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- BLR 22-4 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

3R GUIDELINES  
CLEAR ZONE: 20' & VAR  
DESIGN SPEED: 50 MPH

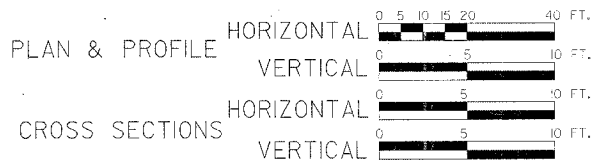
FUNCTIONAL CLASSIFICATION	HIGHWAY	ADT/YEAR	% TRUCKS
MAJOR COLLECTOR (RURAL)	ROCKYFORD ROAD	950/2024	4%
LOCAL	RIVER VIEW ROAD	120/2024	1%
LOCAL	NEWMAN ROAD	<50/2024	<1%

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
PLANS FOR  
PROPOSED LOCAL AGENCY IMPROVEMENT  
FEDERAL-AID BRRP PROJECT

SUMMARY OF QUANTITIES  
CONSTRUCTION TYPE CODE: X081-2A

CODE NO.	ITEM	UNIT	QUANTITY
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNITS	53
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNITS	419
20200100	EARTH EXCAVATION	CU YD	8,912
20201200	REMOVE AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	908
20400800	FURNISHED EXCAVATION	CU YD	741
20900110	POPOUS GRANULAR BACKFILL	CU YD	102
25000300	SEEDING, CLASS 1	ACRE	5.30
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	477
25000500	PHOSPHOROUS FERTILIZER NUTRIENT	POUND	477
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	477
25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	5.30
25100115	MULCH METHOD 2	ACRE	5.30
25100630	FROSION CONTROL BLANKET	SO YD	1,785
28000300	TEMPORARY DITCH CHECKS	EACH	15
28000400	PERIMETER EROSION BARRIER	FOOT	600
28000500	INLET AND PIPE PROTECTION	EACH	3
28100705	STONE DUMPTO RIPRAP, CLASS A3	SO YD	37
31100100	SUB BASE GRANULAR MATERIAL, TYPE B	TON	4,684
35100100	AGGREGATE BASE COURSE, TYPE A	TON	2,945
40500300	BITUMINOUS MIXTURE COMPLETE	TON	344
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	4,974
40600300	AGGREGATE PRIME COAT	TON	15
42001165	BRIDGE APPROACH PAVEMENT	SO YD	240
48100100	AGGREGATE SHOULDERS, TYPE A	TON	1,282
50200100	STRUCTURE EXCAVATION	CU YD	433
50200400	ROCK EXCAVATION FOR STRUCTURES	CU YD	63
50300225	CONCRETE STRUCTURES	CU YD	267.5
50300255	CONCRETE SUPERSTRUCTURES	CU YD	159.5
50300280	BRIDGE DECK GROOVING	SO YD	411
50300310	ELASOMERIC BEARING ASSEMBLY, TYPE I	EACH	4
50400735	F & E PPC BULB T BEAMS, 63"	FOOT	647
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	56,750
50901005	STEEL BRIDGE RAIL, TYPE SM	FOOT	205
51500100	NAME PLATES	EACH	1
542A0223	PIPE CULVERTS, CLASS A, TYPE 1 18"	FOOT	68
542A0473	PIPE CULVERTS, CLASS A, TYPE 1, EQUIVALENT ROUND-SIZE 18"	FOOT	36
54200220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	236
54213663	PRECAST REINFORCED CONCRETE FLARED END SECTIONS 18"	EACH	2
54214503	PRECAST REINFORCED CONCRETE FLARED END SECTIONS, EQUIVALENT ROUND-SIZE 18"	FOOT	2
63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	225
63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4
63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	581
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	30
66700205	PERMANENT SURVEY MARKERS, TYPE 1	EACH	1
67100100	MOBILIZATION	L SUM	1
70101700	TRAFFIC CONTROL AND PROTECTION	L SUM	1
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	1,042
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SO FT	347
78000200	THERMOPLASTIC PAVEMENT MARKING LINE - 4"	FOOT	41,440
78200495	BIDIRECTIONAL GUARD RAIL REFLECTORS	EACH	12
78201000	TERMINAL - MARKER DIRECT APPLIED	EACH	4
74066414	BITUMINOUS CONCRETE SURFACE COURSE, SUPERPAVE, MIX "C", NSD	TON	1,710
20002600	BAR SPLICERS	EACH	74
20005400	BREAKER-RUN CRUSHED STONE	TON	1,861

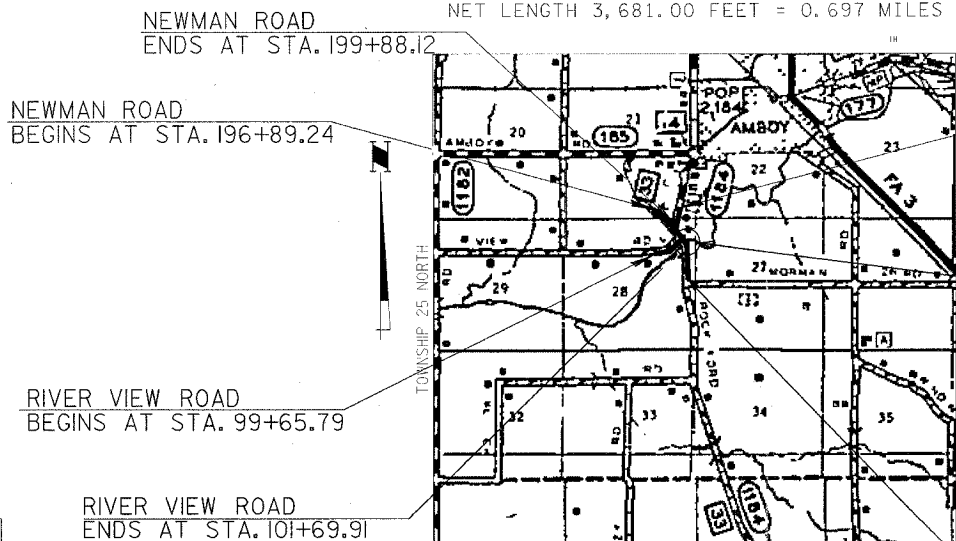
LOCATION MAP SCALE 0 1 2 MILES



BRIDGE REPLACEMENT & REHABILITATION PROGRAM

C.H. 33, FAS 1184  
SECTION 01-00282-00-BR  
ROCKYFORD ROAD  
LEE COUNTY  
PROJECT BR-OS-103(135)  
JOB NO. C-92-067-05  
CONTRACT NO. 85369  
2005

NET LENGTH 3,681.00 FEET = 0.697 MILES



SECTION 01-00282-00-BR ENDS AT STA. 42+00

SECTION 01-00282-00-BR  
REMOVE EXISTING TWO-SPAN (2 @ 51'-9") REINFORCED CONCRETE DECK ON STEEL STRINGERS AT STATION 20+00. NO SALVAGE, AND REPLACE WITH A SINGLE SPAN (1 @ 106'-6") REINFORCED CONCRETE DECK ON 63" P.P.C. BULB T-BEAMS SUPPORTED BY CLOSED ABUTMENT AT STATION 20+00.

Existing structure to be removed by others 2-27-06

SECTION 01-00282-00-BR BEGINS AT STA. 10+22

\* SPECIALTY ITEM

APPROVED: OCTOBER 21st 20 05  
Kevin H. Lewis  
LOCAL AGENCY OFFICIAL

PASSED: November 1st 20 05  
John C. Peltz  
DISTRICT ENGINEER OF LOCAL ROADS & STREETS

APPROVED: November 1st 20 05  
FOR BIDDING: John C. Peltz  
DISTRICT ENGINEER

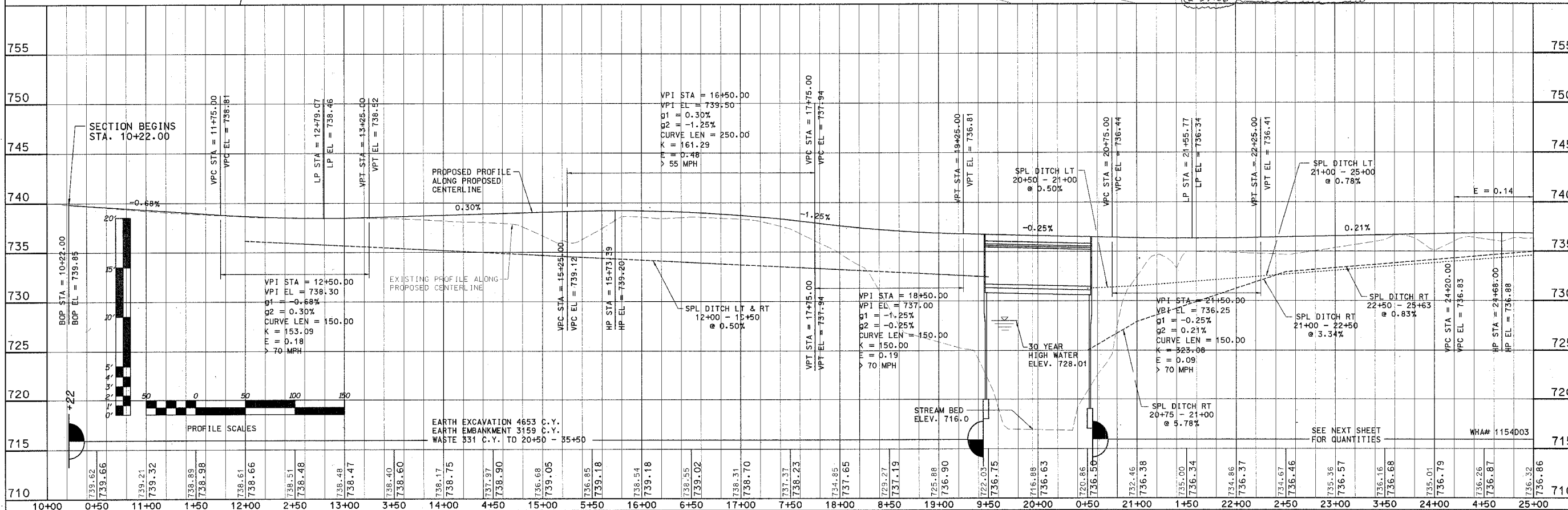
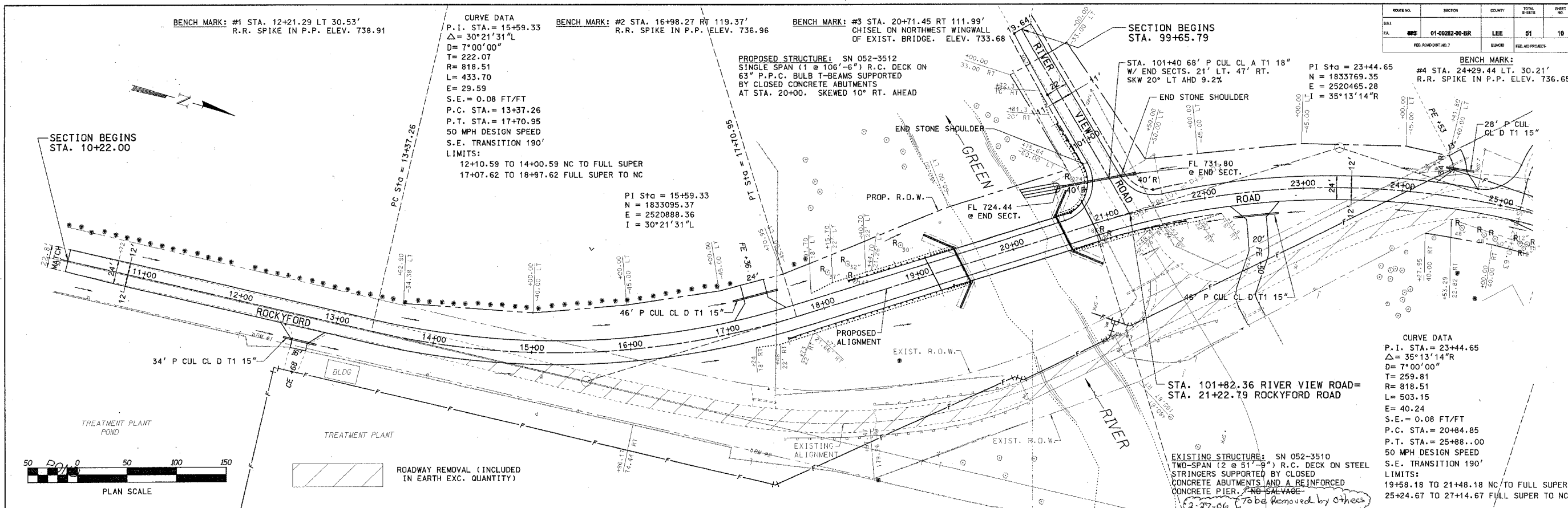
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

33332 REGISTERED PROFESSIONAL ENGINEER  
J. H. HOFMANN  
10/14/05  
10/14/05



PREPARED BY  
**WILLETT HOFMANN & ASSOCIATES, INC.**  
CONSULTING ENGINEERS  
Land Surveying - Transportation - Structural - Environmental - Architecture  
809 East Second Street  
Dixon, Illinois 61021  
Phone: 815-284-3381

REV. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
01	01-00282-00-BR	LEE	51	10
REV. ROAD DIST. NO. 7		SUNSHINE		REV. ROAD PROJECT



**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.  
See Plan & Profile for Location of Existing Structure. Existing Structure to be Removed by Others.

**Bench Mark:** #1 Sta. 12+21.29 Rt. 30.53'  
R.R. Spike in P.P.  
Elev.=738.91

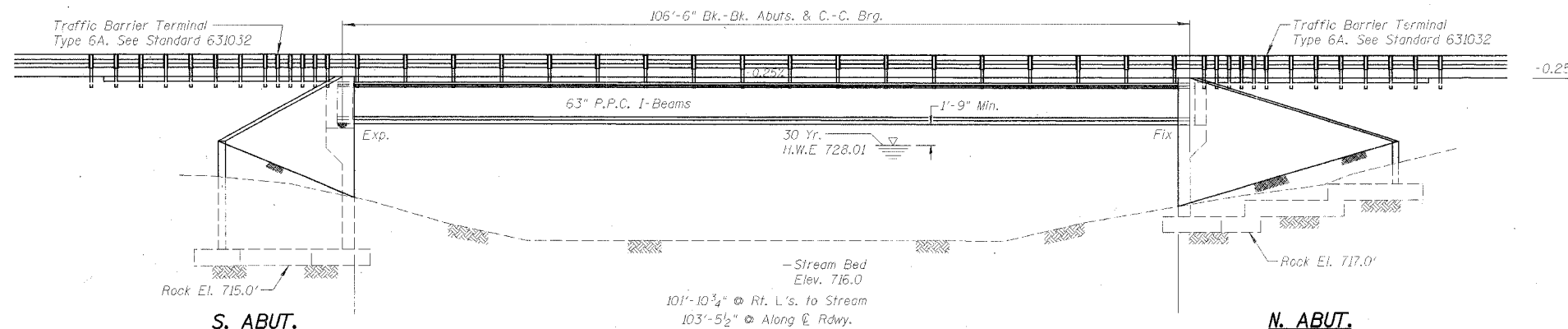
**Bench Mark:** #2 Sta. 16+98.27 Rt. 119.37'  
R.R. Spike in P.P.  
Elev.=736.96

**Bench Mark:** #3 Sta. 20+71.45 Rt. 111.99'  
Chiseled "C" on NW Wingwall of Exist. Bridge. Elev.=733.68

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
201	01-00282-00-BR	LEE	51	15
FED. ROAD DIST. NO. 7		PROJECT	FED. NO. PROJECT	

STRUCTURAL SHEET 1 OF 15

2-27-06

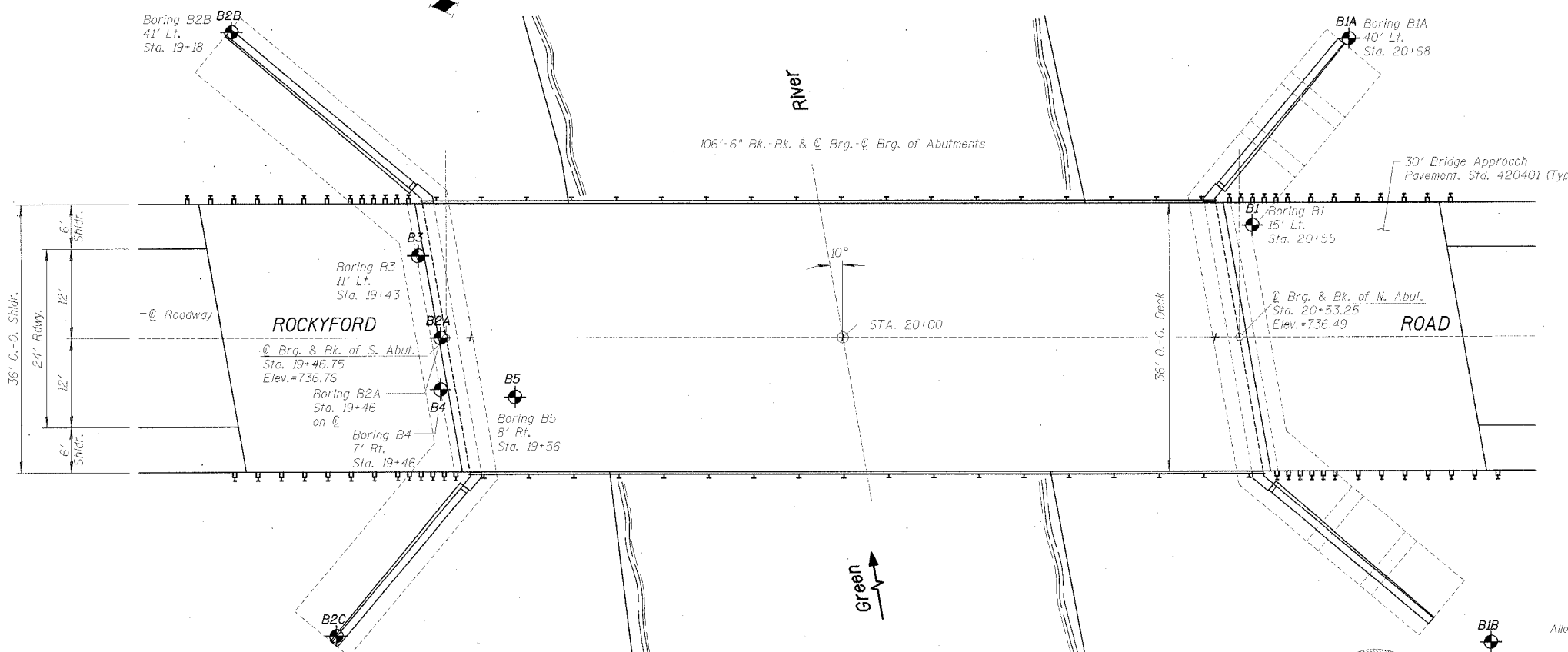


**ELEVATION VIEW**  
(Dimensions Along & Roadway Unless Noted Otherwise)

**BILL OF MATERIAL - BRIDGE**

ITEM	UNIT	SUB	SUPER	TOTAL
Porous Granular Backfill	Cu. Yd.	102	---	102
Removal of Existing Structure	Each	---	---	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

2-27-06



**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)

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.

**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)

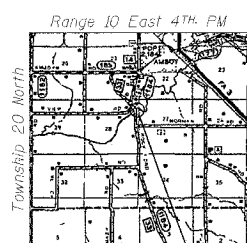
**PRECAST PRESTRESSED UNITS**

$f'_c = 6,000$  psi  
 $f_y = 5,000$  psi  
 $f'_s = 270,000$  psi ( $f'_s$  # Low Lax Strands)  
 $f'_s = 201,960$  psi ( $f'_s$  # Low Lax Strands)



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**

**WILLET**  
**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