Bench Mark: BM#11 Railroad Spike in Power Pole near the Northeast corner of Structure. Elevation 427.76.
BM#13 Railroad Spike in Power Pole near intersection of Rte. 154 and Woodcox Road. Elevation 429.12.

Existing Structure: S.N. 079-0016 was built in 1934 as S.B.I. Rte. 170 Sec. 126B&C at Sta. 718+90.00. In 1971 the superstructure was replaced, the substructure widened, and Piers were added. The existing three span structure consists of PPC deck beams on pile supported cantilever abutments, and wall type piers on pile. The bk. to bk. abutments dimension measures 153'-4" while the O.-O. width measures 33'-0". The existing superstructure shall be replaced with PPC deck beams, and the substructure will be repaired with Structural Repair of Concrete. Staging shall be used during construction.

No Salvage.

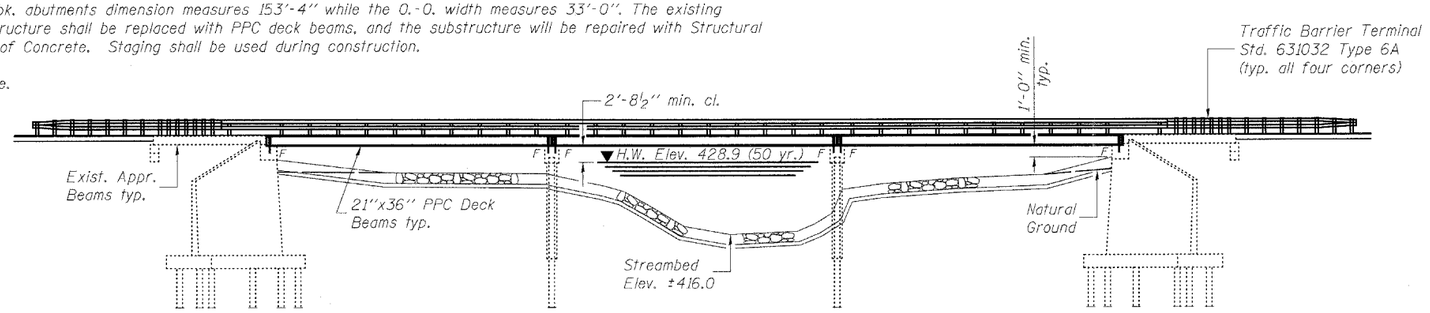
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 329	126BR-1	RANDOLPH	27	15
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

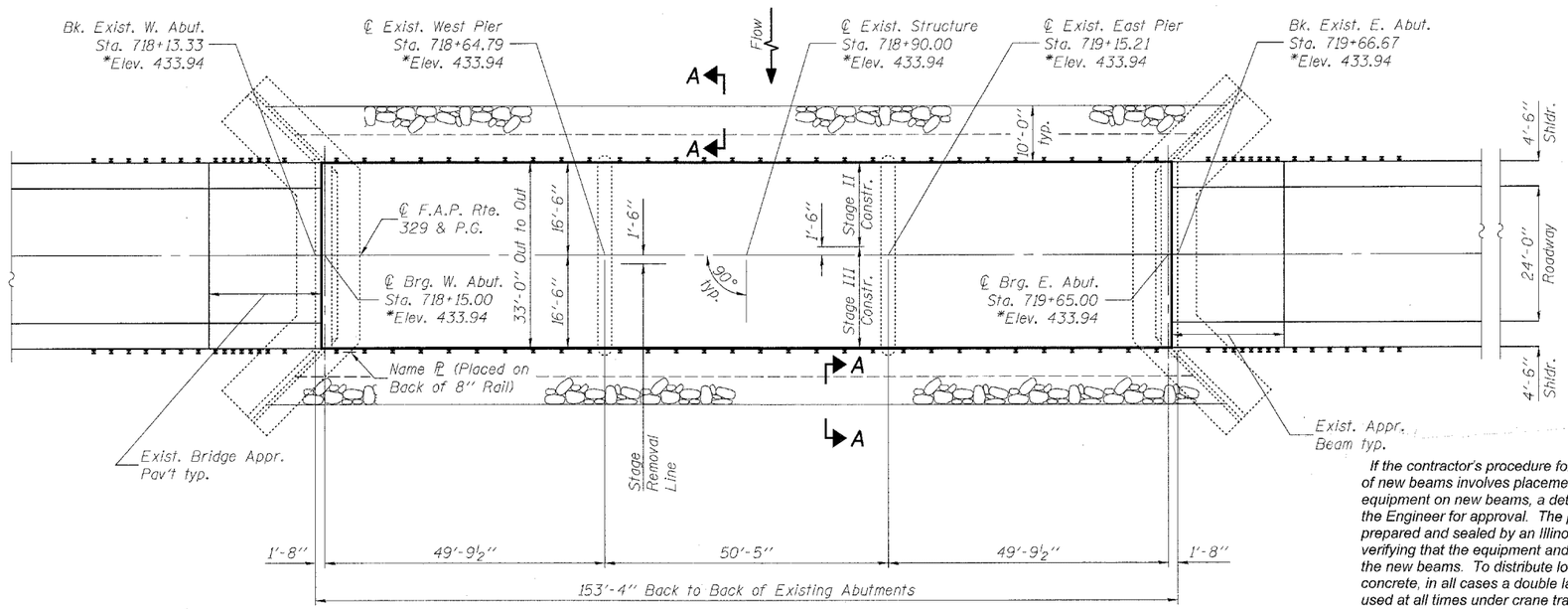
SHEET NO. 1
10 SHEETS

Contract #76898



ELEVATION

* Elevations are based off of existing beam seats.



PLAN

GENERAL NOTES

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

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

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 ¼".

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 contractor is advised that the existing Precast Prestressed Concrete Deck Beams are in a deteriated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstucture.

Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to "Concrete Removal".

Existing Name Plate is to be removed, cleaned, and relocated adjacent to new Name Plate. Cost is included in the cost of Name Plates.

Repair of the abutments and piers shall be completed prior to placement of the new deck beams.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A5	Sq. Yd.		925	925
Filter Fabric	Sq. Yd.		925	925
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		0.7	0.7
Concrete Structures	Cu. Yd.		0.7	0.7
Concrete Superstructure	Cu. Yd.	0.1		0.1
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	4983		4983
Steel Bridge Rail, Type SM	Foot	334		334
Name Plates	Each	1		1
Waterproofing Membrane System	Sq. Yd.	562		562
Portland Cement Mortar Fairing Course	Foot	1510		1510
Removal of Existing P.P.C. Deck Beams	Sq. Ft.	151		151
Structural Repair of Concrete (Depth Equal to or less than 5")	Sq. Ft.		292.8	292.8
Bituminous Concrete Surface Course, Superpave, Mix "C", N70	Ton	87		87
Precast Prestressed Concrete Deck Beams (21" Depth) Special	Sq. Ft.	151		151

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.

LOADING HS20-44 (New Construction)

No Allowance for future wearing surface.

DESIGN SPECIFICATIONS (New Construction)

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

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

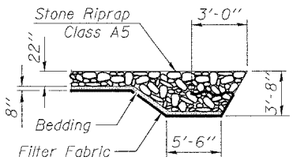
PRECAST PRESTRESSED UNITS

f'_c = 5,000 psi
f'_{ci} = 4,000 psi
f'_s = 270,000 psi (½"ϕ low lax. strands)
f_{si} = 201,960 psi (½"ϕ low lax. strands)

STATION 718+90.00
REBUILT 200 BY
STATE OF ILLINOIS
FAP RT 329 - SEC 126BR-1
LOADING HS20
STR. NO. 079-0016

NAME PLATE

See Std. 515001



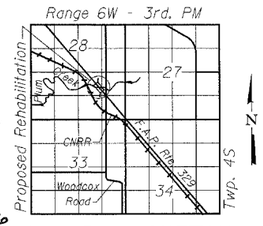
SECTION A-A

DESIGNED	NJM
CHECKED	EML
DRAWN	NJM
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS ■ ARCHITECTS ■ PLANNERS

STATE OF ILLINOIS
ERIC M. LAGEMANN
LICENSE NO. 081-006124
LICENSED STRUCTURAL ENGINEER

Eric Lagemann 8/10/06
Expires 11/30/2006



LOCATION SKETCH

GENERAL PLAN
ILLINOIS ROUTE 154 OVER
PLUM CREEK
F.A.P. ROUTE 329 - SECTION 126BR-1
RANDOLPH COUNTY
STATION 718+90.00
STRUCTURE NO. 079-0016