3' X 2'

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
A1	5	2	4	7		
A2	5	2	5	0		
C1	4	1	3	10		
C2	4	1	5	10		
E1	5	2	7	4	4	4
E2	5	2	7	10	4	10
F	4	5	1	3	0	6
G1	4	1	3	2		
G2	4	2	4	7		
G3	4	3	6	0		
H	4	4	6	0	4	4
K1	4	1	2	0		
K2	4	1	3	9		
N1	4	3	4	0		
N2	4	3	6	0		
Q	4	2	3	4		
R	4	4	0	9		
S1	5	2	1	0		
S2	5	4	1	2		
T1	5	2	1	7		
T2	5	2	4	3		
V1	5	2	2	10	1	7
V2	5	2	3	10	2	7
V3	5	2	4	7	3	4
W1	5	2	2	10	1	7
W2	5	2	3	11	2	8

3' X 3'

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
A1	5	2	5	9		
A2	5	2	6	3		
C1	4	1	3	11		
C2	4	1	5	11		
C3	4	1	7	2		
E1	5	2	7	4	4	4
E2	5	2	7	9	4	9
F	4	5	1	3	0	6
G1	4	2	4	7		
G2	4	2	6	4		
G3	4	3	8	0		
H	4	5	7	0	5	4
K1	4	1	2	0		
K2	4	1	3	11		
K3	4	1	5	0		
N1	4	3	5	0		
N2	4	3	7	2		
Q	4	2	3	4		
R	4	4	0	9		

3' X 3' (CONTINUED)

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
S1	5	2	1	0		
S2	5	4	1	2		
T1	5	2	1	7		
T2	5	2	4	3		
V1	5	2	3	4	2	1
V2	5	2	4	3	3	0
V3	5	3	5	3	4	0
W1	5	2	3	4	2	1
W2	5	2	4	5	3	2
W3	5	1	5	6	4	3

4' X 2'

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
A1	5	2	4	9		
A2	5	2	5	2		
C1	4	1	4	4		
C2	4	1	6	4		
E1	5	2	8	8	5	8
E2	5	2	9	1	6	1
F	4	6	1	3	0	6
G1	4	1	4	7		
G2	4	2	6	4		
G3	4	3	8	0		
H	4	5	6	2	4	6
K1	4	1	2	2		
K2	4	1	4	0		
N1	4	3	4	2		
N2	4	3	6	6		
Q	4	2	4	6		
R	4	5	0	10		
S1	5	2	1	0		
S2	5	2	1	3		
S3	5	2	1	7		
S4	5	2	1	10		
T1	5	2	2	11		
T2	5	2	5	5		
V1	5	2	2	10	1	7
V2	5	2	3	10	2	7
V3	5	3	4	8	3	5
W1	5	2	2	10	1	7
W2	5	2	3	11	2	8

4' X 3'

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
A1	5	2	5	11		
A2	5	2	6	6		
C1	4	1	4	5		
C2	4	1	6	5		
C3	4	1	7	9		
E1	5	2	8	8	5	8
E2	5	2	9	1	6	1
F	4	6	1	3	0	6
G1	4	2	4	8		
G2	4	2	6	4		
G3	4	3	8	0		
H	4	5	7	2	5	6
K1	4	1	2	3		
K2	4	1	4	1		
K3	4	1	5	2		
N1	4	3	5	2		
N2	4	3	7	9		
Q	4	2	4	6		
R	4	5	0	10		
S1	5	2	1	0		
S2	5	2	1	3		
S3	5	2	1	7		
S4	5	2	1	10		
T1	5	2	2	11		
T2	5	2	5	5		
V1	5	2	3	3	2	0
V2	5	2	4	3	3	0
V3	5	2	5	3	4	0
V4	5	2	5	8	4	5
W1	5	2	3	4	2	1
W2	5	2	4	5	3	2
W3	5	1	5	6	4	3

4' X 4'

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
A1	5	2	7	1		
A2	5	2	7	9		
C1	4	1	4	6		
C2	4	1	6	7		
C3	4	1	8	8		
C4	4	1	8	10		
E1	5	2	8	8	5	8
E2	5	2	9	1	6	1
F	4	6	1	3	0	6
G1	4	1	5	0		
G2	4	2	6	8		
G3	4	2	8	4		
G4	4	3	10	0		

4' X 4' (CONTINUED)

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
H	4	6	8	2	6	6
K1	4	1	2	3		
K2	4	1	4	2		
K3	4	1	6	0		
K4	4	1	6	3		
N1	4	3	6	3		
N2	4	3	8	10		
Q	4	2	4	6		
R	4	5	0	10		
S1	5	2	1	0		
S2	5	2	1	3		
S3	5	2	1	7		
S4	5	2	1	10		
T1	5	2	2	11		
T2	5	2	5	5		
V1	5	2	3	9	2	6
V2	5	2	4	9	3	6
V3	5	2	5	9	4	9
V4	5	3	6	8	5	5
W1	5	2	3	10	2	7
W2	5	2	4	11	3	8
W3	5	2	6	0	4	9

5' X 3'

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
A1	5	2	6	1		
A2	5	2	6	8		
C1	4	1	2	11		
C2	4	1	4	11		
C3	4	1	7	0		
C4	4	1	8	3		
E1	5	2	9	11	6	11
E2	5	2	10	5	7	5
F	4	8	1	3	0	6
G1	4	2	6	8		
G2	4	2	8	5		
G3	4	3	10	0		
H	4	6	7	4	5	8
K1	4	1	2	5		
K2	4	1	4	3		
K3	4	1	5	4		
N1	4	3	5	4		
N2	4	3	8	3		
Q	4	2	5	8		
R	4	6	0	11		
S1	5	2	1	0		
S2	5	2	1	3		
S3	5	2	1	7		
S4	5	2	1	11		

5' X 3' (CONTINUED)

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
S5	5	2	2	2		
T1	5	2	4	2		
T2	5	2	6	7		
V1	5	2	3	4	2	1
V2	5	2	4	3	3	0
V3	5	2	5	3	4	0
V4	5	3	5	9	4	6
W1	5	2	3	4	2	1
W2	5	2	4	5	3	2
W3	5	2	5	6	4	3

5' X 4'

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
A1	5	2	7	3		
A2	5	2	7	11		
C1	4	1	2	11		
C2	4	1	5	0		
C3	4	1	7	1		
C4	4	1	9	2		
C5	4	1	9	5		
E1	5	2	9	11	6	11
E2	5	2	10	5	7	5
F	4	8	1	3	0	6
G1	4	1	6	8		
G2	4	2	8	4		
G3	4	2	10	0		
G4	4	3	11	9		
H	4	7	8	4	6	8
K1	4	1	2	6		
K2	4	1	4	4		
K3	4	1	6	2		
K4	4	1	6	5		
N1	4	3	6	5		
N2	4	3	9	5		
Q	4	2	5	8		
R	4	6	0	11		
S1	5	2	1	0		
S2	5	2	1	3		
S3	5	2	1	7		
S4	5	2	1	11		
S5	5	2	2	2		
T1	5	2	3	11		
T2	5	2	6	7		
V1	5	2	3	9	2	6
V2	5	2	4	9	3	6
V3	5	2	5	8	4	5
V4	5	1	6	8	5	5
V5	5	3	6	9	5	6
W1	5	2	3	10	2	7

5' X 4' (CONTINUED)

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
W2	5	2	4	11	3	8
W3	5	2	5	11	4	8
W4	5	1	7	0	5	9

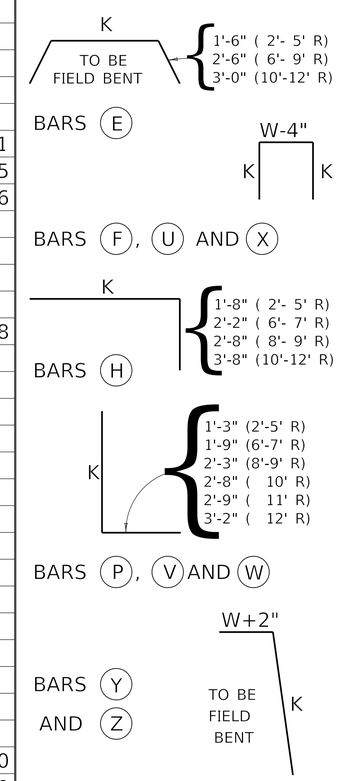
5' X 5'

MARK	SIZE	NO (1)	LGTH FT	LGTH IN	K FT	K IN
A1	5	2	9	2		
A2	5	2	8	5		
C1	4	1	2	11		
C2	4	1	5	0		
C3	4	1	7	1		
C4	4	1	9	3		
C5	4	2	10	7		
E1	5	2	9	11	6	11
E2	5	2	10	5	7	5
F	4	8	1	3	0	6
G1	4	2	7	0		
G2	4	2	8	7		
G3	4	2	10	4		
G4	4	3	12	0		
H	4	7	9	4	7	8
K1	4	1	2	6		
K2	4	1	4	5		
K3	4	1	6	3		
K4	4	2	7	5		
N1	4	3	7	5		
N2	4	3	10	7		
Q	4	2	5	8		
R	4	6	0	11		
S1	5	2	1	0		
S2	5	2	1	3		
S3	5	2	1	7		
S4	5	2	1	11		
S5	5	2	2	2		
T1	5	2	3	11		
T2	5	2	6	7		
V1	5	2	4	3	3	0
V2	5	2	5	3	4	0
V3	5	2	6	2	4	11
V4	5	2	7	1	5	10
V5	5	3	7	9	6	6
W1	5	2	4	3	3	0
W2	5	2	5	4	4	1
W3	5	2	6	5	5	2
W4	5	2	7	6	6	3

NOTES

1. NUMBER OF BARS IN ONE HEADWALL.
2. DIMENSIONS ARE 0. TO 0. OF BARS.
3. ALL BARS ARE STRAIGHT EXCEPT THOSE SHOWN BELOW.
4. R = BOX OR PIPE RISE
5. W = WING WALL WIDTH

BENT BAR SHAPES



KENTUCKY DEPARTMENT OF HIGHWAYS

BILL OF REINFORCEMENT
3' X 2' – 5' X 5' HEADWALLS
PRECAST BOX CULVERTS
15° SKEW

STANDARD DRAWING NO. RDH-1310-03

SUBMITTED _____ DIRECTOR DIVISION OF DESIGN _____ DATE

APPROVED _____ STATE HIGHWAY ENGINEER _____ DATE