

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	116(BR-2)	LOGAN	79	44
STA. 309+00		TO STA. 318+90		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures No. 2	Each	1		1
Concrete Removal	Cu. Yd.		9.8	9.8
Concrete Structures	Cu. Yd.		9.8	9.8
* Bridge Deck Grooving	Sq. Yd.	981		981
Protective Coat	Sq. Yd.	1124		1124
P.P.C. Deck Beams (21" Depth)	Sq. Ft.	3968		3968
P.P.C. Deck Beams (27" Depth)	Sq. Ft.	2512		2512
Reinforcement Bars, Epoxy Coated	Pound	11430	1820	13250
Bar Splicers	Each	155	12	167
Steel Railing, Type SM	Foot	319		319
Name Plates	Each	1		1
Preformed Joint Strip Seal	Foot	131		131
Epoxy Crack Injection	Foot		52	52
Structural Repair of Concrete (Depth Equal to or Greater Than 5")	Sq. Ft.		119	119
Concrete Wearing Surface, 5"	Sq. Yd.	721.2		721.2
Stone Dumped Riprap, Class A4	Ton		1017	1017
Asbestos Bearing Pad Removal	Each	60		60

* Includes area of Bridge Approach Pavement (Special)

LOADING HS20-44

Allow 50 psf for future wearing surface.

DESIGN SPECIFICATIONS

2002 AASHTO Standard Specifications.

DESIGN STRESSES

Field Units

$f'_c = 3500$ psi
 $f_y = 60000$ psi (Reinforcement)
 $f'_c = 5000$ psi (Concrete Wearing Surface)

PRECAST PRESTRESSED UNITS

$f'_c = 5000$ psi
 $f'_{ci} = 4000$ psi
 $f'_s = 270000$ psi ($\frac{1}{2}$ " low lax strands)
 $f'_{si} = 201960$ psi ($\frac{1}{2}$ " low lax strands)

GENERAL NOTES

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

The minimum thickness of the Concrete overlay shall be 5" and varies as required to adjust for the new profile grade and beam camber.

Reinforcement bars shall conform to the requirements of ASTM A 706 Grade 60 (IL Modified). See Special Provisions.

Protective Coat shall be applied to the top and edges of the concrete wearing surface, exterior face of each fascia beam, and bottom of the first three beams on each side of the superstructure.

The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the conditions of the beams when developing construction procedures for removal and replacement of the superstructure.

If the Contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with underlying beams. Prior to placement of the timber mats, the following shall be done: placement and tightening of the transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum, and grouting and curing the shear keys.

Reinforcement bars designated (E) shall be epoxy coated. Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to manufacturers specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

All structural steel shall be shop painted with inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Preformed Joint Strip Seal.

GENERAL NOTES AND BILL OF MATERIAL
F.A.P. ROUTE 315 - (U.S. 136)
OVER PRAIRIE CREEK
SECTION 116(BR-2)
LOGAN COUNTY
STA. 314+50.00
S.N. 054-0025