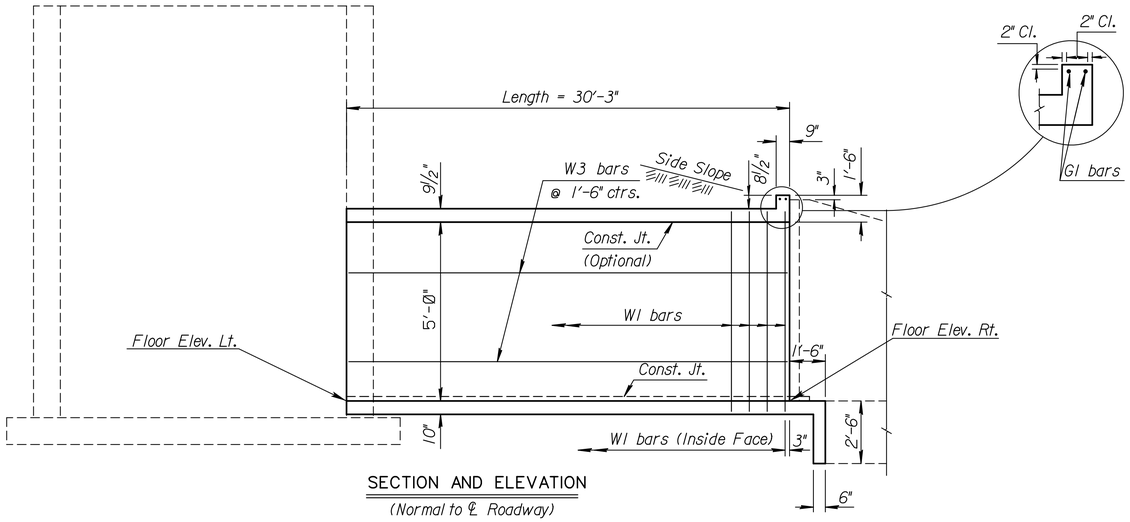
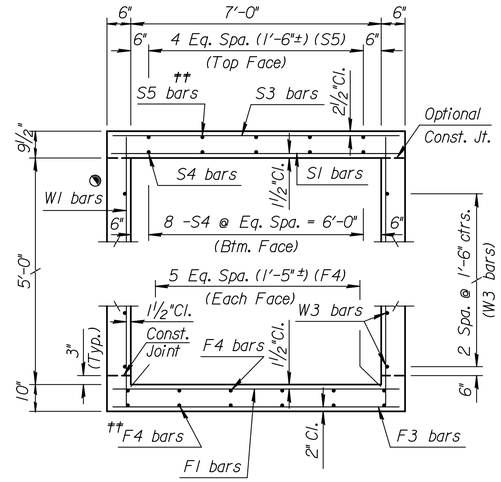
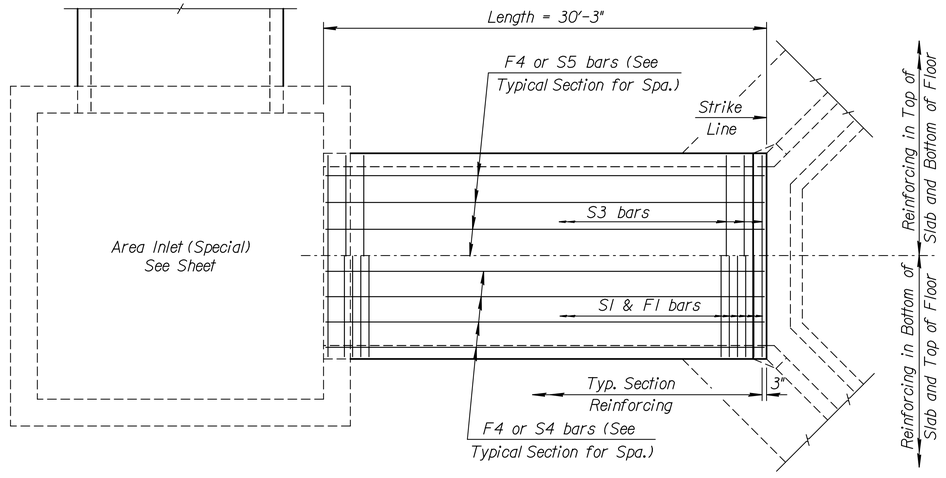
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-85282	2017	41	96



SECTION AND ELEVATION
(Normal to ℄ Roadway)



TYPICAL SECTION



PLAN

⧗ For design purposes ONLY. Do NOT use for Construction — CULVERT SUMMARY — ◔ includes any apron welded wire fabric

Floor Elev. Lt.	Floor Elev. Rt.	Crown Gr. Elev.	⧗ Design Fill Ht.	Skew	Left Wings	Right 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.)
1321.90	1321.85	N/A	2	0	NONE	FLARED	YES	NO	20.32	8.81	29.13	3190	967	4157

BAR SCHEDULE

F1				F4				S1				S4															
Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	No.	Length
6	6"	61	7'-8"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	6	29'-11"	6	6"	61	7'-8"	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5	8	29'-11"	N/A	N/A	N/A

W1								W3								GI											
Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	Spa.	No.	Length	Size	No.	Length	Size	Spa.	No.	Length	Size	No.	Length	Size	Spa.	No.	Length
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4	9"	82	6'-4"	N/A	N/A	N/A	N/A	4	6	29'-11"	N/A	N/A	N/A	N/A	5	2	7'-8"	N/A	N/A	N/A	N/A	N/A	N/A	N/A

◔ See RCB Auxillary Details for Optional Splice.
Note:
S3 bars omitted unless grade box or slab thickness is greater than or equal to 12".

Note:
F3 bars omitted unless floor thickness is greater than or equal to 12".

†† Omit S5 bars when S3 bars are omitted and omit the bottom layer of F4 bars when F3 bars are omitted.

GENERAL NOTES

DESIGN SPECIFICATION: AASHTO LRFD Spec., 2007 Ed., 2009 Int.
DESIGN LOADING: HL93
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 includes the surfacing.

CONCRETE: Use concrete conforming to Grade 4.0 Concrete. Bevel all exposed edges with a ¾" triangular molding. Where Grade 4.0(AE) is specified, place this concrete in the top slab above the Construction Joint.

REINFORCING: Use reinforcing steel conforming to ASTM A615, Grade 60. 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 Grade 4.0 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 3 inches 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 Foundation Stabilization quantity has been calculated to the limits shown on the "RCB Auxiliary 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 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):
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.

Minimum Splice Lengths	
#4	1'-5"
#5	1'-9"
#6	2'-1"

SUMMARY OF QUANTITIES

Concrete (Grade 4.0)	29.1 C.Y.
Concrete (Grade 4.0)(AE)	--- C.Y.
Bridge Backwall Protection System	--- S.Y.
Reinforcing Steel (Gr. 60)	4160 Lbs.
Reinforcing Steel (Gr. 60)(Epoxy Coated)	--- Lbs.
Class III Excavation	--- C.Y.
Foundation Stabilization	10 C.Y.
Concrete for Seal Course (Set)	1 C.Y.

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

SINGLE 7 ft x 5 ft RCB

Proj. No. 472-85282 CITY OF WICHITA

FHWA APPROVAL		10-20-10 APP'D		Terry L. Fleck
DESIGNED	DETAILED	QUANTITIES	TRACED	
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK.	

Plotted By: wll Plot Location:
File: U:\Wichita-Civil\2015\159560000\Trans\Bridge\DGN_Project\Sht41_7x5_Barrel.dgn
Plot Date: 24-JUL-2017 08:16

CADconform Certify This File