Slab Longitudinal Top, at Rail		6b9	8	45'-9"	550	8	45'-9"	550	8	45'-9"	550	8	45'-9"	550
Slab Longitudinal Top, at Rail		6b10	4	36'-10"	222	4	36'-10"	222	4	36'-10"	222	4	36'-10"	222
Slab Longitudinal Top, at Rail		11b11	8	27'-10"	1184	8	27'-10"	1184	8	27'-10"	1184	8	27'-10"	1184
Slab Longitudinal Top, at Rail		10b12	8	14'-4"	494	8	14'-4"	494	8	14'-4"	494	8	14'-4"	494
Slab Transverse Bottom		6c1	147	24'-4"	5373	147	25'-2"	5557	137	24'-4"	5008	127	24'-4"	4642
Slab Transverse Bottom		6c2	147	21'-3"	4692	147	22'-0"	4858	139	21'-3"	4437	131	21'-3"	4182
Slab Transverse Ends, Bottom		6c3	-	-	-	-	-	-	13	VARIES	262	21	VARIES	447
Slab Transverse Ends, Bottom		6c4	-	-	-	-	-	-	11	VARIES	233	20	VARIES	386
Slab Transverse Ends, Bottom		6c5	-	-	-	-	-	-	10	VARIES	173	17	VARIES	298
Slab Transverse Ends, Bottom		6c6	-	-	-	-	-	-	11	VARIES	191	17	VARIES	311
Slab Transverse Top		5d1	147	25'-3"	3872	147	26'-1"	4000	137	25'-3"	3608	127	25'-3"	3345
Slab Transverse Top		5d2	147	21'-10"	3348	147	22'-7"	3463	139	21'-10"	3166	131	21'-10"	2984
Slab Transverse Ends, Top		5d3	-	-	-	-	-	-	13	VARIES	188	21	VARIES	324
Slab Transverse Ends, Top		5d4	-	-	-	-	-	-	11	VARIES	166	20	VARIES	275
Slab Transverse Ends, Top		5d5	-	-	-	-	-	-	10	VARIES	120	17	VARIES	207
Slab Transverse Ends, Top		5d6	-	-	-	-	-	-	11	VARIES	139	17	VARIES	227
Slab, Transverse at Abutment		8e1	18	26'-4"	1266	18	27'-1"	1302	18	29'-6"	1418	18	34'-8"	1667
Slab, Transverse at Abutment		8e2	18	21'-4"	1026	18	22'-0"	1058	18	24'-5"	1174	18	29'-7"	1422
Slab, Transverse at Abutment		6e3	92	5'-0"	691	92	5'-1"	703	92	5'-5"	749	92	6'-1"	841
Slab, Transverse at Abutment		6e4	92	5'-11"	818	92	5'-11"	818	92	5'-11"	818	92	5'-11"	818
Top of Slab, Transverse, at Rail		5j1	292	6'-9"	2056	292	6'-9"	2056	282	6'-9"	1986	276	6'-9"	1944
Wing, Vertical		5m1	40	4'-5"	185	40	4'-5"	185	40	4'-5"	185	40	4'-5"	185
Wing, Horizontal Back Face		5n1	48	6'-8"	334	48	6'-8"	334	48	6'-8"	334	48	6'-8"	334
Epoxy Reinforcing Total Weight (lbs)					96,073			96,746			96,767			97,251
Rail Single-Slope Barrier – Quantities - See Sheet J40-48-25.					6153			6153			6153			6153
Rail Open Barrier – Quantities - See Sheet J40-52-25.					7146			7146			7146			7146
Epoxy Coated Rail Total-lbs. Monolithic Single-Slope Rail					102,226			102,899			102,920			103,404
Epoxy Coated Rail Total-lbs. Monolithic Open Rail					103,219			103,892			103,913			104,397
Epoxy Coated Rail Total-lbs. Non-Monolithic Single-Slope Rail					102,226			102,899			102,920			103,404
Epoxy Coated Rail Total-lbs. Non-Monolithic Open Rail					103,219			103,892			103,913			104,397
Stainless Steel Rail Total-lbs. Single-Slope Rail					3349			3349			3349			3349
Stainless Steel Rail Total-lbs. Open Rail					2925			2925			2925			2925

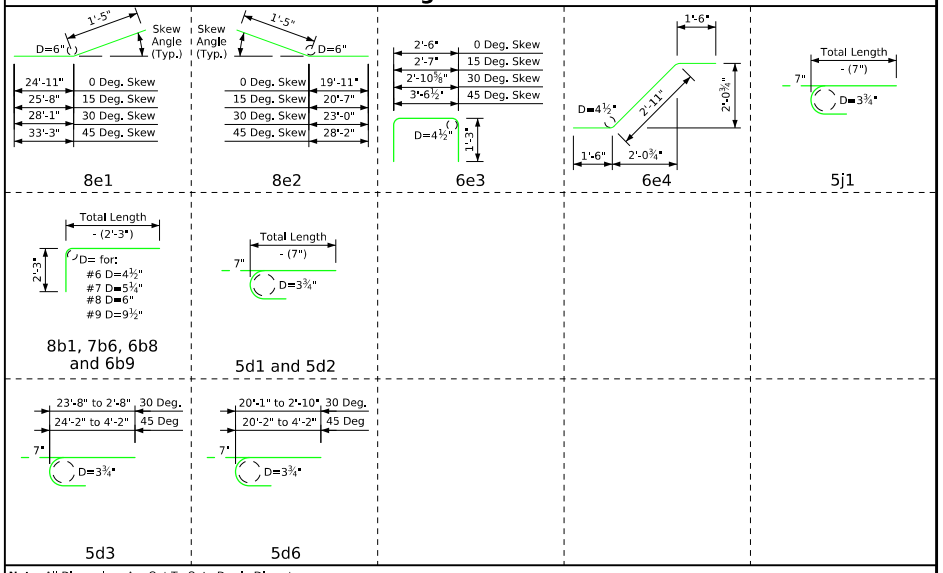
Estimated Quantities for Superstructure 150' Bridge

	Monolithic Cap				Non-Monolithic Cap			
Item	0°	15°	30°	45°	0°	15°	30°	45°
With Single-Slope Rail								
* Structural Concrete (Bridge) (c.y.)	501.1	501.9	503.7	508.2	504.5	505.2	507.6	512.8
Reinf. Steel Epoxy Coated (lbs.)	102,226	102,899	102,920	103,404	102,226	102,899	102,920	103,404
Δ Reinf. Steel Stainless Steel (lbs.)	3572	3572	3572	3572	3572	3572	3572	3572
Concrete single-slope barrier or open rail (lin.ft.)	322	322.2	322.9	324.5	322	322.2	322.9	324.5
With Open Rail								
* Structural Concrete (Bridge) (c.y.)	500.9	501.6	503.4	507.9	504.2	504.9	507.3	512.5
Reinf. Steel Epoxy Coated (lbs.)	103,219	103,892	103,913	104,397	103,219	103,892	103,913	104,397
Δ Reinf. Steel Stainless Steel (lbs.)	3148	3148	3148	3148	3148	3148	3148	3148

* Includes 4 wings at 1.114 cubic yard each; excludes rail concrete.

Δ Includes abutment paving notch bar weight.

150'-0 Bridge-Bent Bar Details



Note: All Dimensions Are Out To Out. D=pin Diameter.

Stainless Steel Reinforcing for Superstructure

(All Skews)

Location	Shape	Bar	No.	Length	Weight
Abutment Paving Notch Bar		8u1	40	2'-1	223

8u1 bars are to be paid for under the price bid for "**Reinforcing Steel, Stainless Steel**". Weight = lbs.

Note:
See J40-26-25 Sheet for Monolithic Pier Cap reinforcing details and quantities.
See J40-28-25 Sheet for Non-Monolithic Pier Cap reinforcing details and quantities.

Latest Revision Date

Approved by Bridge Engineer

IOWA DOT

Standard Design-40'-0" Roadway, 3 Span Bridge

Continuous Concrete Slab Bridge

July, 2025

Superstructure Details
150'-0" Bridge Quantities

J40-19-25