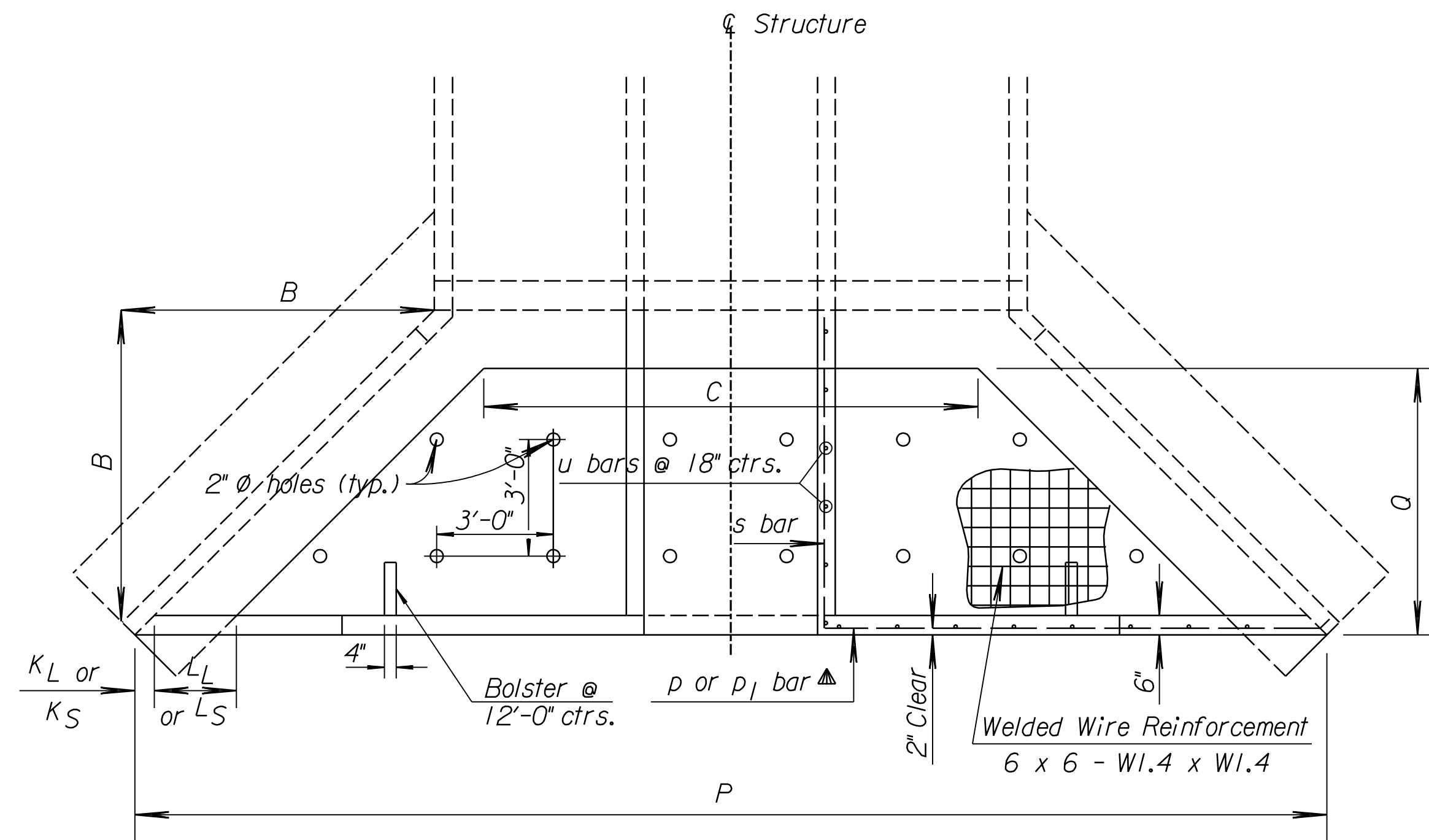


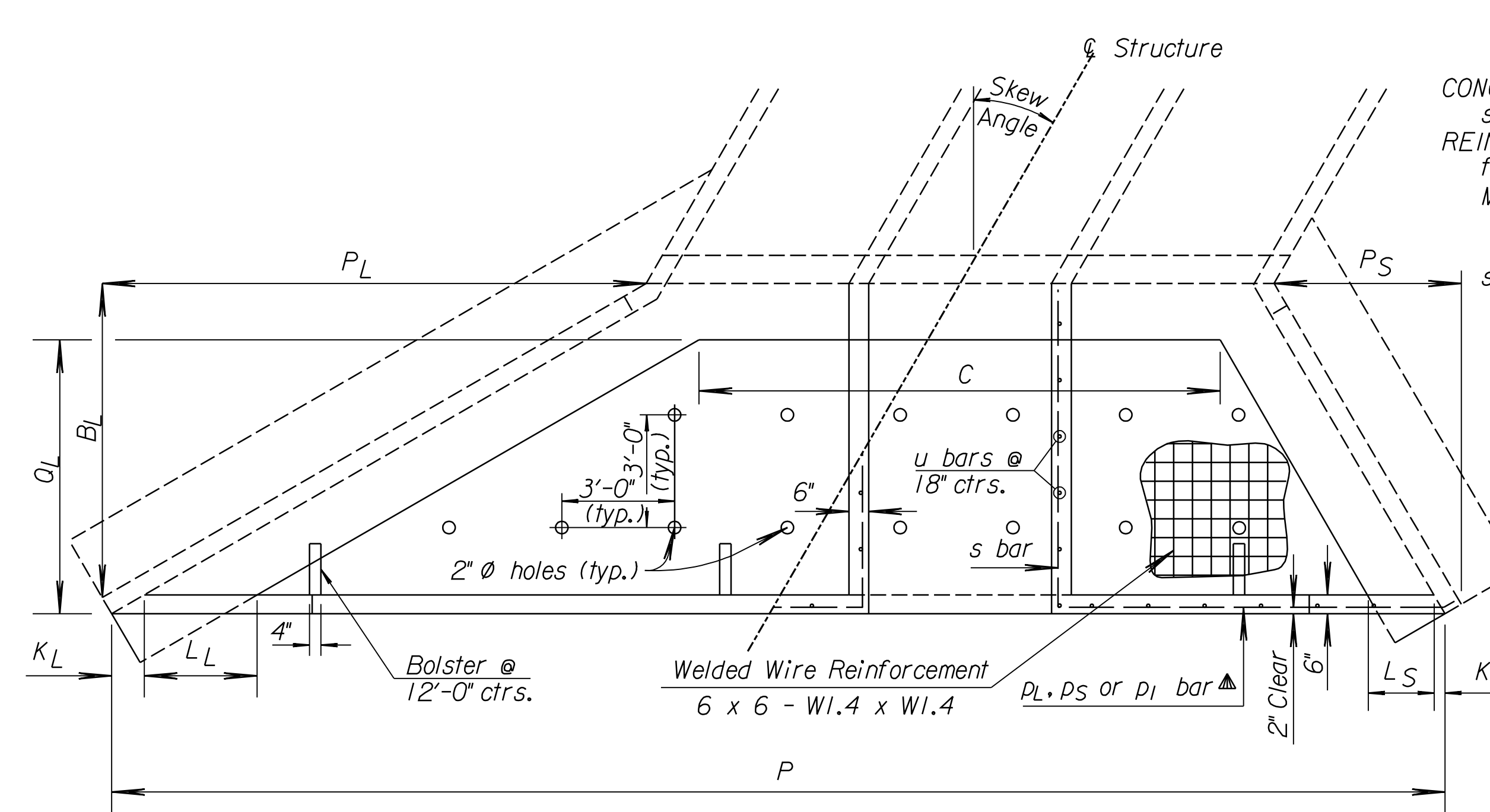
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	87 N-0386-01	2009	119	255

GENERAL NOTE

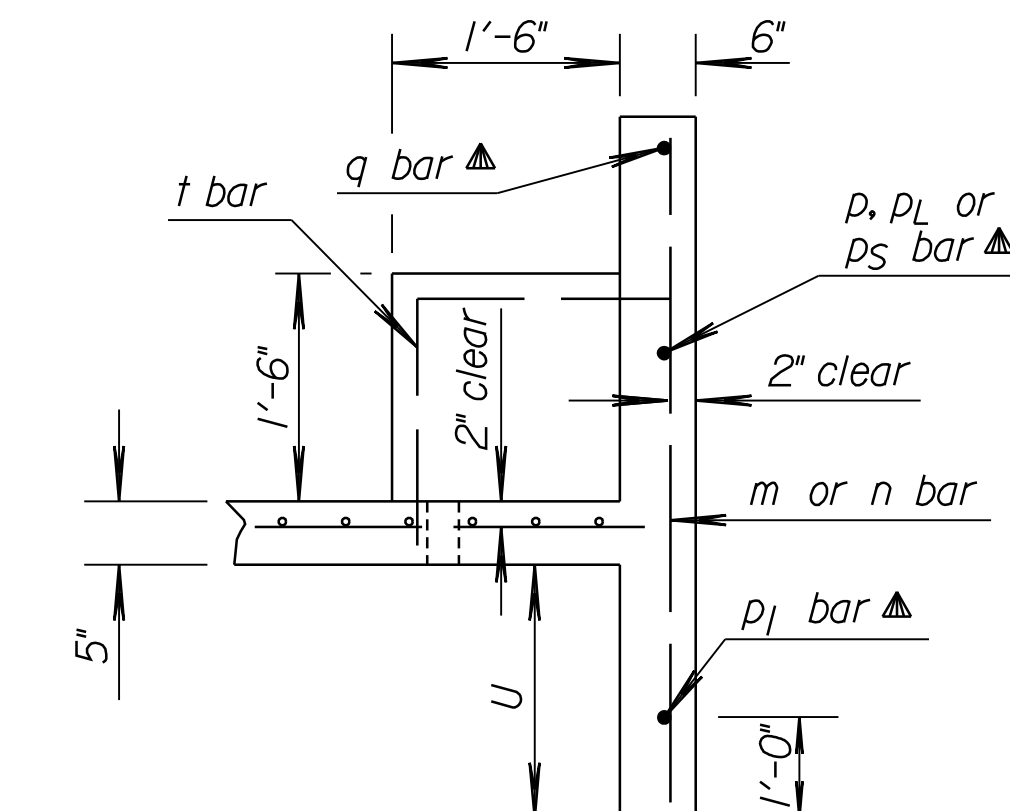
CONCRETE: Concrete Grade 4.0 shall be used throughout. All exposed edges shall be finished with an edging tool.
 REINFORCING: All dimensions are to \mathcal{E} of bar except where noted. All reinforcing bars are No. 4. Reinforcing bars shall be Grade 60 billet steel. Minimum clearance on all reinforcement 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.



PLAN

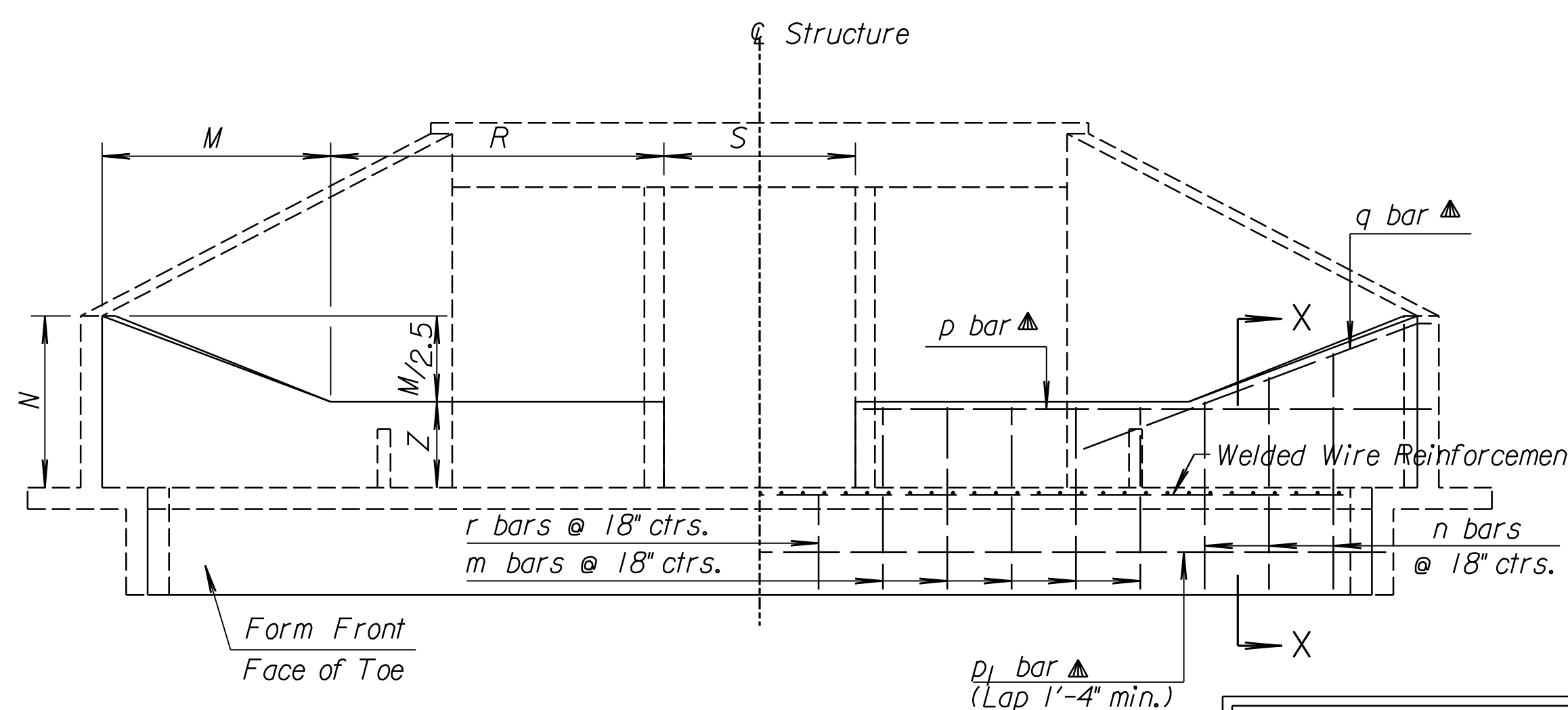


PLAN - SKEW

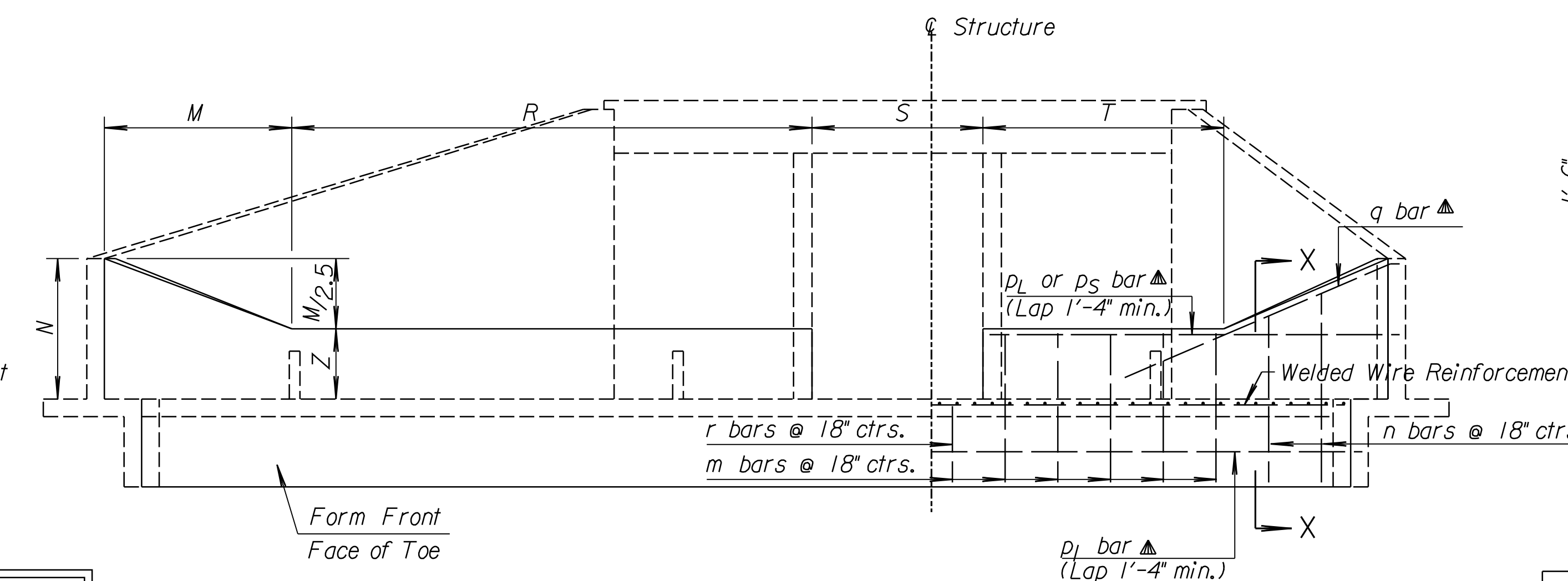


SECTION X-X

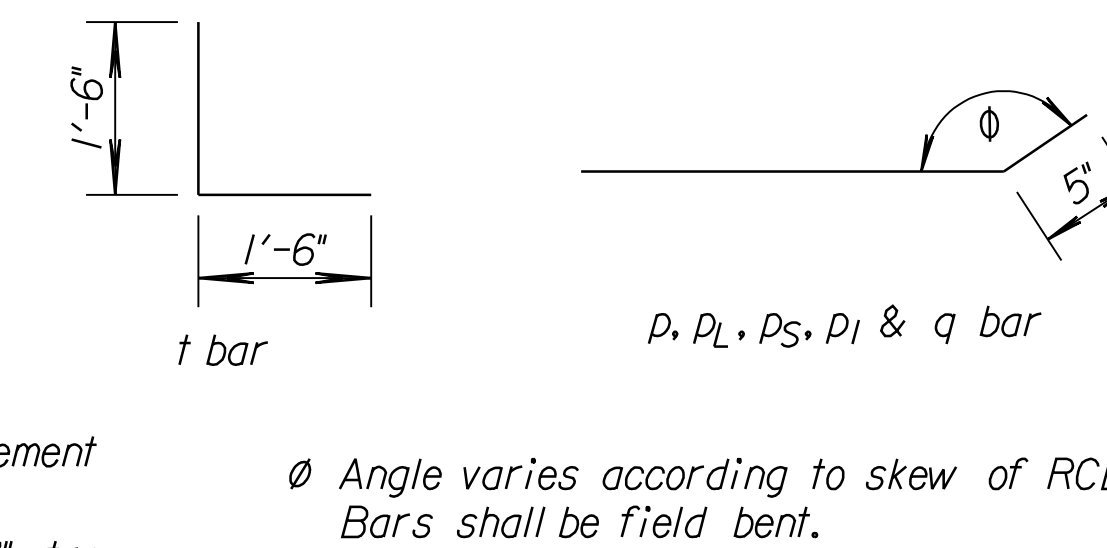
▲ Drill and grout p and q bars into wingwalls and p1 bar into wing footings when the soil saver end wall is constructed separately from the wingwalls. Drilling and grouting shall be Subsidiary to the bid item "Reinforcing Steel".



ELEVATION AND SECTION



ELEVATION AND SECTION



BENDING DIAGRAMS

Quantities for information only. Quantities included in RCB or RFB Summary of Quantities.

STATION	112+13 SIDE										Lt. Skew					0° Z=		3'-0"	
Letter	B	C	KL	KS	LL	LS	M	N	P	PL	PS	Q	R	S	T	U			
Dimension	16'-3 3/16"	33'-7 3/16"	6"	6"	2'-9 9/16"	2'-9 9/16"	12'-6"	8'-0"	70'-0 3/16"	N/A	N/A	15'-4 1/4"	16'-8 1/16"	12'-0"	N/A	3'-1"			
Bar	m	n*	p	p1	q	r	s	t	u	Sq. Ft. WWR		Grade 4.0 Conc.		22.1 Cu. Yd.					
Number	22	12	2	2	2	9	2	4	20										
Length	6'-2"	6'-2" min.	29'-2"	33'-2"	21'-0"	3'-2"	16'-6"	3'-0"	3'-1"	Reinf. steel (Includes WWR)						506 Lbs.			

STATION	122+85 SIDE										Lt. Skew					45° Rt. Z=		2'-0"	
Letter	BL	C	KL	KS	LL	LS	M	N	P	PL	PS	Q1	R	S	T	U			
Dimension	13'-4 3/4"	71'-4 1/4"	1'-2 5/16"	2 1/2"	3'-10 1/2"	1'-7 1/2"	6'-8"	4'-8"	112'-8 9/16"	32'-4"	5'-11 3/16"	12'-7 1/16"	56'-0 5/16"	14'-11 1/16"	29'-2 9/16"	2'-7"			
Bar	m	n*	pL	pS	p1	q	r	s	t	u	Sq. Ft. WWR		Grade 4.0 Conc.		1,113 Sq. Ft.		28.0 Cu. Yd.		
Number	58	5	2	1	3	2	10	2	6	18									
Length	4'-8"	5'-0" min.	32'-1"	36'-0"	36'-10"	11'-7"	2'-8"	14'-1"	3'-0"	2'-1"	Reinf. steel (Includes WWR)						664 Lbs.		

STATION	KTA 5091+94.61 SIDE										Lt. Skew					0° Z=		1'-6"	
Letter	B	C	KL	KS	LL	LS	M	N	P	PL	PS	Q	R	S	T	U			
Dimension	8'-1 9/16"	39'-10 9/16"	6"	6"	2'-1 1/16"	2'-1 1/16"	6'-3"	4'-0"	58'-2 1/4"	N/A	N/A	7'-0 1/2"	12'-6 1/8"	20'-7"	N/A	2'-1"			
Bar	m	n*	p	p1	q	r	s	t	u	Sq. Ft. WWR		Grade 4.0 Conc.		9.1 Cu. Yd.					
Number	16	6	2	2	14	2	10	2	10										
Length	3'-8"	3'-9" min.	18'-11"	28'-0"	10'-2"	2'-2"	8'-2"	3'-0"	1'-7"	Reinf. steel (Includes WWR)						244 Lbs.			

SUMMARY OF SOIL SAVERS				
Station	Culvert Size	Side	Z	Skew
112+13	3-12'x8'	Lt.	3'-0"	0°
122+85	5-10'x4'	Lt.	2'-0"	45° Rt.
5091+94.61	4-10'x5'	Lt.	1'-6"	0°

KANSAS DEPARTMENT OF TRANSPORTATION				
SOIL SAVER FOR R.C. CULVERTS				
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.

RD520			
DESIGNED	APP'D	QUANTITIES	TRACED
DETAIL CK.	DETAIL CK.	QUAN. CK.	TRACE CK.
	6-10-05	APP'D. James O. Brewer	

Drawn By: File: K:\35751A\CADD\SHEETS\STRUCTURES\GRNWH_RD520.dgn

Quantities include apron, bolsters and soil saver end walls. * n bars are variable, increase by increments of 7". Cut 2 each length.