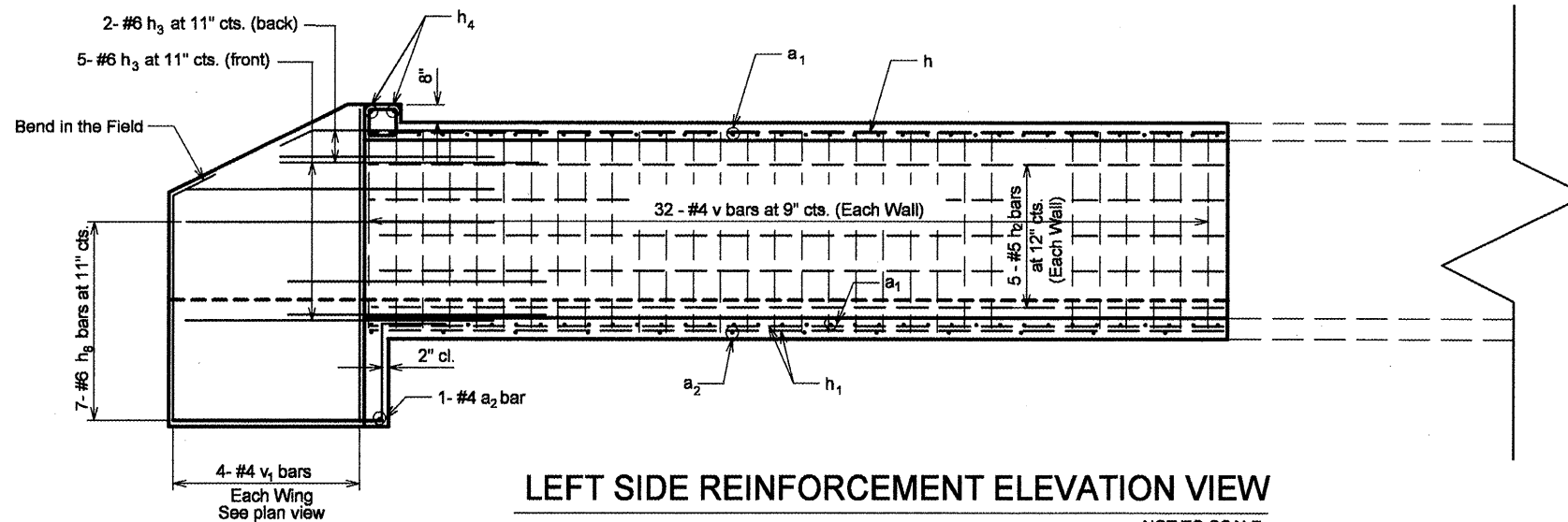


LEFT SIDE REINFORCEMENT PLAN VIEW

NOT TO SCALE

MIN. LAPS

| Bar Size | Box Ext. |
|----------|----------|
| #4 | 1'-4" |
| #5 | 1'-8" |

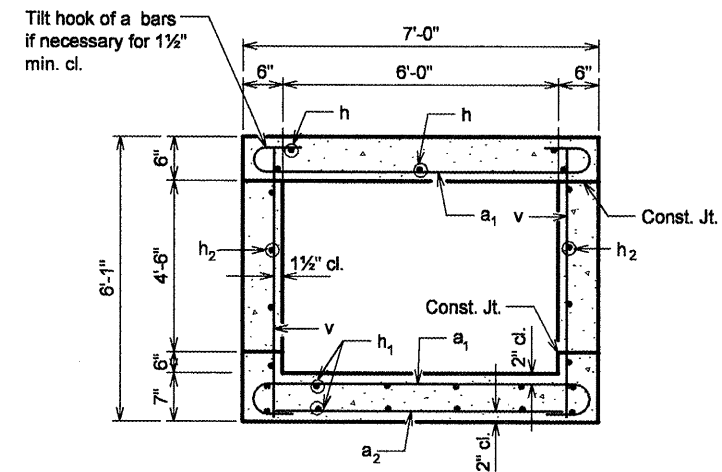


LEFT SIDE REINFORCEMENT ELEVATION VIEW

NOT TO SCALE

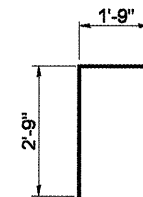
NOTES

A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
 Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.

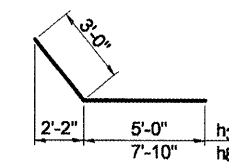


SECTION THRU BARREL

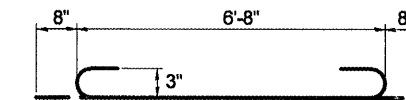
NOT TO SCALE



BAR d



BARS hg & hb



BAR a1

BILL OF MATERIAL

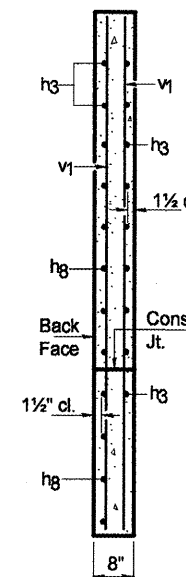
| Bar | No. | Size | Length | Shape |
|------------------------|-----|------|---------|-------|
| a ₁ | 72 | #6 | 8'-0" | |
| a ₂ | 14 | #4 | 6'-8" | |
| d | 7 | #4 | 4'-6" | |
| h | 9 | #5 | 23'-8" | |
| h ₁ | 12 | #4 | 23'-8" | |
| h ₂ | 10 | #5 | 23'-8" | |
| h ₃ | 14 | #6 | 8'-0" | |
| h ₄ | 2 | #6 | 6'-9" | |
| h ₈ | 14 | #6 | 10'-10" | |
| v | 66 | #4 | 5'-9" | |
| v ₁ | 8 | #4 | 8'-9" | |
| u | 8 | #4 | 14'-6" | |
| * 3/4" Expansion Bolts | | | Each | 14.0 |
| Concrete Box Culverts | | | Cu. Yd. | 14.75 |
| Reinforcement Bars | | | Pound | 2,397 |
| * Concrete Collar | | | Cu. Yd. | 1.5 |

* For Information Only

DESIGN STRESSES

f_y = 60,000 psi
 f_c = 3,500 psi

LOADING HS 20-44 & ALT.



SECTION A-A

FILE NAME = sht-details.dgn

USER NAME = crespole

DESIGNED -
 DRAWN -
 PLOT SCALE = 100.0000 / IN.
 PLOT DATE = 4/8/2011

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 REVISI

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BOX CULVERT EXTENSION DETAIL
 LT. STA. 418 + 16.23

F.A.P. RTE. 685 SECTION ** COUNTY * TOTAL SHEETS 329 SHEET NO. 140

SCALE: SHEET NO. OF SHEETS STA. TO STA. ILLINOIS FED. AID PROJECT CONTRACT NO. 68599