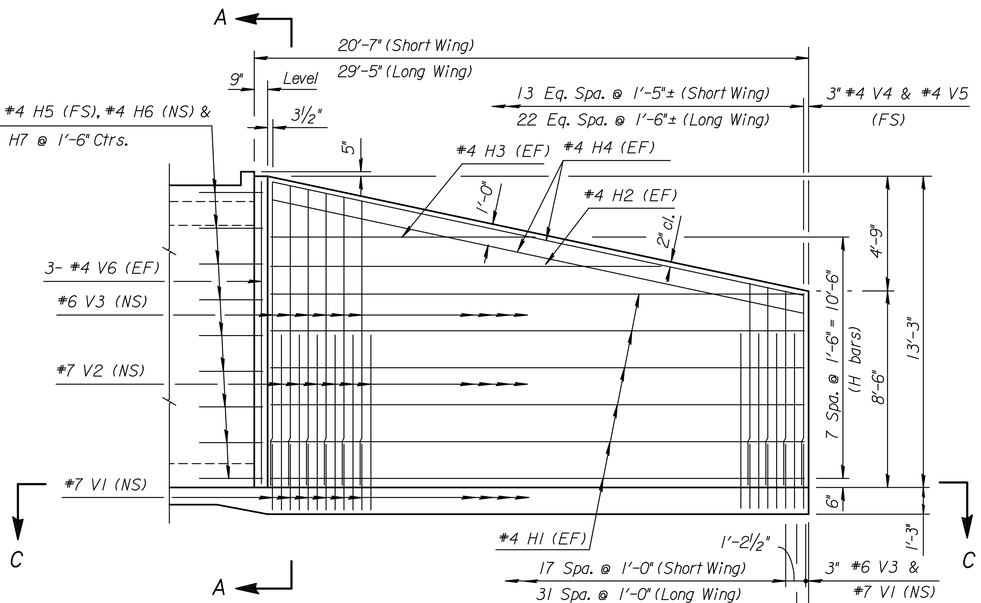
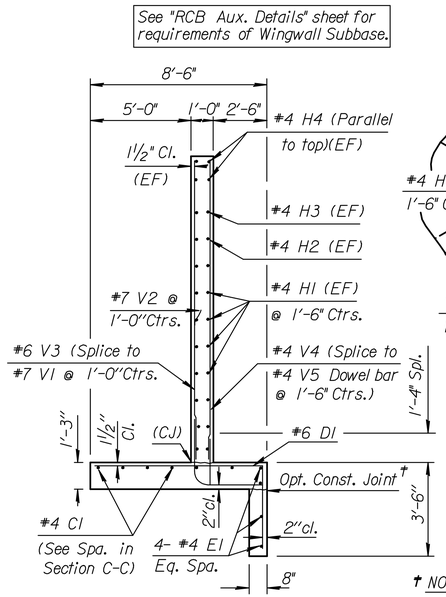
STATE	PROJECT NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	468-84636	2011	20	63



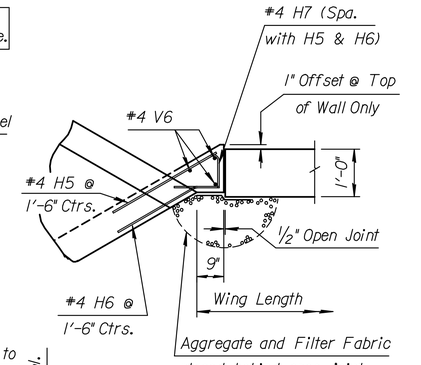
ELEVATION OF WINGWALL

(Backface Shown)

See "RCB Aux. Details" sheet for requirements of Wingwall Subbase.



SECTION A-A



WINGWALL JOINT DETAIL

(Plan View)

† NOTE: Const. Jt. may be used at Contractor's option when approved by the Engineer. Dl bars or mesh may be spliced thus: Minimum overlap shall be 1'-3". No increase in quantities or cost shall be allowed when Contractor elects this option.

GENERAL NOTES

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

CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a ¾inch triangular moulding.

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 down-stream 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)

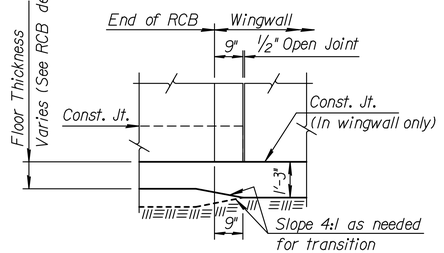
BACKFILL MATERIAL: Soils Judged as high plasticity clays, fat clays, expansive clays, or organic clays are unsuitable for backfill material for wingwalls and will not be used. Where these conditions exist, use Granular Backfill (Wingwalls).

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

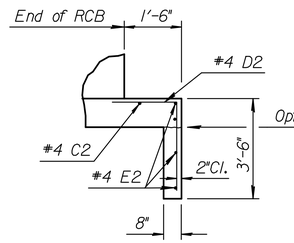
Bar	Incrmts.
V3S	3⅛"±
V3L	1¾"±
V4S	4½"±
V4L	2½"±

Var. 8'-4" to 13'-0" by equal increments (See Table)

V3S, V3L, V4S, V4L

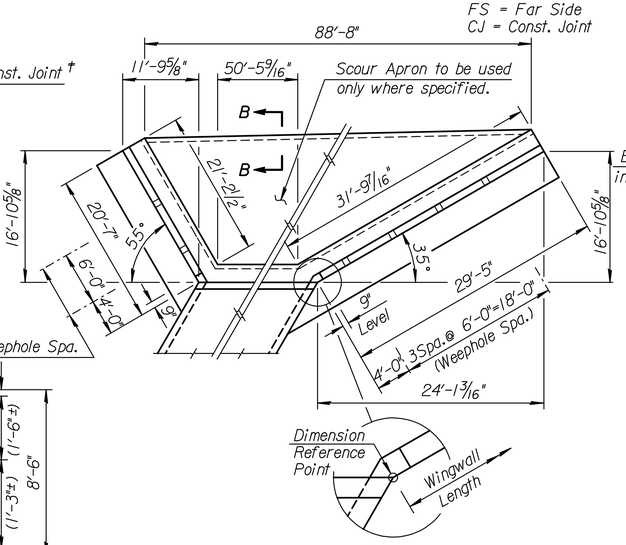


VIEW D-D



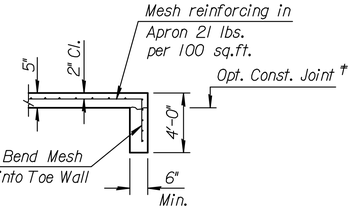
SECTION E-E

NOTE:
EF = Each Face
NS = Near Side
FS = Far Side
CJ = Const. Joint

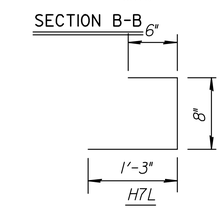


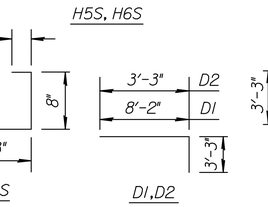
WING DIMENSIONS FOR 20° SKEWED BOX

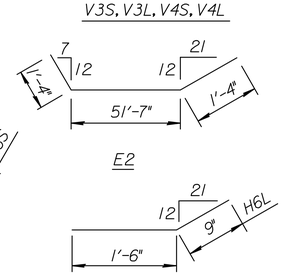
(3½:1 Embankment Slope)

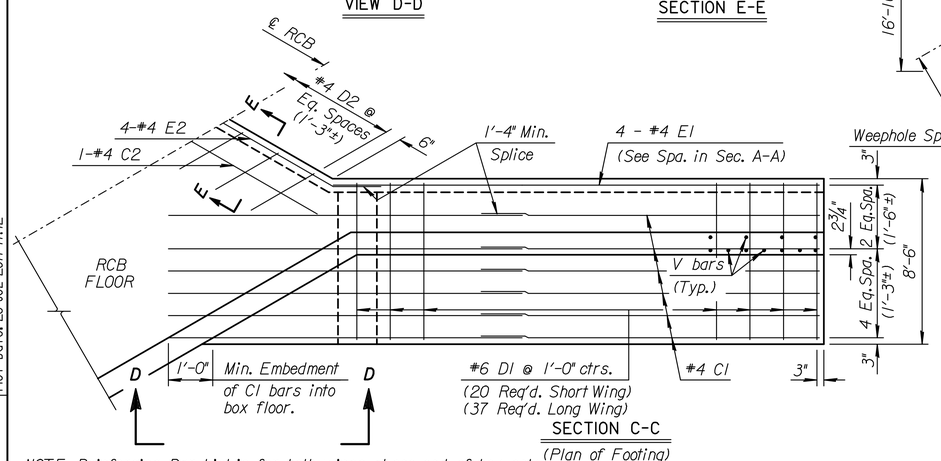


SECTION B-B









SECTION C-C

(Plan of Footing)

Quantities listed below are included in the Summary of Quantities shown on the RCB details.

WINGWALL QUANTITIES (One End Only)		
	Foundation Stabilization (C.Y.)	Concrete (Gr. 4.0) (C.Y.)
Wingwalls	10.67	48.8
Apron	22.67	25.0
Soil Saver	40.4	89.6
Reinforcing Steel (Gr. 60)		5431 Lbs.
Welded Wire Fabric		334 Lbs.

BENDING DIAGRAM

(All dimensions are out to out of bars.)

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

✱ See Bending Diagram

Mark	#4C1S	#4C1L	#6D1	#4E1S	#4E1L	#4C2	#4D2	#4E2	#7V1	#7V2	#6V3S	#6V3L	#4V4S	#4V4L	#4V5	#4V6	#4H1S	#4H1L	#4H2S	#4H2L	#4H3S	#4H3L	#4H4S	#4H4L	#4H5S	#4H5L	#4H6S	#4H6L	#4H7S	#4H7L
Number	6	12	57 ✱	4	4	1	41 ✱	4 ✱	52 ✱	50 ✱	19	33	14	23	37	6	12	12	2	2	2	2	4	4	9 ✱	9	9 ✱	9 ✱	9 ✱	9 ✱
Length	23'-3"	22'-0"	11'-5"	19'-6"	36'-3"	58'-7"	6'-6"	54'-3"	6'-6"	10'-4"	✱	✱	✱	✱	2'-6"	13'-0"	18'-4"	32'-4"	14'-2"	24'-9"	8'-3"	14'-5"	19'-0"	32'-9"	2'-3"	3'-0"	2'-3"	2'-3"	2'-8"	2'-5"

NO.	DATE	REVISIONS	BY	APP'D

KANSAS DEPARTMENT OF TRANSPORTATION

Br. No. 35-87-7.82(823) Sta. 4574+35.00

RCB WINGWALLS
12 ft Rise (20° SKEW)

~~BR 10.30.12~~ Sedgwick Co.

FHWA APPROVAL		6-5-91	APP'D	KENNETH F. HURST
DESIGNED	DETAILED		QUANTITIES	TRACED
DESIGN CK.	DETAIL CK.		QUAN.CK.	TRACE CK.

Plot Location: Plotted By: qp
File: I:\2010\1029\13x16x12\ModifiedWings.dgn
Plot Date: 26-JUL-2011 11:42