Bench Mark: Marked on S.E. corner of S.E. wingwall of S.N. 079-0003; Elevation 407.93

Existing Structure: S.N. 079-0003 built in 1924 under Il. Route 3, section 71, 71B as a 2-span slab bridge. Reconstructed in 1952 as a 4-span structure. The existing superstructure consists of a four span continuous steel wide flange beam with concrete deck and the substructure consists of pile bent abutments and solid wall piers. The back to back of abutment length is 160'-6" and the out to out width of the deck is 33'-8". The structure is to be replaced. During construction, traffic will be maintained using stage construction.

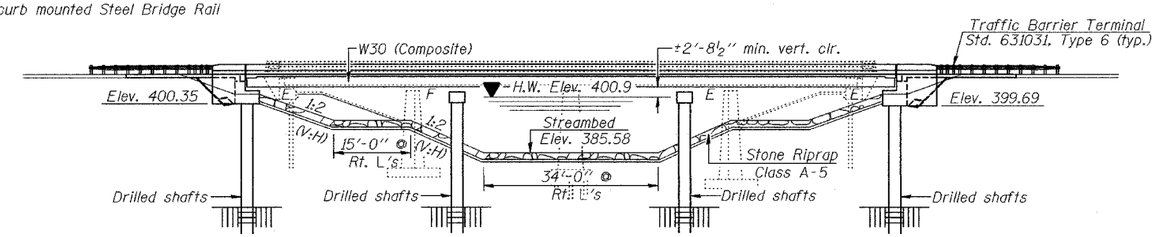
Salvage curb mounted Steel Bridge Rail

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 312	71BR	RANDOLPH	73	25
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 1
31 SHEETS

Contract No. 76125

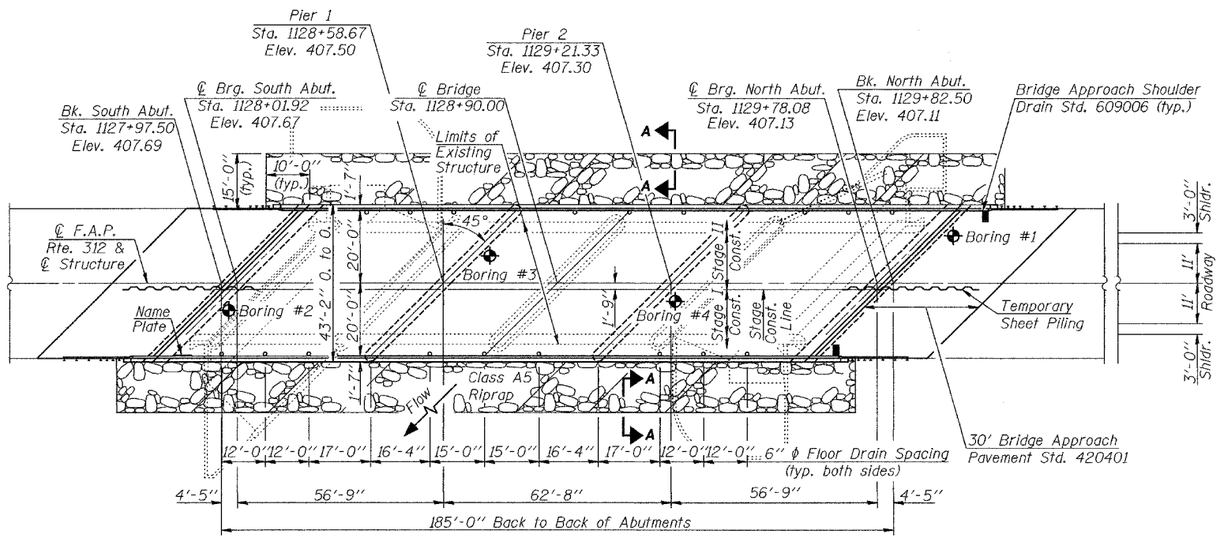


ELEVATION

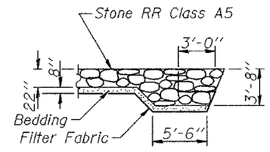
STATION 1128+90
BUILT 200 BY
STATE OF ILLINOIS
F.A.P. RT. 312 SEC. 71BR
LOADING HS20
STR. NO. 079-0048

NAME PLATE

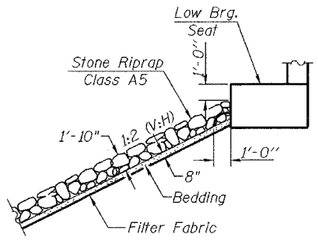
See Std. 515001



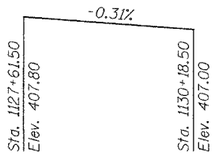
PLAN



SECTION A-A



STONE RIPRAP DETAIL



PROFILE GRADE

(along ℄ roadway)

WATERWAY INFORMATION

Drainage Area = 47.40 sq. mi. Low Grade Elev. 405.5' @ Sta. 1145+15

Flood		Freq. Yr.	Q C.F.S. Exist.	Q C.F.S. Prop.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	079-0002	50	3886	3100	533	533	400.9	2.2	1.6	403.1	402.5
	079-0003		3906	4762	715	839					
	culvert		368	298	100	100					
	total		8160	8160	1348	1472					
Base	079-0002	100	4288	3677	551	551	401.1	2.5	1.8	403.6	402.9
	079-0003		4698	5337	732	861					
	culvert		375	347	100	100					
	total		9361	9361	1383	1512					
Overtopping	079-0002	-	-	-	-	-	-	-	-	-	-
	079-0003		-	-	-	-					
	culvert		-	-	-	-					
	total		-	-	-	-					
Max. Calc.	079-0002	500	5691	4823	590	590	401.6	3.1	2.4	404.7	404.0
	079-0003		6109	7043	769	909					
	culvert		440	374	100	100					
	total		12240	12240	1459	1599					

Max. H.W.E. 400.32'

LOADING HS20-44

Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

1996 AASHTO with 1997 thru 2002 Interims

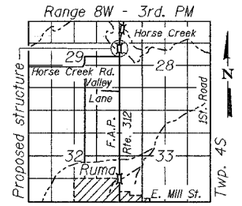
DESIGN STRESSES

FIELD UNITS

f'_c = 3500 psi
f_y = 60000 psi (reinforcement)
f_y = 50000 psi (structural steel, AASHTO M 270, Grade 50)
f_y = 36000 psi (structural steel, AASHTO M 270, Grade 36)

SEISMIC DATA

Seismic Performance Category (SPC) = B
Bedrock Acceleration Coefficient (A) = 12.3%g
Site Coefficient (S) = 1.5



LOCATION SKETCH

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{7}{8}$" ϕ open holes $\frac{15}{16}$" ϕ, unless otherwise noted.

Calculated weight of Structural Steel = 101,210 pounds (M270 Gr. 50).
= 19,100 pounds (M270 Gr. 36)

Reinforcement bars shall conform to AASHTO M31 or M322 Grade 60.

Field welding of construction accessories will not be permitted to the beams.

Anchor bolts shall be set before bolting diaphragms over supports.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. The components are the wide flange beams and all splice plate material except fill plates.

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

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of a $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$ inch adjusting shims, of the dimensions of the bottom bearing plate shall be provided for each bearing in addition to all other plates or shims. For Type 1 Elastomeric Bearing, two $\frac{1}{8}$ inch adjusting shims shall be provided for each bearing and placed as detailed.

Bridge Seat Sealer shall be applied to the seat area of the abutments.

The concrete for bridge floors finished according to Article 503.17 of the Standard Specifications, shall be placed and compacted parallel to the skew in uniform increments along centerline of bridge. The finishing machine, when required, shall be set parallel to the skew for striking off and screeding the concrete.

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 final finish coat for all steel surfaces shall be gray, Munsell No. 5B 7/1. See Special Provision for "Cleaning and Painting New Metal Structures".

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

The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M270 Grade 50.

All construction joints shall be bonded.

DESIGNED	Jennifer Kramer
CHECKED	Tom Kaintzbach
DRAWN	A.M. Seiber
CHECKED	JEE / RK

January 26 2006
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

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

EXPIRES 11-30-2006

GENERAL PLAN
ILLINOIS ROUTE 3 OVER HORSE CREEK
F.A.P. RTE. 312-SECTION 71BR
RANDOLPH COUNTY
STA. 1128+90
STRUCTURE NO. 079-0048