

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7978	(19B)BP	SANGAMON	13	1
		ILLINOIS	CONTRACT NO. 72023	

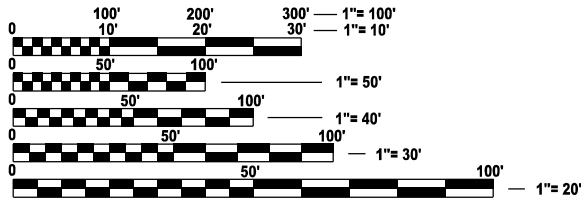
D-96-008-25

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED
HIGHWAY PLANS

FAU ROUTE 7978 (OLD US 36)
SECTION (19B)BP
PROJECT STP-1D0I(958)
BRIDGE PAINTING
SANGAMON COUNTY

C-96-030-25

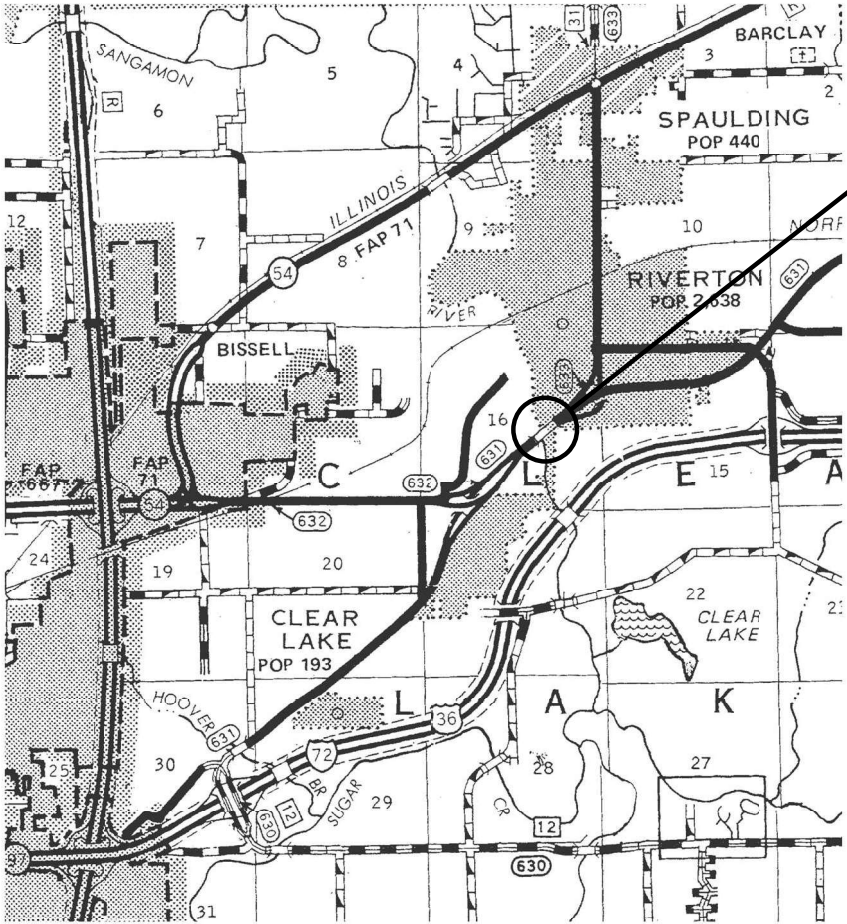


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD
ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT
CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS
ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

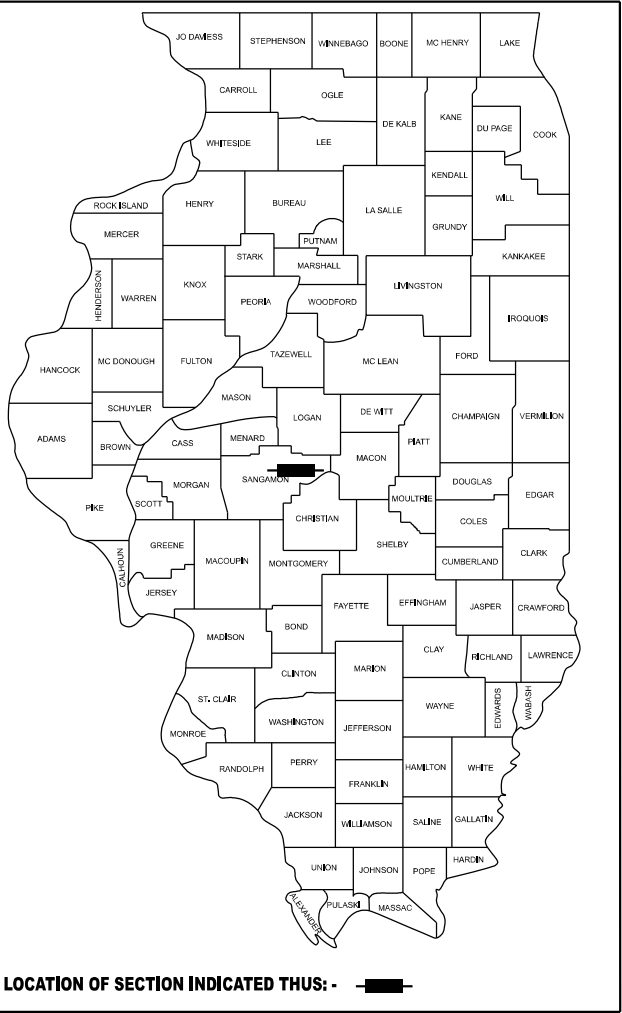
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: BRANDON DUDLEY (217-785-9290)
PROJECT MANAGER

CONTRACT NO. 72023



PROJECT LOCATION:
SN 084-0052
OLD US 36 OVER
SANGAMON RIVER
SW EDGE OF RIVERTON



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED October 17, 2024

[Signature]
REGIONAL ENGINEER

December 6, 2024

[Signature]
ENGINEER OF DESIGN AND ENVIRONMENT

December 6, 2024

[Signature]
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

GROSS LENGTH = 778 FT. = 0.147 MILE
NET LENGTH = 778 FT. = 0.147 MILE

INDEX OF SHEETS

- 1 COVER SHEET
- 2 INDEX, STANDARDS, GENERAL NOTES, & SIGNATURES
- 3 SUMMARY OF QUANTITIES
- 4 TRAFFIC CONTROL PLAN
- 5-13 EXISTING BRIDGE PLANS, SN 084-0052

HIGHWAY STANDARDS

- 000001-08
- 001006
- 701001-02
- 701006-05
- 701301-04
- 701321-19
- 701901-10
- 704001-08
- 782006-01

GENERAL NOTES:

- 1. WORK SHALL CONSIST OF BLASTING AND PAINTING STRUCTURAL STEEL AT LOCATIONS DESCRIBED IN THE SPECIAL PROVISIONS. CLEANING AND PAINTING OF THE EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES". ALL AREAS TO BE PAINTED SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING PER SSPC SP 10. ALL EXISTING STEEL CLEANED SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. THE COLOR OF THE FINAL FINISH COATS SHALL BE AS DESCRIBED IN THE SPECIAL PROVISIONS.
- 2 THE USE OF AIR MONITORS WILL BE REQUIRED AT LOCATIONS AS CALLED OUT IN THE SPECIAL PROVISIONS.
- 3. THE SSPC-QP-1 AND SSPC-QP2 PAINTING CONTRACTOR CERTIFICATIONS WILL BE REQUIRED.
- 4. CARE SHALL BE TAKEN NOT TO DAMAGE RUBBER BEARING OR JOINT COMPONENTS DURING BLASTING AND CLEANING OPERATIONS. ANY DAMAGE TO THESE COMPONENTS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. RUBBER COMPONENTS SHALL NOT BE PAINTED.
- 5. UPON COMPLETION OF PAINTING OPERATIONS, THE CONTRACTOR SHALL REMOVE ALL DEBRIS FROM PIER OR ABUTMENT CAPS UPON WHICH PAINTING OPERATIONS TOOK PLACE. FINAL CLEANUP SHALL BE INCLUDED IN THE COST OF THE PAINT PAY ITEM FOR THE RESPECTIVE LOCATION. THE ENGINEER SHALL HAVE THE RIGHT TO WITHHOLD PAYMENT UNTIL SATISFACTORY CLEANUP IS ACHIEVED.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
DISTRICT 6

EXAMINED

October 15,

20

24

ENGINEER OF OPERATIONS

EXAMINED

October 15,

20

24

ENGINEER OF PROJECT IMPLEMENTATION

EXAMINED

October 16,

20

24

ENGINEER OF PROGRAM DEVELOPMENT

REV - MS

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		DRAWN -	REVISED -										7978	(19B)BP	SANGAMON	13	2
		CHECKED -	REVISED -										CONTRACT NO. 72023				
	PLOT DATE = 8/14/2024	DATE -	REVISED -										ILLINOIS FED. AID PROJECT				

MODEL: SOQ [Sheet]
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				0-01294-6005
				STP 80/20
CODE NO.	ITEM	UNIT	TOTAL QUANTITY	SN 084-0052
				0047-URBAN
				SANGAMON
67100100	MOBILIZATION	L SUM	1	1
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1
70106700	TEMPORARY RUMBLE STRIPS	EACH	6	6
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	270	270
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1025	1025
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1
Ø Z0076600	TRAINEES	HOUR	500	500
Ø Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500	500
Ø 0042				

REV - MS

	USER NAME = brandon.dudley	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES			F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN -	REVISED -					7978	(19B)BP	SANGAMON	13	3
		CHECKED -	REVISED -					CONTRACT NO. 72023				
	PLOT DATE = 8/14/2024	DATE -	REVISED -		SCALE:	SHEET	OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT		

Bench Mark: Disk T-36 at S.W. Corner of Existing Structure (Corps of Engr. 1963 Chicago District)
NAVD '88 = 546.93 Ft.

Existing Structure: S.N. 084-0052, originally built in 1956 as F.A. Route 49, Section 19B. The existing structure is six spans with two three-span continuous, non-composite, riveted built-up plate girder units supported on pile bent abutments and solid wall piers. The back to back of abutments measures 777'-8 3/4" and the out to out bridge width measures 35'-8".
The contractor shall remove and replace the existing deck.
Traffic is to be detoured during construction.

Salvage: None

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 1
7978	BR-1	SANGAMON	261	126	25 SHEETS
Contract #72449					

STATION 70+00.00
REBUILT 20__ BY
STATE OF ILLINOIS
F.A.U. RTE. 7978 SECTION BR-1
LOADING HS20
STR. NO. 084-0052

NAME PLATE
See Std. 515001

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ruth E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

INDEX OF SHEETS

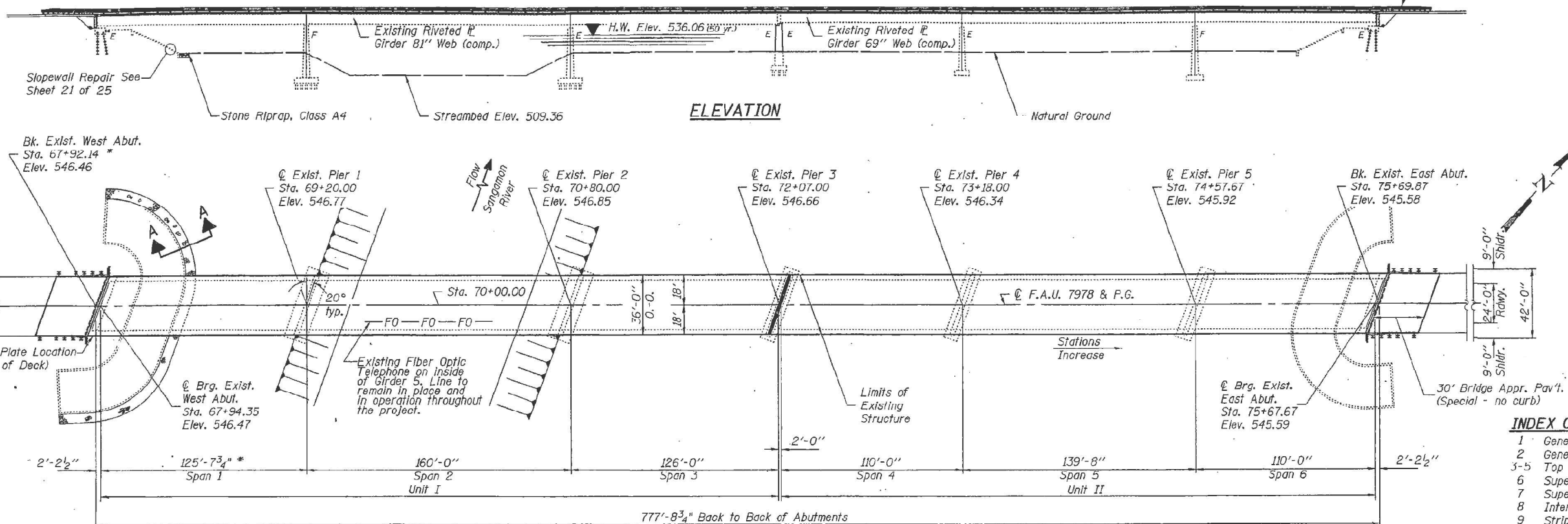
- General Plan
- General Notes and Total Bill of Material
- Top of Slab Elevations
- Superstructure
- Superstructure Details
- Intentionally Blank
- Strip Seal Expansion Joint Assembly
- Finger Plate Details
- Type SM Steel Bridge Rail
- Framing Plans
- Structural Steel Repair at Pier 3
- Pier 3 Diaphragm Details
- West Abutment Bearing Stiffeners and Diaphragm Details
- East and West Abutment Bearing Details
- Pier 3 Unit II Bearing Details
- Pier 3 Unit I Bearing Details
- Abutment and Pier 3 Concrete Removal
- Concrete Repair Details
- Abutments
- Pier 3
- Anchor Bolt Details
- Bar Splicer Assembly Details

ILLINOIS DEPARTMENT OF TRANSPORTATION

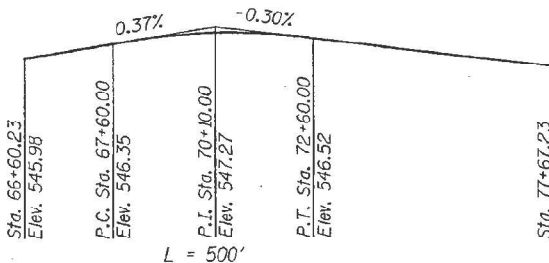
GENERAL PLAN
OLD U.S. ROUTE 36 OVER
SANGAMON RIVER
F.A.U. ROUTE 7978
SECTION BR-1
SANGAMON COUNTY
STA. 70+00.00
STRUCTURE NUMBER 084-0052

DATE: MARCH 2005

DRAWN BY: NJV
CHECKED BY: PBB

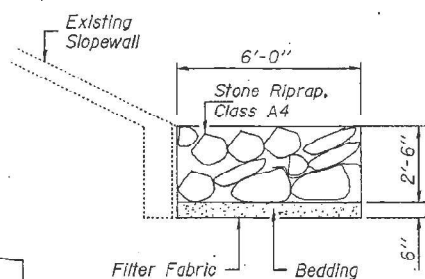


* Note: The existing length of span 1 is being reduced to 125'-7 3/4" due to the existing west abutment being constructed approximately 4 1/4" east of the original intended location.



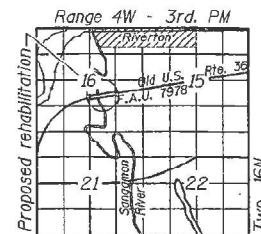
PROFILE GRADE

(along Q. Old U.S. 36/Improvement)



SECTION A-A

(Estimated Length=200 lin. ft.
measured along toe of W. Slopewall)



LOCATION SKETCH

DESIGN SPECIFICATIONS

2002 AASHTO

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.048g
Site Coefficient (S) = 1.2

LOADING HS20-44

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

DESIGN STRESSES

New Construction

$f_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)
 $f_y = 36,000$ psi (Structural Steel)

Existing Construction

$f_c = 1,400$ psi (Superstructure)
800 psi (Substructure)
 $f_y = 40,000$ psi (Reinforcement)
 $f_y = 33,000$ psi (Structural Steel)

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 084-0052
(FOR INFORMATION ONLY)

SCALE: SHEET OF 9 SHEETS STA. TO STA.

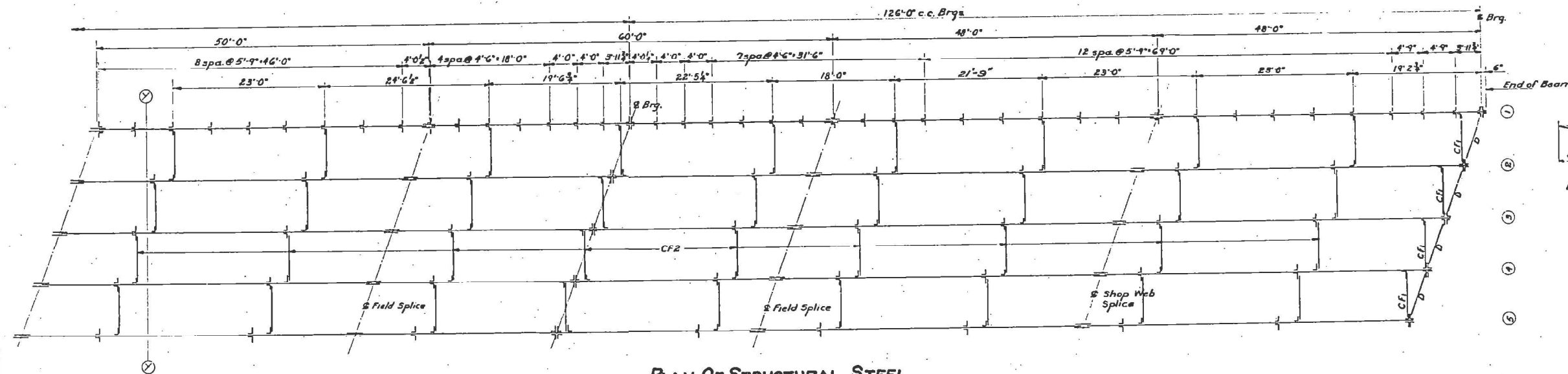
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7978	(19B)BP	SANGAMON	13	5
CONTRACT NO. 72023				

ILLINOIS FED. AID PROJECT

F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7978	(19B)BP	SANGAMON	13	6
		CONTRACT NO. 72023		
		ILLINOIS	FED. AID PROJECT	

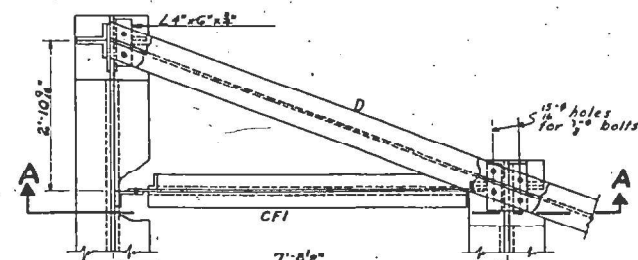
ROUTE NO	SECTION	COUNTY	TOTAL SLEETS	SHEET NO.
S & L	19B	SANGAMON	21	9
F & 49	19F		13	7
PER. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT -	

Hand-drawn structural drawing of a bridge deck showing a grid of reinforcement bars. The drawing includes dimensions for bar spacing and lengths, such as 126'-0" c.c. Brge. and 123 pa. @ 5'-9" c.c. Brge. It also shows various splice locations labeled "Shop Web Splice" and "Field Splice", and a "CF2" label. The drawing is oriented with "End of Beam" on the left and "100' 0' c.c. Brge." on the right.



D. L. DEFLECTION

Structural Steel
Unit 1 925,500 lbs.



FABRICATION DIAGRAM

SANGAMON RIVER BRIDGE

F. A. RT. 49 SECTION 19B-F
SANGAMON COUNTY
STATION 70+00

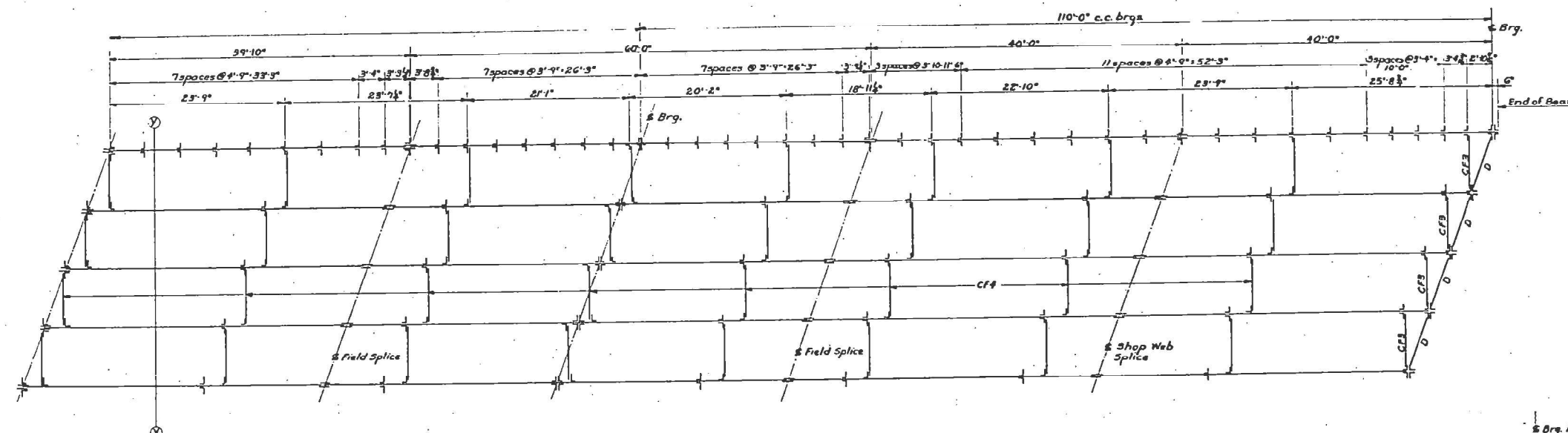
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ILLINOIS	FED. AID PROJECT
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REVISED	-
REVISED	-

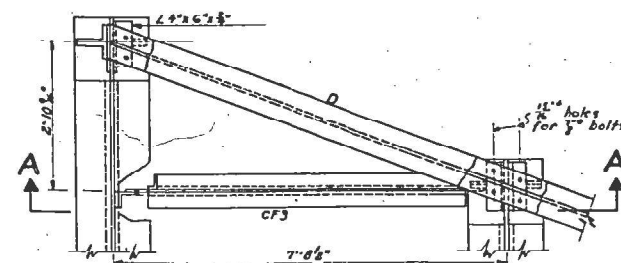
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. L.	19B	SANGAYON	21	11
P. L. 49	19F		13	9
PER. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	



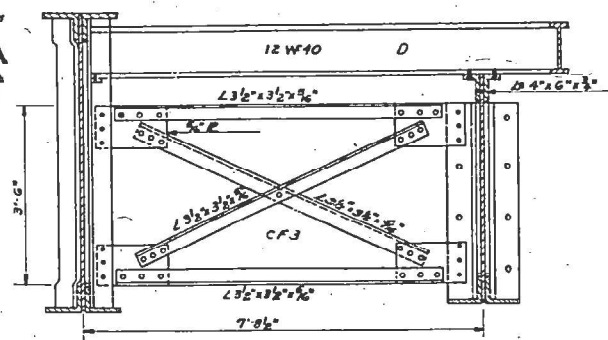
A diagram illustrating the profile of a road surface. It shows a series of points along a curve, with elevations or heights labeled as 7'6", 8'2", 9'6", 10'0", and 10'0". The horizontal distances between some points are given as 27'6" and 34'11". A vertical dimension of 5'10" is shown at the right end.

Structural Steel
Unit II 576,130 lbs

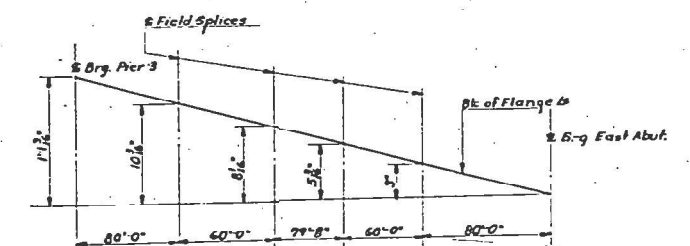


DESIGNED	<i>M. J. Q.</i>
CHECKED	<i>Paul P. M...</i>
DRAWN	<i>M. J. Q.</i> <i>F. Grosch</i>
CHECKED	<i>[Signature]</i>

8-24 1954
EXAMINED *W E Hanson*
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED *E. E. Hanson*
ENGINEER OF DESIGN
APPROVED *R. R. B. B. B.*



Work this sheet
with sheet 16



UNIT II

F.A. RT. 49 SEC. 19B-F
SANGAMON COUNTY
STATION 70+00

USER NAME = brandon.dudley	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 8/14/2024	DATE -	REVISED -

**EXISTING BRIDGE PLANS, SN 084-0052
(FOR INFORMATION ONLY)**

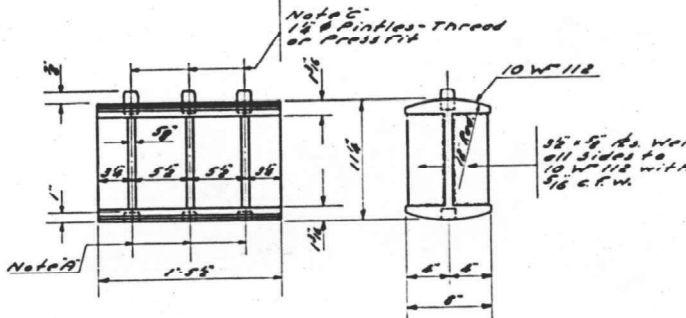
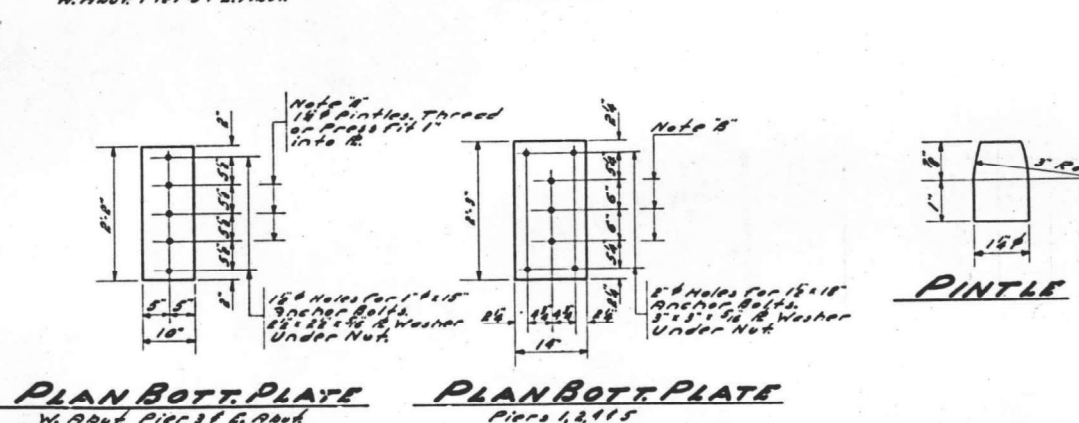
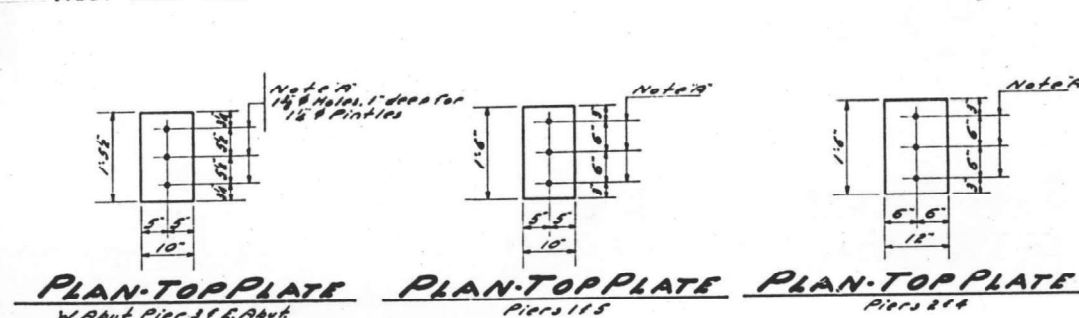
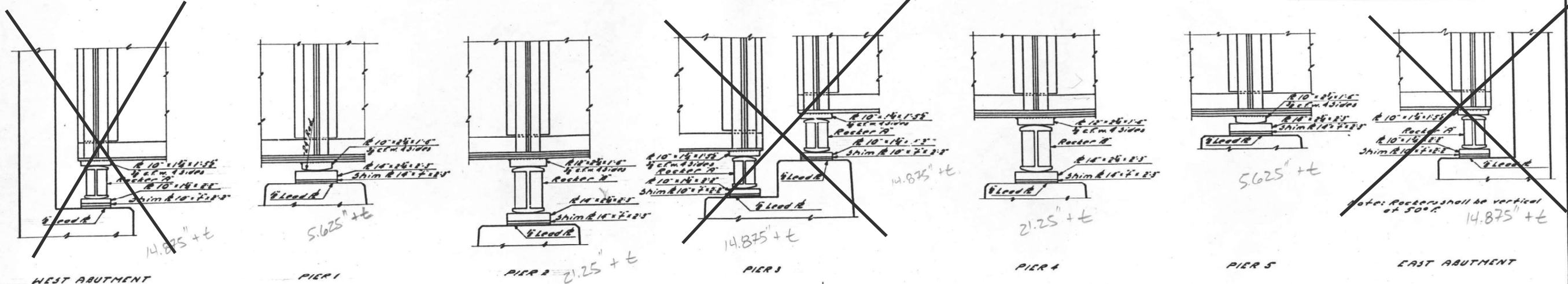
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F.A.U RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7978	(19B)BP	SANGAMON	13	9
		CONTRACT NO. 72023		
		ILLINOIS FED. AID PROJECT		

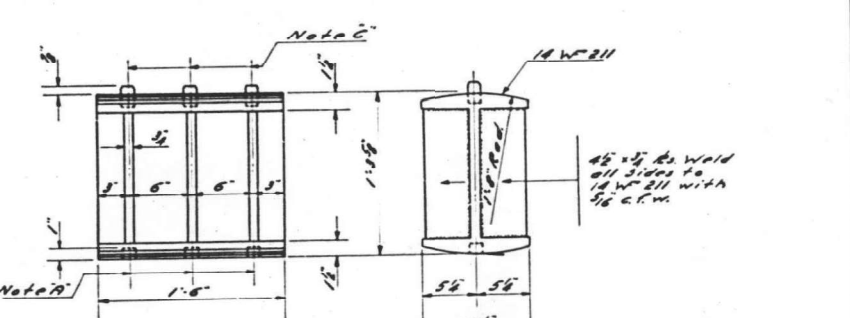
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STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

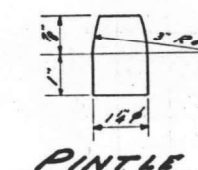
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO.
19B	19F	SANGAMON	21	12	10
SHEET NO. 8					
16 SHEETS					



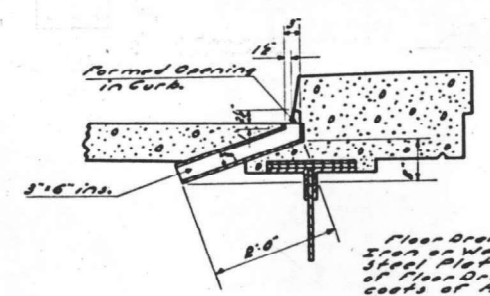
ROCKER "A" DETAILS



ROCKER "B" DETAILS



PINTLE



FLOOR DRAIN DETAILS

Beam No.	1	2	3	4	5
W. Abut	0	0	0	0	0
Pier 1	0	0	0	0	0
Pier 2	0	0	0	0	0
Pier 3	0	0	0	0	0
Pier 4	0	0	0	0	0
Pier 5	0	0	0	0	0
E. Abut	0	0	0	0	0

TABLE OF DIMENSIONS

DESIGNED *M. J. R. C. Pulley*
CHECKED *M. J. R. C. Pulley*
DRAWN *M. J. R. C. Pulley*
CHECKED *M. J. R. C. Pulley*
EXAMINED *W. E. Hanson*
PASSED *W. E. Hanson*
APPROVED *R. L. Bartlett*

BEARINGS & FLOOR DRAIN DETAILS
SANGAMON RIVER BRIDGE
F.A. RT. 49 SECTION 19B-F
SANGAMON COUNTY
STATION 70+00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 084-0052
(FOR INFORMATION ONLY)

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
7978	(19B)BP	SANGAMON	13	10
CONTRACT NO. 72023				

USER NAME = brandon.dudley	DESIGNED -	REVISED -
	DRAWN -	REVISED -
	CHECKED -	REVISED -
PLOT DATE = 8/14/2024	DATE -	REVISED -

SCALE: SHEET OF 9 SHEETS STA. TO STA.

ILLINOIS FED. AID PROJECT

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
797B	BR-1	SANGAMON	261	142
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



Note: $\odot$ Prop. Brg. is $4\frac{1}{4}$ " East of $\odot$ Exist. Brg.
See "Existing Bearing Removal" this sheet and Sheet 16 of 25 for details.



1. *Journal of the American Medical Association*, 2000; 283: 2689-2696.



JACKING EXISTING SUPERSTRUCTURE

1. The Contractor shall submit for approval by the Engineer, plans for jacking existing superstructure prior to commencing any work at the bearings. This submittal shall be sealed by a licensed structural engineer in Illinois.
2. Jacking and removing existing bearings shall be done after existing deck removal is completed and before the new deck is poured.
3. All Girders at the abutments shall be lifted simultaneously $\frac{3}{4}$ " to replace existing bearings. Care shall be taken such that the relative elevation between adjacent girders does not vary by more than $\frac{1}{4}$ " from their original relative elevations.
4. The maximum dead load reaction with deck removed (per bearing) at the West Abutment is 22 kips and at the East Abutment is 18 kips.
5. The minimum jack capacity shall be 17 tons.
6. The new structural steel and bearings shall be in place and the jacks shall be lowered before the new concrete deck is poured.

* In addition to shims listed on the table, provide one $\frac{1}{4}$ " shim, one $\frac{1}{8}$ " shim, and one $\frac{1}{16}$ " shim for height adjustment. Weight included with Structural Steel.



NOTES:

See Sheet 24 of 25 for Anchor Bolt installation.

Shim plates shall not be placed under Bearing Assembly.

Cost of Field Drilling holes in existing beams included in
Cost of Furnishing and Erecting Structural Steel.

ITEM	UNIT	QUANTITY
Elastomeric Bearing Assembly Type I	Each	10
Jack and Remove Existing Bearings	Each	10

DATE: JAN. 2005

DRAWN BY: NJV
CHECKED BY: PBB

ENGINEERS • CONSULTANTS DECATUR, ILLINOIS

SCALE:	SHEET	OF 9	SHEETS	STA.	TO STA.
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ILLINOIS	FED. AID PROJECT
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SHEET NO. 18
25 SHEETS

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