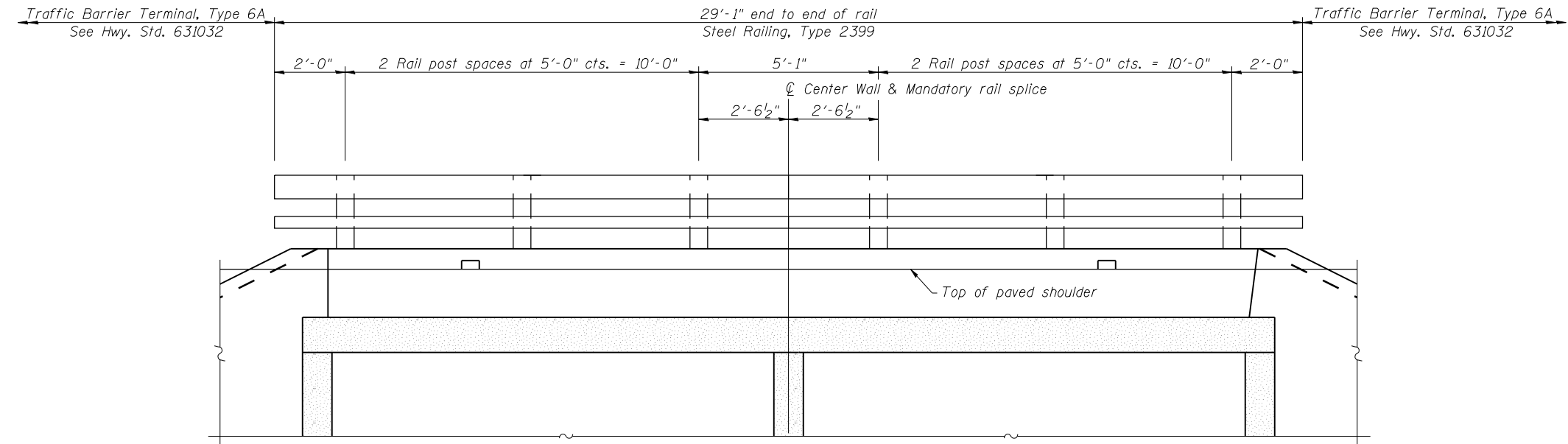


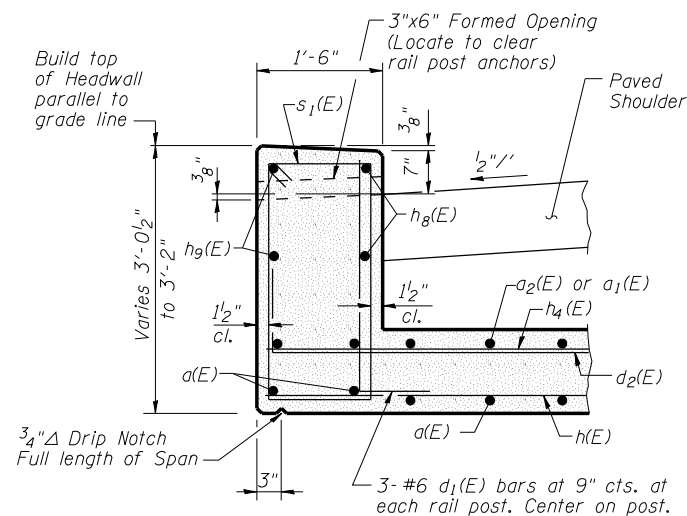


### INSIDE ELEVATION OF RAILING

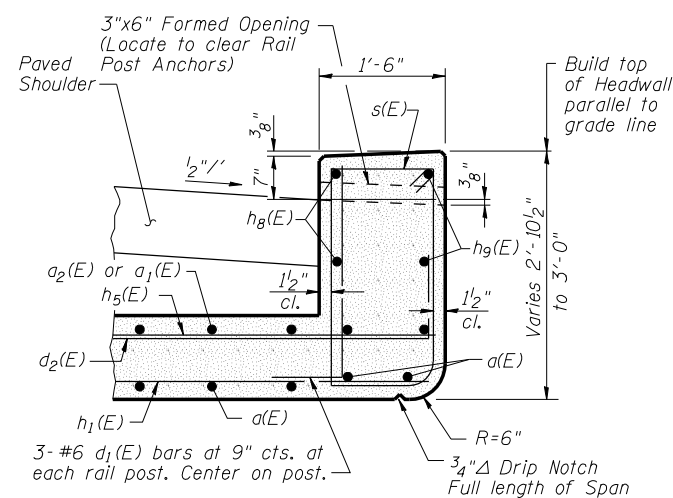
Note:  
See sheet 7 of 11 for railing details.

### BILL OF MATERIAL

| Bar                              | No. | Size | Length  | Shape         |
|----------------------------------|-----|------|---------|---------------|
| d(E)                             | 110 | #8   | 29'-10" |               |
| a <sub>1</sub> (E)               | 110 | #8   | 14'-8"  |               |
| a <sub>2</sub> (E)               | 116 | #5   | 9'-3"   |               |
| d(E)                             | 50  | #4   | 4'-5"   |               |
| d <sub>1</sub> (E)               | 36  | #6   | 3'-7"   |               |
| d <sub>2</sub> (E)               | 48  | #6   | 7'-6"   |               |
| h(E)                             | 35  | #6   | 21'-9"  |               |
| h <sub>1</sub> (E)               | 35  | #6   | 23'-9"  |               |
| h <sub>2</sub> (E)               | 104 | #5   | 21'-9"  |               |
| h <sub>3</sub> (E)               | 104 | #5   | 23'-9"  |               |
| h <sub>4</sub> (E)               | 28  | #4   | 21'-9"  |               |
| h <sub>5</sub> (E)               | 28  | #4   | 23'-9"  |               |
| h <sub>6</sub> (E)               | 50  | #8   | 8'-0"   |               |
| h <sub>7</sub> (E)               | 40  | #8   | 18'-9"  |               |
| h <sub>8</sub> (E)               | 4   | #6   | 26'-0"  |               |
| h <sub>9</sub> (E)               | 4   | #6   | 28'-0"  |               |
| h <sub>10</sub> (E)              | 14  | #6   | 27'-3"  |               |
| h <sub>11</sub> (E)              | 50  | #8   | 8'-0"   |               |
| h <sub>12</sub> (E)              | 40  | #8   | 18'-9"  |               |
| s(E)                             | 27  | #4   | 8'-2"   |               |
| s <sub>1</sub> (E)               | 27  | #4   | 8'-8"   |               |
| v(E)                             | 136 | #6   | 11'-8"  |               |
| v <sub>1</sub> (E)               | 16  | #4   | 15'-7"  |               |
| Concrete Box Culverts            |     |      |         | Cu. Yd. 190.8 |
| Reinforcement Bars, Epoxy Coated |     |      |         | Pound 33,140  |

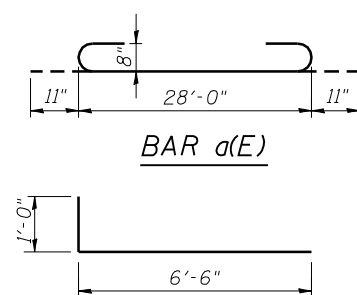


AT DOWNSTREAM END

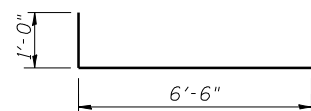


AT UPSTREAM END

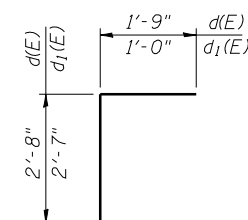
### HEADWALL DETAILS



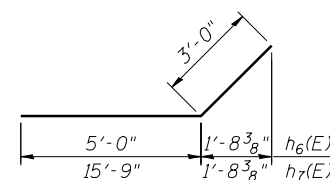
BAR a(E)



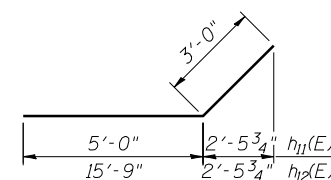
BAR d<sub>2</sub>(E)



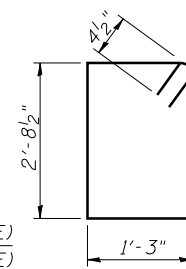
BARS d(E) & d<sub>1</sub>(E)



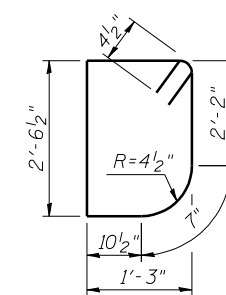
BARS h<sub>6</sub>(E) & h<sub>7</sub>(E)



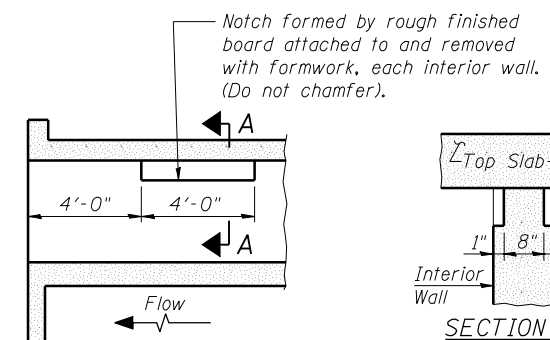
BARS h<sub>11</sub>(E) & h<sub>12</sub>(E)



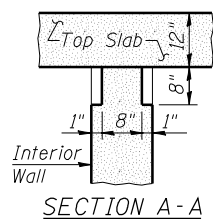
BAR s<sub>1</sub>(E)



BAR s(E)



LONGITUDINAL SECTION



SECTION A-A

PHOEBE NESTING  
SITE DETAILS  
(Downstream End Only)

(Sheet 2 of 2)



USER NAME = RJT  
ESCA PROJECT NO. 988.08  
PLOT SCALE = 0.25" = 1' / IN.  
PLOT DATE = 11/16/2011 9:52:22 AM

DESIGNED - RDP 09/11  
CHECKED - JAF 09/11  
DRAWN - DWH 11/11  
CHECKED - RDP 11/11

REVISED -  
REVISED -  
REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BOX CULVERT DETAILS  
STRUCTURE NO. 039-2029

SHEET NO. 5 OF 11 SHEETS

| F.A.P. RTE.                   | SECTION | COUNTY  | TOTAL SHEETS | SHEET NO.          |
|-------------------------------|---------|---------|--------------|--------------------|
| 312                           | 123B-4  | JACKSON | 58           | 28                 |
| ILLINOIS FED. AID PROJECT AID |         |         |              | CONTRACT NO. 78197 |