

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATE SHEETS	SHEET NO.	SHEET NO. 1 3 SHEETS
FA 885		POPE	21	13	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract Number: 78018

**GENERAL NOTES**

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 condition of the beams when developing construction procedures.

If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on the bridge, 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 or existing beams. To distribute load to multiple beams and protect the existing surface, 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 the underlying beams. If heavy equipment will be placed on new PPC deck beams, the following shall be done prior to placement of the timber mats: placement and tightening of transverse tie assemblies, grouting and curing the shear keys.

Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of Removal of Existing PPC Deck Beams.

The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction 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 scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

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

Reinforcement bars designated (E) shall be epoxy coated. All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Temporary concrete barrier shall only be anchored into the overlay and not into the PPC Deck Beams.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to manufacturer's specifications prior to another coat of zinc. This work shall be performed by the producer and included with the cost of the beam.

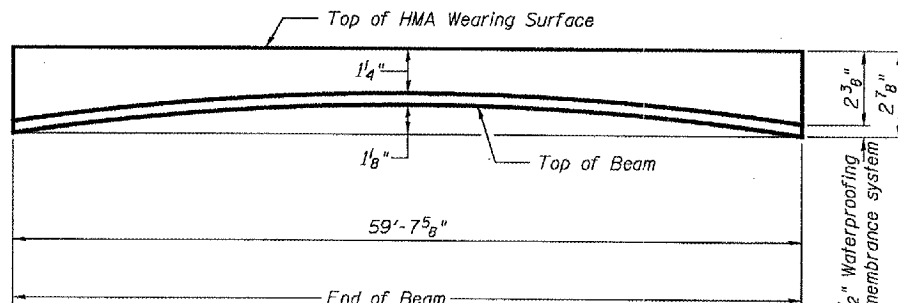
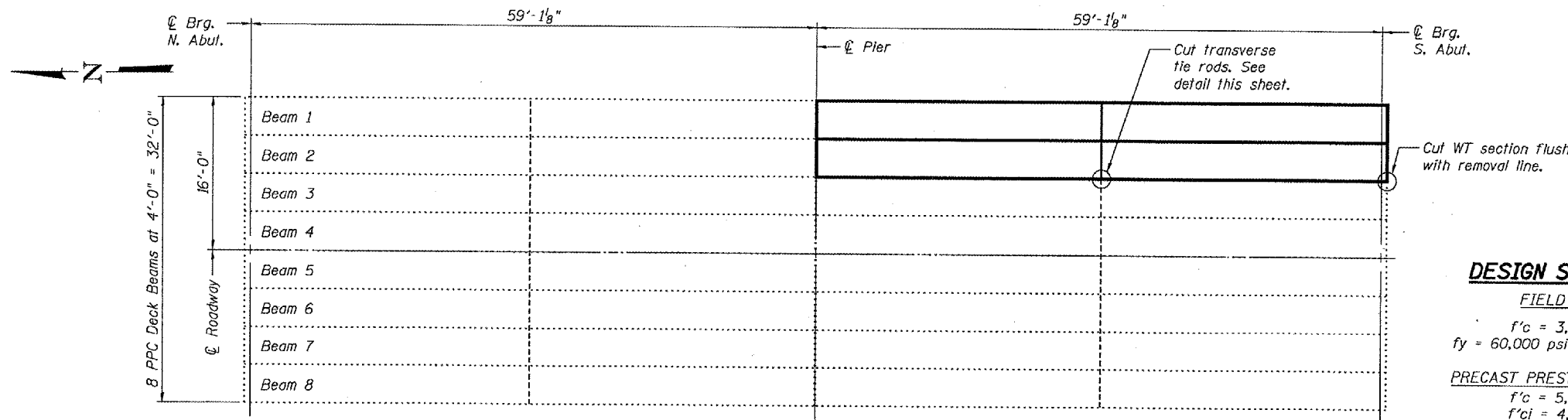
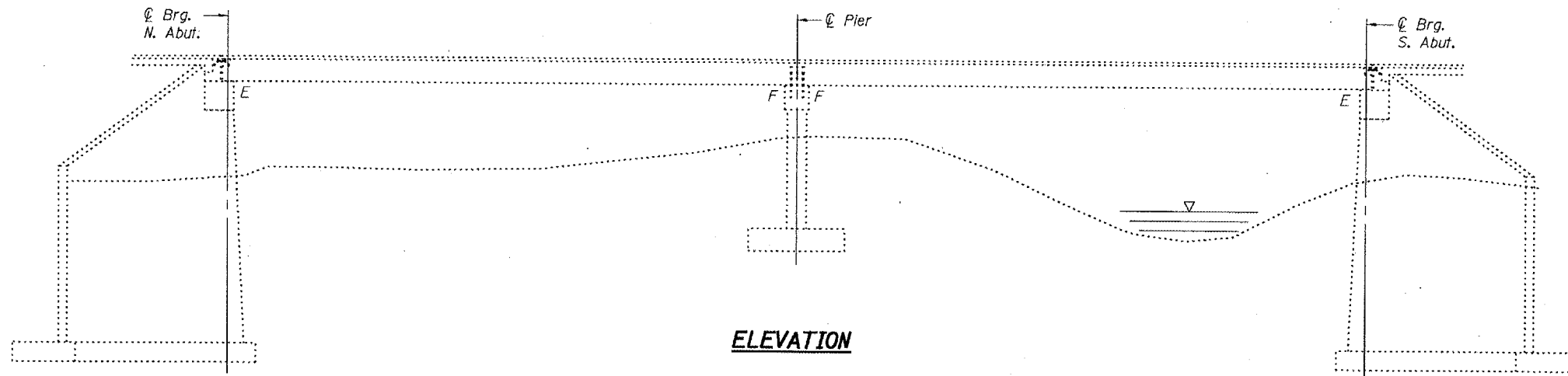
**DESIGN STRESSES**

FIELD UNITS

$f'_c = 3,500$  psi  
 $f_y = 60,000$  psi (Reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$  psi  
 $f'_{ci} = 4,000$  psi  
 $f'_s = 270,000$  psi ( $\frac{1}{2}$ "  $\phi$  low lax strands)  
 $f'_{si} = 201,960$  psi ( $\frac{1}{2}$ "  $\phi$  low lax strands)

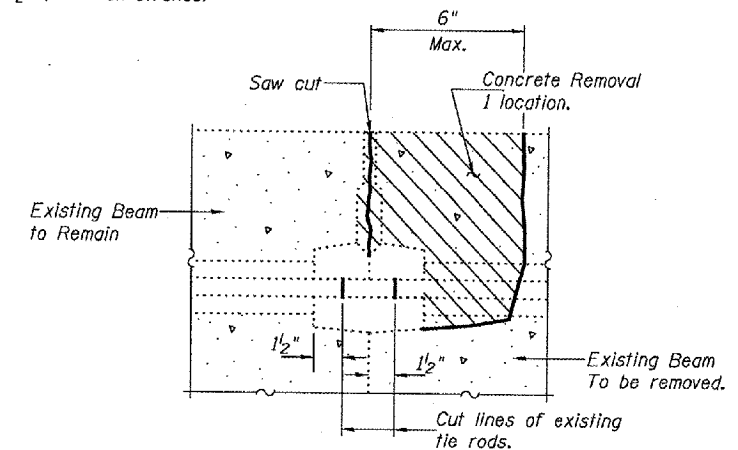


**ANTICIPATED INITIAL CAMBER DIAGRAM**

**PLAN**

**TOTAL BILL OF MATERIAL**

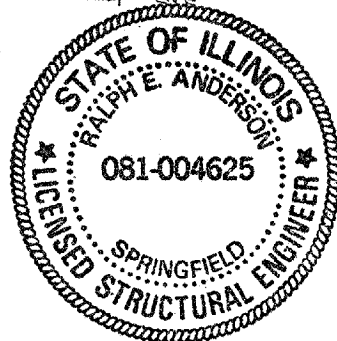
ITEM	UNIT	QUANTITY
Removal of Existing PPC Deck Beams	Sq. Ft.	477
PPC Deck Beams (27" Depth)	Sq. Ft.	477
Hotmix Asphalt Surface Removal	Sq. Yd.	3.8
Hotmix Asphalt Surface Course, Mix "C" N90	Tons	6.3
Concrete Superstructure	Cu. Yd.	2.0
PC Mortar Fairing Course	Foot	119
Waterproofing Membrane System	Sq. Yd.	50
Asbestos Bearing Pad Removal	Each	3
Remove and Re-erecting Existing Railing	Foot	60
Protective Coat	Sq. Yd.	18.6
Reinforcement Bars, Epoxy Coated	Pound	120
Furnishing and Erecting Structural Steel	Pound	280



**BEAM REMOVAL DETAIL  
AT TRANSVERSE TIES**

**PLAN AND ELEVATION  
F.A.S. RT. 2936  
PULASKI COUNTY  
SN 077-0016**

DESIGNED: *Robert H. Halloway* November 14, 2007  
CHECKED: *Alvin T. Halloway* EXAMINED: *Dr. Carl Hammer*  
DRAWN: *[Signature]* PASSED: *Ralph E. Anderson*  
CHECKED: *VHU ATH*



Expires: November 30, 2008