



See RCB Auxillary Details for Optional Splice. See Standard No. RD 080 for additional details. Note: Only cast-in-place or double-cell, precast boxes may be used at this location.

**GENERAL NOTES**

**LOADING:** HS20-44 AASHTO Specifications, 1983 Edition.  
**UNIT STRESSES:** Grade 4.0 Concrete; f'c = 4,000 p.s.i. Reinforcing Steel; fy = 60,000 p.s.i.  
**FILL HEIGHT:** Unless otherwise noted, the Design Fill Height is measured from the riding surface at the culvert and shall include the surfacing.  
**CONCRETE:** Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a 3/4 inch triangular moulding. Where Grade 4.0 Concrete (AE) is specified, it shall be placed in the top slab above the Construction Joint.  
**REINFORCING:** All reinforcing shall conform to ASTM A615, Grade 60. All dimensions relative to reinforcing steel shall be to centerline of bar unless otherwise noted.  
**EXCAVATION:** Excavation for culverts less than bridge length shall not be paid for directly but shall be subsidiary to RCB Extension.  
**SEAL COURSE:** A Seal Course may be required by the Engineer. The Seal Course shall be unreinforced Concrete (Commercial Grade) to a minimum depth of 3 inches or as determined by the Engineer. Concrete for the seal be subsidiary to RCB Extension.  
**FOUNDATION STABILIZATION:** The Foundation Stabilization quantity has been calculated to the limits shown on the "RCB Auxillary Details" sheet. The depth may be increased by the Engineer. The Contractor may underrun Foundation Stabilization under the barrel if founded on firm material and with the Engineer's approval. Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.  
**QUANTITIES:** The quantities shown in the Culvert Summary include apron and/or soil saver quantities when their construction is required by the plans. Payment for additional quantities that result from including seal course and/or floating apron, as a change in original plans, shall be made at the Unit Price bid for the various items involved.  
**GRANULAR BACKFILL (WINGWALLS):** Special backfill procedures may be required at the direction of the Engineer. See Auxillary Details Sheet.  
**STRIKE LINE:** Wingwalls and that portion of the RCB outside the Strike Line shall be constructed level. Footing for wingwalls shall be constructed with the culvert floor. See wingwall detail sheet.

⊗ For design purposes ONLY. Do NOT use for Construction. CULVERT SUMMARY ⊕ includes any apron welded wire fabric

Floor Elev.	Crown Gr. Elev.	Design Fill Ht.	Skew	Wings	Scour Apron	Soil Saver	Concrete			Reinf. Steel (Gr. 60)		
							Barrel (Cu.Yds.)	Wings (Cu.Yds.)	Total (Cu.Yds.)	Barrel (Lbs.)	⊕Wings (Lbs.)	Total (Lbs.)
Ext.Lt. 1317.40	1323.67	0	0	FLARED	YES	NO	15.56	5.18	20.74	3063	404	3467
Ext.Rt. 1317.40				FLARED			15.59	8.20	23.79	3063	445	3508

**BAR SCHEDULE**

F1		F3		F4		Δ S1		Δ S3		Δ S4		Δ S5																				
Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length					
Ext.Lt.	6"	30	15'-2"	N/A	N/A	N/A	N/A	5	7 1/2"	22	15'-2"	4	24	13'-2"	6	6"	33	15'-2"	N/A	N/A	N/A	N/A	5	7 1/2"	24	15'-2"	5	16	14'-8"	4	10	14'-8"
Ext.Rt.	6"	30	15'-2"	N/A	N/A	N/A	N/A	5	7 1/2"	22	15'-2"	4	24	13'-2"	6	6"	33	15'-2"	N/A	N/A	N/A	N/A	5	7 1/2"	24	15'-2"	5	16	14'-8"	4	10	14'-8"

  

Δ K1		Δ K2		W1		W3		W4		Δ G1		Δ G2																	
Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length														
Ext.Lt.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	9"	40	5'-2"	N/A	N/A	N/A	N/A	4	11	14'-8"	4	9"	20	5'-2"	5	2	15'-2"	N/A	N/A	N/A	N/A
Ext.Rt.	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	9"	40	5'-2"	N/A	N/A	N/A	N/A	4	11	14'-8"	4	9"	20	5'-2"	5	2	15'-2"	N/A	N/A	N/A	N/A

Minimum Splice Lengths

#4	1'-4"
#5	1'-8"
#6	2'-0"

**SUMMARY OF QUANTITIES**

Concrete (Grade 4.0)	34.7 C.Y.
Concrete (Grade 4.0)(AE)	12.9 C.Y.
Reinforcing Steel (Gr. 60)	4000 Lbs.
Reinforcing Steel (Gr. 60)(Epoxy Coated)	3010 Lbs.
Class III Excavation	C.Y.
Foundation Stabilization	16 C.Y.
Concrete for Seal Course	8 C.Y.
Granular Backfill (Wingwalls)	4 C.Y.

NO.	DATE	REVISIONS	BY	APP'D
<b>KANSAS DEPARTMENT OF TRANSPORTATION</b> Sta. 35+41.18 <b>DOUBLE 7 ft x 4 ft RCB</b> 15.0 ft EXT. RT. 15.0 ft EXT. LT. Sedgwick Co.				
DESIGNED	DATE	QUANTITIES	TRACED	
DESIGN CK.	DETAIL CK.	QUAN. CK.	TRACE CK.	

Plotted By: \$USER\$ Plot Location: \$UNIT\$  
 File: \$\$\$\$\$\$SPEC\$\$\$\$\$\$  
 Plot Date: \$\$\$\$STIME\$\$\$\$\$