

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

|                       |         |                  |        |           |
|-----------------------|---------|------------------|--------|-----------|
| ROUTE NO.             | SECTION | COUNTY           | SHEETS | SHEET NO. |
| FAP 821               |         | JEFFERSON        | 14     | 12        |
| FED. ROAD DIST. NO. 7 | BALANCE | FED. AID PROJECT |        | 3 SHEETS  |

Contract Number: 78035

**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.

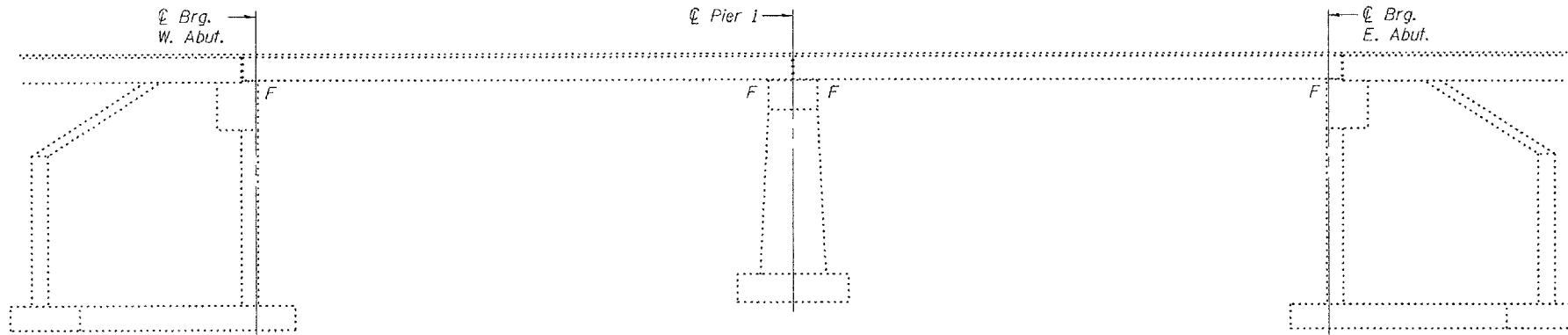
If the contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on the bridge, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed 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.

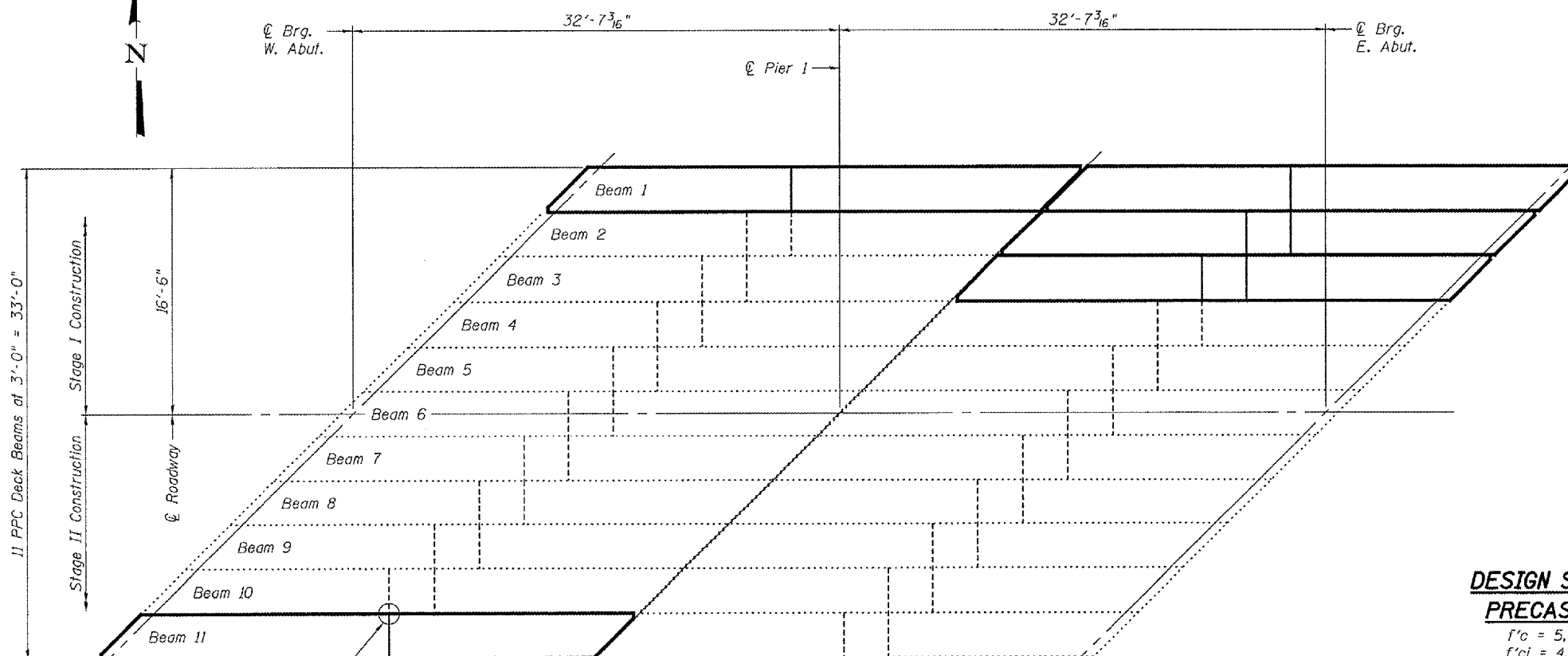
The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.

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.

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



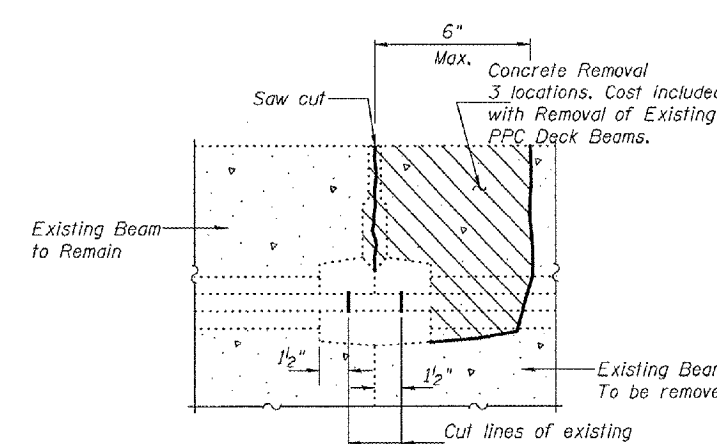
**ELEVATION**



**PLAN**

**DESIGN STRESSES  
PRECAST UNITS**

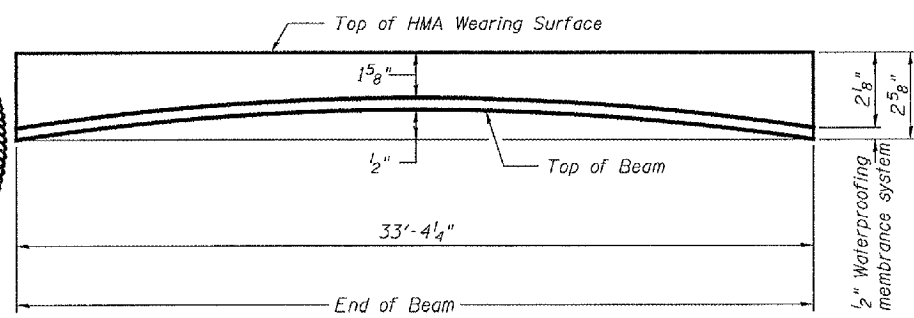
$f'_c = 5,000$  psi  
 $f'_{ci} = 4,000$  psi  
 $f'_s = 270,000$  psi ( $\frac{1}{2}$ "  $\phi$  low lax strands)  
 $f'_{si} = 201,960$  psi ( $\frac{1}{2}$ "  $\phi$  low lax strands)



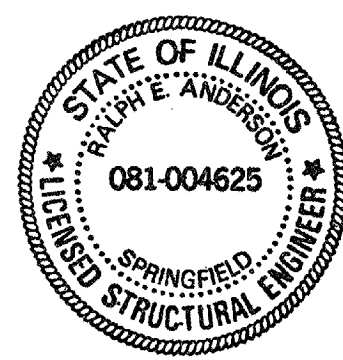
**BEAM REMOVAL DETAIL  
AT TRANSVERSE TIES**

**TOTAL BILL OF MATERIAL**

| ITEM                                       | UNIT    | QUANTITY |
|--|---------|----------|
| Removal of Existing PPC Deck Beams         | Sq. Ft. | 500.3    |
| PPC Deck Beams (17" Depth)                 | Sq. Ft. | 500.3    |
| Hotmix Asphalt Surface Removal             | Sq. Yd. | 7.0      |
| Hotmix Asphalt Surface Course, Mix "C" N90 | Tons    | 6.4      |
| PC Mortar Fairing Course                   | Foot    | 167      |
| Waterproofing Membrane System              | Sq. Yd. | 62.6     |
| Remove and Re-erect Existing Bridge Rail   | Foot    | 98       |



**ANTICIPATED INITIAL CAMBER DIAGRAM**



DESIGNED: *[Signature]*  
 CHECKED: *[Signature]*  
 DRAWN: *[Signature]*  
 CHECKED: *[Signature]*

EXAMINED: *[Signature]*  
 PASSED: *[Signature]*

January 3, 2008  
 ENGINEER OF STRUCTURAL SERVICES  
 ENGINEER OF BRIDGES AND STRUCTURES

Expires: November 30, 2008

**PLAN AND ELEVATION  
FAP 821  
OVER POLE CAT CREEK  
JEFFERSON COUNTY  
SN 041-0021**