

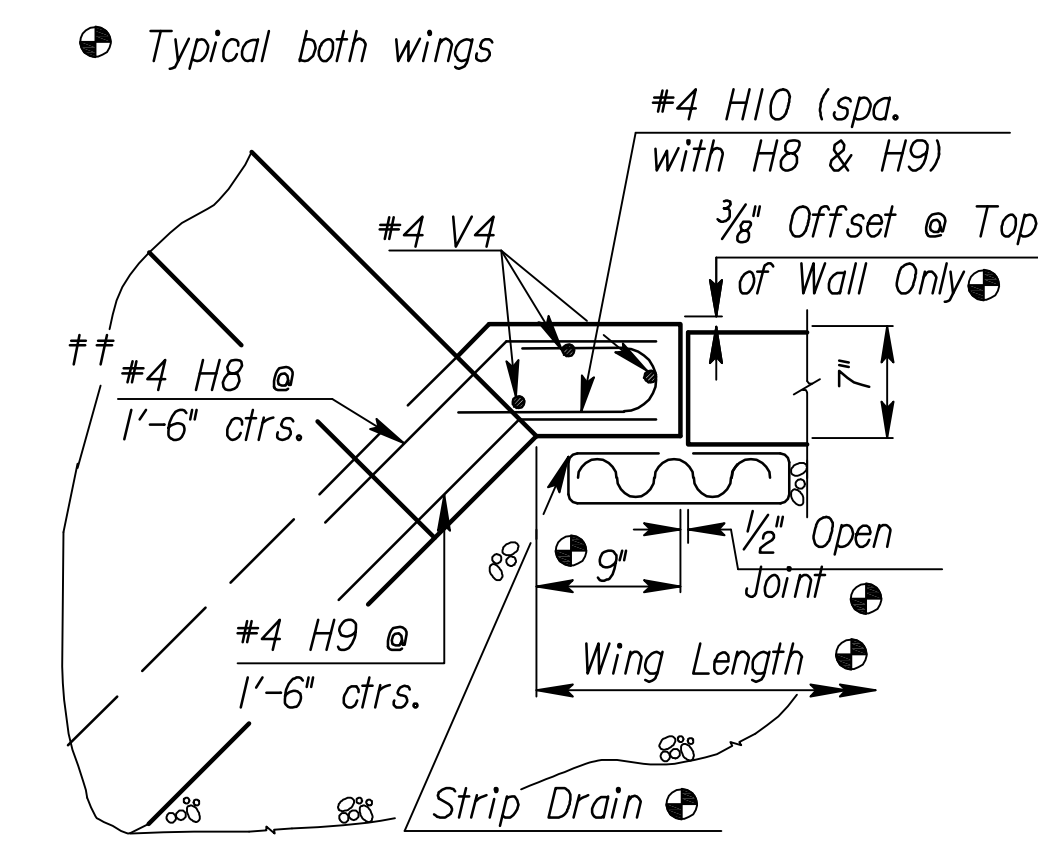
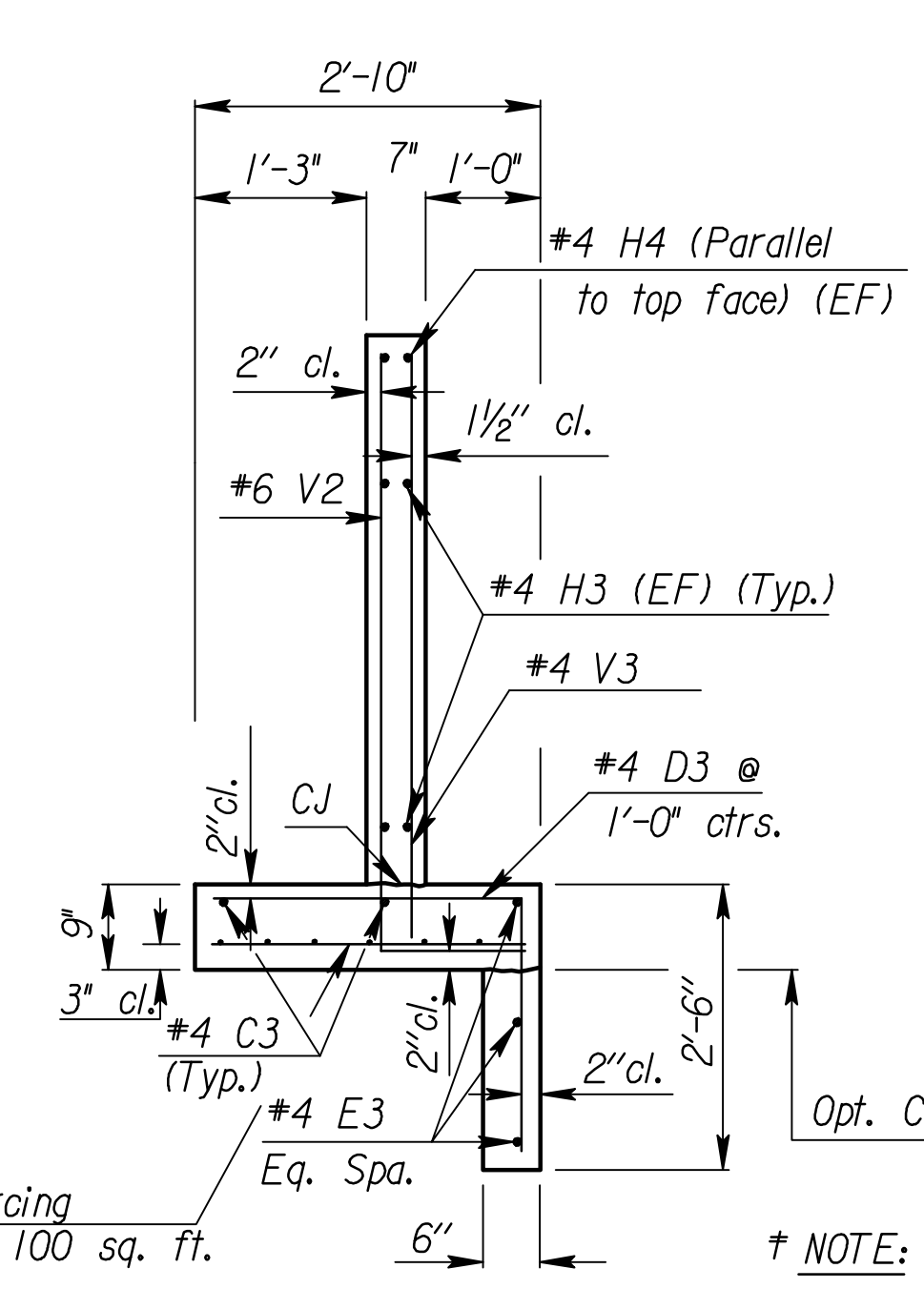
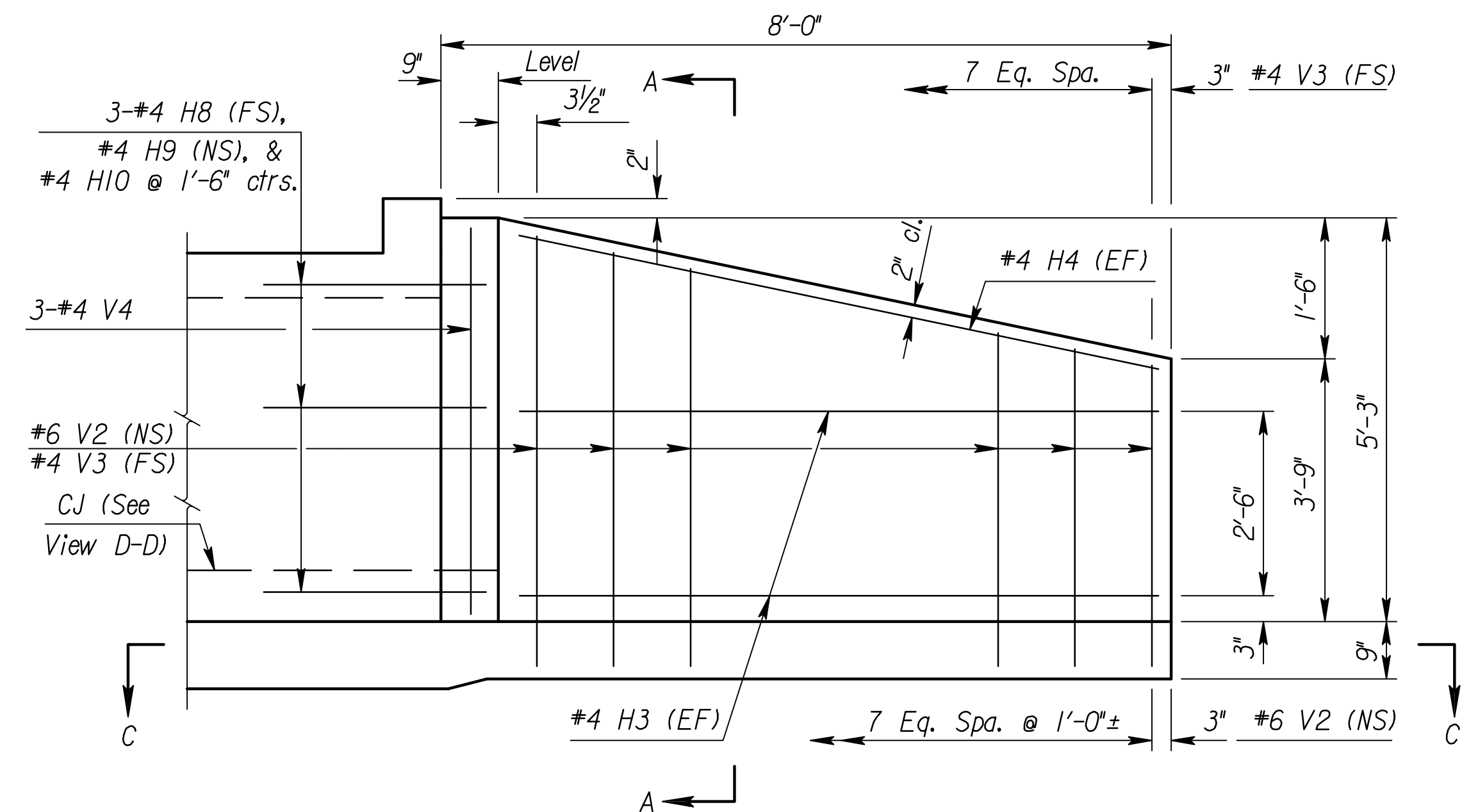
| STATE | PROJECT NO. | YEAR | SHEET NO. | TOTAL SHEETS |
|--------|--------------|------|-----------|--------------|
| KANSAS | 87 N-0615-01 | 2017 | 70 | 183 |



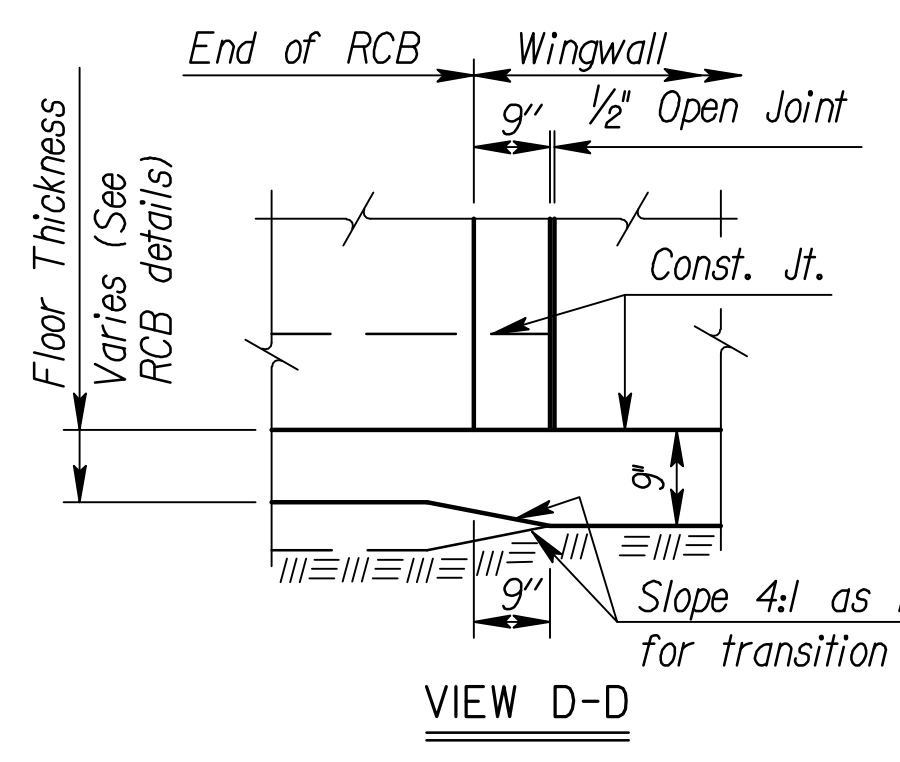
STREET IMPROVEMENTS FOR
127TH STREET EAST
FROM 13TH STREET NORTH TO 21ST STREET NORTH

GENERAL NOTES

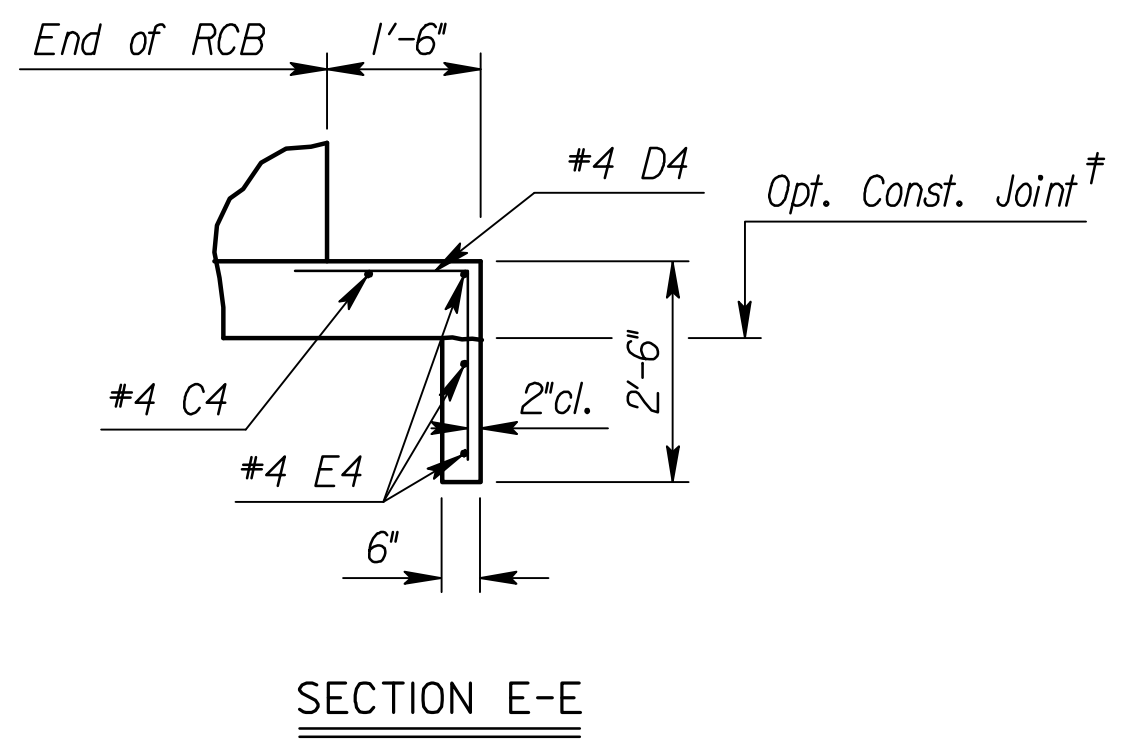
DESIGN SPECIFICATION: AASHTO LRFD Spec., 2007 Ed., 2009 Int.
DESIGN LOADING: HL93
UNIT STRESSES: Grade 4.0 Concrete; $f'_c = 4,000$ p.s.i.
 Reinforcing Steel; $f_y = 60,000$ p.s.i.
CONCRETE: Grade 4.0 Concrete shall be used throughout. Bevel all exposed edges with a $\frac{3}{4}$ " triangular mauling.
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 centerline of bar unless otherwise noted. Wire Reinforcing mesh shall be electrically welded and shall be composed of 6 x 6- W6 x W6 welded wire fabric and shall be classified as pounds of reinforcing and included in the total quantity for Reinforcing Steel (Gr. 60).
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.
BACKFILL MATERIAL: Use Granular Backfill material meeting the requirements of SB-1, SB-2, SCA-1, SCA-2. Backfill all wings to limits shown on the "RCB Auxiliary Sheet".
FILTER FABRIC: Separate in-situ material from granular backfill with approved filter fabric complying with Section 1710. Filter Fabric is subsidiary to the bid item "Pipe, SWS, RCBC (5'x4)".
FOUNDATION STABILIZATION: Use Foundation Stabilization on all wingwalls unless founded on rock or granular material.



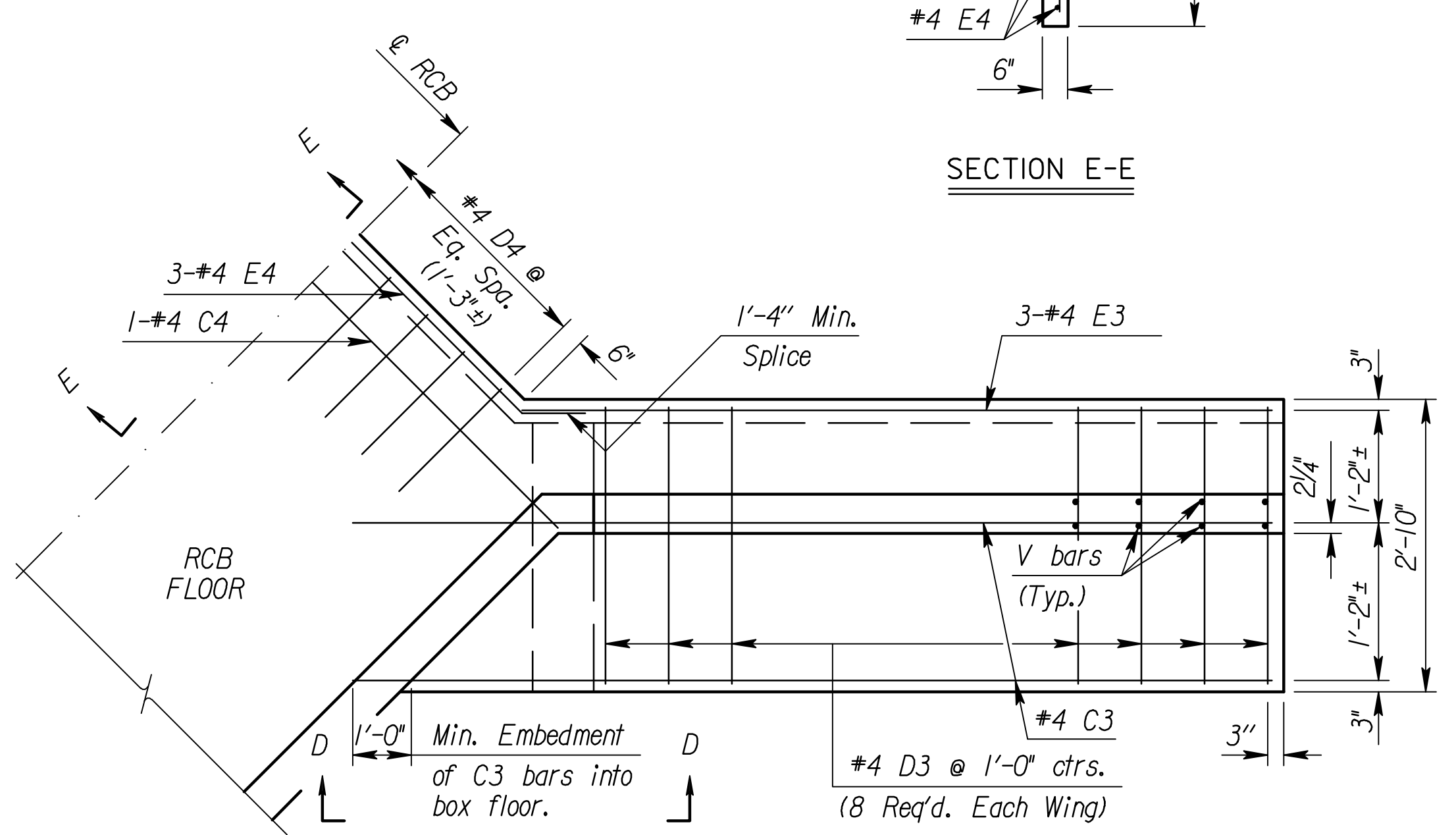
WINGWALL JOINT DETAIL
(Plan View)



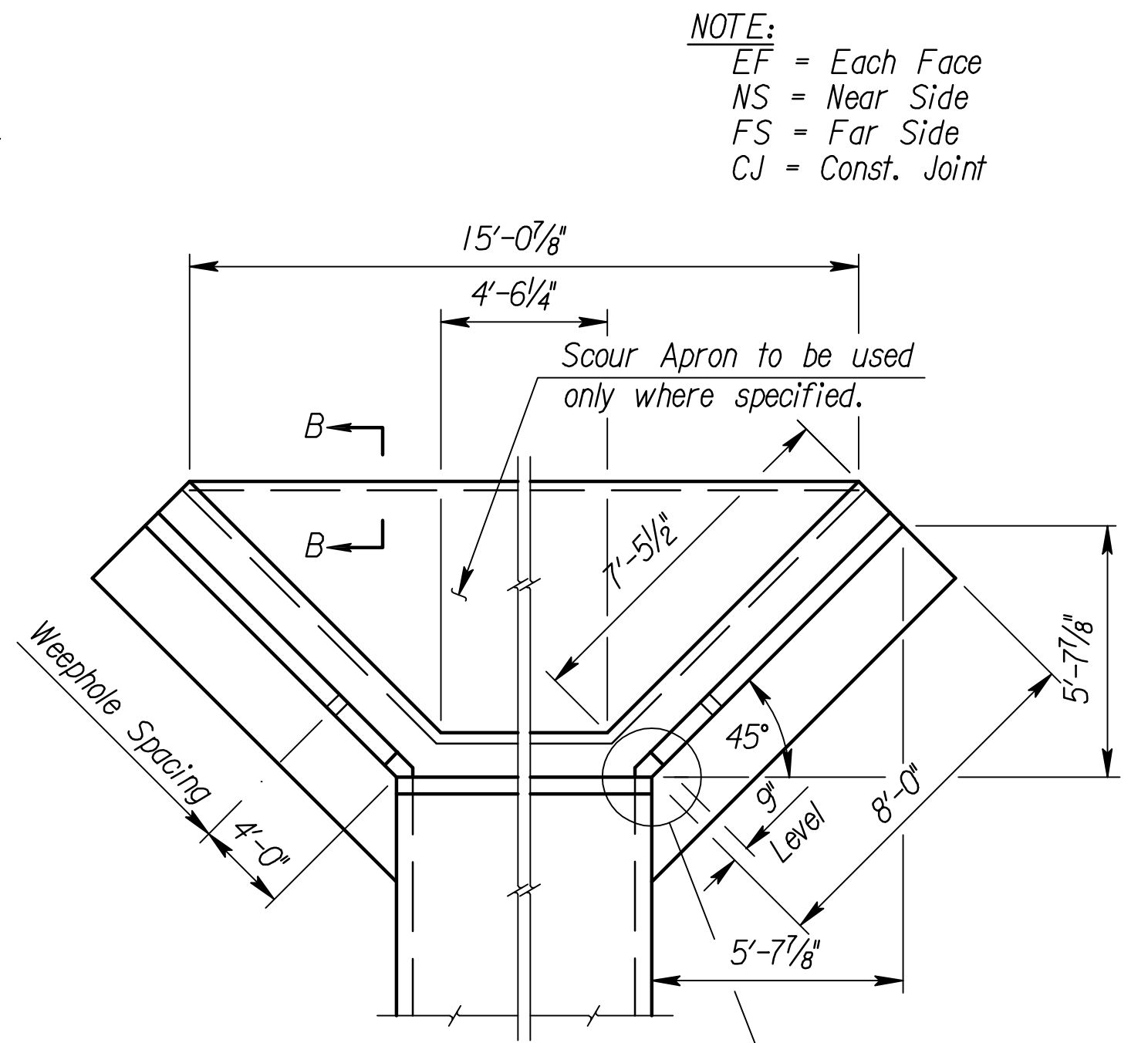
ELEVATION OF WINGWALL
(Backface Shown)



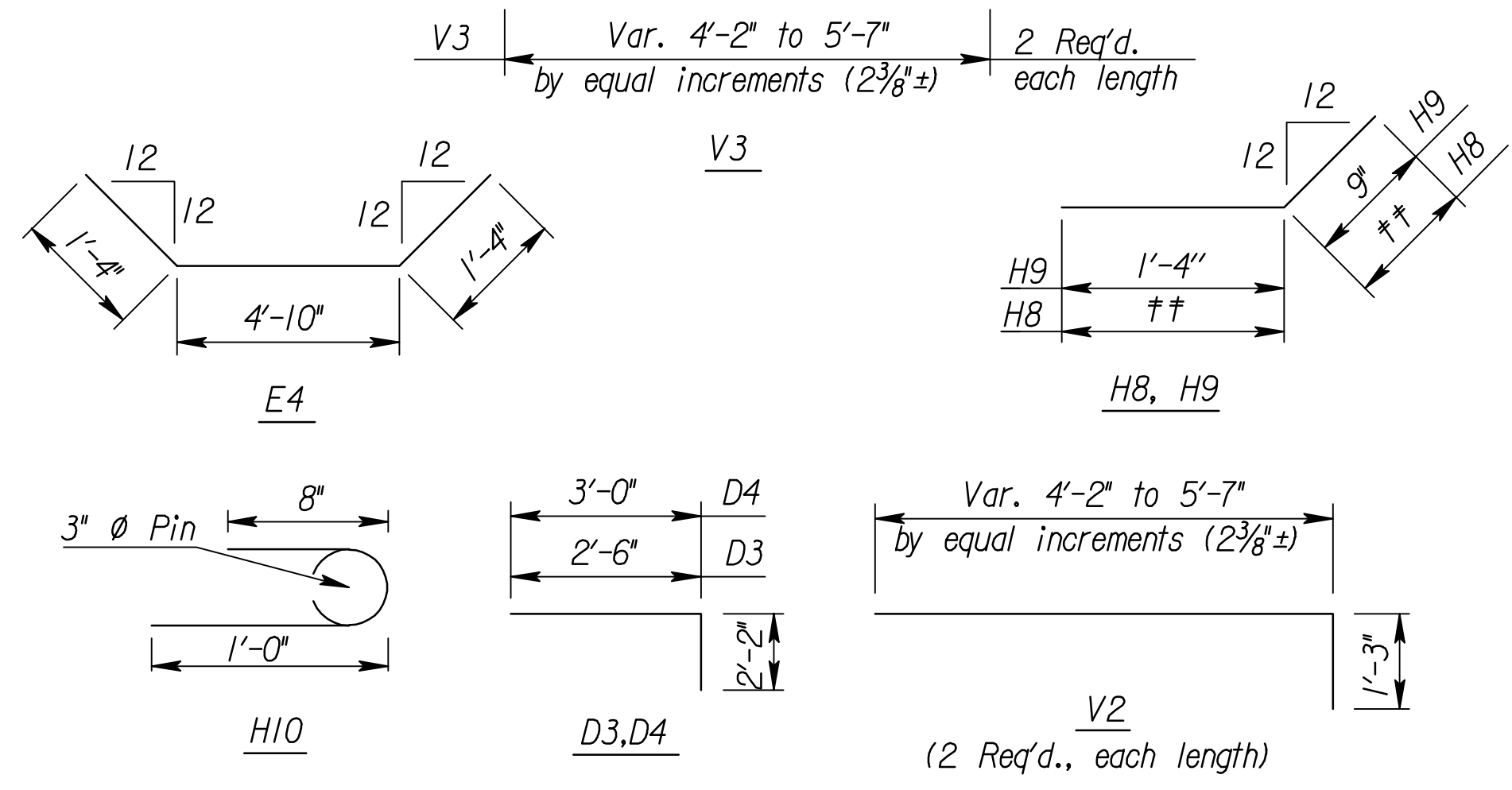
SECTION E-E



SECTION C-C
(Plan of Footing)



WING DIMENSIONS FOR NORMAL BOX
($\frac{3}{2}$:1 Embankment Slope)



BENDING DIAGRAM

(All dimensions are out to out of bars.)
 ** Bend in Field

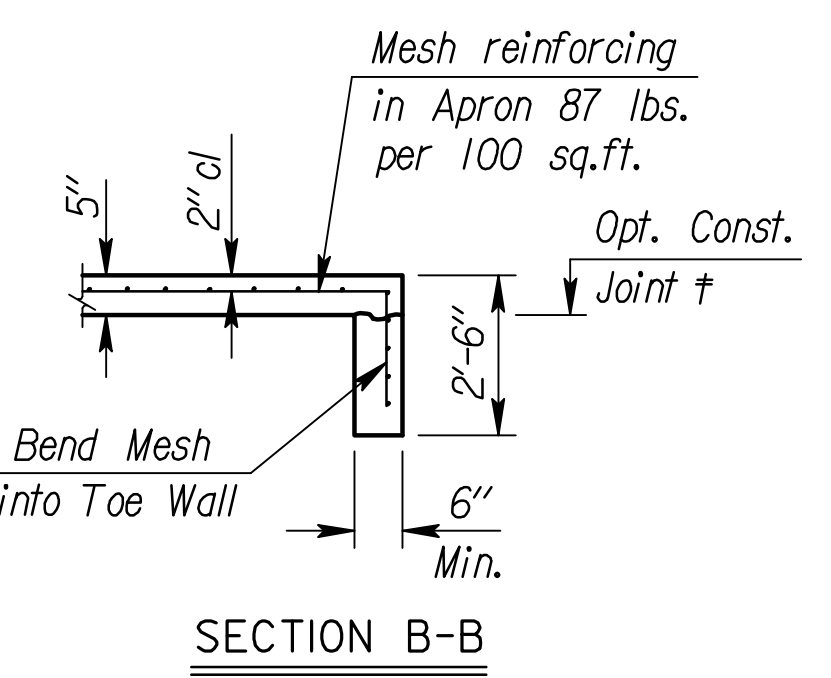
Quantities listed below are provided for information only and are included in the Summary of Quantities shown on the RCB details.

| WINGWALL QUANTITIES (One End Only) | | | |
|------------------------------------|--------------------------|--------------------|--|
| | Foundation Stabilization | Concrete (Gr. 4.0) | |
| Wingwalls | 1.44 (C.Y.) | 3.72 (C.Y.) | |
| Apron | 0.00 (C.Y.) | 0.00 (C.Y.) | |
| Soil Saver | 0.00 (C.Y.) | 0.00 (C.Y.) | |
| Reinforcing Steel (Gr. 60) | | 435 Lbs. | |
| Welded Wire Fabric (Wings) | | 39 Lbs. | |
| Welded Wire Fabric (Apron) | | 0 Lbs. | |
| Granular Backfill (Wingwalls) | | 10.07 C.Y. | |
| Filter Fabric (subsidiary) | | 14.00 S.Y. | |

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

* See Bending Diagram

| 0° Skew | Reinforcing Bar List | | | | | | | | | | | | | | |
|---------|----------------------|--------|-------|-------|-------|-------|-------|------|--------|-------|--------|-------|-------|------|-------|
| | No. | #4C3 | #4D3 | #4E3 | #4C4 | #4D4 | #4E4 | #6V2 | #4H3 | #4H4 | #4H8 | #4H9 | #4H10 | #4V3 | #4V4 |
| | No. | 4 | 16 * | 6 | 1 | 4 * | 3 * | 16 | 8 | 4 | 6 * | 6 * | 6 * | 16 | 6 |
| | Length | 9'-10" | 4'-8" | 7'-3" | 5'-8" | 5'-2" | 7'-6" | * | 6'-10" | 7'-0" | 1'-10" | 2'-1" | 1'-9" | * | 5'-0" |



SECTION B-B

PLOTTED: Wednesday, November 29, 2017 @ 02:55PM
 J:\PROJECTS\2017\1401040290 - COWI_127THE_13TH TO 21ST STS-CIVIL\CAD\DWG\14290006.DWG

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STORM SEWER LINE 1-5' x 4' RCB WING DETAILS

| | | |
|-------------|-----------|------|
| PROJECT NO. | 472-85158 | |
| DATE | 11/29/17 | |
| SCALE | NTS | |
| DESIGNED | JRA | |
| DRAWN | DMU | |
| CHECKED | KJS | |
| NO. | REVISION | DATE |