## 12' X 6'

| MARK | SIZE | NO (1) | LGTH FT | LGTH IN | K FT | K IN |
|---|---|---|---|---|---|---|
| A1 | 5 | 2 | 10 | 6 | | |
| A2 | 5 | 2 | 18 | 10 | | |
| B1 | 5 | 4 | 2 | 11 | | |
| B2 | 5 | 4 | 3 | 6 | | |
| B3 | 5 | 4 | 4 | 0 | | |
| B4 | 5 | 4 | 4 | 7 | | |
| B5 | 5 | 4 | 5 | 1 | | |
| B6 | 5 | 4 | 5 | 8 | | |
| B7 | 5 | 4 | 6 | 2 | | |
| B8 | 5 | 4 | 6 | 9 | | |
| B9 | 5 | 4 | 7 | 3 | | |
| B10 | 5 | 42 | 7 | 5 | | |
| C1 | 4 | 2 | 23 | 9 | | |
| C2 | 4 | 2 | 27 | 2 | | |
| C3 | 4 | 2 | 31 | 1 | | |
| C4 | 4 | 2 | 34 | 9 | | |
| C5 | 4 | 2 | 38 | 3 | | |
| C6 | 4 | 4 | 39 | 0 | | |
| E1 | 5 | 2 | 32 | 4 | 27 | 4 |
| E2 | 5 | 2 | 33 | 1 | 28 | 1 |
| F | 4 | 28 | 1 | 5 | 0 | 6 |
| G1 | 4 | 2 | 28 | 2 | | |
| G2 | 4 | 2 | 31 | 1 | | |
| G3 | 4 | 2 | 34 | 0 | | |
| G4 | 4 | 2 | 37 | 0 | | |
| G5 | 4 | 3 | 40 | 0 | | |
| H | 4 | 21 | 11 | 10 | 9 | 8 |
| J1 | 5 | 4 | 3 | 1 | | |
| J2 | 5 | 4 | 4 | 1 | | |
| J3 | 5 | 4 | 5 | 2 | | |
| J4 | 5 | 4 | 6 | 3 | | |
| J5 | 5 | 4 | 7 | 3 | | |
| K1 | 4 | 2 | 1 | 7 | | |
| K2 | 4 | 2 | 3 | 6 | | |
| K3 | 4 | 2 | 5 | 5 | | |
| K4 | 4 | 2 | 7 | 4 | | |
| K5 | 4 | 2 | 9 | 3 | | |
| K6 | 4 | 4 | 9 | 4 | | |
| M1 | 4 | 1 | 2 | 4 | | |
| M2 | 4 | 48 | 3 | 9 | | |
| N1 | 4 | 7 | 9 | 4 | | |
| N2 | 4 | 5 | 36 | 1 | | |
| N3 | 4 | 2 | 39 | 2 | | |
| P | 5 | 49 | 5 | 3 | 3 | 6 |
| Q | 5 | 5 | 13 | 8 | | |
| R | 5 | 14 | 4 | 0 | | |
| S1 | 5 | 2 | 1 | 7 | | |
| S2 | 5 | 2 | 3 | 0 | | |
| S3 | 5 | 2 | 4 | 5 | | |
| S4 | 5 | 2 | 5 | 9 | | |

### 12' X 6' (CONTINUED)

| MARK | SIZE | NO (1) | LGTH FT | LGTH IN | K FT | K IN |
|---|---|---|---|---|---|---|
| S5 | 5 | 2 | 7 | 2 | | |
| S6 | 5 | 2 | 8 | 7 | | |
| S7 | 5 | 2 | 10 | 0 | | |
| S8 | 5 | 2 | 11 | 5 | | |
| S9 | 5 | 2 | 12 | 10 | | |
| S10 | 5 | 2 | 14 | 3 | | |
| S11 | 5 | 2 | 15 | 8 | | |
| S12 | 5 | 2 | 17 | 1 | | |
| S13 | 5 | 2 | 18 | 6 | | |
| S14 | 5 | 2 | 19 | 11 | | |
| S15 | 5 | 2 | 20 | 8 | | |
| T1 | 5 | 2 | 1 | 7 | | |
| T2 | 5 | 2 | 2 | 3 | | |
| T3 | 5 | 2 | 3 | 0 | | |
| T4 | 5 | 2 | 3 | 9 | | |
| T5 | 5 | 2 | 4 | 5 | | |
| T6 | 5 | 2 | 5 | 2 | | |
| T7 | 5 | 2 | 5 | 10 | | |
| T8 | 5 | 2 | 6 | 7 | | |
| T9 | 5 | 2 | 7 | 3 | | |
| T10 | 5 | 2 | 8 | 0 | | |
| T11 | 5 | 2 | 8 | 8 | | |
| T12 | 5 | 2 | 9 | 5 | | |
| T13 | 5 | 2 | 10 | 1 | | |
| T14 | 5 | 2 | 10 | 10 | | |
| T15 | 5 | 2 | 11 | 6 | | |
| T16 | 5 | 2 | 12 | 2 | | |
| T17 | 5 | 2 | 12 | 11 | | |
| T18 | 5 | 2 | 13 | 7 | | |
| T19 | 5 | 2 | 14 | 4 | | |
| T20 | 5 | 2 | 14 | 5 | | |

## 12' X 8'

| MARK | SIZE | NO (1) | LGTH FT | LGTH IN | K FT | K IN |
|---|---|---|---|---|---|---|
| A1 | 5 | 2 | 12 | 10 | | |
| A2 | 5 | 2 | 22 | 11 | | |
| B1 | 5 | 4 | 3 | 11 | | |
| B2 | 5 | 4 | 4 | 6 | | |
| B3 | 5 | 4 | 5 | 0 | | |
| B4 | 5 | 4 | 5 | 7 | | |
| B5 | 5 | 4 | 6 | 1 | | |
| B6 | 5 | 4 | 6 | 8 | | |
| B7 | 5 | 4 | 7 | 2 | | |
| B8 | 5 | 4 | 7 | 9 | | |
| B9 | 5 | 4 | 8 | 3 | | |
| B10 | 5 | 4 | 8 | 9 | | |
| B11 | 5 | 4 | 9 | 4 | | |
| B12 | 5 | 42 | 9 | 6 | | |
| C1 | 4 | 2 | 23 | 10 | | |

### 12' X 8' (CONTINUED)

| MARK | SIZE | NO (1) | LGTH FT | LGTH IN | K FT | K IN |
|---|---|---|---|---|---|---|
| C2 | 4 | 2 | 27 | 7 | | |
| C3 | 4 | 2 | 31 | 4 | | |
| C4 | 4 | 2 | 35 | 1 | | |
| C5 | 4 | 2 | 38 | 9 | | |
| C6 | 4 | 2 | 42 | 6 | | |
| C7 | 4 | 6 | 43 | 0 | | |
| E1 | 5 | 2 | 32 | 4 | 27 | 4 |
| E2 | 5 | 2 | 33 | 1 | 28 | 1 |
| F | 4 | 28 | 1 | 5 | 0 | 6 |
| G1 | 4 | 2 | 27 | 9 | | |
| G2 | 4 | 2 | 30 | 7 | | |
| G3 | 4 | 2 | 33 | 5 | | |
| G4 | 4 | 2 | 36 | 3 | | |
| G5 | 4 | 2 | 39 | 1 | | |
| G6 | 4 | 3 | 42 | 0 | | |
| H | 4 | 22 | 14 | 4 | 11 | 8 |
| J1 | 5 | 4 | 4 | 0 | | |
| J2 | 5 | 4 | 5 | 1 | | |
| J3 | 5 | 4 | 6 | 1 | | |
| J4 | 5 | 4 | 7 | 2 | | |
| J5 | 5 | 4 | 8 | 2 | | |
| J6 | 5 | 4 | 9 | 3 | | |
| K1 | 4 | 2 | 1 | 6 | | |
| K2 | 4 | 2 | 3 | 5 | | |
| K3 | 4 | 2 | 5 | 5 | | |
| K4 | 4 | 2 | 7 | 4 | | |
| K5 | 4 | 2 | 9 | 3 | | |
| K6 | 4 | 2 | 11 | 2 | | |
| K7 | 4 | 6 | 11 | 5 | | |
| M1 | 4 | 2 | 2 | 8 | | |
| M2 | 4 | 54 | 4 | 9 | | |
| N1 | 4 | 8 | 11 | 5 | | |
| N2 | 4 | 5 | 39 | 4 | | |
| N3 | 4 | 3 | 43 | 2 | | |
| P | 7 | 55 | 6 | 9 | 4 | 6 |
| Q | 5 | 5 | 13 | 8 | | |
| R | 5 | 14 | 4 | 6 | | |
| S1 | 5 | 2 | 1 | 7 | | |
| S2 | 5 | 2 | 3 | 0 | | |
| S3 | 5 | 2 | 4 | 5 | | |
| S4 | 5 | 2 | 5 | 9 | | |
| S5 | 5 | 2 | 7 | 2 | | |
| S6 | 5 | 2 | 8 | 7 | | |
| S7 | 5 | 2 | 10 | 0 | | |
| S8 | 5 | 2 | 11 | 5 | | |
| S9 | 5 | 2 | 12 | 10 | | |
| S10 | 5 | 2 | 14 | 3 | | |
| S11 | 5 | 2 | 15 | 8 | | |
| S12 | 5 | 2 | 17 | 1 | | |
| S13 | 5 | 2 | 18 | 6 | | |
| S14 | 5 | 2 | 19 | 11 | | |

### 12' X 8' (CONTINUED)

| MARK | SIZE | NO (1) | LGTH FT | LGTH IN | K FT | K IN |
|---|---|---|---|---|---|---|
| S15 | 5 | 2 | 20 | 8 | | |
| T1 | 5 | 2 | 1 | 7 | | |
| T2 | 5 | 2 | 2 | 3 | | |
| T3 | 5 | 2 | 3 | 0 | | |
| T4 | 5 | 2 | 3 | 9 | | |
| T5 | 5 | 2 | 4 | 5 | | |
| T6 | 5 | 2 | 5 | 2 | | |
| T7 | 5 | 2 | 5 | 10 | | |
| T8 | 5 | 2 | 6 | 7 | | |
| T9 | 5 | 2 | 7 | 3 | | |
| T10 | 5 | 2 | 8 | 0 | | |
| T11 | 5 | 2 | 8 | 8 | | |
| T12 | 5 | 2 | 9 | 5 | | |
| T13 | 5 | 2 | 10 | 1 | | |
| T14 | 5 | 2 | 10 | 10 | | |
| T15 | 5 | 2 | 11 | 6 | | |
| T16 | 5 | 2 | 12 | 2 | | |
| T17 | 5 | 2 | 12 | 11 | | |
| T18 | 5 | 2 | 13 | 7 | | |
| T19 | 5 | 2 | 14 | 4 | | |
| T20 | 5 | 2 | 14 | 5 | | |
| X1 | 4 | 1 | 2 | 7 | 1 | 1 |
| X2 | 4 | 1 | 3 | 1 | 1 | 4 |
| X3 | 4 | 1 | 3 | 5 | 1 | 6 |
| X4 | 4 | 1 | 3 | 9 | 1 | 8 |
| X5 | 4 | 1 | 4 | 3 | 1 | 11 |
| X6 | 4 | 1 | 4 | 7 | 2 | 1 |
| X7 | 4 | 1 | 4 | 11 | 2 | 3 |
| Z | 4 | 2 | 9 | 5 | 8 | 5 |

## 12' X 10'

| MARK | SIZE | NO (1) | LGTH FT | LGTH IN | K FT | K IN |
|---|---|---|---|---|---|---|
| A1 | 5 | 2 | 15 | 0 | | |
| A2 | 5 | 2 | 26 | 9 | | |
| B1 | 5 | 4 | 4 | 11 | | |
| B2 | 5 | 4 | 5 | 6 | | |
| B3 | 5 | 4 | 6 | 0 | | |
| B4 | 5 | 4 | 6 | 7 | | |
| B5 | 5 | 4 | 7 | 1 | | |
| B6 | 5 | 4 | 7 | 8 | | |
| B7 | 5 | 4 | 8 | 2 | | |
| B8 | 5 | 4 | 8 | 9 | | |
| B9 | 5 | 4 | 9 | 3 | | |
| B10 | 5 | 4 | 9 | 9 | | |
| B11 | 5 | 4 | 10 | 4 | | |
| B12 | 5 | 4 | 10 | 10 | | |
| B13 | 5 | 4 | 11 | 5 | | |
| B14 | 5 | 42 | 11 | 6 | | |
| C1 | 4 | 2 | 24 | 0 | | |

### 12' X 10' (CONTINUED)

| MARK | SIZE | NO (1) | LGTH FT | LGTH IN | K FT | K IN |
|---|---|---|---|---|---|---|
| C2 | 4 | 2 | 27 | 10 | | |
| C3 | 4 | 2 | 31 | 6 | | |
| C4 | 4 | 2 | 35 | 2 | | |
| C5 | 4 | 2 | 38 | 11 | | |
| C6 | 4 | 2 | 42 | 7 | | |
| C7 | 4 | 2 | 46 | 5 | | |
| C8 | 4 | 8 | 46 | 11 | | |
| E1 | 5 | 2 | 33 | 4 | 27 | 4 |
| E2 | 5 | 2 | 34 | 4 | 28 | 4 |
| F | 4 | 28 | 1 | 7 | 0 | 6 |
| G1 | 4 | 1 | 27 | 1 | | |
| G2 | 4 | 2 | 29 | 11 | | |
| G3 | 4 | 2 | 32 | 9 | | |
| G4 | 4 | 2 | 35 | 7 | | |
| G5 | 4 | 2 | 38 | 4 | | |
| G6 | 4 | 2 | 41 | 2 | | |
| G7 | 4 | 3 | 44 | 0 | | |
| H | 4 | 23 | 17 | 4 | 13 | 8 |
| J1 | 5 | 4 | 5 | 1 | | |
| J2 | 5 | 4 | 6 | 1 | | |
| J3 | 5 | 4 | 7 | 2 | | |
| J4 | 5 | 4 | 8 | 2 | | |
| J5 | 5 | 4 | 9 | 3 | | |
| J6 | 5 | 4 | 10 | 3 | | |
| J7 | 5 | 4 | 11 | 3 | | |
| K1 | 4 | 2 | 1 | 6 | | |
| K2 | 4 | 2 | 3 | 6 | | |
| K3 | 4 | 2 | 5 | 6 | | |
| K4 | 4 | 2 | 7 | 5 | | |
| K5 | 4 | 2 | 9 | 4 | | |
| K6 | 4 | 2 | 11 | 3 | | |
| K7 | 4 | 2 | 13 | 2 | | |
| K8 | 4 | 8 | 13 | 4 | | |
| M1 | 4 | 2 | 3 | 4 | | |
| M2 | 4 | 59 | 5 | 7 | | |
| N1 | 4 | 9 | 13 | 4 | | |
| N2 | 4 | 6 | 42 | 7 | | |
| N3 | 4 | 3 | 47 | 1 | | |
| P | 8 | 61 | 8 | 2 | 5 | 6 |
| Q | 5 | 6 | 13 | 8 | | |
| R | 5 | 14 | 5 | 4 | | |
| S1 | 5 | 2 | 2 | 0 | | |
| S2 | 5 | 2 | 3 | 5 | | |
| S3 | 5 | 2 | 4 | 10 | | |
| S4 | 5 | 2 | 6 | 3 | | |
| S5 | 5 | 2 | 7 | 9 | | |
| S6 | 5 | 2 | 9 | 1 | | |
| S7 | 5 | 2 | 10 | 6 | | |
| S8 | 5 | 2 | 12 | 0 | | |
| S9 | 5 | 2 | 13 | 4 | | |
| S10 | 5 | 2 | 14 | 9 | | |

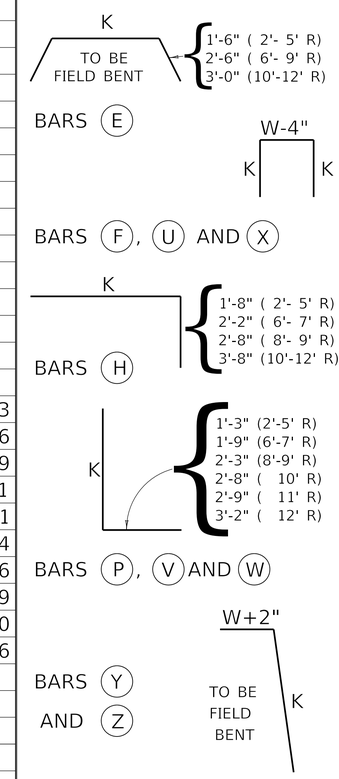
### 12' X 10' (CONTINUED)

| MARK | SIZE | NO (1) | LGTH FT | LGTH IN | K FT | K IN |
|---|---|---|---|---|---|---|
| S11 | 5 | 2 | 16 | 2 | | |
| S12 | 5 | 2 | 17 | 7 | | |
| S13 | 5 | 2 | 19 | 0 | | |
| S14 | 5 | 2 | 20 | 5 | | |
| S15 | 5 | 2 | 20 | 10 | | |
| T1 | 5 | 2 | 1 | 4 | | |
| T2 | 5 | 2 | 2 | 0 | | |
| T3 | 5 | 2 | 2 | 8 | | |
| T4 | 5 | 2 | 3 | 5 | | |
| T5 | 5 | 2 | 4 | 2 | | |
| T6 | 5 | 2 | 4 | 10 | | |
| T7 | 5 | 2 | 5 | 6 | | |
| T8 | 5 | 2 | 6 | 3 | | |
| T9 | 5 | 2 | 7 | 0 | | |
| T10 | 5 | 2 | 7 | 8 | | |
| T11 | 5 | 2 | 8 | 4 | | |
| T12 | 5 | 2 | 9 | 1 | | |
| T13 | 5 | 2 | 9 | 9 | | |
| T14 | 5 | 2 | 10 | 6 | | |
| T15 | 5 | 2 | 11 | 2 | | |
| T16 | 5 | 2 | 11 | 11 | | |
| T17 | 5 | 2 | 12 | 7 | | |
| T18 | 5 | 2 | 13 | 3 | | |
| T19 | 5 | 2 | 14 | 0 | | |
| T20 | 5 | 4 | 14 | 7 | | |
| X1 | 4 | 1 | 3 | 1 | 1 | 3 |
| X2 | 4 | 1 | 3 | 7 | 1 | 6 |
| X3 | 4 | 1 | 4 | 1 | 1 | 9 |
| X4 | 4 | 1 | 4 | 5 | 1 | 11 |
| X5 | 4 | 1 | 4 | 9 | 2 | 1 |
| X6 | 4 | 1 | 5 | 3 | 2 | 4 |
| X7 | 4 | 1 | 5 | 7 | 2 | 6 |
| X8 | 4 | 1 | 6 | 1 | 2 | 9 |
| X9 | 4 | 1 | 6 | 7 | 3 | 0 |
| Z | 4 | 2 | 11 | 8 | 10 | 6 |

## 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*
*12' X 6' - 12' X 10' HEADWALLS*
*PRECAST BOX CULVERTS*
*45° SKEW*

STANDARD DRAWING NO. RDH-1368-03

SUBMITTED _____ DIRECTOR DIVISION OF DESIGN _____ DATE

APPROVED _____ STATE HIGHWAY ENGINEER _____ DATE