

STREET IMPROVEMENTS FOR
135th Street West
from 13th Street to 21st Street North

STORM SEWER
LINE 27, 2-8x4
RCB WINGWALL
DETAILS

SHEET TITLE
MKEC PROJ #10265
PROJECT NUMBER

DESIGN BY: JRA
DRAWN BY: DMU
CHECKED BY: JRA

ISSUED: February 2012
REVISED:

SHEET NO.
88 of 231

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 moulding.

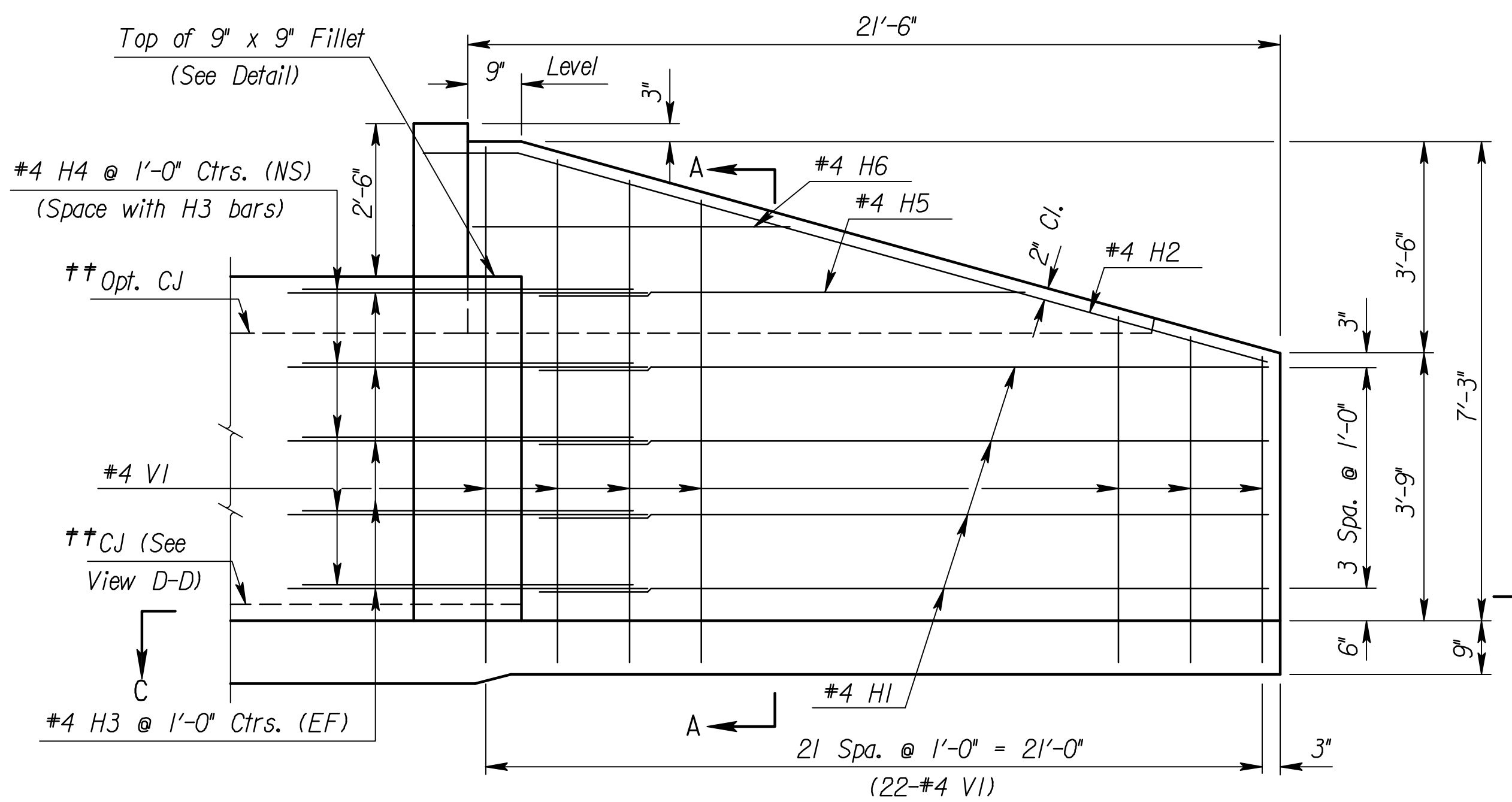
REINFORCING: All reinforcing shall conform to ASTM A615, Grade 60. Welded Wire Fabric shall conform to ASTM A185. All dimensions relative to reinforcing steel shall be to center-line of bar unless otherwise noted.

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

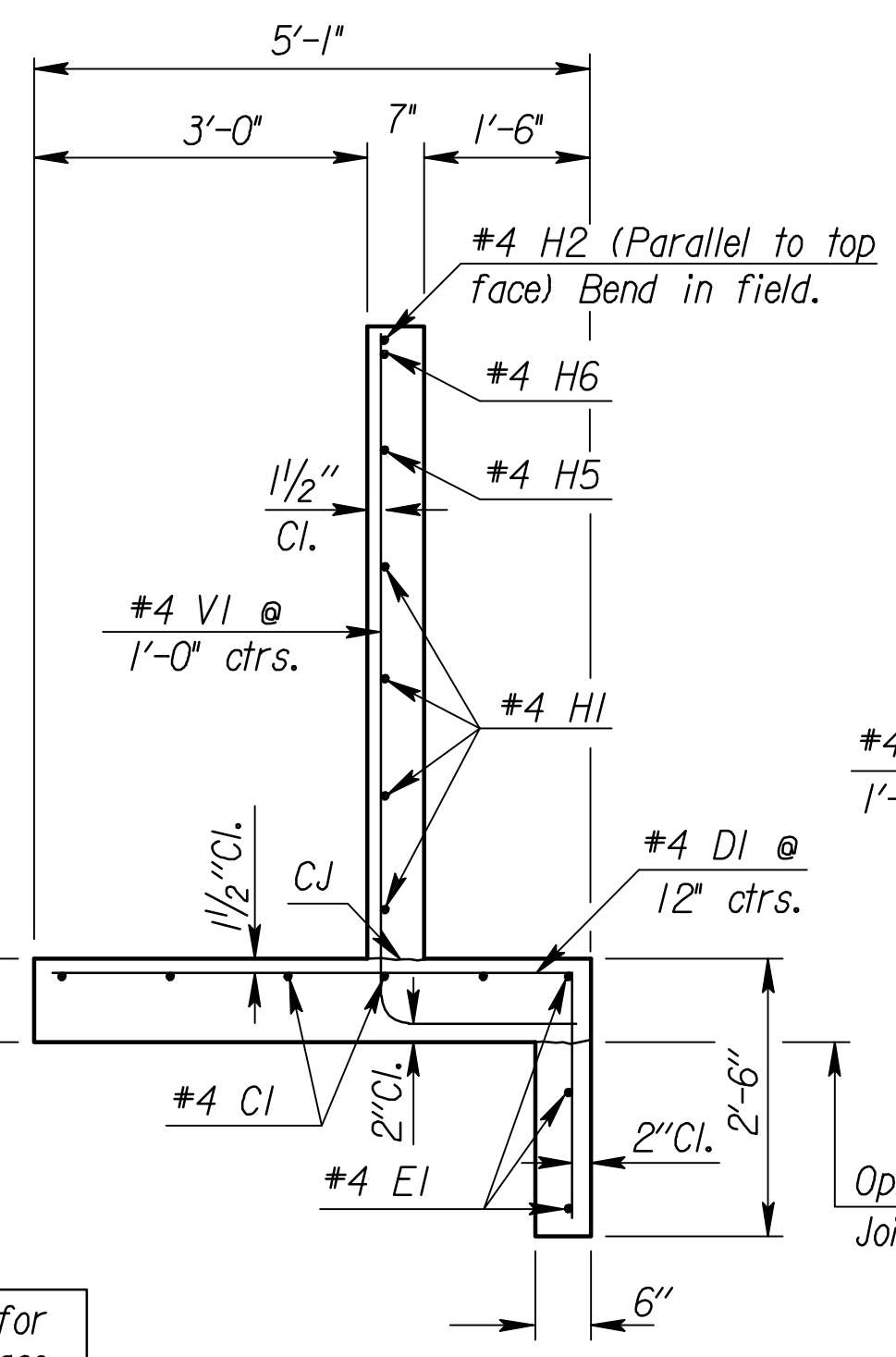
APRON: A 5' concrete slab shall be constructed between the down-stream wings in locations subject to scour only when specified on the plans or by the Engineer. Wire Reinforcing mesh shall be electrically welded and shall be composed of 6 x 6- W1.4 x W1.4 welded wire fabric and shall be classified as 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).

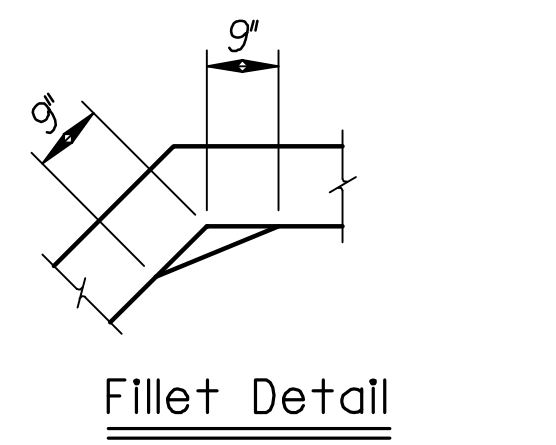
FOUNDATION STABILIZATION: Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.



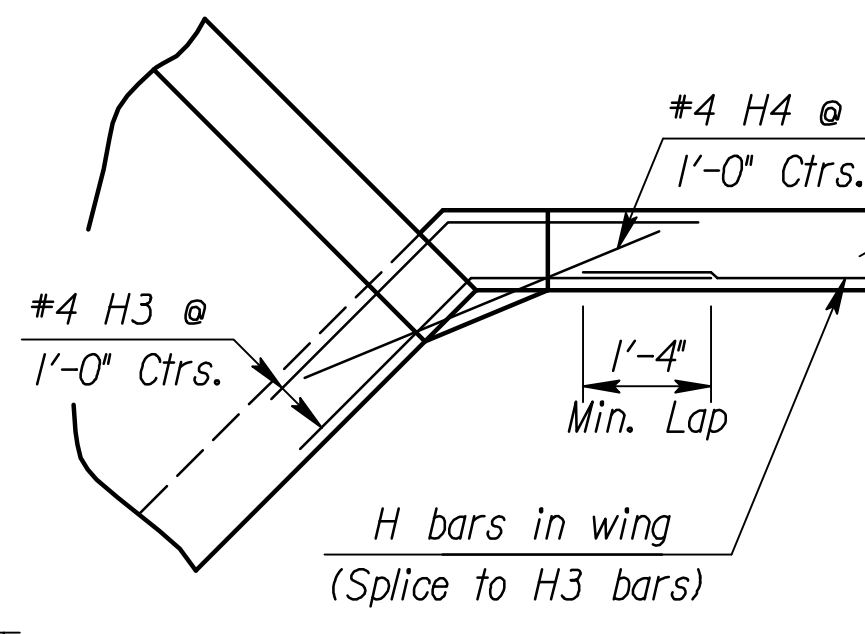
ELEVATION OF WINGWALL
(Backface Shown)



SECTION A-A



Fillet Detail

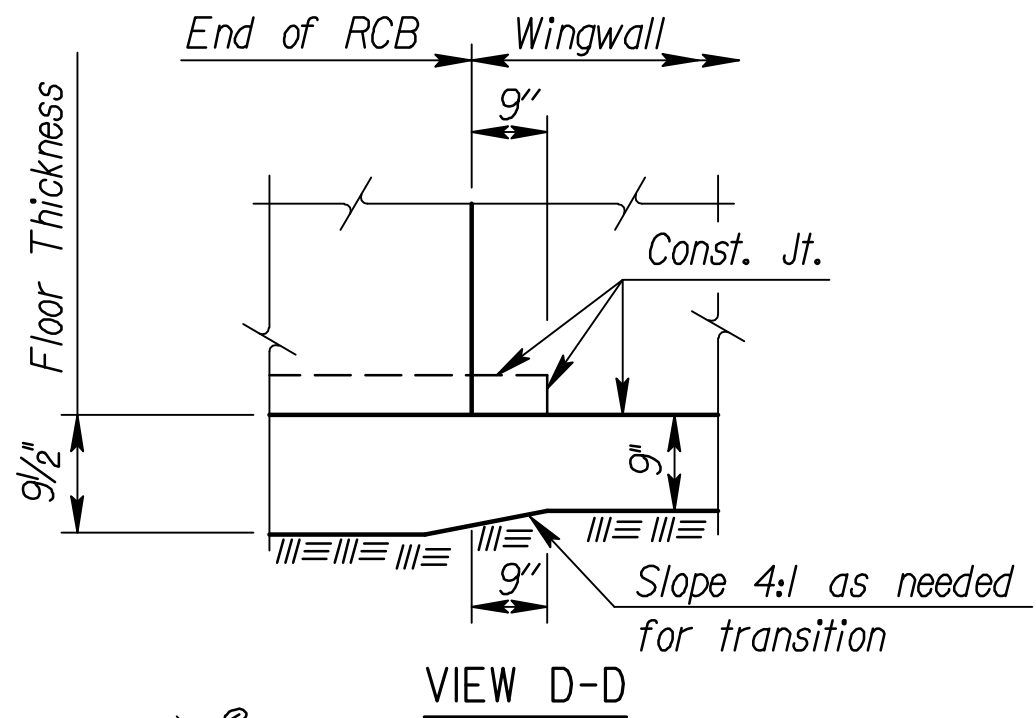


DETAIL OF 9" x 9" FILLET
(Plan View)

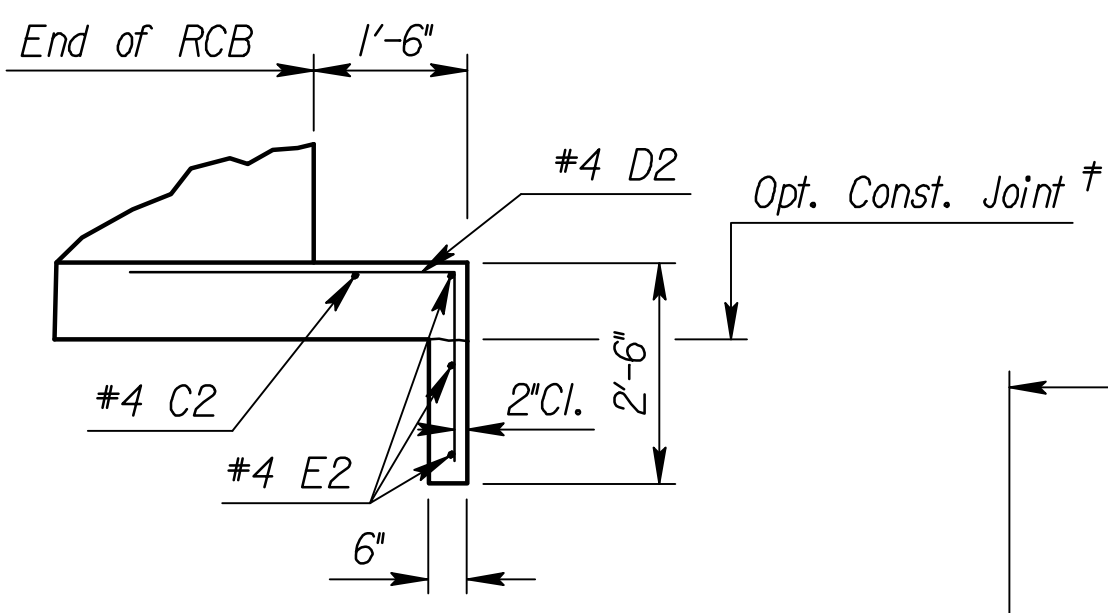
** See RCB Details for location of construction joint.

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

NOTE: The work on this sheet shall be subsidiary to "Pipe, SWS, RCBC (2-8'x4')

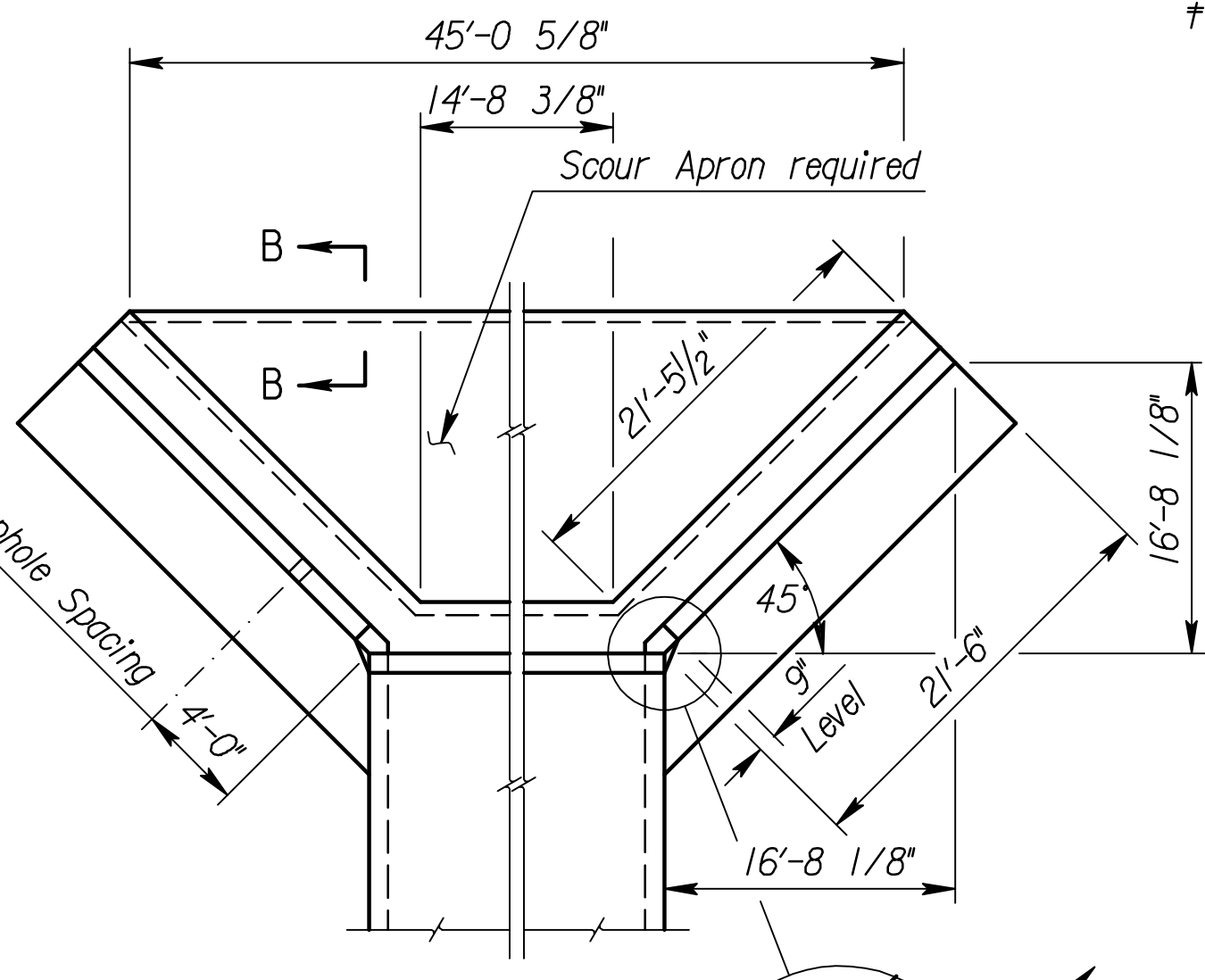


VIEW D-D



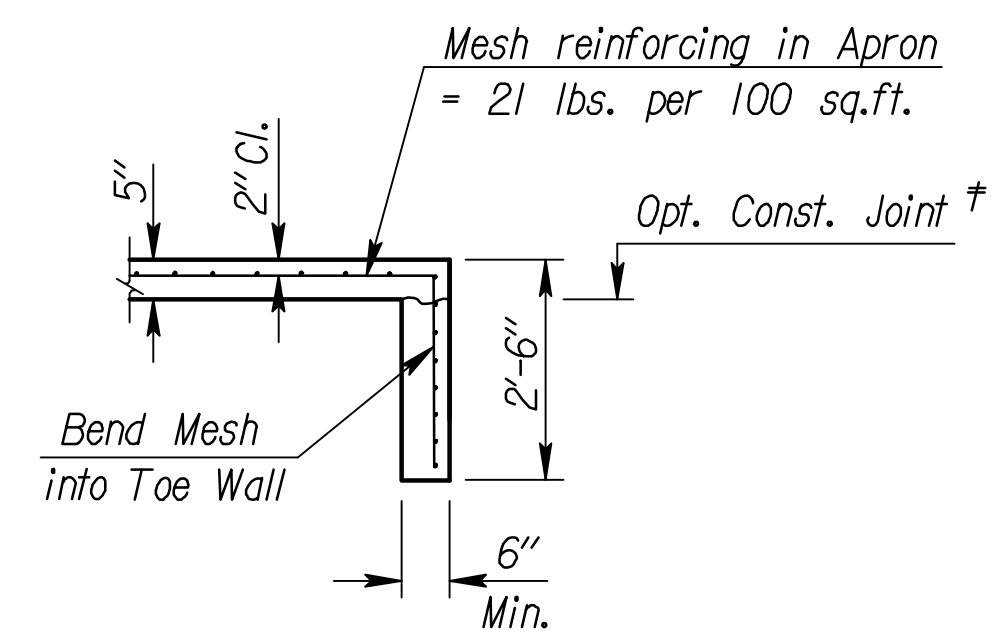
SECTION E-E

NOTE: Space weepholes to clear reinforcing steel. See "RCB Aux. Details" sheet for additional weephole details.

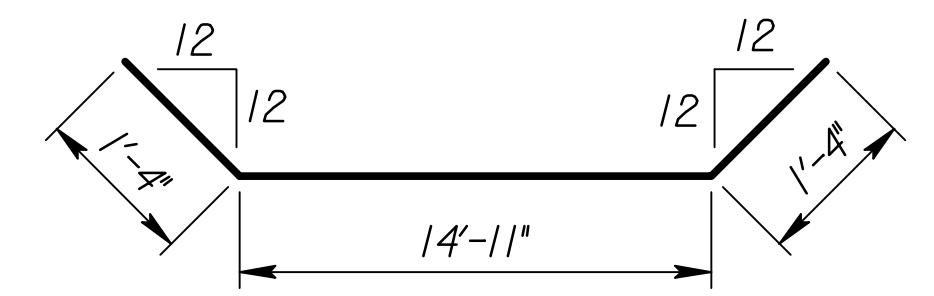


WING DIMENSIONS FOR NORMAL BOX

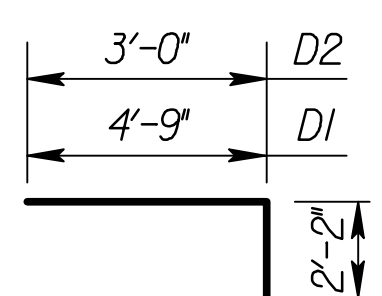
* NOTE: Const. Jt. may be used at Contractor's option when approved by the Engineer. D1 bars or mesh may be spliced thus: Minimum overlap shall be 1'-3". No increase in quantities or cost shall be allowed when Contractor elects this option.



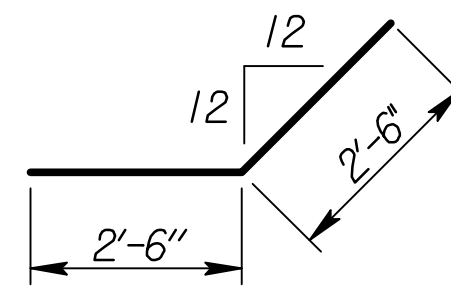
SECTION B-B



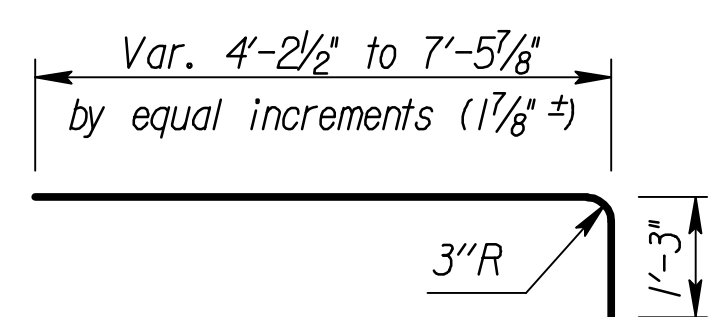
E2



D1, D2



H3



V1

(2 Req'd., each length)

BENDING DIAGRAM

(All dimensions are out to out of bars.)

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

WINGWALL QUANTITIES (For Information Only) (One End Only)		
	Foundation Stabilization (C.Y.)	Concrete (Gr. 4.0) (C.Y.)
Wingwalls	5.70	13.51
Apron	7.98	8.71
Reinforcing Steel (Gr. 60)		970 Lbs.
Welded Wire Fabric		95 Lbs.

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

* See Bending Diagram

0° Skew	#4C1	#4D1	#4E1	#4C2	#4D2	#4E2	#4V1	#4H1	#4H2	#4H3	#4H4	#4H5	#4H6
No.	10	42 *	6	1	13 *	3 *	44 *	8	2	20 *	10	2	2
Length	25'-1"	6'-11"	21'-3"	17'-3"	5'-2"	17'-7"	Avg. 5'-10 1/4"	20'-5"	22'-2"	5'-0"	3'-0"	14'-9"	9'-1"

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

PLOTED: Thursday, February 16, 2012 @ 11:19AM

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