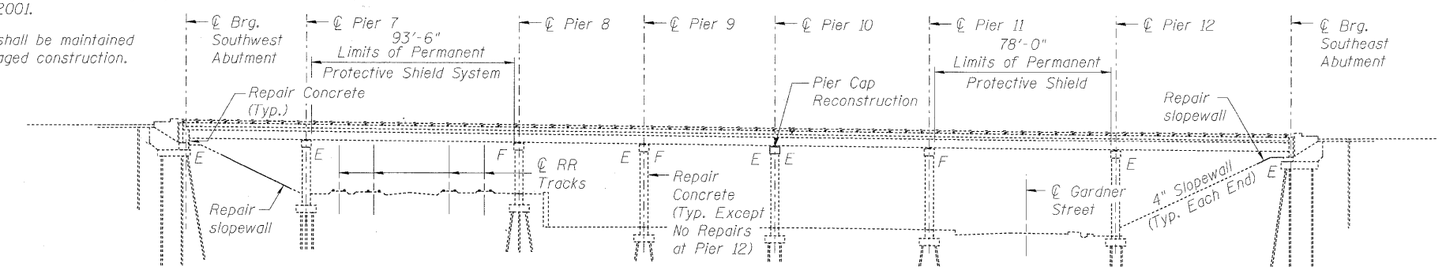
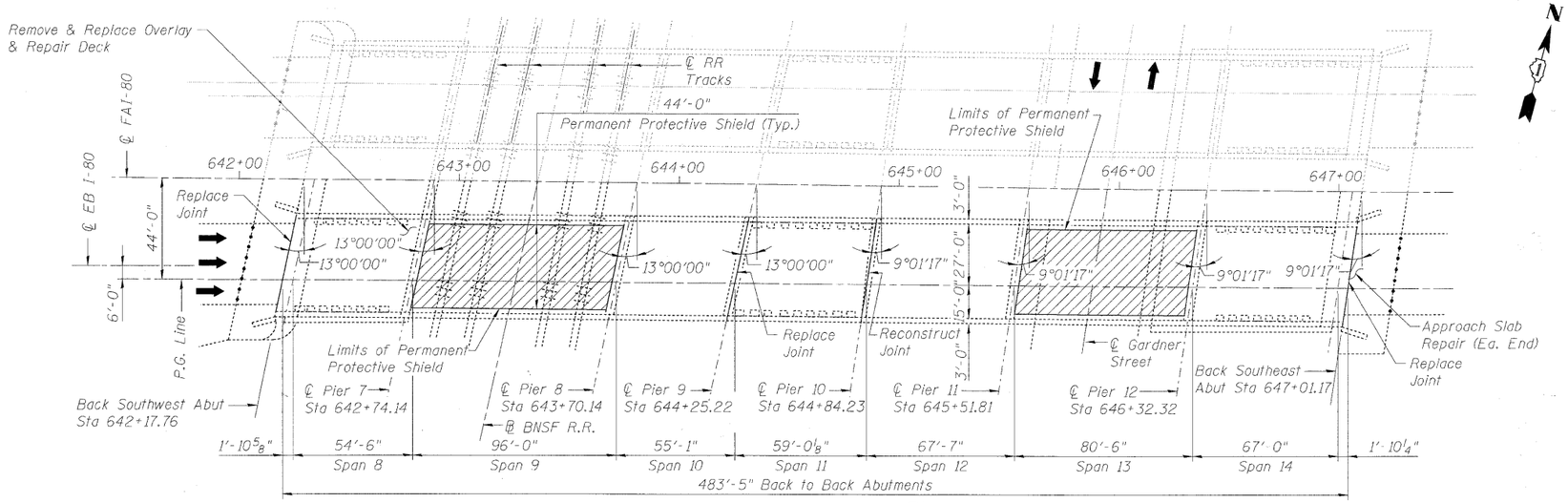
Existing Structure: SN 099-0060
The existing structure is a seven span, three-unit bridge. Spans 8 thru 10 and 12 thru 14 are three span continuous non-composite units and Span 11 is a single span composite unit. All units are steel wide flange beams. The beams support a 7" reinforced concrete slab and a 2" thick waterproof membrane system and polymerized bituminous concrete surface course. The substructure consists of reinforced concrete stub abutments and multi-column piers all founded on steel piles. The structure was originally constructed in 1964 as FAI Route 80 Section 99-4VB and rehabilitated in 1990, 1998, and 2001.

Staging: Traffic shall be maintained using staged construction.

Salvage: None



ELEVATION



PLAN

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Hot-Mix Asphalt Surface Removal (Deck)	Sq.Yd.	2,211	-	2,211
Deck Slab Repair (Partial)	Sq.Yd.	383	-	383
Deck Slab Repair (Full Depth, Type I)	Sq.Yd.	10	-	10
Deck Slab Repair (Full Depth, Type II)	Sq.Yd.	104	-	104
Polymerized Hot-Mix Asphalt Surface Course, Stone Matrix Asphalt, N80	Ton	249	-	249
Silicone Joint Sealer, 1.75"	Foot	51	-	51
Silicone Joint Sealer, 2.5"	Foot	151	-	151
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 inches)	Sq.Ft.	-	379	379
Structural Repair Of Concrete (Depth Greater Than 5 inches)	Sq.Ft.	-	410	410
Protective Shield, Special	Sq.Yd.	838	-	838
Approach Slab Repair (Partial Depth)	Sq.Yd.	20	-	20
Jack And Reposition Bearings	Each	-	19	19
Temporary Shoring and Cribbing	Each	28	-	28
Slope Wall Removal	Sq.Yd.	-	78	78
Slope Wall 4 Inch	Sq.Yd.	-	78	78
Polymer Concrete	Cu.Ft.	4.1	8.9	13.0
Porous Granular Embankment	Cu.Yd.	-	39	39
Reinforcement Bars, Epoxy Coated	Pound	1,280	142	1,422
Bar Splicers	Each	14	-	14
Furnishing and Erecting Structural Steel	Pound	-	697	697
Remove and Replace Bearings	Each	-	2	2
Concrete Removal	Cu.Yd.	6.1	1.0	7.1
Concrete Superstructure	Cu.Yd.	5.7	-	5.7
Concrete Structures	Cu.Yd.	-	1.0	1.0
Anchor Bolts, 1"	Each	-	4	4

STATE OF ILLINOIS
PHILIP C. AZZARELLO
081-004245
CHICAGO, ILLINOIS
LICENSED STRUCTURAL ENGINEER

Signed: Philip C. Azzarello
Date: 1-19-11
Exp: 11/30/2012
Sheets: S1 thru 15

INDEX OF SHEETS

SCOPE OF WORK

1. Remove the existing 2"± polymerized bituminous concrete surface course and replace it with a 2"± thick polymerized hot-mix asphalt surface course.
2. Perform partial and full depth repairs of the bridge deck.
3. Perform structural repairs on the abutments and the piers.
4. Replace the existing silicone sealers at the abutments and Pier 9 and existing preformed joint seal at Pier 10. Remove steel hardware at Pier 10 and replace with polymer concrete nosing.
5. Perform structural repairs to the slope walls.
6. Jack and reposition expansion bearings at Piers 9 and 10.
7. Remove and replace bearings at Pier 10 at locations noted for pier cap removal and replacement.
8. Provide temporary shoring at Piers 9 and 10 for pier repairs.
9. Repair polymer concrete nosing at East Abutment joint.
10. Place permanent protective shield at Span 9 and Span 13.
11. Repair approach slab at abutments.

DESIGN SPECIFICATIONS

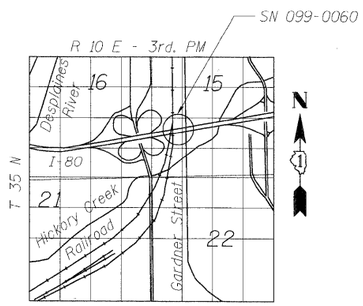
2002 AASHTO Standard Specifications for Highway Bridges, 17th Edition.

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement Bars)

GENERAL NOTES

1. 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.
2. Reinforcement bars shall conform to the requirements of ASTM A706 Grade 60. See Special Provisions.
3. Areas of proposed repairs are estimated. Actual type, location and dimensions are to be determined by the Engineer during construction.
4. Reinforcement bars designated (E) shall be epoxy coated.
5. The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
6. The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel bearing plates. The color of the final finish coat shall be Reddish Brown, Munsell No. 2.5YR 3/4. See Special Provision for "Cleaning and Painting New Metal Structures."
7. Contractor to coordinate with Railroad the installation of the protective shield. Cost included with Protective Shield, Special.
8. Protective shield shall be installed prior to any deck slab repair work.
9. Substructure repairs shall be done under staging where no live load is present over the repair area.



LOCATION SKETCH

USER NAME = lsupencheck	DESIGNED - PCA	REVISED -	
PLOT SCALE = 1:1	DRAWN - CFB	REVISED -	
PLOT DATE = 19-JAN-2011	CHECKED - ACF	REVISED -	
	DATE - 01/21/2011	REVISED -	

HBP Illinois Partners

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION, NOTES, & TOTAL BILL OF MATERIAL
EASTBOUND FAI-80 OVER RAILROAD/GARDNER STREET
STRUCTURE NO. 099-0060
SHEET NO. S-1 OF 15 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
80	99 (2&3) RS-3	WILL	200	149
		CONTRACT NO. 60M64		
FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

FILE NAME = IP_PWP:dms34575\d990060-60M64-001-GPE.dgn