

BRIDGE BILL OF MATERIAL

CONTRACT NO. 89510

| ITEM | UNIT | Super | Sub | Total Bridge |
|--|--------|--------|-------|--------------|
| POROUS GRANULAR EMBANKMENT, SPECIAL | CU YD | | 200 | 200 |
| FABRIC FORMED CONCRETE REVETMENT MAT | SQ YD | | 860 | 860 |
| BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) | SQ YD | 50.4 | | 50.4 |
| REMOVAL OF EXISTING STRUCTURES | EACH | 1 | | 1 |
| SLOPE WALL REMOVAL | SQ YD | | 280 | 280 |
| STRUCTURE EXCAVATION | CU YD | | 388 | 388 |
| FLOOR DRAINS | EACH | 12 | | 12 |
| CONCRETE STRUCTURES | CU YD | | 65.0 | 65.0 |
| CONCRETE SUPERSTRUCTURE | CU YD | 282.6 | | 282.6 |
| BRIDGE DECK GROOVING | SQ YD | 601 | | 601 |
| CONCRETE ENCASEMENT | CU YD | | 5.6 | 5.6 |
| PROTECTIVE COAT | SQ YD | 771 | | 771 |
| FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 54 IN. | FOOT | 681 | | 681 |
| REINFORCEMENT BARS, EPOXY COATED | POUND | 58,730 | 5,300 | 64,030 |
| BAR SPLICERS | EACH | 76 | | 76 |
| FURNISHING STEEL PILES HPI2X53 | FOOT | | 735 | 735 |
| DRIVING PILES | FOOT | | 735 | 735 |
| TEST PILE STEEL HPI2X53 | EACH | | 2 | 2 |
| NAME PLATES | EACH | 1 | | 1 |
| GEOCOMPOSITE WALL DRAIN | SQ YD | | 98 | 98 |
| PIPE UNDERDRAINS FOR STRUCTURES 4" | FOOT | | 164 | 164 |
| MONODIRECTIONAL PRISMATIC BARRIER REFLECTOR | EACH | 12 | | 12 |
| ENGINEER'S FIELD OFFICE, TYPE B | CAL MO | 7 | | 7 |
| MOBILIZATION | L. SUM | 1 | | 1 |
| TRAFFIC CONTROL AND PROTECTION | L. SUM | 1 | | 1 |
| CONSTRUCTION LAYOUT | L. SUM | 1 | | 1 |
| TRAINEES | HOURL | 500 | | 500 |
| CONCRETE HEADWALL FOR PIPE DRAINS | EACH | | 4 | 4 |

GENERAL NOTES

- 1.) Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions
- 2.) Reinforcement bars designated (E) shall be epoxy coated.
- 3.) If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
- 4.) The existing structural steel coating may contain lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- 5.) Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- 6.) The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.
- 7.) All embedded and separate bearing plates, slide retainers, anchor bolts, nuts, washers and pinfiles shall be galvanized according to AASHTO M111 or M232 (as applicable).

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications - 4th ed. with 2008 Interim Revisions

LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

SEISMIC DATA

Seismic Performance Zone (SPZ): 1
Design Spectral Acceleration at 1.0 sec. (SD1): 0.07
Design Spectral Acceleration at 0.2 sec. (SDS): 0.1
Soil Site Class: C

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 6,000 psi (I-Beams)
f'ci = 5,000 psi (I-Beams)
f's = 270,000 psi (1/2" φ strands)
fsi = 201,960 (1/2" φ strands)

FRENCH CREEK
BUILT 20__ BY
PEORIA COUNTY
SEC. 08-00092-00-BR
STATION 7+27
STR. NO. 072-3147 LOADING HL-93

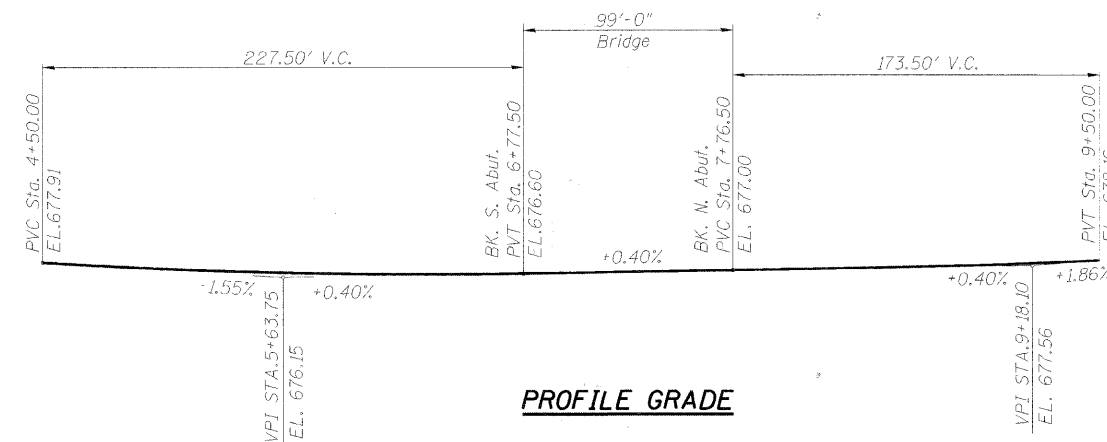
NAME PLATE

See Std. 515001-03

WATERWAY INFORMATION

Drainage Area = 14.9 sq. mi. Low Grade Elev. = 676.40 @ Sta. 6+47.5

| Flood | Freq. Yr. | Q | Opening Sq. Ft. | | Nat. H.W.E. | Head - Ft. | | Headwater El. | |
|------------------------|-----------|------|-----------------|-------|-------------|------------|-------|---------------|--------|
| | | | Exist. | Prop. | | Exist. | Prop. | Exist. | Prop. |
| Design | 20 | 2657 | 423 | 571 | 667.24 | 0.54 | 0.05 | 667.78 | 667.29 |
| Base | 100 | 4059 | 491 | 651 | 668.29 | 0.99 | 0.10 | 669.28 | 668.39 |
| Max. Calc. Overtopping | 500 | 5499 | 543 | 712 | 669.04 | 1.68 | 0.19 | 670.72 | 669.23 |



PROFILE GRADE

**BRIDGE GENERAL NOTES & TOTAL BILL OF MATERIAL
ELMORE ROAD BRIDGE
OVER FRENCH CREEK**

| | |
|----------|--------|
| DESIGNED | P.J.L. |
| CHECKED | LLV |
| DRAWN | MGM |
| CHECKED | P.J.L. |

AECOM

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IL Design Firm Reg. No. 184-001518
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| HWY | SECTION | COUNTY | TOTAL SHEETS | SHEET NO. |
|------------------------|----------------|--|--------------|-----------|
| R-15 | 08-00092-00-BR | PEORIA | 32 | 8 |
| STRUCTURE NO. 072-3147 | | STATION 7+27 | | |
| FED. ROAD DIST. NO. _ | | ILLINOIS FED. AID PROJECT BROS-0143(049) | | |