

ROUTE NO.	SECTION	COUNTY	LEAVE SHEETS	SHEET NO.	SHEET NO. 1
F.A.P. 326	0910-1BR-84	KANE	62	19	32 SHEETS
FED. ROAD DIST. NO. 7	BLDG. NO.	FED. AID PROJECT			

Contract #62531
 ISTHA Contract #RR-02-5129
 ISTHA Bridge No. 1101

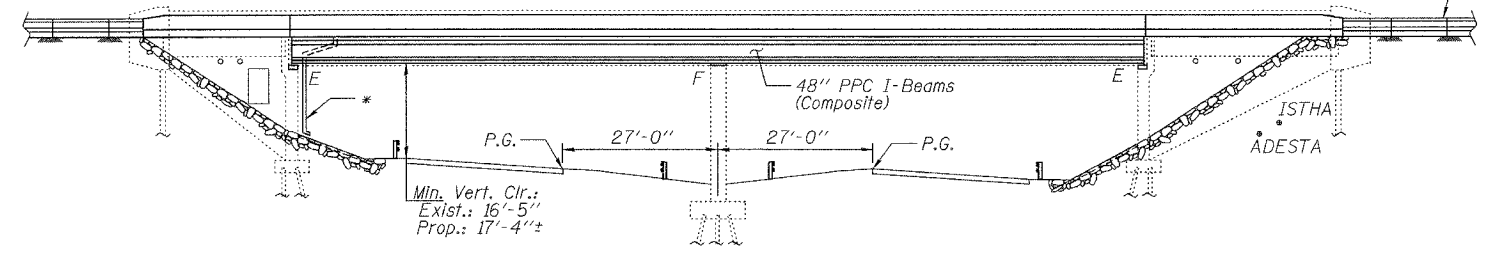
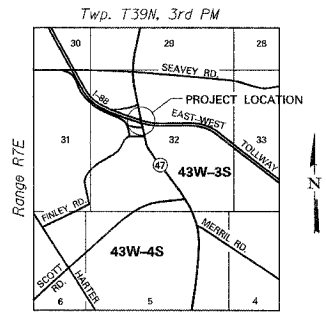
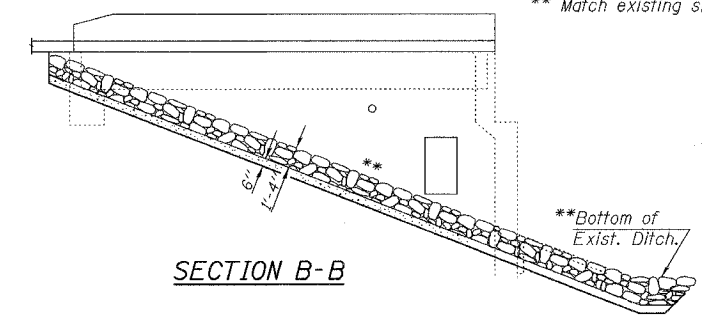
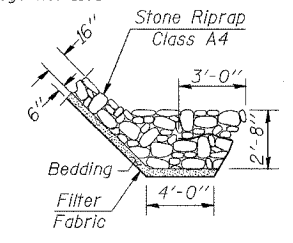
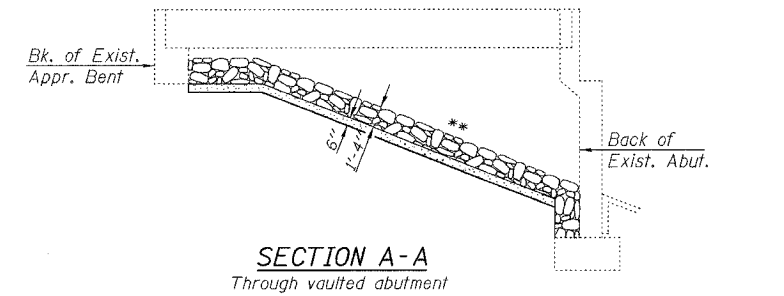
Benchmark:
 Square cut in eastern corner of metal base of light pole at southwest corner of Route 47 & I-88 EB off ramp.
 El. = 747.79

Existing structure:
 The existing structure No. 045-0082 was originally constructed in 1972 and rehabilitated in 1997. The existing structure consists of two vaulted approach spans and two main spans. The vaulted approach spans consist of a 4 1/2" thick reinforced concrete slab and 2 1/2" thick precast concrete planks supported on 36" deep (simply supported) PPC I-Beams. The main spans consist of a 5" thick reinforced concrete slab and 2 1/2" thick precast concrete planks supported on 54" deep (simply supported) PPC I-Beams. The substructure consists of reinforced concrete vaulted abutments, pile bents and two three-column piers at C of I-88 (E-W Tollway). The abutments, piers and pile bents are reinforced concrete elements supported on cast-in-place concrete piles. The overall structure length is 239'-0" back to back of pile bents. IL Rte 47 carries 4 lanes of traffic (2-12' lanes in each direction) with a 12' left turn lane in the northbound direction. There is a tapered raised center median. There are 9'-3" shoulders on both sides. The out to out of deck width is 91'-8" and face to face of curb dimension is 88'-6". One lane of traffic in each direction and one left turn lane shall be maintained during the rehabilitation using stage construction.

Salvage: The existing aluminum handrail shall be salvaged and delivered to the Bridge Office in Elk Grove Village. Contact Tom Matyas at (847) 956-1444 prior to delivery.

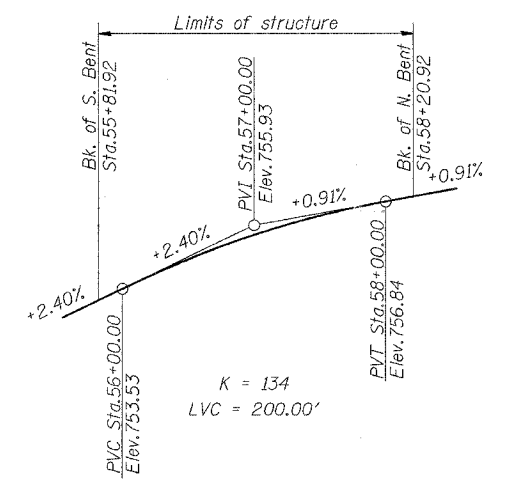
STATION 57+00.12
 REBUILT 20 BY
 STATE OF ILLINOIS
 F.A.P. RT. 326
 SEC. 0910-1BR-84
 LOADING HS20
 STR. NO. 045-0082

NAME PLATE
 See Std. 515001

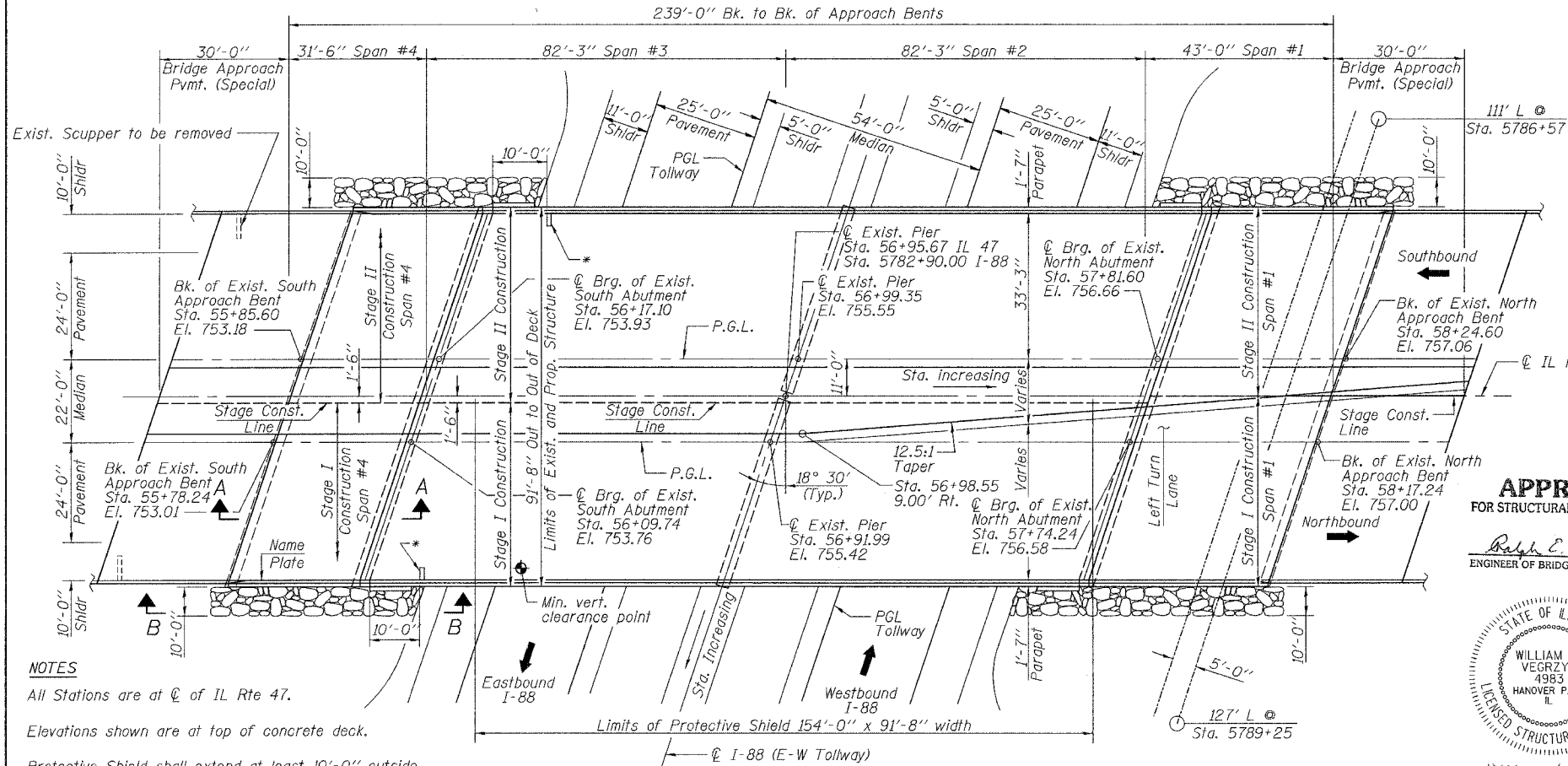


* Type DS-33 Drainage Scupper - See Sheet 18 of 32 for Drainage System.

ELEVATION



PROPOSED PROFILE GRADE



PLAN

NOTES
 All Stations are at C of IL Rte 47.
 Elevations shown are at top of concrete deck.
 Protective Shield shall extend at least 10'-0" outside the edge of each shoulder of I-88.

LOADING HS20-44
 Allow 25 pounds/Sq.Ft. for future wearing surface. New beams only.

DESIGN SPECIFICATIONS
 2002 AASHTO (17th Edition).

DESIGN STRESSES

NEW FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinf.)

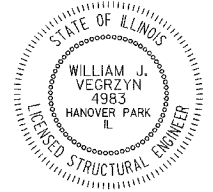
NEW PRECAST PRESTRESSED UNITS
 $f'_c = 7,000$ psi
 $f'_{ci} = 6,000$ psi
 $f'_s = 270,000$ psi (1/2" low relax. strands)
 $f'_{si} = 201,960$ psi (1/2" low relax. strands)

Existing Substructure Field Units
 $f'_c = 3,500$ psi
 $f_y = 40,000$ psi (Reinf.)

Existing 36" PPC-I Beam Units
 $f'_{ci} = 5,000$ psi
 $f'_s = 270,000$ psi (1/2" stress relieved strands)

SEISMIC DATA
 Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = .04g
 Site Coefficient (S) = 1.0

APPROVED
 FOR STRUCTURAL ADEQUACY ONLY
 Ralph E. Anderson
 ENGINEER OF BRIDGES AND STRUCTURES



William J. Vegrzyn
 Expires 11-30-06

rjngroup
 Excellence through Ownership
 200 West Front Street
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ILLINOIS DEPARTMENT OF TRANSPORTATION
 GENERAL PLAN AND ELEVATION
 IL RTE. 47 OVER I-88 (E-W TOLLWAY)
 KANE COUNTY
 STRUCTURE NO. 045-0082
 DATE: 2-01-2006
 DRAWN BY: BLB
 CHECKED BY: WJW