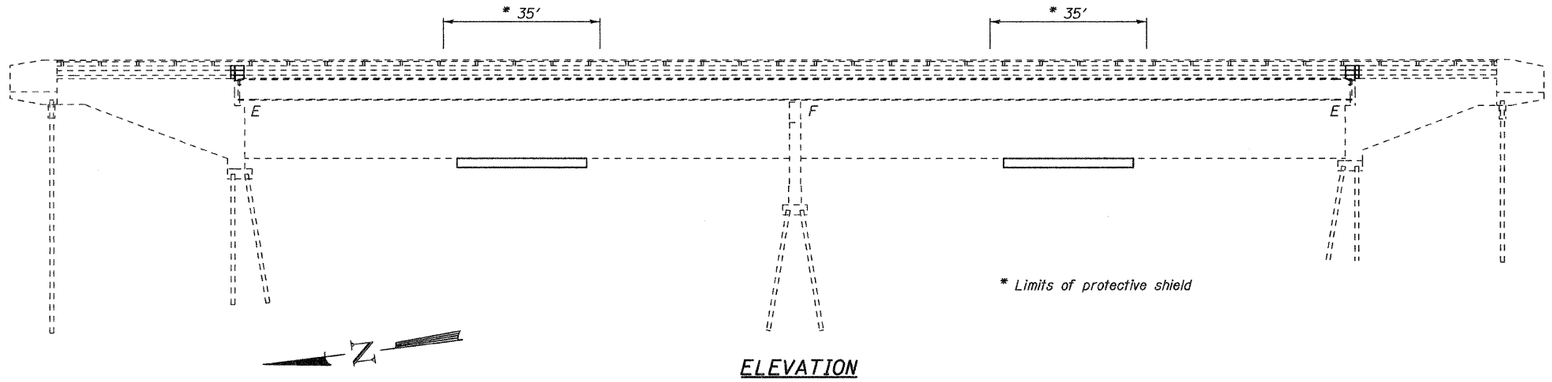
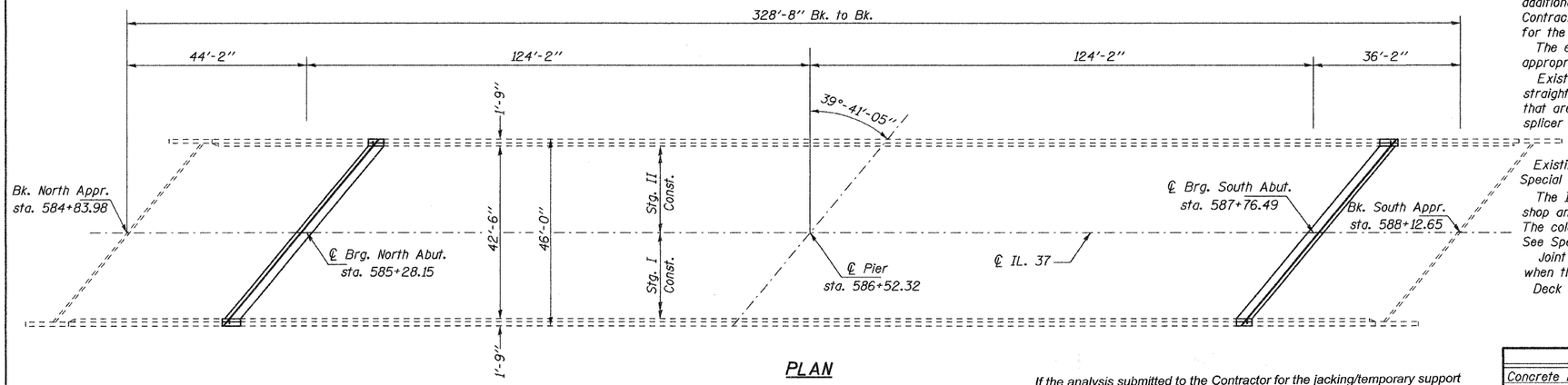


* Limits of protective shield

ELEVATION



PLAN

If the analysis submitted to the Contractor for the jacking/temporary support system to be used shows temporary stiffeners are required to prevent web crippling or buckling, the stiffeners shall be steel and bolted to the web. If stiffeners are not required, hardwood timbers shall be installed tightly between the top and bottom flange to prevent flange rotation.

Design Stresses

FIELD UNITS (New Construction)

f'c = 3,500 psi
fy = 60,000 psi (reinforcement)
fy = 36,000 psi (AASHTO M270 Gr. 36))

FIELD UNITS (Existing Construction)

f'c = 1,200 psi (deck slab)
f'c = 1,400 psi (curb, parapet, sub.)
fy = 20,000 psi (structural steel)
fy = 20,000 psi (reinforcement)
n = 10

STATE OF ILLINOIS
RALPH E. ANDERSON
081-004625
SPRINGFIELD
LICENSED STRUCTURAL ENGINEER

Expires 11-30-2010

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts - $\frac{3}{4}$" ϕ, holes - $\frac{15}{16}$" ϕ, unless otherwise noted.

All structural steel shall be AASHTO M 270 Grade 36 unless otherwise noted. No field welding is permitted except as specified in the contract documents.

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

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck section, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer.

Any cracks that cannot be removed by grinding $\frac{1}{4}$ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.

Plan dimensions and details relative to existing plans are subject to nominal construction 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 at the unit price bid for the work.

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Existing structural steel shall only be cleaned and painted as required by the Special Provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures".

The Inorganic zinc rich primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the Acrylic finish coat shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provisions for "Cleaning and Painting New Metal Structures".

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50°F.

Deck Slab Repair (Partial Depth) quantity is estimated at 59.7 Sq. Yd. (info only).

TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	13.3
Concrete Superstructures	Cu. Yd.	14.2
Bridge Deck Grooving	Sq. Yd.	1444
Furnishing and Erecting Structural Steel	Pound	2350
Jack and Remove Existing Bearings	Each	12
Reinforcement Bars, Epoxy Coated	Pound	1640
Bar Splicers	Each	20
Preformed Joint Strip Seal	Foot	115
Elastomeric Bearing Assembly, Type I	Each	12
Anchor Bolts, 1"	Each	48
Structural Repair of Concrete (Depth ≤ 5")	Sq. Ft.	235
Bridge Deck Microsilica Concrete Overlay $2\frac{1}{4}$"	Sq. Yd.	1516
Bridge Deck Hydro-Scarification $\frac{1}{2}$"	Sq. Yd.	1516
Deck Slab Repair (Full Depth, Type I)	Sq. Yd.	2
Protective Coat	Sq. Yd.	1552
Protective Shield	Sq Yd.	360

BRIDGE REPAIRS
IL. ROUTE 37 OVER FAI 24
JOHNSON COUNTY
STA. 203+80.86
S.N. 044-0031

FILE NAME = $FILE$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
SN 044-0031

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24/57	D9 BSMART FY09-1	JOHNSON/PULASKI	20	11
		CONTRACT NO. 78095		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

044-0031-BRI.dgn 5/1/2009 10:32:35 AM