

PROJECT NO.	YEAR	SHEET NO.	
	1992		
REVISIONS			
NO.	DATE	BY	BRIEF DESCRIPTION
1	2-24-95	TO	REMOVED SIGNATURES
2	1-4-96	TO	REVISED BR DRAWING NO. TO SBR DRAWING NO. AND REVISED STD-2-1 TO STD-1-1

BILL OF STEEL LOADING H15-44-90°, 75°, 60° AND 45° SKEW (SEE NOTE BELOW)

SPAN LENGTH (FT)	*4A		*4A1		*4A2		B		*4F		*4H		*4HI		*4H2		*4H3		*4L		
	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	
16	10	15'-6"	62	3'-0"	62	3'-2"	8	4	15'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	32	3'-8"				
18	10	17'-6"	70	3'-0"	70	3'-2"	8	4	17'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	36	3'-8"				
20	10	19'-6"	78	3'-0"	78	3'-2"	9	4	19'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	40	3'-8"				
22	10	21'-6"	86	3'-0"	86	3'-2"	9	4	21'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	44	3'-8"				
24	10	23'-6"	94	3'-0"	94	3'-2"	10	4	23'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	48	3'-8"				
26	10	25'-6"	102	3'-0"	102	3'-2"	10	4	25'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	52	3'-8"				
28	10	27'-6"	110	3'-0"	110	3'-2"	9	8	27'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	56	3'-8"				
30	10	29'-6"	118	3'-0"	118	3'-2"	11	8	29'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	60	3'-8"				
32	10	31'-6"	126	3'-0"	126	3'-2"	11	8	31'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	64	3'-8"				
34	10	33'-6"	134	3'-0"	134	3'-2"	11	8	33'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	68	3'-8"				

NOTE: BARS LISTED IN BILL OF STEEL ARE FOR ALL SKEWS (90°, 75°, 60° & 45°) UNLESS NOTED OTHERWISE.
 ① BARS A1 ARE FOR 90°, 60° & 45° SKEWS.
 ② BARS A2 ARE FOR 75° SKEW ONLY.
 ③ 90° SKEW REQUIRES 6-#4 BARS H.
 75° SKEW REQUIRES 2-#4 BARS H AND 4-#4 BARS HI.
 60° SKEW REQUIRES 2-#4 BARS H AND 4-#4 BARS H2.
 45° SKEW REQUIRES 2-#4 BARS H AND 4-#4 BARS H3.

ESTIMATED QUANTITIES H15-44 LOADING

SPAN LENGTH (FT)	SKEW	90°		75°		60°		45°	
		CONCRETE CLASS 'A' C.Y.	REINFORCING STEEL LB.	CONCRETE CLASS 'A' C.Y.	REINFORCING STEEL LB.	CONCRETE CLASS 'A' C.Y.	REINFORCING STEEL LB.	CONCRETE CLASS 'A' C.Y.	REINFORCING STEEL LB.
16		1.8	629	1.8	630	1.8	630	1.9	642
18		2.0	703	2.0	704	2.0	705	2.1	719
20		2.2	849	2.2	849	2.3	850	2.3	853
22		2.4	929	2.4	929	2.5	930	2.5	937
24		2.6	1108	2.7	1109	2.7	1110	2.7	1106
26		2.9	1196	2.9	1196	2.9	1197	2.9	1196
28		3.1	1577	3.1	1577	3.1	1578	3.1	1564
30		3.3	2202	3.3	2202	3.3	2203	3.3	2127
32		3.5	2340	3.5	2340	3.5	2341	3.5	2269
34		3.7	2477	3.7	2478	3.7	2479	3.7	2410

NOTE: COST OF BITUMINOUS FIBERBOARD, JOINT SEALER, ELASTOMERIC BEARING PADS, LAG SCREWS, BOLTS AND WASHERS (FOR JOINING PRECAST CHANNELS) TO BE INCLUDED IN COST OF PRECAST UNIT.

STRENGTH OF CONCRETE H15-44 LOADING

SPAN LENGTH (FT)	ITEM	MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS PSI
16		3000
18		3000
20		3000
22		3000
24		3000
26		3000
28		3000
30		3000
32		3500
34		4400

NOTE: CHANNEL UNITS SHALL BE CAMBERED TO COMPENSATE FOR DEAD LOAD DEFLECTION. THIS CURVE IS FOR DEAD LOAD BEAM AND ALL DEAD LOADS APPLIED AFTER CHANNEL UNITS ARE IN PLACE. IN LIEU OF CAMBERING THE CHANNEL UNITS, THE CAMBER MAY BE PROVIDED BY VARYING THE DEPTH OF ASPHALT OR CONCRETE OVERLAY.

SPAN LENGTH	DIMENSION	
	A	B
16	1/16"	1/8"
18	1/8"	1/8"
20	1/8"	1/4"
22	3/16"	1/2"
24	1/4"	1/2"
26	1/4"	3/8"
28	1/4"	3/8"
30	1/2"	1/2"
32	1/2"	1/2"
34	1/2"	2"

DEAD LOAD CORRECTION CURVE

BILL OF STEEL LOADING HS20-44-90°, 75°, 60° AND 45° SKEW (SEE NOTE BELOW)

SPAN LENGTH (FT)	*4A		*4A1		*4A2		B		*4F		*4H		*4HI		*4H2		*4H3		*4L		
	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	NO.	LGTH.	
16	10	15'-6"	62	3'-0"	62	3'-2"	8	4	15'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	32	3'-8"				
18	10	17'-6"	70	3'-0"	70	3'-2"	9	4	17'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	36	3'-8"				
20	10	19'-6"	78	3'-0"	78	3'-2"	9	4	19'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	40	3'-8"				
22	10	21'-6"	86	3'-0"	86	3'-2"	10	4	21'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	44	3'-8"				
24	10	23'-6"	94	3'-0"	94	3'-2"	10	4	23'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	48	3'-8"				
26	10	25'-6"	102	3'-0"	102	3'-2"	11	8	25'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	52	3'-8"				
28	10	27'-6"	110	3'-0"	110	3'-2"	11	8	27'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	56	3'-8"				
30	10	29'-6"	118	3'-0"	118	3'-2"	11	8	29'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	60	3'-8"				
32	10	31'-6"	126	3'-0"	126	3'-2"	11	8	31'-8"	8	3'-0"	4'-4"	4'-6"	4'-10"	5'-8"	64	3'-8"				

NOTE: BARS LISTED IN BILL OF STEEL ARE FOR ALL SKEWS (90°, 75°, 60° & 45°) UNLESS NOTED OTHERWISE.
 ① BARS A1 ARE FOR 90°, 60° & 45° SKEWS.
 ② BARS A2 ARE FOR 75° SKEW ONLY.
 ③ 90° SKEW REQUIRES 6-#4 BARS H.
 75° SKEW REQUIRES 2-#4 BARS H AND 4-#4 BARS HI.
 60° SKEW REQUIRES 2-#4 BARS H AND 4-#4 BARS H2.
 45° SKEW REQUIRES 2-#4 BARS H AND 4-#4 BARS H3.

ESTIMATED QUANTITIES HS20-44 LOADING

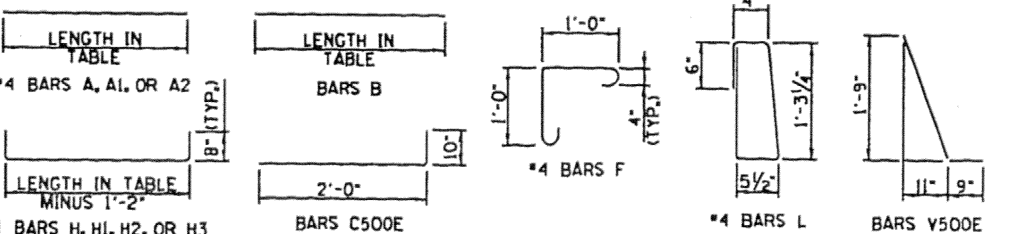
SPAN LENGTH (FT)	SKEW	90°		75°		60°		45°	
		CONCRETE CLASS 'A' C.Y.	REINFORCING STEEL LB.	CONCRETE CLASS 'A' C.Y.	REINFORCING STEEL LB.	CONCRETE CLASS 'A' C.Y.	REINFORCING STEEL LB.	CONCRETE CLASS 'A' C.Y.	REINFORCING STEEL LB.
16		1.8	629	1.8	630	1.8	630	1.9	642
18		2.0	769	2.0	769	2.0	770	2.1	719
20		2.2	849	2.2	849	2.3	850	2.3	853
22		2.4	1021	2.4	1022	2.5	1022	2.5	937
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26		2.9	1926	2.9	1927	2.9	1928	2.9	1196
28		3.1	2064	3.1	2065	3.1	2065	3.1	1564
30		3.3	2202	3.3	2202	3.3	2203	3.3	2127
32		3.5	2340	3.5	2340	3.5	2341	3.5	2269

NOTE: COST OF BITUMINOUS FIBERBOARD, JOINT SEALER, ELASTOMERIC BEARING PADS, LAG SCREWS, BOLTS AND WASHERS (FOR JOINING PRECAST CHANNELS) TO BE INCLUDED IN COST OF PRECAST UNIT.

STRENGTH OF CONCRETE HS20-44 LOADING

SPAN LENGTH (FT)	ITEM	MINIMUM COMPRESSIVE STRENGTH @ 28 DAYS PSI
16		3000
18		3000
20		3000
22		3000
24		3000
26		3000
28		3500
30		4200
32		4500

B MINOR REVISION - FHWA APPROVAL NOT REQUIRED



DESIGNED BY: B.B.O. DATE: 11-91
 DRAWN BY: D.M.A. DATE: 11-91
 SUPERVISED BY: B.B.O. DATE: 11-91
 CHECKED BY: M.OINTURFF DATE: 2-92

'E' DENOTES BAR TO BE EPOXY COATED.

STATE OF TENNESSEE
 DEPARTMENT OF TRANSPORTATION
 BUREAU OF HIGHWAYS
 DETAILS FOR PRECAST
 SLAB BRIDGE CHANNELS
 SPANS 16'-0" THRU 34'-0"
 SKEWS 90°-75°-60°-45°
 1992