

VERSION: 5.1.0 COMPILED: 03/01/95

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

GENERAL NOTES

UNIT STRESSES: Grade 4.0 Concrete; $f'c = 4,000$ p.s.i.
Reinforcing Steel; $f_y = 60,000$ p.s.i.

CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a $\frac{3}{4}$ inch triangular mounding.

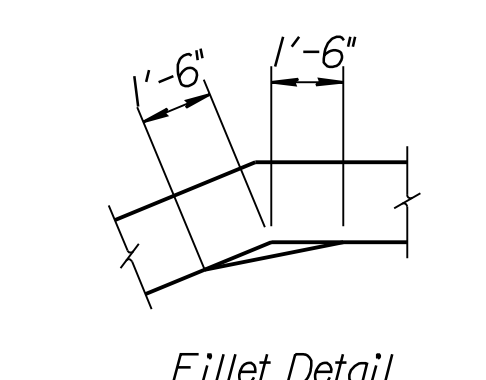
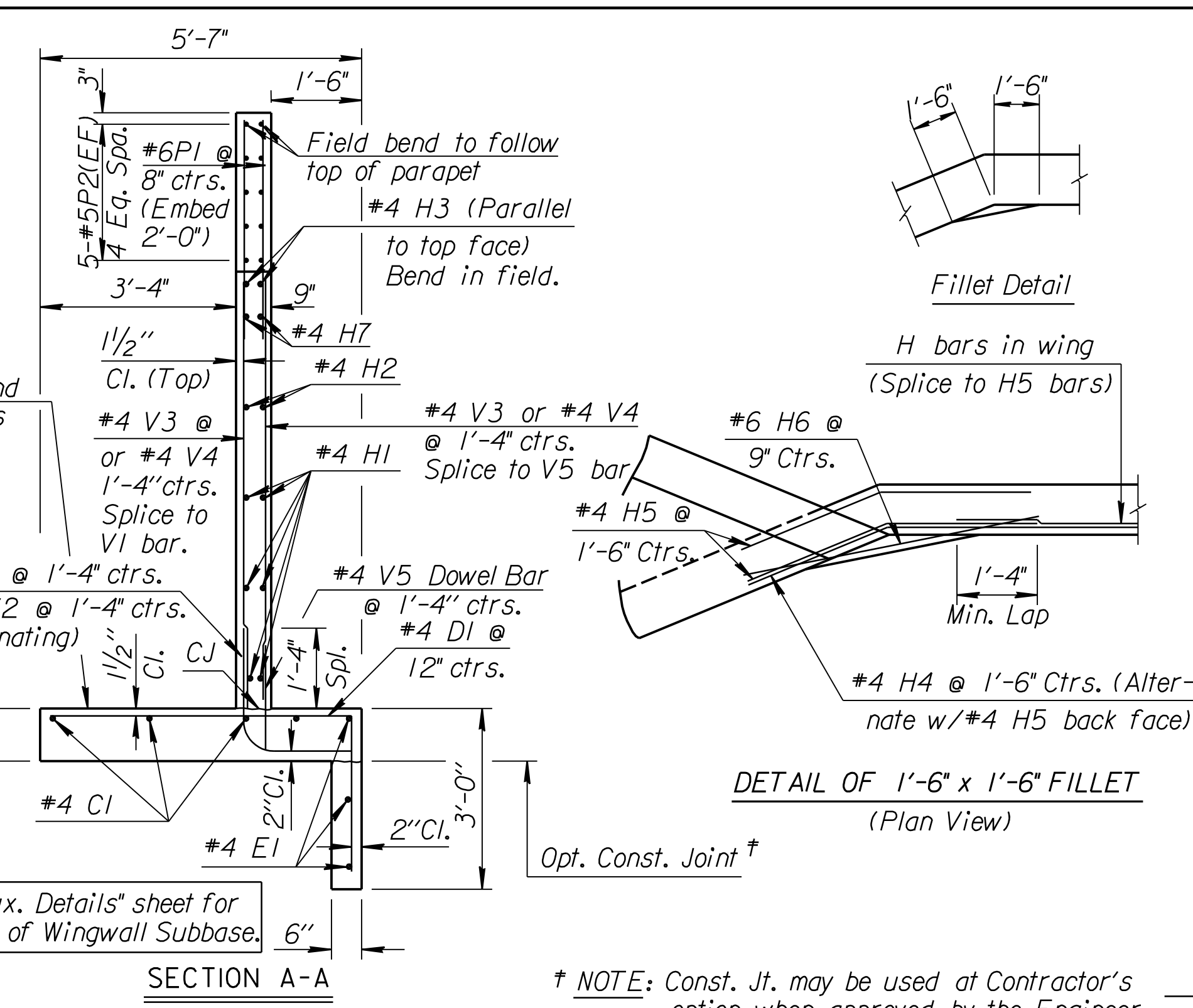
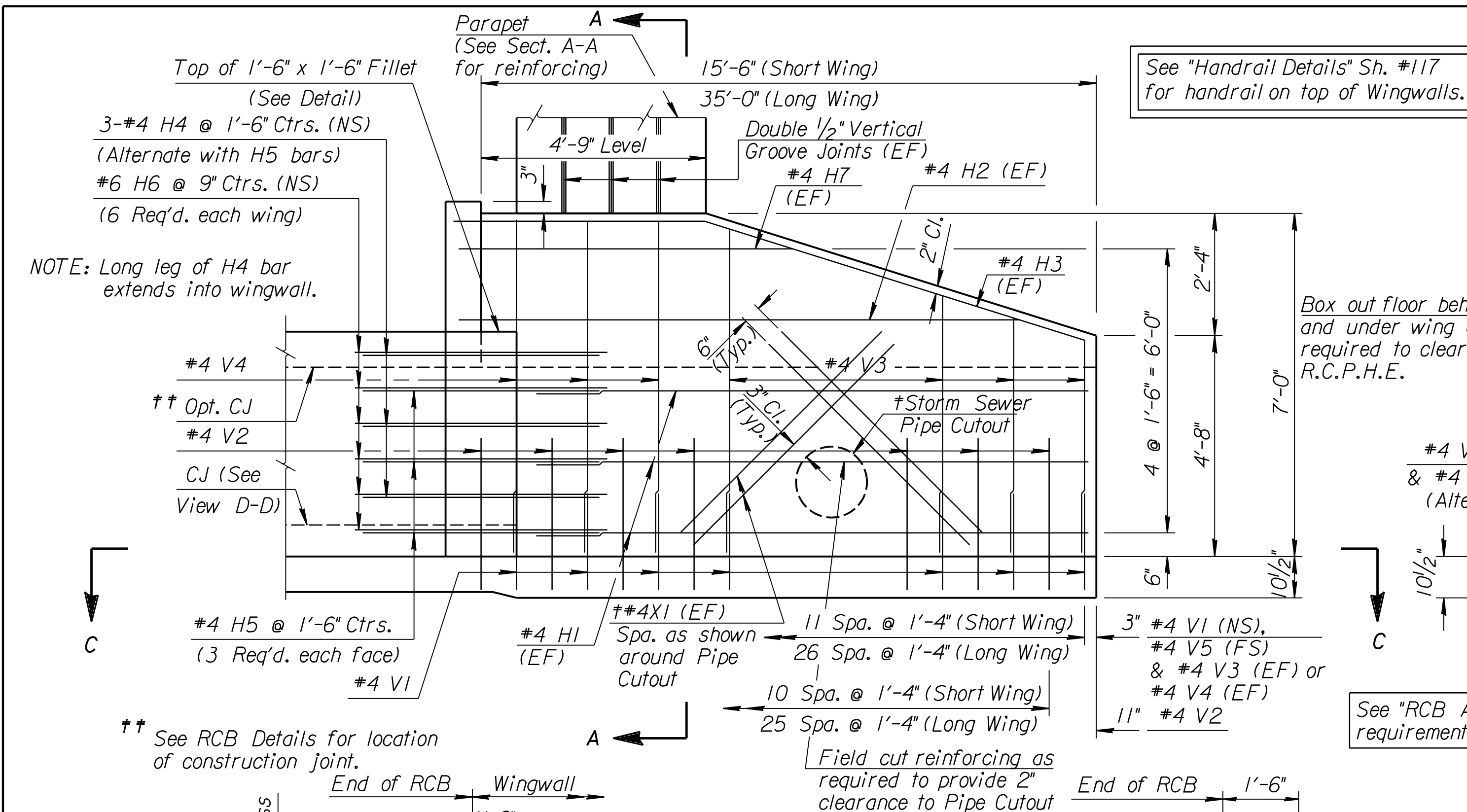
REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. Welded Wire Fabric shall conform to ASTM A185. All dimensions relative to reinforcing steel shall be to center-line of bar unless otherwise noted.

QUANTITIES: Wingwall Quantities include all quantities outside the neat lines of the box, excluding the hubguard.

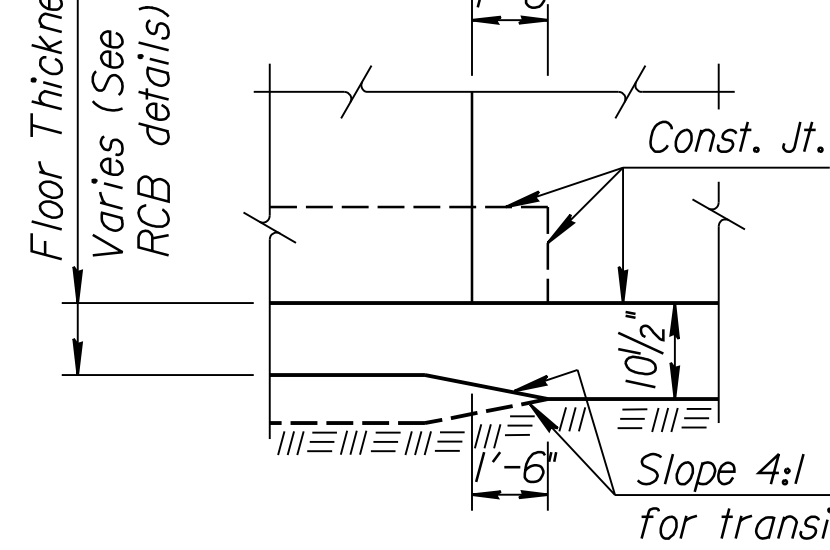
APRON: A 5' concrete slab shall be constructed between the downstream wings in locations subject to scour only when specified on the plans or by the Engineer. Wire Reinforcing mesh shall be electrically welded and shall be composed of 6 x 6-W1.4 x W1.4 welded wire fabric and shall be classified as pounds of reinforcing and included in the total quantity for the bid item Reinforcing Steel (Gr. 60).

BACKFILL MATERIAL: Soils judged as high plasticity clays, fat clays, expansive clays, or organic clays are unsuitable for backfill material for wingwalls and will not be used. Where these conditions exist, use Granular Backfill (Wingwalls).

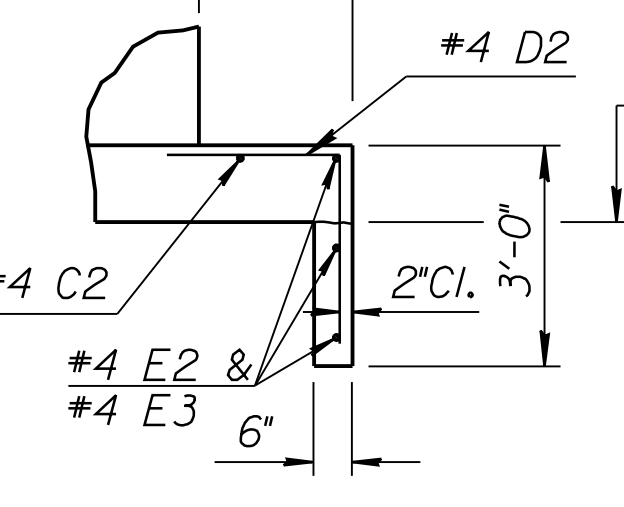
FOUNDATION STABILIZATION: Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.



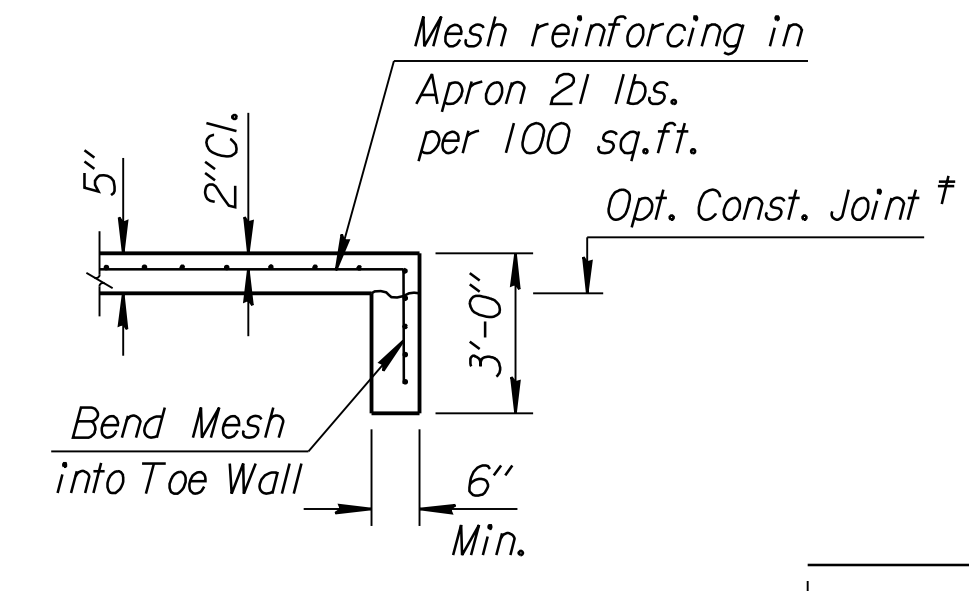
DETAIL OF 1'-6" x 1'-6" FILLET (Plan View)



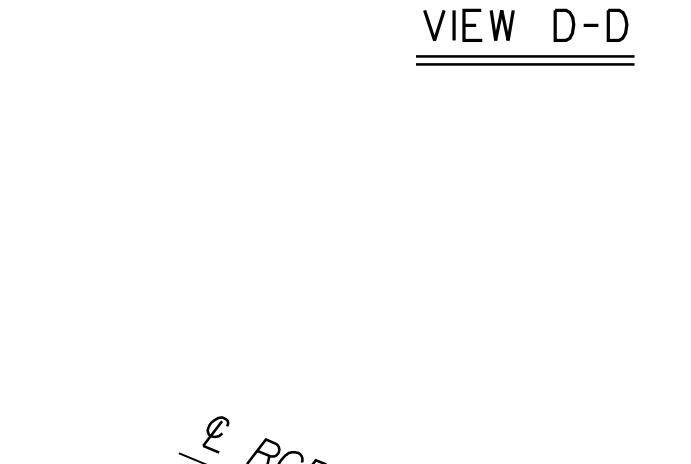
ELEVATION OF WINGWALL (Backface Shown)



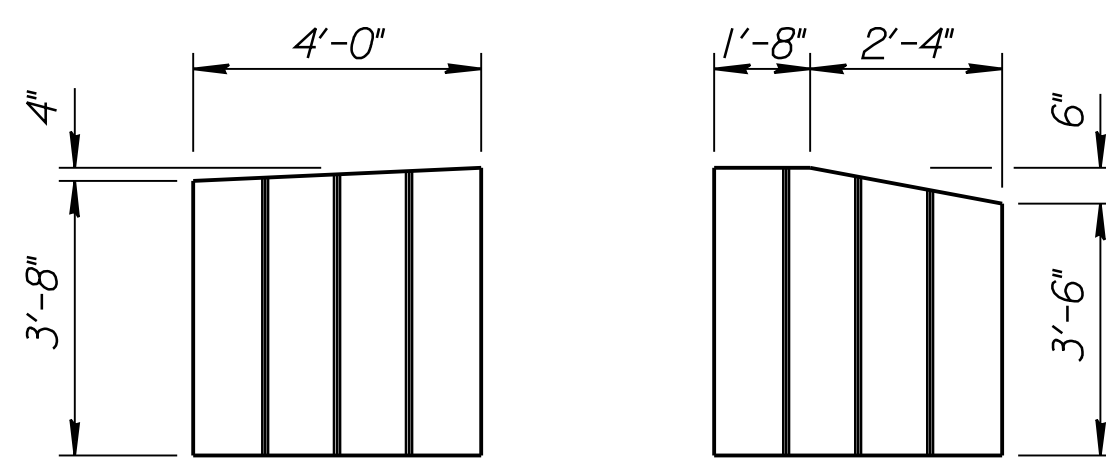
SECTION E-E



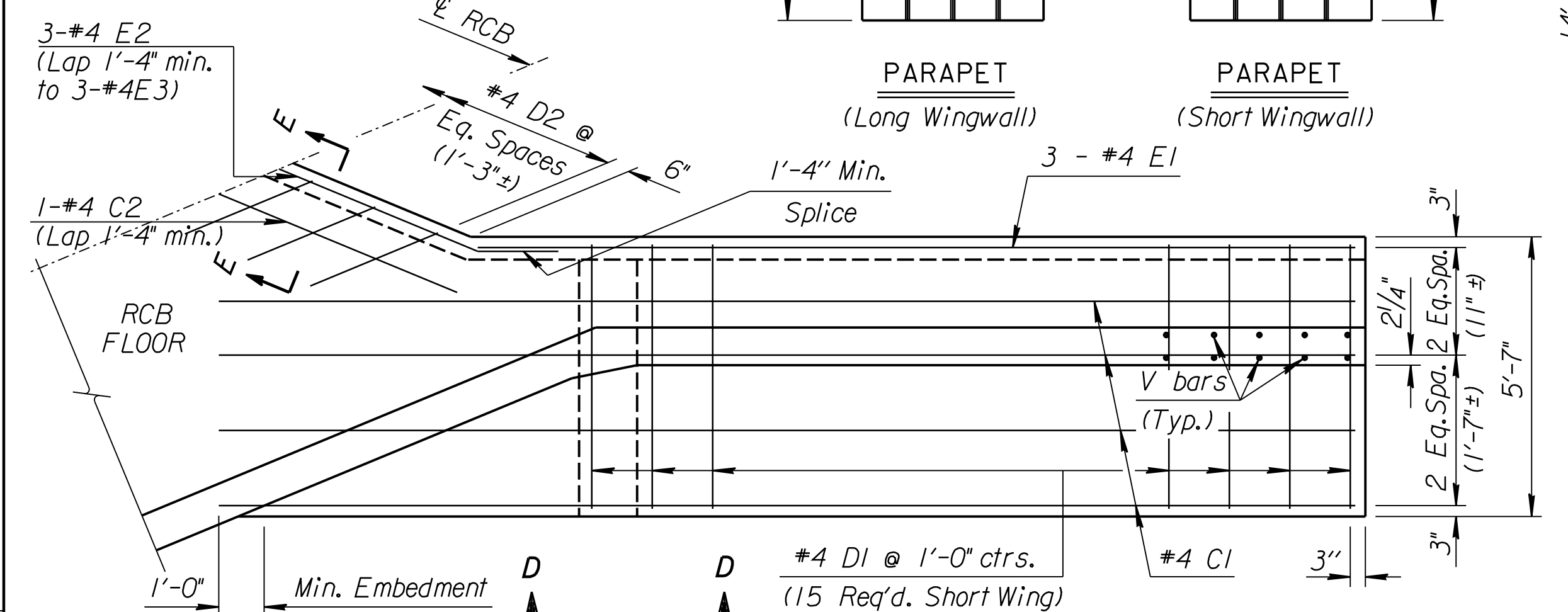
SECTION B-B



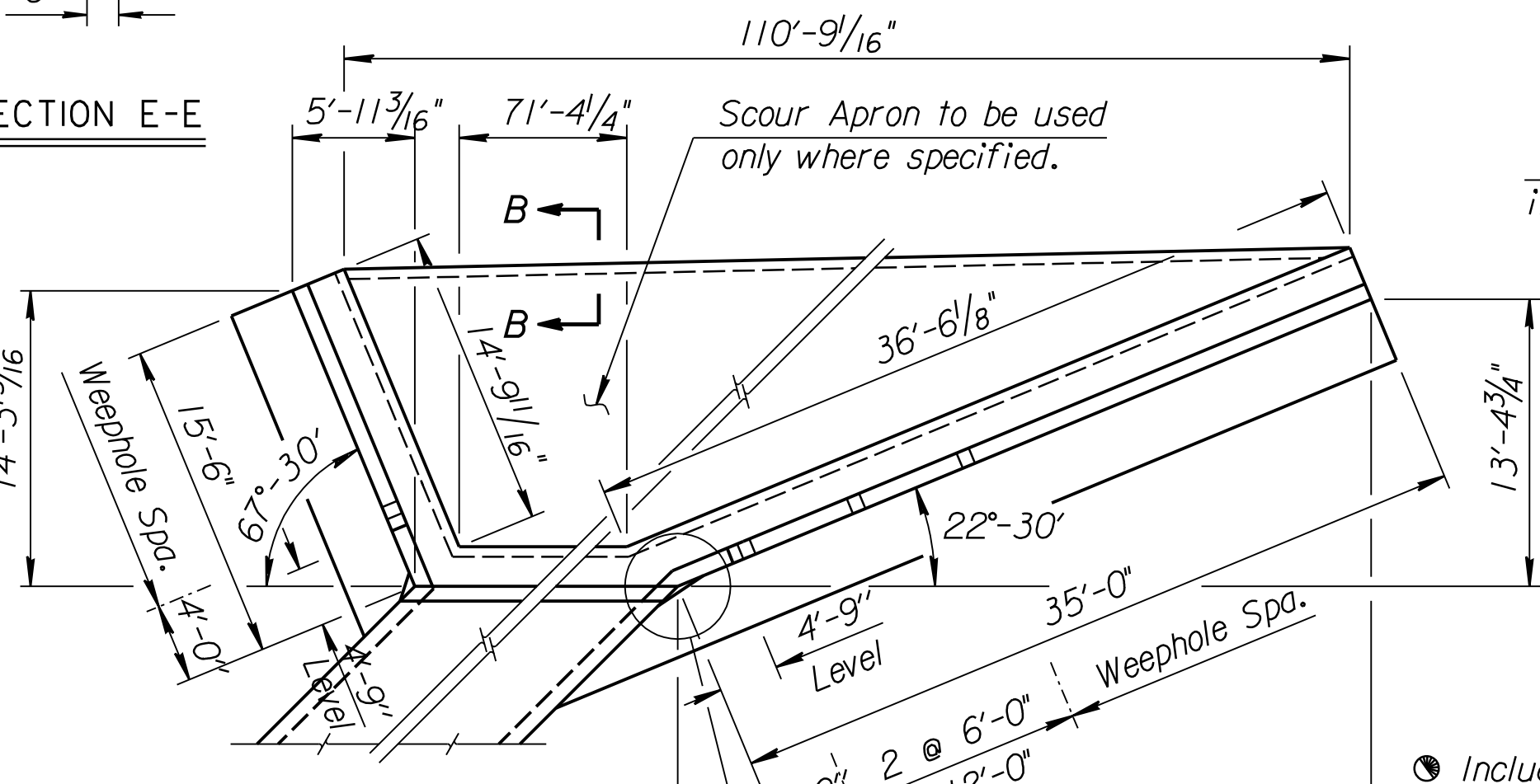
VIEW D-D



PARAPET (Long Wingwall) and PARAPET (Short Wingwall)



SECTION C-C (Plan of Footing)



WING DIMENSIONS FOR 45° SKEWED BOX (3/2:1 Embankment Slope)

WINGWALL QUANTITIES (One End Only)		
	Foundation Stabilization (C.Y.)	Concrete (Gr. 4.0) (C.Y.)
Wingwalls	8.65	27.93
Apron (Rt.)	22.26	24.66
Soil Saver (Lt.)	20.32	27.99
Reinforcing Steel (Gr. 60) (Wing only)		2,338 Lbs. Left
Welded Wire Fabric (Apron only)		2,418 Lbs. Right
		317 Lbs.

BENDING DIAGRAM (All dimensions are out to out of bars.)

NO.	DATE	REVISIONS	BY	APP'D
KANSAS DEPARTMENT OF TRANSPORTATION BR. NO. 4304008700SBT09 Sta. 122+85 FLARED WINGWALLS 4 ft Rise (45° Skew)				
BR-10-45-04		Sedgwick Co.		
DESIGNED	BSI DETAILED	6-5-91 APP'D	KENNETH F. HURST	
DESIGN CK.	AH DETAIL CK.	AH QUAN CK.	SBI TRACE CK.	

NOTE: Reinforcing Bar List is for both wings at one end of box only.

NOTE: Bars with an 'L' or 'S' designation identifies bars in the long wingwall ('L') or short wingwall ('S'); ie. #4 H2L, #4 H2S, etc.

45° Skew	Mark	#4C1S	#4C1L	#4D1	#4E1S	#4E1L	#4C2	#4D2	#4E2	#4E3	#4V1	#4V2	#4V3S	#4V3L	#4V4	#4V5	#4H1S	#4H1L	#4H2S	#4H2L	#4H3S	#4H3L	#4H4S	#4H4L	#4H5S	#4H5L	#4H6S	#4H6L	#4H7S	#4H7L	#6P1	#5P2	#4XS1	#4XL1
	Number	4	4	52*	3	3	2	57*	3*	3*	39*	37*	16	46	16	39	6	6	2	2	2	2	3*	3*	6*	6*	6	6	2	2	24	20	† 8	† 8
	Length	17'-8"	43'-4"	7'-11"	14'-10"	36'-5"	38'-2"	6'-2"	37'-10"	37'-10"	4'-2"	5'-2"	*	*	6'-8"	2'-3"	14'-4"	33'-9"	14'-0"	29'-4"	16'-5"	35'-9"	5'-0"	6'-0"	5'-0"	5'-0"	3'-5"	5'-4"	7'-1"	9'-10"	5'-10"	3'-8"	8'-0"	7'-0"

Plotted By: -
File: \$\$\$\$\$\$DGN\$SPEC\$
Plot Date: 11/24/2009