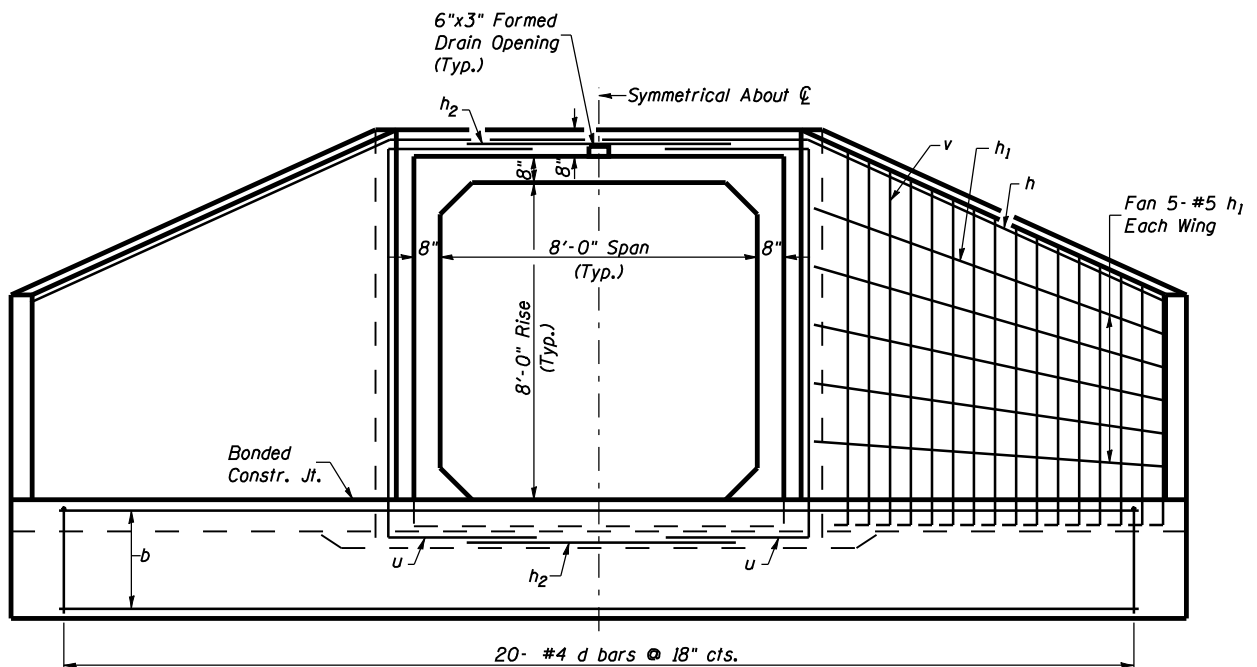
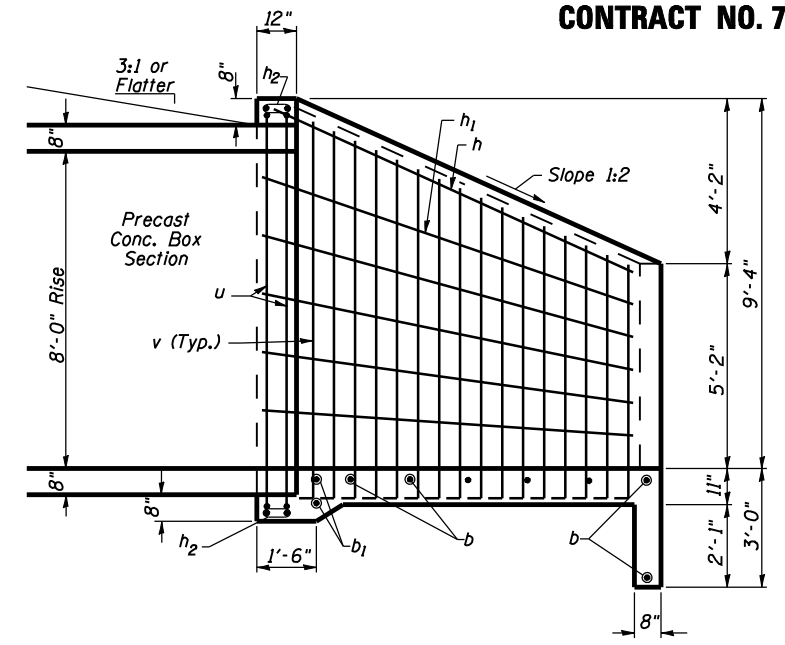
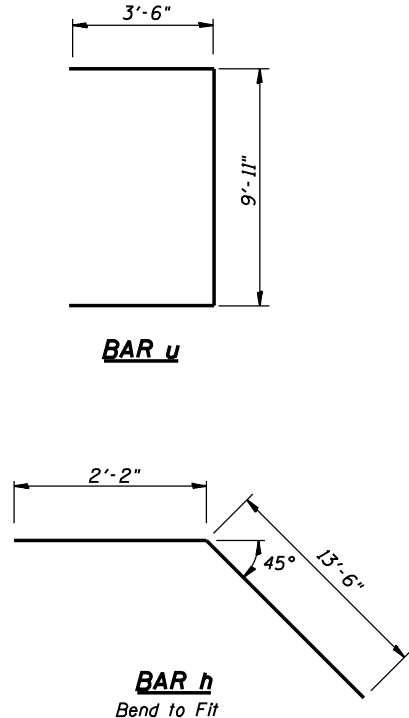


D-96-551-02
CONTRACT NO. 72680

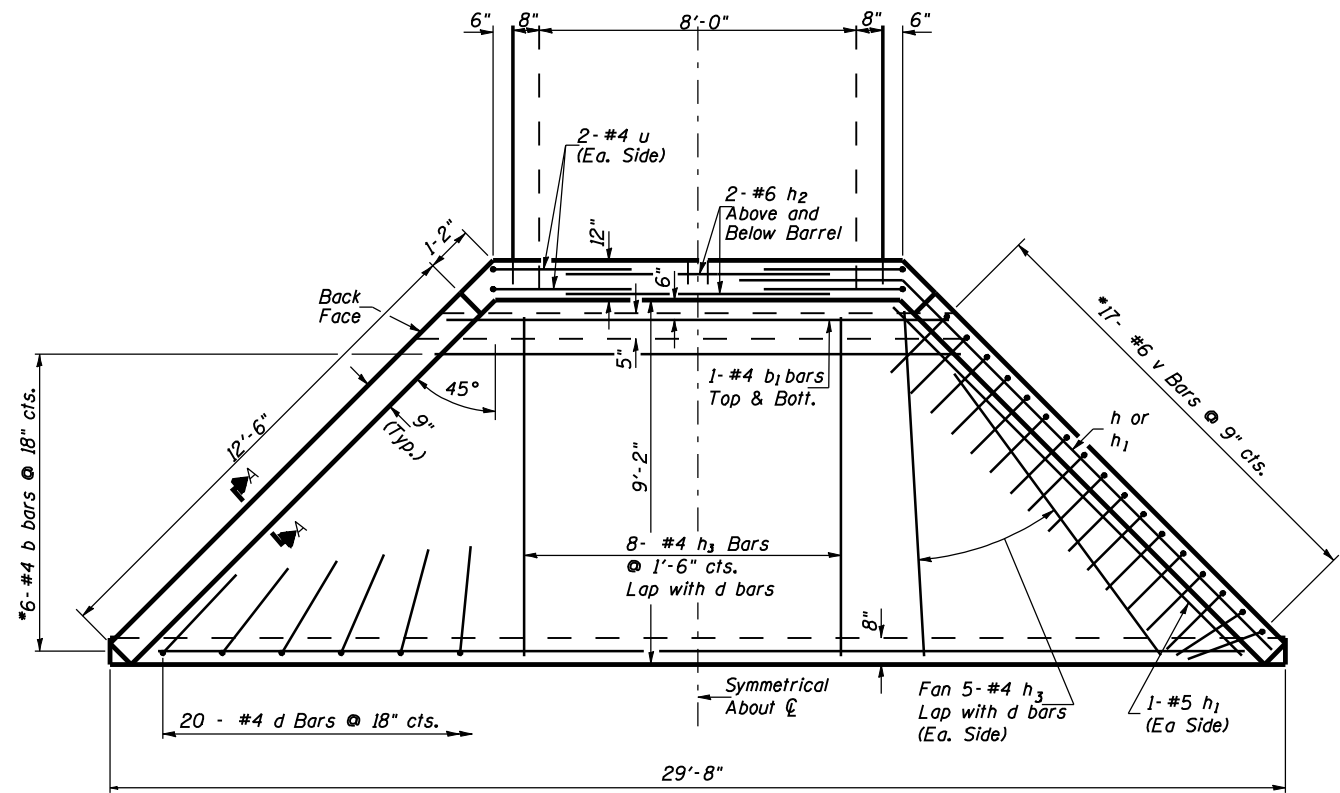


END ELEVATION

MIN BAR LAP
 #4 = 1'-4"

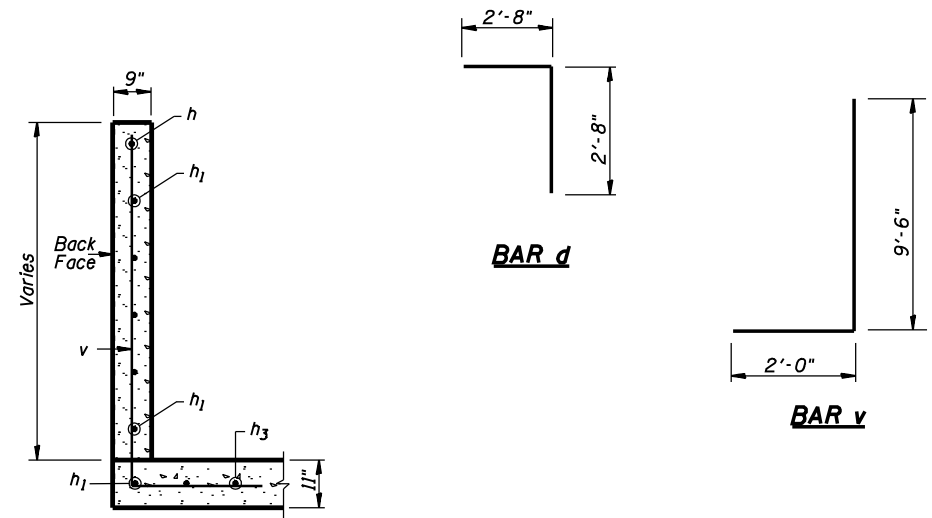


HALF SIDE ELEVATION

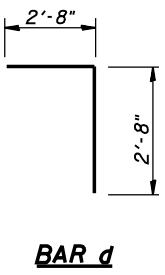


PLAN

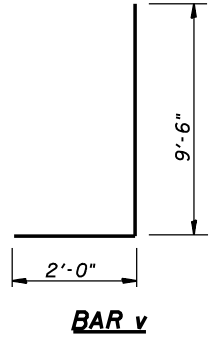
*Bend or Cut to Fit



SECTION A-A



BAR d



BAR v

BILL OF MATERIAL ONE HEADWALL

| BAR | NO. | SIZE | LENGTH | SHAPE |
|--------------------------|-----|---------|----------|-------|
| b | 7 | #4 | 27'-3" | — |
| b ₁ | 2 | #4 | 12'-8" | — |
| d | 20 | #4 | 5'-4" | └ |
| h | 2 | #5 | 15'-8" | └ |
| h ₁ | 12 | #5 | 12'-6" | — |
| h ₂ | 4 | #6 | 7'-4" | — |
| h ₃ | 18 | #4 | 8'-8" | — |
| u | 4 | #5 | 16'-11" | └ |
| v | 34 | #6 | 11'-6" | └ |
| Item | | Unit | Quantity | |
| Concrete Box Culverts | | Cu. Yd. | 14.1 | |
| Reinforcement Bars | | Lbs. | 1190 | |
| Box Culvert End Sections | | Each | 2 | |

NOTES

Exposed edges shall be beveled 3/4".
 Reinforcement Bars shall conform to the requirements of AASHTO M-31 or M322, Grade 60.
 For backfilling and embankment, See Standard Specifications.
 Bars indicated thus 12x4-#5 etc. indicates 12 lines of bars with 4 lengths per line.
 Precast substitution not allowed.

DESIGN STRESSES

f_y = 60,000 psi
 f'c = 3,500 psi

**CAST-IN-PLACE
 END SECTION DETAILS FOR
 8'X8' BOX CULVERT
 COUNTY HIGHWAY 28
 STATION 55+88**

HUTCHISON ENGINEERING, INC.
 JACKSONVILLE, ILLINOIS