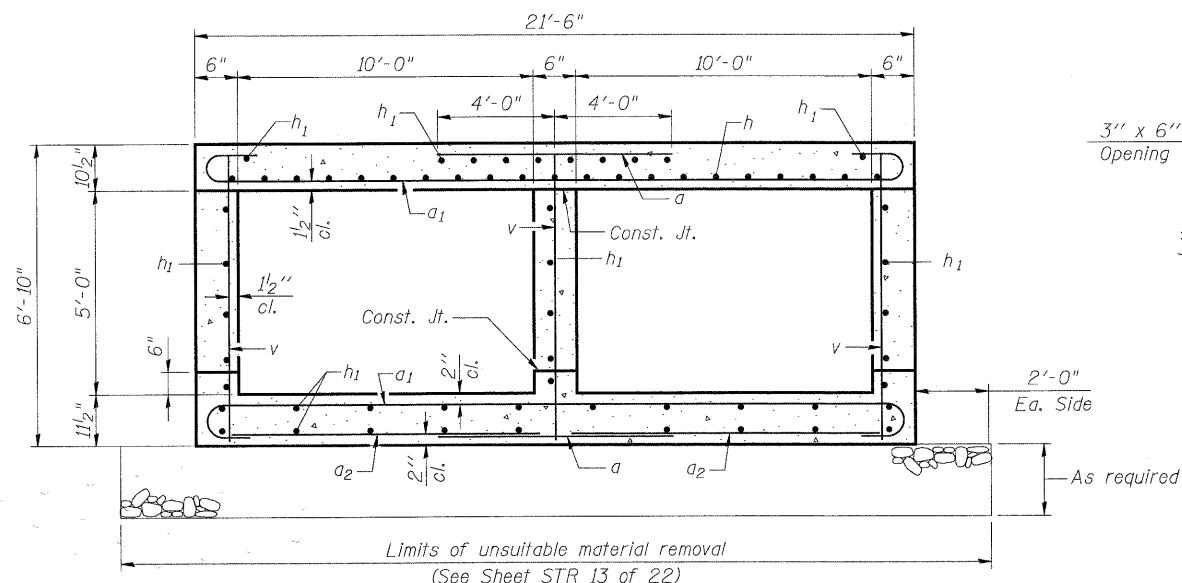


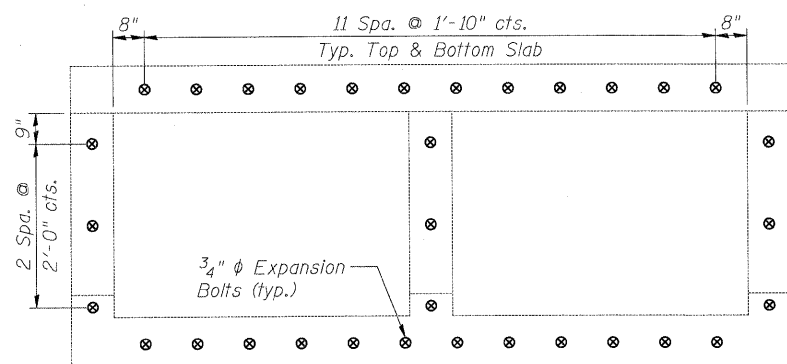
BILL OF MATERIAL

| Bar | No. | Size | Length | Shape |
|--------------------------|-----|---------|----------|-------|
| a | 338 | #5 | 8'- 0" | — |
| a1 | 226 | #5 | 22'- 4" | U |
| a2 | 60 | #4 | 10'- 6" | — |
| a3 | 1 | #4 | 21'- 2" | — |
| d | 21 | #4 | 4'- 6" | L |
| h | 75 | #6 | 22'- 0" | — |
| h1 | 135 | #5 | 22'- 10" | — |
| h3 | 18 | #7 | 9'- 8" | — |
| h4 | 2 | #6 | 21'- 2" | — |
| h5 | 8 | #6 | 22'- 11" | — |
| h8 | 16 | #7 | 11'- 10" | — |
| v | 227 | #4 | 6'- 6" | — |
| v1 | 8 | #4 | 9'- 4" | — |
| Stone Riprap, Class A4 | | Sq. Yd. | 43.0 | |
| Filter Fabric | | Sq. Yd. | 43.0 | |
| Structure Excavation | | Cu. Yd. | 27.0 | |
| Reinforcement Bars | | Pound | 16,400 | |
| Expansion Bolts 3/4 Inch | | Each | 33 | |
| Concrete Box Culverts | | Cu. Yd. | 105.4 | |
| Name Plates | | Each | 1 | |



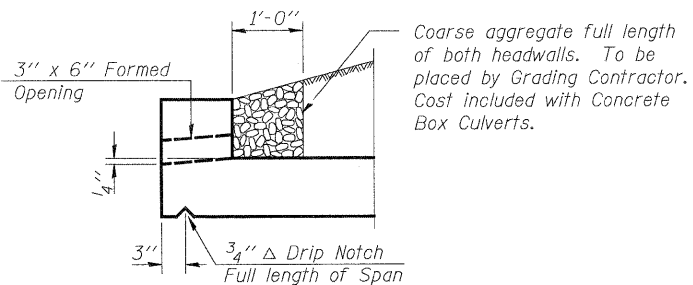
SECTION THRU BARREL

(Maximum Soil Pressure Under Barrel = 2,000 psf)

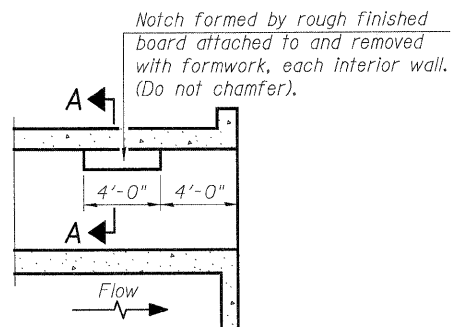


SECTION THRU EXISTING BARREL

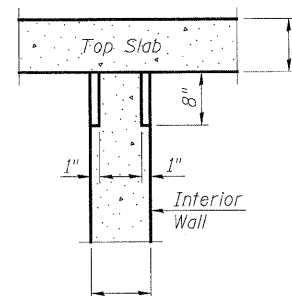
Showing placement of Expansion Bolts



DRAIN DETAIL



LONGITUDINAL SECTION

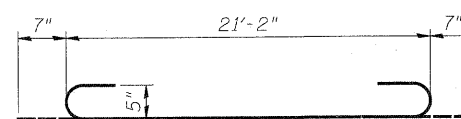


SECTION A-A

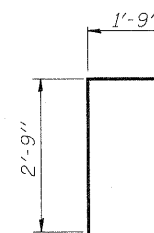
PHOEBE NESTING

SITE DETAILS

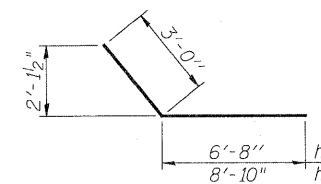
(Downstream End Only)



BAR a1



BAR d



BARS h3 & h8

CULVERT DETAILS II

| | | | | | | | | | | |
|-----------------------|------------------------------------|----------------------|-----------|--|---|-------------------|---------------------------|-------------------|---|------------------|
| | USER NAME = Rduy.Lisle | DESIGNED - A. Durbak | REVISED - | | RAKOW ROAD FROM ACKMAN ROAD TO ILLINOIS ROUTE 31 BOX CULVERT OVER CRYSTAL CREEK STA 112+94.31 STRUCTURE NO. 056-3157 | F.A. RTE. 0336 | SECTION 05-00308-00-WR | COUNTY MCHENRY | TOTAL SHEETS 606 | SHEET NO. 417 |
| | PLOT CONFIG = PDF(Grey, Large).plt | DRAWN - A. Durbak | REVISED - | | | SCALE: NONE | SHEET NO. STR 15 OF 22 | STA. TO STA. | FED. ROAD DIST. NO. [ILLINOIS] FED. AID PROJECT | CONTRACT NO. |
| PLOT SCALE = 1/16" | CHECKED - A. Yargilooglu | REVISED - | | | | | | | | |
| PLOT DATE = 7/28/2010 | DATE - 8/2/2010 | REVISED - | | | | | | | | |

G:\MCDOT\209502_001\Drawings\STRUCT\FinalPlans\S15 Culvert Details.dgn