

30° SKEW 32'-0" - 33'-6" BRIDGE WIDTH 2:1 FILL SLOPES

MARK		Bill of Reinforcement																																			
TYPE		A1		A2		A3		A4		A5		A6		A7		A8		A9		A10		A11		A12		A13		A14		A15		A16		A17		A18	
SIZE		Str.		Str.		Str.		Str.		Str.		Str.		Str.		Str.		Str.		Str.		Str.		Str.		Str.		Str.		Str.		Str.		Str.			
15-16	95	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18	10	18
13-14	88	9	16	9	16	9	16	9	16	9	16	9	16	9	16	9	16	9	16	9	16	9	16	9	16	9	16	9	16	9	16	9	16	9	16	9	16
11-12	83	8	15	8	15	8	15	8	15	8	15	8	15	8	15	8	15	8	15	8	15	8	15	8	15	8	15	8	15	8	15	8	15	8	15	8	15
9-10	79	7	14	7	14	7	14	7	14	7	14	7	14	7	14	7	14	7	14	7	14	7	14	7	14	7	14	7	14	7	14	7	14	7	14	7	14
7-8	74	6	13	6	13	6	13	6	13	6	13	6	13	6	13	6	13	6	13	6	13	6	13	6	13	6	13	6	13	6	13	6	13	6	13	6	13
5-6	69	5	12	5	12	5	12	5	12	5	12	5	12	5	12	5	12	5	12	5	12	5	12	5	12	5	12	5	12	5	12	5	12	5	12	5	12

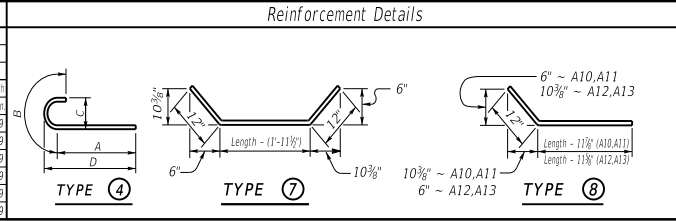
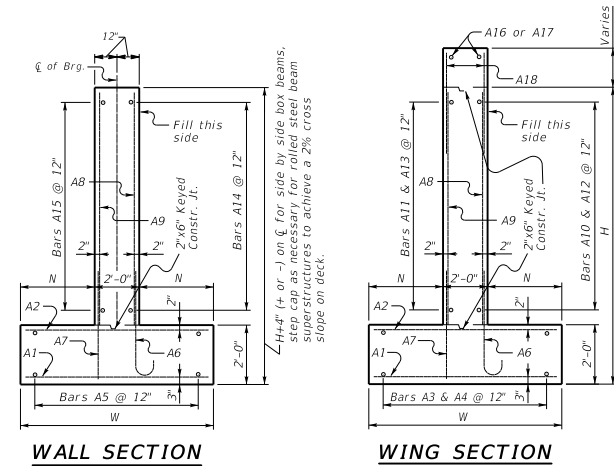
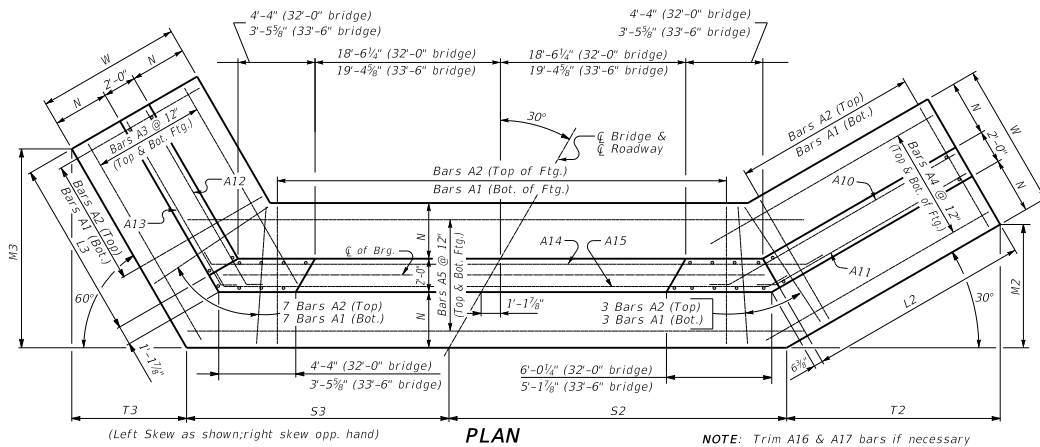


Table of Dimensions												
H	W	N	M2	M3	S2	S3	T2	T3	L2	L3	Length	Length
ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.	ft.
15-16	12	0	5	0	18	5	18	28	28	9	22	0
13-14	11	0	4	0	17	4	17	26	26	8	20	0
11-12	10	0	4	0	16	3	16	24	24	7	18	0
9-10	9	0	3	0	15	3	15	22	22	6	16	0
7-8	7	0	2	0	13	2	13	18	18	5	14	0
5-6	6	0	2	0	12	2	12	16	16	4	12	0

4 foot min. shoulder

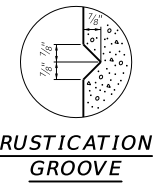
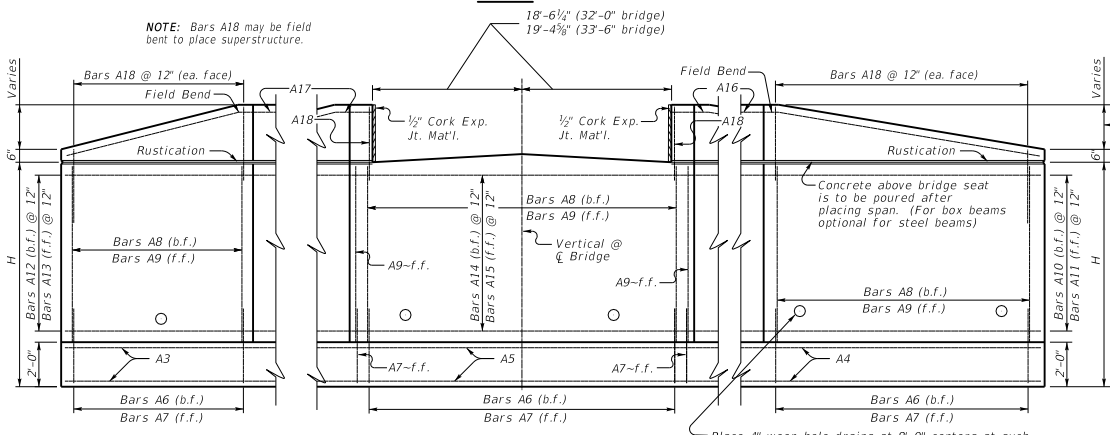


Quantities		
H	Concrete*	Reinforcement
5	48.4	185
6	53.1	3999
7	67.6	5511
8	72.7	5511
9	94.4	7853
10	100	7853
11	118.7	10818
12	124.6	10818
13	146.9	15177
14	153.3	15177
15	179.8	19998
16	186.7	19998

*Concrete quantities computed using 21" beam depth on 1/2" pad & 32'-0" Bridge Width

GENERAL NOTES

- SPECIFICATIONS:** Construct abutments according to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction. Abutments are designed for side by side box beams as detailed in Standard Drawings BDP-001 through BDP-012, current edition. Dimensions may be adjusted to allow for 33'-6" rolled steel beam bridge width.
- FOUNDATION PRESSURE:** Construct abutment footings on solid rock bearing material that can support a pressure of 8000 psf service or 10,800 psf strength factored as recommended by a geotechnical engineer.
- WING LENGTHS:** Calculated assuming 21" superstructure depth and stream bank elevation at top of footing.
- FOOTING ELEVATION:** Construct bottom of footing below the anticipated scour elevation. (This typically entails embedding the footings 1'-0" to 2'-0" into rock and pouring concrete directly against cut rock faces as recommended by geotechnical engineer.)
- NOTE:** Distances to bars shown are clear dimensions unless otherwise noted.
- MATERIAL SPECIFICATIONS:**
Concrete, Class "A" = 3500 psi
Steel Reinforcement = Grade 60



**KENTUCKY
DEPARTMENT OF HIGHWAYS**

30° SKEW
32'-0"-33'-6" BRIDGE WIDTH
2:1 FILL SLP, 4' MIN. SHLDR.

STANDARD DRAWING NO. BSA-109

SUBMITTED BY *Ben Adams* 02-26-20
DIRECTOR DIVISION OF STRUCTURAL DESIGN DATE

APPROVED BY *[Signature]* 02-26-20
STATE ENGINEER DATE