

ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
F.A.P. 877		WHITE	7	1
FED. ROAD DIST. NO. 7	ILL. ROAD DIST. NO.	PROJECT		

\*(101BR-3) I-1

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

F.A.P. ROUTE 877 (ILL. ROUTE 141)

(101BR-3)I-1

WHITE COUNTY

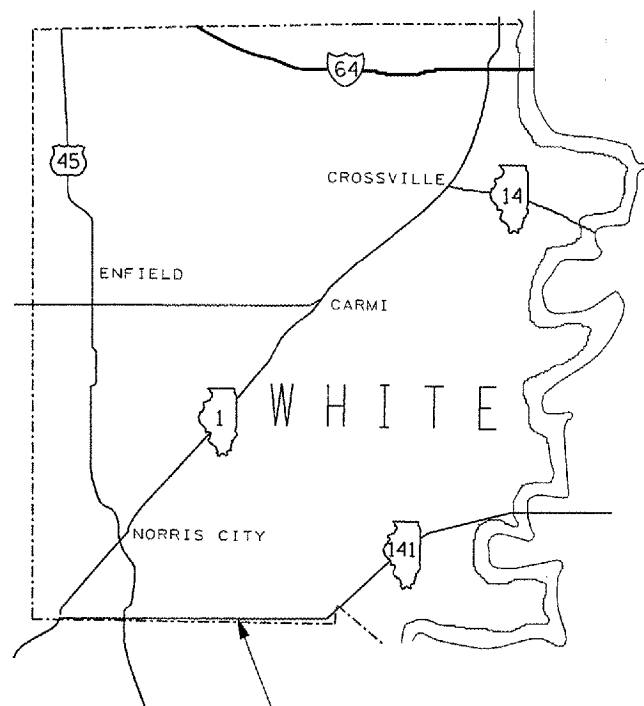
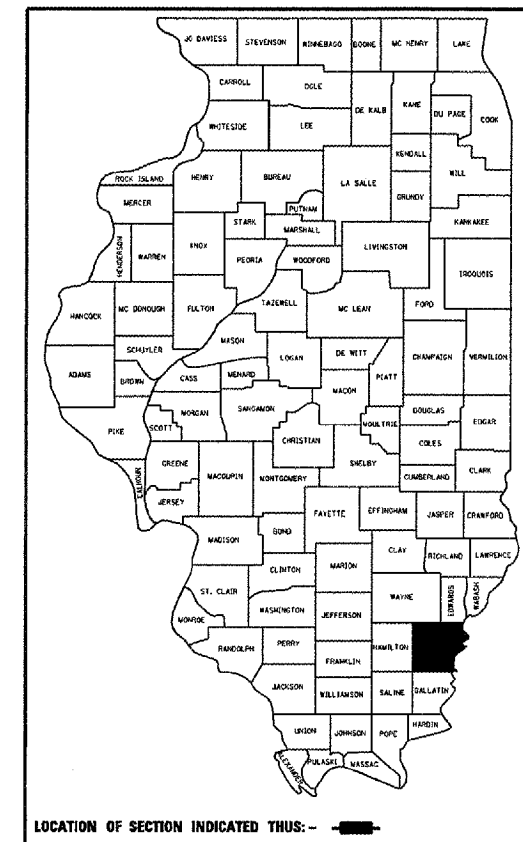
C-99-003-07

INDEX OF SHEETS

- 1 COVER SHEET
- INDEX OF SHEETS, STANDARDS
- 2 GENERAL NOTES, PLAN AND ELEVATION, GENERAL NOTES  
SUMMARY OF QUANTITIES
- 3 BEAM REMOVAL DETAIL
- 4 BEAM DETAILS
- 5 TEMPORARY CONCRETE BARRIER
- 6 WIDE LOAD DETOUR SIGNS

STANDARDS

- 701201-02 LANE CLOSURE, 2L, 2W, DAY ONLY  
701321-08 LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER  
702001-06 TRAFFIC CONTROL DEVICES



IMPROVEMENT LOCATION  
STRUCTURE 097-0037  
PPC DECK BEAM REPLACEMENT

HERALDS PRAIRIE TOWNSHIP  
2005 ADT = 2200  
POSTED SPEED = 55 m. p. h.  
INVENTORY RATING HS 26.5  
OPERATING RATING HS 42.4

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED Oct 12 2006  
May C. Hamel  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 8, 2006  
Eric E. Harms  
INTERIM ENGINEER OF DESIGN AND ENVIRONMENT

December 8, 2006  
Milton R. Sees P.E.  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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OF THE STATE OF ILLINOIS**

PROJECT ENGINEER: CASEY TECKENBROCK  
SQUAD LEADER: RITA GAUTNEY  
(618) 549-2171  
CENTREX 782-4554

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	LETS	SHEET
F.A.P. 877	*	WHITE	7	2

FED. ROAD DIST. NO. 7  
ILLINOIS PROJECT  
•(101BR-3) I-1

**GENERAL NOTES**

Any time the concrete barrier is not in the proper position, flaggers shall be in place to control traffic, and the temporary traffic signals shall be set to flash all red.

Factors used for quantity calculation are as follows:

- All bituminous concrete.....2.016 tons/cu. yd.
- Bituminous Materials:
  - On Pavement.....0.09 gal./sq. yd.
  - Aggregate (Prime Coat).....0.0015 tons/sq. yd.

While signal heads are mounted in place, but not yet in operation, they shall be securely covered in white plastic.

"NARROW BRIDGE" signs with advisory tags "10 ft 0 in" shall be erected between one ROAD CONSTRUCTION AHEAD sign and the SIGNAL AHEAD signs. The payment for these signs is included in payment for traffic control standard 701321and will not be paid for separately.

**HOT-MIX ASPHALT DESIGN**

LOCATION:	HOT-MIX ASPHALT SURFACE COURSE
MIXTURE USE(S):	HOT-MIX ASPHALT CONCRETE SURFACE COURSE, MIX C, N90
AC/PG:	PG64-22
RAP % (MAX):	10
DESIGN AIR VOIDS:	4.0%, 90 GYRATION SUPERPAVE DESIGN
MIXTURE COMPOSITION: (GRADATION MIXTURE)	IL - 9.5 mm OR IL 12.5 mm
FRICTION AGGREGATE:	C SURFACE

**PAINT PAVEMENT MARKING - LINE 4"**

YELLOW	91 FT.
WHITE	164 FT.

Prepared By: *Kevin Hammer*  
DISTRICT OPERATIONS ENGINEER

Examined By: *Wanda Clayton*  
ASSISTANT REGIONAL ENGINEER

Examined By: *James Eng*  
DISTRICT LAND ACQUISITION ENGINEER

Examined By: *Carrie Nelson*  
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: *Joe G. Hendrickson*  
DISTRICT STUDIES & PLANS ENGINEER

Examined By: *Joseph L. Quinn*  
DISTRICT CONSTRUCTION ENGINEER

Examined By: *Bruce Smith*  
DISTRICT MATERIALS ENGINEER

Examined By: *J. Smith*  
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Approved By: *Mary C. Lewis*  
DEPUTY DIRECTOR OF HIGHWAYS,  
REGION ENGINEER

Oct 12 2006  
DATE



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		White	7	4
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT

SHEET NO. 1  
2 SHEETS

Contract Number: 98988

**GENERAL NOTES**

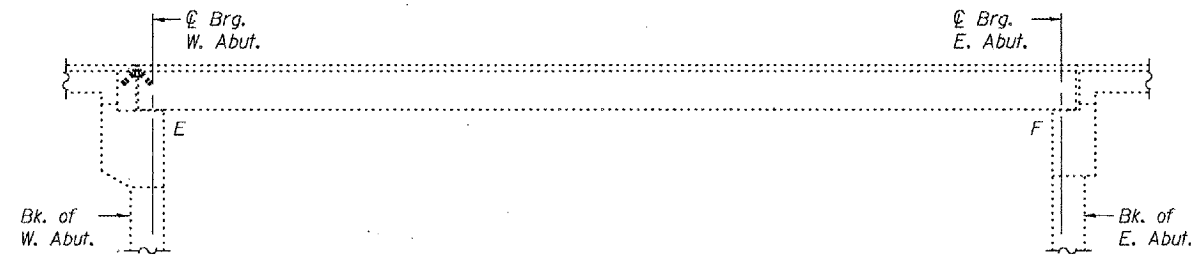
Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of "Removal of Existing P.P.C. Deck Beams".

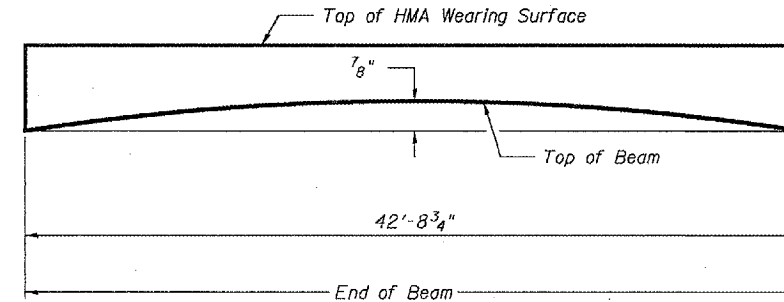
The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products. Temporary concrete barrier shall only be anchored into the overlay and not the PPC Deck Beams.

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Precast Prestressed Concrete Deck Beams.

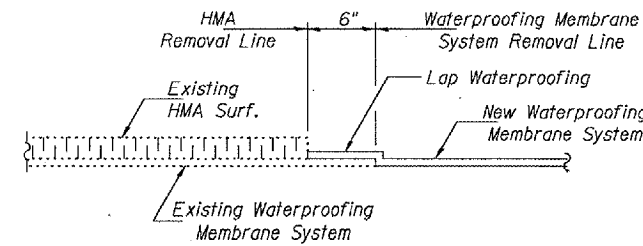
The existing structural steel coating contains lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.



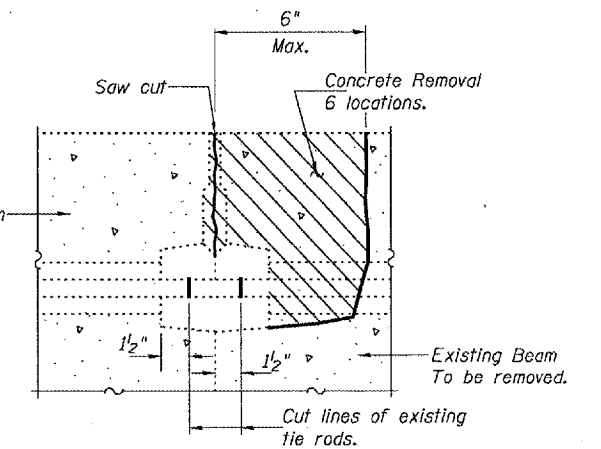
**ELEVATION**



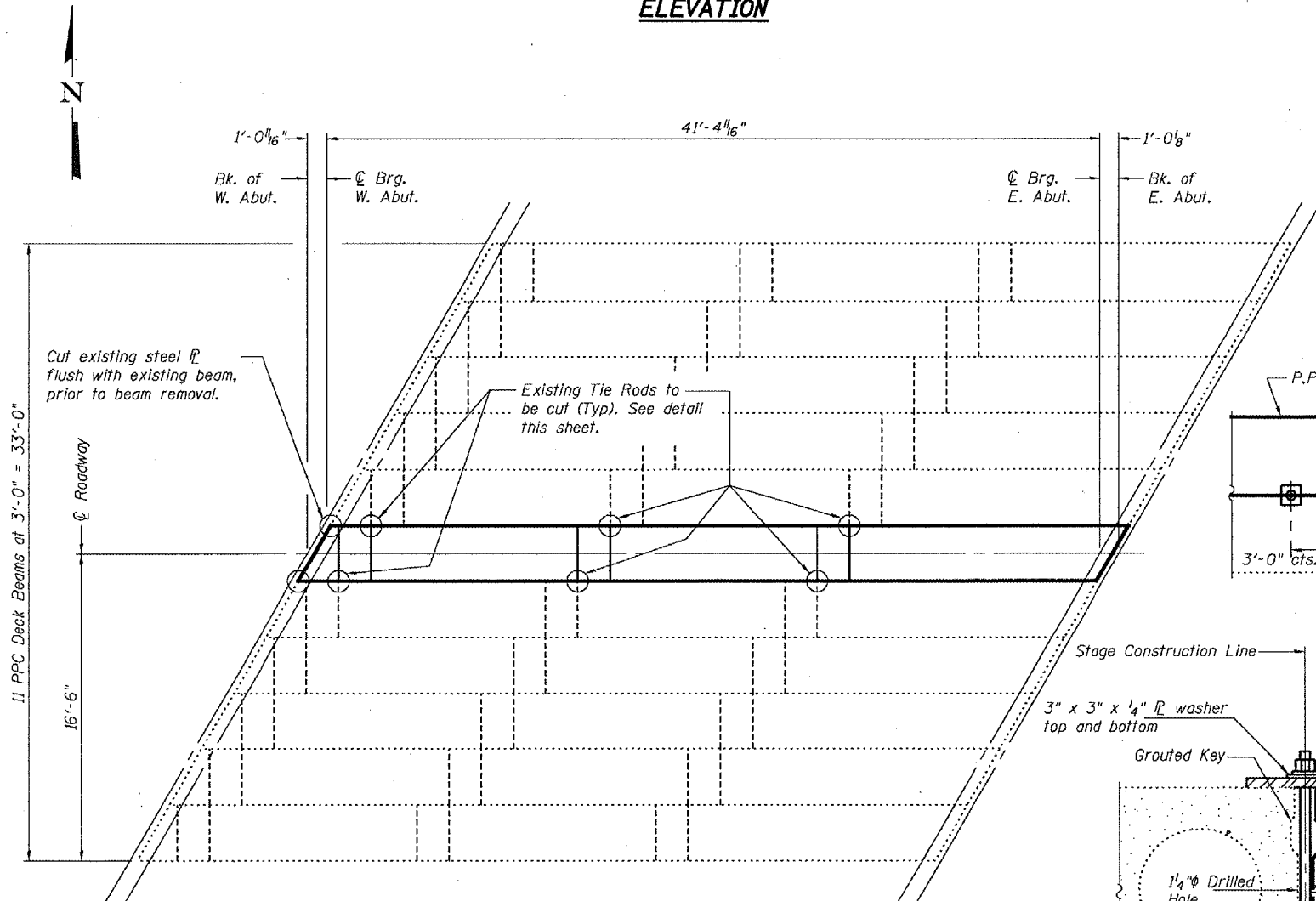
**ANTICIPATED INITIAL CAMBER DIAGRAM**



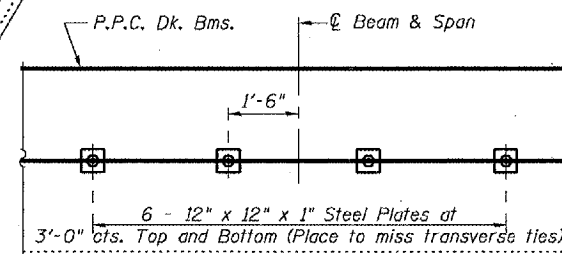
**WATERPROOFING TREATMENT**



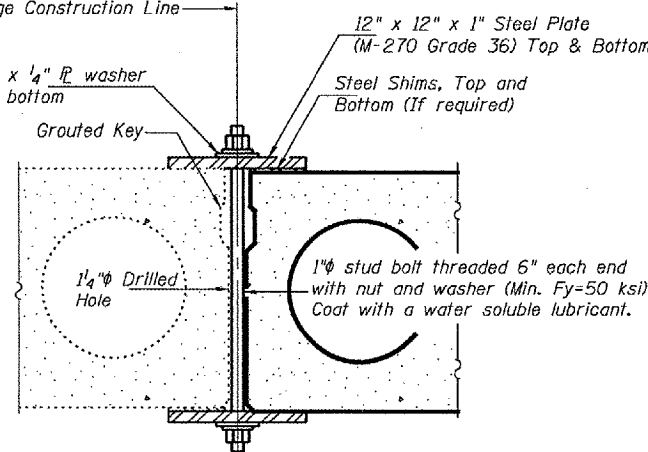
**BEAM REMOVAL DETAIL AT TRANSVERSE TIES**



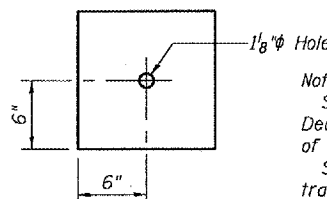
**PLAN**



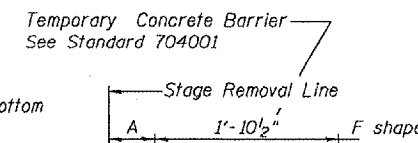
**PLAN**



**SECTION**



**CLAMPING PLATE**



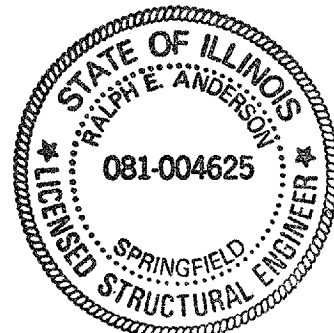
**EXISTING SLAB SECTIONS THRU SLAB**

Drill 1/4"  $\phi$  Holes for 1"  $\phi$  x 10" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier. No anchorage required if A > 3'-6".

**EXISTING SLAB SECTIONS THRU SLAB**

**DESIGN STRESSES  
PRECAST UNITS**

$f'_c = 5,000$  psi  
 $f'_{ci} = 4,000$  psi  
 $f'_s = 270,000$  psi (1/2"  $\phi$  low lax strands)  
 $f'_{si} = 201,960$  psi (1/2"  $\phi$  low lax strands)



Expires: November 30, 2008

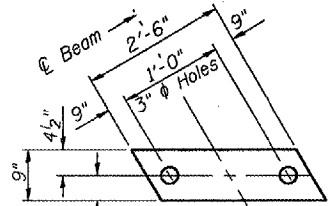
DESIGNED	Alvin T. Holloway
CHECKED	John A. Morris
DRAWN	Ralph E. Anderson
CHECKED	ATH STB

EXAMINED	November 9, 2006
PASSED	John A. Morris
	Ralph E. Anderson

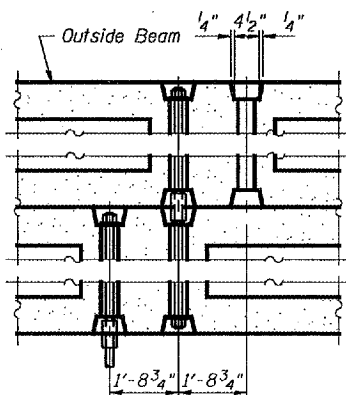
**TOTAL BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	125
Hotmix Asphalt Surface Removal	Sq. Yd.	19.2
Removal of Existing PPC Deck Beams	Sq. Ft.	128
Concrete Superstructure	Cu. Yd.	0.1
Hotmix Asphalt Surface Course, Mix "C" N50	Tons	3.2
PC Mortar Fairing Course	Foot	86
Waterproofing Membrane System	Sq. Yd.	19.2
Concrete Removal	Cu. Yd.	0.1
Asbestos Bearing Pad Removal	Each	1

**PLAN AND ELEVATION  
RT. 141 OVER CANE  
CREEK TRIB.  
WHITE COUNTY  
SN 097-0037**

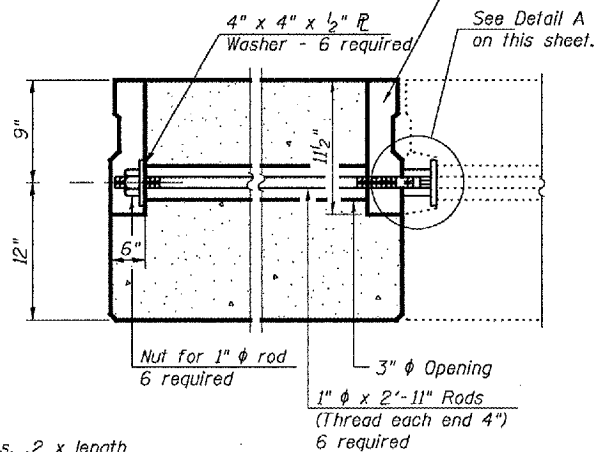


**FABRIC BEARING PAD**  
**FIXED**  
(Expansion Brg. Pad same size without the holes.)

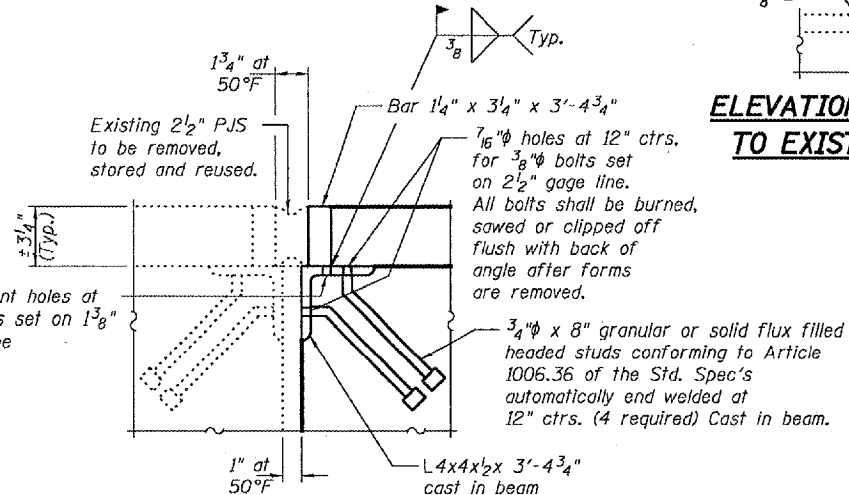


6" x 6" x 11 1/2" blackout to be filled with Class BS concrete after beams have been installed. Cost included with Concrete Superstructure.

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

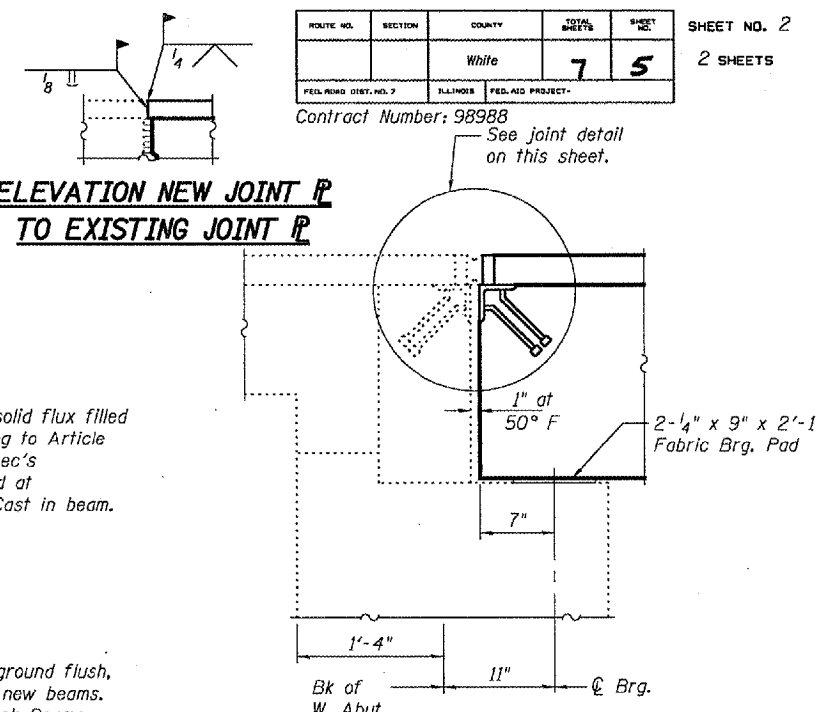


**TYPICAL TRANSVERSE TIE ASSEMBLY**

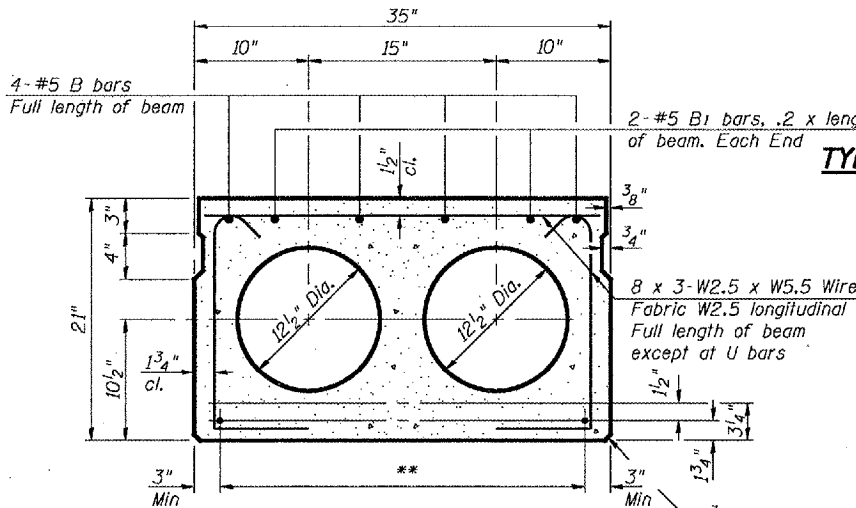


**WEST ABUTMENT JOINT DETAIL**  
(Cost included with PPC Deck Beams)

**ELEVATION NEW JOINT P TO EXISTING JOINT P**

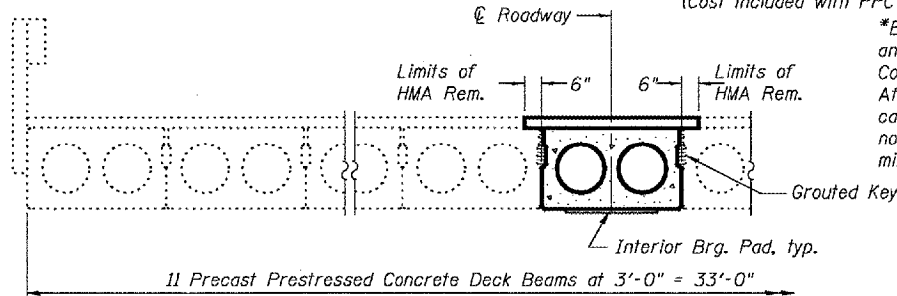


**TYPICAL WEST ABUTMENT SECTION**



**TYPICAL SECTION**

1/2" diameter Strands, Each Strand Stressed to 30,900 Lbs.  
6 - Strands 1 3/4" up, 4 - Strands 3/4" up

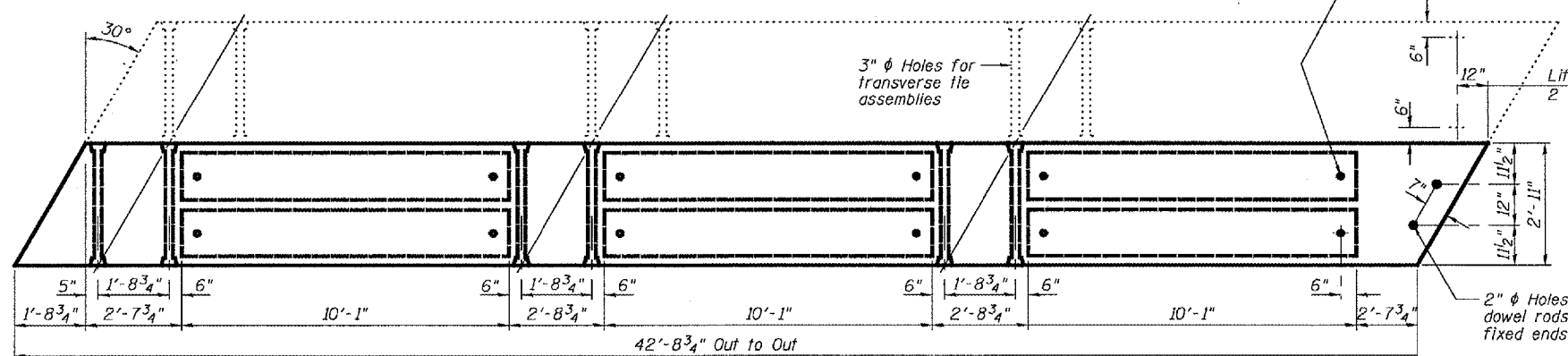


**HALF CROSS SECTION**  
(Looking East)

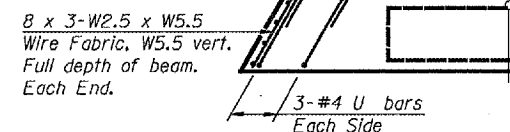
\*Existing dowel rods are to be burned off, ground flush, and sealed with epoxy prior to placement of new beams. After beams have been erected holes shall be drilled into cap and dowel rods placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure a minimum of 24 hours prior to grouting the shear keys.

**\*\* TRANSVERSE PLACEMENT GUIDELINES**

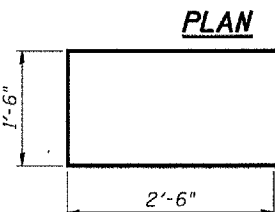
1. Place strands symmetrically about centerline of beam.
  2. The minimum distance from center to center of strands in all directions shall be 2".
  3. The minimum clearance from strand to dowel hole shall be 1/2".
  4. The minimum clearance from strand to void shall be 1/2".
- Vertical placement of strands shall not be adjusted to satisfy the above guidelines.



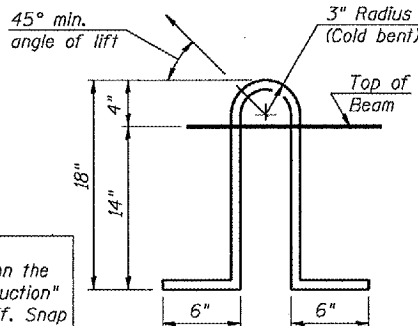
**PLAN**



**END PLAN**



**BAR U**



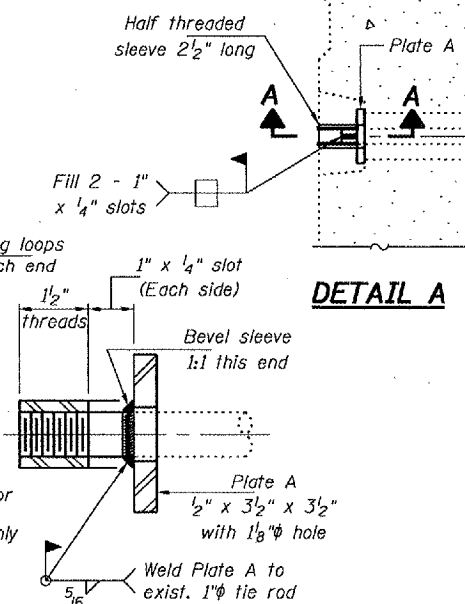
**LIFTING LOOP DETAIL**

**BILL OF MATERIAL**

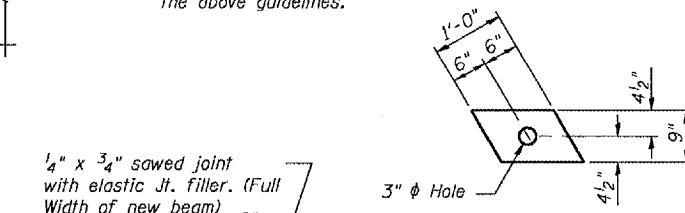
Precast Prestressed Conc. Deck Bms.	Sq. Ft.	125

**NOTES**

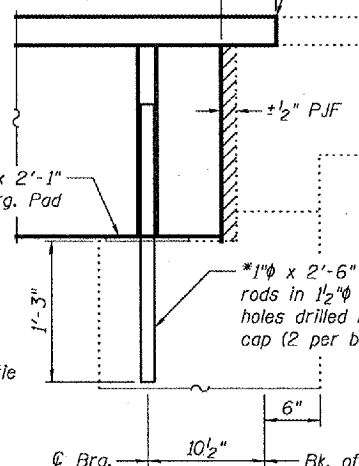
Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2 - 1/2" diameter 270 ksi strands, as shown. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions shown shall be provided for each bearing. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key. Corrosion Inhibitor, according to Articles 1020.05(b)(12) and 1021.06 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'ci, shall be 4,000 p.s.i.



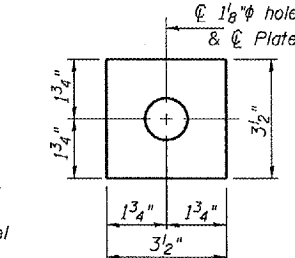
**SECTION A-A**  
(6 Required)



**ADJUSTING SHIMS**



**TYPICAL EAST ABUTMENT SECTION**



**PLATE A**  
(6 Required)

**BEAM DETAILS**  
**RT. 141 OVER CANE**  
**CREEK TRIB.**  
**WHITE COUNTY**  
**SN 097-0037**

DESIGNED	A.T.H.
CHECKED	S.J.B.
DRAWN	Drew Christopher
CHECKED	A.T.H., S.J.B.

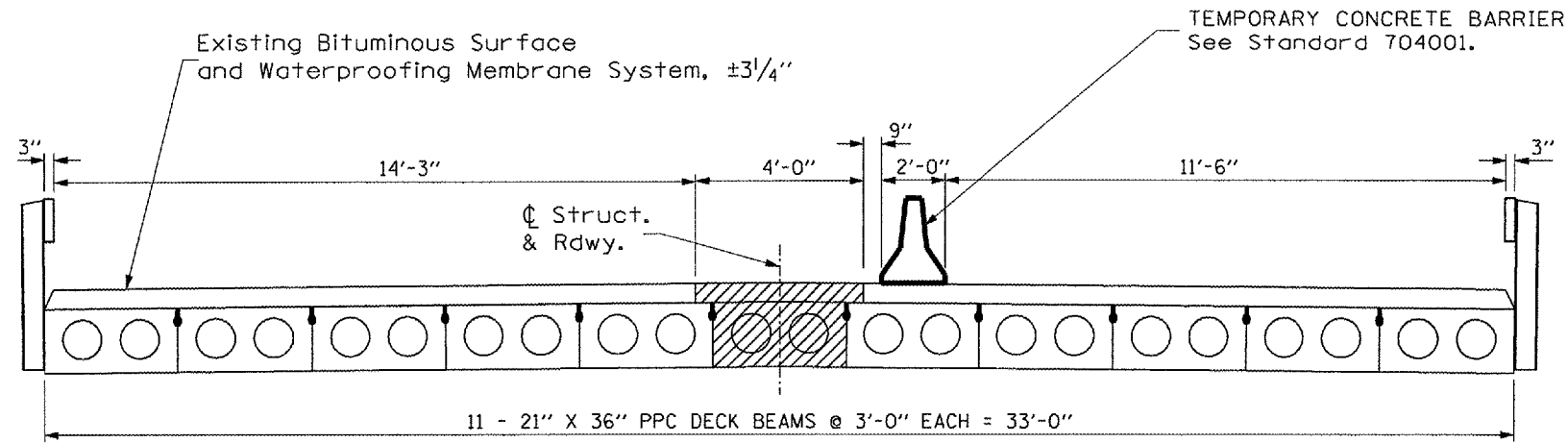
November 9, 2006  
EXAMINED *John A. Morris*  
PASSED *Ralph E. Anderson*

**STAMP AREA**  
This will not show up on the final plans when "Construction" Line Types are turned off. Snap to the Center of this rectangle to center STAMP in the area. Place STAMP on the Title Block Model.

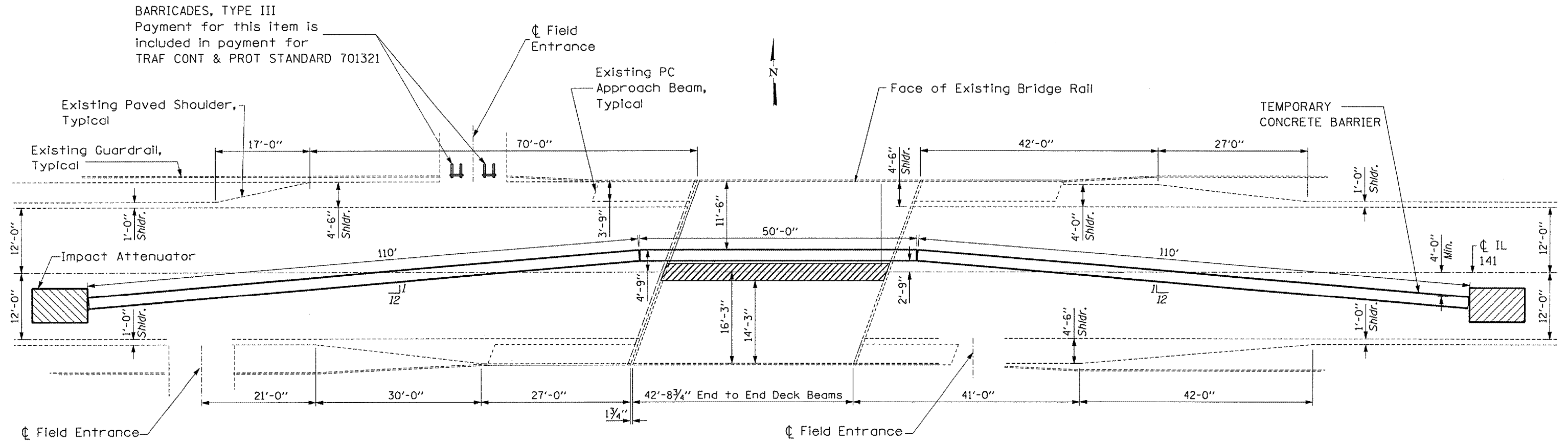
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
F.A.P. 877	.	WHITE	7	6
FED. ROAD DIST. NO. 7	ILLINOIS	PROJECT		

•(101BR-3) 1-1



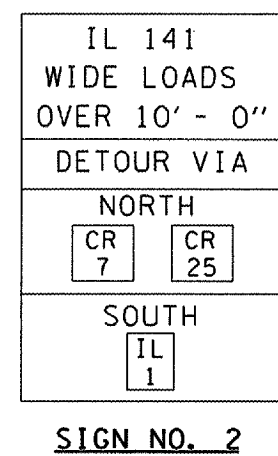
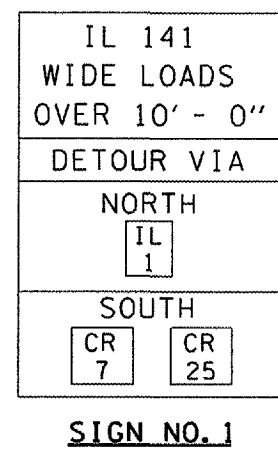
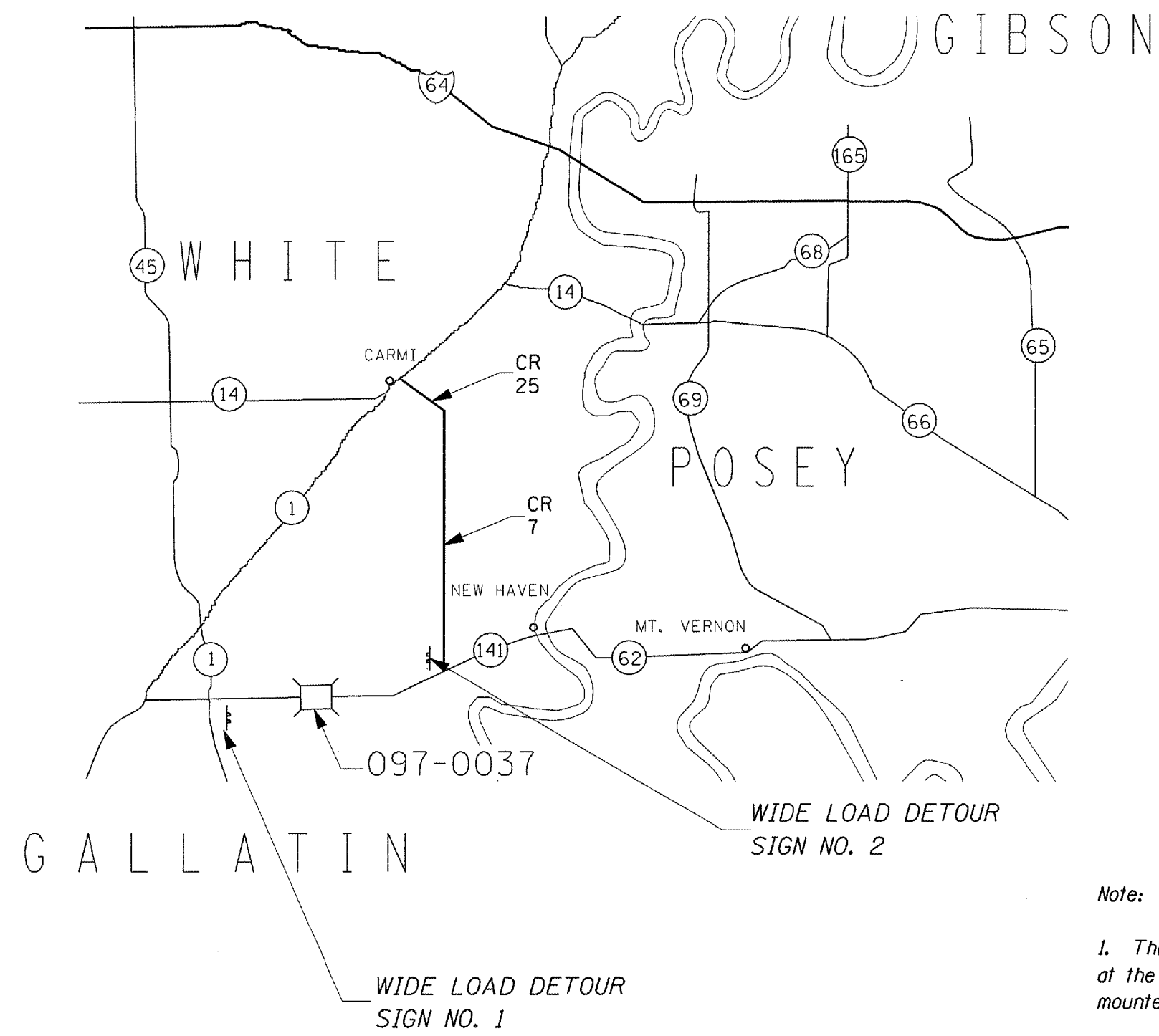
**TEMPORARY CONCRETE BARRIER  
LOOKING WEST**



**PLAN - TEMPORARY CONCRETE BARRIER**

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
F.A.P. 877	-	WHITE	7	7
FED. ROAD DIST. NO. 7		ILLINOIS	PROJECT	

\*(101BR-3) 1-1



WIDE LOAD DETOUR SIGNS

**Note:**

1. The Contractor shall furnish, erect, maintain, and remove the posts and signs at the locations shown and as directed by the Engineer. All signs shall be post mounted.
2. The above noted work, including signs, posts, hardware, and labor shall be included in the contract unit price, each, for TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 and no other compensation will be allowed.
3. All signs shall meet the requirements of Article 1091.02 of the Standard Specifications, with black legend on orange reflectorized background.