Bench Mark: Brass Plate on Southeast Wingwall Elev. 100.00

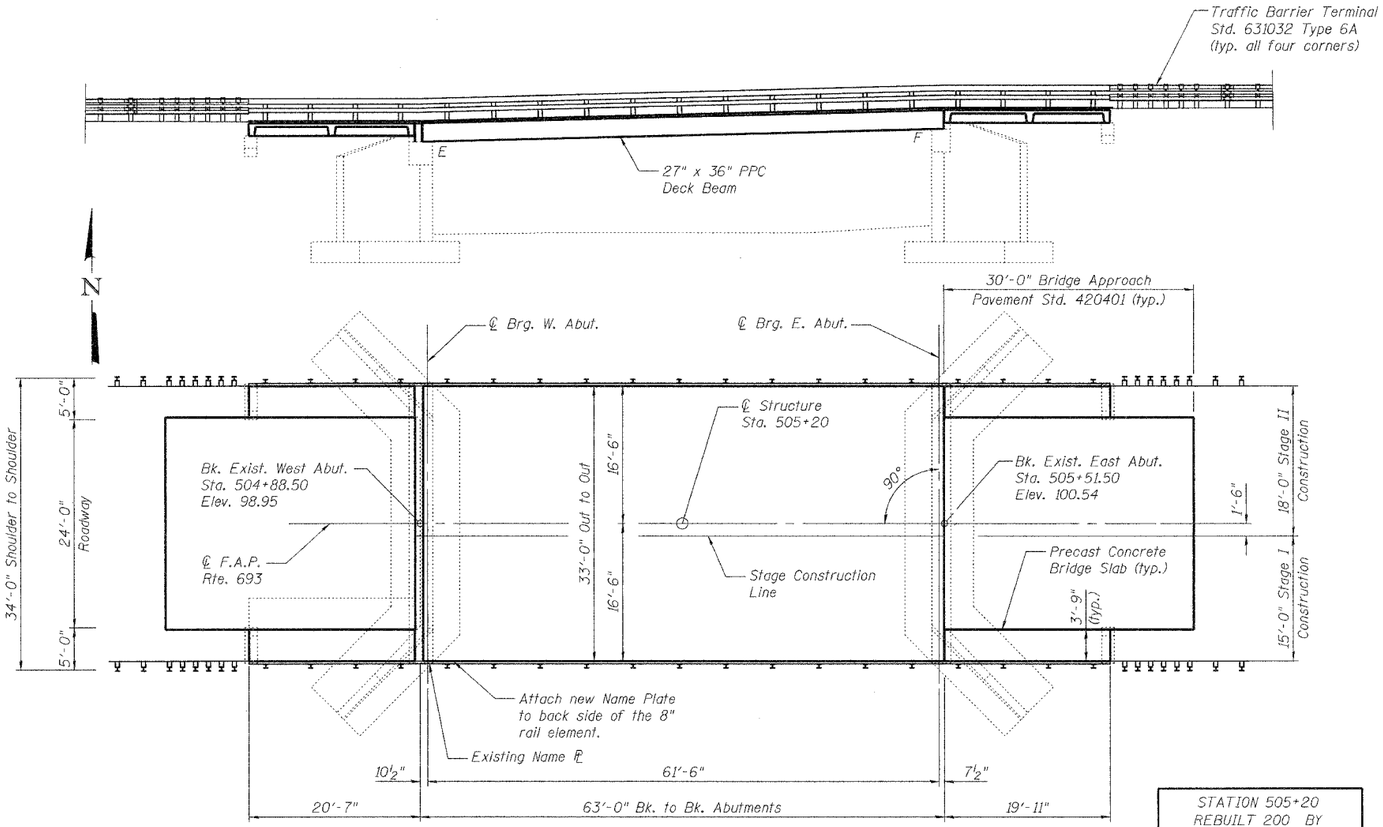
Existing Structure: S.N. 090-0061 was originally built in 1928 and rebuilt in 1975 as S.B.I. RTE 164, Section 119-BR-3 at Sta. 505+20. The structure consists of simple span PPC-deck beams on closed abutments on pile supported footings. The bk. to bk. abutment length is 63'-0" and the out to out bridge width is 33'-0". The existing superstructure is to be removed and replaced. Staged construction shall be used during construction.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 693	(119B-3)I	TAZEWELL	34	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
14 SHEETS

Contract # 68415



Index of Sheets

DESIGNED BWP	THOUVENOT, WADE & MOERCHEN, INC. ENGINEERS ◆ SURVEYORS ◆ PLANNERS
CHECKED ALN	TWM
DRAWN BWP	CORPORATE OFFICE 4940 OLD COLLINSVILLE RD. SWANSEA, ILLINOIS 62226 TEL (618) 624-4488 FAX (618) 624-6688 E-MAIL: corp@twm-inc.com
CHECKED KPC	

LOADING HS20-44

No Allowance for Future Wearing Surface

DESIGN SPECIFICATIONS

2002 AASHTO 17th Edition

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 ($\frac{1}{2}$" ϕ Low Relaxation Strands)
f'_{si} = 201,960 psi ($\frac{1}{2}$" ϕ Low Relaxation Strands)

PRECAST CONCRETE BRIDGE SLAB UNITS

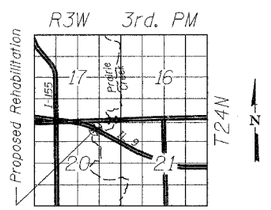
f'_c = 4,500 psi
f_y = 60,000 psi (reinforcement)

STATION 505+20
REBUILT 200 BY
STATE OF ILLINOIS
F.A.P. RT. 693
SEC. (119B-3)I
LOADING HS-20
STR. NO. 090-0061

NAME PLATE

See Std. 515001

Existing Name Plate shall be cleaned and relocated adjacent to new Name Plate. Cost included with Name Plates.



LOCATION SKETCH

KERMIT P. CHRISTMANN
081-005202
LICENSED STRUCTURAL ENGINEER OF ILLINOIS

Expires: 11/30/06

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 for the work.

The top surface of the beams shall be finished according to Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of $\frac{1}{4}$".

All construction joints shall be bonded.

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 the manufacturer's 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.

The minimum thickness of the Bituminous overlay shall be 2" and varies as required to adjust for the new profile grade and beam camber.

The contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractors responsibility to account for the condition 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 the underlying beams. Prior to placement of the timber mats the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of the beams.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		2.4	2.4
Preformed Joint Strip Seal	Foot	33		33
Concrete Structures	Cu. Yd.		3.4	3.4
Structural Repair of Concrete (Depth Equal to or Less Than 5")	Sq. Ft.	45.1		45.1
Precast Concrete Bridge Slab	Sq. Ft.	299		299
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	2066		2066
Reinforcement Bars, Epoxy Coated	Pound		450	450
Steel Bridge Rail, Type SM	Foot	207		207
Name Plates	Each	1		1
Waterproofing Membrane System	Sq. Yd.	230		230
PC Mortar Fairing Course	Foot	626		626
Bituminous Concrete Surface Course, Superpave, Mix "D", N50	Ton	33.1		33.1
Bar Splicers	Each		8	8
Removal of Existing Precast Unit	Sq. Ft.	299		299

PLAN AND ELEVATION
ILLINOIS ROUTE 9 OVER
PRAIRIE CREEK
F.A.P. ROUTE 693 SECTION (119B-3)I
TAZEWELL COUNTY
SN 090-0061