85369

Existing Structure: S.N. 052-3510
Two-Span (2 @ 51'-9") R.C. Deck on Steel Stringers Supported by Closed Concrete Abutments and a Reinforced Concrete Pier.
~~No Salvage~~ See Plan & Profile for Location of Existing Structure. Existing Structure to be Removed by others.

2-27-06

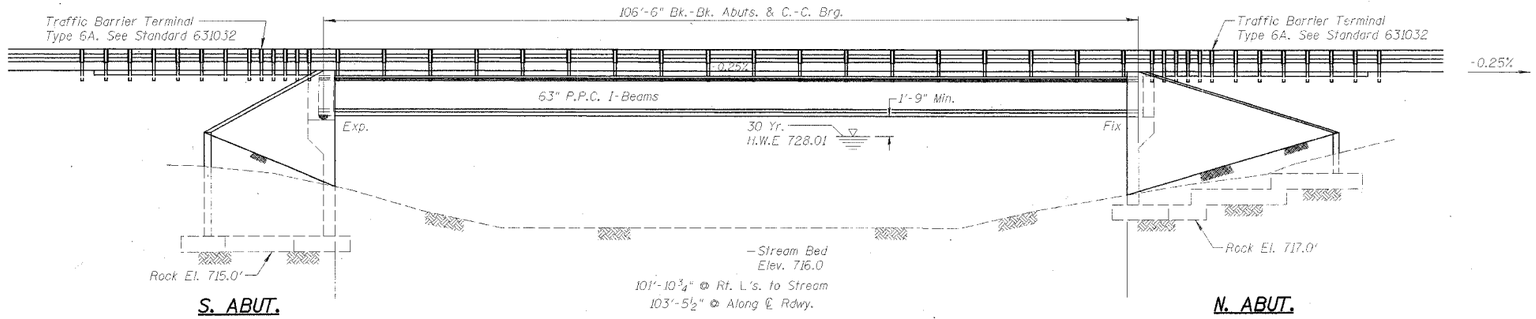
Bench Mark: #1 Sta. 12+21.29 Lt. 30.53'
R.R. Spike in P.P.
Elev.=736.91

Bench Mark: #2 Sta. 16+98.27 Rt. 119.37'
R.R. Spike in P.P.
Elev.=736.96

Bench Mark: #3 Sta. 20+71.45 Rt. 111.99'
Chiseled "□" on NW Wingwall of Exist. Bridge. Elev.=735.68

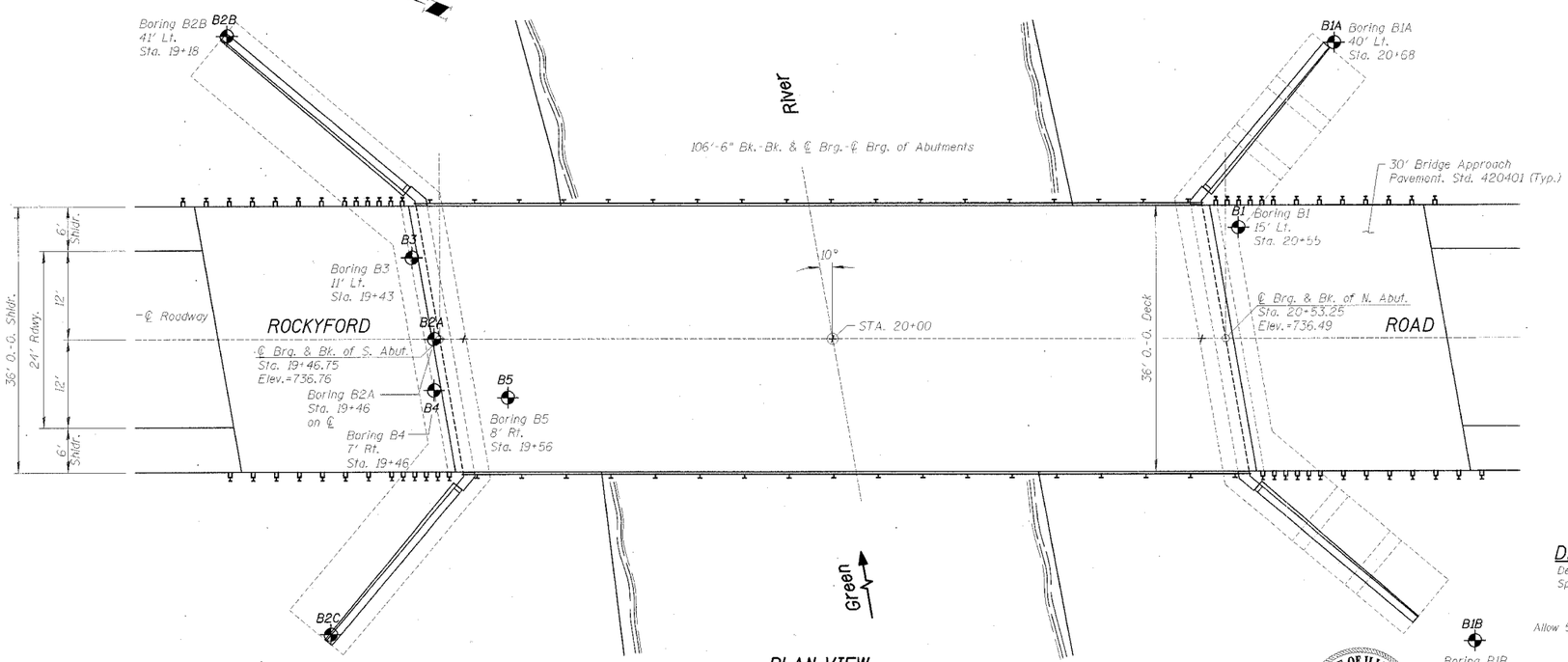
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I.				
F.A. ~~STR.~~	01-00282-00-BR	LEE	51	15
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

STRUCTURAL SHEET 1 OF 15



ELEVATION VIEW

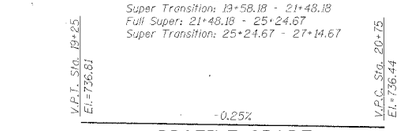
(Dimensions Along ℄ Roadway Unless Noted Otherwise)



PLAN VIEW

HORIZONTAL CURVE DATA

P.I. Sta.=23+44.65
S.E.=0.08 Ft./Ft.
P.C. Sta.=20+84.85
P.T. Sta.=25+88.00
S.E. Transition=190'
Super Transition: 19+58.18 - 21+48.18
Full Super: 21+48.18 - 25+24.67
Super Transition: 25+24.67 - 27+14.67



PROFILE GRADE

(Along ℄ Roadway)

BILL OF MATERIAL - BRIDGE

ITEM	UNIT	SUB	SUPER	TOTAL
Porous Granular Backfill	Cu. Yd.	102	———	102
2-27-06 ~~Removal of Existing Structure~~	Each	1	———	1
Structure Excavation	Cu. Yd.	433	———	433
Rock Excavation for Structures	Cu. Yd.	63	———	63
Concrete Structures	Cu. Yd.	267.5	———	267.5
Concrete Superstructure	Cu. Yd.	———	159.5	159.5
Bridge Deck Grooving	Sq. Yd.	———	411	411
Elastomeric Bearing Assembly, Type I	Each	———	6	6
Furnishing & Erecting PPC Bulb T Beams, 63"	Foot	———	647	647
Reinforcement Bars, Epoxy Coated	Pound	30500	26250	56750
Steel Bridge Rail, Type SM	Foot	———	206	206
Name Plates	Each	———	1	1
Permanent Survey Markers, Type I	Each	———	1	1
Bar Splicers	Each	———	74	74

GENERAL NOTES

See proposal for boring data.

The back face of Closed Abutments and their Wingwalls (or Retaining Walls) shall be waterproofed according to Article 503.18 of the Standard Specifications.

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" 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 I Elastomeric Bearings, two 1/8" adjusting shims shall be provided for each bearing and placed as detailed).

The contractor shall make allowance for deflection of forms, shrinkage, & settlement of falsework, in addition to the allowance for dead load deflection.

Bearings shall be AASHTO M270 Grade 50 Steel.

All elastomeric bearing assemblies & connection plates shall be hot dipped galvanized in accordance with AASHTO M232 and in accordance with Article 506.04 of Standard Specifications.

The Contractor shall backfill behind abutment and wingwalls to seat elevation height prior to erecting beams.

DESIGN SPECIFICATIONS

Design In Accordance With 2002 AASHTO Specifications.

LOADING HS20-44

Allow 50#/Sq. Ft. For Future Wearing Surface

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.035
Site Coefficient (S) = 1.2

DESIGN STRESSES

FIELD UNITS

f'_c = 3,500 psi
f_y = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'_c = 6,000 psi
f'_{ci} = 5,000 psi
f'_s = 270,000 psi (½" ϕ Low Lax Strands)
f'_{si} = 201,960 psi (½" ϕ Low Lax Strands)

ROCKYFORD ROAD OVER GREEN RIVER
BUILT 2006 BY
LEE COUNTY
SECTION 01-00282-00-BR
C.H. 33 STA. 20+00
STR. NO. 052-3512 LOADING HS20

NAME PLATE LETTERING

Refer to Std. 515001

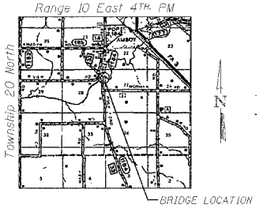
WATERWAY INFORMATION

DRAINAGE AREA	188 Sq. Mi.
DESIGN DISCHARGE (30 YR.)	8340 C.F.S.
EXISTING OPENING	1012 Sq. Ft.
REQUIRED OPENING	1012 Sq. Ft.
PROPOSED OPENING	1081 Sq. Ft.
CREATED HEAD (30 YR.)	< 0.5'
100 YR. DISCHARGE	10050 C.F.S.
CREATED HEAD (100 YR.)	< 1.0'
HIGH WATER ELEV. (100 YR.)	728.96 Ft.

STATE OF ILLINOIS
BRIAN K. CONVERSE
081-005213
LICENSED STRUCTURAL ENGINEER
DIXON, IL

Brian K. Converse
DATE: 10/21/05
EXPIRES 11/30/06

"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'."



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
SECTION 01-00282-00-BR
ROCKYFORD ROAD over GREEN RIVER
STA. 20+00 (S.N. 052-3512)
LEE COUNTY

WILLETT HOFMANN & ASSOCIATES, Inc.
Consulting Engineers
WHA # 1154D03

Design By: B.K. Converse Date: 9/04
Checked By: M.R. Leslie Date: 11/04
Drawn By: R.D. Allen Date: 10/04