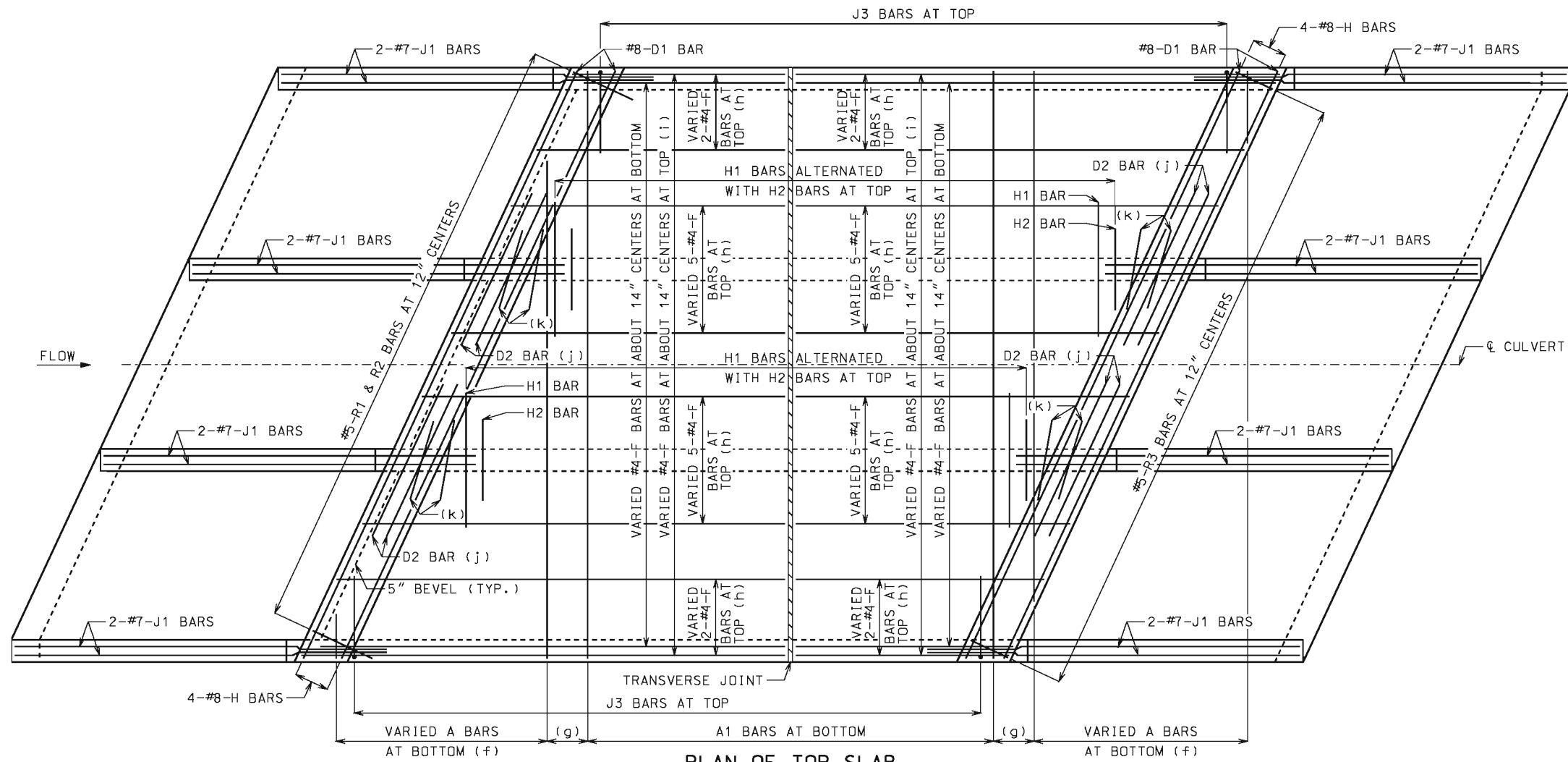
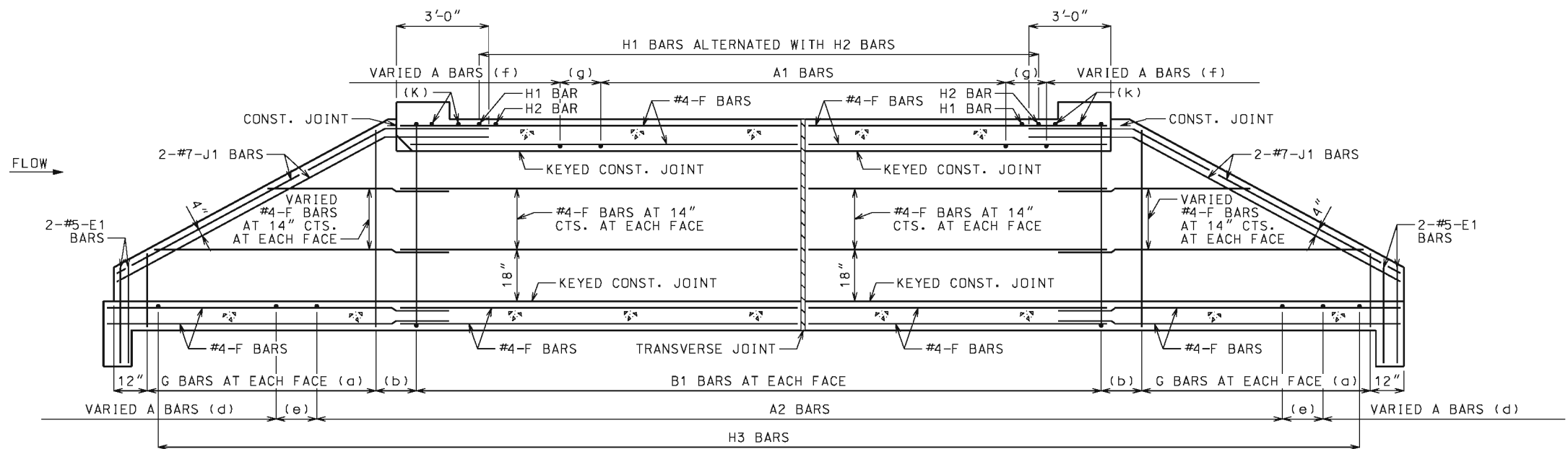


IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



PLAN OF TOP SLAB

B BARS IN WALLS ARE NOT SHOWN FOR CLARITY. FOR PLACEMENT, SEE SHEET 1 OF 3.



SECTION NEAR INTERIOR WALL

J1 BARS MAY BE BENT IN FIELD OR SHOP.

GENERAL NOTES:

FOR SECTIONS THRU BARREL, WINGS AND HEADWALLS, SEE SHEET 3 OF 3. FOR BAR SIZES, SPACING AND DIMENSIONS OF ALL REINFORCEMENT EXCEPT J5 BARS, SEE 703.87. FOR J5 BARS, SEE 703.37.

CONSTRUCTION JOINT KEY NOT SHOWN FOR CLARITY IN PLAN AND SECTION, SEE SHEET 3 OF 3 FOR DETAILS.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2\"/>

LAP LONGITUDINAL BARS A MINIMUM OF 23\"/>

BEVELED HEADWALL SHALL BE LOCATED AT UPSTREAM END.

(a) SAME SIZE AND SPACING AS ADJACENT B BARS

(b) VARIES, 12\"/>

(c) NOT SPECIFIED ON THIS SHEET

(d) SAME SIZE AND SPACING AS A2 BARS

(e) A2 BAR SPACING

(f) SAME SIZE AND SPACING AS A1 BARS

(g) A1 BAR SPACING

(h) FOR DESIGN FILLS OVER 2'-0\"/>

(i) FOR DESIGN FILLS 2'-0\"/>

(j) NOT REQUIRED FOR CLEAR SPANS ≤ 10'-0\"/>

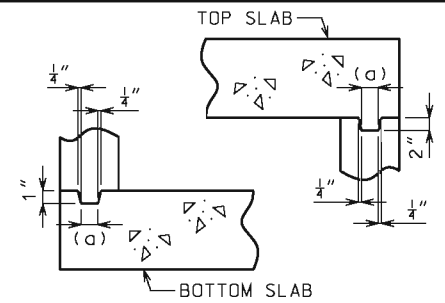
#8 FOR CLEAR SPAN > 10'-0\"/>

#9 FOR CLEAR SPAN > 13'-0\"/>

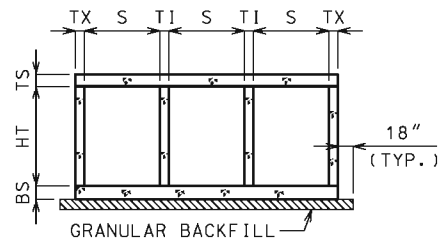
IF REQUIRED, THE MINIMUM LENGTH EACH SIDE OF C WALL SHALL BE THE GREATER OF 48 BAR DIAMETERS OR 1/4 CLEAR SPAN. THE CLEAR SPAN IS PARALLEL TO LONG DIRECTION OF HEADWALL.

(k) H2 BARS AS REQUIRED, QUANTITY OF BARS VARIES WITH SKEW.

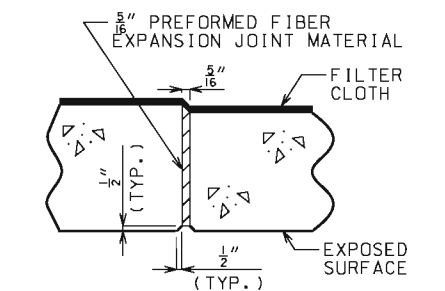
	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	
	105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
	CONCRETE TRIPLE BOX CULVERT	
	SKEW: RIGHT ADVANCE WINGS: STRAIGHT	
REINFORCEMENT		
DATE EFFECTIVE: 12/01/2011 DATE PREPARED: 5/13/2015	703.84H	SHEET NO. 2 OF 3



KEYED CONSTRUCTION JOINT
(a) APPROXIMATELY ONE-THIRD OF WALL THICKNESS



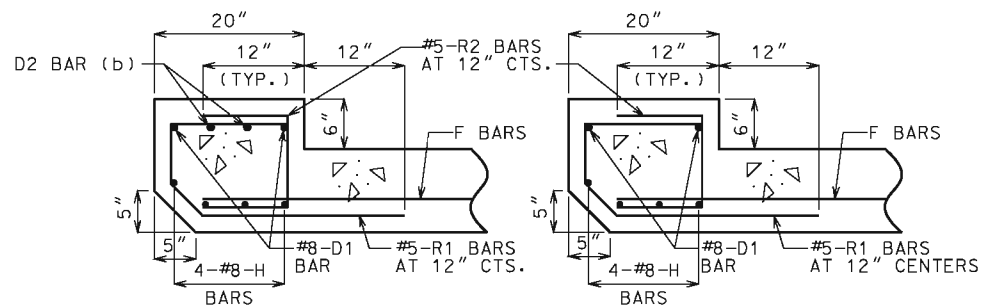
GRANULAR BACKFILL LIMITS AND MEMBER DIMENSIONS



TRANSVERSE JOINT THRU BARREL

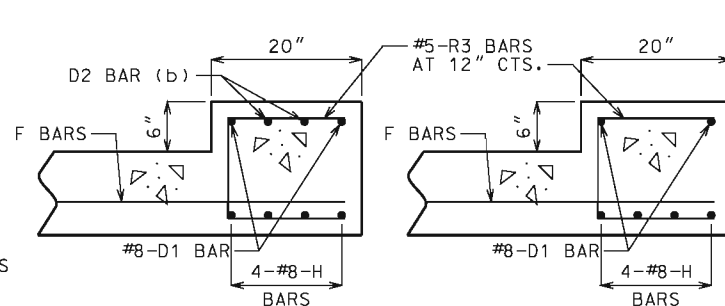
PERFORMED FIBER EXPANSION JOINT MATERIAL IN ACCORDANCE WITH SEC 1057 SHALL BE SECURELY STITCHED TO ONE FACE OF THE CONCRETE WITH 10 GAGE COPPER WIRE OR 12 GAGE SOFT DRAWN GALVANIZED STEEL WIRE.

FILTER CLOTH 3 FEET IN WIDTH AND DOUBLE THICKNESS SHALL BE CENTERED ON TRANSVERSE JOINTS IN TOP SLAB AND SIDEWALLS WITH EDGES SEALED WITH MASTIC OR TWO SIDED TAPE. FILTER CLOTH SHALL BE A SUBSURFACE DRAINAGE GEOTEXTILE IN ACCORDANCE WITH SEC 1011. COST OF FURNISHING AND INSTALLING FILTER CLOTH WILL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR OTHER ITEMS.



UPSTREAM HEADWALL REINFORCEMENT
NEAR INTERIOR WALL

UPSTREAM HEADWALL REINFORCEMENT
NEAR MIDSPAN

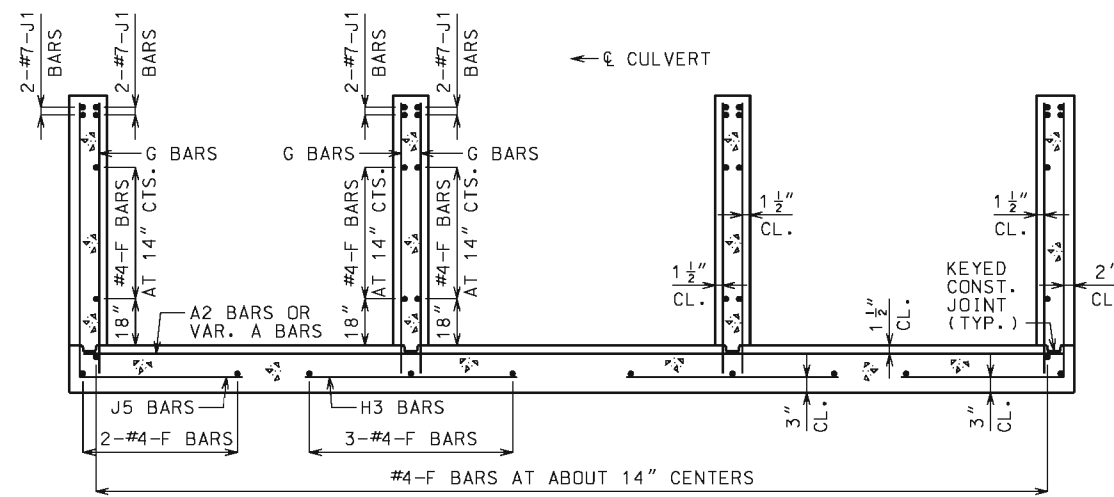


DOWNSTREAM HEADWALL REINFORCEMENT
NEAR INTERIOR WALL

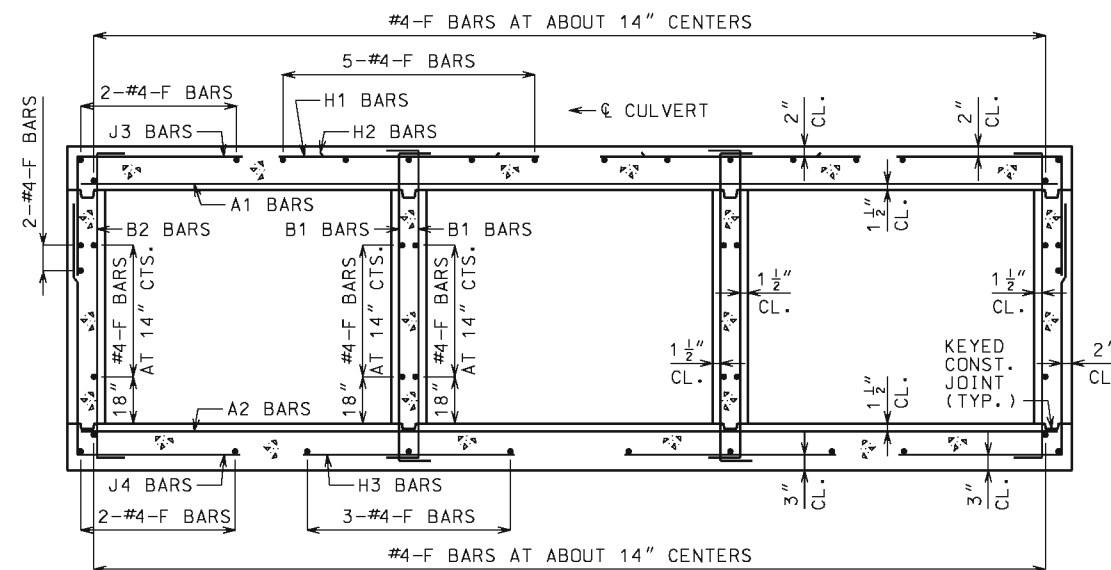
DOWNSTREAM HEADWALL REINFORCEMENT
NEAR MIDSPAN

(b) NOT REQUIRED FOR CLEAR SPANS $\leq 10'-0"$
#8 FOR CLEAR SPAN $> 10'-0"$
#9 FOR CLEAR SPAN $> 13'-0"$

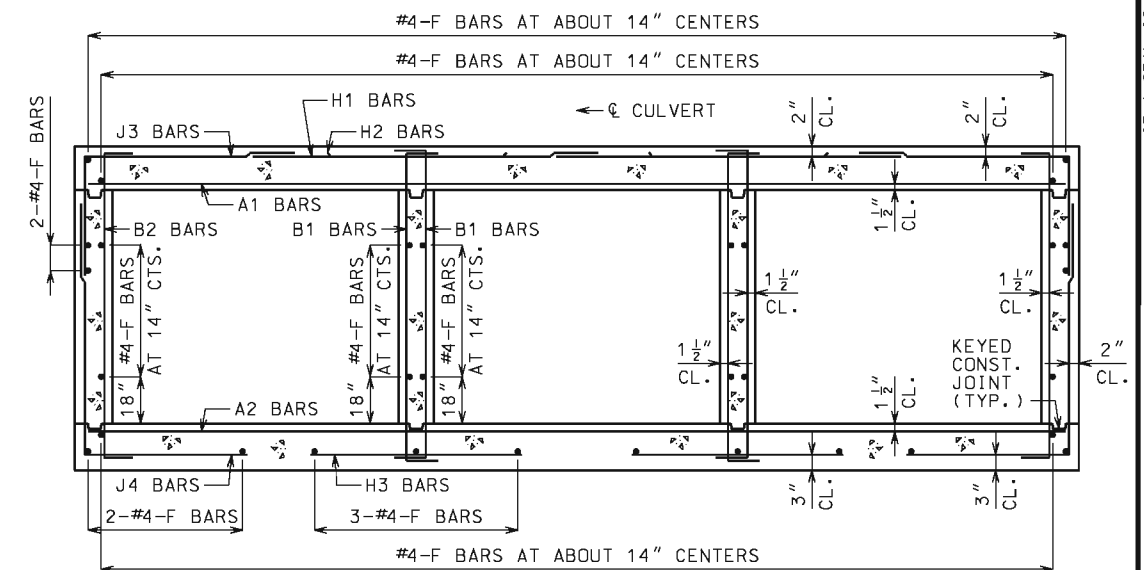
IF D2 BARS ARE REQUIRED, THE MINIMUM LENGTH EACH SIDE OF ϕ WALL SHALL BE THE GREATER OF 48 BAR DIAMETERS OR $\frac{1}{4}$ CLEAR SPAN. THE CLEAR SPAN IS PARALLEL TO LONG DIRECTION OF HEADWALL.



UPSTREAM AND DOWNSTREAM WINGS REINFORCEMENT



BARREL REINFORCEMENT
FOR DESIGN FILLS OVER 2'-0"



BARREL REINFORCEMENT
FOR DESIGN FILLS 2'-0" OR LESS

GENERAL NOTES:

FOR MEMBER THICKNESS AND FOR BAR SIZES, SPACING AND DIMENSIONS OF ALL REINFORCEMENT EXCEPT J5 BARS, SEE 703.87. FOR J5 BARS, SEE 703.37.

BARREL AND WINGS SECTIONS ARE SYMMETRICAL ABOUT AND NORMAL TO ϕ CULVERT. HEADWALL SECTIONS ARE NORMAL TO LONG DIRECTION OF HEADWALL.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2".

<p>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</p> <p>105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)</p>	
<p>CONCRETE TRIPLE BOX CULVERT</p> <p>SKEW: RIGHT ADVANCE WINGS: STRAIGHT</p> <p>SECTIONS</p>	
<p>STATE OF MISSOURI DENNIS W. HECKMAN NUMBER PE-27141 PROFESSIONAL ENGINEER</p> <p>THIS SHEET HAS BEEN SIGNED SEALED AND DATED ELECTRONICALLY.</p>	<p>DATE EFFECTIVE: 12/01/2011 DATE PREPARED: 5/13/2015</p>
<p>703.84H</p>	
<p>SHEET NO. 3 OF 3</p>	

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.