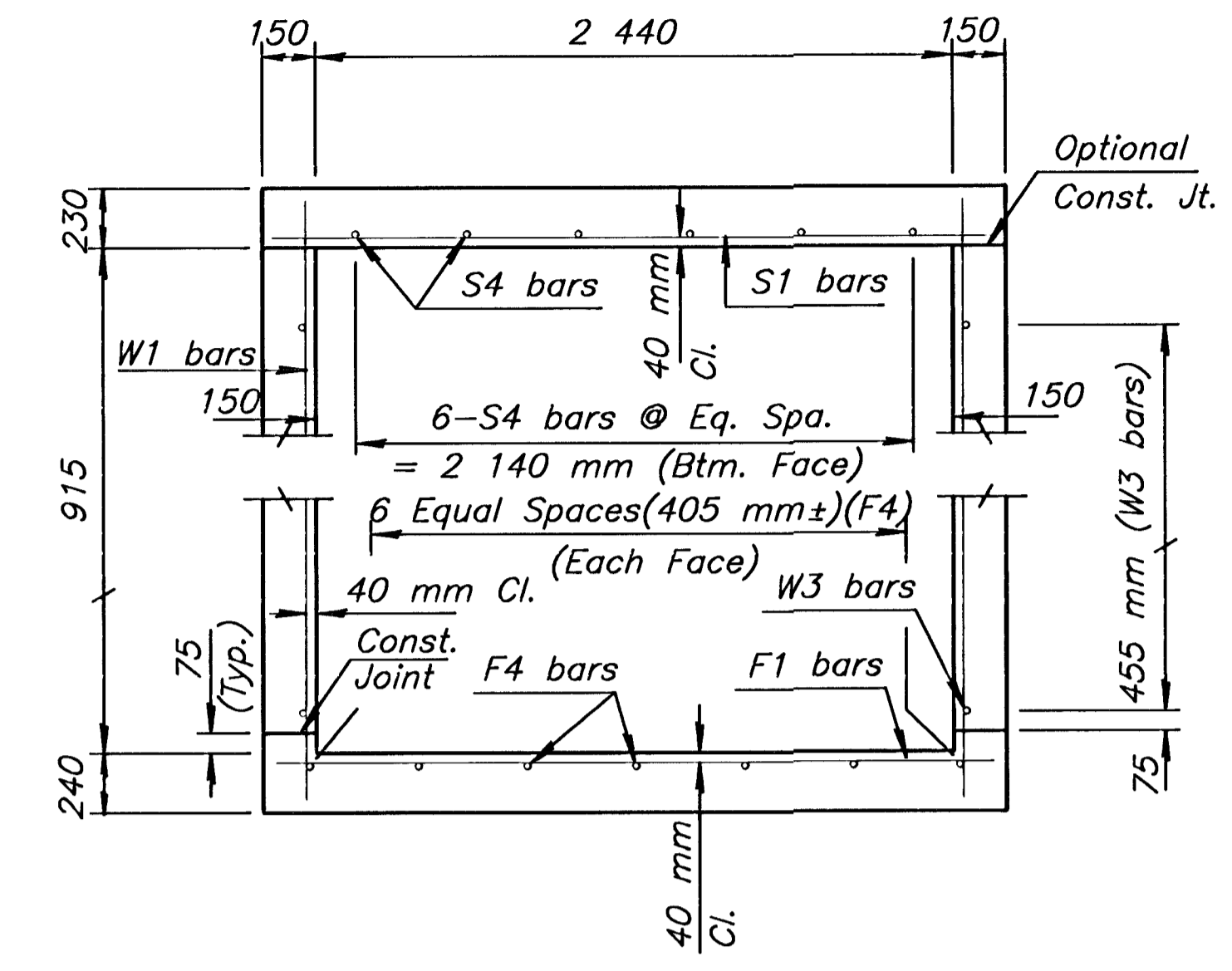
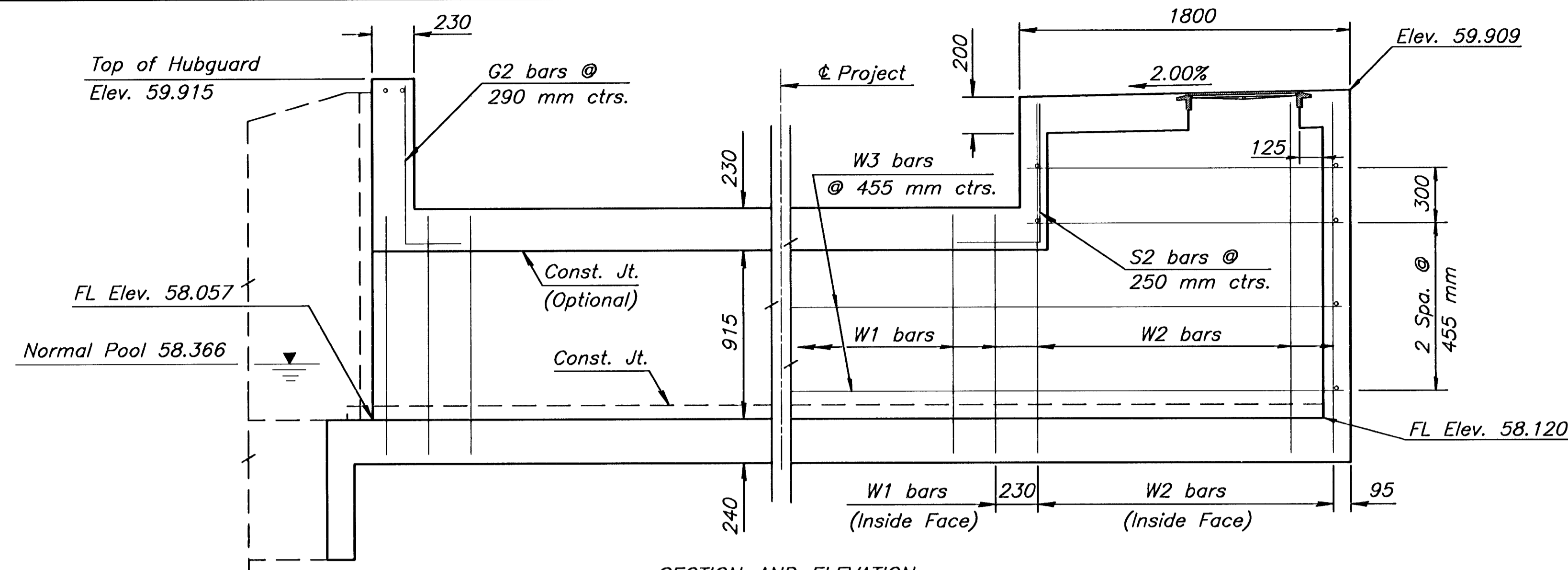
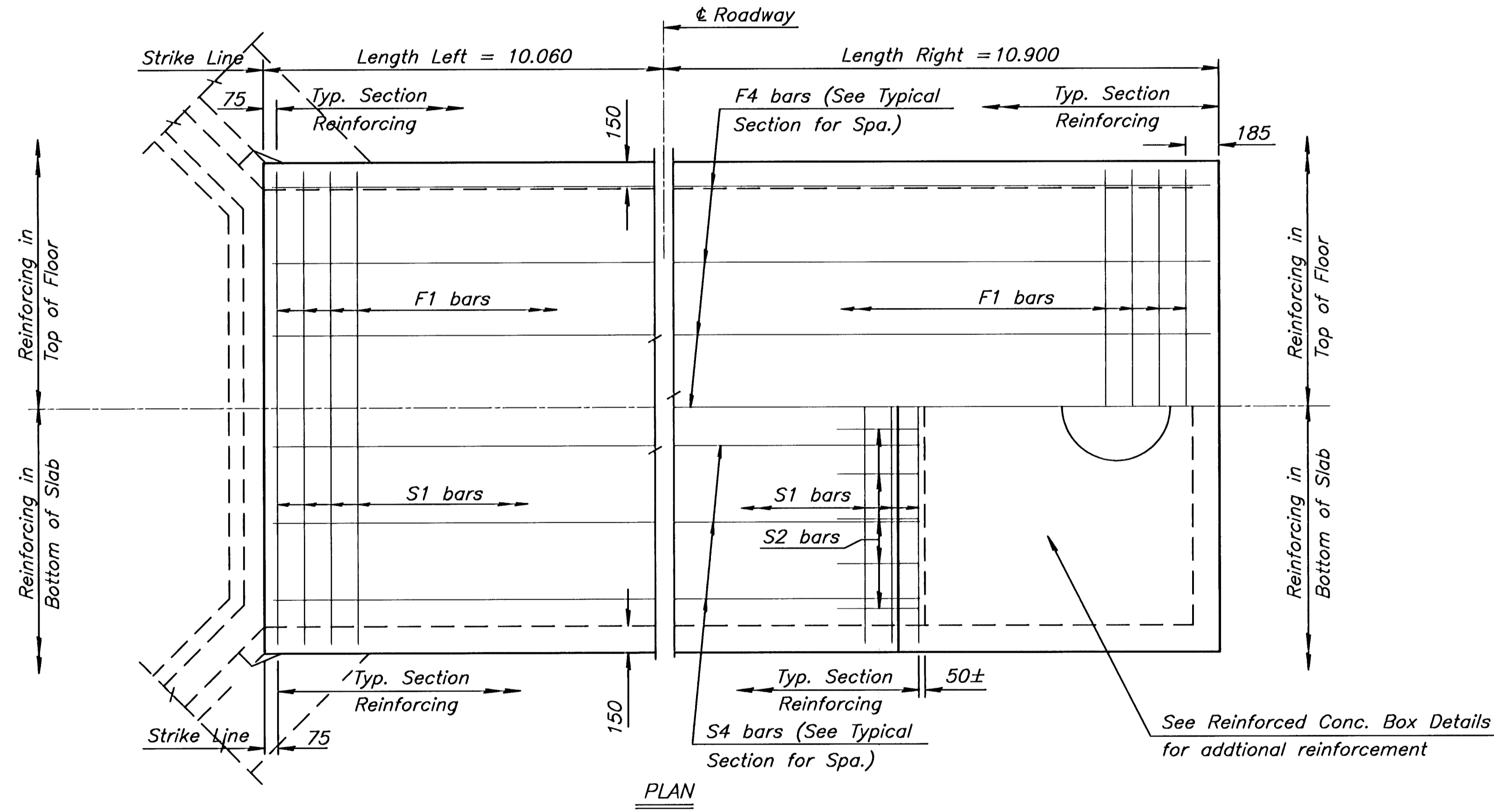


FHWA REGION NO.	STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
7	KANSAS	87-N-0200-01	2001	23	78



SECTION AND ELEVATION
(Normal to Roadway)

TYPICAL SECTION



PLAN

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO Specifications, 1983 Edition
DESIGN LOADING: MS18-44
UNIT STRESSES: Class AAA Concrete $f'c = 28$ MPa
 Reinforcing Steel $f_y = 420$ 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.

CO.	CHECK
PROJ.	DESIGN
DATE	DATE
DATE	DATE
DATE	DATE
DATE	DATE
DATE	DATE
DATE	DATE

MKEC
 g:\civil\99257\dwg\sws\99257bx
 Plotted : View =

CULVERT SUMMARY															
Flow Line Elev. Lt. (m)	Flow Line Elev. Rt. (m)	Crown Gr. Elev. (m)	Design Fill Ht. (m)	Skew	Left Wings	Right 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)
58.057	58.120	59.965	0.9	0	FLARED	NONE	YES	NO	NO	34.8	4.9	39.7	2352	199	2495

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

BAR SCHEDULE																																			
F1				F3				F4				S1				S2 *				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	Size	Spa.	No.	Length				
20	150	139	2 640	-	-	-	-	-	-	-	-	12	14	10	640	20	150	140	2 640	12	250	10	1 200	-	-	-	-	12	12	10	640	-	-	-	-
K1				K2				W1				W2				W3				G1				G2											
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	Size	Spa.	No.	Length	Size	Spa.	No.	Length
-	-	-	-	-	-	-	-	12	230	182	1 295	12	230	-	-	12	8	10	640	-	-	-	-	15	4	2	640	12	10	1	200	-	-	-	-

* Bid as 2.4m x 0.9m RCB (L.S.)

SUMMARY OF QUANTITIES (For information only)	
Class AAA Concrete	39.7 m ³
Class AAA Concrete (AE)	0.0 m ³
Reinforcing Steel (Gr. 420)	2500 kg
Reinforcing Steel (Epoxy Coated)	0 kg
Class III Excavation	m ³
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. 0+864
 SINGLE 2.4 m x 0.9 m RCB

BR1.8.3 SI SEDGWICK CO.

DESIGNED	MDK	DETAILED	MDK	QUANTITIES	MDK	TRACED	MDK
DESIGN CK.	MDK	DETAIL CK.	MDK	QUAN. CK.	MDK	TRACE CK.	MDK