Epoxy Steel Reinforcing for Superstructure-100' 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	20'-6"	2901	53	20'-6"	2901	53	20'-6"	2901	53	20'-6"	2901
Slab Longitudinal Bottom		8a2	53	31'-2"	4411	53	31'-2"	4411	53	31'-2"	4411	53	31'-2"	4411
Slab Longitudinal Bottom		8a3	53	32'-4"	4576	53	32'-4"	4576	53	32'-4"	4576	53	32'-4"	4576
Slab Longitudinal Bottom		9a4	52	25'-3"	4465	52	25'-3"	4465	52	25'-3"	4465	52	25'-3"	4465
Slab Longitudinal Bottom		9a5	26	29'-0"	2564	26	29'-0"	2564	26	29'-0"	2564	26	29'-0"	2564
Slab Longitudinal Bottom, at Rail		8a6	8	35'-9"	764	8	35'-9"	764	8	35'-9"	764	8	35'-9"	764
Slab Longitudinal Bottom, at Rail		8a7	4	38'-0"	406	4	38'-0"	406	4	38'-0"	406	4	38'-0"	406
Slab Longitudinal Bottom, at Rail		8a8	8	25'-6"	545	8	25'-6"	545	8	25'-6"	545	8	25'-6"	545
Slab Longitudinal Bottom, at Rail		8a9	4	28'-4"	303	4	28'-4"	303	4	28'-4"	303	4	28'-4"	303
Slab Longitudinal Top		8b1	53	6'-7"	932	53	6'-7"	932	53	6'-7"	932	53	6'-7"	932
Slab Longitudinal Top		10b2	53	18'-11"	4315	53	18'-11"	4315	53	18'-11"	4315	53	18'-11"	4315
Slab Longitudinal Top		10b3	53	18'-0"	4106	53	18'-0"	4106	53	18'-0"	4106	53	18'-0"	4106
Slab Longitudinal Top		6b4	52	30'-9"	2402	52	30'-9"	2402	52	30'-9"	2402	52	30'-9"	2402
Slab Longitudinal Top		9b5	52	13'-0"	2299	52	13'-0"	2299	52	13'-0"	2299	52	13'-0"	2299
Slab Longitudinal Top		6b6	26	33'-6"	1309	26	33'-6"	1309	26	33'-6"	1309	26	33'-6"	1309
Slab Longitudinal Top		6b7	53	25'-3"	2011	53	25'-3"	2011	53	25'-3"	2011	53	25'-3"	2011
Slab Longitudinal Top, at Rail		6b8	8	30'-7"	368	8	30'-7"	368	8	30'-7"	368	8	30'-7"	368
Slab Longitudinal Top, at Rail		6b9	8	31'-11"	384	8	31'-11"	384	8	31'-11"	384	8	31'-11"	384
Slab Longitudinal Top, at Rail		6b10	4	27'-8"	167	4	27'-8"	167	4	27'-8"	167	4	27'-8"	167
Slab Longitudinal Top, at Rail		9b11	8	16'-1"	438	8	16'-1"	438	8	16'-1"	438	8	16'-1"	438
Slab Longitudinal Top, at Rail		9b12	8	10'-9"	293	8	10'-9"	293	8	10'-9"	293	8	10'-9"	293
Slab Transverse Bottom		6c1	97	24'-4"	3546	97	25'-2"	3667	87	24'-4"	3180	77	24'-4"	2815
Slab Transverse Bottom		6c2	97	21'-3"	3096	97	22'-0"	3206	89	21'-3"	2841	81	21'-3"	2586
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	97	25'-3"	2555	97	26'-1"	2639	87	25'-3"	2292	77	25'-3"	2028
Slab Transverse Top		5d2	97	21'-10"	2209	97	22'-7"	2285	89	21'-10"	2027	81	21'-10"	1845
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		6j1	192	7'-7"	2187	192	7'-7"	2187	182	7'-7"	2074	176	7'-7"	2005
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)					57,872			58,343			58,523			58,980
Rail Single-Slope Barrier – Quantities - See Sheet J40-48-25.					4461			4461			4461			4461
Rail Open Barrier – Quantities - See Sheet J40-52-25.					5151			5151			5151			5151
Epoxy Coated Rail Total-lbs. Monolithic Single-Slope Rail					62,333			62,804			62,984			63,441
Epoxy Coated Rail Total-lbs. Monolithic Open Rail					63,023			63,494			63,674			64,131
Epoxy Coated Rail Total-lbs. Non-Monolithic Single-Slope Rail					62,333			62,804			62,984			63,441
Epoxy Coated Rail Total-lbs. Non-Monolithic Open Rail					63,023			63,494			63,674			64,131
Stainless Steel Rail Total-lbs. Single-Slope Rail					2221			2221			2221			2221
Stainless Steel Rail Total-lbs. Open Rail					2020			2020			2020			2020

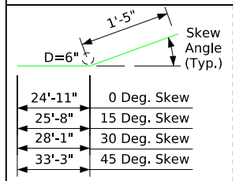
Estimated Quantities for Superstructure 100' Bridge

	Monolithic Cap				Non-Monolithic Cap			
Item	0°	15°	30°	45°	0°	15°	30°	45°
With Single-Slope Rail								
* Structural Concrete (Bridge) (c.y.)	257.2	258	260.2	265.3	260.5	261.3	264	269.9
Reinf. Steel Epoxy Coated (lbs.)	62,333	62,804	62,984	63,441	62,333	62,804	62,984	63,441
Δ Reinf. Steel Stainless Steel (lbs.)	2444	2444	2444	2444	2444	2444	2444	2444
Concrete single-slope barrier or open rail (lin.ft.)	222	222.2	222.9	224.5	222	222.2	222.9	224.5
With Open Rail								
* Structural Concrete (Bridge) (c.y.)	257	257.8	260	265.1	260.4	261.2	263.9	269.7
Reinf. Steel Epoxy Coated (lbs.)	63,023	63,494	63,674	64,131	63,023	63,494	63,674	64,131
Δ Reinf. Steel Stainless Steel (lbs.)	2243	2243	2243	2243	2243	2243	2243	2243

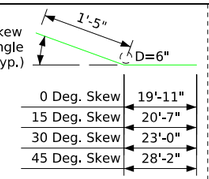
* Includes 4 wings at 1.114 cubic yard each; excludes rail concrete.

Δ Includes abutment paving notch bar weight.

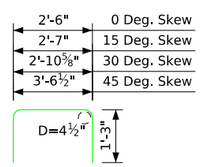
100'-0 Bridge-Bent Bar Details



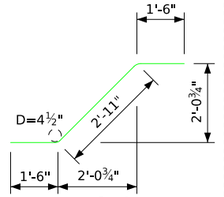
8e1



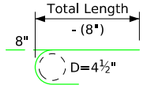
8e2



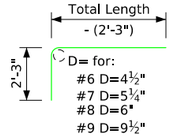
6e3



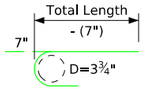
6e4



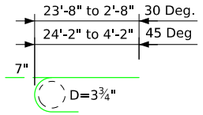
6j1



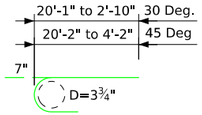
8b1, 6b4, 6b7, 6b8 and 6b9



5d1 and 5d2



5d3



5d6

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
100'-0" Bridge Quantities

J40-09-25