

SLAB DATA

		LONGITUDINAL															TRANSVERSE							
		BOTTOM BARS						TOP BARS									BOTTOM		TOP		U BARS *			
SPANS (feet)	T (inches)	A BARS			B BARS			C BARS			D BARS			E BARS			N BARS		M BARS		N BARS)			
		SIZE	SPA.	a	LENGTH	SIZE	SPA.	LENGTH	SIZE	SPA.	LENGTH	SIZE	SPA.	LENGTH	SIZE	SPA.	LENGTH	SIZE	SPA.	NO. **		SIZE	SPA.	NO.
14 - 17.50 - 14	11	8	7 in	16'-0"	16'-11"	8	7 in	20'-6"	5	7 in	7'-6"	8	7 in	21'-0"	N/A	N/A	N/A	6	15 in	47	4	12 in	47	78
15 - 18.75 - 15	11½	8	7 in	17'-0"	17'-11"	8	7 in	21'-9"	5	7 in	7'-10"	8	7 in	22'-3"	N/A	N/A	N/A	6	15 in	48	4	12 in	50	80
16 - 20.00 - 16	12	8	7 in	18'-0"	18'-11"	8	7 in	23'-0"	5	7 in	8'-3"	8	7 in	23'-6"	N/A	N/A	N/A	6	15 in	51	4	12 in	53	86
17 - 21.25 - 17	12½	8	7 in	19'-0"	19'-11"	8	7 in	24'-3"	5	7 in	8'-7"	8	7 in	24'-9"	N/A	N/A	N/A	6	15 in	54	4	12 in	56	92
18 - 22.50 - 18	13	8	7 in	20'-0"	20'-11"	8	7 in	25'-6"	5	7 in	9'-0"	8	7 in	26'-0"	N/A	N/A	N/A	6	15 in	57	4	12 in	60	98
19 - 23.75 - 19	13½	8	7 in	21'-0"	21'-11"	8	7 in	26'-9"	5	7 in	9'-4"	8	7 in	27'-3"	N/A	N/A	N/A	6	15 in	60	4	12 in	63	104
20 - 25.00 - 20	14	8	7 in	22'-0"	22'-11"	8	7 in	28'-0"	5	7 in	9'-9"	8	7 in	28'-6"	N/A	N/A	N/A	6	15 in	61	4	12 in	66	106
21 - 26.25 - 21	14½	8	7 in	23'-0"	23'-11"	8	7 in	29'-3"	5	7 in	10'-1"	8	7 in	29'-9"	N/A	N/A	N/A	6	15 in	64	4	12 in	69	112
22 - 27.50 - 22	15	8	7 in	24'-0"	24'-11"	8	7 in	30'-6"	5	7 in	13'-8"	8	7 in	24'-8"	5	7	9'-11"	6	15 in	67	4	12 in	73	118
23 - 28.75 - 23	15½	8	7 in	25'-0"	25'-11"	8	7 in	31'-9"	5	7 in	14'-3"	8	7 in	25'-5"	5	7	10'-4"	6	15 in	70	4	12 in	76	124
24 - 30.00 - 24	16	8	7 in	26'-0"	26'-11"	8	7 in	33'-0"	5	6 in	14'-10"	8	6 in	26'-3"	5	6	10'-10"	6	15 in	73	4	12 in	79	130
25 - 31.25 - 25	16½	8	7 in	27'-0"	27'-11"	8	7 in	34'-3"	5	6 in	15'-5"	8	6 in	27'-1"	5	6	11'-3"	6	15 in	74	4	12 in	82	132
26 - 32.50 - 26	17	8	7 in	28'-0"	28'-11"	8	7 in	35'-6"	5	6 in	16'-1"	8	6 in	27'-10"	5	6	11'-8"	6	15 in	77	4	12 in	86	138
27 - 33.75 - 27	17½	8	7 in	29'-0"	29'-11"	8	7 in	36'-9"	5	6 in	16'-8"	8	6 in	28'-8"	5	6	12'-2"	6	15 in	80	4	12 in	89	144
28 - 35.00 - 28	18	8	7 in	30'-0"	30'-11"	8	7 in	38'-0"	5	6 in	17'-3"	8	6 in	29'-6"	5	6	12'-7"	6	15 in	83	4	12 in	92	150
29 - 36.25 - 29	18½	8	6 in	31'-0"	31'-11"	8	6 in	39'-3"	5	6 in	17'-10"	8	6 in	30'-3"	5	6	13'-0"	6	15 in	86	4	12 in	95	156
30 - 37.50 - 30	19	8	6 in	32'-0"	32'-11"	8	6 in	40'-6"	5	7 in	18'-5"	9	7 in	31'-1"	5	7	13'-6"	6	15 in	87	4	12 in	99	158
31 - 38.75 - 31	19½	8	6 in	33'-0"	33'-11"	8	6 in	41'-9"	5	7 in	19'-0"	9	7 in	31'-11"	5	7	13'-11"	6	15 in	90	4	12 in	102	164
32 - 40.00 - 32	20	8	6 in	34'-0"	34'-11"	8	6 in	43'-0"	5	7 in	19'-8"	9	7 in	32'-8"	5	7	14'-4"	6	15 in	93	5	12 in	105	170
33 - 41.25 - 33	20½	8	6 in	35'-0"	35'-11"	8	6 in	44'-3"	5	7 in	20'-3"	9	7 in	33'-6"	5	7	14'-9"	6	15 in	96	5	12 in	108	176
34 - 42.50 - 34	21	8	6 in	36'-0"	36'-11"	8	6 in	45'-6"	5	7 in	20'-10"	9	7 in	34'-4"	5	7	15'-2"	6	15 in	99	5	12 in	112	182
35 - 43.75 - 35	21½	8	6 in	37'-0"	37'-11"	8	6 in	46'-9"	5	6 in	21'-5"	9	6 in	35'-2"	5	6	15'-8"	6	15 in	100	5	12 in	115	184
36 - 45.00 - 36	22	8	6 in	38'-0"	38'-11"	8	6 in	48'-0"	5	6 in	22'-0"	9	6 in	35'-11"	5	6	16'-1"	6	15 in	103	5	12 in	118	190
37 - 46.25 - 37	22½	9	7 in	39'-5"	40'-8"	9	7 in	50'-1"	5	6 in	22'-7"	9	6 in	36'-9"	5	6	16'-7"	6	15 in	106	5	12 in	121	196
38 - 47.50 - 38	23	9	7 in	40'-5"	41'-8"	9	7 in	51'-4"	5	6 in	23'-3"	9	6 in	37'-6"	5	6	17'-0"	6	15 in	109	5	12 in	125	202
39 - 48.75 - 39	23½	9	7 in	41'-5"	42'-8"	9	7 in	52'-7"	5	6 in	23'-10"	9	6 in	38'-4"	5	6	17'-6"	6	15 in	112	5	12 in	128	208
40 - 50.00 - 40	24	9	7 in	42'-5"	43'-8"	9	7 in	53'-10"	5	6 in	24'-5"	9	6 in	39'-1"	5	6	17'-11"	6	15 in	113	5	12 in	131	210
41 - 51.25 - 41	24½	9	6 in	43'-5"	44'-8"	9	6 in	55'-1"	5	6 in	25'-0"	10	6 in	39'-11"	5	6	18'-5"	6	15 in	116	5	12 in	134	216
42 - 52.50 - 42	25	9	6 in	44'-5"	45'-8"	9	6 in	56'-4"	5	6 in	25'-8"	10	6 in	40'-8"	5	6	18'-10"	6	15 in	119	5	12 in	138	222
43 - 53.75 - 43	25½	9	6 in	45'-5"	46'-8"	9	6 in	57'-7"	5	6 in	26'-3"	10	6 in	41'-6"	5	6	19'-3"	6	15 in	122	5	12 in	141	228
44 - 55.00 - 44	26	9	6 in	46'-5"	47'-8"	9	6 in	58'-10"	5	6 in	26'-10"	10	6 in	42'-4"	5	6	19'-8"	6	15 in	125	5	12 in	144	234
45 - 56.25 - 45	26½	10	7 in	47'-11"	49'-4"	10	7 in	61'-1"	5	6 in	27'-5"	10	6 in	43'-1"	5	6	20'-2"	6	15 in	126	5	12 in	147	236
46 - 57.50 - 46	27	10	7 in	48'-11"	50'-4"	10	7 in	62'-4"	5	6 in	28'-1"	10	6 in	43'-10"	5	6	20'-8"	6	15 in	129	5	12 in	151	242

LEGEND:

* - U BARS SHALL NOT BE LAPPED WITH THE ADDITIONAL N-BARS PROVIDED AT THE ABUTMENTS AND PIERS

** - TOTAL NUMBER OF N-BARS INCLUDES THE ADDITIONAL N-BARS PROVIDED AT THE ABUTMENTS AND PIERS

GENERAL: THIS DRAWING PROVIDES DESIGN AND GENERAL CONSTRUCTION DETAILS FOR THREE SPAN SLAB BRIDGES. THE PROJECT PLANS FOR EACH STRUCTURE WILL SHOW SPAN LENGTHS, ROADWAY WIDTHS, SKEW, CURVE AND SUPERELEVATION (IF ANY), ELEVATIONS, SLAB REINFORCEMENT DETAILS IN PLAN AND TRANSVERSE SECTIONS, SUBSTRUCTURE DETAILS, ESTIMATED QUANTITIES, REINFORCING STEEL LIST AND OTHER NECESSARY DETAILS AND SPECIAL NOTES.

ADDITIONAL INTERIOR SPANS, THE SAME LENGTH AS THE MIDDLE SPAN, MAY BE INCORPORATED INTO THE STRUCTURE WITHOUT CHANGE IN SLAB THICKNESS OR AREA OF REINFORCING STEEL. WHEN SPANS ARE ADDED, THE PROJECT PLANS WILL SHOW THE REVISED DETAILS.

ROADWAY WIDTH: THE SLAB DESIGN IS APPLICABLE FOR THE FOLLOWING ROADWAY WIDTHS, MEASURED OUT TO OUT OF BRIDGE DECK: 18ft ≤ WIDTH ≤ 60ft

DESIGN SPECIFICATIONS:

THIS DRAWING CONFORMS TO THE "AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOURTH EDITION" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2007, AND THE OHIO BRIDGE DESIGN MANUAL, 2007.

DESIGN DATA:

DESIGN METHOD - LOAD AND RESISTANCE FACTOR DESIGN
 DESIGN LOADING - HL-93
 FUTURE WEARING SURFACE - 60 LB/FT²
 WEARING SURFACE - ONE INCH MONOLITHIC
 DESIGN STRESSES:

CONCRETE - COMPRESSIVE STRENGTH = 4500 PSI
 REINFORCING STEEL - MIN. YIELD STRENGTH = 60,000 PSI

EDGE BEAM OPTION: IN LIEU OF FORMING AN EDGE BEAM, AT NO ADDITIONAL COST TO THE OWNER, THE CONTRACTOR MAY FURNISH AN 18" SLAB OR A SLAB VARYING IN THICKNESS FROM 18" AT THE EDGE TO "T" AT THE CENTER OF THE ROADWAY. SEE SHEETS 3/4 AND 4/4 FOR EDGE BEAM DETAILS.

CAMBER: TO COMPENSATE FOR FALSEWORK DEFLECTION AND FOR THE DEFLECTION OF THE SLAB AFTER THE FALSEWORK IS REMOVED, BUILD CAMBER INTO THE FALSEWORK ACCORDING TO CMS 508.02.

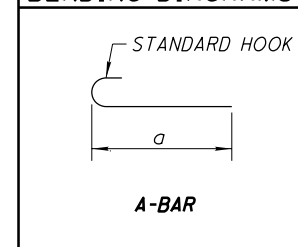
SKEW: FOR BRIDGES WITH SKEW, PLACE LONGITUDINAL BARS PARALLEL TO THE CENTERLINE OF THE ROADWAY AND TRANSVERSE BARS PARALLEL TO THE CENTERLINE OF PIERS AND ABUTMENTS. DO NOT USE THIS STANDARD FOR SKEWS GREATER THAN 30°.

REINFORCING STEEL: FURNISH THE REINFORCING STEEL LENGTHS AS INDICATED IN THE TABLE OR STANDARD DRAWINGS. IF THE CONTRACTOR ELECTS TO UTILIZE SHORTER BAR LENGTHS, PROVIDE THE MINIMUM LAP LENGTHS SHOWN BELOW AT NO ADDITIONAL COST TO THE STATE:

NO. 4 LAP = 3'-0" NO. 8 LAP = 6'-9"
 NO. 5 LAP = 3'-6" NO. 9 LAP = 8'-7"
 NO. 6 LAP = 4'-4" NO. 10 LAP = 10'-10"

THE LOCATIONS OF THE SPLICES SHALL BE APPROVED BY THE ENGINEER.

BENDING DIAGRAMS



NOTE

A BAR LENGTHS INCLUDE THE 180° BEND STANDARD HOOK LENGTH.

DESIGN AGENCY	OFFICE OF STRUCTURAL ENGINEERING	ORIGINAL DESIGN PREPARED BY: E.L. ROBINSON
STATE OF OHIO DEPARTMENT OF TRANSPORTATION	DATE	07-18-08
ADMINISTRATOR	ADMINISTRATOR	1-10-08
REVIEWED	FILE	
CHECKED	DFT	
DESIGNED	AME	
DRAWN	DTA	
REVISED		
STANDARD	CONTINUOUS SLAB BRIDGE	
	2	4