

CONTRACT NO. 91314

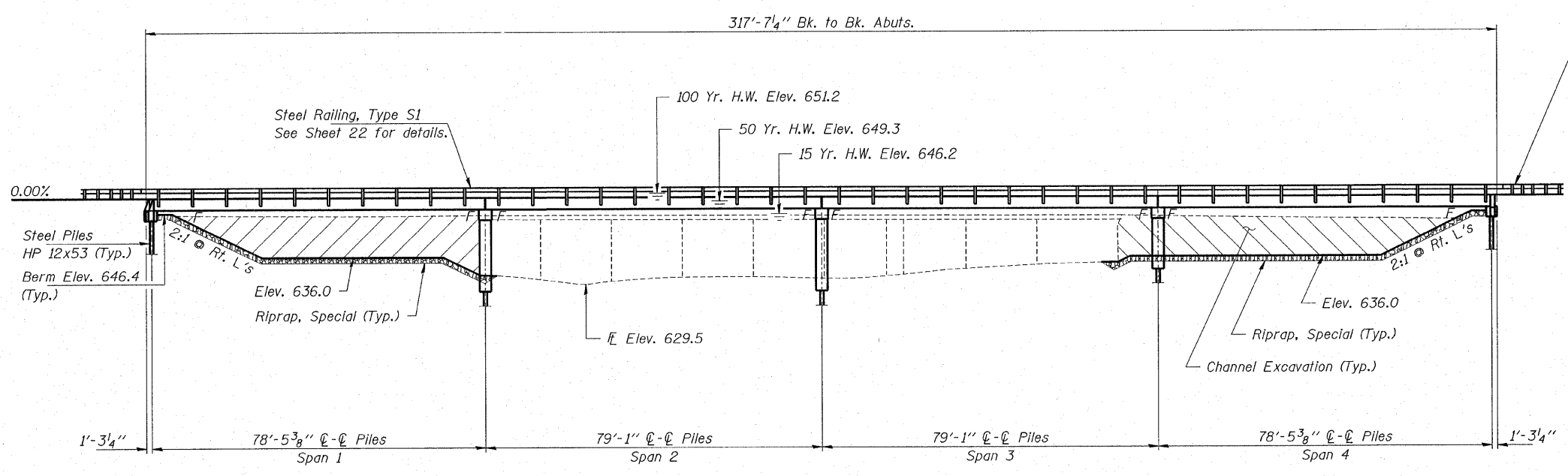
GENERAL NOTES

Layout of riprap may be varied in the field to suit ground conditions as directed by the Engineer.
 The Contractor shall drive two steel test piles in permanent locations, one at the South Abutment and one at Pier 3, as directed by the Engineer before ordering the remainder of the piles.
 All proposed construction activity shall be in accordance with Nationwide Permit number 14 of the Department of the Army authorized under Section 404 of the Clean Water Act.
 The IEPA has issued Section 401 Water Quality Certification for this activity. See Special Provisions for conditions.
 See Sheet 26 for boring log.

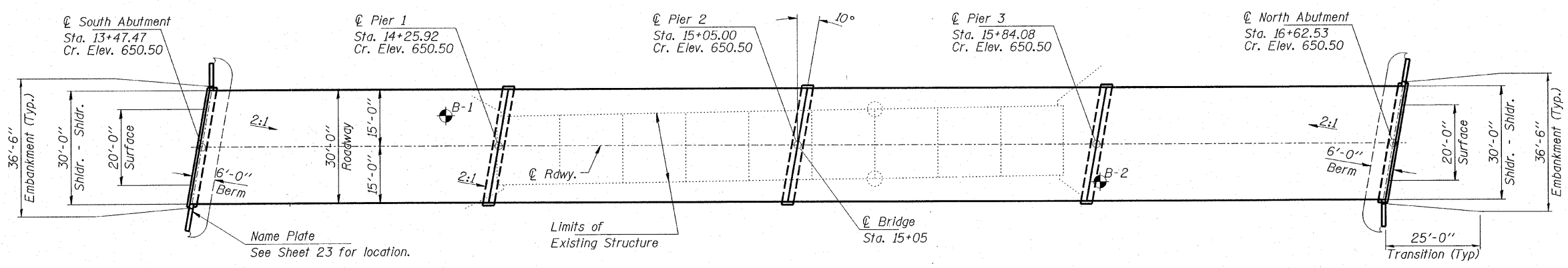
KASKASKIA RIVER
 BUILT 200 BY
 BOURBON ROAD DISTRICT
 DOUGLAS COUNTY
 SEC. 98-02120-00-BR
 F.A. PROJECT BR-05-04186
 STR. NO. 021-4544 LOADING HS 20

NAME PLATE

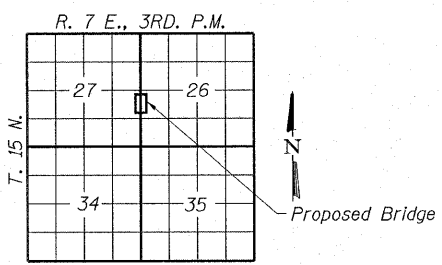
See Std. 515001



ELEVATION



PLAN



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area = 355.0 Sq. Mi. Low Grade Elev. 649.0 @ Sta. 20+00 - 25+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Natural Head - Ft.		Headwater El.		
			Exist.	Prop.	H.W.E. Exist.	Prop.	Exist.	Prop.	
	10	10000	1820	3090	645.1	1.3	0.5	646.4	645.6
Design	15	10730	1820	3410	646.2	0.8	0.5	647.0	646.7
Base	100	15760	1820	3980	651.2	0.0	0.1	651.2	651.3
Overtopping	50	14120	1820	3980	649.3	0.2	0.2	649.5	649.5

- Approach Openings:
- 585 Sq. Ft.
 - 1,380 Sq. Ft.
 - 9,070 Sq. Ft.
 - 5,200 Sq. Ft.
 - 2,560 Sq. Ft.
 - 140 Sq. Ft.

DESIGN STRESSES

f'c = 5,000 psi (Prestressed Beams)
 f'ci = 4,000 psi (Prestressed Beams)
 fc = 1,400 psi (Class SI Concrete)
 f's = 270,000 psi (1/2" Low Lax. Strands)
 fsi = 201,960 psi (1/2" Low Lax. Strands)
 fs = 20,000 psi (Reinf. Bars - Field Units)
 fy = 60,000 psi (Reinf. Bars - Precast Units)
 n = 9 (Class SI Concrete)
 Loading HS 20-44

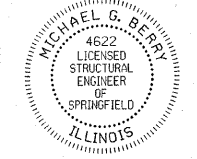
Design Specifications: 2002 AASHTO and all applicable Interims 25#/Sq. Ft. included in dead load for future wearing surface.

SEISMIC DATA

Seismic Performance Category (SPC) = A
 Bedrock Acceleration Coefficient (A) = 0.05
 Site Coefficient (S) = 1.5

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current "AASHTO Standard Specifications for Highway Bridges".

Michael G. Berry 1/14/06
 ILLINOIS STRUCTURAL NO. 4622



Expires 11-30-06

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Precast Prestressed Concrete Deck Beams (33" Depth)	Sq. Ft.	9,480		9,480
Concrete Structures	Cu. Yd.		185.9	185.9
Reinforcement Bars	Pound		12,770	12,770
Steel Railing, Type S1	Foot	641		641
Name Plates	Each		1	1
Riprap, Special	Ton		1,700	1,700
Steel Piles, HP 12X53	Foot		1,160	1,160
Test Pile Steel HP 12X53	Each		2	2
Underwater Structure Excavation Protection L-1	Each		1	1
Underwater Structure Excavation Protection L-2	Each		1	1
Underwater Structure Excavation Protection L-3	Each		1	1

HLR
 Rice, Berry and Associates
 A Division of Hampton, Lenzini and Renwick, Inc.
 Civil & Structural Engineers
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 Suite 201
 Springfield, Illinois 62703
 217-546-3400
 P.O. Box 1036
 DuQuoin, Illinois 62832
 618-790-4637
 Account Number 12-30-0008-1
 Date: 01-05-06
 DESIGNED: S.W.M. CHECKED: T.P.L. DRAWN: D.B.

GENERAL PLAN AND ELEVATION
 SECTION 98-02120-00-BR
 BOURBON ROAD DISTRICT
 DOUGLAS COUNTY
 STATION 15+05