

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO. 1
745		Pike	7	5	3 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract Number: 72B57

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 dowel rods 24 hours minimum and 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.

The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Wearing Surface.

Work to be done under road closure.

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi

$f'_c = 5,000$ psi (Concrete Wearing Surface)

$f_y = 60,000$ psi (Reinforcement)

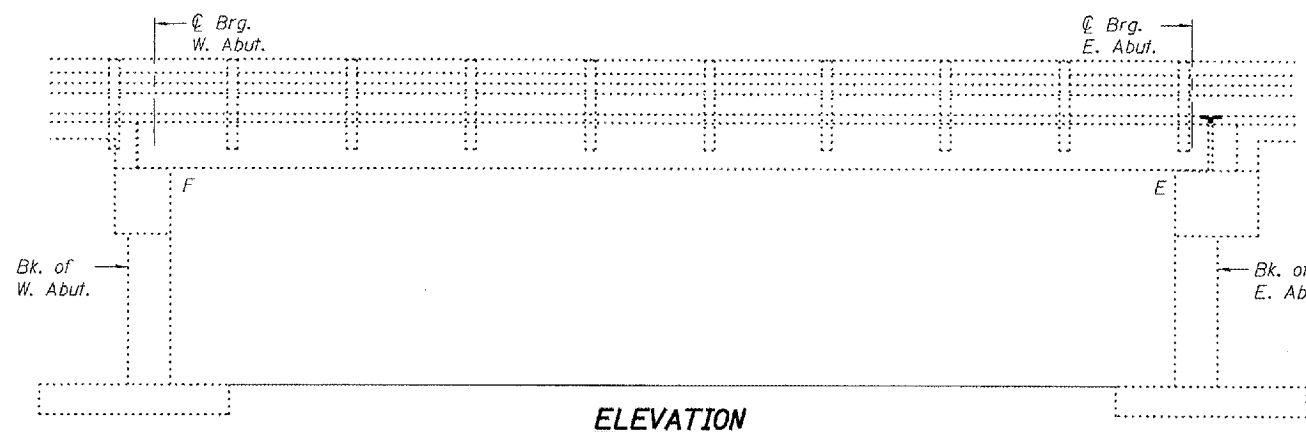
PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi

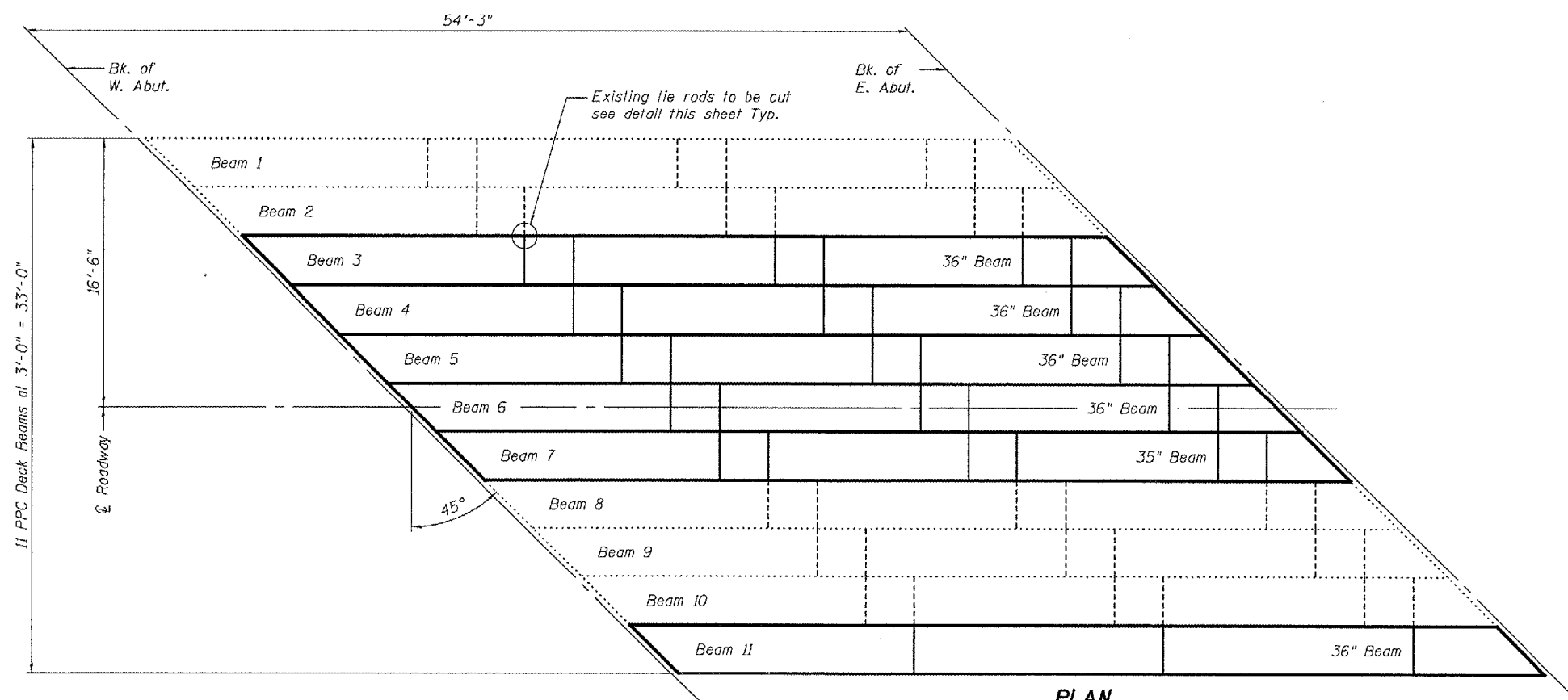
$f'_{ci} = 4,000$ psi

$f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax strands)

$f'_{si} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax strands)



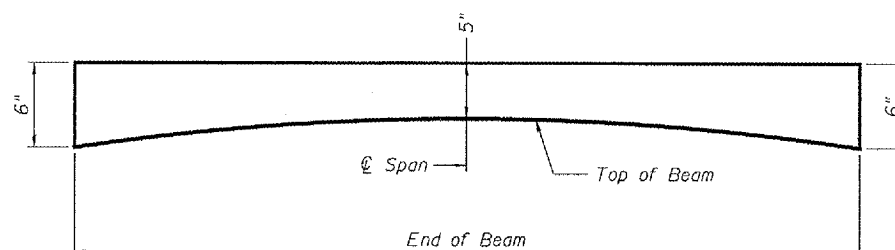
ELEVATION



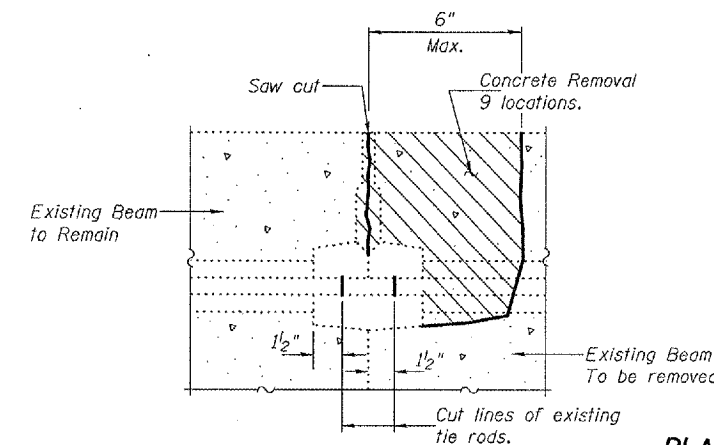
PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Removal of Existing PPC Deck Beams	Sq. Ft.	959
PPC Deck Beams (27" Depth)	Sq. Ft.	955
Concrete Wearing Surface	Sq. Yd.	117.6
Concrete Wearing Surface Removal	Sq. Yd.	10.4
Reinforcement Bars, Epoxy Coated	Pound	1,840
Removing and Re-erecting Existing Railing	Foot	54
Silicone Joint Sealer	Foot	28
Mechanical Splice	Each	207
Polymer Concrete	Cu. Ft.	1.0
Asbestos Bearing Pad Removal	Each	6
Protective Coat	Sq. Yd.	117.6



CONCRETE WEARING SURFACE PROFILE



**BEAM REMOVAL DETAIL
AT TRANSVERSE TIES**

**PLAN AND ELEVATION
F.A.P. RT. 745 IL 104
PIKE COUNTY
SN 075-0029**

DESIGNED *Adrian T. Holloway*
CHECKED *Victor H. Vela*
DRAWN *[Signature]*
CHECKED *ATW UHV*

February 26, 2008
EXAMINED *[Signature]*
PASSED *[Signature]*
ENGINEER OF BRIDGES AND STRUCTURES

