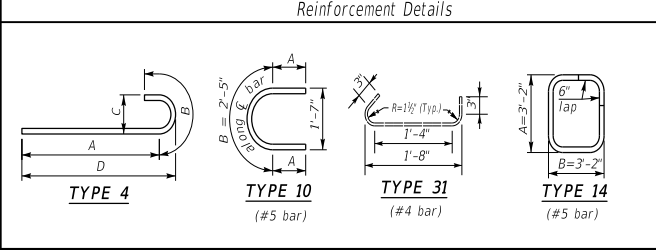


30° SKEW 32'-0" - 33'-6" BRIDGE WIDTH (No Seismic Load)

MARK		Bill of Reinforcement																																																									
TYPE	SIZE	P1	P2	P3	P4				P5				P6	P7	P8	P9(e)	P10(e)	P11(e)																																									
		Str.	Str.	Str.	Type 4				Type 10				Str.	Type 31	Str.	Type 14																																											
		No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length	No.	Length																																								
		ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.	ft.	in.																																								
10-11	61	8	12	8	26	6	40	2	12	6	5	12	8	10	4	8	10	7	5	1	5	0	8	7	9	10	5	7	5	12	2	6	10	5	33	6	12	8	5	2	5	10	4	8	10	0	8	8	4	2	2	4	4	2	4	2	1	3	2
12-13	61	8	12	8	26	6	40	2	12	6	5	12	8	10	4	8	10	7	5	1	5	0	8	7	9	10	5	7	5	12	2	6	14	5	33	6	12	8	5	2	5	10	4	8	10	0	8	8	4	2	2	4	4	2	4	2	1	3	2
14-15	61	8	12	8	26	6	40	2	12	6	5	12	8	10	4	8	10	7	5	1	5	0	8	7	9	10	5	7	5	12	2	6	18	5	33	6	12	8	5	2	5	10	4	8	10	0	8	8	4	2	2	4	4	2	4	2	1	3	2
16-17	61	8	12	8	26	6	40	2	12	6	5	12	8	10	4	8	10	7	5	1	5	0	8	7	9	10	5	7	5	12	2	6	22	5	33	6	12	8	5	2	5	10	4	8	10	0	8	8	4	2	2	4	4	2	4	2	1	3	2
18-19	61	8	12	8	26	6	40	2	12	6	5	12	8	10	4	8	10	7	5	1	5	0	8	7	9	10	5	7	5	12	2	6	26	5	33	6	12	8	5	2	5	10	4	8	10	0	8	8	4	2	2	4	4	2	4	2	1	3	2
20-21	61	8	12	8	26	6	40	2	12	6	5	12	8	10	4	8	10	7	5	1	5	0	8	7	9	10	5	7	5	12	2	6	30	5	33	6	12	8	5	2	5	10	4	8	10	0	8	8	4	2	2	4	4	2	4	2	1	3	2
22-23	61	8	12	8	26	6	40	2	12	6	5	12	8	10	4	8	10	7	5	1	5	0	8	7	9	10	5	7	5	12	2	6	34	5	33	6	12	8	5	2	5	10	4	8	10	0	8	8	4	2	2	4	4	2	4	2	1	3	2
24-25	61	8	12	8	26	6	40	2	12	6	5	12	8	10	4	8	10	7	5	1	5	0	8	7	9	10	5	7	5	12	2	6	38	5	33	6	12	8	5	2	5	10	4	8	10	0	8	8	4	2	2	4	4	2	4	2	1	3	2

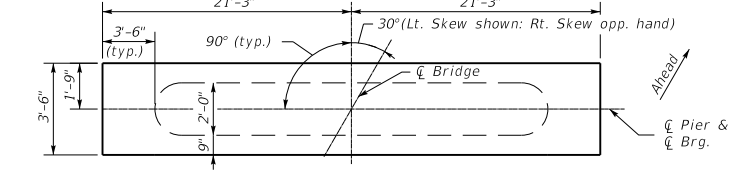


DIMENSIONS TABLE		QUANTITIES										
H	A	B	C	D	H	CONCRETE CLASS "A" CU. YDS. (1)	STEEL REINFORCEMENT EPOXY COATED LBS.	STEEL REINFORCEMENT LBS.				
10-11	2	6	2	6	20	3	5	6	10-11	82	1658	9704
12-13	2	6	2	6	20	3	5	6	12-13	87.2	1658	10487
14-15	2	6	2	6	20	3	5	6	14-15	92.4	1658	11271
16-17	2	6	2	6	20	3	5	6	16-17	97.6	1658	12054
18-19	2	6	2	6	20	3	5	6	18-19	102.8	1658	12837
20-21	2	6	2	6	20	3	5	6	20-21	108	1658	13620
22-23	2	6	2	6	20	3	5	6	22-23	113.2	1658	14404
24-25	2	6	2	6	20	3	5	6	24-25	118.4	1658	15187

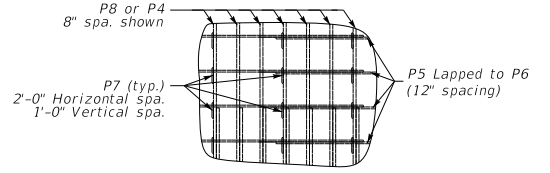
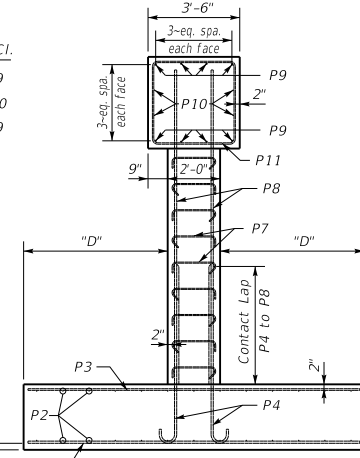
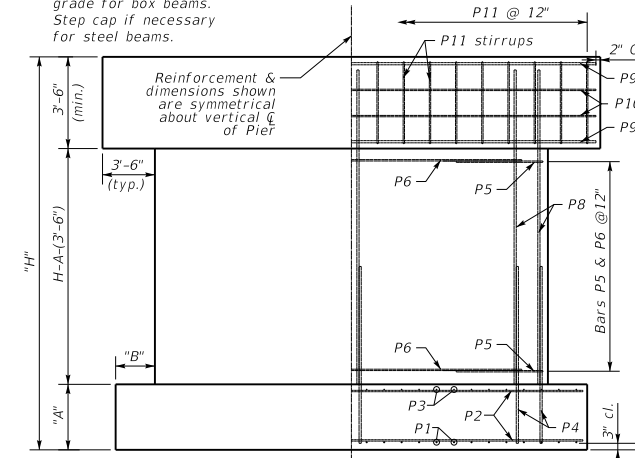
Note: All bars in cap shall be epoxy coated.

Note: All concrete shall be Class "A"

(1) Quantity is based on taller height. Reduce by 2.6 cubic yd. for shorter height.



Note: Grade cap to roadway grade for box beams. Step cap if necessary for steel beams.



GENERAL NOTES

SPECIFICATIONS: Construct piers according to the current edition of the Kentucky Department of Highways Standard Specifications for Road and Bridge Construction. Piers are designed for side by side box beams as detailed in Standard Drawings BDP-001 through BDP-012, current edition. They may be slightly modified to allow for 33'-6" rolled steel beam bridge width.

FOUNDATION PRESSURE: Construct pier 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.

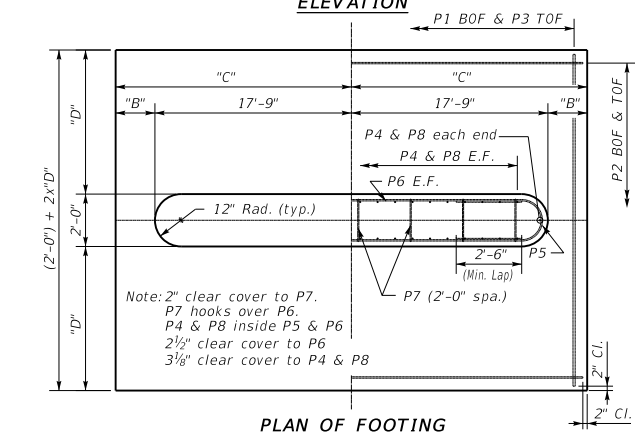
DESIGN LOADS: Pier is designed for the CB42 beam superstructure with 3-97 foot spans. Pier is designed to handle a half a 97 foot span for thermal load with expansion bearings under the beams. Pier is designed for 100 mph wind. Wind on superstructure is for 1-97' span longitudinal and transverse. Pier is designed for stream flow of 10 ft./sec. up to the top of the pier. It is not designed for flow acting on the superstructure. Pier is not designed for earthquake loading.

DESIGN APPLICABILITY: Consult with a structural engineer to determine if these details are applicable for any particular project.

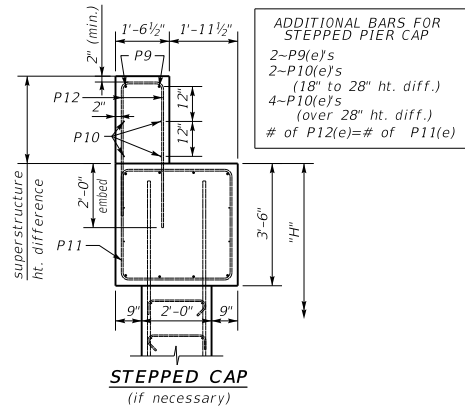
FOOTING ELEVATION: Construct bottom of footing below the anticipated scour elevation. (This typically entails embedding the footings 1'-0" to 2'-0" into rock and pouring concrete directly against cut rock faces as recommended by geotechnical engineer.)

NOTE: Distances to bars shown are clear dimensions unless otherwise noted.

MATERIAL SPECIFICATIONS:
 Concrete, Class "A" = 3500 psi
 Steel Reinforcement = Grade 60



Note: 2" clear cover to P7. P7 hooks over P6. P4 & P8 inside P5 & P6. 2 1/2" clear cover to P6. 3/8" clear cover to P4 & P8.



ADDITIONAL BARS FOR STEPPED PIER CAP
 2-P9(e)s
 2-P10(e)s (18" to 28" ht. diff.)
 4-P10(e)s (over 28" ht. diff.)
 # of P12(e) = # of P11(e)

KENTUCKY DEPARTMENT OF HIGHWAYS

Standard Pier

30° Skew

32'-0"-33'-6" Bridge Width

STANDARD DRAWING NO. **BSP-009**

SUBMITTED *[Signature]* **02-26-20**
DIRECTOR DIVISION OF STRUCTURAL DESIGN DATE

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