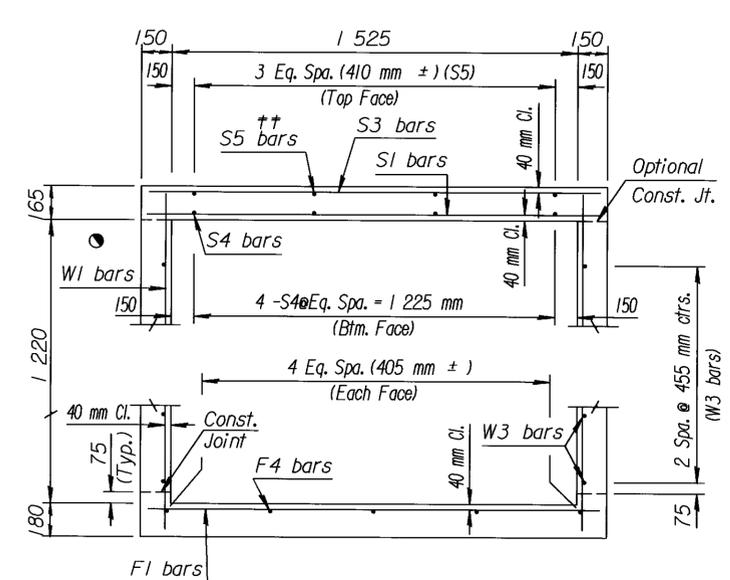
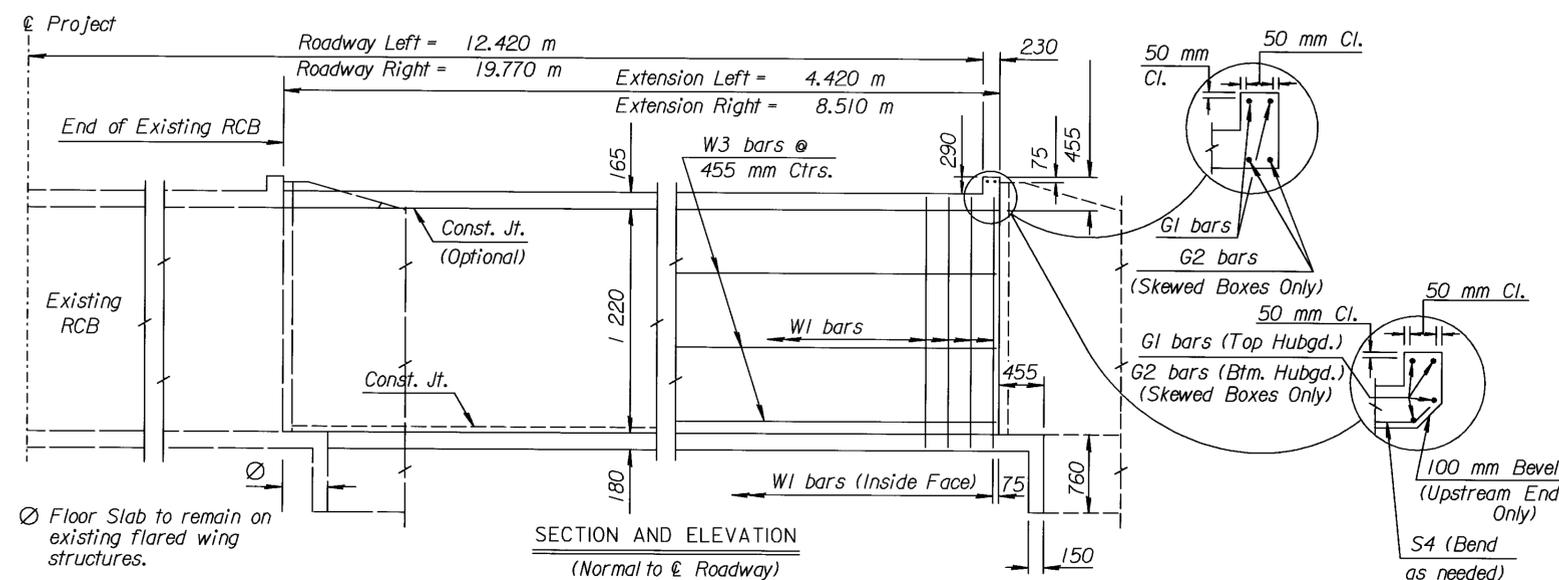


VERSION: 5.1.0m COMPILED: 03/01/95

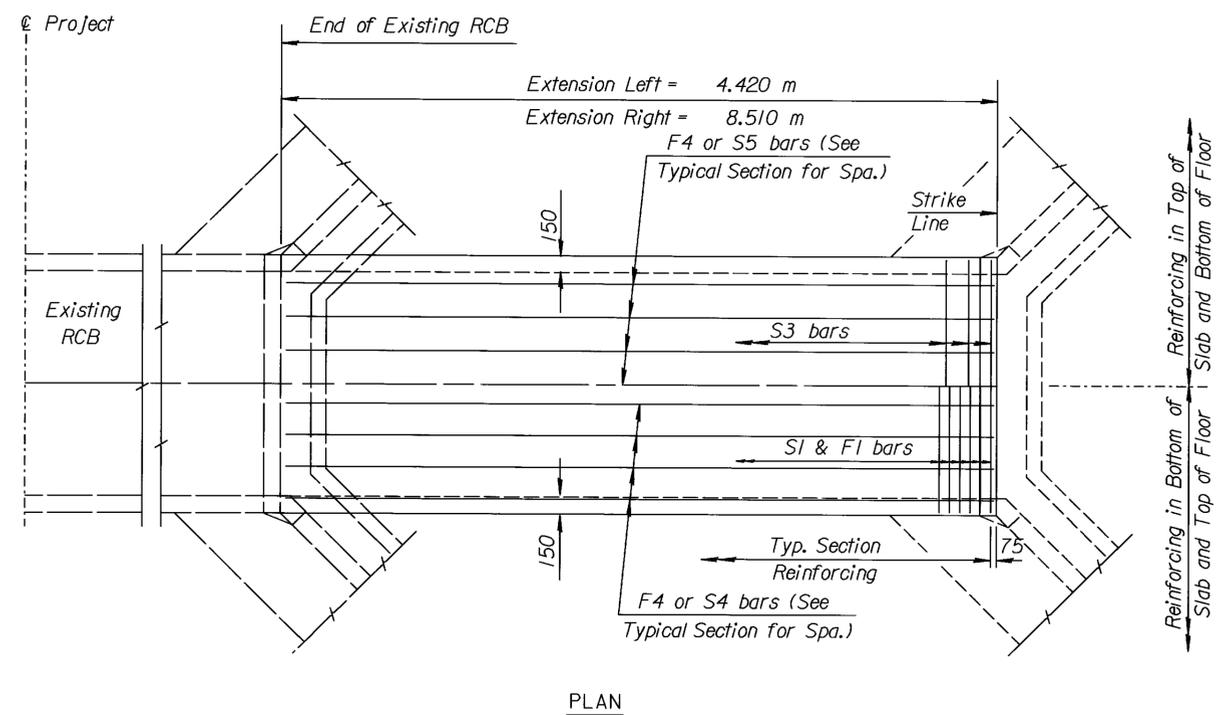
CO.	CHECK	DATE
PROJ.	DESIGN	DATE
ORIG. FROM	NO.	DATE
DESIGN	DATE	DATE
DETAIL	DATE	DATE
QUANTITIES	DATE	DATE
REVISED	DATE	DATE

Drawn By: \$\$\$USERNAME\$\$
 DGN File: \$\$\$DGNFILE\$\$\$
 Plotted: \$\$\$STTIME\$\$\$ View=

FHWA REGION NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	52 C 3604-01	1999	15	70



See RCB Auxillary Details for Optional Splice.
 Note:
 S3 bars omitted unless grade box or slab thickness is greater than or equal to 305 mm.
 †† Omit S5 bars when S3 bars are omitted.
 See Standard No. RD 510 for additional details.



TYPICAL SECTION

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO Specifications, 1983 Edition
DESIGN LOADING: MS18-44
UNIT STRESSES: Class AAA Concrete $f'c = 28 \text{ MPa}$
 Reinforcing Steel $f_y = 420 \text{ MPa}$
FILL HEIGHT: Unless otherwise noted, the Design Fill Height is measured from the riding surface at the culvert and includes the surfacing.
CONCRETE: Use concrete conforming to Class AAA Concrete. Bevel all exposed edges with a 20 mm triangular molding. Where Class AAA(AE) is specified, place this concrete in the top slab above the Construction Joint.
REINFORCING: Use reinforcing steel conforming to ASTM A615M, Grade 420. All dimensions relative to reinforcing steel are to the centerline of the bar unless otherwise noted.
EXCAVATION: Excavation for culverts less than bridge length shall not be paid for directly but shall be subsidiary to Class AAA Concrete. Excavation for RCB bridges shall be paid for as Class III Excavation.
SEAL COURSE: The Engineer may require a seal course. The seal course shall be unreinforced Concrete (Commercial Grade) with a minimum depth of 75 mm or as determined by the Engineer. Concrete for the seal course shall be paid for at the unit price set for Concrete for Seal Course.
FOUNDATION STABILIZATION: The Engineer may require Foundation Stabilization. The Engineer shall determine the depth of Foundation Stabilization. Foundation Stabilization shall be paid for at the unit price set for Foundation Stabilization. See the "Auxiliary Details" sheet.
QUANTITIES: The quantities shown in the Culvert Summary include apron and/or soil saver quantities when they are required by the plans. Payment for additional quantities that result from including a seal course and/or a floating apron, as a change in the original plans, shall be made at the unit price bid for the various items involved.
GRANULAR BACKFILL (WINGWALLS): The Engineer may require special backfill procedures. See the "Auxiliary Details" sheet.
STRIKE LINE: Construct the wingwalls and that portion of the RCB outside the Strike Line level. Construct the wingwall footings with the culvert floor. See the wingwall detail sheets.

Note: Use only cast-in-place construction at this location.

Minimum Splice Lengths	
#12	405
#15	510
#20	610

CULVERT SUMMARY													
Flow Line Elev.	Crown Gr. Elev.	Design Fill Ht.	Skew	Wings	Scour Apron	Soil Saver	Granular Backfill	Concrete			Reinf. Steel (Gr. 420)		
								Barrel (m ³)	Wings (m ³)	Total (m ³)	Barrel (kg)	Wings (kg)	Total (kg)
Ext.Lt. 299.600 m	302.405 m	3.0 m	0	FLARED	YES	YES	NO	4.3	5.2	9.5	218	204	422
Ext.Rt. 297.000 m				FLARED	YES	NO		8.4	4.7	13.1	405	173	578

BAR SCHEDULE																																			
F1						F4						S1						S3						S4						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.	12	180	26	1 725	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
Ext.Rt.	12	180	48	1 725	-	-	-	-	-	-	-	12	5	4 050	12	180	27	1 725	-	-	-	-	-	-	-	-	-								
Ext.Lt.	-	-	-	-	-	-	-	-	-	-	-	12	6	4 330	-	-	-	-	-	-	-	-	-	-	-	-	-								
Ext.Rt.	-	-	-	*	-	-	-	*	12	230	40	1 475	-	-	-	12	6	8 410	-	-	-	-	-	-	-	-	-								

SUMMARY OF QUANTITIES	
Class AAA Concrete	22.6 m ³
Class AAA Concrete (AE)	0.0 m ³
Reinforcing Steel (Gr. 420)	1000 kg
Foundation Stabilization (Set)	1 m ³
Concrete for Seal Course (Set)	1 m ³
Granular Backfill (Wingwalls) (Set)	1 m ³

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION
Sta. 23+906.308

SINGLE 1.5 m x 1.2 m RCB
 4.4 m EXT. LT.
 8.5 m EXT. RT.

BR 1.5.4 SI LEAVENWORTH CO.

FHWA APPROVAL	6-5-99	APP'D	KENNETH F. HURST
DESIGNED		QUANTITIES	TRACED
DESIGN CK.		QUAN. CK.	TRACE CK.