

Bench Mark: RR Spike in Power Pole on West Side of US 45, Sta. 719+90.00 approximately 29.6' Left, Elev. 438.45.

Existing Structure: S.N. 096-0020 was built in 1921 as S.B.I. Rte. 25 Sec. 8B at Sta. 719+63.00. In 1974 the superstructure was replaced, and the substructure widened. The existing single span structure consists of PPC deck beams on spread footing supported closed abutments. The bk. to bk. abts dimension measures 43'-0" while the O.-O. width measures 33'-0". The existing superstructure shall be replaced with PPC deck beams and the existing approach pavement shall be replaced with new Bridge Approach Pavement (Special). Staging shall be used during construction.

No Salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO.
F.A.P. 328	(8BR-1) B-1	WAYNE	39	17
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
13 SHEETS

Contract #74041

GENERAL NOTES

The minimum thickness of Concrete wearing surface shall be 5" and varies as required to adjust for the new profile grade and beam camber.

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.

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.

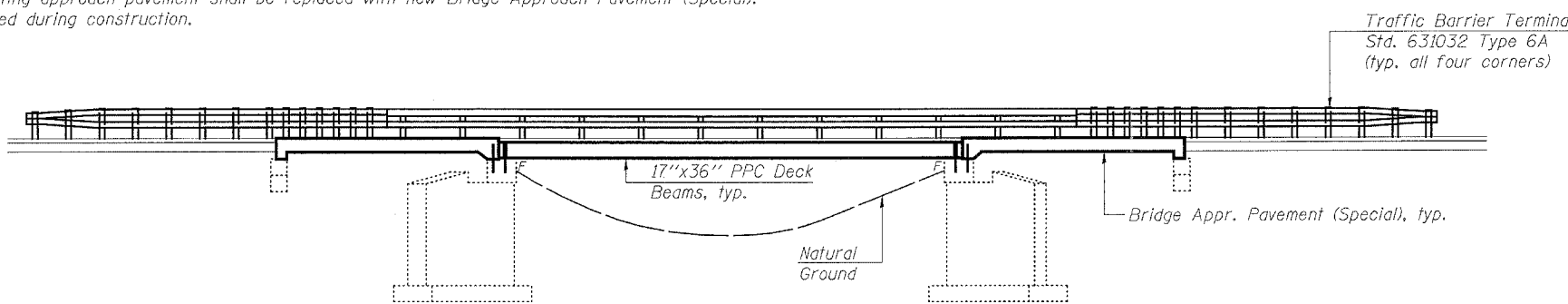
The contractor is advised that the existing Precast Prestressed Concrete Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement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

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

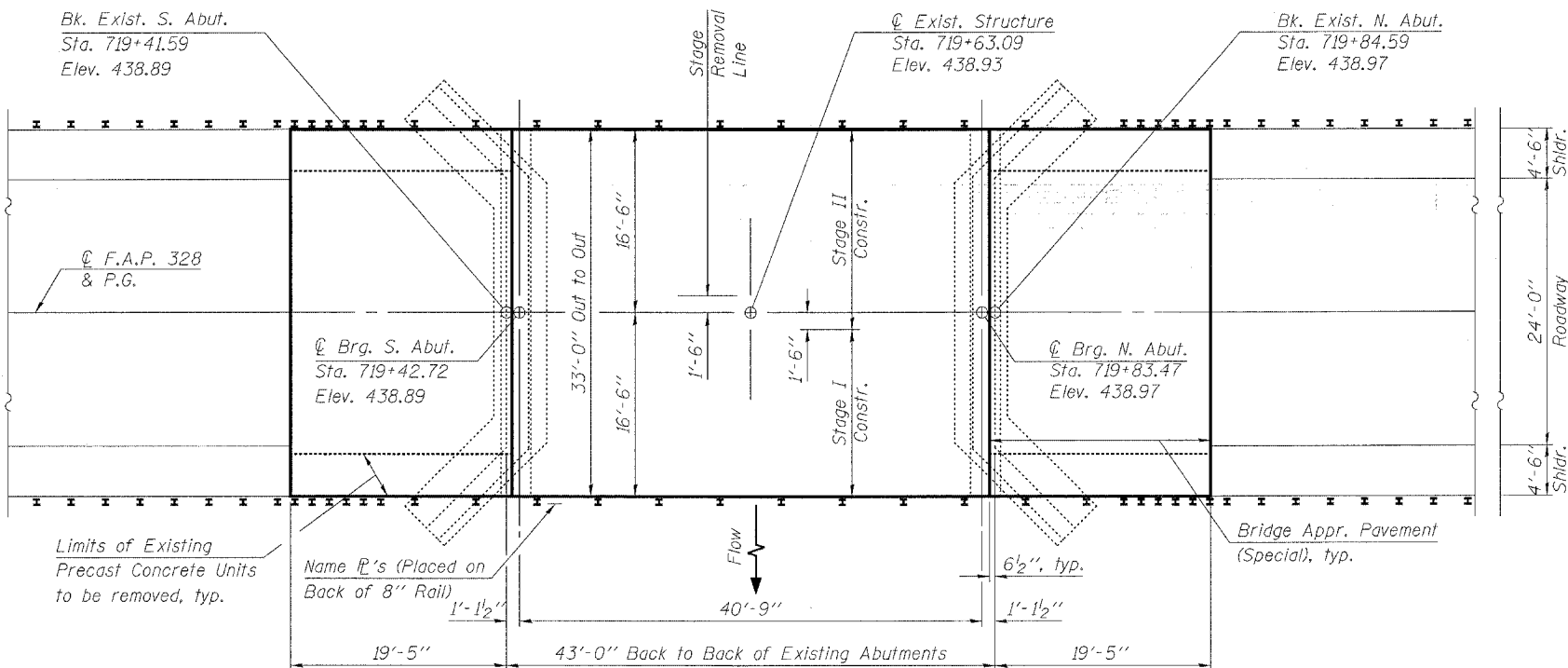
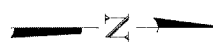
Reinforcement bars designated (E) shall be epoxy coated. If the Contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include 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. No in-stream work will be allowed on this project.

TOTAL BILL OF MATERIAL

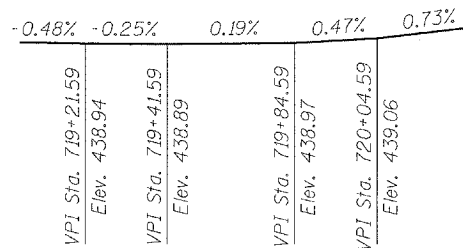
ITEM	UNIT	SUPER	SUB	TOTAL
Hot Mix Asphalt Surface Course, Mix "C", N70	Ton	9		9
Bridge Approach Pavement (Special)	Sq. Yd.		146	146
Removal of Existing Superstructures	Each	1		1
Concrete Superstructure	Cu. Yd.	1.6		1.6
Bridge Deck Grooving	Sq. Yd.	144		144
Protective Coat	Sq. Yd.	154		154
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1,383		1,383
Reinforcement Bars, Epoxy Coated	Pound	3,000	250	3,250
Bar Splicers	Each	42		42
Steel Railing, Type SM	Foot	126		126
Name Plates	Each	1		1
Removal of Existing Precast Prestressed Concrete Deck Beams	Sq. Ft.	252		252
Removal of Existing Precast Concrete Units	Sq. Ft.		299	299
Concrete Wearing Surface, 5"	Sq. Yd.	154		154
Precast Prestressed Concrete Deck Beams (17" Depth) Special	Sq. Ft.	252		252
Removing and Re-Erecting Existing Railing	Foot	82		82



ELEVATION



PLAN



PROFILE GRADE

Along @ Roadway

DESIGNED	JJD
CHECKED	EML
DRAWN	JJD
CHECKED	EML

STATION 719+63.09
RE-BUILT 200 BY
STATE OF ILLINOIS
FAP RT 328 - SEC (8BR-1)B-1
LOADING HS20
STR. NO. 096-0020

NAME PLATE

See Std. 515001

LOADING HS20-44 (New Construction)

No Allowance For future wearing surface.

DESIGN SPECIFICATIONS (New Construction)

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

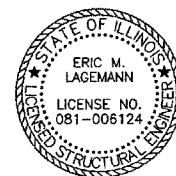
- $f'_c = 5,000$ psi (Concrete Wearing Surface)
- $f'_c = 3,500$ psi (All Other)
- $f_y = 60,000$ psi (reinforcement)

PRECAST PRESTRESSED UNITS

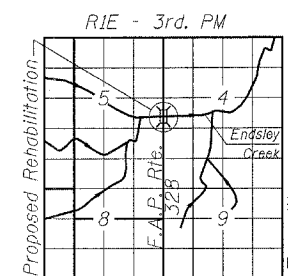
- $f'_c = 5,000$ psi
- $f_{ci} = 4,000$ psi
- $f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ low lax. strands)
- $f_{si} = 201,960$ psi ($\frac{1}{2}$ " ϕ low lax. strands)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson (TS)
ENGINEER OF BRIDGES AND STRUCTURES



Eric Lagemann 4/20/07
Expires 11/30/2008



LOCATION SKETCH

GENERAL PLAN

US 45 OVER ENDSLEY CREEK
F.A.P. ROUTE 328 - SECTION (8BR-1)B-1
WAYNE COUNTY
STATION 719+63.09
STRUCTURE NO. 096-0020

