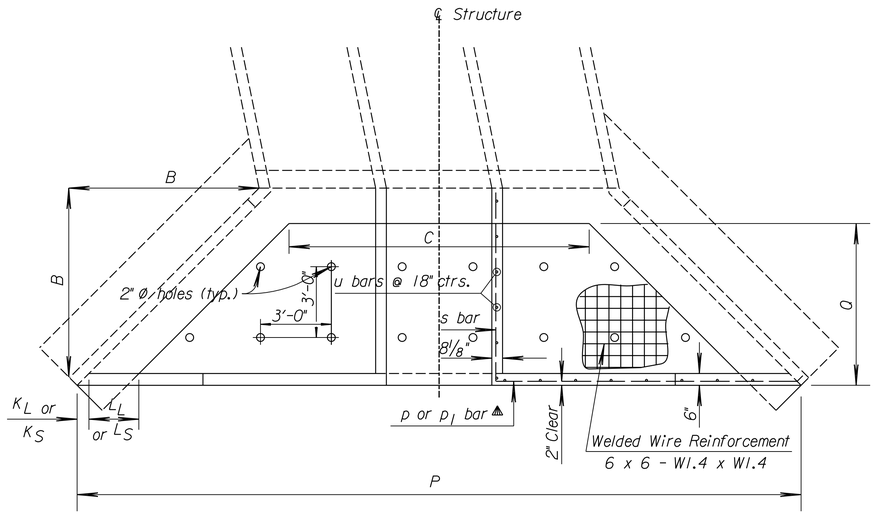
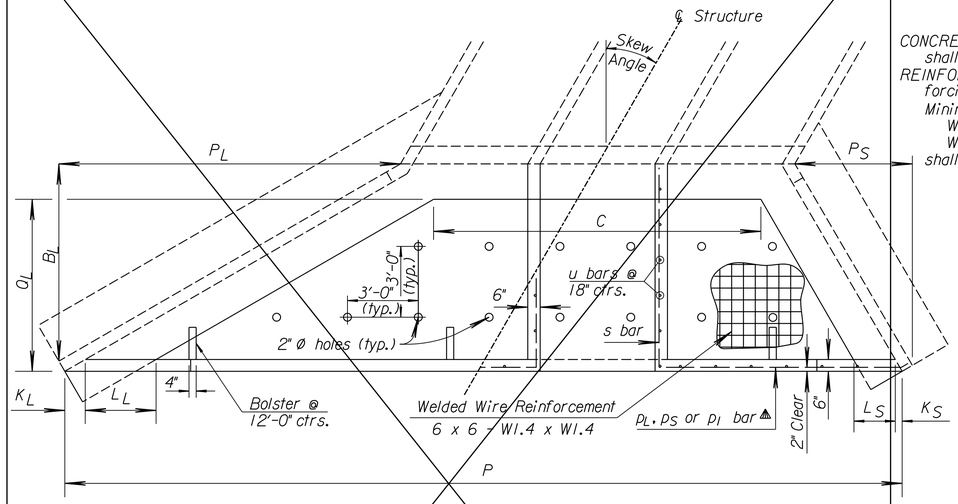
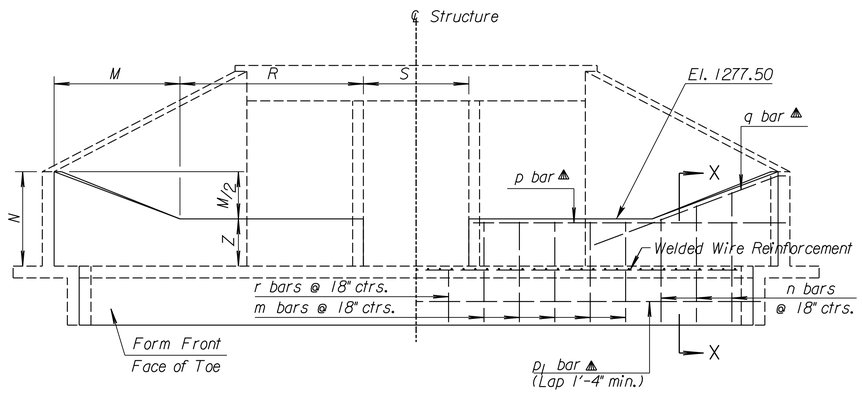
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	472-84702	2010	16	36



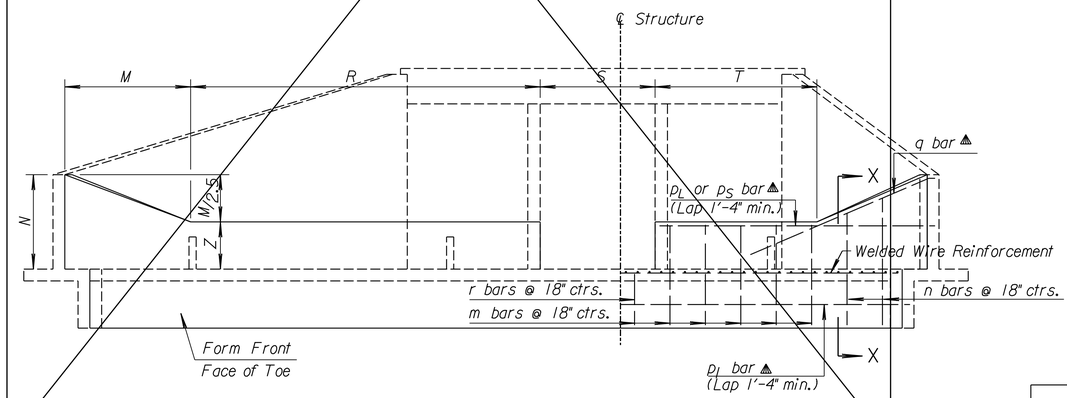
PLAN



PLAN - SKEW



ELEVATION AND SECTION



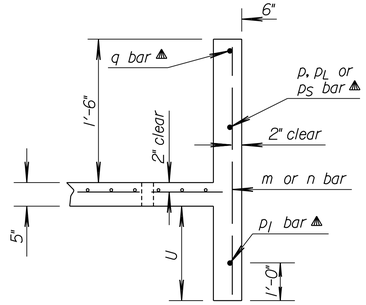
ELEVATION AND SECTION

GENERAL NOTE

CONCRETE: Concrete Class AAA shall be used throughout. All exposed edges shall be finished with an edging tool.

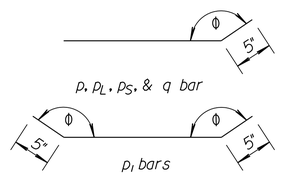
REINFORCING: All dimensions are to ℄ of bar except where noted. All reinforcing bars are No. 4. Reinforcing bars shall be Grade 60 billet steel. Minimum clearance on all reinforcement shall be 2".

Welded wire reinforcement shall be paid as pounds of reinforcing steel. When holes in the apron are warranted by drainage conditions they shall be constructed as directed by the Engineer.



SECTION X-X

▲ Drill and grout p and q bars into wingwalls and p_1 bar into wing footings when the soil saver end wall is constructed separately from the wingwalls. Drilling and grouting shall be Subsidiary to the bid item "Reinforcing Steel".



Ø Angle varies according to skew of RCB. Bars shall be field bent.

BENDING DIAGRAMS

STATION 199+90				SIDE Lt.					Skew= 0°				Z= 1'-6"				
Letter	B	C	K_L	K_S	L_L	L_S	M	N	P	P_L	P_S	O	R	S	T	U	
Dimension	4'-5"	30'-2½"	6"	6"	2'-1½"	2'-1½"	7'-6"	5'-3"	41'-2¾"	N/A	N/A	3'-4¾"	8'-0⅛"	10'-2½"	N/A	2'-1"	
Bar	m	n *	p	p_1	q	r	s	u	Sq. Ft. WWR							106	Sq. Ft.
Number	12	8	2	1	2	6	2	6	Grade 4.0 Conc.							4.9	Cu. Yd.
Length	3'-8"	*	15'-8"	37'-8"	10'-9"	2'-2"	4'-5"	2'-0"	Reinf. steel (Includes WWR)							162	Lbs.

STATION				SIDE					Skew				Z=				
Letter	B_L	C	K_L	K_S	L_L	L_S	M	N	P	P_L	P_S	O_L	R	S	T	U	
Dimension																	
Bar	m	n *	p_L	p	1		r	s	t	u	Sq. Ft. WWR						Sq. Ft.
Number											Grade 4.0 Conc.						Cu. Yd.
Length											Reinf. steel (Includes WWR)						Lbs.

STATION				SIDE				Lt.	Skew			0°	Z=				
Letter	B	C	K_L	K_S	L_L	L_S	M	N	P	P_L	P_S	O	R	S	T	U	
Dimension																	
Bar	m	n *	p	p	q	r	s	t	u	Sq. Ft. WWR							Sq. Ft.
Number										Grade 4.0 Conc.							Cu. Yd.
Length										Reinf. steel (Includes WWR)							Lbs.

Quantities include apron, bolsters and soil saver end walls. * n bars are variable, increase from 4'-2" to 6'-5" by 9" increments. Cut 2 each length.

SUMMARY OF SOIL SAVERS

Station	Culvert Size	Side	Z	Skew
199+90	3-10'x4'	Lt.	1'-6"	0°

NO.	DATE	REVISIONS	BY	APP'D
2	04-28-05	Chg. Class to Grade concrete, WWR	S.W.K.	J.O.B.
1	08-01-00	Revised Drill & Grout Note	R.J.S.	J.O.B.

KANSAS DEPARTMENT OF TRANSPORTATION

SOIL SAVER FOR R.C. CULVERTS

~~RD520~~

FHWA APPROVAL	6-10-05	APP'D. James O. Brewer	
DESIGNED	DETAILED	QUANTITIES	TRACED Bowser
DESIGN CK.	DETAIL CK.	QUAN.CK.	TRACE CK. Seltz

Plotted : 4/28/2010
Drawn By: _
File : T:\35768A\CADD\SHEETS\STRUCTURES\31STSS.dgn