Epoxy Steel Reinforcing for Superstructure-90' 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		8a1	53	19'-4"	2736	53	19'-4"	2736	53	19'-4"	2736	53	19'-4"	2736
Slab Longitudinal Bottom		8a2	53	28'-8"	4057	53	28'-8"	4057	53	28'-8"	4057	53	28'-8"	4057
Slab Longitudinal Bottom		8a3	53	29'-2"	4128	53	29'-2"	4128	53	29'-2"	4128	53	29'-2"	4128
Slab Longitudinal Bottom		8a4	52	22'-9"	3159	52	22'-9"	3159	52	22'-9"	3159	52	22'-9"	3159
Slab Longitudinal Bottom		8a5	26	26'-2"	1817	26	26'-2"	1817	26	26'-2"	1817	26	26'-2"	1817
Slab Longitudinal Bottom, at Rail		8a6	8	32'-9"	700	8	32'-9"	700	8	32'-9"	700	8	32'-9"	700
Slab Longitudinal Bottom, at Rail		8a7	4	34'-0"	364	4	34'-0"	364	4	34'-0"	364	4	34'-0"	364
Slab Longitudinal Bottom, at Rail		8a8	8	23'-3"	497	8	23'-3"	497	8	23'-3"	497	8	23'-3"	497
Slab Longitudinal Bottom, at Rail		8a9	4	25'-11"	277	4	25'-11"	277	4	25'-11"	277	4	25'-11"	277
Slab Longitudinal Top		9b1	53	7'-7"	1367	53	7'-7"	1367	53	7'-7"	1367	53	7'-7"	1367
Slab Longitudinal Top		9b2	53	16'-10"	3034	53	16'-10"	3034	53	16'-10"	3034	53	16'-10"	3034
Slab Longitudinal Top		9b3	53	17'-3"	3109	53	17'-3"	3109	53	17'-3"	3109	53	17'-3"	3109
Slab Longitudinal Top		6b4	52	27'-5"	2142	52	27'-5"	2142	52	27'-5"	2142	52	27'-5"	2142
Slab Longitudinal Top		9b5	52	13'-7"	2402	52	13'-7"	2402	52	13'-7"	2402	52	13'-7"	2402
Slab Longitudinal Top		6b6	26	29'-0"	1133	26	29'-0"	1133	26	29'-0"	1133	26	29'-0"	1133
Slab Longitudinal Top		6b7	53	21'-10"	1739	53	21'-10"	1739	53	21'-10"	1739	53	21'-10"	1739
Slab Longitudinal Top, at Rail		6b8	8	28'-5"	342	8	28'-5"	342	8	28'-5"	342	8	28'-5"	342
Slab Longitudinal Top, at Rail		6b9	8	29'-11"	360	8	29'-11"	360	8	29'-11"	360	8	29'-11"	360
Slab Longitudinal Top, at Rail		6b10	4	25'-10"	156	4	25'-10"	156	4	25'-10"	156	4	25'-10"	156
Slab Longitudinal Top, at Rail		9b11	8	14'-2"	386	8	14'-2"	386	8	14'-2"	386	8	14'-2"	386
Slab Longitudinal Top, at Rail		8b12	8	8'-9"	187	8	8'-9"	187	8	8'-9"	187	8	8'-9"	187
Slab Transverse Bottom		6c1	87	24'-4"	3180	87	25'-2"	3289	77	24'-4"	2815	67	24'-4"	2449
Slab Transverse Bottom		6c2	87	21'-3"	2777	87	22'-0"	2875	79	21'-3"	2522	71	21'-3"	2267
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	87	25'-3"	2292	87	26'-1"	2367	77	25'-3"	2028	67	25'-3"	1765
Slab Transverse Top		5d2	87	21'-10"	1982	87	22'-7"	2050	79	21'-10"	1800	71	21'-10"	1617
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, Tansverse at Abutment		8e1	18	26'-4"	1266	18	27'-1"	1302	18	29'-6"	1418	18	34'-8"	1667
Slab, Tansverse at Abutment		8e2	18	21'-4"	1026	18	22'-0"	1058	18	24'-5"	1174	18	29'-7"	1422
Slab, Tansverse at Abutment		6e3	92	5'-0"	691	92	5'-1"	703	92	5'-5"	749	92	6'-1"	841
Slab, Tansverse 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		7j1	172	8'-3"	2901	172	8'-3"	2901	162	8'-3"	2732	156	8'-3"	2631
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)					51,544			51,974			52,139			52,563
Rail Single-Slope Barrier – Quantities - See Sheet J40-48-25.					4134			4134			4134			4134
Rail Open Barrier – Quantities - See Sheet J40-52-25.					4789			4789			4789			4789
Epoxy Coated Rail Total-lbs. Monolithic Single-Slope Rail					55,678			56,108			56,273			56,697
Epoxy Coated Rail Total-lbs. Monolithic Open Rail					56,333			56,763			56,928			57,352
Epoxy Coated Rail Total-lbs. Non-Monolithic Single-Slope Rail					55,678			56,108			56,273			56,697
Epoxy Coated Rail Total-lbs. Non-Monolithic Open Rail					56,333			56,763			56,928			57,352
Stainless Steel Rail Total-lbs. Single-Slope Rail					2020			2020			2020			2020
Stainless Steel Rail Total-lbs. Open Rail					1867			1867			1867			1867

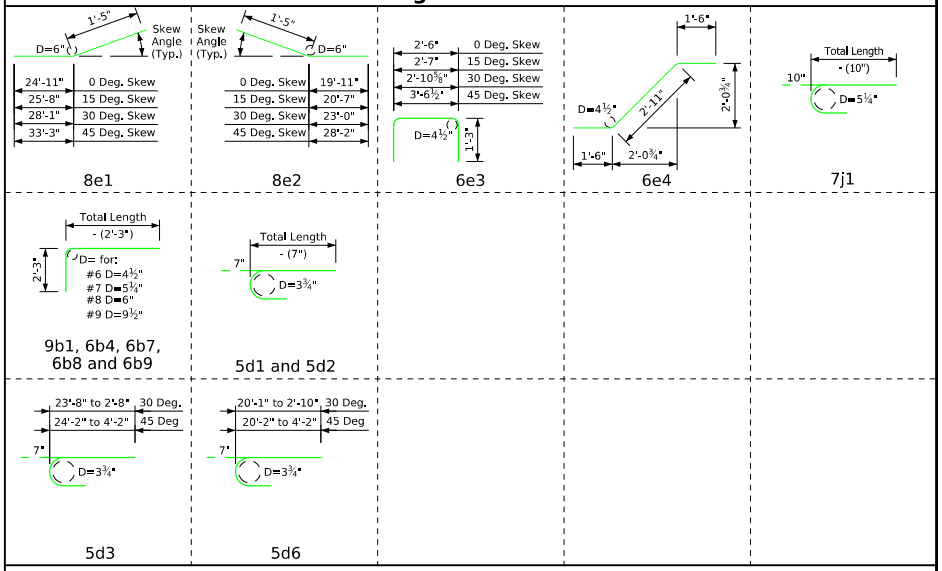
Estimated Quantities for Superstructure 90' Bridge

	Monolithic Cap				Non-Monolithic Cap			
Item	0°	15°	30°	45°	0°	15°	30°	45°
With Single-Slope Rail								
* Structural Concrete (Bridge) (c.y.)	219.4	220.2	222.4	227.7	222.7	223.5	226.3	232.3
Reinf. Steel Epoxy Coated (lbs.)	55,678	56,108	56,273	56,697	55,678	56,108	56,273	56,697
Δ Reinf. Steel Stainless Steel (lbs.)	2243	2243	2243	2243	2243	2243	2243	2243
Concrete single-slope barrier or open rail (lin.ft.)	202	202.2	202.9	204.5	202	202.2	202.9	204.5
With Open Rail								
* Structural Concrete (Bridge) (c.y.)	219.3	220.1	222.3	227.6	222.5	223.4	226.1	232.1
Reinf. Steel Epoxy Coated (lbs.)	56,333	56,763	56,928	57,352	56,333	56,763	56,928	57,352
Δ Reinf. Steel Stainless Steel (lbs.)	2090	2090	2090	2090	2090	2090	2090	2090

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

Δ Includes abutment paving notch bar weight.

90'-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
90'-0" Bridge Quantities

J40-07-25