

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SECTION	COUNTY	JOINT SHEETS	SHEET NO.
VAR 09 BRIDGE PAINT 2019-1	VARIOUS	50	1
ILLINOIS CONTRACT NO. 78677			

FOR INDEX OF SHEETS, SEE SHEET NO. 2

FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 3

PROPOSED HIGHWAY PLANS

VARIOUS ROUTES SECTION D9 BRIDGE PAINT 2019-1 PROJECT STP-UBY6(205) VARIOUS COUNTIES

BRIDGE NO. 1
SN. 041-0039
IL 37 2017 ADT=3950, 9% TRUCKS
TOWNSHIP-ROME
POSTED SPEED: 55 MPH

BRIDGE NO. 2
SN. 041-0040
IL 142 2017 ADT=5800, 6% TRUCKS
TOWNSHIP-DODDS
POSTED SPEED: 55 MPH

BRIDGE NO. 3
SN. 041-0041
IL 142 2017 ADT=5800, 6% TRUCKS
TOWNSHIP-DODDS
POSTED SPEED: 55 MPH

BRIDGE NO. 4
SN. 041-0042
IL 142 2017 ADT=5800, 6% TRUCKS
TOWNSHIP-DODDS
POSTED SPEED: 55 MPH

BRIDGE NO. 5
SN. 041-0077
I-64 EB 2017 ADT=11500, 38% TRUCKS
TOWNSHIP-CASNER
POSTED SPEED: 70 MPH

BRIDGE NO. 6
SN. 041-0078
I-64 WB 2017 ADT=11500, 38% TRUCKS
TOWNSHIP-CASNER
POSTED SPEED: 70 MPH

BRIDGE NO. 7
SN. 041-0087
I-64 WB 2017 ADT=5650, 39% TRUCKS
TOWNSHIP-DODDS
POSTED SPEED: 70 MPH

BRIDGE NO. 8
SN. 041-0088
I-64 EB 2017 ADT=5650, 39% TRUCKS
TOWNSHIP-DODDS
POSTED SPEED: 70 MPH

BRIDGE NO. 9
SN. 002-0032
IL 3 2017 ADT=3800, 8% TRUCKS
TOWNSHIP-CO UNIT ROAD DIST
POSTED SPEED: 55 MPH

BRIDGE NO. 10
SN. 028-0038
IL 149 2017 ADT=4400, 7% TRUCKS
TOWNSHIP-DENNING
POSTED SPEED: 55 MPH

BRIDGE NO. 11
SN. 028-0041
IL 149 2017 ADT=2100, 10% TRUCKS
TOWNSHIP-CAVE
POSTED SPEED: 55 MPH

BRIDGE NO. 12
SN. 033-0012
IL 142 2017 ADT=3200, 8% TRUCKS
TOWNSHIP-DAHLGREN
POSTED SPEED: 55 MPH

BRIDGE NO. 13
SN. 064-0003
US 45 2017 ADT=2100, 8% TRUCKS
TOWNSHIP-CO UNIT ROAD DIST
POSTED SPEED: 55 MPH

BRIDGE NO. 14
SN. 097-0024
US 45 2017 ADT=2950, 12% TRUCKS
TOWNSHIP-ENFIELD
POSTED SPEED: 35 MPH

BRIDGE NO. 5
STRUCTURE NO. 041-0077
OVER TR-108A/BN RR

BRIDGE NO. 6
STRUCTURE NO. 041-0078
OVER TR-108A/BN RR

BRIDGE NO. 7
STRUCTURE NO. 041-0087
OVER CASEY FORK OVERFLOW

BRIDGE NO. 8
STRUCTURE NO. 041-0088
OVER CASEY FORK OVERFLOW

C-99-102-18

BRIDGE NO. 1
STRUCTURE NO. 041-0039
OVER SOUTHERN RR

BRIDGE NO. 2
STRUCTURE NO. 041-0040
OVER BRANCH OF CASEY FORK

BRIDGE NO. 3
STRUCTURE NO. 041-0041
OVER CASEY FORK OVERFLOW

BRIDGE NO. 4
STRUCTURE NO. 041-0042
OVER CASEY FORK

BRIDGE NO. 12
STRUCTURE NO. 033-0012
OVER MIDDLE CREEK

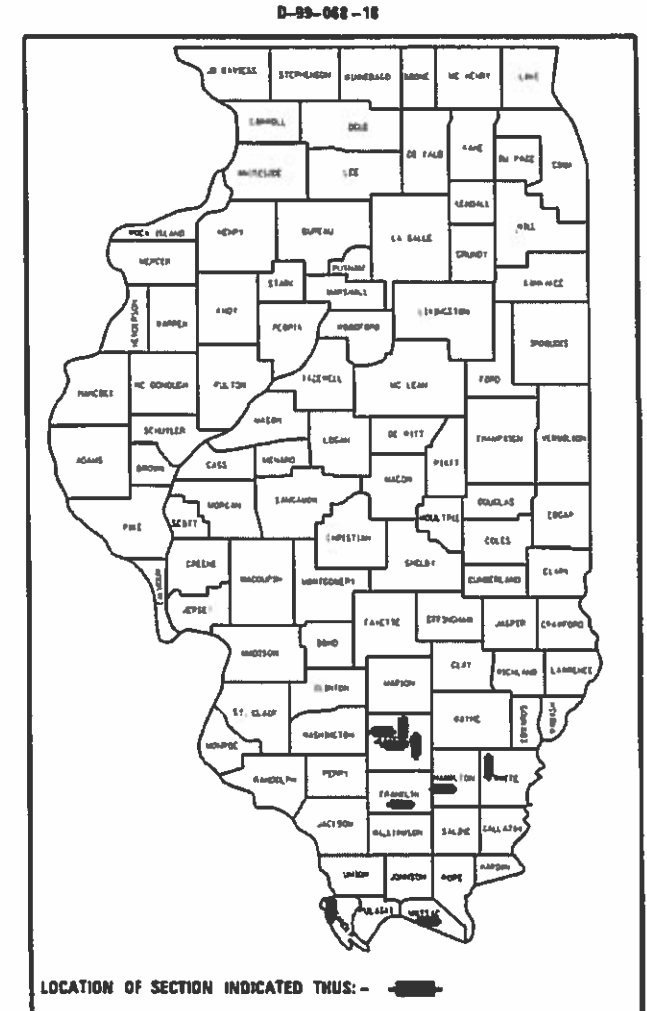
BRIDGE NO. 14
STRUCTURE NO. 097-0024
OVER L&N RR

BRIDGE NO. 11
STRUCTURE NO. 028-0041
OVER STEVENS CREEK

BRIDGE NO. 10
STRUCTURE NO. 028-0038
OVER B&N RR

BRIDGE NO. 9
STRUCTURE NO. 002-0032
OVER SEXTON CREEK

BRIDGE NO. 13
STRUCTURE NO. 064-0003
OVER Q DITCH



LOCATION OF SECTION INDICATED THUS: -

DESIGN DESIGNATION : N/A

COORDINATE SYSTEM : N/A

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

PROJECT ENGINEER: DAVID PICHE
PROJECT DESIGNER: DAVID WILSON

CONTRACT NO. 78677

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Oct 1 2018

Jeffrey Z. K... REGION FIVE ENGINEER

Dec 7 2018

See E.A. Elk ENGINEER OF DESIGN AND ENVIRONMENT

Dec 7 2018

David P. Ch... DIRECTOR OF HIGHWAYS, PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

GENERAL NOTES

ADDITIONAL TRAFFIC CONTROL DEVICES MAY BE REQUIRED TO CHANNEL TRAFFIC AT COMMERCIAL AND/OR PRIVATE ENTRANCE AS DIRECTED BY THE ENGINEER. ALL TRAFFIC CONTROL DEVICES ARE INCLUDED IN THE COST OF THE TRAFFIC CONTROL AND PROTECTION STANDARD USED AT THE SITE, AND WILL NOT BE PAID FOR SEPERATELY.

THE CONTRACTOR IS REQUIRED TO BE SSPC OPI AND SSPC OP2 CERTIFIED.

A CONTRACTOR'S RIGHT-OF-ENTRY PERMIT IS REQUIRED BEFORE ANY WORK CAN COMMENCE ON RAILROAD PROPERTY. THE COST TO OBTAIN THIS PERMIT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.

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 AT THE UNIT PRICE BID FOR THE WORK.

FOR STRUCTURES 028-0038, 041-0087, AND 041-0088, CLEANING AND PAINTING OF EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES" AND "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES." ALL STRUCTURAL STEEL WITHIN 5 FT. (MEASURED ALONG THE BEAM) OF EITHER SIDE OF SPECIFIED DECK JOINTS SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING -SSPC- SP10. ALL STEEL SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E.U. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR SURFACES AND BOTTOM OF THE FLANGE OF THE FASCIA BEAMS SHALL BE INTERSTATE GREEN, MUNSELL NO. 7.5G 4/8.

FOR STRUCTURE 028-0041 CLEANING AND PAINTING OF EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES" AND "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES." ALL STRUCTURAL STEEL WITHIN 5 FT. (MEASURED ALONG THE BEAM) OF EITHER SIDE OF SPECIFIED DECK JOINTS SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING -SSPC- SP10. ALL STEEL SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR SURFACES AND BOTTOM OF THE FLANGE OF THE FASCIA BEAMS SHALL BE REDDISH BROWN, MUNSELL NO. 2.5 YR 3/4.

FOR STRUCTURES 033-0012, 041-0039, 041-0040 AND 041-0042, CLEANING AND PAINTING OF EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES" AND "CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES." ALL STRUCTURAL STEEL WITHIN 5 FT. (MEASURED ALONG THE BEAM) OF EITHER SIDE OF SPECIFIED DECK JOINTS SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING -SSPC- SP10. ALL STEEL SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E.U. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR SURFACES AND BOTTOM OF THE FLANGE OF THE FASCIA BEAMS SHALL BE INTERSTATE GREEN, MUNSELL NO. 7.5G 4/8.

FOR STRUCTURES 002-0032 AND 041-0041, CLEANING AND PAINTING OF EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES" AND "CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES." ALL STRUCTURAL STEEL WITHIN 10 FT. (MEASURED ALONG THE BEAM) OF EITHER SIDE OF SPECIFIED DECK JOINTS SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING -SSPC- SP10. ALL STEEL SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM I - OZ/E/U. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR SURFACES AND BOTTOM OF THE FLANGE OF THE FASCIA BEAMS SHALL BE INTERSTATE GREEN, MUNSELL NO. 7.5G 4/8.

FOR STRUCTURES 041-0077 AND 041-0078, CLEANING AND PAINTING OF EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES" AND "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES." ALL STRUCTURAL STEEL WITHIN 5 FT. (MEASURED ALONG THE BEAM) OF EITHER SIDE OF SPECIFIED DECK JOINTS AND THE OUTSIDE AND BOTTOM FLANGE OF THE FASCIA BEAMS SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING - SSPC- SP10. ALL STEEL SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR SURFACES AND BOTTOM OF THE FLANGE OF THE FASCIA BEAMS SHALL BE INTERSTATE GREEN, MUNSELL NO. 7.5G 4/8.

FOR STRUCTURE 064-0003, CLEANING AND PAINTING OF EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES" AND "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES." ALL STRUCTURAL STEEL WITHIN 5 FT. (MEASURED ALONG THE BEAM) OF EITHER SIDE OF SPECIFIED DECK JOINTS AND THE ENTIRE FASCIA BEAMS SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING - SSPC- SP10. ALL STEEL WITHIN 5 FT. OF SPECIFIED DECK JOINTS AND THE ENTIRE FASCIA BEAMS SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR SURFACES AND BOTTOM OF THE FLANGE OF THE FASCIA BEAMS SHALL BE GRAY, MUNSELL NO. 5B 7/1.

FOR STRUCTURE 097-0024, CLEANING AND PAINTING OF EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES" AND "CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES." ALL STRUCTURAL STEEL SHALL BE CLEANED PER NEAR WHITE BLAST CLEANING -SSPC- SP10. ALL STEEL SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U, THE COLOR OF THE FINAL FINISH COAT FOR ALL INTERIOR STEEL SURFACES SHALL BE GRAY, MUNSELL NO. 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR SURFACES AND BOTTOM OF THE FLANGE OF THE FASCIA BEAMS SHALL BE GRAY, MUNSELL NO. 5B 7/1.

A TOTAL OF 15 AIR MONITORS ARE REQUIRED TO MONITOR ABRASIVE BLASTING OPERATIONS AT 7 LOCATIONS. 1 AT BRIDGE NO. 4 (SN 041-0042), 2 AT BRIDGE NO. 5 (SN 041-0077), 2 AT BRIDGE NO. 6 (SN 041-0078), 2 AT BRIDGE NO. 7 (SN 041-0087), 2 AT BRIDGE NO. 8 (SN 041-0088), 2 AT BRIDGE NO. 10 (SN 028-0038), AND 4 AT BRIDGE NO. 14 (SN 097-0024).

COMMITMENTS: NONE AS OF OCTOBER 19, 2018.

INDEX OF SHEETS








<u>SHEET NO.</u>	<u>DESCRIPTION</u>	<u>SHEET NO.</u>	<u>DESCRIPTION</u>
1	COVER SHEET	19-21	SN 041-0077 & 041-0078 STRUCTURE INFORMATION
2	INDEX OF SHEETS, HIGHWAY STANDARDS, GENERAL	22-23	SN 041-0087 & 041-0088 STRUCTURE INFORMATION
	NOTES AND AREAS OF CLEANING AND PAINTING	24-29	SN 002-0032 STRUCTURE INFORMATION
3-4	SUMMARY OF QUANTITIES	30-32	SN 028-0038 STRUCTURE INFORMATION
5-7	SN 041-0039 STRUCTURE INFORMATION	33-35	SN 028-0041 STRUCTURE INFORMATION
8-10	SN 041-0040 STRUCTURE INFORMATION	36-39	SN 033-0012 STRUCTURE INFORMATION
11-14	SN 041-0041 STRUCTURE INFORMATION	40-43	SN 064-0003 STRUCTURE INFORMATION
15-18	SN 041-0042 STRUCTURE INFORMATION	44-50	SN 097-0024 STRUCTURE INFORMATION

AREAS OF CLEANING & PAINTING

BRIDGE NUMBER	STRUCTURE NUMBER	LEAD PRESENT	5' AT BEAM ENDS AT ABUTMENTS	10' AT BEAM ENDS AT ABUTMENTS	OUTSIDE AND BOTTOM FLANGE OF BOTH FASCIA BEAMS	ENTIRE FASCIA BEAMS	ALL STRUCTURAL STEEL
1	041-0039	NO	X				
2	041-0040	NO	X				
3	041-0041	NO		X			
4	041-0042	NO	X				
5	041-0077	YES	X		X		
6	041-0078	YES	X		X		
7	041-0087	YES	X				
8	041-0088	YES	X				
9	002-0032	NO		X			
10	028-0038	YES	X				
11	028-0041	YES	X				
12	033-0012	NO	X				
13	064-0003	YES	X			X	
14	097-0024	YES					X

STANDARDS

701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
701101-05	OFF-RD OPERATIONS, MULTILANE, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
701106-02	OFF-RD OPERATIONS, MULTILANE, MORE THAN 15' (4.5m) AWAY
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > TO 45 MPH
701901-08	TRAFFIC CONTROL DEVICES

Prepared By:		DISTRICT STUDIES & PLANS ENGINEER
Examined By:		DISTRICT LAND ACQUISITION ENGINEER
Examined By:		DISTRICT PROGRAM DEVELOPMENT ENGINEER
Examined By:		DISTRICT OPERATIONS ENGINEER
Examined By:		DISTRICT PROJECT IMPLEMENTATION ENGINEER
Examined By:		DISTRICT CONSTRUCTION ENGINEER
Examined By:		DISTRICT MATERIALS ENGINEER

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

INDEX OF SHEET, STANDARDS, GENERAL NOTES, AND AREAS OF CLEANING AND PAINTING

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	2
CONTRACT NO. 78677				
ILLINOIS FED. AID PROJECT				

SUMMARY OF QUANTITIES CONT'D

SUMMARY OF QUANTITIES CONT'D			COUNTY:	ALEXANDER	FRANKLIN		HAMILTON	MASSAC	WHITE
			ROUTE:	IL 3	IL 149		IL 142	US 45	US 45
			FUNDING:	80% FEDERAL 20% STATE	80% FEDERAL 20% STATE	80% FEDERAL 20% STATE	80% FEDERAL 20% STATE	80% FEDERAL 20% STATE	80% FEDERAL 20% STATE
			LOCATION	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL
CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	BRIDGE NO. 9	BRIDGE NO. 10	BRIDGE NO. 11	BRIDGE NO. 12	BRIDGE NO. 13	BRIDGE NO. 14
				002-0032	028-0038	028-0041	033-0012	064-0003	097-0024
67000400	ENGINEERS FIELD OFFICE, TYPE A	CAL MO	SEE SHT 3	0.5	0.5	0.5	0.5	1	1
67100100	MOBILIZATION	LSUM	SEE SHT 3	0.07	0.07	0.07	0.07	0.08	0.08
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	LSUM	SEE SHT 3	0.08	0.08	0.09	0.09	0.09	0.09
X5060609	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 9	LSUM	1	1					
X5060610	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 12	LSUM	1				1		
X7015005	CHANGEABLE MESSAGE SIGN	CAL DA	SEE SHT 3	14	14	14	14	14	14
Z0007110	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 10	LSUM	1		1				
Z0007111	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 11	LSUM	1			1			
Z0007113	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 13	LSUM	1					1	
Z0007115	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 14	LSUM	1						1
Z0010509	CLEANING AND PAINTING STEEL BRIDGE NO. 9	LSUM	1	1					
Z0010510	CLEANING AND PAINTING STEEL BRIDGE NO. 10	LSUM	1		1				
Z0010511	CLEANING AND PAINTING STEEL BRIDGE NO. 11	LSUM	1			1			
Z0010512	CLEANING AND PAINTING STEEL BRIDGE NO. 12	LSUM	1				1		
Z0010513	CLEANING AND PAINTING STEEL BRIDGE NO. 13	LSUM	1					1	
Z0010514	CLEANING AND PAINTING STEEL BRIDGE NO. 14	LSUM	1						1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	LSUM	SEE SHT 3		0.2				0.2

Existing Structure: S.N.: 041-0039, Built in 1956 as S.B.I. Rt. #2 Section 110-2-VB, is a three span continuous steel I-beam bridge with a non-composite slab. The substructure consists of pile bent abutments and R.C. piers with spread footings on rock. The existing concrete deck, abutment bearings and end diaphragms are to be replaced utilizing existing steel beams and substructure units.

Traffic is to be staged.

No salvage

DATE REC.	ENTER	ENTRY	TIME PAGES	SHEET NO.	SHEET NO. / 15 SHEETS
R.A.T. P.A.S. 2006	110- 2006 EVER	JEFFERSON	20	6	
FED. GOV. EMP. NO. 7		NAME	FED. GOV. PROJECT -		

*Bridge Seat Sealer shall be applied to the seal area of the abutments.
Est. quantity = 250 Sq. Ft.*

All contact surfaces of joints for the diaphragms shall be free of paint or lacquer.

All existing structural steel which is to remain shall be cleaned by Method II prior to painting.

The three coat lead and chromate free alkyd paint system shall be used for field painting of the Existing Structural Steel. The color of the final finish coat shall be Interstate Green (Munsell 7.5G 4/8). See Special Prov.

The three coat lead and chromate free alkyd paint system shall be used for shop and field painting of New Structural Steel. The color of the final finish coat shall be Interstate Green (Munsell 7.5G 4/8). See Special Prov.

Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

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

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

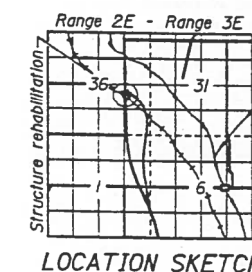
Expansion bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 lbs., and $\frac{3}{4}$ " ϕ hooked bolts.

Bearing seat surfaces of abutments shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{4}$ " 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, shims of the dimensions of top plate shall be provided and placed as detailed.

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	Cu. Yd.	-	12.1	12.1
Expansion Bolts 3/4"	Each		60	60
Removal of Existing Concrete Deck	Each	1		1
Structure Excavation	Cu. Yd.		32	32
Preformed Joint Seal 2 1/2"	Lin. Ft.	43		43
Preformed Joint Seal 4"	Lin. Ft.	43		43
Protective Coat	Sq. Yd.	125		125
Elastomeric Bearing Assembly Type I	Each		6	6
Elastomeric Bearing Assembly Type II	Each		6	6
Class X Concrete	Cu. Yd.		6.4	6.4
Class X Concrete Superstructure	Cu. Yd.	184.6		184.6
Structural Steel	Lb.	6460		6460
Stud Shear Connectors	Each	2412		2412
Cleaning and Painting Steel Bridge	L. S.	1		1
Structural Steel Removal	Lb.	2460		2460
Reinforcement Bars, Epoxy Coated	Lb.	43130	1310	44440
Name Plates	Each	1		1
Jack and Remove Existing Bearings	Each		12	12
Bridge Seal Sealer	L.S.		1	1

* Removal of existing steel bridge rail and concrete sidewalk is incidental to "Removal of Existing Concrete Deck".

GENERAL PLAN
ILLINOIS ROUTE 37 OVER
SOUTHERN RAILROAD
S.B.I. ROUTE 142-SECTION 110-2VBR
JEFFERSON COUNTY
STA. 865+05.20
STRUCTURE NO. 041-0039

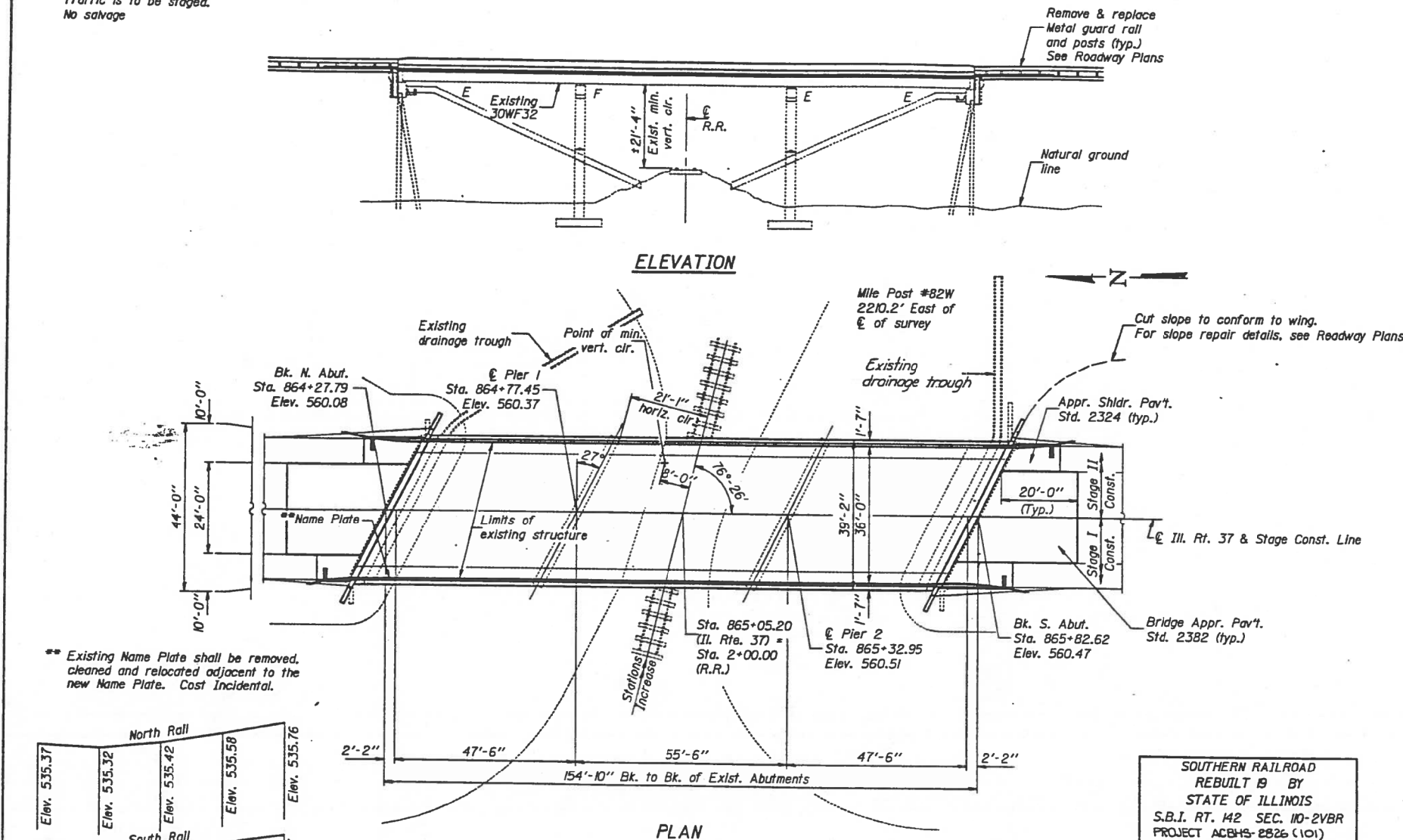


AASHTO (1983) and applicable Interims (1984 thru 1988)
Allow 25#/sq. ft. for future wearing surface.

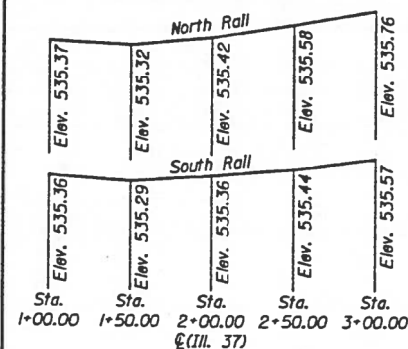
FIELD UNITS

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (reinforcement)
 $f_s = 18,000$ psi (exist. structural steel)
 $f_s = 20,000$ psi (New structural steel)



**** Existing Name Plate shall be removed, cleaned and relocated adjacent to the new Name Plate. Cost Incidental.**



RAILROAD PROFILE GRADE
(as per survey)

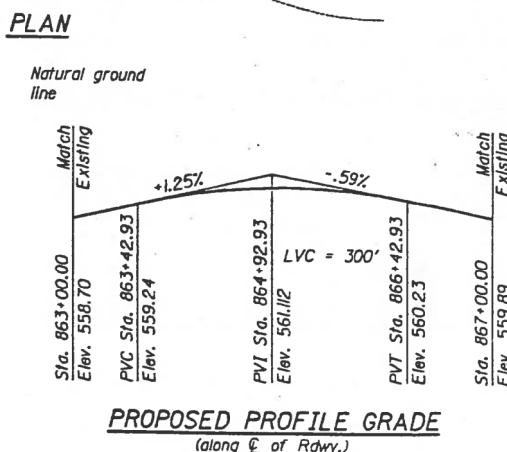
DESIGNED	<i>W. L. F. Thompson</i>
CHECKED	<i>H. W. H. H. H.</i>
DRAWN	W.D.C.
CHECKED	<i>G. S. H. H. H.</i>

May 9 1959

EXAMINED *Wm. J. Kaza*
ENGINEER OF BRIDGE DESIGN

PASSED *James J. Buchanan*
ENGINEER OF BRIDGES AND STRUCTURES

APPROVED _____
DIRECTOR OF HIGHWAYS



PROPOSED PROFILE GRADE
(along C of Rdwy.)

SOUTHERN RAILROAD
REBUILT @ BY
STATE OF ILLINOIS
S.B.I. RT. 142 SEC. 10-2VBR
PROJECT ACBHS-2826 (101)
STA. 865+05.20 LOADING HS20
STR. NO. 041-0039
NAME PLATE
See Std. 2113

~~FOR INFORMATION ONLY 041-0039~~
041-0039

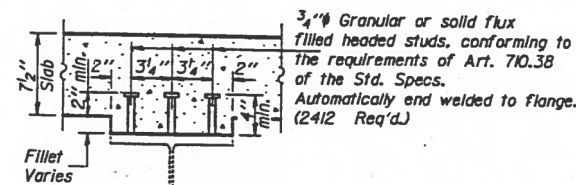
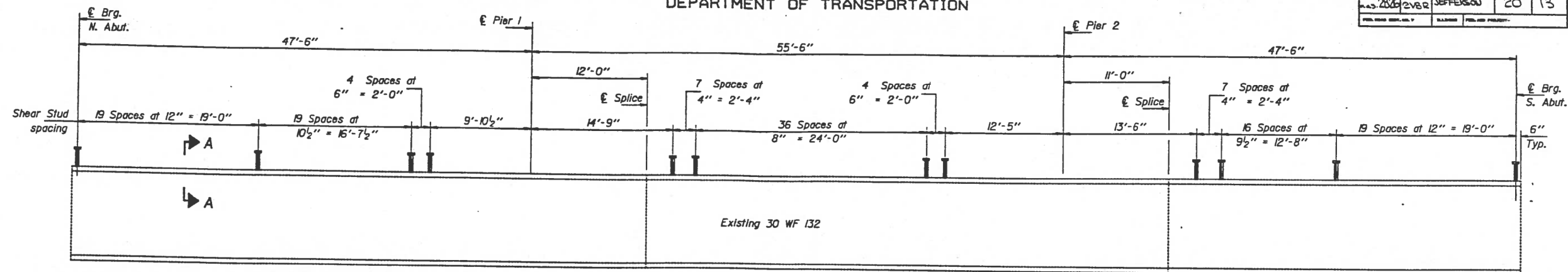
041-0039

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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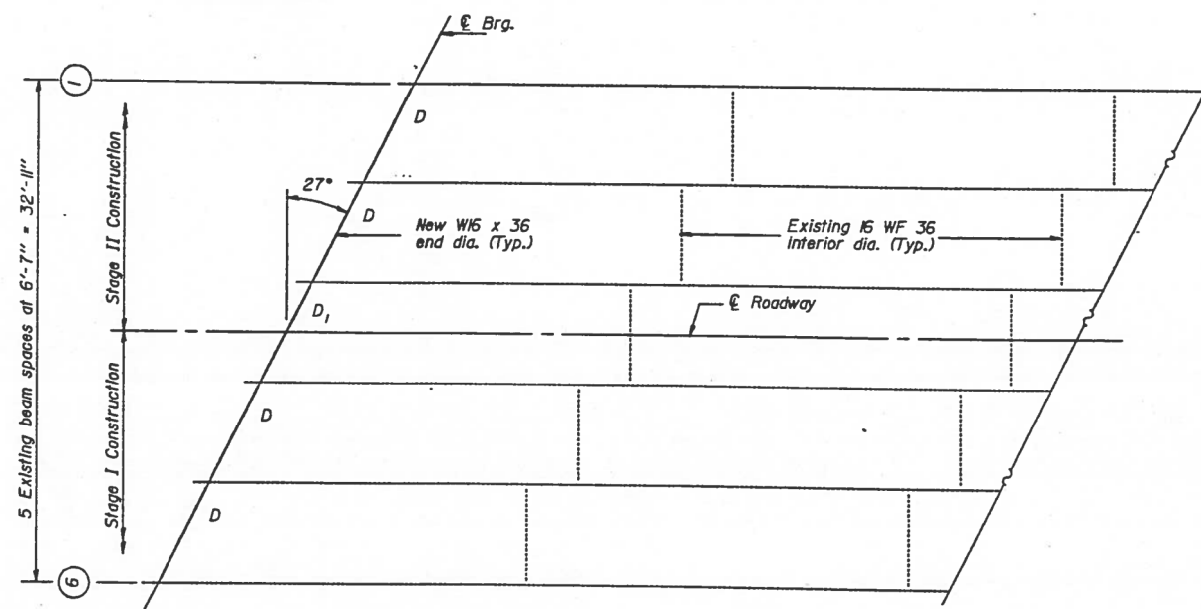
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	5
		CONTRACT NO. 78677		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

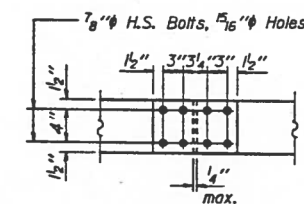
DATE	BY	CHKD	APP'D	SHEET NO.
11-10-2018	JEFFERSON	20	13	15 SHEETS



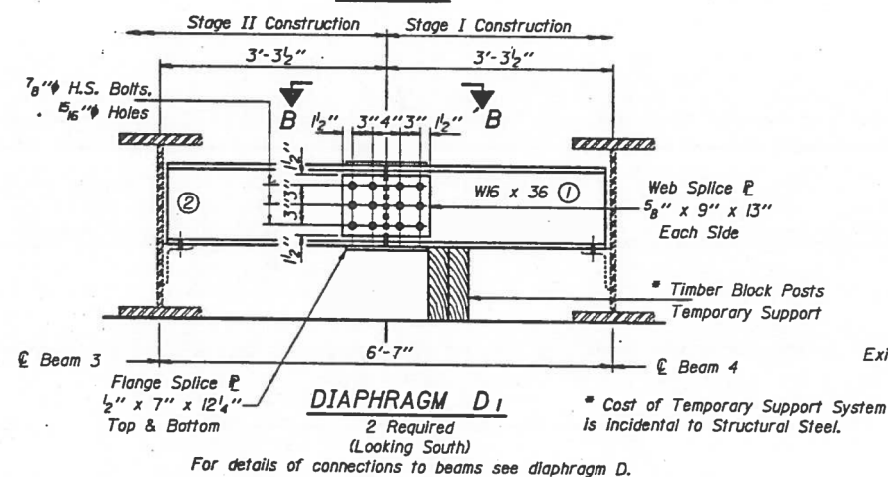
ELEVATION



PARTIAL FRAMING PLAN



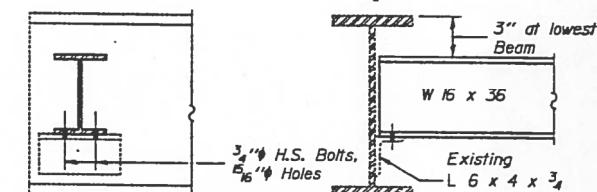
VIEW B-B



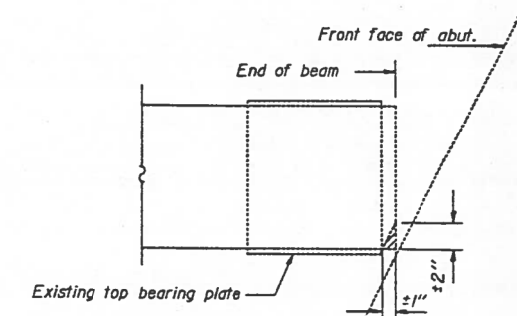
DIAPHRAGM D₁ CONSTRUCTION SEQUENCE

- 1.) Order Diaphragm D₁ in two sections with lengths of 3'-7 1/2" and 3'-7 1/2".
- 2.) Attach section ① of Diaphragm to Beam 4 and top flange splice E during Stage I Construction.
- 3.) Place Temporary Support System between section ① of diaphragm and abutment bearing seat.
- 4.) Attach section ② of diaphragm to both Beam 3 and section ① of diaphragm during Stage II Construction.
- 5.) Attach all remaining splice plates to sections ① and ② of diaphragms.
- 6.) Remove Temporary Support System.

Note: Two hardened washers shall be required over all 5/8" holes. All contact surfaces of joints shall be free of paint or lacquer. Holes for attaching diaphragms to existing seat angles shall be field drilled.



DIAPHRAGM D
8 Required



PLAN - SOUTH ABUTMENT

Beams #1, 2 & 3
Remove hatched area on top and bottom flanges using a mechanically guided torch or other method as approved by the Engineer. Cut surfaces shall meet the ANSI surface roughness rating of 1000. Cost incidental to Contract.

STRUCTURAL STEEL DETAILS
S.B.I. ROUTE 142-SECTION 110-2VBR
JEFFERSON COUNTY
STA. 865+05.20

DESIGNED	May 9, 1989
CHECKED	
DRAWN	
CHECKED	

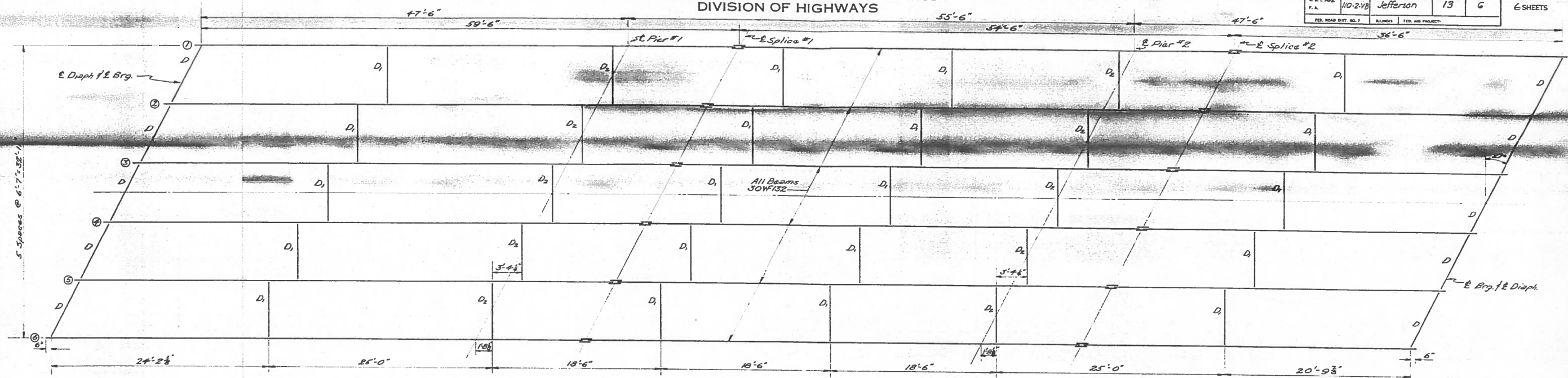
FOR INFORMATION ONLY 041-0039

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	041-0039	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	6
PLOT DATE = 10/10/2018	CHECKED -	REVISED -			SCALE:	SHEET	OF	SHEETS	STA.
	DATE -	REVISED -							TO STA.
									ILLINOIS FED. AID PROJECT

041-0039

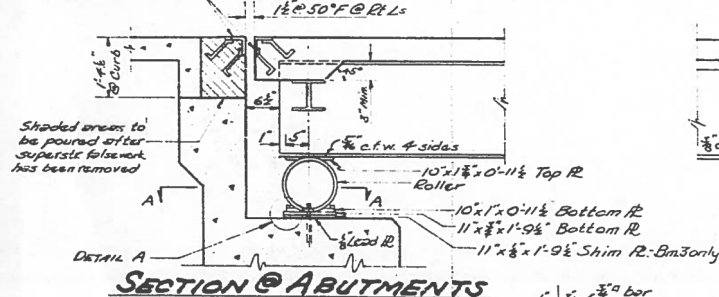
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL MILETS	SHEET NO.	SHEET NO. 3 6 SHEETS
E. B. L. 142 F. A.	110-2-VB	Jefferson	13	6	
FED. ROAD DIST. NO. 7		BLINDING	FED. AID PROJECT		

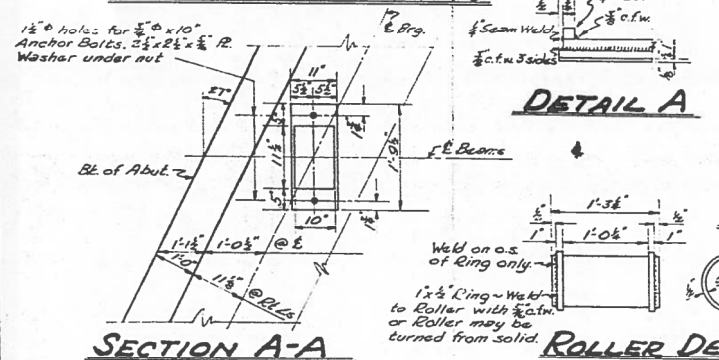


PLAN

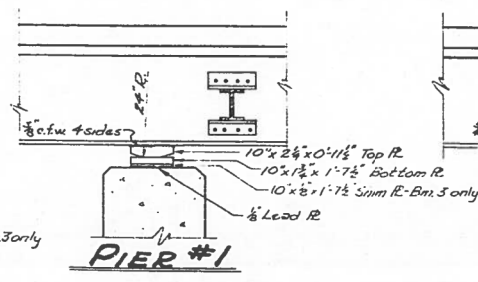
$\frac{5}{8}$ " ϕ holes @ 12" cts for $\frac{3}{4}$ " ϕ bolts. All bolts shall be burned, sawed, or clipped off flush with back of angles after forms are removed.



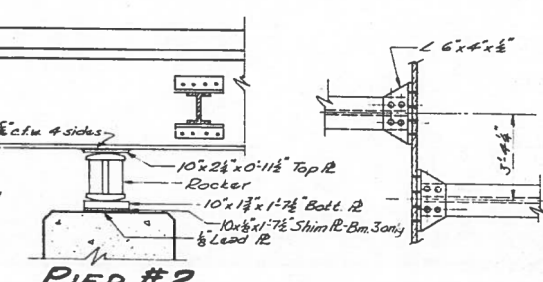
SECTION @ ABUTMENTS



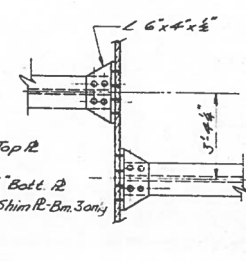
SECTION A-A



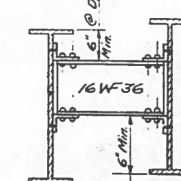
PIER #1



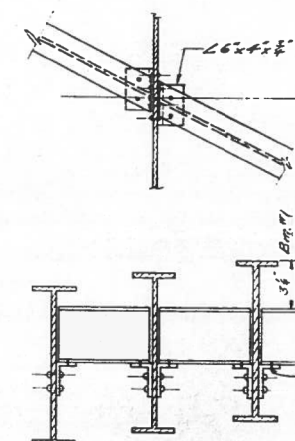
1-1-1
P150 #2



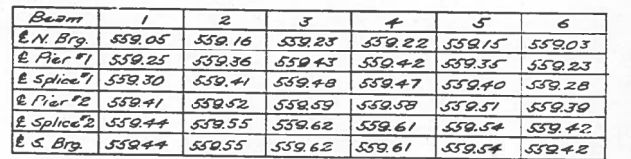
STRAP DETAIL



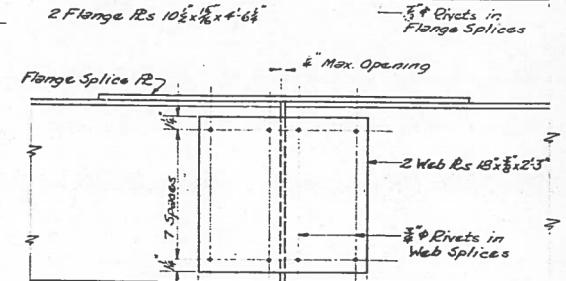
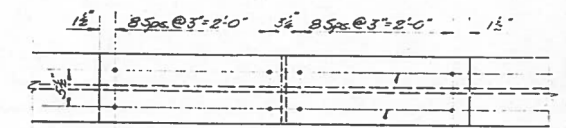
DIAPHRAGM D₁ & D₂



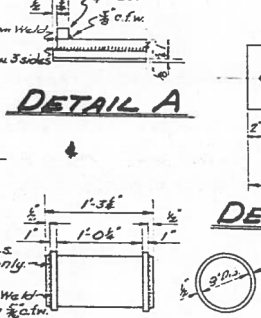
DIAPHRAGM D



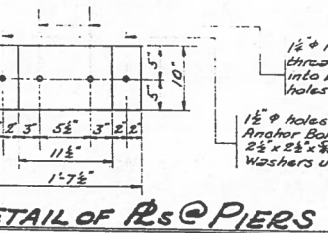
ELEVATION @ TOP OF BEAMS



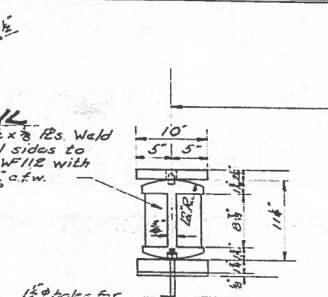
SPLICE DETAIL



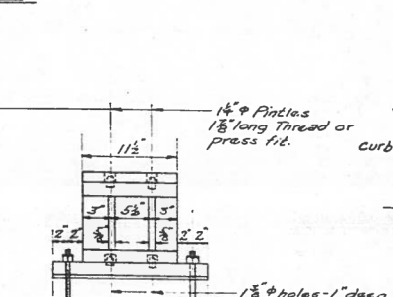
id. ROLLER DETAIL



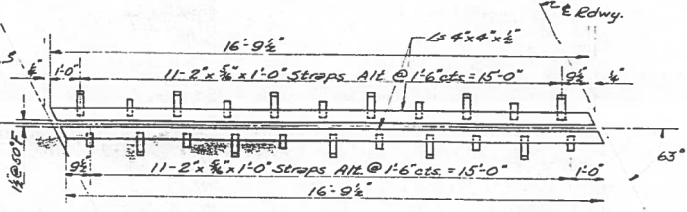
DETAIL OF $R_s @ P_i$ F.P.S



PINTLE



ROCKER DETAIL



EXPANSION GUARD DETAIL

NOTE: The roadway expansion devices shall be in two pieces and shall be fabricated to fit the crown of the roadway. Straps shall be shop welded in their proper positions.

STRUCTURAL STEEL
S.B.I. RT. 142 SEC. 110-2-VB
JEFFERSON COUNTY
STA. 865+05.20

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/10/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

041-0039

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	7
		CONTRACT NO. 78677		
ILLINOIS		FED. AID PROJECT		

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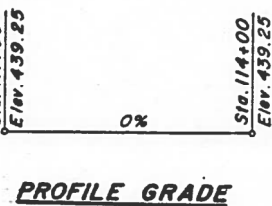
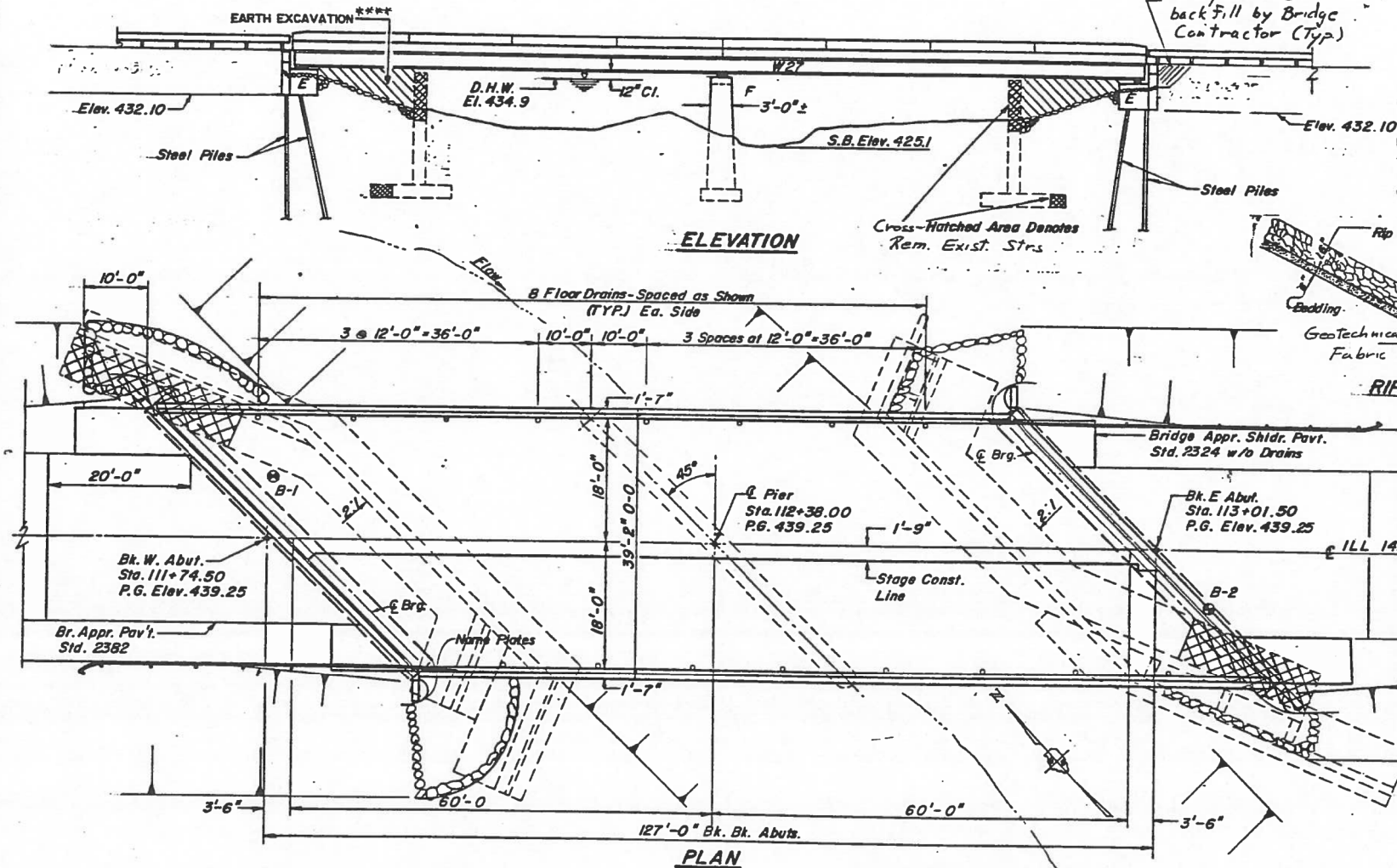
B.M. Top of N.W. Wing of existing bridge at Sta. 118+09 Elev. 439.00

Existing Structure: # 041-0040. Two span R.C. deck girder with Texas type rails R.C. closed abuts. and solid R.C. pier. (36'-4" O-Ox 88'-6" b-b)
To be removed using Stage Construction. Pier to be revised to accommodate new Superstructure. No other salvage.

FOR INFORMATION ONLY

041-0040

*** See Rduy Plans For quantity and location



STATION 12+38
RE BUILT 1981 BY
STATE OF ILLINOIS
F.A. RT. 849 SEC. 13BR
F.A. PROJ. ACB-AC-84(4)
LOADING HS20
STR. NO. 041-0040

NAME PLATE
(See Std. 283)

* Locate Existing Name Pl.
adjacent to New. Cost Incidental

WATERWAY INFORMATION TABLE

Drainage Area	1.86	Square Miles	Low Grade Elev. 438.52 at Sta. 124+50
Section	Flood.	Freq.	Q Total
113 BR	DESIGN	50	1713
	BASE	100	1969
	500 Yr.	500	2596
Opening (Sq. Ft.)	Exist.	Prop.	Nat.
	444	434.90	0.52
	459	435.10	0.68
	483	435.50	0.76
Head (Ft.)	Exist.	Prop.	Headwater Elev.
	435.42	435.29	
	435.78	435.58	
	436.26		

- (1) Fasteners shall be high strength bolts AASHTO M164. Bolts 3/4" dia, open holes 1/2" dia, or 5/8" dia, open holes 3/4" dia, unless otherwise noted.
- (2) Calculated weight of structural steel.
(M183) 15,270
(M223, 6+50-70, 140)
- (3) The Zinc Silicate and Vinyl Paint System shall be used for shop and field painting of structural steel, except where otherwise noted.
- (4) Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to 4' the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
- (5) Anchor bolts shall be set before bolting diaphragms over the supports.
- (6) The main load carrying member components subject to tensile stress shall conform to the supplemental requirements for Notch Toughness Zone 2. These components are the splice plate material and steel wide flange beams.
- (7) Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42, or M-53 Grade 60.
- (8) Riprap slopes may be varied in the field to suit ground conditions as directed by the Engineer.
- (9) Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8". Adjustments shall be made either by grinding the surface or by shimming the bearing. Two 3" 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 Bearing, shims of the dimensions of the Top Plate shall be provided & placed as detailed.
- (10) For Boring Data see sheet 16.
- (11) The Contractor shall drive one (1) Steel Test Pile at the West Abutment; at a permanent location as directed by the Engineer. Test pile shall be driven prior to ordering the remainder of the piling.

GENERAL NOTES

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUB	SUPER	TOTAL
Protective Coat **	sq.yd.		796	796
Class X Concrete	cu.yd.	87.8		87.8
Structural Steel	L.sum		.03	.03
Stud Shear Connectors	ea.		1764	1764
Reinforcement Bars	lb.	7390		7390
Reinforcement Bars (Epoxy coated)	lb.		32,390	32,390
Name Plates	ea.		1	1
Neoprene Expansion Joint, 2"	lin.ft.		106	106
- Steel Piles HP 8x36	lin.ft.	729		729
Test Piles, Steel HP 8x36	ea.	1		1
Class X Concrete Superstructures	cu.yd.		144.2	144.2
Riprap - Stone, Class A4	sq.yd.	230		230
Floor Drains	ea.		16	16
Concrete Removal	cu.yd.	8.3		8.3
Temporary Sheet Piling	sq.ft.		1000	1000
Elastomeric Brg. Assy., Ty. I	ea.		12	12
Removal of Existing Structures	ea.		1	1
Filter Fabric For use w/ Riprap	sq.yd.	230		230
Structure Excavation	cu.yd.	130		130

** quantity includes bridge deck surface
*** Except that the pier shall be rehabilitated for reuse



Project Location
R3E 3rd. PM.

DESIGN STRESSES

f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (Reinf.)
fy = 50,000 p.s.i. (St. Sl. M223) Gr. 50
fy = 36,000 p.s.i. (St. Steel M-183)
LOADING HS20-44
Design Specifications: 1983 A.A.S.H.T.O.
& 1984 Thru 1988 Interims.
Allow 25 #/sq. ft. for future wearing surface.



LOCATION MAP

APPROVED
FOR 3 MONTHS ONLY

James T. Rayburn
Engineer of Bridge and Structures

GENERAL PLAN

FA. ROUTE 849 (IL 142) / BRANCH OF
CASEY FORK
SEC. 113 BR
JEFFERSON COUNTY
Sta. 112+38 S.N. 041-0040

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS
1010 STEVENSON DR. • ST. LOUIS 801 • SPRINGFIELD, ILL.

REV. 5-18-89

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

041-0040

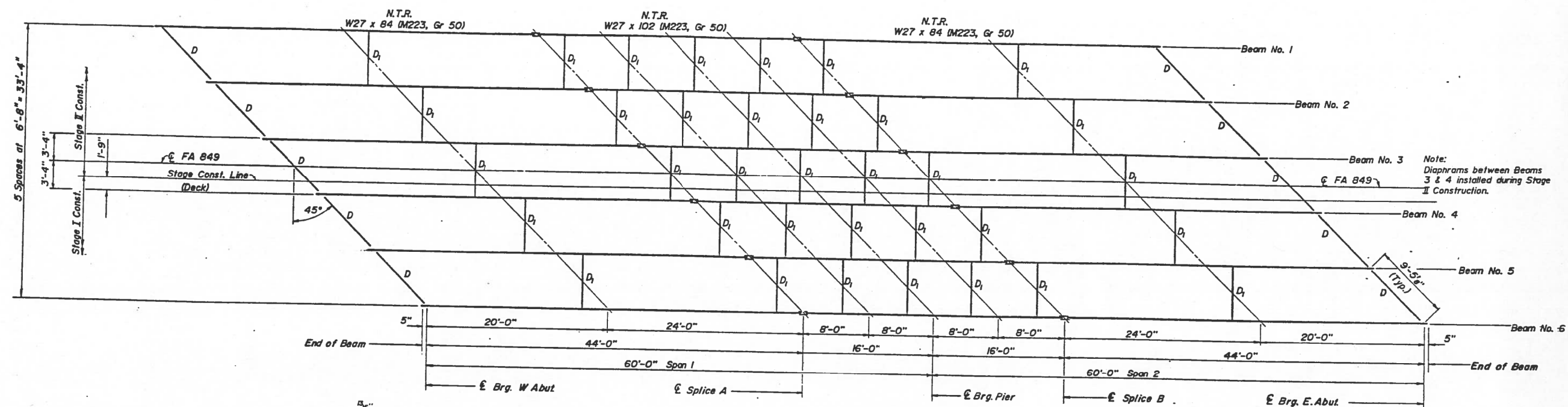
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	8
CONTRACT NO. 78677				
ILLINOIS FED. AID PROJECT				

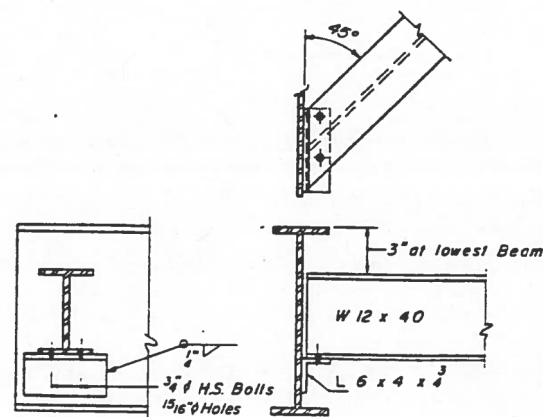
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	SHEET NO.	TOTAL SHEETS
849	113BR	JEFFERSON	23	11

BRIDGE SHEET 7 OF 17 SHEETS

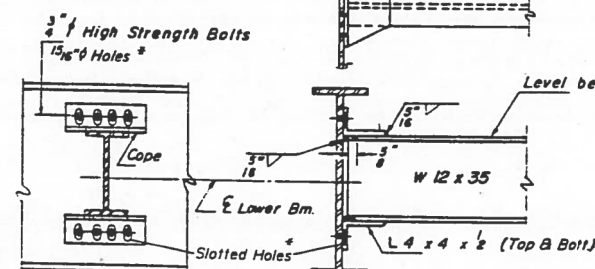


FRAMING PLAN



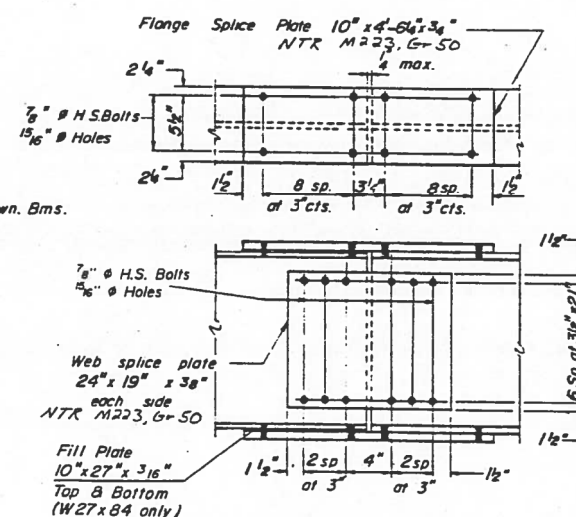
DIAPHRAGM D
10 Required

SLOTTED HOLE
DETAIL



DIAPHRAGM D1
35 Required

Note: Two hardened washers shall be required over all $\frac{1}{2}$ " holes.
* Provide slotted holes in $4 \times 4 \times \frac{1}{2}$ angles for diaphragms between Bms. 3 & 4. Provide slots in angles at North end of diaphragms only. Provide $\frac{3}{8}$ " Str. R washer at each slotted connector.
 $\frac{3}{4}$ " H.S. Bolts for diaphragms D1 between bms. 3 & 4 shall be tightened only after completing Stage II deck construction.



SPlice
(N.T.R. - all plates)

All Splice Plates are
M 223, Gr 50 Struct. St.

ELEVATION TOP OF WF **

Location	Beam 1	2	3	4	5	6
W&E. Abuts	438.19	438.31	438.42	438.42	438.31	438.19
Splices A&B	438.19	438.31	438.42	438.42	438.31	438.19
Pier	436.21	438.33	438.44	438.44	438.33	438.21

* Elevations shown are for W27 x 84.
For top of W27 x 102 at Splices add .02'.
** Use for Shop Fabrication only.
N.T.R. = Notch Toughness Requirement.

STRUCTURAL STEEL
FA RTE 849 SECTION 113BR
JEFFERSON CO.
STATION 112+38

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS
1418 STEVENSON DR. • PITTSBURGH • SPRINGFIELD, IL

FOR INFORMATION ONLY 041-0040

USER NAME = WILSONDA	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 10/10/2018	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

041-0040

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	9
CONTRACT NO. 78677				
ILLINOIS FED. AID PROJECT				

GROUP NO.	ENTRY	GROUP	OFFICE	DATE
P.A.L. # 849	113 BR	JEFFERSON	23	13
FED. BUREAU OF INV. NO. 7		ALLIANCE	FED. BUREAU OF INV. NO. 7	

[illegible]

Side Retainer (at inside face of exterior girders only & on S. side of Beam 4.

*# E 1" ϕ x 12" Anchor bolts with 2 1/2" x 2 1/2" x 5/16" E washer under nut

Technical drawing of a concrete pile cap showing dimensions and reinforcement details. The drawing includes a cross-section and a plan view.

Dimensions:

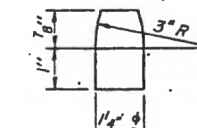
- Overall width: $13\frac{1}{2}'$
- Overall length: $1'-6\frac{1}{2}"$
- Cap thickness: $15"$
- Distance from centerline to pile center: $7\frac{1}{2}'$
- Distance from centerline to reinforcement: $7\frac{1}{2}'$
- Reinforcement spacing: $23"$
- Reinforcement diameter: $1\frac{1}{4}"$
- Reinforcement length: $17"$
- Reinforcement diameter: $1\frac{1}{2}"$

Reinforcement Details:

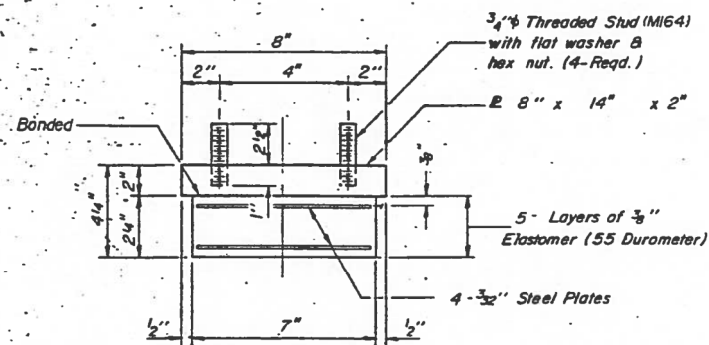
- $1\frac{1}{4}" \phi$ Holes - $1"$ deep in top R. for $1\frac{1}{4}" \phi$ pintles. Thread or press fit in bottom R.
- $1" \phi \times 12"$ Anchor bolts with $2\frac{1}{2}" \times 2\frac{1}{2}" \times \frac{5}{16}"$ R. washer under nut
- $1\frac{1}{2}" \phi$ Holes in bottom R.

* Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet # 15 for Anchor Bolt installation.

(6 - Req'd)

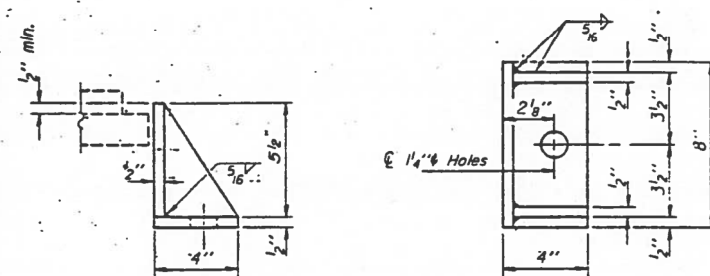


PINTLE



BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly



SIDE RETAINER (6 Req'd)

Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.
Side retainers are included in Structural
Steel pay item.

FOR INFORMATION ONLY 041-0040

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	12

BEARINGS

FA RTE 849 SECTION 113BR
JEFFERSON CO.
STATION 112+38

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS
100 STOKESON DR. • SUITE 200 • SPRINGFIELD, IL 62761

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/10/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

041-0040

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	10
		CONTRACT NO. 78677		
		ILLINOIS FED. AID PROJECT		

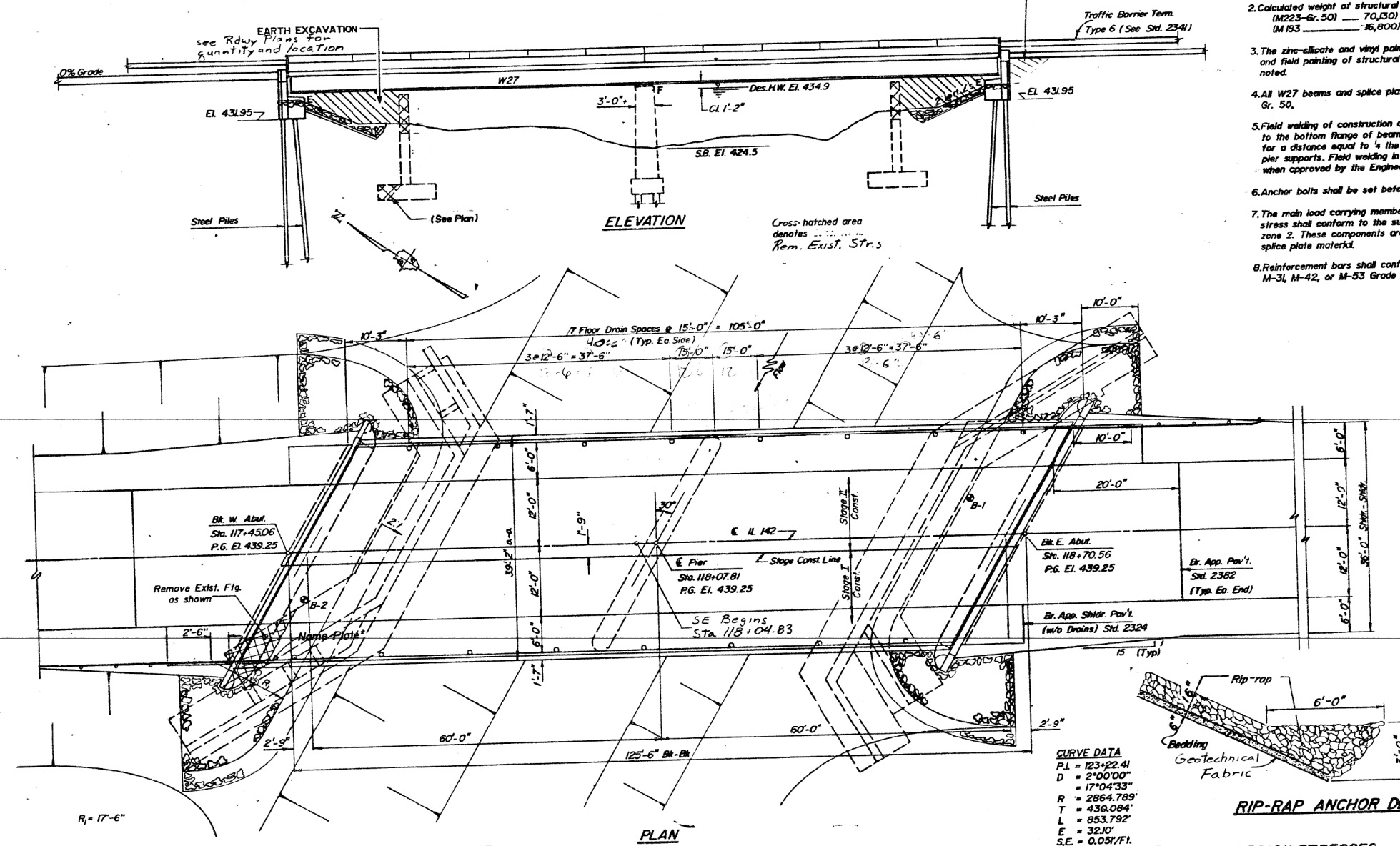
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 849/113BR-3		JEFFERSON	22	5
FHWA REG. NO. 5 ILLINOIS FEDERAL PROJECT				

B.M. "D" Top of N.W. Wing of Exist. Br. Elev. 439.00

Exist. Struct *041-0041 Two span R.C. Deck girder. Built 1928 - Widened 1953 (36'-4" x 86'-11" Bk-Bk.) R.C. Closed Abuts. and Solid Pier. To be removed using Stage Const. Pier to be revised to accommodate new superstructure. No other salvage.

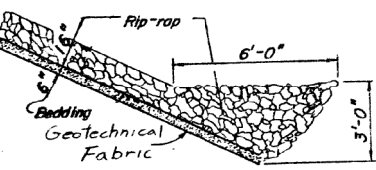
GENERAL NOTES

- Fasteners shall be high strength bolts. Bolts 3/4" Ø, Open Holes 1/2" Ø, or Bolts 1/2" Ø, Open Holes 1/4" Ø, unless otherwise noted.
 - Calculated weight of structural steel 86,930 pounds. (M223-Gr. 50) 70,000 (M193 16,900)
 - The zinc-silicate and vinyl paint system shall be used for shop and field painting of structural steel except where otherwise noted.
 - All W27 beams and splice plates shall be AASHTO M223, Gr. 50.
 - Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to 1/4 the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
 - Anchor bolts shall be set before bolting diaphragms over supports.
 - The main load carrying member components subject to tensile stress shall conform to the supplemental requirements for notch zone 2. These components are the wide flange beams and all splice plate material.
 - 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 1/4". Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2" 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, shims of the dimensions of top plate shall be provided and placed as detailed.
 - The Contractor shall drive one (1) Steel Test Pile in a permanent location at the East Abutment as directed by the Engineer before ordering the remainder of piles.
 - See Sh 16 for Boring Data.
 - Layout of Stone Riprap may be varied in the field as directed by the Engineer to suit ground conditions.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.



TOTAL BILL OF MATERIAL				
ITEM	UNIT	SUB	SUPER	TOTAL
Protective Coat *	sq. yd.		761	761
Class X Concrete	cu. yd.	74.8		74.8
Structural Steel	L. sum		03	03
Stud Shear Connectors	ea.	1764		1764
Reinforcement Bars	lb.	6620		6620
Reinforcement Bars (Epoxy coated)	lb.		32010	32010
Name Plate	ea.		1	1
Preformed Joint Seal 2 1/2"	lin. ft.		90	90
Steel Piles HP 8x36	lin. ft.	672		672
Test Piles, Steel HP 8x36	ea.	1		1
Class X Concrete Superstrs	cu. yd.		145.2	145.2
Stone Riprap, Class A4	sq. yd.	540		540
Floor Drains	ea.	16		16
Concrete Removal	cu. yd.	6.3		6.3
Removal of Existing Structures **	ea.		1	1
Temp. Sheet Piling	sq. ft.	1000		1000
Elastomeric Brg. Assy. Ty. I	ea.	12		12
Filter Fabric For use w/ Riprap	sq. yd.	540		540
Structure Excavation	cu. yd.	100		100

* quantity includes bridge deck surface
** Except that the pier shall be rehabilitated for reuse.



RIP-RAP ANCHOR DETAIL

DESIGN STRESSES

$f'_c = 3,500 \text{ p.s.i.}$
 $f_y = 60,000 \text{ p.s.i. (Reinf.)}$
 $f_y = 50,000 \text{ p.s.i. (St. Sl. M223) Gr. 50}$
 $f_y = 36,000 \text{ p.s.i. M-193}$
LOADING HS20-44
Design Specifications: 1983 A.A.S.H.T.O. § 1984 thru 1988 Interims
Allow 25 #/sq. ft. for future wearing surface.

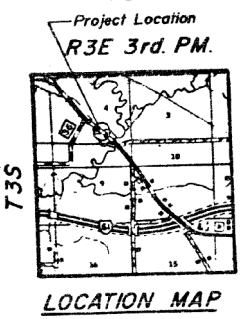
WATERWAY INFORMATION TABLE

Drainage Area		75.7		Square Miles		Low Grade Elev. 438.52 at Sta. 124+50					
Section	Flood	Freq. Yr.	Q Total C.F.S.	Opening Exist.	(Sq. Ft.) Prop.	Nat. H.W.E.	Head (Ft.) Exist/Prop.	Headwater Elev.		Elev. Prop.	
113 BR-3	Design	50	2294	519	570	434.9	0.52	0.39	435.42	435.29	
	Base	100	2633	533	587	435.1	0.68	0.48	435.78	435.58	
	Max. Calc.	500	3389		600	435.5		0.76		436.26	

APPROVED
FOR STRUCTURAL AGENCY ONLY

James T. Rayburn
Engineer of Bridges and Structures

* Locate Existing Name & adjacent to New. Cost incidental.



GENERAL PLAN & ELEVATION

F.A. RTE 849 (ILL. 142)/CASEY FORK CREEK
SECTION 113BR-3
JEFFERSON COUNTY
STATION 118+07.81
STRUCTURE NO. 041-0041
GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS
1111 S. KENTON ST. ST. LOUIS, MO. 63104

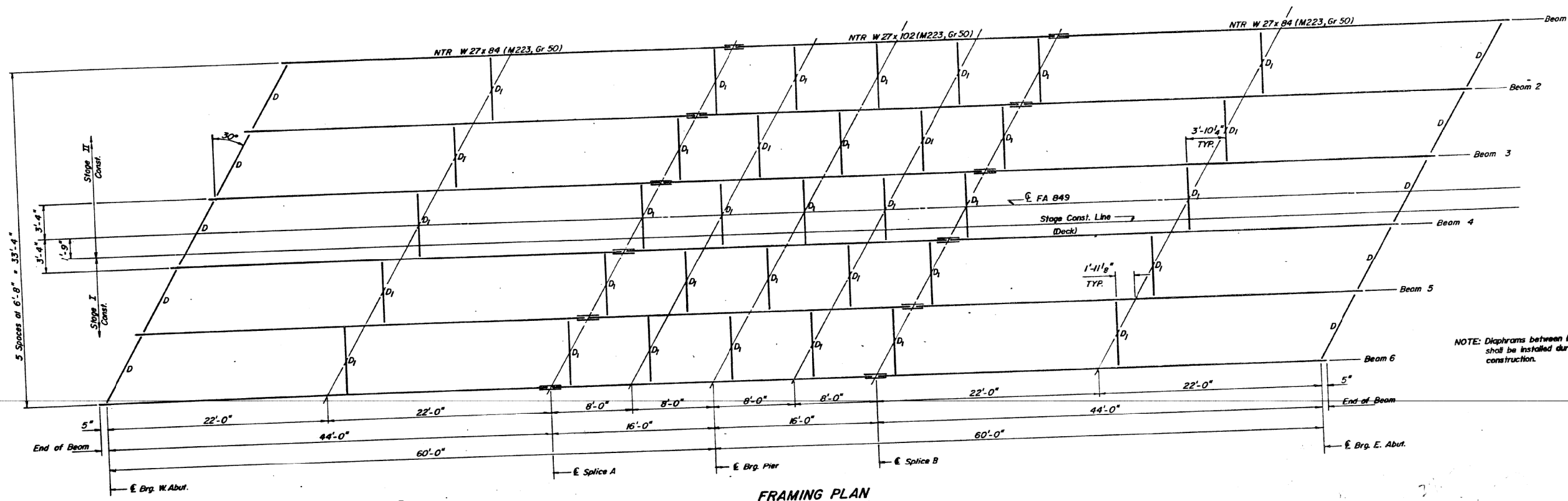
FOR INFORMATION ONLY 041-0041

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	041-0041	SCALE: SHEET OF SHEETS STA. TO STA.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
DRAWN -	REVISED -	REVISED -				VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	11
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -				ILLINOIS FED. AID PROJECT				
PLOT DATE = 10/10/2018	DATE -	REVISED -				CONTRACT NO. 78677				

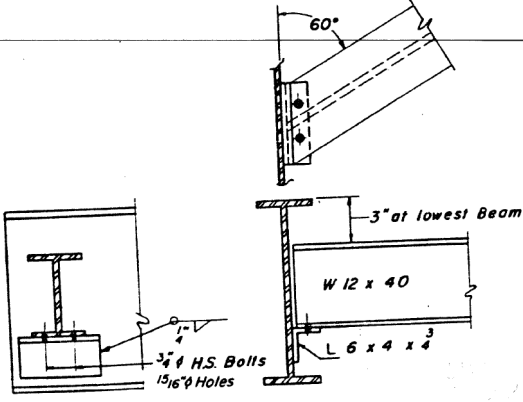
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 849	113 BR 3	JEFFERSON	22	12
TO STA.				
FHWA RES. NO. 5 ILLINOIS FED. AID PROJECT-				

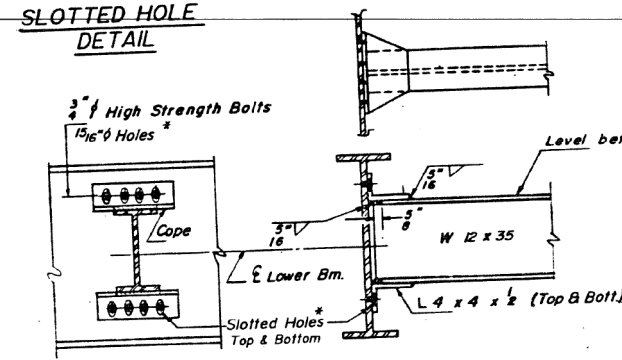
BRIDGE SHEET 8 OF 17



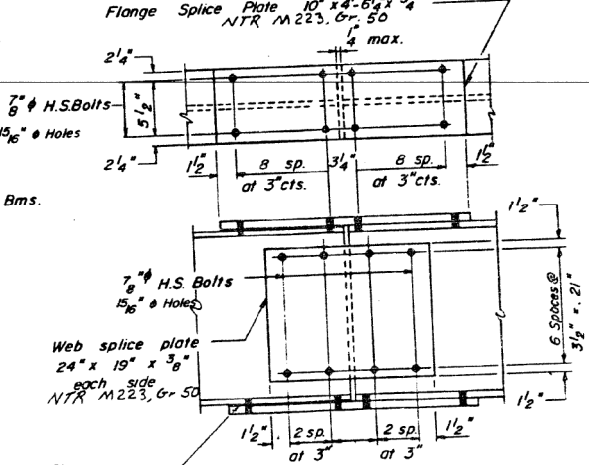
FRAMING PLAN



DIAPHRAGM D
10 Required



DIAPHRAGM D1
35 Required



SPLICE
(M223, Gr 50)
NTR - All Plates

ELEVATION TOP OF WF **						
Location	Beam	1	2	3	4	5
West Abutment		438.17	438.27	438.40	438.40	438.27
* Splices A & B		438.17	438.27	438.40	438.40	438.27
Pier		438.17	438.27	438.40	438.40	438.27
East Abutment		438.53	438.59	438.51	438.39	438.21

* Elevations shown are for W27x84. For top of W27x102 at Splices add .02'
** Use for Shop Fabrication only.
NTR - Notch Toughness Requirement.

NOTE: Bolts for Interior Diaphragms between Beams 3 & 4 shall be tightened after Stage II Deck is in place.

STRUCTURAL STEEL
FA RTE 849 SECTION 113 BR-3
JEFFERSON CO.
STATION 118+07.81
S.N. 041-0041

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS
1818 BIRCHMOUNT DR. • 217-462-8811 • SPRINGFIELD, ILL.

FOR INFORMATION ONLY 041-0041

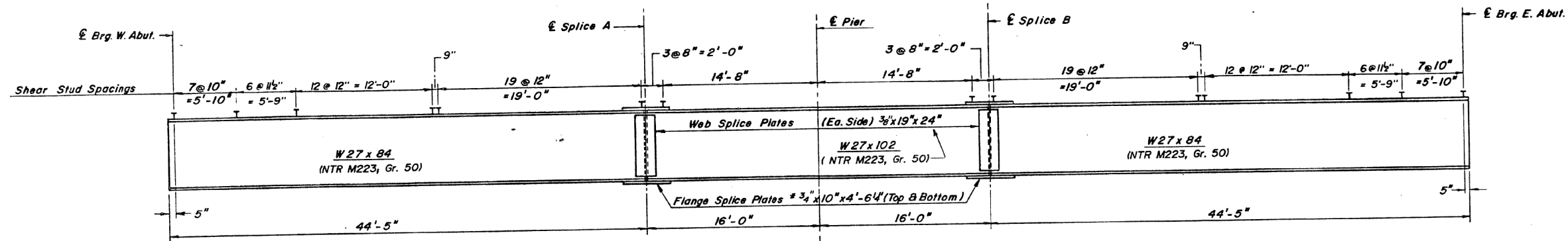
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PLOT DATE = 10/10/2018	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

041-0041

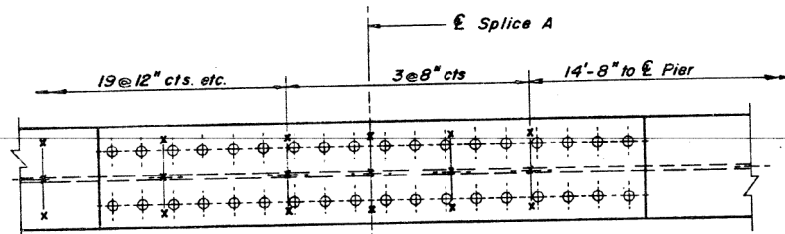
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	12
CONTRACT NO. 78677				
ILLINOIS FED. AID PROJECT				



ELEVATION TYPICAL BEAM

* See Sheet 8 for Fill Plates



STUD LOCATION PLAN

(Splice A Shown - B Similar)

o - Flange Splice Bolt

x - Shear Stud

Note: Minor relocation of studs will be permitted in order to avoid flange bolts.

INTERIOR GIRDER MOMENT TABLE		
	0.4 Sp. 1	Pier
I_x (in. ⁴)	2850	3620
I_y (in. ⁴)	9088	
S_x (in. ³)	213	267
S_y (in. ³)	342	
Z (in. ³)		305
\bar{Q} (K/1)	0.726	1.028
M_D (K)	173	-463
M_L (K/1)	302	
M_{sD} (K)	86	
M_{sL} (K)	417	-222
M_{imp} (K)	112	-60
$S_y(M_D + I)$ (K)	882	-470
M_a (K)	1483	-1212
M_u (K)	1734	
f_s (non-comp) (ksi)	9.7	18.2
f_s (comp) (ksi)	3.3	
f_s (t + I) (ksi)	30.9	18.5
f_s (Overload) (ksi)	43.9	36.7
f_s (Total) (ksi)		47.7
VR (K)	45.3	

INTERIOR GIRDER REACTION TABLE		
	Abut	Pier
R_D (K)	23.1	77.0
R_L (K)	35.8	43.8
I_{mp} (K)	9.7	11.8
R_{Total} (K)	68.6	132.6

NOTES

I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s (Total Overload).

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total Overload).

VR is the maximum \pm impact shear range in span.

Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.

The Fully Plastic Moment capacity (M_p) is computed according to AASHTO 10.48.1 & 10.50.11.

f_s (Total) is the sum of the stresses due to $1.3[M_D + M_s D + S_y(M_L + I)]$

f_s (Overload) is the sum of the stresses due to $M_D + M_s D + S_y(M_L + I)$

M_D - Moment due to dead loads on non-composite section.

$M_s D$ - Moment due to dead loads on composite section.

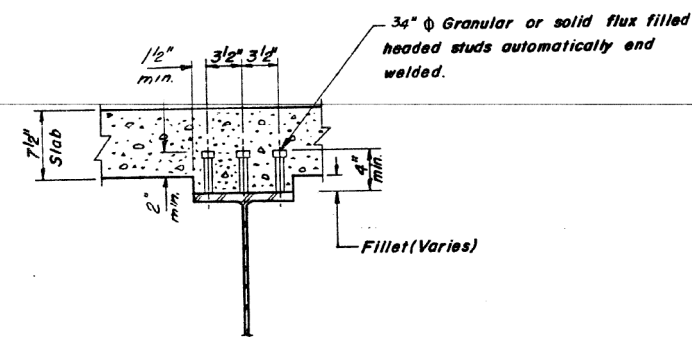
M_L - Moment due to live load on non-composite or composite section.

I - Live load impact

* M_u = Full Plastic Moment Capacity for Compact, Braced section.

** Non-compact section

M_a (Applied Moment) = $1.3[M_D + M_s D + S_y(M_L + I)]$



SHEAR STUDS

1,764 Req'd.

STRUCTURAL STEEL DETAILS

FA RTE 849 SECTION 113BR-3
JEFFERSON CO.
STATION 118+07.81

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS
1015 STEVENSON DR. - ST. LOUIS, MO. 63103-1015

FOR INFORMATION ONLY 041-0041

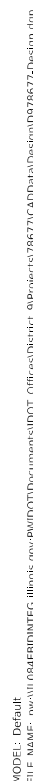
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PLOT DATE = 10/10/2018	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

041-0041

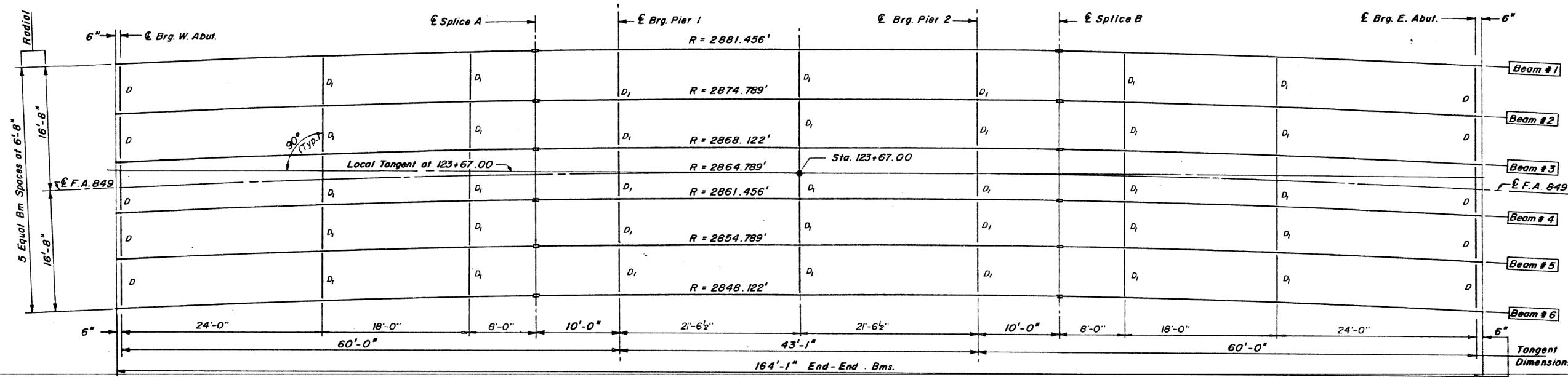
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	13
CONTRACT NO. 78677				
ILLINOIS FED. AID PROJECT				



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

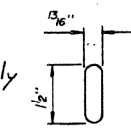
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
849	113BR-1	JEFFERSON	27	14
BRIDGE SHEET 2 OF 17				



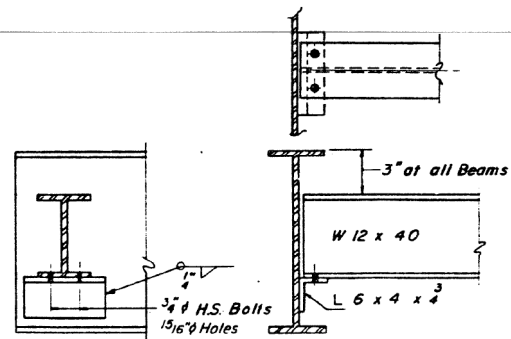
TOP OF WF ELEVATION *

Beam	ELEV
1	439.33
2	438.99
3	438.65
4	438.31
5	437.97
6	437.63

* Use designated elevation throughout for each beam line.
For Fabrication Only

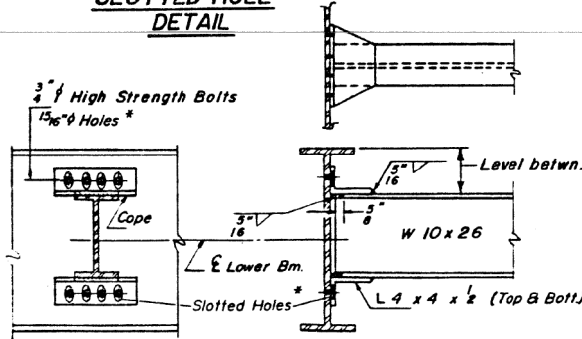


SLOTTED HOLE DETAIL



DIAPHRAGM D

10 Required



DIAPHRAGM D1

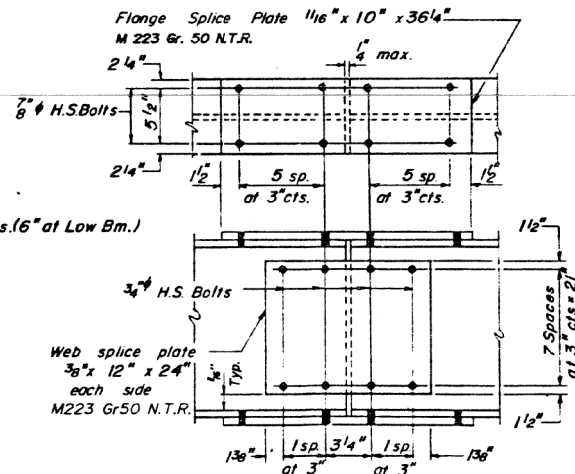
35 Required

Note: Two hardened washers shall be required over all 1 1/2" holes.
* Provide slotted holes in 4 x 4 x 1/2 angles for diaphragms between Bms. 3 & 4. Provide slots in angles at North end of diaphragms only. Provide 3/8" Str. R washer at each slotted connector.
3/4" H.S. Bolts for diaphragms D1 between bms. 3 & 4 shall be tightened only after completing Stage II deck construction. Slots to be 1 1/2" x 1 1/2".

FRAMING PLAN

(All Bms. W27 x 94)
M223 Gr50 N.T.R.

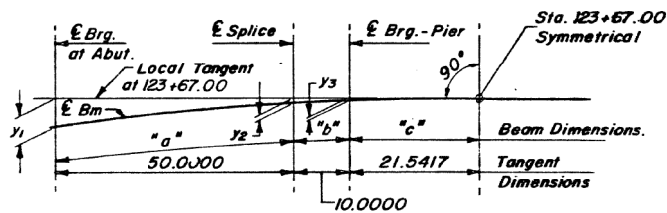
NOTE: Place diaphragms between Bms. #3 & #4 during Stage II construction.



SPLICE

NOTE: All Splice Plates are to be M223 Gr50 Structural Steel

N.T.R. = Notch Toughness Requirement



Dim. Beam	BEAM DIMENSIONS			LAYOUT DIMENSIONS		
	"a"	"b"	"c"	"y1"	"y2"	"y3"
1	50.0103	10.0004	21.5419	1.1540	0.1726	0.0805
2	50.0103	10.0004	21.5419	1.1567	0.1730	0.0807
3	50.0104	10.0004	21.5419	1.1594	0.1734	0.0809
4	50.0105	10.0004	21.5419	1.1621	0.1738	0.0811
5	50.0105	10.0004	21.5419	1.1648	0.1742	0.0813
6	50.0106	10.0004	21.5419	1.1675	0.1747	0.0815

BEAM GEOMETRY

NOTES: 1. All dimensions shown in feet.
2. Beams symmetrical about Sta. 123+67.00

STRUCTURAL STEEL

F.A. RTE. 849 ILL. 142 N/CASEY FORK CR.
SECTION 113BR-1
JEFFERSON COUNTY
STATION 123+67.00
STRUCTURE NO. 041-0042

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS
1401 STEVENSON DR. • ST. LOUIS, MO. 63103 • SPRINGFIELD, IL

FOR INFORMATION ONLY 041-0042

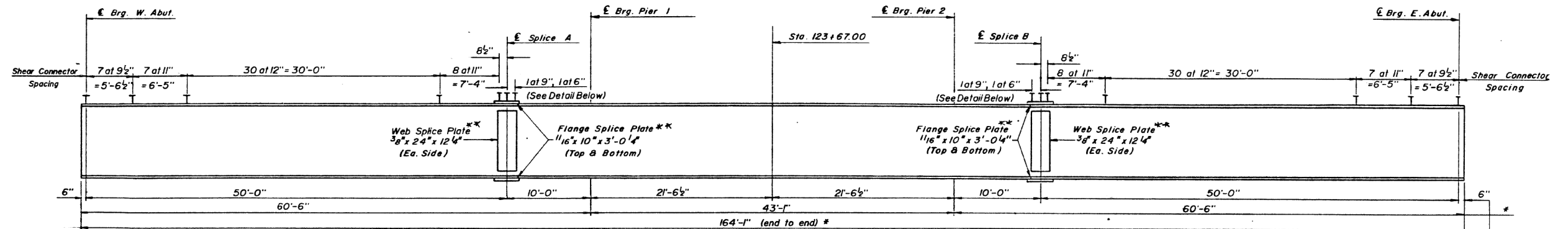
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DRAWN -	REVISED -	
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 10/10/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

041-0042

SCALE: SHEET OF SHEETS STA. TO STA.

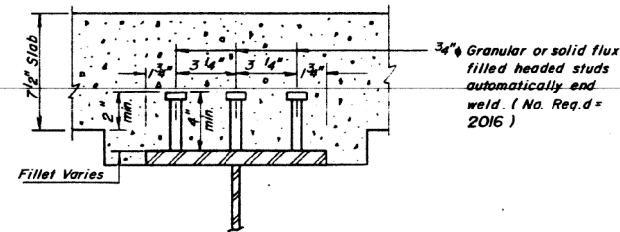
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	16
CONTRACT NO. 78677				
ILLINOIS FED. AID PROJECT				



TYPICAL BEAM
(Use W 27x94 throughout)**
** NTR M223, G-50

Note: Fabricate beams to horizontal radius shown on Sheet 8

* Dimensions along local tangent @ Sta. 123+67.00
For dimensions along beam see Sheet 8



SHEAR STUDS

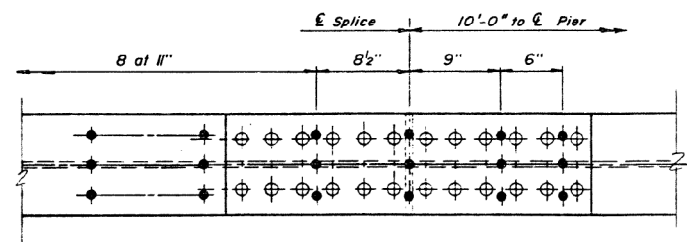
INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp. 1	Pier	0.5 Sp. 2
I_s (in ⁴)	3270	3270	3270
I_c (in ⁴)	10434	—	—
S_s (in ³)	243	243	243
S_c (in ³)	374	—	—
M (K/ft)	738	1040	1040
M_L (K)	231	-286.3	-46
s (K/ft)	302	—	—
M_s (K)	105	—	—
M_L (K)	424	-177	185
M_{imp} (K)	114	-52	56
$s_3(M_L + I)$ (K)	897	-382	402
M_a (K)	1603	781	461
M_u (K)	2280	—	1158
f_s (non-comp) (k.s.i.)	11.4	-14.1	-2.2
f_s (comp) (k.s.i.)	3.5	—	—
f_s (L + I) (k.s.i.)	28.6	-18.8	19.5
f_s (Overload) (k.s.i.)	43.7	-32.9	17.3
f_s (Total) (k.s.i.)	—	-42.8	—
VR (K)	49.4	—	—

NOTES

I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s (Total Overload).
 I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total Overload).
 VR is the maximum $L +$ impact shear range in span.

The Fully Plastic Moment capacity (M_u) is computed according to AASHTO 10.48.1 & 10.50.11.
 f_s (Total) is the sum of the stresses due to $1.3[M_L + M_s + s_3(M_L + I)]$
 f_s (Overload) is the sum of the stresses due to $M_L + M_s + s_3(M_L + I)$
 M_L - Moment due to dead loads on non-composite section.
 M_s - Moment due to dead loads on composite section.
 M_L - Moment due to live load on non-composite or composite section.
 I - Live load impact.

See General Notes # 6 Sheet No. 1 for Notch Toughness Requirements.



PLAN DETAIL

○ Splice Bolt
● Shear Connector
(Stud Spacing @ Flange Splice)
NOTE: Splice A shown, Splice B similar by rotation.
Location of shear connectors may be adjusted slightly to avoid flange splice bolts.

INTERIOR GIRDER REACTION TABLE		
	Abut.	Pier
R_L (K)	26.5	58.4
R_R (K)	35.9	46.1
$Imp.$ (K)	9.7	12.4
R_{Total} (K)	72.1	116.9

* M_u = Full Plastic Moment Capacity for Compact, Braced section.
** Non-compact section
 M_a (Applied Moment) = $1.3[M_L + M_s + s_3(M_L + I)]$

STRUCTURAL STEEL DETAILS

F.A. RTE. 849 (ILL. 142) / CASEY FORK R.
SECTION 113BR-1
JEFFERSON COUNTY
STATION 123+67.00
STRUCTURE NO. 041-0042

GREENE & BRADFORD, LTD.
CONSULTING ENGINEERS
1815 STEVENSON DR. • 217-828-8881 • SPRINGFIELD, ILL.

FOR INFORMATION ONLY 041-0042

USER NAME = WILSONDA	DESIGNED -	REVISED -
DRAWN -	REVISED -	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 10/10/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

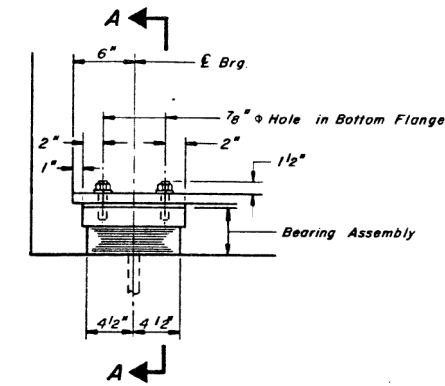
041-0042

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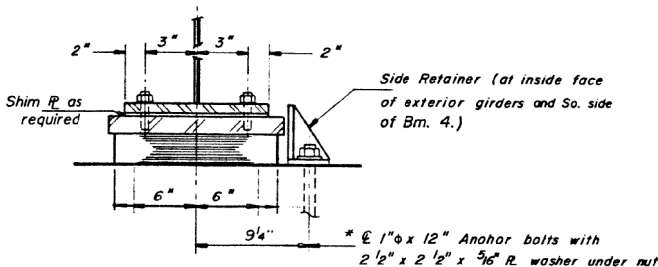
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VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	17
ILLINOIS FED. AID PROJECT				

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 849	113BR-1	JEFFERSON	27	16

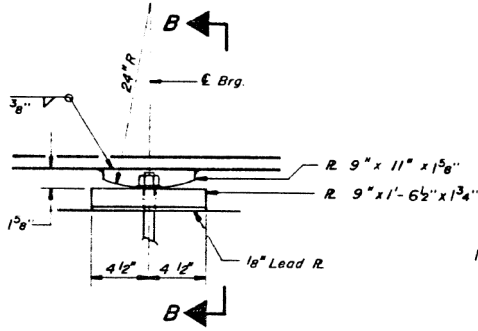
BRIDGE SHEET 10 OF 17



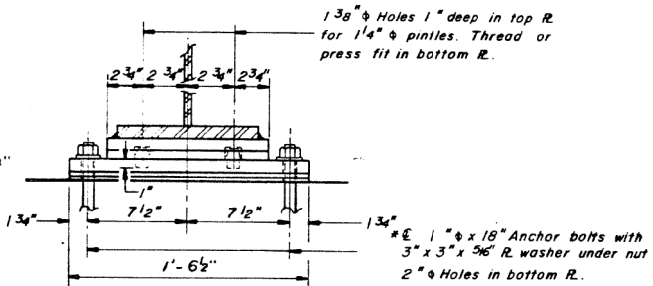
ELEVATION AT ABUT.



SECTION A-A

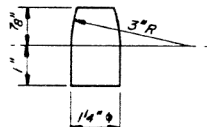


ELEVATION AT PIER

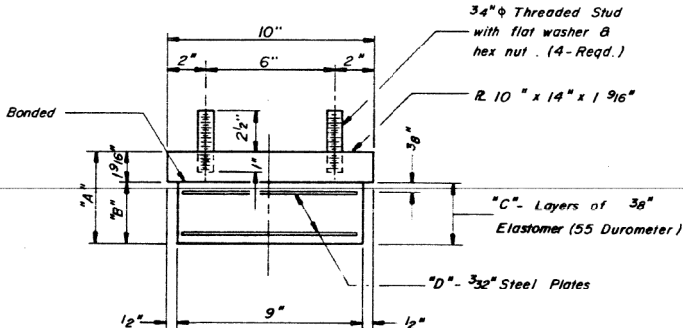


SECTION B-B

FIXED BEARING
(PIER - 2)



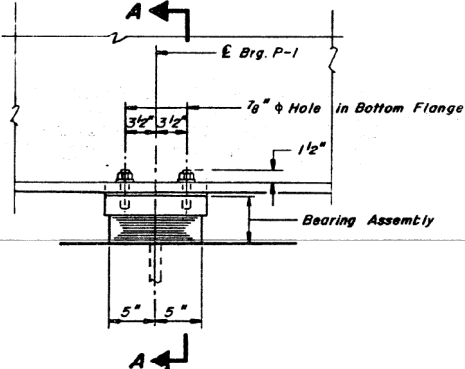
PINTLE



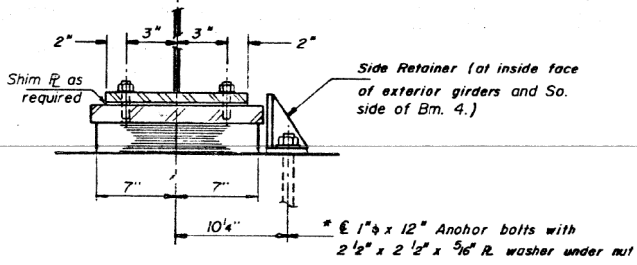
BEARING ASSEMBLY - ABUTS
(See Table for Values A, B, C, D)

NOTES: Shim plates shall not be placed under Bearing Assembly.

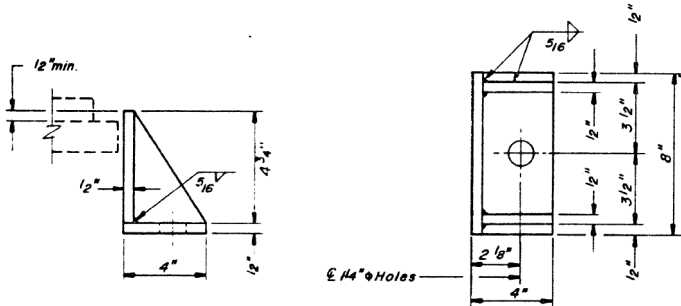
TABLE OF VALUES				
Value Location	A	B	C	D
West Abut.	4 3/4"	3 3/16"	7	6
East Abut.	3 13/16"	2 1/4"	5	4



ELEVATION AT PIER I

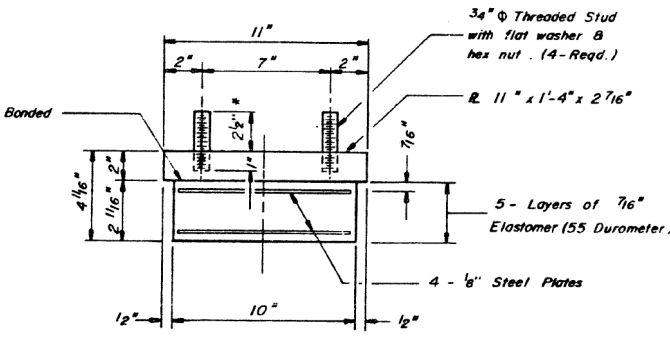


SECTION A-A



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight of Side retainers included with Structural Steel. (9 Req'd)



BEARING ASSEMBLY - PIER I
TYPE I ELASTOMERIC EXP. BRG.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	18

BEARINGS

RTE. 843 (ILL. 142 1/ CASEY FORK CR.
SECTION 113BR-1
JEFFERSON COUNTY
STATION 123+67.00
STRUCTURE NO. 041-0042

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS
1616 STEVENSON DR. • 217/928-8861 • SPRINGFIELD, ILL.

FOR INFORMATION ONLY 041-0042

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 10/10/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

041-0042

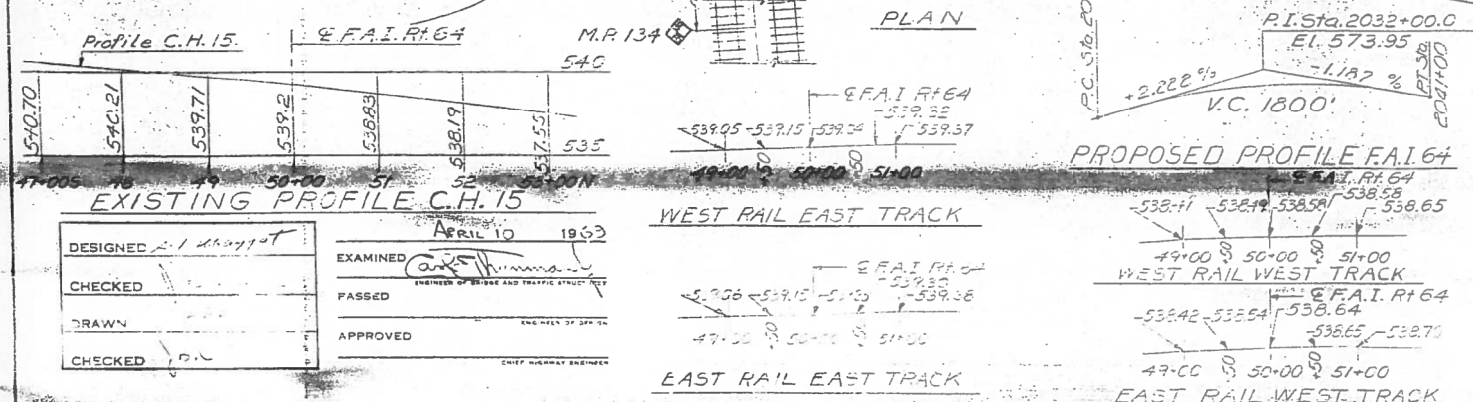
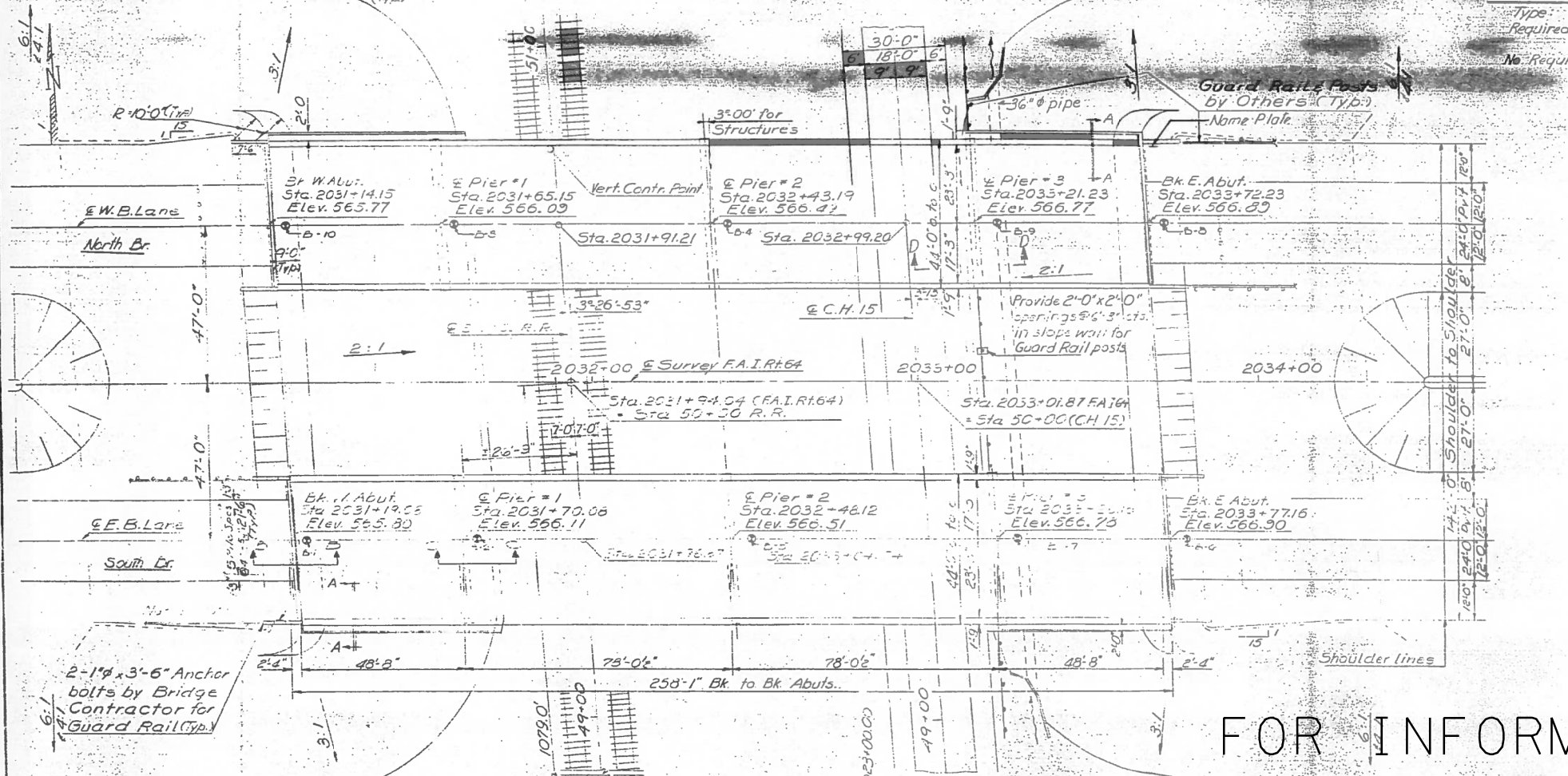
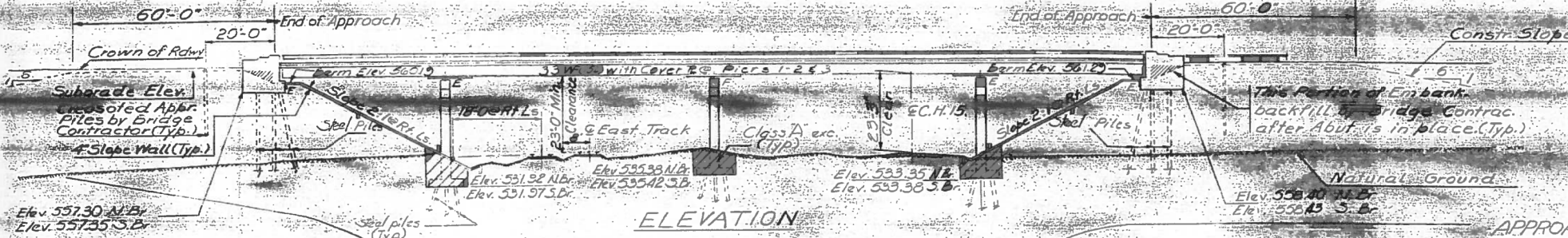
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	18
				CONTRACT NO. 78677
				ILLINOIS FED. AID PROJECT

E.M. R.R. Spike in Power Pole 348' left of
Sta. 2030+95 F.A.I. Rt. 64 Elev. 557.35

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

PROJECT NO.	41-6HVB-1	SHEET NO.	28	OF	6	TOTAL SHEETS	20 SHEETS
DATE	10/10/2018	DESIGNED BY	WILSONDA	CHECKED BY	WILSONDA	DRAWN BY	WILSONDA



DESIGNED	WILSONDA	EXAMINED	WILSONDA
CHECKED	WILSONDA	PASSED	WILSONDA
DRAWN	WILSONDA	APPROVED	WILSONDA
CHECKED	WILSONDA		

GENERAL NOTES

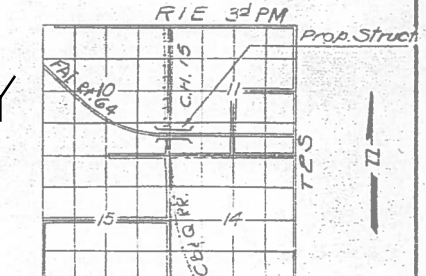
- All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
- Calculated weight of structural steel 529410 Lbs.
- Field welding of construction accessories will not be permitted in the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
- Anchor bolts shall be set before fastening diaphragms over supports.
- Slope wall shall be reinforced with welded wire fabric 6"x6" mesh weighing 58# per 100 sq. ft.
- The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
- The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class A concrete, except the approach and conform to the requirements of Handrail Concrete.
- The Contractor shall drive 4 Steel test piles in a permanent location at the West Abut. North Bridge, East Abut. South Bridge, Pier 1 South Bridge & Pier 3 North Bridge as directed by the engineer before ordering the remainder of piles.
- The Basic Lead Silico Chromate Paint system shall be used for shop and field painting of structural steel.
- Fasteners shall be high strength bolts. Bolts 3/4" & open holes 1 1/8" & unless otherwise noted.
- Diaphragm connections may be adapted to shop welding subject to approval by the Engineer.
- Class A Excavation for structures includes excavation for slope wall.

APPROACH PILE DATA

Type	Cresosoted
Required Length: W. Abuts. - 24'-0"	
E. Abuts. 22'-0"	
No. Required	24

STATION 2031+94.04
BUILT 1970 BY
STATE OF ILLINOIS
F.A.I. RT. 64 SEC. 41-6HVB-1
FA. PROJ. IIG-64-3(12)62
LOADING HS20+ALT.

Name Plate
(see Std. E1157)



LOCATION SKETCH

GENERAL PLAN & ELEVATION

PROJECT: IIG-64-3(12)62
F.A.I. Rt. 64 over BN INC R.R. & C.H. 15.
F.A.I. Rt. 64 - SECTION 41-6HVB-1

JEFFERSON CO.

STA. 2031 + 94.04

FOR INFORMATION ONLY
041-0077 & 041-0078

DESIGN STRESSES

- $f_c = 1200$ Super Deck
- $f_c = 1400$ Sub. & Parapet Curb
- $f_s = 20,000$ psi Reinf.
- $f_s = 20,000$ psi Struct. (A-36)
- $n = 10$
- Allowable Live Load & Impact defl.
- Non Composite 1800
- Composite 1800
- Loading: HS 20-44 & Alt.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

041-0077 & 041-0078

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	19
CONTRACT NO. 78677				
ILLINOIS FED. AID PROJECT				

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10 20 SHEETS
S.S. F.A.I. 64	41- GHVB	JEFFERSON	28	15	
FED. ROAD DIST. NO. F		ILLINOIS	FED. AID PROJECT:		



Technical drawing of a cover plate for a beam. The drawing shows a side view of the cover plate with dimensions and labels.

Dimensions:

- Overall length: 17'-6"
- Span 1: 6'-9"
- Span 2: 8'-9"
- Span 3: 6'-9"
- Span 4: 8'-9"
- Span 5: 6'-9"
- Span 6: 8'-9"
- Span 7: 6'-9"
- Span 8: 8'-9"
- Span 9: 6'-9"
- Span 10: 8'-9"
- Span 11: 6'-9"
- Span 12: 8'-9"
- Span 13: 6'-9"
- Span 14: 8'-9"
- Span 15: 6'-9"
- Span 16: 8'-9"
- Span 17: 6'-9"
- Span 18: 8'-9"
- Span 19: 6'-9"
- Span 20: 8'-9"
- Span 21: 6'-9"
- Span 22: 8'-9"
- Span 23: 6'-9"
- Span 24: 8'-9"
- Span 25: 6'-9"
- Span 26: 8'-9"
- Span 27: 6'-9"
- Span 28: 8'-9"
- Span 29: 6'-9"
- Span 30: 8'-9"
- Span 31: 6'-9"
- Span 32: 8'-9"
- Span 33: 6'-9"
- Span 34: 8'-9"
- Span 35: 6'-9"
- Span 36: 8'-9"
- Span 37: 6'-9"
- Span 38: 8'-9"
- Span 39: 6'-9"
- Span 40: 8'-9"
- Span 41: 6'-9"
- Span 42: 8'-9"
- Span 43: 6'-9"
- Span 44: 8'-9"
- Span 45: 6'-9"
- Span 46: 8'-9"
- Span 47: 6'-9"
- Span 48: 8'-9"
- Span 49: 6'-9"
- Span 50: 8'-9"
- Span 51: 6'-9"
- Span 52: 8'-9"
- Span 53: 6'-9"
- Span 54: 8'-9"
- Span 55: 6'-9"
- Span 56: 8'-9"
- Span 57: 6'-9"
- Span 58: 8'-9"
- Span 59: 6'-9"
- Span 60: 8'-9"
- Span 61: 6'-9"
- Span 62: 8'-9"
- Span 63: 6'-9"
- Span 64: 8'-9"
- Span 65: 6'-9"
- Span 66: 8'-9"
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- Span 80: 8'-9"
- Span 81: 6'-9"
- Span 82: 8'-9"
- Span 83: 6'-9"
- Span 84: 8'-9"
- Span 85: 6'-9"
- Span 86: 8'-9"
- Span 87: 6'-9"
- Span 88: 8'-9"
- Span 89: 6'-9"
- Span 90: 8'-9"
- Span 91: 6'-9"
- Span 92: 8'-9"
- Span 93: 6'-9"
- Span 94: 8'-9"
- Span 95: 6'-9"
- Span 96: 8'-9"
- Span 97: 6'-9"
- Span 98: 8'-9"
- Span 99: 6'-9"
- Span 100: 8'-9"

Labels:

- 1" - 6"
- 7'-9"
- 7'-3"
- 1" - 6"
- 3"
- 1"
- 13"
- 8 Brg.
- Cover plate top and bottom 10'-8" x 3/4" x 17'-6"

A schematic diagram of a mechanical testing machine. It consists of a rectangular frame. Inside, a specimen is represented by a horizontal bar with diagonal hatching. The specimen is held at its left end by a vertical rod that passes through a horizontal plate. At the right end of the specimen, a handle is attached, which is being pulled to the right by a force vector F . The specimen is positioned between two horizontal plates, one above and one below it.

COVER PLATE
At Fig 3
10-11-12

level 0. to 0.
-3" at Bm. 5 No. Bridge
@ Bm. 11 So. Bridge

DIAPHRAGM D
Total 110 Required

Diagram illustrating the cross-section of a bridge deck with a cover plate. The diagram shows two spans: 5'-0" Span 1-2 and 8'-3" Span 2-3. The total length of the cover plate is 13'-0". The diagram also shows various offsets and dimensions: 1'-6" offset from the left pier, 4'-3" gap between the spans, 7'-3" offset from the right pier, and 1'-0" offset from the right pier. A vertical dimension of 5" is shown on the left, and a horizontal dimension of 8" is shown at the bottom left. The text "COVER PLATE (24 rods)" and "At Piers 1 & 3" is written below the diagram.

2 1/4"

7/8" H.S. Bolts

1"

1/4" max.

1 1/2"

10 sp. at 3" cts.

10 sp. at 3" cts.

1 1/2"

3/8"

3/4" H.S. Bolts

Web splice plate 18" x 7/16" x 2-1/2" each side

13"

2 sp. at 3"

2 sp. at 3"

1 3/8"

SP LICE

	NORTH BRIDGE						
	Brg. 1	Bm 2	Bm 3	Fn 4	Fr 5	Bm 6	
E Brg. W. Abut.	564.87	565.01	565.12	565.33	564.89	564.73	
E Splice 1	564.89	565.13	565.24	565.13	565.21	564.85	
E Brg. Pier 1	565.09	565.23	565.34	565.25	565.11	564.95	
E Splice 2	565.29	565.27	565.48	565.39	565.45	565.29	
E Splice 3	565.23	565.75	565.74	565.13	565.01	565.45	
E Brg. Pier 3	565.77	565.91	566.02	565.93	565.79	565.65	
E Splice 4	565.82	565.96	566.07	565.98	565.84	565.68	
E Brg. E. Abut.	565.97	566.11	566.22	566.13	565.99	565.83	
	SOUTH BRIDGE						
E Brg. W. Abut.	564.78	564.93	565.06	565.16	565.03	564.89	
E Splice 1	564.90	565.05	565.18	565.28	565.15	565.01	
E Brg. Pier 1	565.00	565.15	565.23	565.35	565.25	565.11	
E Splice 2	565.33	565.48	565.61	565.71	565.58	565.44	
E Brg. Pier 2	565.47	565.56	565.69	565.73	565.66	565.52	
E Splice 3	565.49	565.64	565.77	565.87	565.74	565.60	
E Brg. Pier 3	565.66	565.81	565.94	566.04	565.91	565.77	
E Splice 4	565.71	565.86	565.99	566.05	565.96	565.82	
E Brg. E. Abut.	565.86	566.01	566.14	566.24	566.11	565.97	

FOR INFORMATION ONLY
041-0077 & 041-0078

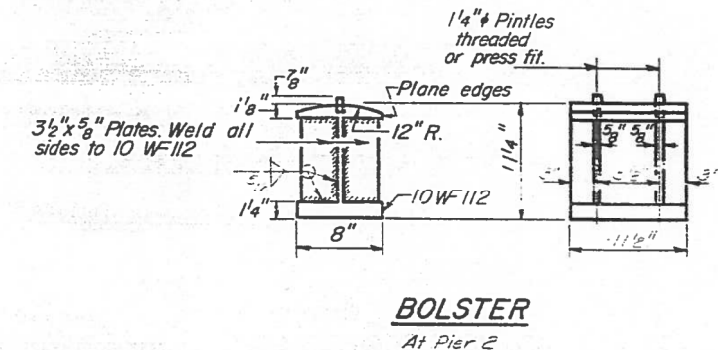
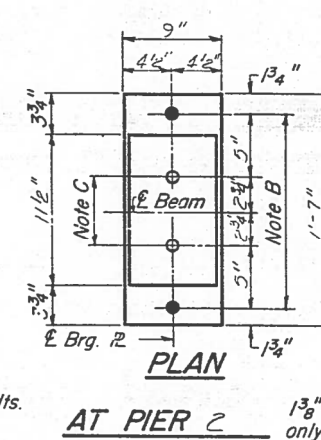
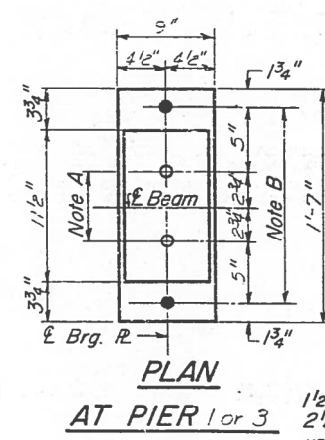
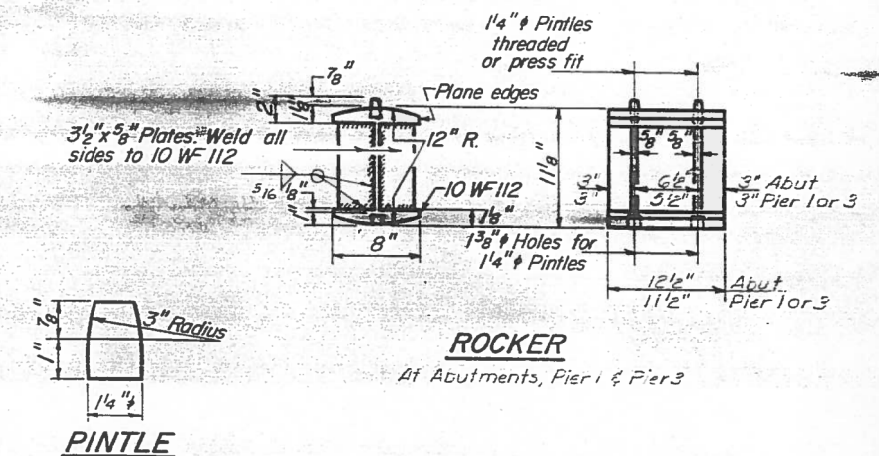
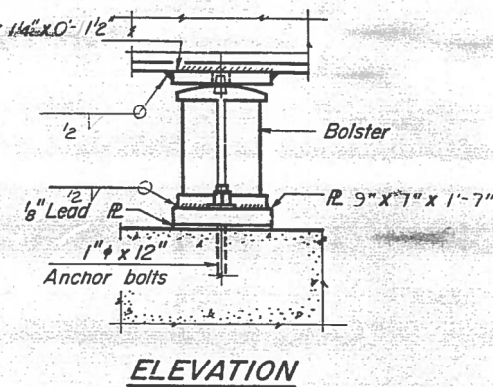
STRUCTURAL STEEL
FAI RT. 64 SEC. 41-64VB-1
JEFFERSON COUNTY
STA. 2031+24.04

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	20
		CONTRACT NO. 78677		
		ILLINOIS	FED. AID PROJECT	

MAP SHEET NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. 1 P. 1. 64	4- 64HYB-1	JEFFERSON	28	16
PER. ROAD SHEET NO. 7		ILLINOIS	PER. AND PROJECT	

SHEET NO. 16
20 SHEETS



NOTE B
1 1/2" ϕ Holes for 1" ϕ anchor bolts.
2 1/2" x 2 1/2" x 5/16" ϕ Washers
under nut.

NOTE C
13" ϕ Holes 1" deep in top R
— only for 14" ϕ pintles.

BEARING ASSEMBLY DETAILS

- b) After beams have been erected and dimensions D^* or D^{**} determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

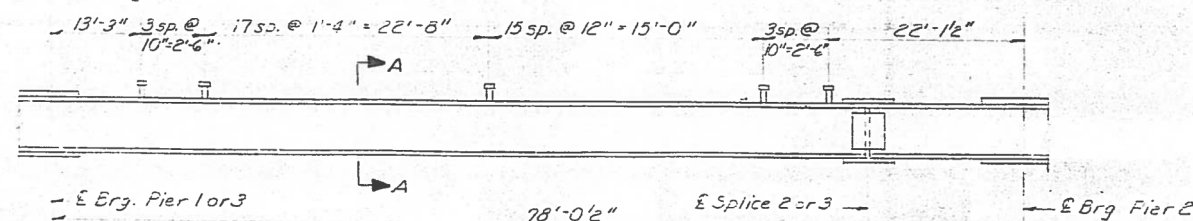


TABLE OF MOMENTS & REACTIONS

	0.4sp1	Fier1	0.3sp2	Fier2	-0.1	-0.1	Fier3	Fier4
D.L.	109.8	407.8	240.6	-572.6	4.35	67.09	79.14	
S.D.L.	39.6	109.5	97.2	-143.5	4.90	20.45	23.80	
L.L.	326.3	319.5	541.8	-384.8	37.97	51.05	56.29	
Imp.	94.0	-85.3	133.3	-94.7	10.93	13.63	13.85	
Total	569.7	-922.5	1012.9	-1195.6	68.78	152.22	173.08	

*Syn. m. about 5 ft. 2

PROPERTIES	
STEEL SECTION	
I _s	8147.6 in ⁴
S _{Ts}	486.4 in ³
S _E s	456.4 in ³
COMPOSITE SECT 11	
I _c	19766.7 in ⁴
S _{Tc}	4475.1 in ³
S _{Ec}	479.7 in ³

FOR INFORMATION ONLY
041-0077 & 041-0078

DESIGNED <i>L. I. Kharayat</i>	APR. 10 1965
CHECKED _____	EXAMINED <i>W. H. Munnally</i>
DRAWN <i>P. G. Barnett</i>	PASSED
CHECKED _____	APPROVED

STUD LAYOUT
Span 2 or 3

3/4" x 4" CR1020 STL
granular or solid
flux filled headed
studs automatically
end welded.

$\frac{12' 35'' @ 273''}{= 858''}$ 12'

SECTION A-A.

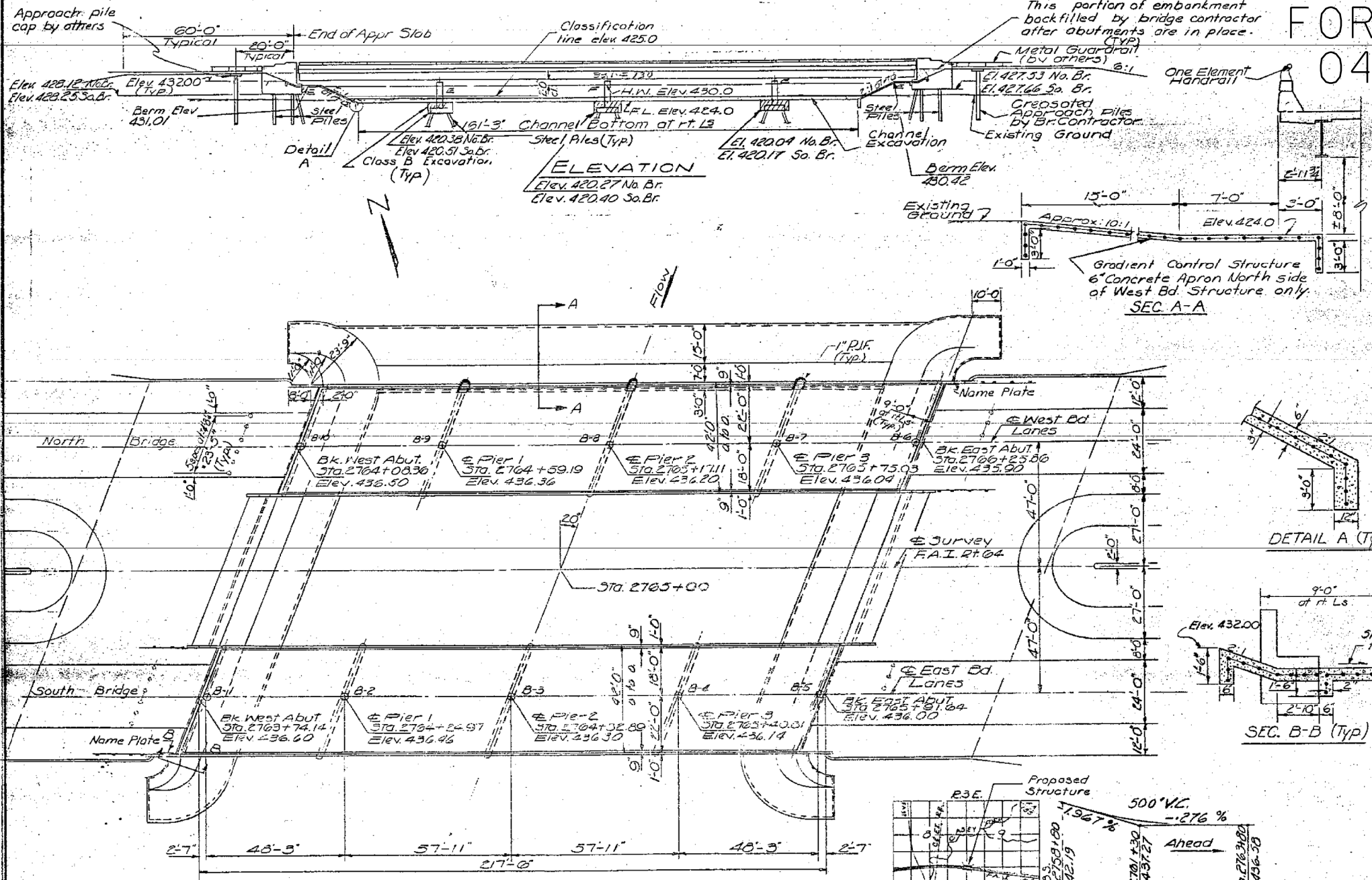
B.M. #6-RR Spike in 11" Oak tree
200' LT. OF STA. 2755+00 Elev. 429.502

Approach Pile Data
Type: Cressed
Required Length: 10'
Number Required: 24

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

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET TOTAL
41-58	41-58	JEFFERSON	99	44
SHEET NO. 1				

FOR INFORMATION ONLY
041-0087 & 041-0088



GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.

Rivets $\frac{3}{4}$ " open holes $\frac{1}{2}$ " unless otherwise noted.

Diaphragm connections may be adapted to shop welding subject to approval by the Engineer.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of Aluminum paint.

Field welding of construction accessories will not be permitted to the bottom flange of beams or girders nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before riveting diaphragms over supports.

Slope wall shall be reinforced with welded wire fabric 6" x 6" mesh, weighing 58# per 100 sq. ft.

Class A Excavation for structures includes excavation for slope wall.

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Standard Concrete.

Layout of slope walls may be varied to suit ground conditions in field as directed by the Engineer.

The contractor shall drive four steel test piles, one each of west abutment South Bridge, East abutment North Bridge, Pier One North Bridge, and Pier Three South Bridge in a permanent location, as directed by the Engineer before ordering the remainder of piles.

TOTAL BILL OF MATERIALS

ITEM	UNIT	SUPER	SUB	TOTAL
Class "A" Concrete	Cu.Yd.		300.1	300.1
Class "B" Excav. for Structure	Cu.Yd.			44.3
Class "X" Concrete	Cu.Yd.	520.4	181.2	701.6
Protective Coat	Sq. Yds.			22.70
Structural Steel	Lbs.	410,170		410,170
Aluminum Siding	Lbs.	857		857
Reinforcement Bars	Lbs.	163,350	31,000	194,350
Cressed Piles up to 20'	Lin. Ft.			240
Steel Piles (BBP36)	Lin. Ft.			3797
Test Piles (Steel/BBP36)	ea.			4
Name Plates	ea.			2
Slope Wall (6")	Sq. Yds.			1800
Bridge Seat Sealant	L.S.			1
Channel Excavation	Cu.Yd.			2090

*** At abutments only.

*** Includes quantity of gradient control structure

† Includes excavation for slopewalls.

DESIGNED: J. J. Hammett
CHECKED: George A. Bassi
DRAWN: J. M. Heninger
CHECKED: George A. Bassi

EXAMINED: *W. E. Dymally*
PASSED: *W. E. Dymally*
APPROVED: *W. E. Dymally*

FEBRUARY 27 1968

STATION 2765+00
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 64 SEC. 41-58-1
FA. PROJ. 1-1643 (N)
LOADING H20+44
NAME PLATE
See Std. 2113-T

WATERWAY INFORMATION

Drainage Area — 53,040 Acres *

Character — Level, rolling, hilly, wooded, cultivated

Required Opening — (50 Year Flood) — 1000 Sq. Ft.

Present Opening — None

Proposed Opening — 1000 Sq. Ft.

Q₂₄ = 10,800 cfs. *

* For Mainline and overflow structures.

DESIGN STRESSES

f_c = 1400 psi. (Super. & Sub.)

f_s = 20,000 psi. (Reinf.)

f_s = 20,000 psi. (Struct.)

v_c = 75 psi. (Figs.)

n = 10

L.L. Deflection = 1/1000

GENERAL PLAN ELEVATION

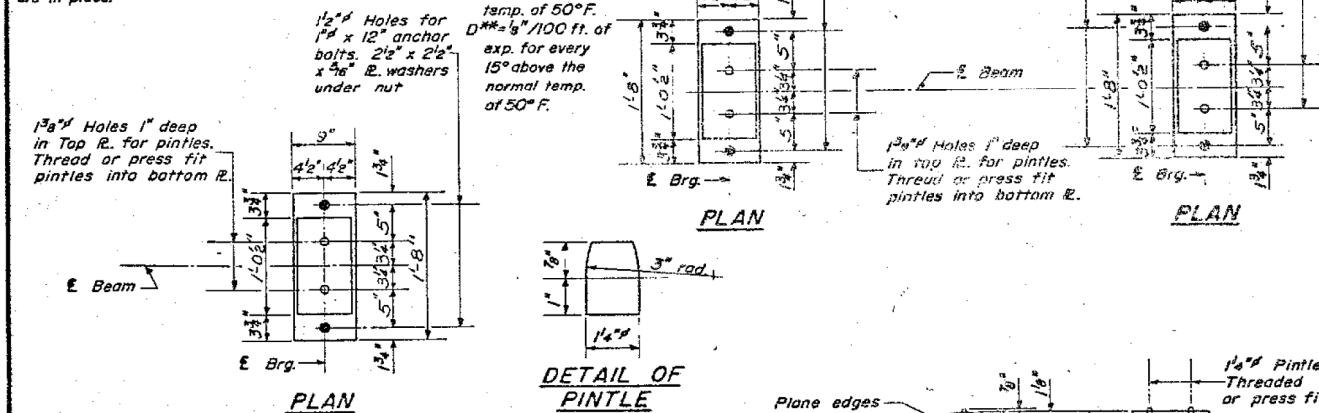
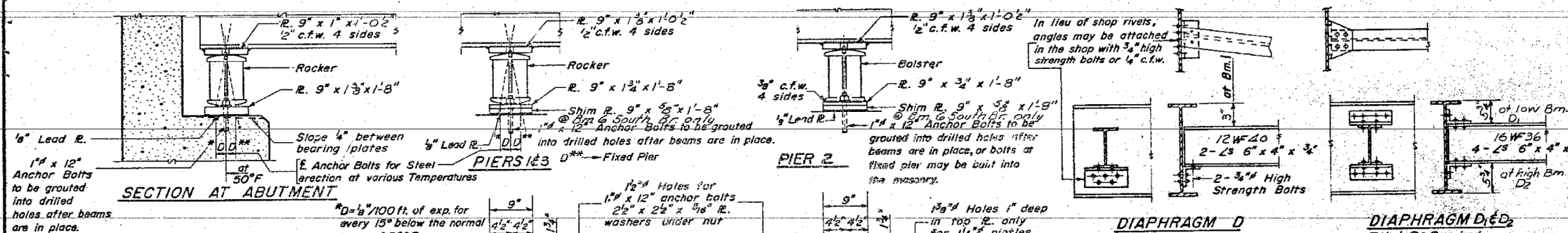
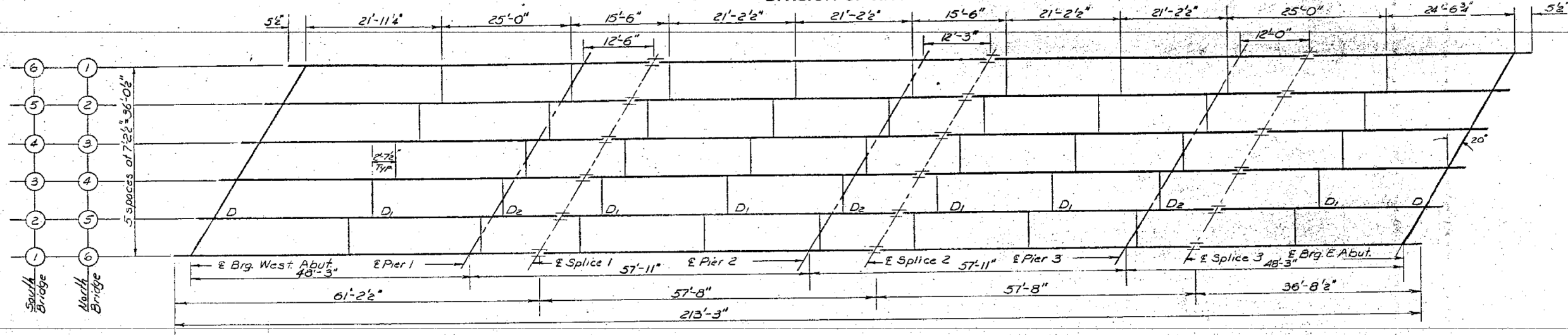
CASEY FORK
OVERFLOW CHANNEL
F.A.I. ROUTE 64
SECTION 41-58-1
JEFFERSON COUNTY
STATION 2765+00

MODEL: Default
FILE: 041-0087 & 041-0088.dwg
PLOT DATE: 10/10/2018

FOR INFORMATION ONLY
041-0087 & 041-0088

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

PROJECT NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
41-8	JEFFERSON	99	51	11
DATE	BY	DATE	BY	DATE
10/10/2018	George A. Bazi	10/10/2018	George A. Bazi	10/10/2018

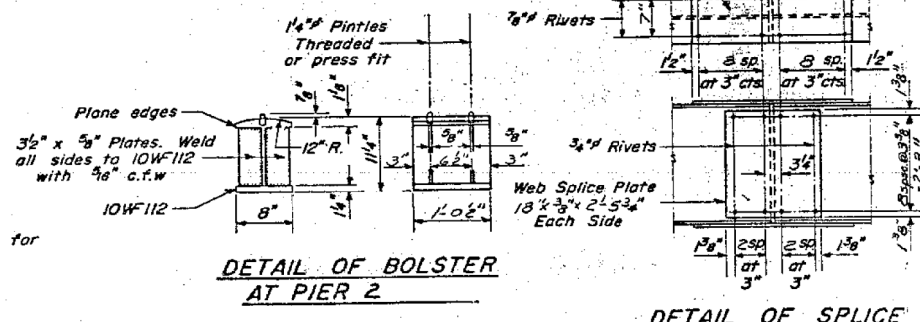
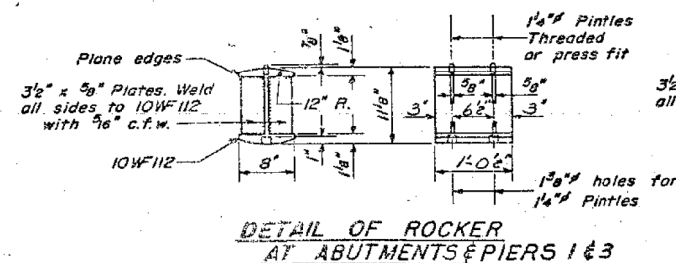


MOMENTS & REACTIONS (Interior Beams)

Beam	Moment (Kip. Ft.)		Reaction (Kip.)	
	Left	Right	Left	Right
1	181.9	314.6	10.1	65.2
2	313.2	252.4	31.7	263.4
3	90.5	71.0	85.1	72.0
4	585.6	638.0	549.0	640.0
5	66.8	121.3	119.3	

ELEVATIONS OF TOP OF WF (for fabrication only)

Station	Top of WF
435.50	435.50
435.51	435.51
435.52	435.52
435.53	435.53
435.54	435.54
435.55	435.55
435.56	435.56
435.57	435.57
435.58	435.58
435.59	435.59
435.60	435.60
435.61	435.61
435.62	435.62
435.63	435.63
435.64	435.64
435.65	435.65
435.66	435.66
435.67	435.67
435.68	435.68
435.69	435.69
435.70	435.70
435.71	435.71
435.72	435.72
435.73	435.73
435.74	435.74
435.75	435.75
435.76	435.76
435.77	435.77
435.78	435.78
435.79	435.79
435.80	435.80
435.81	435.81
435.82	435.82
435.83	435.83
435.84	435.84
435.85	435.85
435.86	435.86
435.87	435.87
435.88	435.88
435.89	435.89
435.90	435.90
435.91	435.91
435.92	435.92
435.93	435.93
435.94	435.94
435.95	435.95
435.96	435.96
435.97	435.97
435.98	435.98
435.99	435.99
436.00	436.00



DESIGNED	A.Y. Khayia
CHECKED	George A. Bazi
DRAWN	Jm. Heninger
CHECKED	George A. Bazi

EXAMINED	George A. Bazi
PASSED	George A. Bazi
APPROVED	George A. Bazi

STRUCTURAL STEEL
NORTH & SOUTH BRIDGES
FAI. RT. 64 SEC. 41-8B-1
JEFFERSON COUNTY
STA. 2765+00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

041-0087 & 041-0088

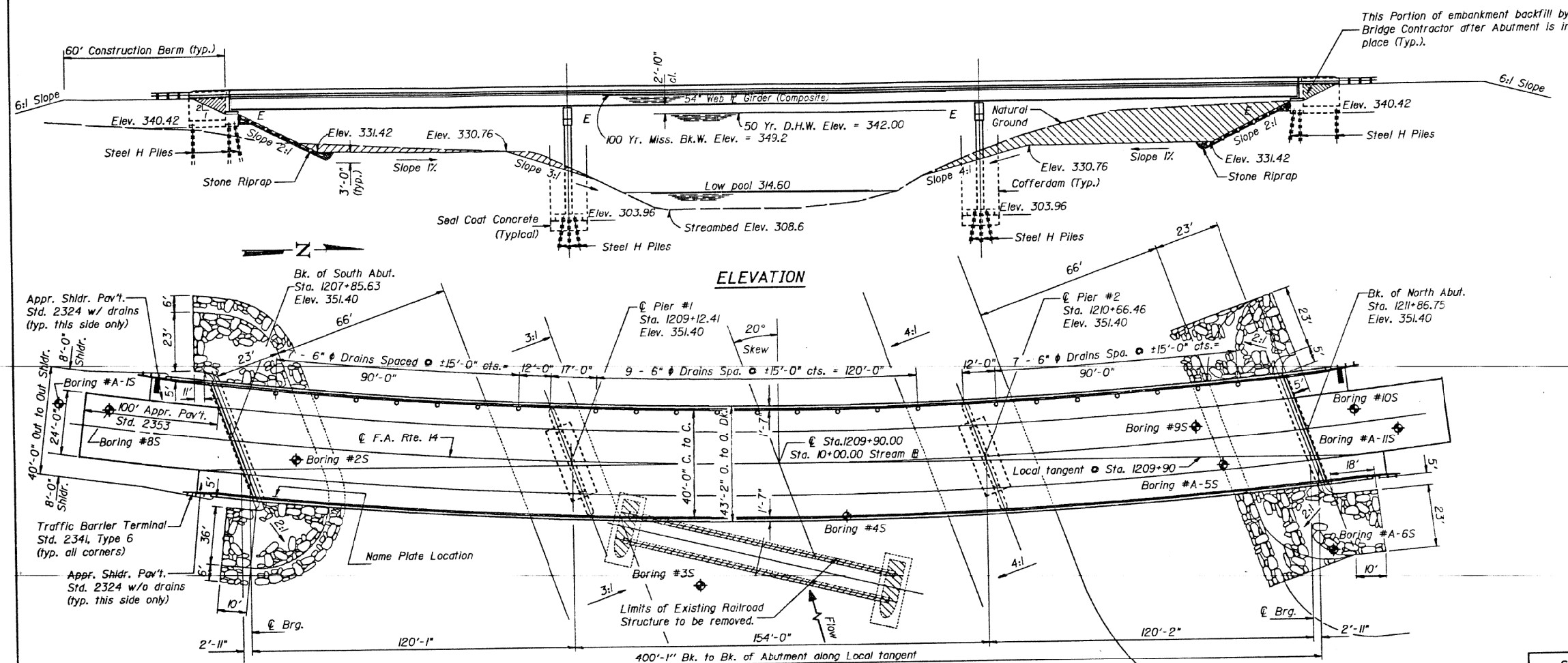
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
D9	BRIDGE PAINT 2019-1	VARIOUS	50	23
ILLINOIS	FED. AID PROJECT			

B.M. Benchmark R.R. Spike in 16" Maple tree, 14' Lt. Sta. 1208+74.00 Elev. 333.44

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
133B-1	Alexander	145	127	19 SHEETS



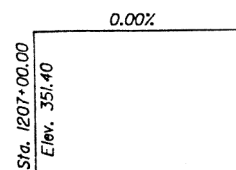
ELEVATION

PLAN

CURVE DATA

$\Delta = 61^{\circ}19'50''$
 $D = 3^{\circ}$
 $L = 2044.354$
 $R = 1909.86$
 $T = 1132.428$
 $E = 310.491$
 $P.C. = 1193+40.48$
 $P.I. = 1204+72.91$
 $P.T. = 1213+84.83$
 $S.E. = .06 \text{ ft./ft.}$

PROFILE GRADE
(Along E. Roadway)



WATERWAY INFORMATION

Drainage Area = 217 Sq. Mi.		Low Grade Elev. 351.40		Sta. 1215+20.00	
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.	Head - Ft.	Headwater El.
Design	50	15759	5764	342.00	342.00
Base	100	17904	5764	342.00	342.00
Overtopping	-	-	5764	342.00	342.00
Max. Calc.	500	22787	5764	342.00	342.00

10 Yr. Flood on Mississippi River.

DESIGN SPECIFICATIONS
1983 AASHTO, 1984 Interims (Seismic Zone 3)

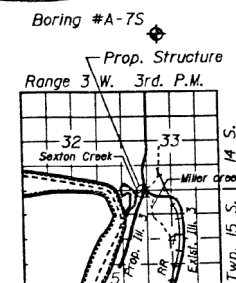
LOADING HS 20-44

Allow 25# / sq. ft. for future wearing surface.

DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500 \text{ psi}$
 $f_y = 60,000 \text{ psi (reinf.)}$
 $f_y = 36,000 \text{ psi (M183)}$
 $f_y = 50,000 \text{ psi (M223 Grade 50)}$



LOCATION SKETCH

STATION 1209+90.00
BUILT 198 BY
STATE OF ILLINOIS
F.A. RTE. 14 SEC. 133B-1
F.A. PROJECT F-BRF-14(119)
LOADING HS20
STR. NO. 002-0032

NAME PLATE
See Std. 2113

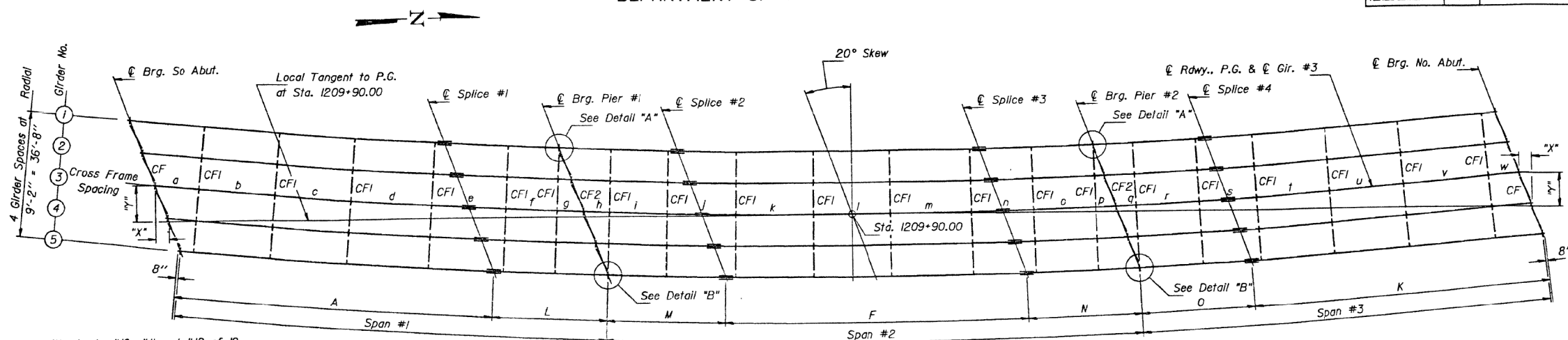
GENERAL PLAN
ILLINOIS RTE. 3 OVER SEXTON CREEK
F.A. RTE. 14 SECTION 133B-1
ALEXANDER COUNTY
STATION 1209+90.00
STRUCTURE NUMBER 002-0032

FOR INFORMATION ONLY 002-0032

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	002-0032	SCALE: SHEET OF SHEETS STA. TO STA.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -				VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	24
PLOT DATE = 10/10/2018	CHECKED -	REVISED -				CONTRACT NO. 78677				
	DATE -	REVISED -				ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROJECT NO.	SECTION	COUNTY	SHEET NO.	135
135			135	
135			135	



FRAMING PLAN

TOP OF WEB ELEVATIONS

Gir.	Loc.	Br. S. Abut.	Splice #1	Br. Pier #1	Splice #2	Splice #3	Br. Pier #2	Splice #4	Br. N. Abut.
#1		349.53	349.48	349.40	349.50	349.50	349.40	349.46	349.53
#2		350.08	350.03	349.95	350.05	350.05	349.95	350.01	350.08
#3		350.63	350.58	350.50	350.60	350.60	350.50	350.56	350.63
#4		351.18	351.13	351.05	351.15	351.15	351.05	351.11	351.18
#5		351.73	351.68	351.60	351.70	351.70	351.60	351.66	351.73

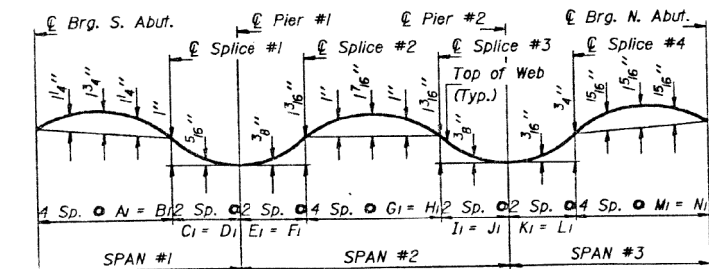
Top of Web Elevations at Splices have been adjusted for Camber.
For Fabrication only.

INTERIOR GIRDER REACTION TABLE		
	Abuts.	Piers
R ₁	(K) 69.7	244.5
R ₂	(K) 66.9	107.8
Imp.	(K) 11.0	20.5
R (Total)	(K) 147.6	372.8

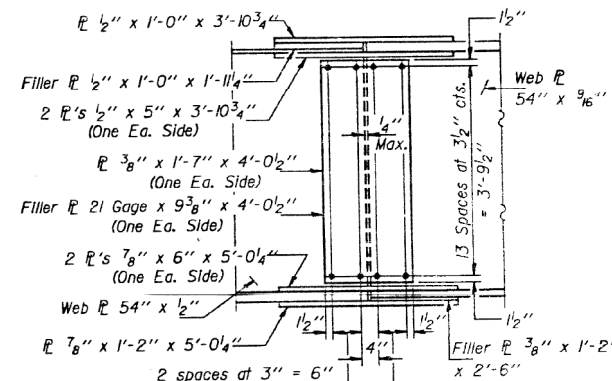
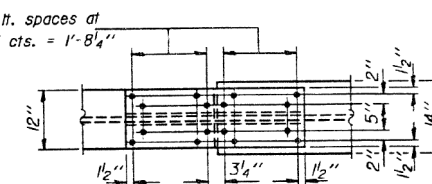
INTERIOR GIRDER MOMENT TABLE				
	0.4 Sp. #1	Piers	0.5 Sp. #2	
I _s	(in ⁴) 33,639.4	67,794.9	33,639.4	
I _c	(in ⁴) 86,391.7	—	86,391.7	
S _s	(in ³) 1,482.4	2,307.9	1,482.4	
S _c	(in ³) 1,987.1	—	1,987.1	
S _{bi}	(in ³) 61.3	101.3	61.3	
W	(K/ft.) 1.159	1.558	1.171	
M ₁	(K) 1,108.7	3,274.2	995.2	
M ₂	(K/ft.) 0.393	—	0.393	
M ₃	(K) 441.5	—	480.1	
M ₄	(K) 1,677.9	1,384.6	1,768.9	
M (Imp)	(K) 275.1	263.1	258.3	
S ₃ (M ₁ +I)	(K) 3,255.0	2,746.2	3,378.7	
M ₀	(K) 6,246.8	7,826.5	6,310.2	
M ₀₁	(K) 27.8	23.2	29.3	
f _s non-comp	(k.s.i.) 9.0	17.0	8.1	
f _s comp	(k.s.i.) 2.7	—	2.9	
f _s (M ₁ +I)	(k.s.i.) 19.7	14.3	20.4	
f _w	(k.s.i.) 5.5	2.8	5.8	
f _s + f _w (Overload)	(k.s.i.) 35.6	33.5	35.9	
f _s (Total)	(k.s.i.) 40.8	40.7	40.8	
f _s (Total) + f _w	(k.s.i.) 46.3	43.5	46.6	
f _d	(k.s.i.) 50.0	50.0	50.0	
VR	(K) 74.5	—	66.4	

CAMBER DIAGRAM DIMENSIONS A₁ THRU N₁

Gir.	Loc.	A ₁	B ₁	C ₁	D ₁	E ₁	F ₁	G ₁
#1		+22'-8 1/2"	90'-11 1/2"	+16'-6"	33'-0"	+17'-3"	34'-6"	+21'-9"
#2		+22'-8 1/2"	90'-10 3/4"	+16'-5 1/4"	32'-11 3/4"	+17'-2 1/4"	34'-5 1/4"	+21'-8 1/4"
#3		+22'-8 1/2"	90'-9 1/4"	+16'-5 1/4"	32'-11 3/4"	+17'-2 1/4"	34'-5 1/4"	+21'-8 1/4"
#4		+22'-8 1/2"	90'-8 1/4"	+16'-5 1/4"	32'-11 3/4"	+17'-2 1/4"	34'-5 1/4"	+21'-8 1/4"
#5		+22'-7 3/4"	90'-7 1/4"	+16'-5 1/4"	32'-10 5/8"	+17'-2 1/4"	34'-4 5/8"	+21'-8 1/4"
Gir.	Loc.	H ₁	I ₁	J ₁	K ₁	L ₁	M ₁	N ₁
#1		87'-0 1/2"	+16'-4 1/4"	32'-9"	+16'-3"	32'-6"	+21'-3 1/4"	85'-0 3/4"
#2		86'-11 1/2"	+16'-4 1/4"	32'-8 3/4"	+16'-3"	32'-5 1/4"	+21'-3"	85'-0 1/4"
#3		86'-10 3/4"	+16'-4 1/4"	32'-8 3/4"	+16'-2 1/4"	32'-5 1/4"	+21'-3"	84'-11 1/4"
#4		86'-10 3/4"	+16'-4 1/4"	32'-8 3/4"	+16'-2 1/4"	32'-5 1/4"	+21'-2 1/4"	84'-11 1/4"
#5		86'-9 1/2"	+16'-4 1/4"	32'-8 1/4"	+16'-2 1/4"	32'-5 1/4"	+21'-2 1/4"	84'-11 1/4"



CAMBER DIAGRAM



FIELD SPICE DETAIL

(Use 7/8" H.S. Bolts)

Notch Toughness Requirements are required for all splice plates except filler plates. Top flange filler plates shall be placed on the South side of splice #1 & #3 and on the North side of splice #2 & #4. Bottom flange filler plates shall be placed on the North side of splice #1 & #3 and on the South side of splice #2 & #4.

STRUCTURAL STEEL

F.A. RT. 14 SECTION 133B-1

ALEXANDER COUNTY

STATION 1209+90.00

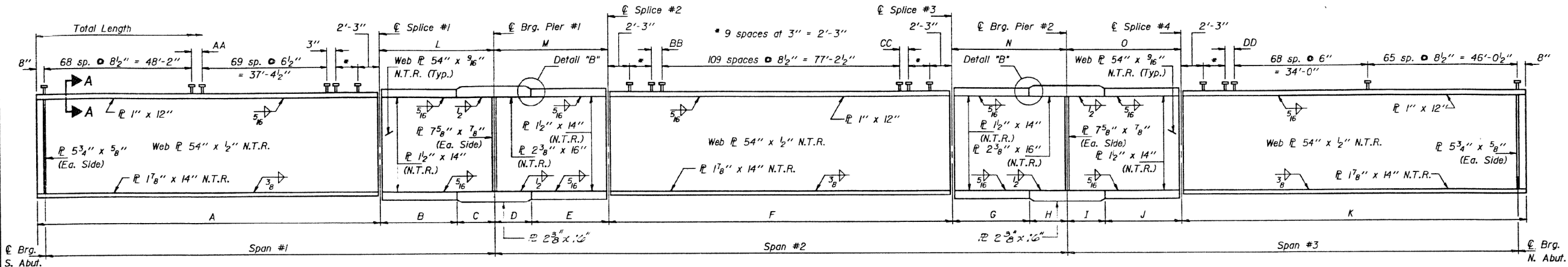
FOR INFORMATION ONLY 002-0032

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS	002-0032	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -	DEPARTMENT OF TRANSPORTATION		VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	25
PLOT DATE = 10/10/2018	CHECKED -	REVISED -			SCALE:	SHEET	OF	SHEETS	STA.
	DATE -	REVISED -							TO STA.
								ILLINOIS	FED. AID PROJECT

Notes: All dimensions are along the curve except as noted.
Work this sheet with sheets #9, #11 & #12 of 19.
All flanges, webs, bearing stiffeners and splice plates
materials shall be AASHTO M223 Grade 50.
All other Structural Steel shall be AASHTO M-183.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO. 10
A.S.L.			136	19 SHEETS
F.A.				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		



GIRDER ELEVATION

"NTR" denotes plates to which notch
toughness requirements are applicable.

CROSS FRAME SPACING

Gir. Loc.	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w
#1	21'-8"	21'-7"	21'-7"	22'-4"	22'-1"	14'-7 3/4"	—	14'-11"	15'-10"	20'-7"	21'-1"	22'-0 1/8"	22'-3"	18'-8 3/4"	17'-9"	—	11'-7 1/8"	18'-1"	17'-4"	20'-7 1/4"	21'-7"	24'-3 1/4"	4'-0"
#2	17'-2 1/2"	21'-8 1/4"	21'-8 1/4"	22'-6"	22'-2 1/4"	14'-8 3/8"	3'-9 5/8"	11'-2"	16'-11"	20'-8 1/4"	21'-2 1/4"	22'-2"	22'-4 1/8"	18'-9 1/4"	17'-10 1/4"	2'-11 1/2"	8'-8 1/8"	18'-2 1/8"	17'-5 1/8"	20'-8 3/4"	21'-8 1/4"	24'-4 1/8"	6'-4 1/8"
#3	12'-9 1/8"	21'-9 1/8"	21'-9 1/8"	22'-7 1/8"	22'-3 1/8"	14'-9 1/8"	7'-7 1/4"	7'-5 1/4"	17'-0"	20'-9 3/8"	21'-3 1/8"	22'-3 1/8"	22'-5 1/4"	18'-1"	17'-11 1/4"	5'-11"	5'-9 1/4"	18'-4"	17'-6 1/4"	20'-9 5/8"	21'-9 1/4"	24'-6 1/8"	8'-8 1/8"
#4	8'-4"	21'-10 1/4"	21'-10 1/4"	22'-8 1/4"	22'-5 1/4"	14'-10 1/8"	11'-4 1/4"	3'-8 5/8"	17'-1"	20'-10 1/8"	21'-4 1/4"	22'-4 1/4"	22'-7"	19'-0"	18'-0 3/8"	5'-10 1/4"	2'-10 1/4"	18'-5"	17'-7 1/4"	20'-10 1/4"	21'-10 1/4"	24'-7 1/8"	11'-0 1/8"
#5	4'-0"	22'-0"	22'-0"	22'-9 1/4"	22'-6 1/4"	14'-11 1/8"	15'-2 1/4"	—	17'-1 1/8"	20'-11 1/4"	21'-6"	22'-6"	22'-8 3/4"	19'-1 1/8"	18'-1 3/8"	11'-9 1/4"	—	18'-6 1/8"	17'-8 1/4"	21'-0"	22'-0"	24'-8 1/8"	13'-5 1/4"

GIRDER DIMENSIONS

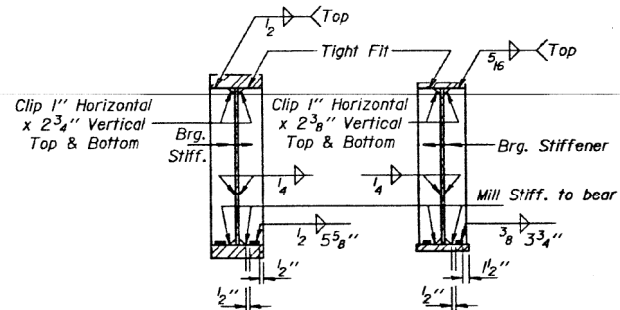
Gir. Loc.	Radius	Span #1	Span #2	Span #3	Total Length	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
#1	1891.53'	123'-11"	154'-3"	117'-6"	397'-14"	91'-7"	21'-0"	12'-0"	12'-0"	22'-6"	87'-0"	20'-9"	12'-0"	12'-0"	20'-6"	85'-8"	33'-0"	34'-6"	32'-9"	32'-6"
#2	1900.69'	123'-10"	154'-1"	117'-6"	396'-10"	91'-6"	20'-8"	11'-11"	11'-11"	22'-5"	86'-10"	20'-8"	11'-11"	11'-11"	20'-5"	85'-8"	32'-11"	34'-5"	32'-8"	32'-5"
#3	1909.86'	123'-8"	154'-0"	117'-5"	396'-6"	91'-5"	20'-11"	11'-11"	11'-11"	22'-5"	86'-10"	20'-8"	11'-11"	11'-11"	20'-5"	85'-7"	32'-11"	34'-5"	32'-8"	32'-5"
#4	1919.03'	123'-7"	153'-11"	117'-4"	396'-3"	91'-4"	20'-11"	11'-11"	11'-11"	22'-5"	86'-10"	20'-8"	11'-11"	11'-11"	20'-5"	85'-7"	32'-11"	34'-5"	32'-8"	32'-5"
#5	1928.19'	123'-5"	153'-10"	117'-4"	396'-0"	91'-3"	20'-11"	11'-11"	11'-11"	22'-5"	86'-9"	20'-8"	11'-11"	11'-11"	20'-5"	85'-7"	32'-10"	34'-4"	32'-8"	32'-5"

"X" & "Y" OFFSET DIMENSIONS

Gir. Loc.	Q Brg. S. Abut.	Q Splice #1	Q Brg. Pier #1	Q Splice #2	Q Splice #3	Q Brg. Pier #2	Q Splice #4	Q Brg. N. Abut.
#1	4'-2"	11'-5"	1'-3"	3'-7"	8"	1'-10"	2"	7"
#2	4'-0"	11'-0"	1'-2"	3'-5"	7"	1'-8"	2"	6"
#3	3'-10"	10'-7"	1'-2"	3'-2"	6"	1'-6"	2"	6"
#4	3'-8"	10'-2"	1'-1"	2'-11"	6"	1'-5"	2"	7"
#5	3'-6"	9'-9"	1'-0"	2'-9"	5"	1'-3"	1"	4"

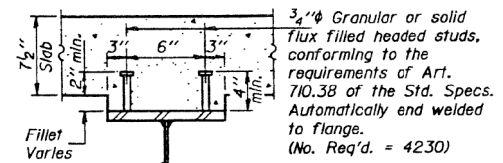
VALUES OF AA THRU DD

Gir. Loc.	AA	BB	CC	DD
#1	8"	4"	4"	6"
#2	6"	4"	4"	5"
#3	5"	4"	4"	5"
#4	4"	3"	3"	5"
#5	3"	3"	3"	4"



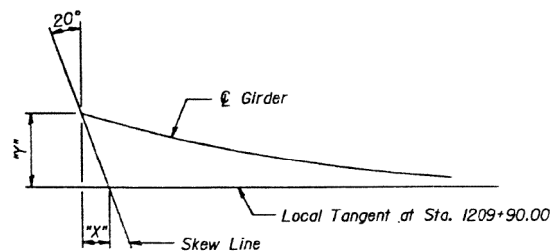
SECTION AT PIER

SECTION AT ABUTMENT

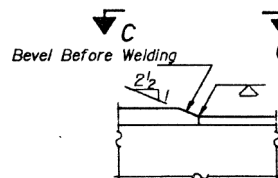


SECTION A-A

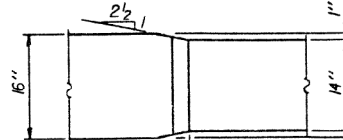
DESIGNED: <i>[Signature]</i>	EXAMINED: <i>[Signature]</i>
CHECKED: <i>[Signature]</i>	PASSED: <i>[Signature]</i>
DRAWN: <i>[Signature]</i>	APPROVED: <i>[Signature]</i>
CHECKED: <i>[Signature]</i>	



"X" & "Y" OFFSET LOCATIONS



DETAIL "B"



VIEW C-C

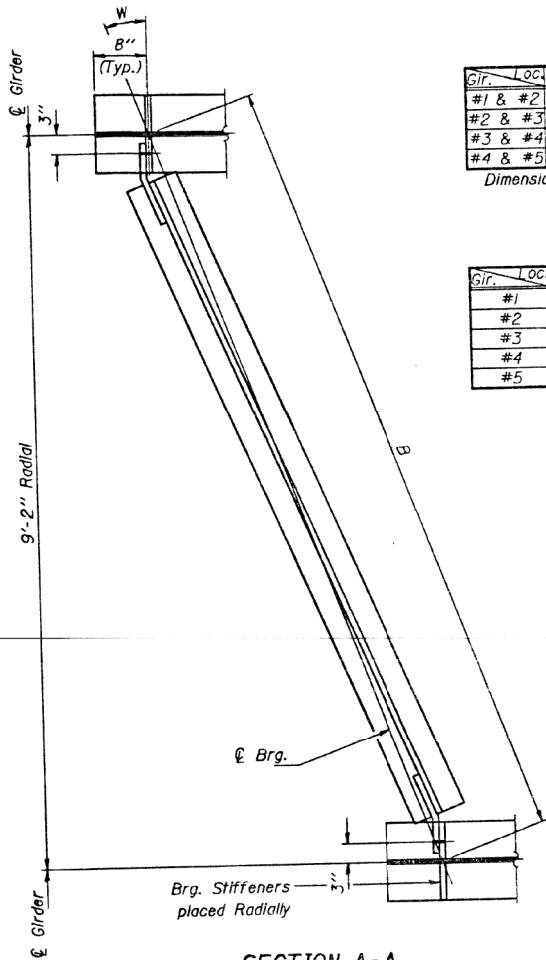
STRUCTURAL STEEL
F.A. RT. 14 SECTION 133B-1
ALEXANDER COUNTY
STATION 1209+90.00

FOR INFORMATION ONLY 002-0032

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	002-0032	SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -									VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	26
PLOT DATE = 10/10/2018	CHECKED -	REVISED -												CONTRACT NO. 78677	
	DATE -	REVISED -									ILLINOIS	FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET NO.
13B			13B	19 SHEETS
FED. ROAD DIST. NO. 7				



DIMENSION "B"

Gir.	Loc.	Br. S. Abut.	Br. N. Abut.
#1 & #2	10'-2 3/8"	9'-5 1/2"	
#2 & #3	10'-2 1/2"	9'-5 1/2"	
#3 & #4	10'-2 1/8"	9'-5 1/2"	
#4 & #5	10'-2 1/4"	9'-5 3/8"	

Dimensions are between Girders.

VALUE OF W

Gir.	Loc.	Br. S. Abut.	Br. N. Abut.
#1	26°-18'-40"	14°-19'-22"	
#2	26°-10'-28"	14°-15'-08"	
#3	26°-02'-22"	14°-10'-57"	
#4	25°-54'-21"	14°-06'-48"	
#5	25°-46'-25"	14°-02'-41"	

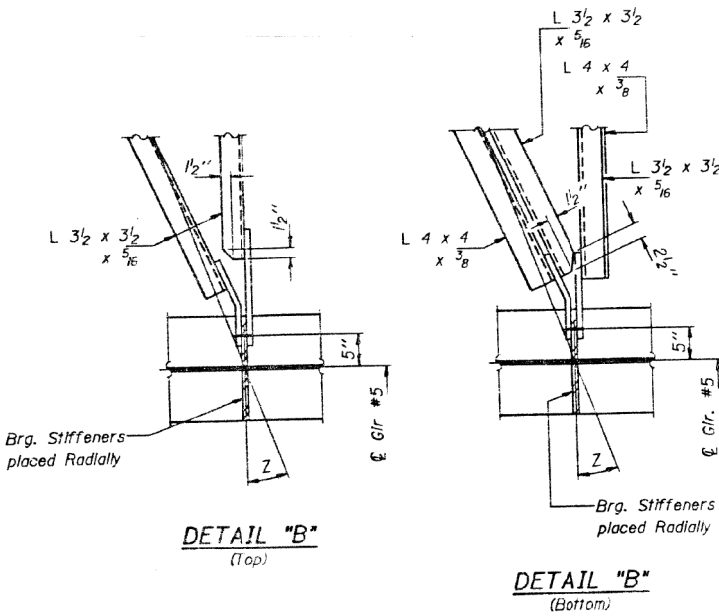
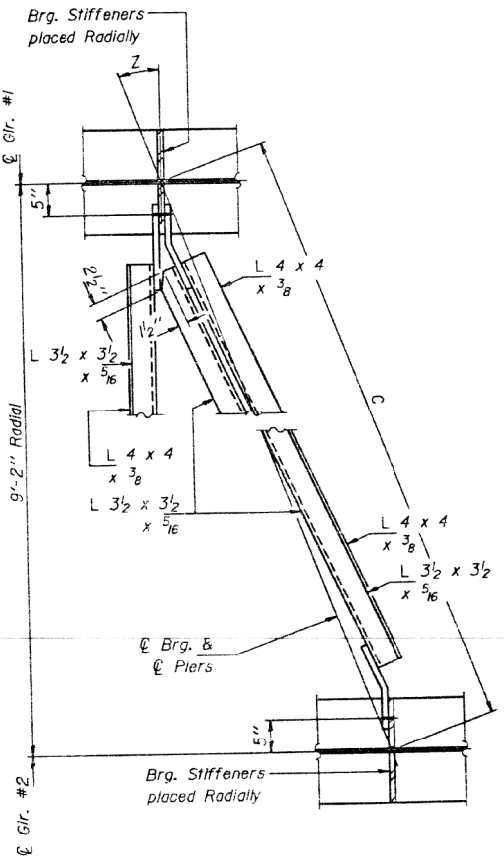
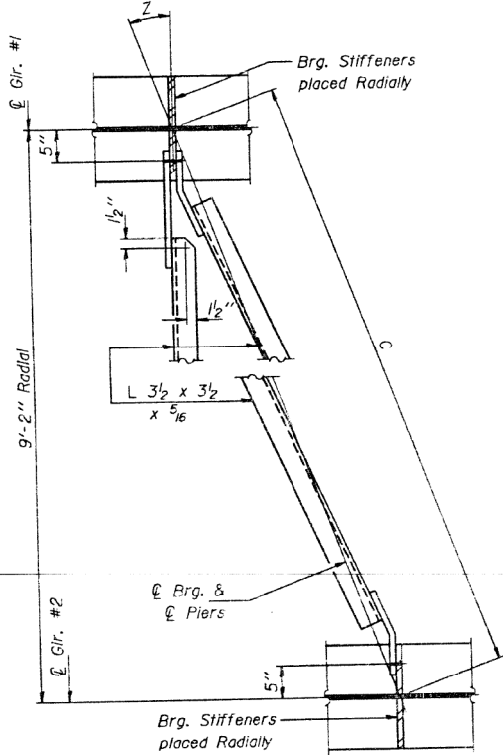
DIMENSION "C"

Gir.	Loc.	Br. Pier #1	Br. Pier #2
#1 & #2	9'-11 1/2"	9'-7 1/2"	
#2 & #3	9'-11"	9'-7 1/2"	
#3 & #4	9'-10 1/8"	9'-7 1/2"	
#4 & #5	9'-10 3/4"	9'-7 3/8"	

Dimensions are between Girders.

VALUE OF Z

Gir.	Loc.	Br. Pier #1	Br. Pier #2
#1	22°-33'-22"	17°-53'-01"	
#2	22°-26'-29"	17°-47'-40"	
#3	22°-19'-40"	17°-42'-22"	
#4	22°-12'-56"	17°-37'-08"	
#5	22°-06'-15"	17°-31'-56"	



Notes: Work this sheet with sheets #9 and #11 of 19.

DESIGNED: *[Signature]*
CHECKED: *[Signature]*
DRAWN: John F. Schneller Jr.
CHECKED: *[Signature]*

Feb 11 1988
EXAMINED: *[Signature]*
PASSED: *[Signature]*
APPROVED: *[Signature]*
DIRECTOR OF HIGHWAYS

STRUCTURAL STEEL
F.A. RT. 14 SECTION 133B-1
ALEXANDER COUNTY
STATION 1209+90.00

FOR INFORMATION ONLY 002-0032

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 10/10/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

002-0032

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	28
CONTRACT NO. 78677				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

No Salvage:

FOR INFORMATION ONLY : 028-0038

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S. R. 1. P. A. 873	106-VB- DR	Franklin	28	17
FED. ROAD DIST. NO. 7		SLABING	FED. AID PROJECT-	

SHEET NO. 1 / 12 SHEETS

GENERAL NOTES

See Proposal for Boring Data.
Fasteners shall be high strength bolts. Bolts $\frac{3}{4}" \phi$, open holes $\frac{13}{16}" \phi$, and bolts $\frac{1}{2}" \phi$, open holes $\frac{9}{16}" \phi$, unless otherwise noted.
Calculated weight of Struct. Steel = M223 - 52,200* and M183 - 11,900*.
The basic lead silica chromate paint system shall be used for shop and field painting of Structural Steel except where otherwise noted.
All contact surfaces of joints for the diaphragms shall be free of paint or lacquer.
Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the engineer.
Anchor bolts shall be set before bolting diaphragms over supports.
The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 222.
The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are wide flange beams and all splice plate materials.
Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 53, Grade 60.
Sipewall shall be reinforced with welded wire fabric, 6" \times 6" W4.0 \times W4.0, weighing 5B lbs. per 100 Sq. Ft.
The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however, the contractor will be paid for the quantity actually furnished at the unit price bid for the work.
Expansion Bolts shall consist of approved expansion anchors, providing minimum certified proof load = 4,080 Lbs., and $\frac{3}{4}" \phi \times 12"$ hooked bolts.
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}"$. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}"$ 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, shims of the dimensions of the top plate shall be provided and placed as detailed.
The Contractor shall drive one Steel HPBx36 test pile in a permanent location at each abutment as directed by the Engineer before ordering the remainder of the piles.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Expansion Bolts 3/4"	Each		156	156
Structure Excavation	Cu. Yd.		189	189
Floor Drains	Each	8		8
Protective Coat	Sq. Yd.	611		611
Class X Concrete	Cu. Yd.	122.9	105.0	249.9
Structural Steel	Lump Sum			1
Stud Shear Connectors	Each	1680		1680
Reinforcement Bars	Pound	14,920	9840	24,760
Reinforcement Bars (Epoxy Coated)	Pound	22,080		22,080
Steel Piles HP 8x36	Lin. Ft.		500	500
Test Piles Steel HP 8x36	Each		2	2
Name Plates	Each	1		1
Slage Wall 4"	Sq. Yd.		493	493
Preformed Joint Seal 2 1/2"	Lin. Ft.	72		72
Elastomeric Bearing Assembly, Type I	Each	10		10
Elastomeric Bearing Assembly, Type II	Each	5		5
Rock Excavation for Structures	Cu. Yd.		1	1
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		24	24

DESIGN STRESSES

$f'_c = 3,500 \text{ psi}$
 $f_y = 60,000 \text{ psi (Reinf.)}$
 $f_y = 50,000 \text{ psi (Struct. XAASHTO M 223 Gr. 50)}$
 $f_y = 36,000 \text{ psi (Struct. XAASHTO M 183)}$

LOADING HS 20-44

*Design Specifications: 1977 AASHTO;
1978 thru 1982 Interim Specifications as applicable.*

Allow 25[#]/sq.ft. for future wearing surface.

GENERAL PLAN

GENERAL FEAR
ILL. Rte. 149 Over Burlington Northern R.R.
F.A. Rte. 873 SECTION 106 VB-DR
Sta. 568 +25.90
FRANKLIN COUNTY

LOCATION SKETCH

DESIGNED	<i>Rick Brunette</i>
CHECKED	<i>M. B.</i>
DRAWN	<i>JR3</i>
CHECKED	<i>M. B.</i>

May 23 1983

EXAMINED *James J. Rafter*
REGISTERED PROFESSIONAL DESIGN

PASSED *EST*
INDEPENDENT BRIDGES AND STRUCTURES

APPROVED

DESIGNER'S ORIGINATOR'S

STATE OF ILLINOIS
2287

MODEL: Default
FILE NAME: nw:\11084FERINTEG. Illinois: now:\PWIN\Documents\DOT_Offices\District_0\Project\8677C.ADD\data\Design\DOT08677C-Design.dgn

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/10/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

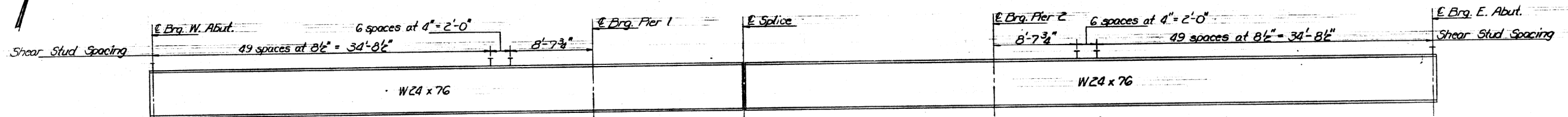
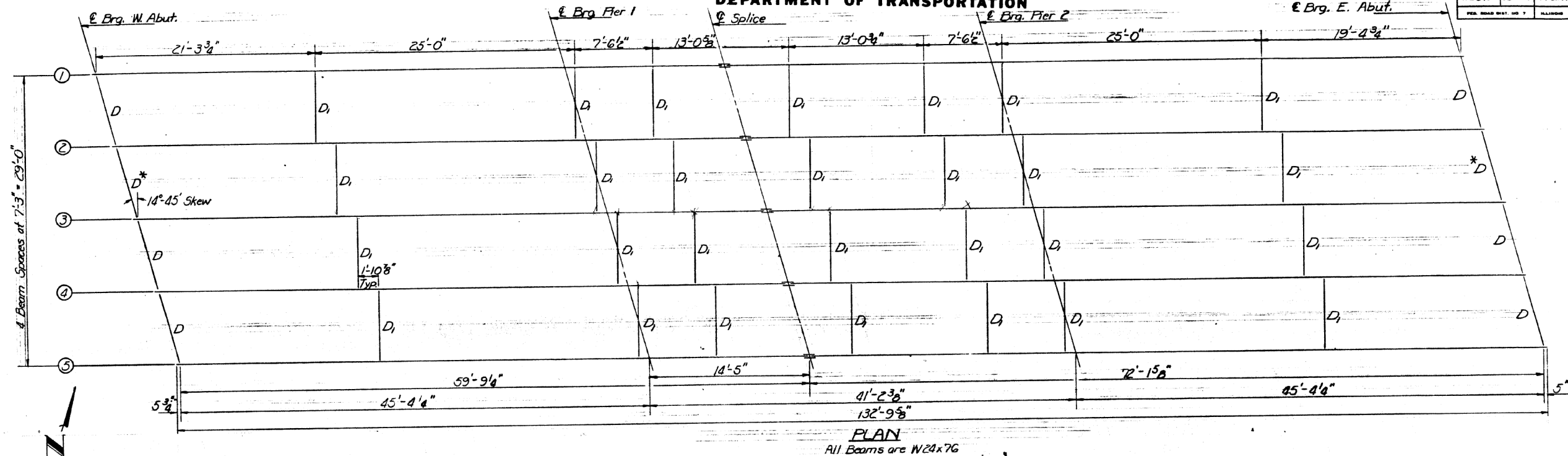
028-0038

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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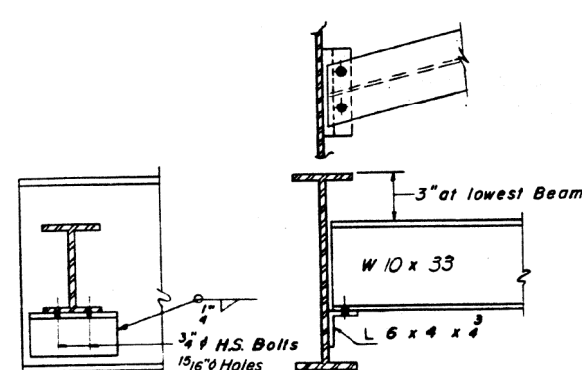
[illegible]

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 6
873	106 VB-DR	Franklin	28	22	12 SHEETS
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT					

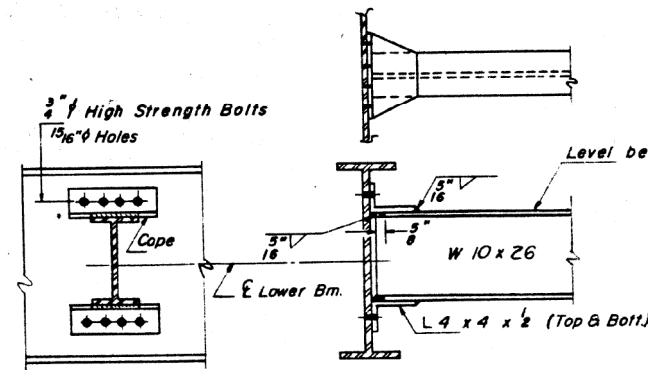


ELEVATION
(Showing Shear Stud Spacing)



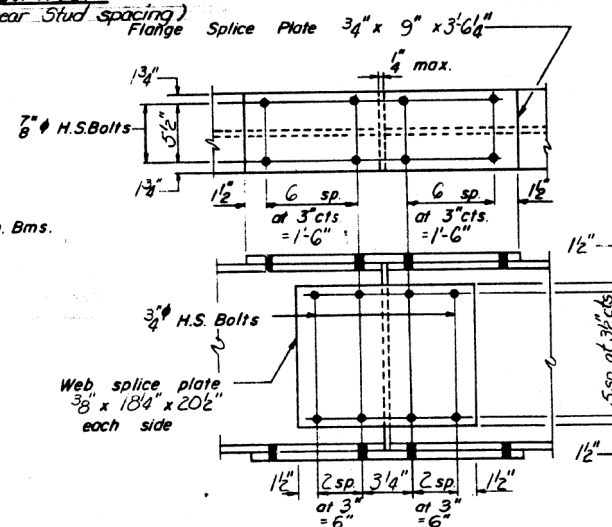
DIAPHRAGM D
8 Required

Note: Two hardened washers shall be required over all 15/16\"/>



DIAPHRAGM D1
28 Required

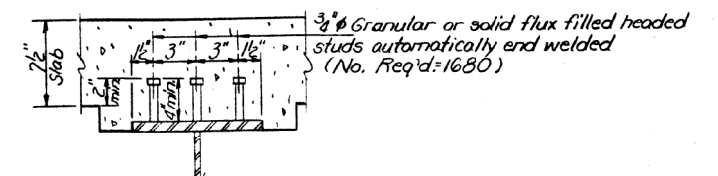
Note: All beams and splice plate material shall be AASHTO M223 Grade 50. All diaphragms and connecting angles shall be AASHTO M183.



SPLICE

Notes: For Notch Toughness Requirements see General Notes on Sheet #1.

* Diaphragms designated D, between beams 2 and 3 shall be bolted to Beam 2 and temporarily supported in a final position (level) during Stage I Construction. The connection at Beam 3 shall be made during Stage II Construction.



SHEAR STUDS

DESIGNED	Rick Brunette
CHECKED	M. Bloxdorf
DRAWN	Joe Sutherland
CHECKED	M. Bloxdorf

May 23
EXAMINED
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

FOR INFORMATION ONLY 028-0038

STRUCTURAL STEEL
F.A. RT. 873 SEC. 106 VB-DR
FRANKLIN COUNTY
STATION 568+25.90

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	028-0038	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	31
PLOT DATE = 10/10/2018	CHECKED -	REVISED -			CONTRACT NO. 78677				
	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

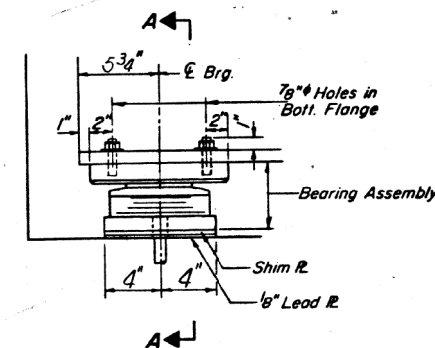
FOR INFORMATION ONLY

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

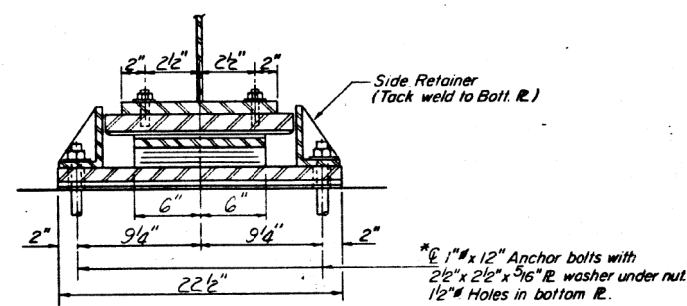
028-0038

PROJECT NO.	SECTION	SHEET NO.	TOTAL SHEETS
106VB-DR	Franklin	28	24

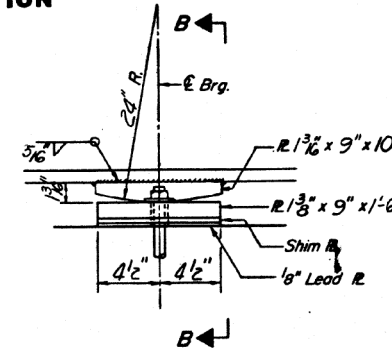
SHEET NO. 8
12 SHEETS



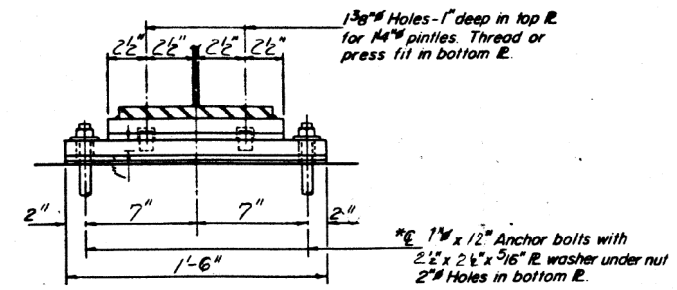
ELEVATION WEST ABUT.



SECTION A-A

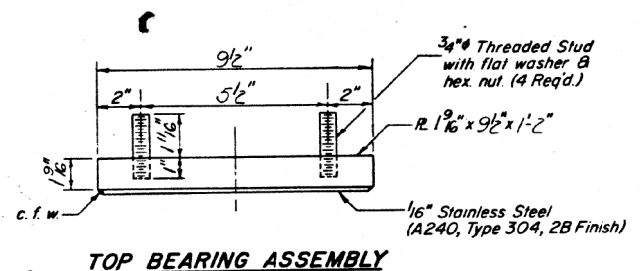


ELEVATION AT PIER-2

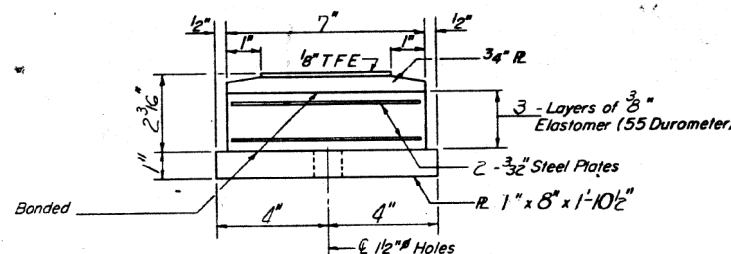


SECTION B-B

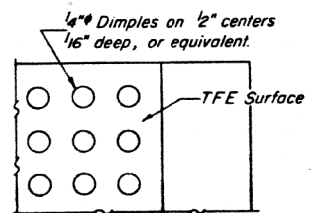
TYPE II TFE ELASTOMERIC EXP. BRG.



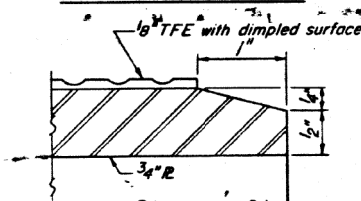
TOP BEARING ASSEMBLY



BOTTOM BEARING ASSEMBLY



PLAN-TFE SURFACE

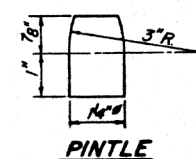


SECTION THRU TFE

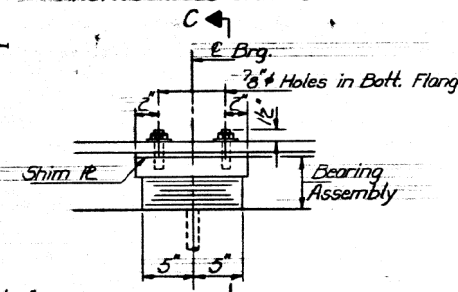
*Note: After girders have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry.

FIXED BEARING

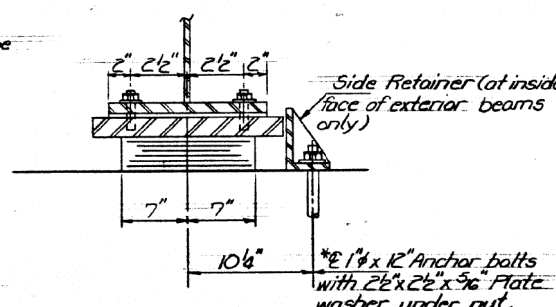
Note: All fixed bearing plates shall be AASHTO M223 Grade 50.



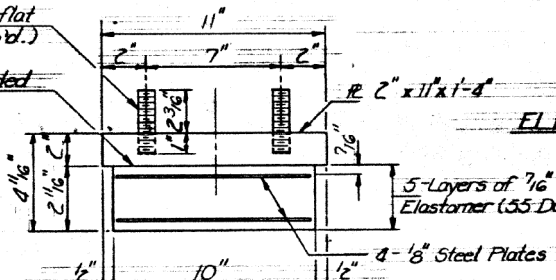
PINTLE



ELEVATION AT PIER-1

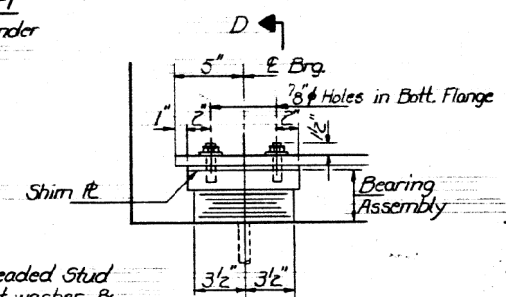


SECTION C-C

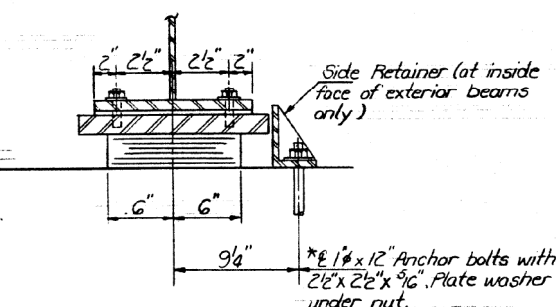


BEARING ASSEMBLY AT PIER-1

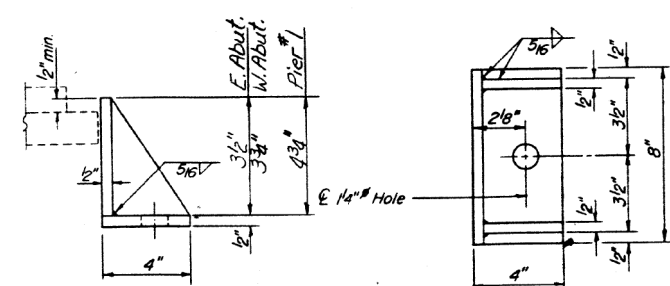
Note: Shim plates shall not be placed under Bearing Assembly.



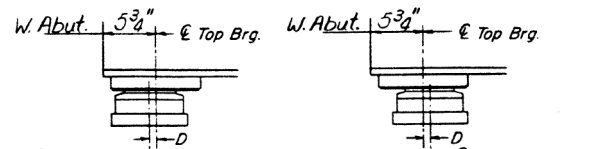
ELEVATION EAST ABUT.



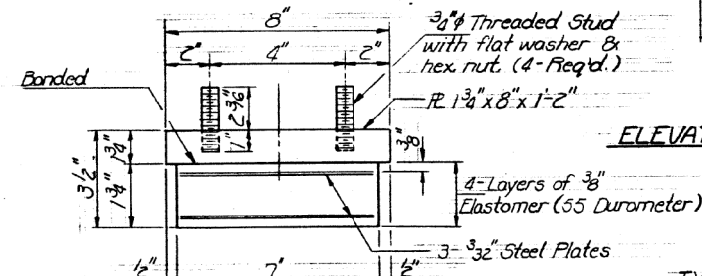
SECTION D-D



SIDE RETAINER



BELOW 50°F (Move bolt brg. away from fixed brg.)
ABOVE 50°F (Move bolt brg. toward fixed brg.)
SETTING ANCHOR BOLTS AT EXP. BRG.
D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F



BEARING ASSEMBLY AT EAST ABUT.

Note: Shim plates shall not be placed under Bearing Assembly.

TYPE I ELASTOMERIC EXPANSION BEARINGS

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	10
Elastomeric Bearing Assembly, Type II	Each	5

BEARING DETAILS
F.A. RT. 873 SEC. 106VB-DR
FRANKLIN COUNTY
STATION 568+25.90

DESIGNED Rick Brunette	EXAMINED May 23 1983
CHECKED M. Bloxdorf	PASSED
DRAWN Joe Sutherland	APPROVED
CHECKED M. Bloxdorf	

I-2-E2 4-1-79

Rev. 5-23-83 GR

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

028-0038

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	32
				CONTRACT NO. 78677

ILLINOIS FED. AID PROJECT

B.M. Railroad spike in 24" Ash, 33' right of station 1112+00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DESIGN NO. 028-0041
SHEET NO. 33

GENERAL NOTES

See Proposal for Boring Data.

Fasteners shall be high strength bolts (AASHTO M 164, Type 3).
Bolts 3/4", open holes 1/2" and bolts 1/2", open holes 3/8", unless otherwise noted.

Calculated weight of Structural Steel = 42,980 Pounds.
All Structural Steel shall be AASHTO M 222.

AASHTO M 222 structural steel shall not be painted except that for a distance of three times the depth of the beams (but not exceeding 10 feet) each way from deck joints, the AASHTO M 222 structural steel shall be cleaned and given one coat of the basic lead silico chromate primer and two coats of the epoxy paint. Spot painting shall not be permitted.

Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.

Anchor bolts shall be set before bolting diaphragms over supports.

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Expansion bolts shall consist of approved expansion anchors, providing certified minimum proof load = 4,080 lbs., and 3/4" x 12" hooked bolts.

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 1/2" 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, shims of the dimensions of top plate shall be provided and placed as detailed).

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges, webs and all splice plate material of the steel wide flange beams.

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

The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 222.

All contact surfaces of joints for the diaphragms shall be free of paint or loquax.

Temporary Bridge Rail to extend from end to end of Approach Pavement.

TOTAL BILL OF MATERIAL

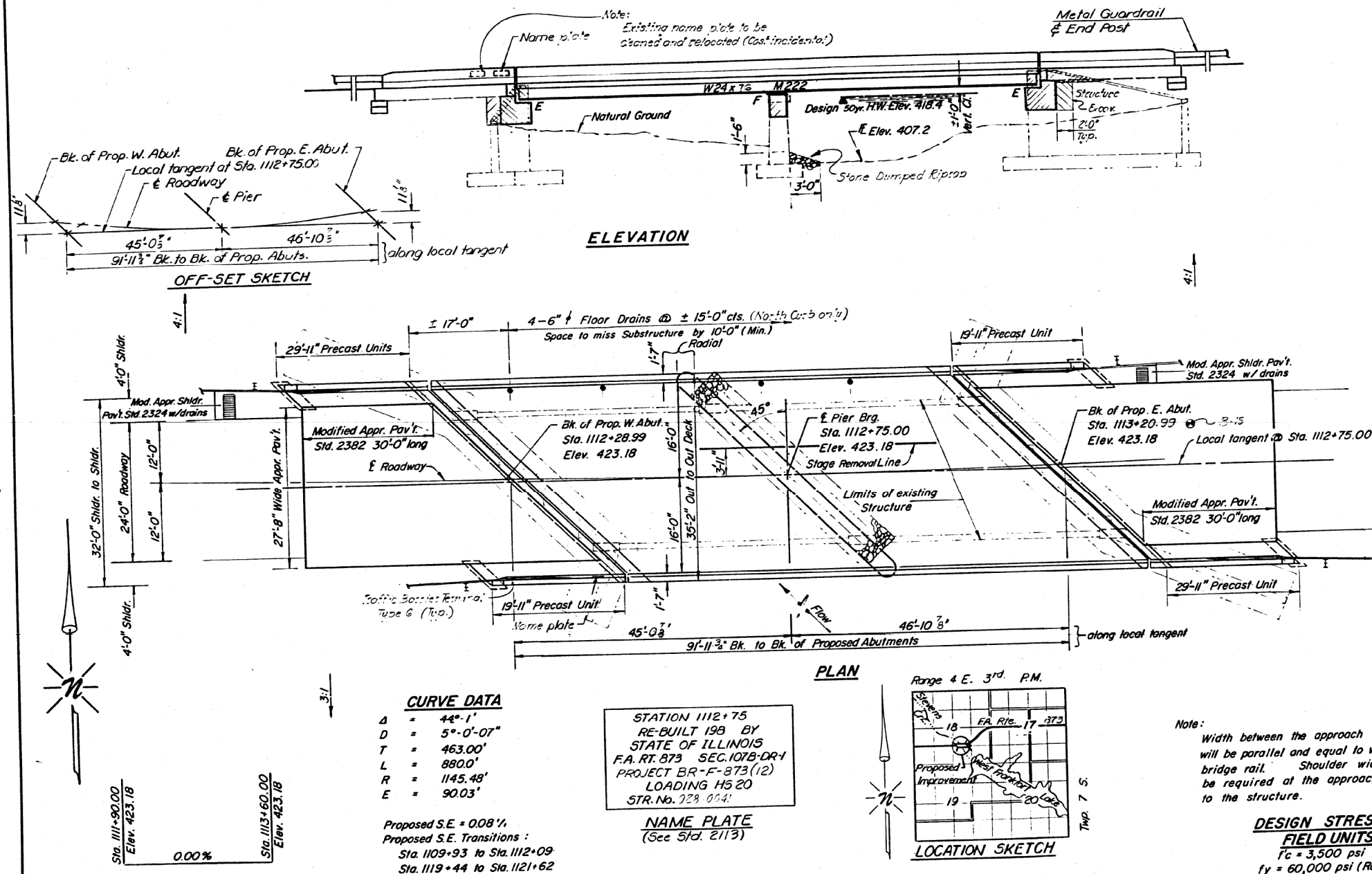
Item	Unit	Super.	Sub.	Total
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		30	30
Floor Drains	Each	4		4
Class X Concrete	Cu. Yd.	118.4	97.1	215.5
Structural Steel	L.S.	2.5		2.5
Stud Shear Connectors	Each	1320		1320
Reinforcement Bars	Pound	10870	7890	18760
Reinforcement Bars (Epoxy Coated)	Pound	10870		10870
Name Plates	Each	1		1
Stone Dumped Riprap	Sq. Yd.		19	19
Neoprene Expansion Joint 2"	Lin. Ft.	95		95
Temporary Bridge Rail	Lin. Ft.	179		179
Elastomeric Bearing Assembly, Type I	Each	10		10
Expansion Bolts 3/4" Inch	Sq. Yd.	422		422
Protective Coat	Cu. Yd.		72	72
Structure Excavation	Sq. Ft.	373		373
Precast Concrete Bridge Slab	Sq. Ft.			373

GENERAL PLAN

FA. Rte. 873 Over STEVENS CREEK
FA. Rte. 873 SECTION 107B-DR-1
FRANKLIN COUNTY
Sta. 1112+75.00

Existing Structure: 028-0041 The existing structure built in 1928 as S.B.I. 149 Section 107-B is a 87'-9" Bk. to Bk. two span bridge. The existing superstructure consists of 4 reinforced concrete "T" girders with an out to out of 24.7'. The existing substructure is composed of two R.C. closed abutments and one solid concrete pier. The existing superstructure shall be removed and replaced with a concrete slab supported by W steel beams. The existing substructure shall be widened with new caps and repaired as necessary to support the proposed superstructure. Traffic shall be maintained at all times utilizing stage construction.

No salvage:



FOR INFORMATION ONLY 028-0041

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	028-0041					F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -							VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	33
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -		CONTRACT NO. 78677									
PLOT DATE = 10/10/2018	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT			

MOMENT TABLE - 2 Span Continuous
(Composite in Positive Moment Areas Only)

INTERIOR BEAM MOMENT TABLE

	0.4 Sp. 1	Pier *
I _s (in. ⁴)	2100	2100
I _c (in. ⁴)	6663	—
S _s (in. ³)	176	176
S _c (in. ³)	278	—
D (K/I)	.776	1.121
S _E (K/I)	.345	—
M _Q (K-I)	100.5	234.3
M _{SQ} (K-I)	54.6	—
M _L (K-I)	283.9	132.9
M _{IMP} (K-I)	85.2	40.0
M _a (K-I)	601.3	679.2
M _{capacity}	1628.0	683.5
Mover load	770.3	522.5
Mover load cap	1043.3	586.7
V _R (k)	50.3	—

* Includes the effect of lateral flange bending due to torsion over Pier.

INTERIOR BEAM REACTION TABLE

	Abut.	Pier
R _Q (k)	18.7	59.1
R _L (k)	36.0	43.2
Imp. (k)	10.8	13.0
R _a (k)	125.7	198.8

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing M_{capacity}.
I_c and S_c are the moment of inertia and section modulus of the composite section used in computing M_{capacity}.
V_R is the maximum $\frac{1}{2}$ Impact shear range in span.
The load factor (1.3) [Q + $\frac{1}{2}$ (I + Imp.)] is used in computing M_a (Applied Moment) and R_a (Applied Reaction).

LAYOUT DIMENSIONS

(All dimensions are in feet)

An dimensions								
		€ Brg. w. Abut.		€ Splice		€ Brg. Pier		€ Brg. E. Abut.
Bm.	Radius	x	y	x	y	x	y	x
1	1130.98	1.454	1.454	0.266	0.266	0.094	0.094	0.355
2	1138.23	1.086	1.086	0.129	0.129	0.023	0.023	0.551
3	1145.48	0.776	0.776	0.042	0.042	0.0	0.0	0.786
4	1152.73	0.521	0.521	0.003	0.003	0.023	0.023	1.059
5	1159.98	0.319	0.319	0.010	0.010	0.090	0.090	1.369

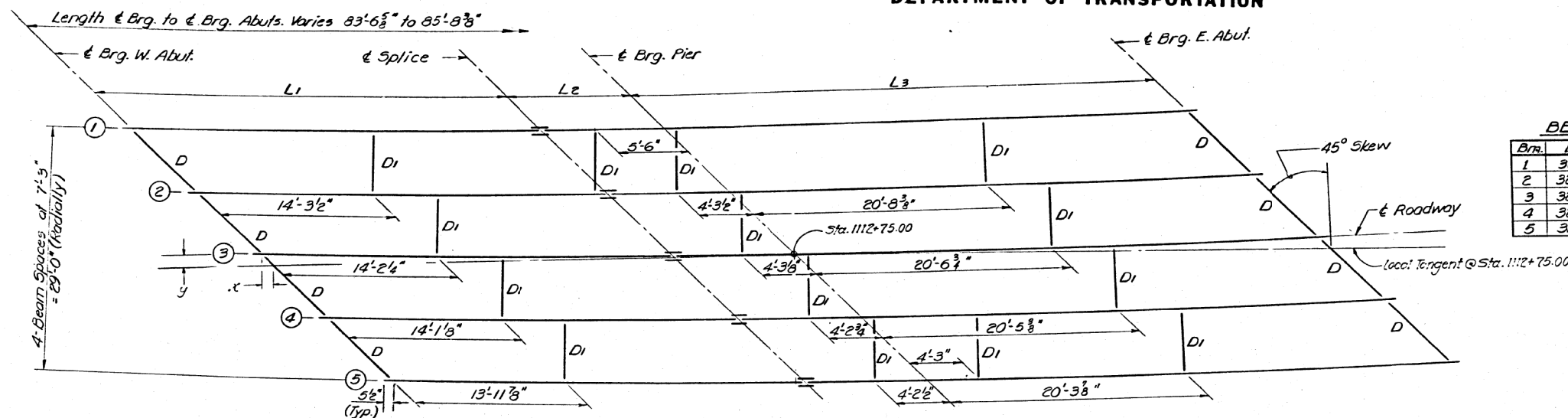
TOP OF FLANGE ELEVATIONS

Location	Bm.	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
Br. W. Abut.		421.296	421.876	422.456	423.036	423.616
Splice		421.296	421.876	422.456	423.036	423.616
Pier		421.296	421.876	422.456	423.036	423.616
Br. E. Abut.		421.296	421.876	422.456	423.036	423.616

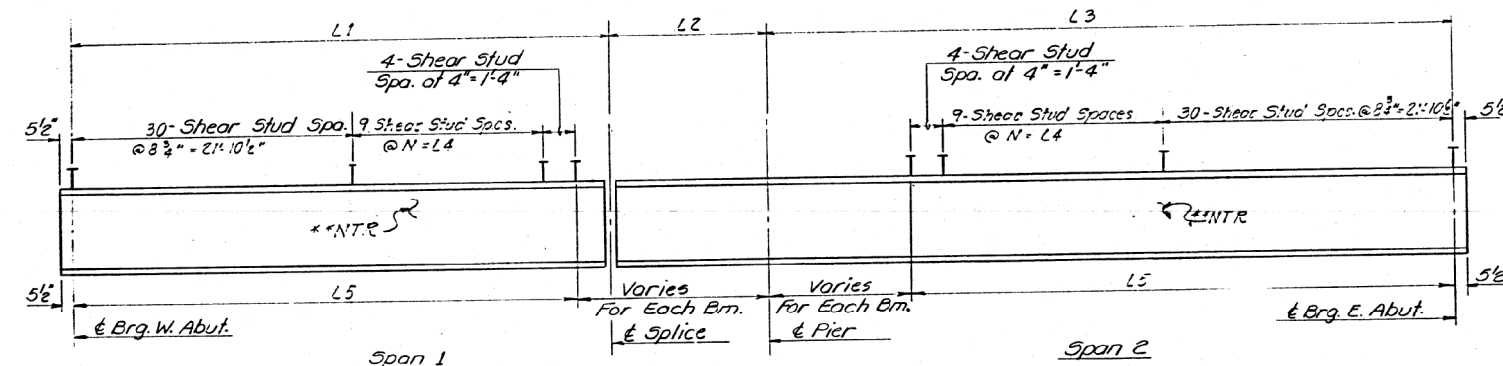
Above Elevations are for fabrication only.

BEAM DIMENSIONS

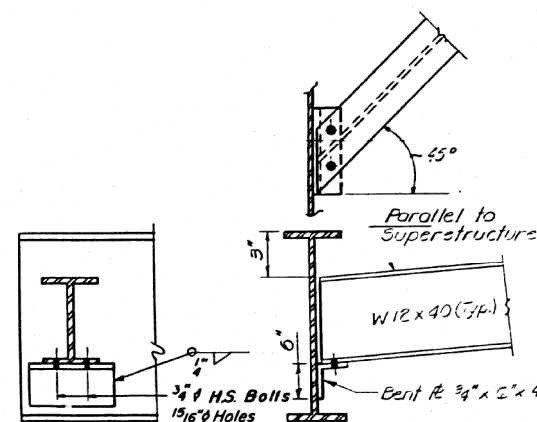
Bm.	L1	L2	L3
1	32'-10"	9'-11 1/2"	42'-11 1/4"
2	32'-7 1/2"	9'-10 1/4"	42'-8 1/8"
3	32'-4 3/8"	9'-9 1/2"	42'-5 1/8"
4	32'-1 1/4"	9'-8 3/4"	42'-2 1/8"
5	31'-11 1/4"	9'-8 3/8"	41'-11 1/4"



FRAMING PLAN



BEAM ELEVATION

** See Sheet #1 for Notch Toughness Requirements
(ALL STRUCTURAL STEEL SHALL BE AASHTO M222)

DIAPHRAGM D

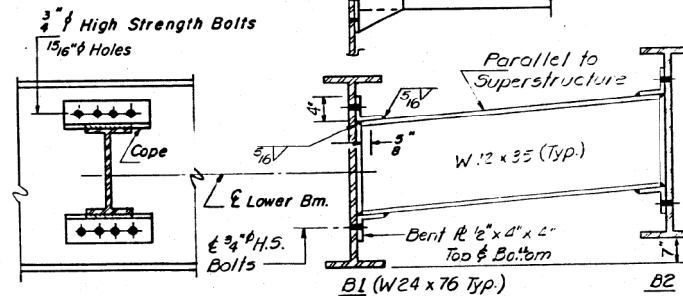
3 - Required

Note: Two hardened washers shall be required over all 1 1/2" holes.
All contact surfaces of joints shall be free of paint or lacquer.

DESIGNED	Patrick P. Paine
CHECKED	A. J. Carr
DRAWN	Stu Ferchow
CHECKED	A. J. Carr

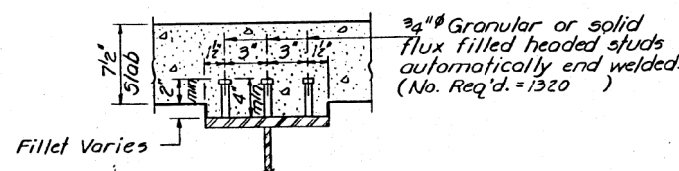
EXAMINED	James J. Rasmussen
PASSED	James J. Rasmussen
APPROVED	James J. Rasmussen

I-2-D 8-30-80



DIAPHRAGM D1

14 - Required



SPLICE

SHEAR STUD DIMENSIONS

Bm.	N	L4	L5
1	10"	7'-6"	30'-8 1/2"
2	9 1/2"	7'-3 1/2"	30'-6 1/4"
3	9 1/2"	7'-1 1/4"	30'-4"
4	9 1/2"	6'-11 1/4"	30'-1 1/2"
5	9"	6'-9"	29'-11 1/2"

STRUCTURAL STEEL
F.A. RT. 873 SEC. 107B-DR-1
FRANKLIN COUNTY
STATION 1112+75.00

FOR INFORMATION ONLY 028-0041

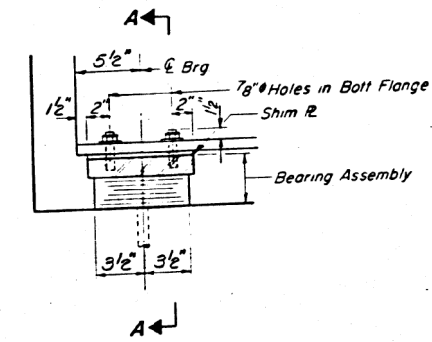
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PLOT SCALE = 100,0000' / in.
PLOT DATE = 10/10/2018DESIGNED -
DRAWN -
CHECKED -
DATE -REVISED -
REVISED -
REVISED -
REVISED -STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

028-0041

SCALE: SHEET OF SHEETS STA. TO STA.

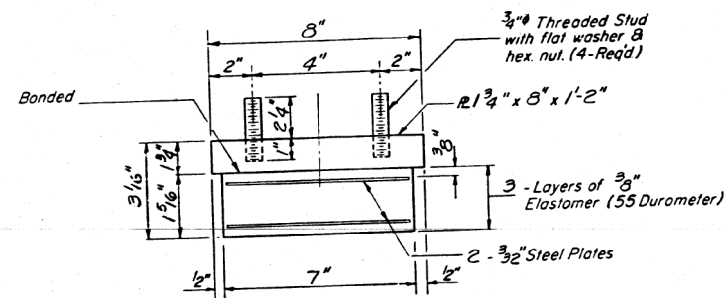
F.A. RTE. SECTION COUNTY TOTAL SHEETS SHEET NO.
VAR D9 BRIDGE PAINT 2019-1 VARIOUS 50 34
ILLINOIS FED. AID PROJECT CONTRACT NO. 78677

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



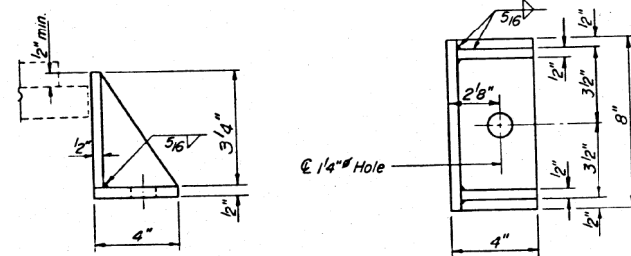
SECTION AT ABUTS.

TYPE I ELASTOMERIC EXP. BRG.

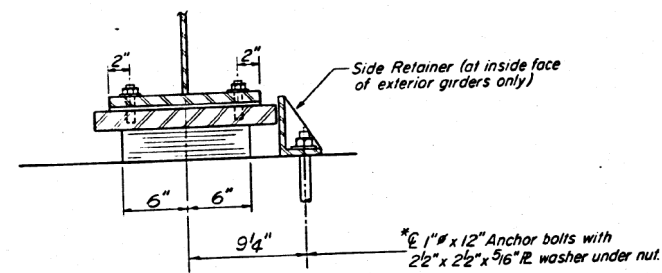


BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.

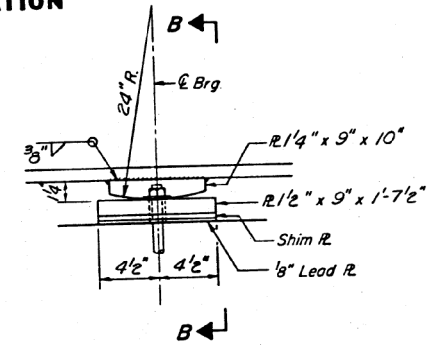


SIDE RETAINER

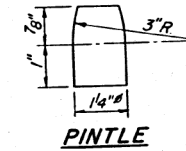


SECTION A-A

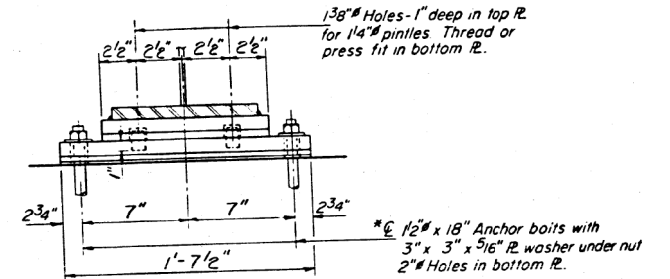
*Note: After girders have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place. Anchor bolts at fixed bearings may be built into the masonry.



ELEVATION AT PIER



PINTLE



SECTION B-B

FIXED BEARING

DESIGNED <i>Patrick M. Pichne</i>	EXAMINED <i>James T. Rayburn</i>
CHECKED <i>G. J. Bunn</i>	PASSED <i>[Signature]</i>
DRAWN <i>Stu Ferchow</i>	APPROVED <i>[Signature]</i>
CHECKED <i>[Signature]</i>	DIRECTOR OF HIGHWAYS

I-2-EI 8-30-80

FOR INFORMATION ONLY 028-0041

BEARING DETAILS
F.A. RT. 873 SEC. 107B-DR-1
FRANKLIN COUNTY
STATION 1112+75.00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

028-0041

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	35
CONTRACT NO. 78677				
ILLINOIS FED. AID PROJECT				

*B.M. : Chiseled square on the Northwest
Wing of Existing Bridge
Elevation 419.66*

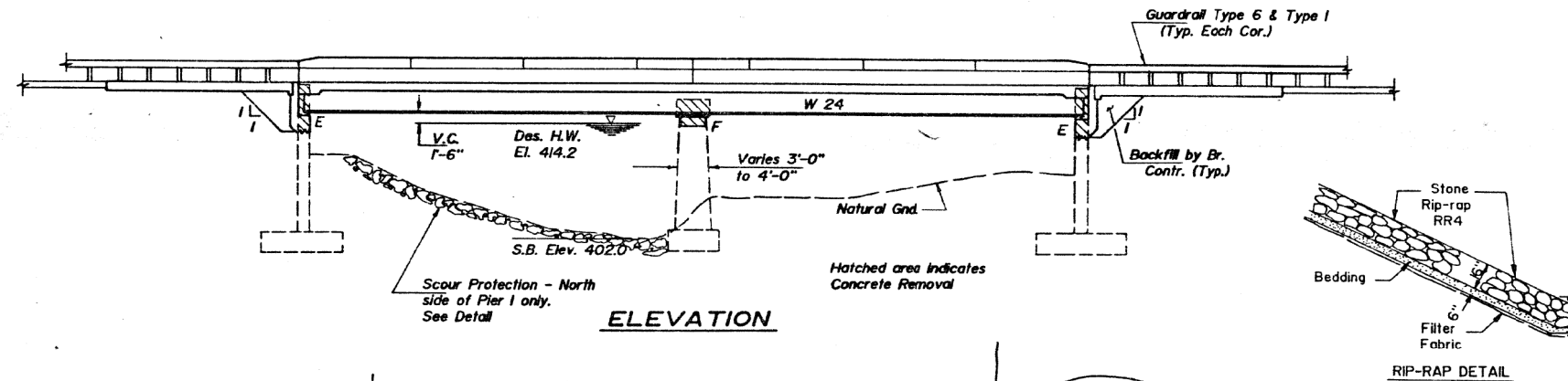
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 849	#4 BR-1	HAMILTON	17	5
FHWA REG. NO. 5		ILLINOIS FED. AID PROJECT-		

Bridge Sheet 1 of 13.

GENERAL NOTES

- (1) Fasteners shall be high strength bolts AASHTO M164. Bolts $\frac{3}{4}$ " ϕ with $\frac{15}{16}$ " ϕ open holes unless otherwise noted.
- (2) Calculated weight of structural steel equals 50,480 pounds.
(M223 Gr 50 = 33,880) (M183 = 16,600)
- (3) The Zinc Silicate and Vinyl Paint System shall be used for shop and field painting of structural steel, except where otherwise noted. The Color of the Vinyl Finish Coat shall be Munsell No. 7.5G 4/8
- (4) Field welding of construction accessories will not be Permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
- (5) The main load carrying member components subject to tensile stress shall conform to the supplemental requirements for Match Toughness Zone 2. These components are the steel wide flange beam, web and flange splice plates.
- (6) Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.
- (7) Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

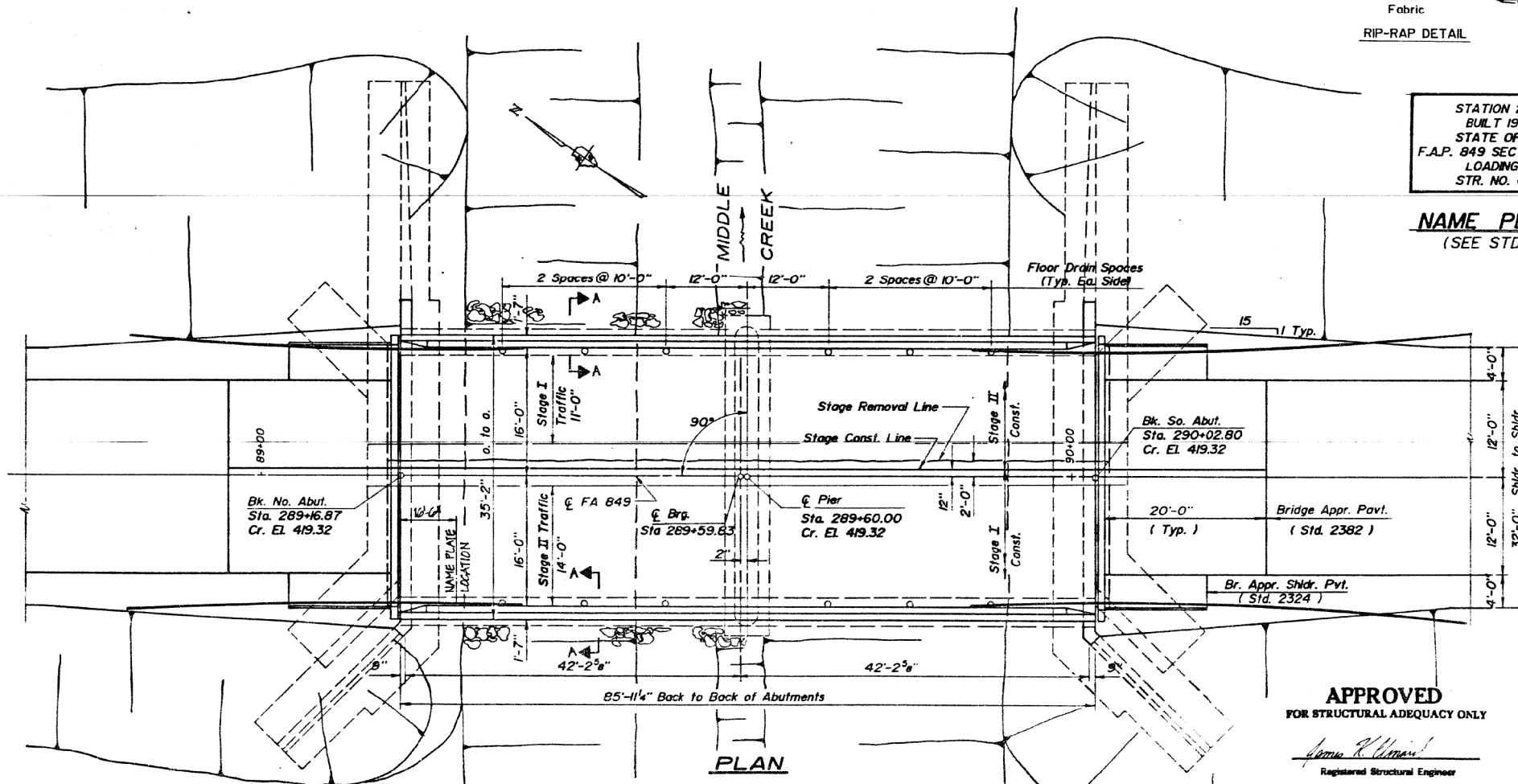


STATION 289+59.83
BUILT 19 BY
STATE OF ILLINOIS
F.A.P. 849 SECTION 114BR-1
LOADING HS-20
STR. NO. 033-0012

NAME PLATE
(SEE STD. 2113)

TOTAL BILL OF MATERIALS				
ITEM	UNIT	SUB	SUPER	TOTAL
Class X Concrete	Cu.Yd.	30.2		30.2
Class X Concrete - Superstructure	Cu.Yd.		94.0	94.0
Furn. & Erect Struct. Steel	L.Sum		1	1
Stud Shear Connectors	Ea.		1410	1410
Porous Granular Embankment	Cu. Yd.	60		60
Reinforcement Bars (Epoxy Coated)	Lb.	4870	23200	28070
Name Plate	Ea.		1	1
Concrete Removal	Cu.Yd.	15		15
Preformed Joint Seal 2½"	LIn.Ft.		70	70
Stone Riprap Class A4	Sq.Yd.	210		210
Floor Drains	Ea.		12	12
* Protective Coat	Sq.Yd.		400	400
Removal of Existing Superstructures	Ea.			1
Filter Fabric for use with Rip-rap	Sq.Yd.	210		210
Elastomeric Bearing Assembly Ty. I	Ea.		10	10

* Includes top of bridge deck.



WATERWAY INFORMATION

Drainage Area: 5.2 sq. mi. Low Grade Elev. 418.15 @ Sta. 300+00									
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	1930	580	580	414.2	0.6	0.6	414.8	414.8
Base	100	2225	595	595	414.4	0.7	0.7	415.1	415.1
Max. Calc.	500	2910	620	620	414.7	1.1	1.1	415.8	415.8

PAVEMENT PROFILE

<p>Sta. 284+00 EI 418.82</p>	<p>Sta. 286+00 EI 418.80</p>	<p>Sta. 288+00 EI 419.20</p>	<p>Sta. 290+00 EI 419.20</p>	<p>Sta. 292+00 EI 419.17</p>	<p>Sta. 294+00 EI 419.04</p>
----------------------------------	----------------------------------	----------------------------------	----------------------------------	----------------------------------	----------------------------------

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

James R. Umairi
Registered Structural Engineer

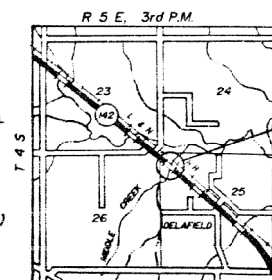
DESIGN STRESSES

$f'c = 3,500$ p.s.i.
 $f_y = 60,000$ p.s.i. (Reinf.)
 $f_y = 50,000$ p.s.i. (Str. St. M223.Gr. 50)
 $n = 9.0$

LOADING HS20-44
Design Specifications : 1989 A.A.S.H.T.O.

Design Specifications : 1989 A.A.S.H.T.O.

Allow 25 # / Sq. Ft. for future surface.



LOCATION MAP

GENERAL PLAN & ELEVATION

FAP RTE. 849 over MIDDLE CREEK
SECTION 114BR-1
HAMILTON COUNTY
STATION 289+59.83
S.N. 033-0012

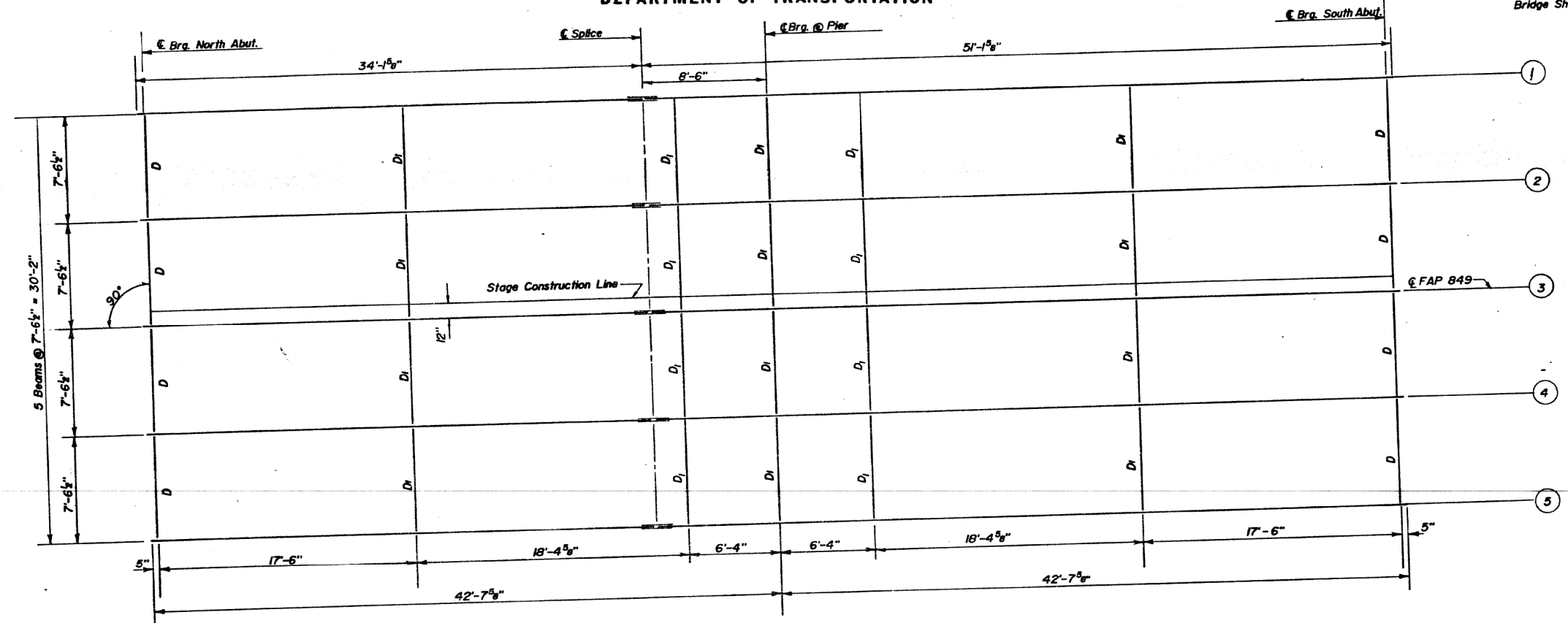
GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS

REV 3-21-90 BY HLC CHANGED STONE RIPRAP CLASS AA AND FILTER FABRIC FOR USE WITH RIPRAP
FROM 190 TO 210 SQ YD

FOR INFORMATION ONLY 033-0012

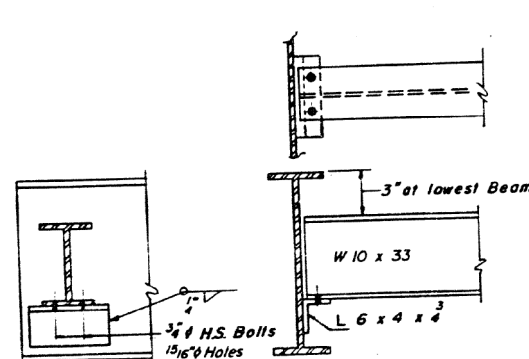
USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	033-0012				F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -						VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	36
PLOT SCALE = 100.0000' = 1 in.	CHECKED -	REVISED -		CONTRACT NO. 78677								
PLOT DATE = 10/10/2018	DATE -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO STA.			

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 849	114BR-1	HAMILTON	17	9
ILLINOIS FED. AID PROJECT -				
Bridge Sheet 5 of 13.				

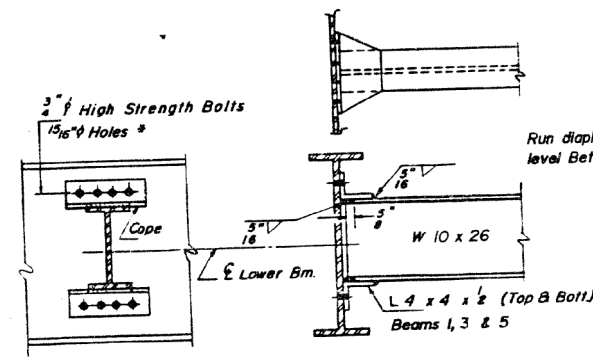


NOTE: All beams W24 x 76

FRAMING PLAN



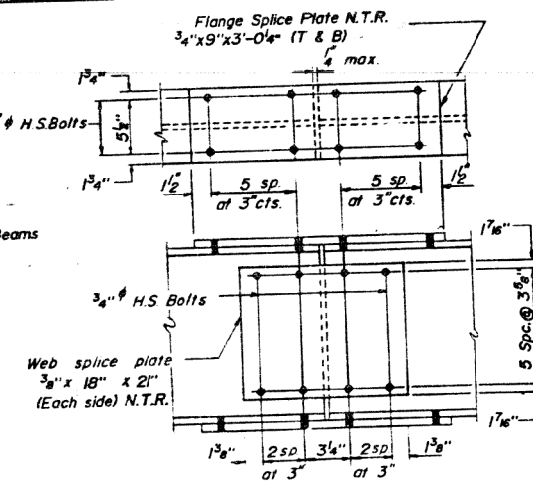
DIAPHRAGM D
8 Required



DIAPHRAGM D1
20 Required

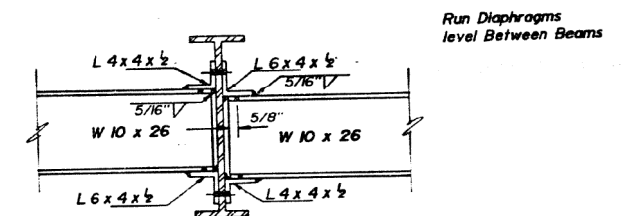
Note: Two hardened washers shall be required over all 1 5/16" holes. All contact surfaces of joints shall be free of paint or lacquer.

* Beams 2 and 3 shall have 1 1/2" long x 1 5/8" slotted holes for the intermediate diaphragm connection. The slotted holes shall have a 1/8" plate washer placed over them. Bolts shall be finger tightened until the placement of Stage II deck concrete. Long dimension of slots shall be vertical.



SPLICE

N.T.R.- Must conform to Supplemental Requirements for Notch Toughness Zone 2. See General Note No. 5.



DIAPHRAGM D1
at Beams 2 and 4
(Beam 4 is shown)

FRAMING PLAN

FAP RTE. 849 over MIDDLE CREEK
SECTION 114BR-1
STATION 289+59.83
HAMILTON COUNTY

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
800 STEVENSON DR. 217/525-6400 SPRINGFIELD

FOR INFORMATION ONLY 033-0012

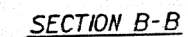
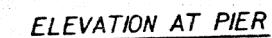
USER NAME = WILSONDA	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 10/10/2018	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

033-0012

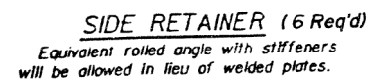
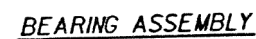
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	37
CONTRACT NO. 78677				
ILLINOIS FED. AID PROJECT				



* Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet # 8 for Anchor Bolt installation.

FIXED BEARING



	0.4 Sp.1	Pier
Is (in ⁴)	2100	2100
Ic (in ⁴)	6991	—
Sc (in ³)	176	176
Ss (in ³)	286	—
Z (in ³)	—	200
B (K/ft)	0.803	1148
M ^L (K)	100.2 ✓	235.6 ✓
g _R (K/ft)	0.345	—
M _{g_R} (K)	51.00 ✓	—
M _{g_L} (K)	287.5 ✓	-133.4 ✓
M _{imp} (K)	86.3 ✓	-40.0 ✓
M _g (M _{g_R} +1) (K)	623.0	-289.0
M _g (K)	1006.5	-682.0
M _u (K)	1677	-833.3
fs _L (nom-comp) (ksi)	6.83	-16.06
fs _L (comp) (ksi)	2.36	—
fs _g (L+L) (ksi)	26.14	-19.70
fs (Overload) (ksi)	35.33	-35.76
fs (Total) (ksi)	—	46.49
VR (K)	51.7	—

	Abut.	Pier
R^L (K)	18.6	59.6
R^R (K)	37.1	44.9
Imp. (K)	11.1	13.5
R_{Total} (K)	66.8	118.0

* M_u = Full Plastic Moment Capacity for Compact, Braced section
 ** Non-compact section
 M_u (Applied Moment) = $1.3 [M_1 + M_2 P + S_3 (M_1' + 1)]$

DESIGN DATA TABLES

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total and Overload).

I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_s (Total and Overload)

VR is the maximum $\frac{1}{2}$ * impact shear range in span.

Z is the plastic section modulus used to determine the Fully Plastic Moments in the non-composite areas.

The Fully Plastic Moment capacity (M_u) is computed according to

The Fully Plastic Moment
AASHTO 10.48.1 & 10.50.1.1.

f_s (Total) is the sum of the stresses due to $1.3 [M_L + M_s L + \frac{5}{3} (M_L + I)]$

f_s (Overload) is the sum of the stresses due to $M_Q + M_S Q + \frac{5}{3} (M_L + I)$

M_D - Moment due to dead loads on non-composite section.

M_{DL} - Moment due to dead loads on composite section.

M_L - Moment due to live load on non-composite or composite section.

I - Live load impact

BILL OF MATERIAL

Item.	Unit	Total
Elastomeric Bearing Assembly Type 1	Each	10

BEARING DETAILS

FAP RTE. 849 over MIDDLE CREEK
SECTION 114BR-1
STATION 289+59.63
HAMILTON COUNTY

GREENE & BRADFORD, INC.
OF SPRINGFIELD
CONSULTING ENGINEERS
100 STEVENSON DR. 27/529-6681 SPRINGFIELD, IL

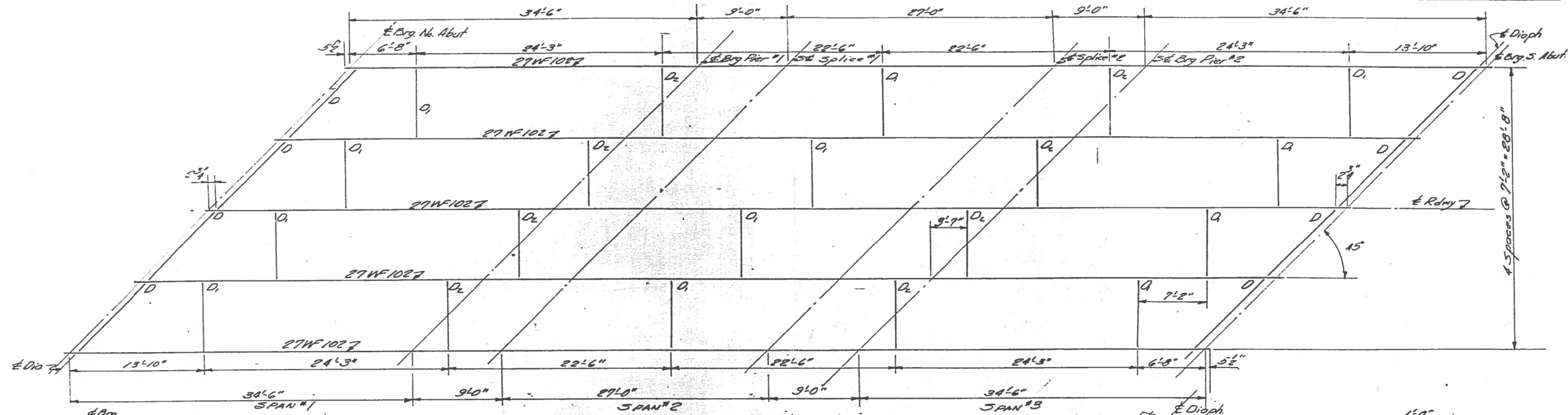
FOR INFORMATION ONLY

033-0012

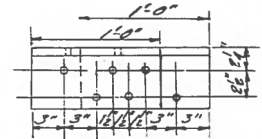
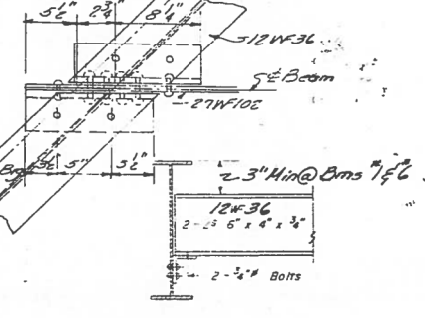
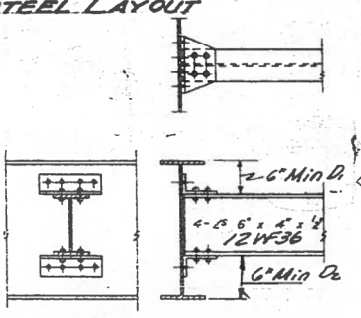
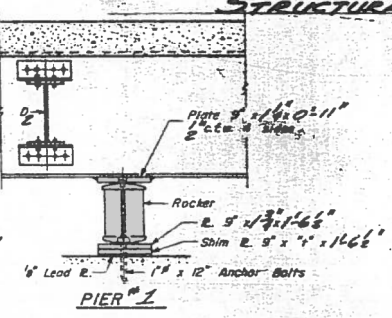
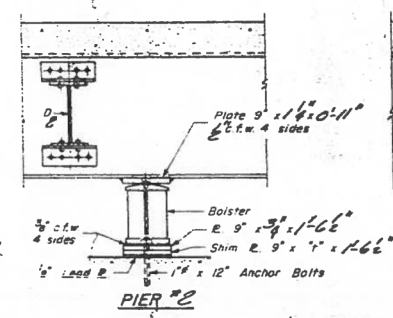
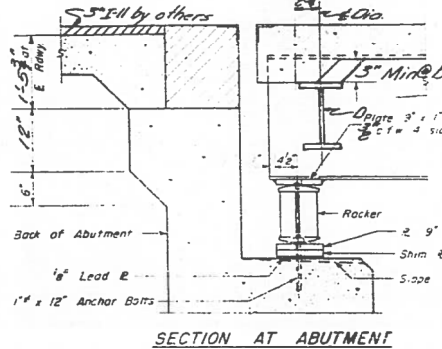
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
59W-1 LOW	Massac	98	53
750. ROAD DIST. NO. 1			
ELIMINATED			

SHEET NO. 2
7 SHEETS



STRUCTURAL STEEL LAYOUT



ELEVATION TOP OF BEAMS

Beam Location	#1	#2	#3	#4	#5
E. Brg. N. Abut.	353.38	353.50	353.54	353.50	353.38
E. Brg. Pier 1	353.38	353.50	353.54	353.50	353.38
E. Splice #1	353.38	353.50	353.54	353.50	353.38
E. Splice #2	353.38	353.50	353.54	353.50	353.38
E. Brg. Pier 2	353.38	353.50	353.54	353.50	353.38
E. Brg. S. Abut.	353.38	353.50	353.54	353.50	353.38

Note: Elevations top of beams does not include deflection.

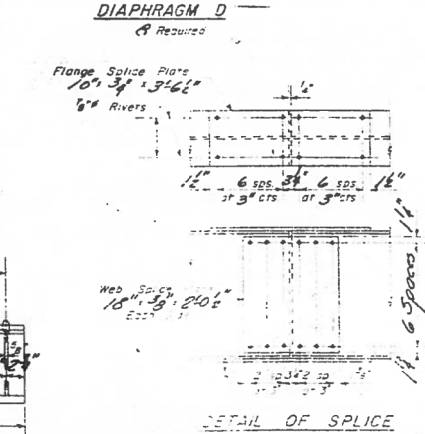
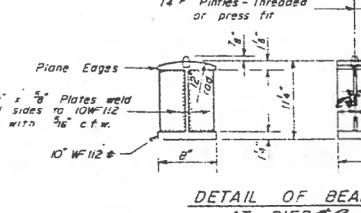
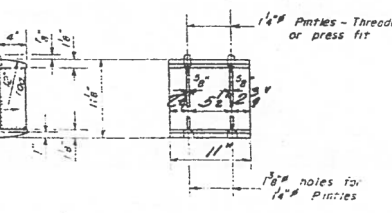
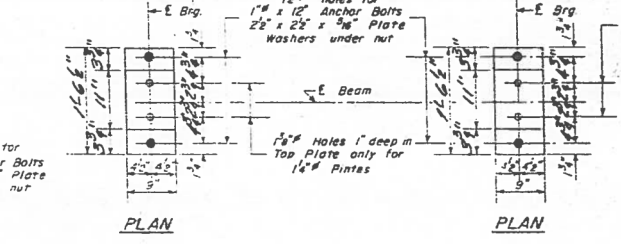
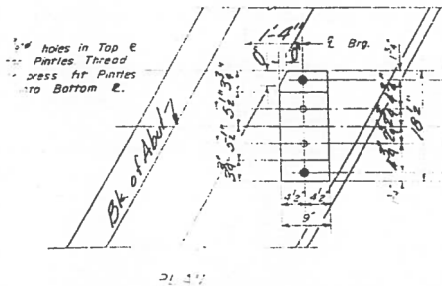


TABLE OF "I" DIMENSIONS

Beam Location	#1	#2	#3	#4	#5
E. Brg. N. Abut.	0	0	1/2	0	0
E. Brg. Pier 1	0	0	1/2	0	0
E. Brg. Pier 2	0	0	1/2	0	0
E. Brg. S. Abut.	0	0	1/2	0	0

STRUCTURAL STEEL
OVER Q DITCH
S.B.I.R.T. SEC. 40 BR
MASSAC COUNTY
STATION 755+55.49

DESIGNED: *W. J. Kelly*
CHECKED: *W. J. Kelly*
DRAWN: *W. J. Kelly*
CHECKED: *W. J. Kelly*

AUGUST 19, 1958
EXAMINED: *M. R. Romine*
REVIEWED: *C. S. Shing*
APPROVED: *R. R. Bartschmeyer*

USER NAME = WILSONDA	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 10/10/2018	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

064-0003

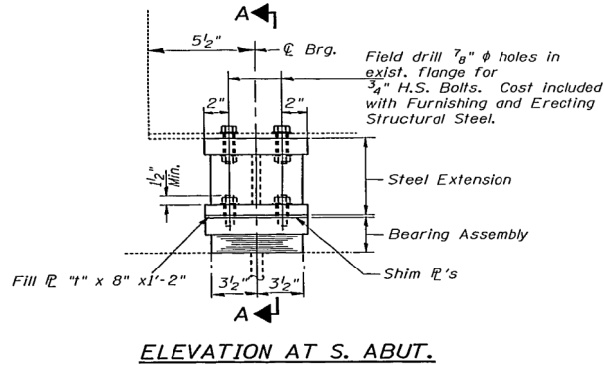
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	41
CONTRACT NO. 78677				
ILLINOIS FED. AID PROJECT				

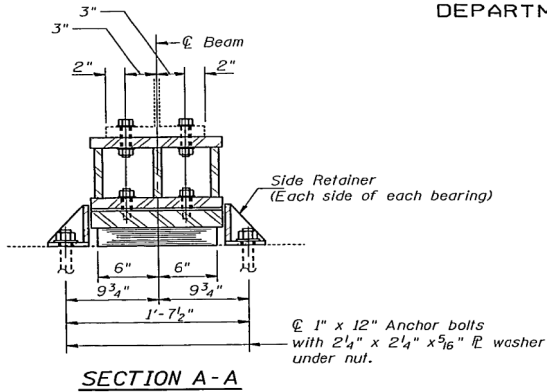
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A. R. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	MASSAC	20	18	
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* CONT. MAINT. FY 2001-8



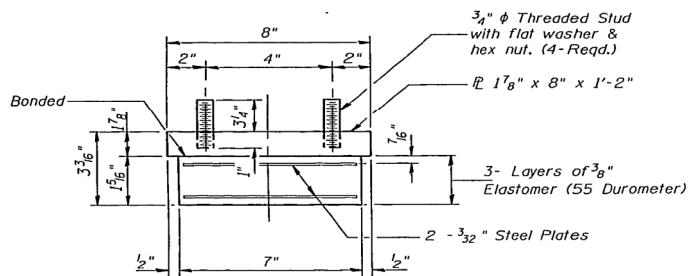
ELEVATION AT S. ABUT.



SECTION A-A

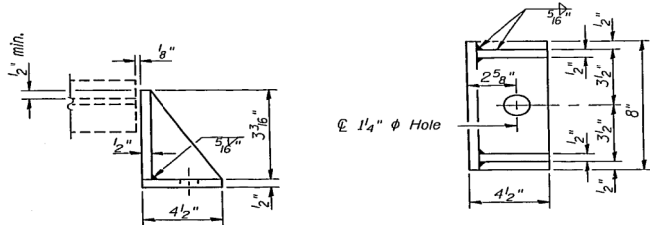
TYPE I ELASTOMERIC EXP. BRG.

Notes: See sheet 12 of 20 for Anchor Bolt Installation.



BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.



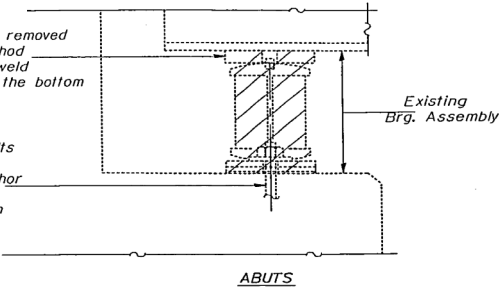
SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Furnishing and Erecting Structural Steel.

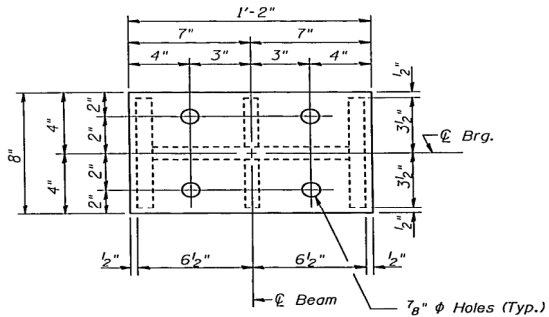
DESIGNED	T. Wayne Halstead
CHECKED	Mike Stephenson
DRAWN	T. Wayne Halstead
CHECKED	TWH MAS CHW

Existing Top \varnothing to be removed using the air-arc method and grind smooth all weld material remaining on the bottom flange.

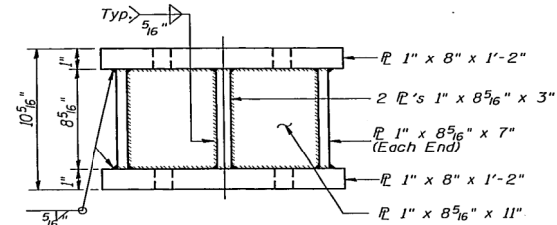
Burn the existing anchor bolts flush with existing concrete surface. Grind existing anchor bolts smooth and seal with epoxy. Cost is included with Jack and Remove Existing Bearings.



EXISTING BEARING REMOVAL DETAIL



PLAN-TOP & BOTTOM PLATE



STEEL EXTENSION AT SOUTH ABUT.

GIRDER REACTIONS

R _D	(K)	15.0
R _L	(K)	33.0
Imp.	(K)	10.0
R (Total)	(K)	58.0

TABLE OF "I" DIMENSIONS
SOUTH ABUT

#1	#2	#3	#4	#5
		1/2"		

Notes:

Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Cost of field drilling holes on bottom flange for steel extension is included in the cost of "Elastomeric Bearing Assembly Type I".

The minimum jack capacity required is 30 Tons.

Existing diaphragm removal and new diaphragm erection shall be coordinated with drilling holes in bottom flange for bearing attachment, if necessary, to provide clearance for the drill.

New steel extensions, side retainers, connection bolts, shim \varnothing 's and anchor bolts are included in "Furnishing and Erecting Structural Steel". Hatched areas indicate Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	5
Jack and Remove Existing Bearings	Each	5

TYPE I BEARING REPLACEMENT
SOUTH ABUTMENT
MASSAC COUNTY
S.N. 064-0003

FOR INFORMATION ONLY
064-0003

USER NAME	= WILSONDA	DESIGNED	-	REVISED	-
PLOT SCALE	= 100.0000' / in.	DRAWN	-	REVISED	-
PLOT DATE	= 10/10/2018	CHECKED	-	REVISED	-
		DATE	-	REVISED	-

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

064-0003

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	42
CONTRACT NO. 78677				
ILLINOIS FED. AID PROJECT				

FOR INFORMATION ONLY
064-0003

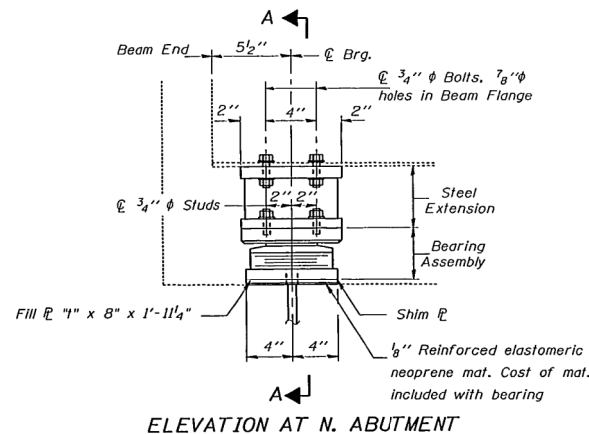
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER REACTIONS

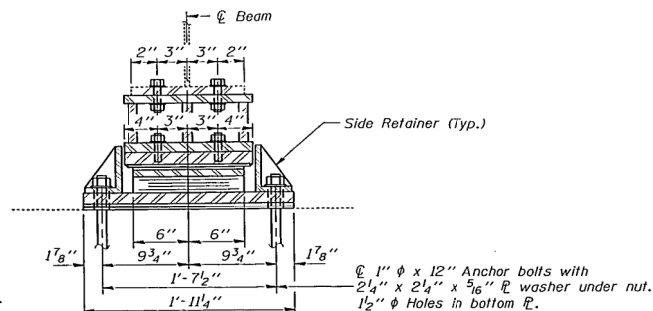
RP	(K)	15.0
R _L	(K)	33.0
Imp.	(K)	10.0
R (Total)	(K)	58.0

F.A. P. NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	MASSAC	20	19	
STA.	TO STA.			
FED. ROAD DIST. NO.	BLDG.	FED. AID PROJECT		

* CONT. MAINT. FY 2001-8



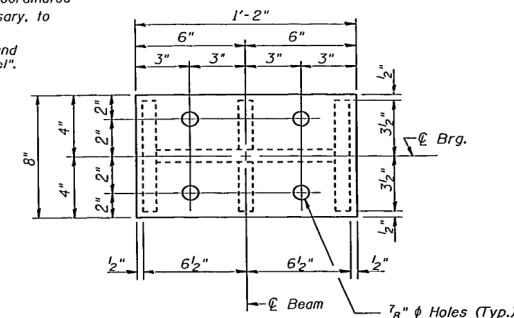
ELEVATION AT N. ABUTMENT



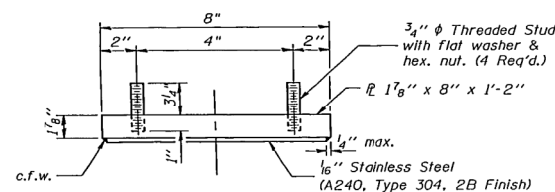
SECTION A-A

Notes:

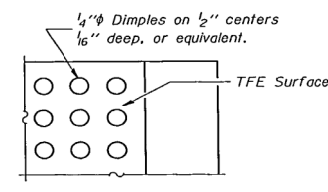
Existing diaphragm removal and new diaphragm erection shall be coordinated with drilling holes in bottom flange for bearing attachment, if necessary, to provide clearance for the drill.
New steel extensions, side retainers, connection bolts, Shim P's and anchor bolts are included in "Furnishing and Erecting Structural Steel".
See sheet 12 of 20 for Anchor Bolt Installation.
Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions.
The minimum jack capacity required is 30 Tons.
Cost of field drilling holes in bottom flange for steel extension is included in the cost of "Elastomeric Bearing Assembly Type II".
For existing bearing removal detail see sheet 18 of 10.



PLAN-TOP & BOTTOM PLATE



TOP BEARING ASSEMBLY



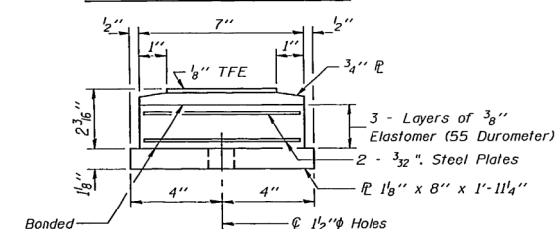
PLAN-TFE SURFACE

TABLE OF "I" DIMENSIONS
@ NORTH ABUT

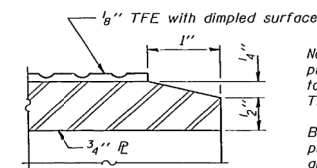
#1	#2	#3	#4	#5
		1/2"		

Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

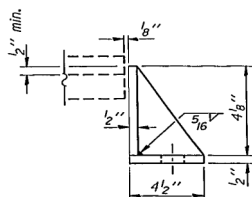
Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



BOTTOM BEARING ASSEMBLY

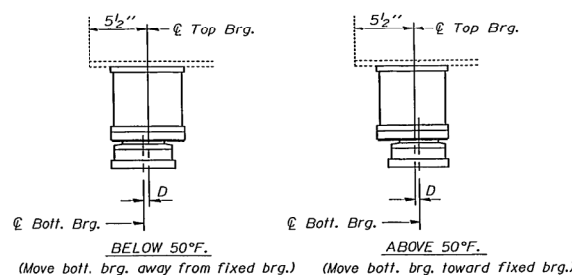


SECTION THRU TFE



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



SETTING ANCHOR BOLTS AT EXP. BRG.

D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

STEEL EXTENSION AT NORTH ABUT.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	5
Jack and Remove Existing Bearings	Each	5

TYPE II BEARING REPLACEMENT
NORTH ABUTMENT
MASSAC COUNTY
S.N. 064-0003

DESIGNED	T. Wayne Halstead
CHECKED	Mike Stephenson
DRAWN	T. Wayne Halstead
CHECKED	TWH MAS CHW

BENCHMARK

Southwest bolt on the north handrail base Lt. Sta. 9+75
ELEV. 491.04

EXISTING STRUCTURE DESCRIPTION

SN 097-0024 D.O.T. No. 346-384-U
Existing structure is a three span reinforced concrete slab on steel stringers, 116'-0" long and 34'-9" wide on open abutments built in 1939. Remove the existing concrete deck and handrails. No salvage. Traffic shall be maintained utilizing stage construction.

NOTE: After removal of the concrete deck, the intermittent welds of the top cover plate shall be inspected for fatigue cracks. If cracks are found, the cover plate shall be retrofitted. Contact the Bridge Engineer for method of retrofitting.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

- See Proposal for Boring Data.
- Fasteners shall be high strength bolts. Bolts 3/4" dia., open holes 15/16" dia., unless otherwise noted.
- Calculated weight of Structural Steel = 18,624 Pounds (M-183)
All new structural steel shall be given one first prime coat and one final coat of the lead and chromate free alkyl paint system in the shop. The color of the final coat shall be Interstate Green, Munsell Color Std. 7.5G 46. The contractor shall touch up any damaged areas and areas not painted at the shop (such as bolt splices, etc.). Painting shall be incidental to the pay item of FURNISHING AND ERECTING STRUCTURAL STEEL.
- NO NOTE
- Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.
- Anchor bolts shall be set before bolting diaphragms over supports.
- The structural steel bearing plates of the Elastomeric Bearing Assembly shall conform to the requirements of AASHTO M 183
- The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the wide flange beams and all splice plate material.
- Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.
- Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field 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 the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- Bearing seat surfaces under Beam #1 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, shims of the dimensions of top plate shall be provided and placed as detailed.
- The contractor shall drive one steel HP 10 x 42 test pile in a permanent location at the South Abutment as directed by the Engineer before ordering the remainder of piles.
- For cantilever forming brackets, See Special Provisions.
- Bridge Seal Sealer shall be applied to seal area of the Abutment. Estimated Quantity = 141 Sq.Ft.
- The Contractor will be required to mark, on top of the concrete deck, the locations of the top flange of all the steel beams, prior to any removal of the bridge concrete deck. Saw cutting directly over the top of the beam flanges is not permitted.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Structure Excavation	Cu.Yd.		122	122
Concrete Removal	Cu.Yd.		17.4	17.4
Class "X" Concrete	Cu.Yd.		50.7	50.7
Class "X" Concrete Superstructure	Cu.Yd.	137.6		137.6
Protective Coat	Sq.Yd.	567		567
F. & E. Structural Steel	L.Sum.	1		1
Stud Shear Connectors	Each	3,885		3,885
Reinforcement Bars, Epoxy Coated	Pound	32,790	6,536	39,320
Name Plates	Each	1		1
Preformed Joint Seal - 2 1/2"	Lin.Ft.	78		78
Furnishing Steel Piles, HP 10 x 42	Lin.Ft.		227	227
Driving Steel Piles	Lin.Ft.		227	227
Test Pile Steel, HP 10 x 42	Each		1	1
Aluminum Railing, Type L	Lin.Ft.	134		134
Elastomeric Bearing Assembly, Type I	Each		14	14
Removal of Existing Concrete Deck	Each	1		1
Bridge Seal Sealer	L.Sum		1	1
Cleaning and Painting Steel Bridge	L.Sum		1	1
Jack and Remove Existing Bearings	Each		18	18
Structural Steel Removal	PXIN		3,348	3,348
Elastomeric Bearing Assembly, Type II	Each		7	7

NAME PLATE (Std. 2113)

STATION 8+65
REBUILT BY
STATE OF ILLINOIS
U.S. RTE. 45 SEC. 108 VB-1
F.A. PROJECT F-328-(1)
LOADING HS 20
STR. NO. 097-0024

APPROVED
FOR STRUCTURAL ASSURANCE ONLY

Ralph E. Arden
Engineer of Bridges and Structures

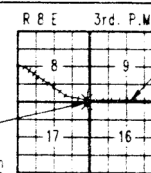
DESIGN LOADING
HS 20-44 and Allowance for
25 P.S.F. Future Wearing Surface

DESIGN STRESSES (New Construction)
 $f_y = 60,000$ p.s.i. Reinforcement
 $f'_c = 3,500$ p.s.i. Concrete
 $f_y = 36,000$ p.s.i. Structural Steel
 $f_s = 22,000$ p.s.i. (AASHTO M-183, Gr. 36)

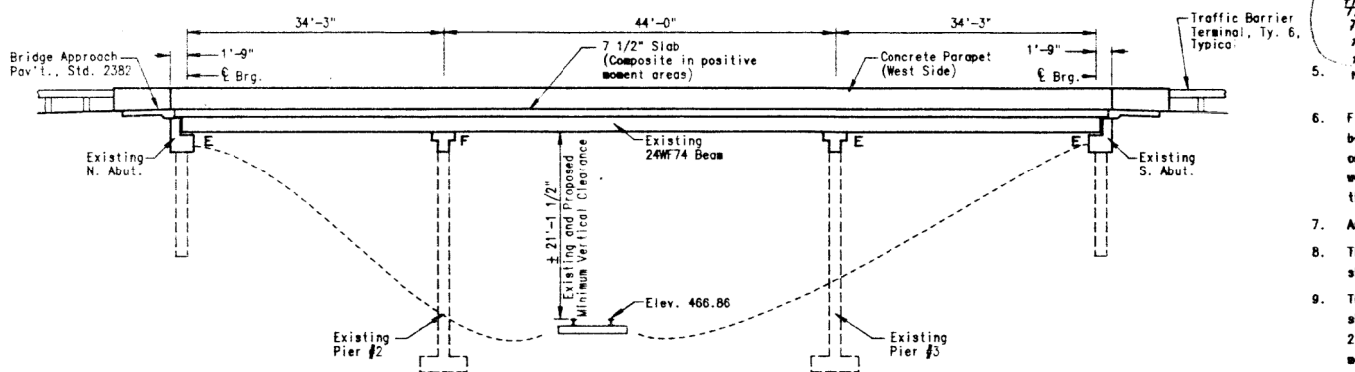
DESIGN STRESSES (Existing Beams)
 $f_y = 33,000$ p.s.i. Structural Steel
 $f_s = 18,150$ p.s.i.

DESIGN SPECIFICATIONS
AASHTO 1989 & 1990 Interim Specifications
& Seismic Retrofitting Guidelines for
Highway Bridges.

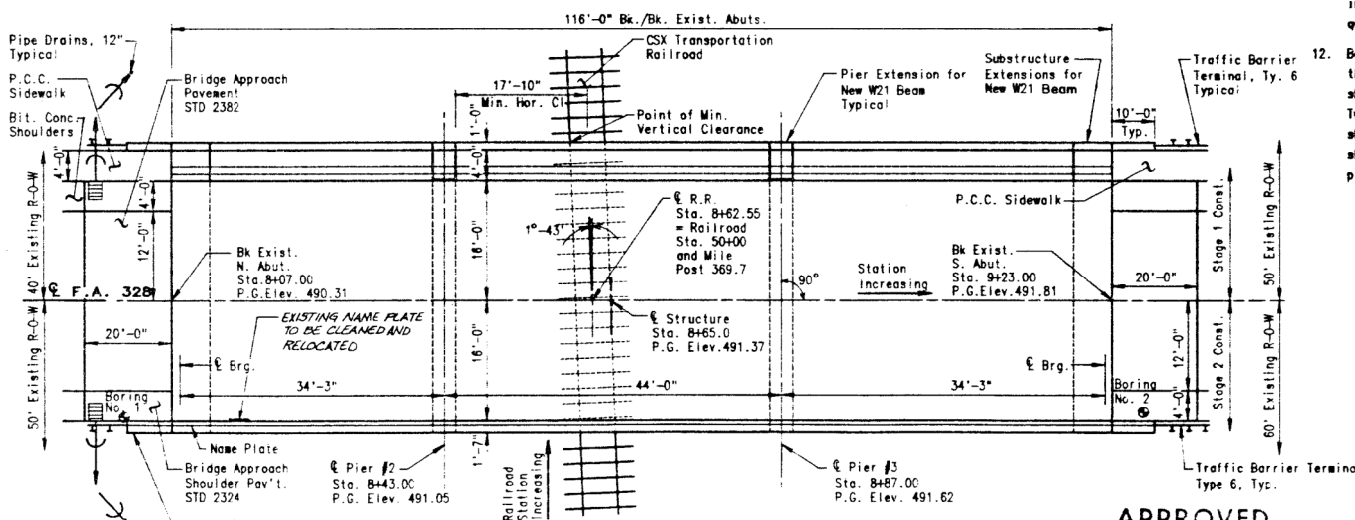
LOCATION PLAN



GENERAL PLAN
F.A. ROUTE 328
(SB 140) (U.S. ROUTE 45)
OVER CSX TRANSPORTATION RAILROAD
SECTION 108 VB-1
WHITE COUNTY
STRUCTURE NO. 097-0024
STA. 8+65



ELEVATION



PLAN

Sodemann and Associates, Inc.
STRUCTURAL ARCHITECTURE
PROJECT MANAGEMENT

DESIGNED: K.E.
CHECKED: J.A.F.
DRAWN: R.E.H.
CHECKED: R.L.H.

PROFILE GRADE

(Along CSX Transportation Railroad
North Rail)

PROFILE GRADE

(Along Roadway Centerline)

COUNTY SECTION

F.A. ROUTE 328 SECTION 108 VB-1 WHITE CO.

SHEET 6 OF 29 SHEETS 9004

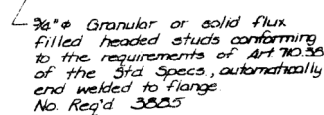
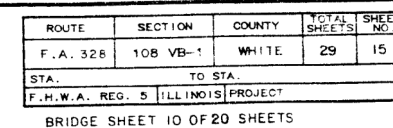
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

097-0024

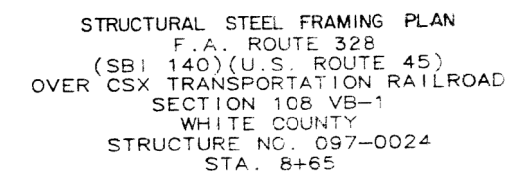
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	44
CONTRACT NO. 78677				
ILLINOIS FED. AID PROJECT				

097-0024



See Structural Steel Details
sheet 11 of 20 for stud
placement on splice plates



SHEET 15 OF 29 SHEETS 90043

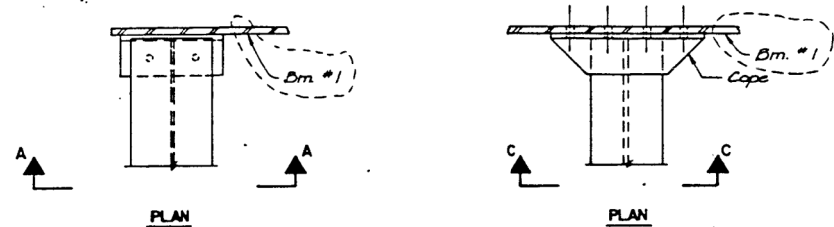
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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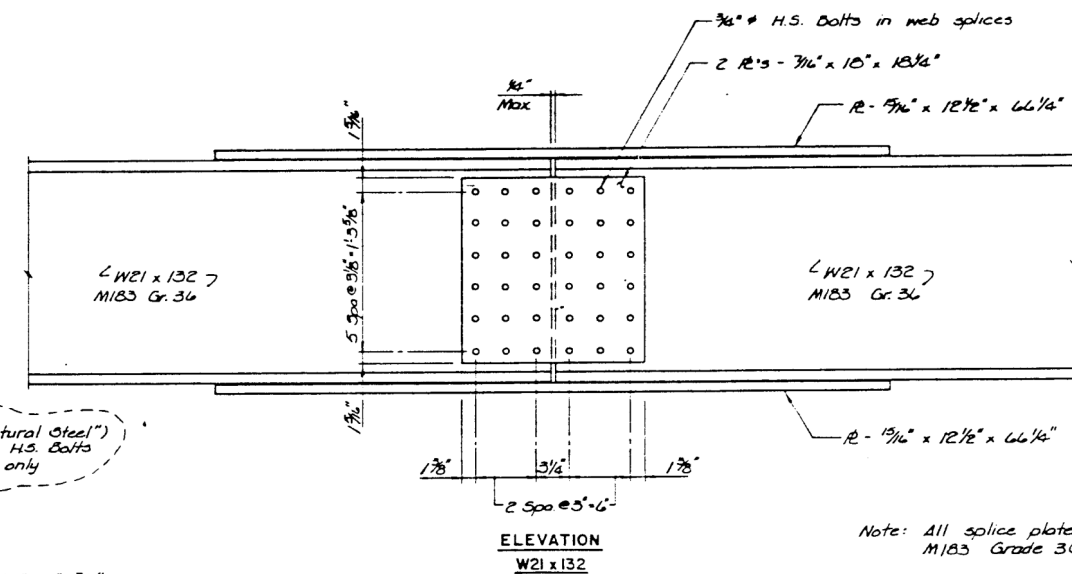
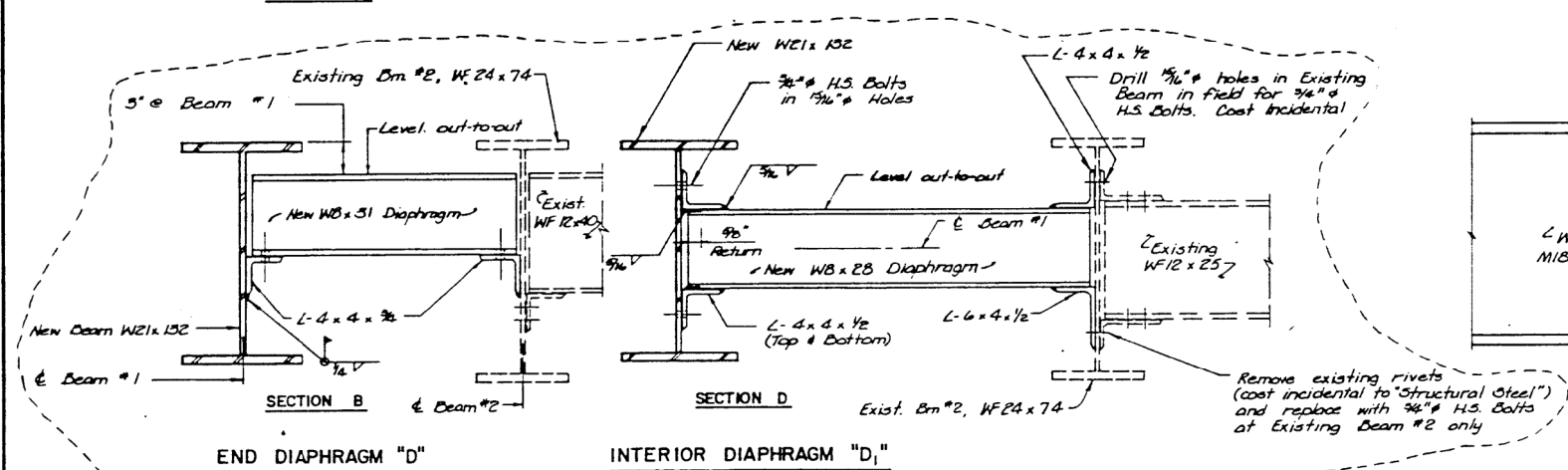
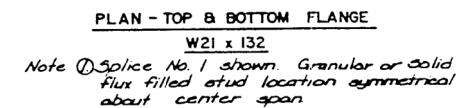
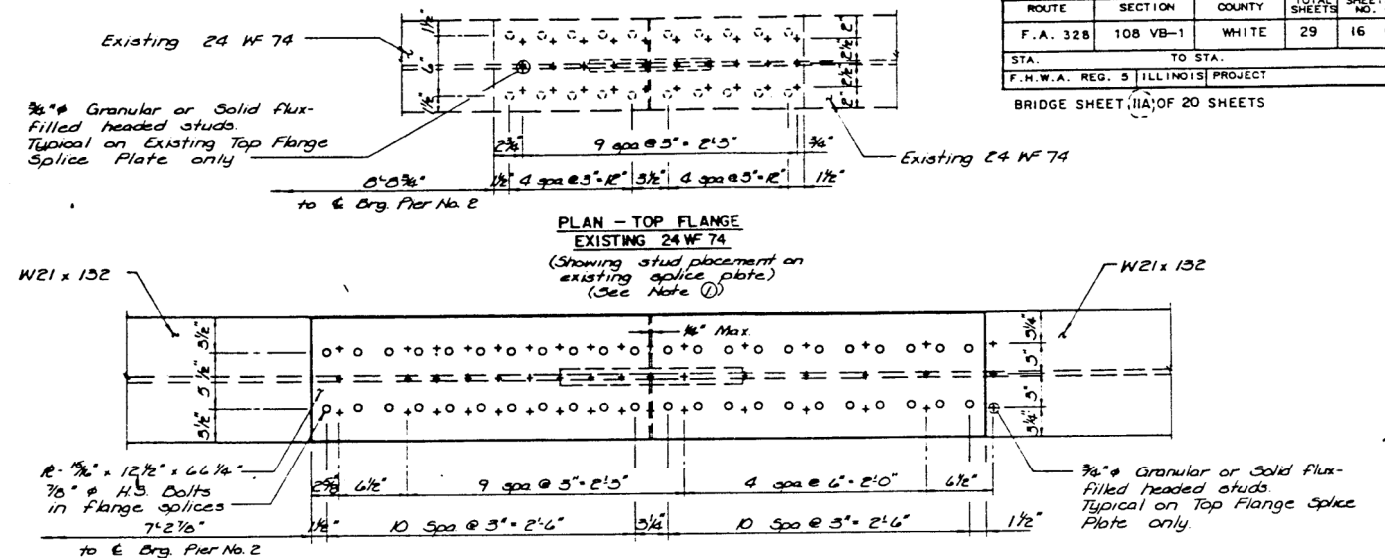
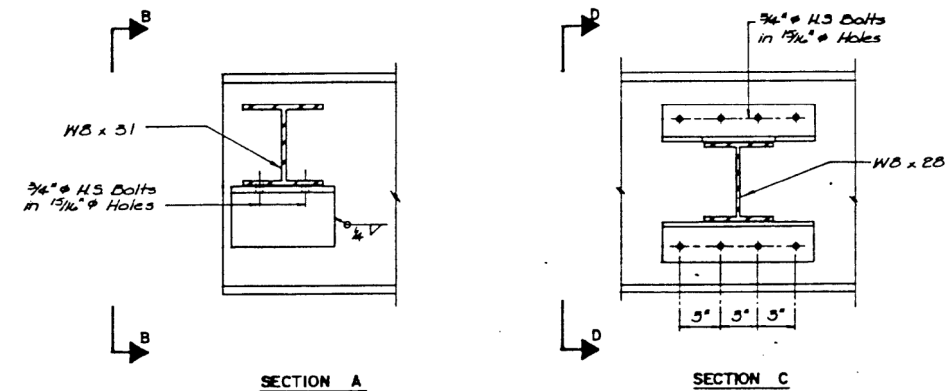
[illegible]

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 328	108 VB-1	WHITE	29	16
STA.		TO STA.		
F.H.W.A. REG. 5	ILLINOIS PROJECT			

BRIDGE SHEET 11A OF 20 SHEETS



Note: Two hardened washers shall be required over all oversize holes.

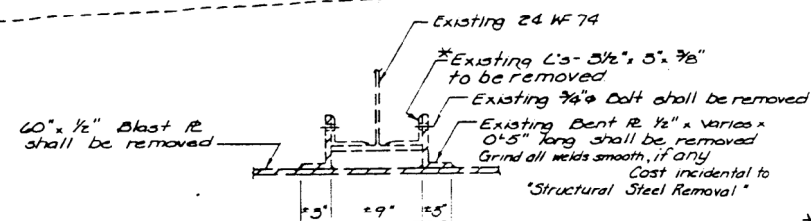


Note: All splice plates shall be NTR
M183 Grade 36.

TOP OF BEAM ELEVATIONS *

Beam Location	No 1	No 2
£ Org. North Abut.	489.29	489.26
£ Org Pier No 2	489.88	489.92
£ Splice No 1	490.05	490.11
£ Splice No 2	490.37	490.41
£ Org Pier No 3	490.45	490.47
£ Org. South Abut.	490.73	490.69

*FOR FABRICATION ONLY



BLAST PLATE REMOVAL DETAIL

Note: Hatching indicates "Structural Steel Removal".
Remove Blast R's and Bent R's including
3/4" Bolts.

FIELD SPLICE DETAILS

* REMOVE EXISTING ANGLES BY GRINDING EXISTING WELDS. FINAL GRIND 1/16" TO 1/8" DEEP IN FLANGES AT REMOVED WELDS TO REDUCE RESIDUAL STRESS CONCENTRATIONS. FINAL GRINDING SHALL BE PARALLEL TO THE WEB OF THE BEAMS. THE GROUND AREAS SHALL BE CHECKED FOR MICRO-CRACKS BY THE USE OF A DYE PENETRATION. ANY CRACKS DISCOVERED SHALL BE REMOVED BY GRINDING IF LESS THAN 1/8" DEEP. CRACKS OVER 1/8" DEEP SHALL BE REPORTED TO THE ENGINEER FOR RESOLUTION.

STRUCTURAL STEEL DETAILS
F.A. ROUTE 328
(SBI 140)(U.S. ROUTE 45)
OVER CSX TRANSPORTATION RAILROAD
SECTION 108 VB-1
WHITE COUNTY
STRUCTURE NO. 097-0024
STA. 8+65

FOR INFORMATION ONLY 097-0024

F.A. ROUTE 328 SECTION 108 VB-1 WHITE CO.

SHEET 16 OF 29 SHEETS 90043

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/10/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

097-0024

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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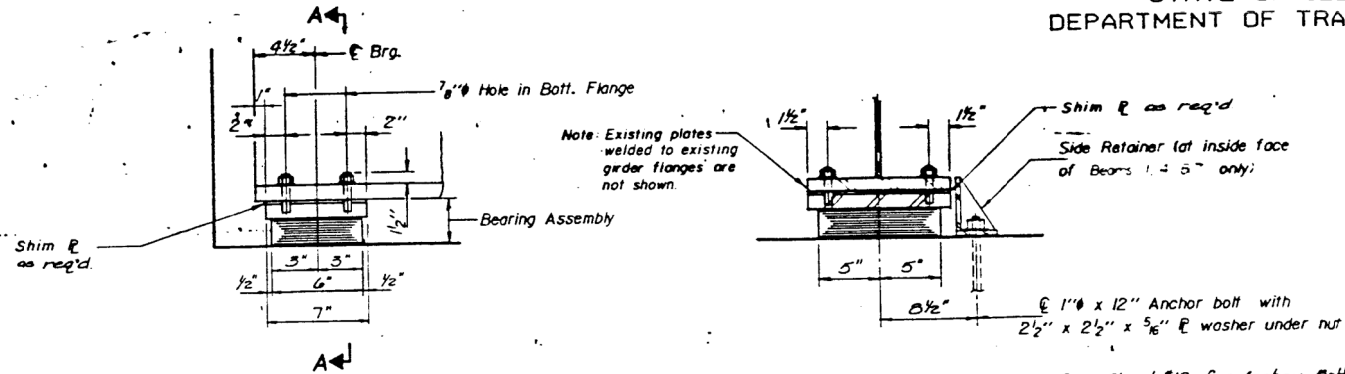
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	46
		CONTRACT NO. 78677		
		ILLINOIS	FED. AID PROJECT	

ILLINOIS	FED. AID PROJECT
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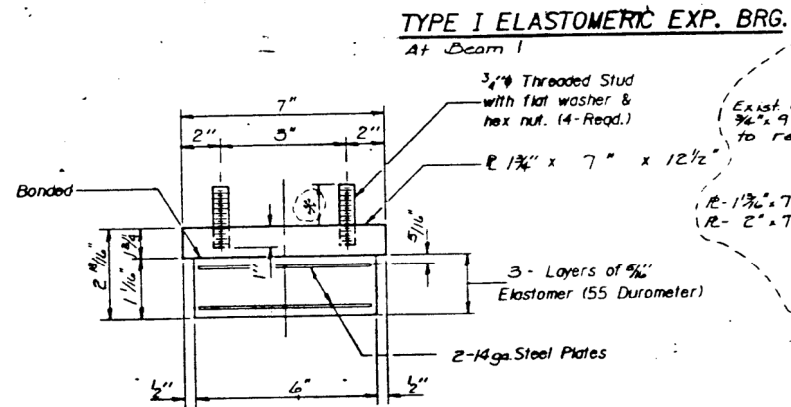
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA 320	*	WHITE	29	17
STA. TO STA.				
FED. ROAD DIST. NO. 7		ILLINOIS	PROJECT	

* 108 VB-1, ~
BRIDGE SHEET 12A OF 20 SHEETS

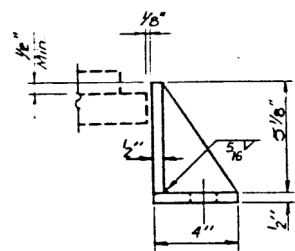
ELEVATION AT N. ABUT.

SECTION A-A



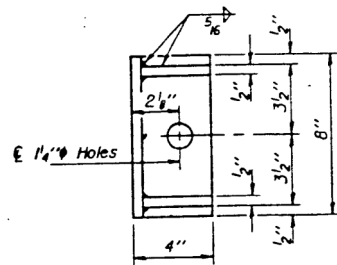
BEARING ASSEMBLY

Note: Shim plates shall not be placed under Bearing Assembly.

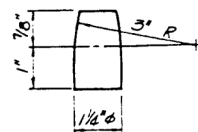


SIDE RETAINER

Equivalent rolled angle with stiffeners
→ will be allowed in lieu of welded plates.



PINTEL

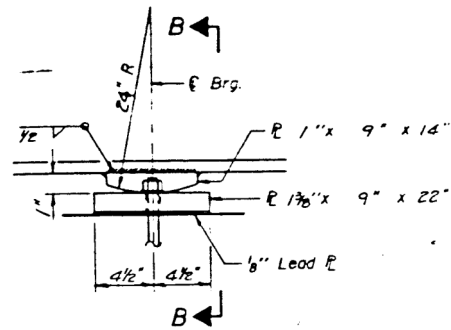


1. I_s and S_s are the moment of inertia and section modulus of the steel section.
2. I_c and S_c are the moment of inertia and section modulus of the composite section used in computing f_o (Total). Composite section is used in positive moment areas only.
3. V_R is the maximum 4 and impact shear range in span.

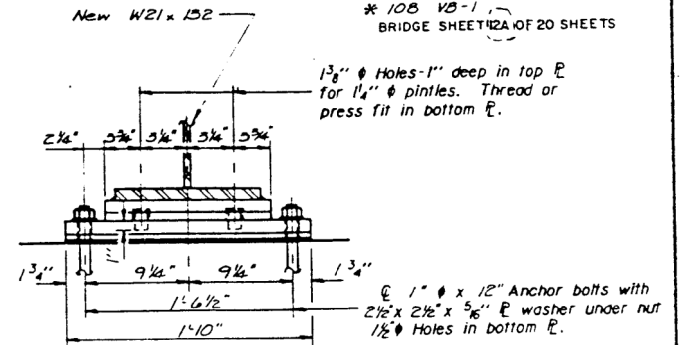
' PROPOSED BEAM MOMENT TABLE

		0.4 Span 1 0.6 Span 3	Piers	0.5 Span 2
Is	(in ⁴)	3220	3220	3220
Ic	(in ⁴)	3893	—	3893
Js	(in ³)	295	295	295
Sc	(in ³)	3809	—	3809
Q	(K/I)	0.430	0.430	0.430
M Q	('K)	33.6	67.2	36.9
S Q	(K/I)	0.580	0.580	0.580
M _s Q	('K)	45.3	90.6	49.8
M _t	('K)	26.6	53.1	29.2
M _{IMP}	('K)	8.0	15.9	8.8
f _s Q Non-Comp	(ksi)	1.4	2.7	1.5
f _s Q Comp	(ksi)	1.8	3.7	2.0
f _s (4 • I)	(ksi)	1.1	2.8	1.2
f _s (Total)	(ksi)	4.3	9.2	4.7
VR	(K)	42.5	—	44.0

ELEVATION AT PIER NO. 2



SECTION B-B



Notes: Δ
Weight of Steel Plates, bolts, nuts & washers
and end retainers is included in "Structural Steel".
New fixed bearing shall be used for Beam
No.1 at Pier No.2 only.

Existing fixed bearings at Pier No. 2 for Beams 2 thru 7 shall remain.

Provide Type I Elastomeric Expansion Bearings for all beams at North Abutment and Pier No. 3. Existing rollers, anchor bolts, and bottom plates shall be removed down to the top of the pedestals. The existing plates welded to the existing beam flanges shall remain.

Provide Type II Elastomeric Expansion Bearings for all beams at South Abutment. Existing rollers, anchor bolts and bottom plates shall be removed down to the top of the pedestals. The existing plates welded to the existing beam flanges shall remain.

If it is necessary to remove the existing diaphragms to drill holes for new anchor bolts, the Contractor shall replace all diaphragm connection bolts with the same size H.S. bolts at an incidental cost.

Jacking, cribbing and bearing replacement shall be done on the superstructure slab has been removed and before new slab has been poured.

The maximum dead load reaction per bearing of each pier after concrete deck removal is 4 kips. Use minimum 10 ton jack per bearing.

REACTION TABLE

	Abut	Pier
RDL (K)	94	34.4
ALL (K)	294	379
RSDL (K)	48	15.9
RIMP (K)	8.8	11.4
R TOTAL (K)	524	996

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	7

(Revised 3-19-92 KEB)

NORTH ABUTMENT 8, PIER NO 2
BEARING DETAILS - DESIGN STRESSES
F. A. ROUTE 328
(SBI 140) (U. S. ROUTE 45)
OVER CSX TRANSPORTATION RAILROAD
SECTION 108 VB-1
WHITE COUNTY
STRUCTURE NO. 097-0024
STA. 8+65

F. A. ROUTE 328 SECTION 108 VB-1 WHITE CO.

SHEET 17 OF 29 SHEETS 90043

USER NAME	= WILSONDA
PLOT SCALE	= 100.0000 ' / in.
PLOT DATE	= 10/10/2018

DESIGNED	-
DRAWN	-
CHECKED	-
DATE	-

REVISED	-
REVISED	-
REVISED	-
REVISED	-

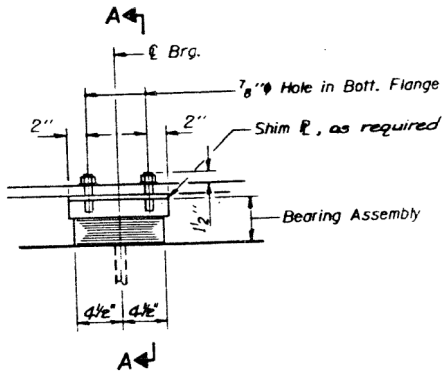
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

097-0024

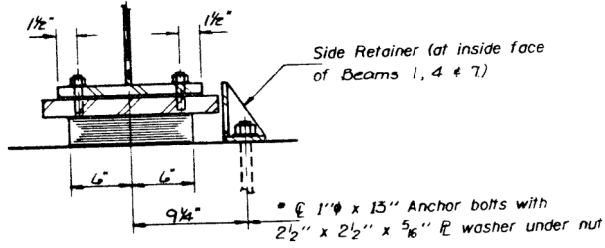
SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	47
		CONTRACT NO. 78677		
		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

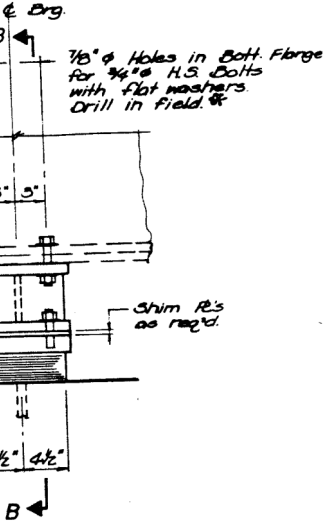


ELEVATION AT PIER 3

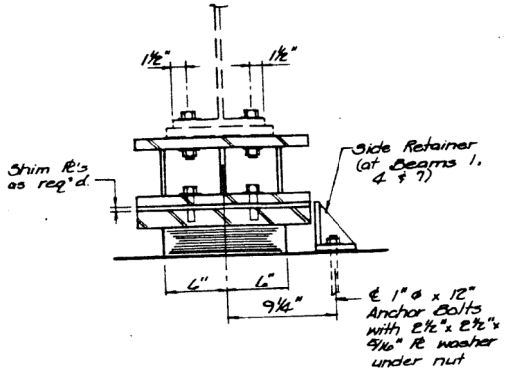


SECTION A-A

*Cost of drilling holes in bottom flanges in field is incidental to "Elastomeric Bearing Assembly Type 1."

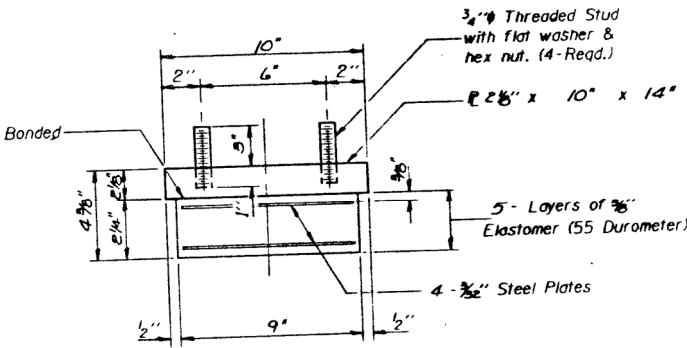


ELEVATION AT PIER 3



SECTION B-B

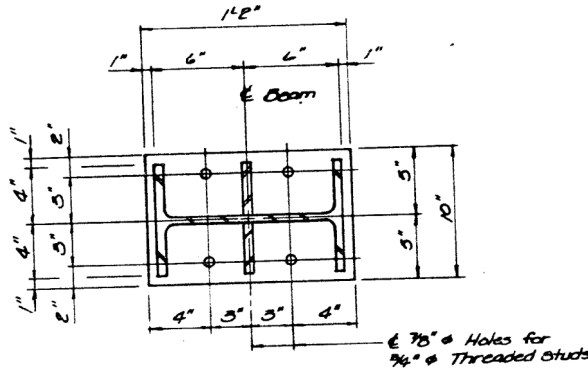
TYPE I ELASTOMERIC EXP. BRG.
At Beam 1.



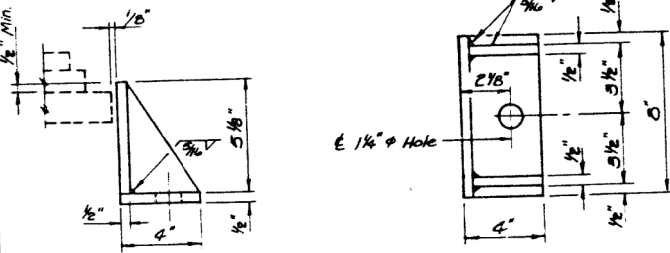
BEARING ASSEMBLY
Typical of all beams

Note: Shim plates shall not be placed under Bearing Assembly.

See Sheet No. 18 of 20 for Anchor Bolt installation.

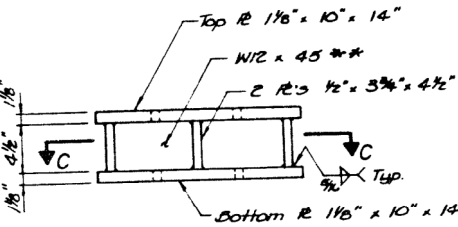


SECTION C-C



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



ELEVATION

STEEL EXTENSION

**Equivalent welded plates will be allowed in lieu of W12 x 45

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type 1	Each	7

BEARING DETAILS - PIER NO 3
F A ROUTE 328
(SBI 140) (U.S. ROUTE 45)
OVER CSX TRANSPORTATION RAILROAD
SECTION 108 VB-1
WHITE COUNTY
STRUCTURE NO. 097-0024
STA. 8+65

SHEET 18 OF 29 SHEETS 90043

F. A. ROUTE 328 SECTION 108 VB-1 WHITE CO.

DESIGNED
CHECKED
DRAWN
CHECKED

I-2-E1 12-1-83

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 10/10/2018	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

097-0024

SCALE: SHEET OF SHEETS STA. TO STA.

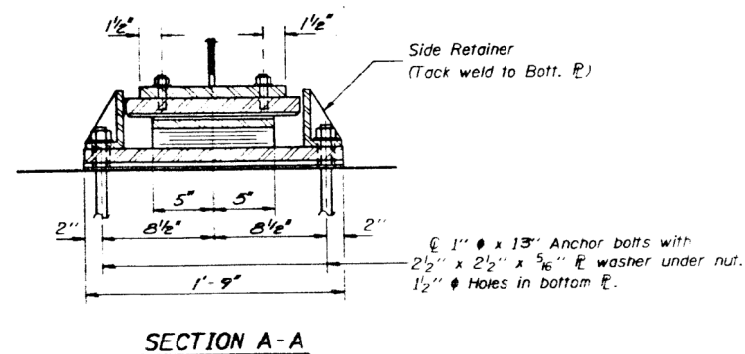
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	48
				CONTRACT NO. 78677
		ILLINOIS	FED. AID PROJECT	

097-0024

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
FA. 328	*	White	29	19
STA.		TO STA.		
FED. ROAD DIST. NO. 7	ILLINOIS		PROJECT	

* 108 VB-1

BRIDGE SHEET 14 OF 20 SHEETS

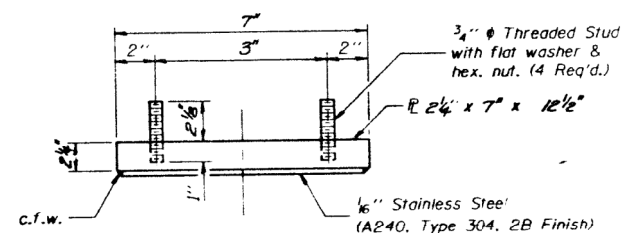


ELEVATION AT S. ABUT.

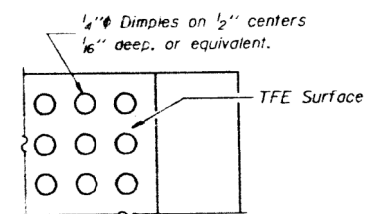
SECTION A-A

TYPE II TFE ELASTOMERIC EXP. BRG.
(Beams 1-7)

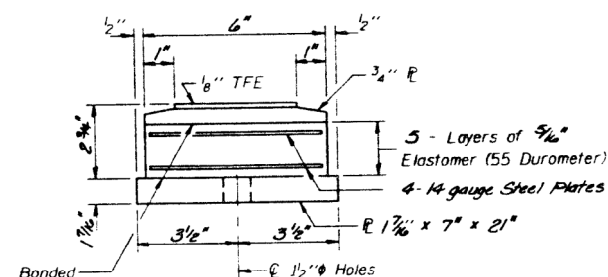
Cost of drilling holes in bottom flanges in field is incidental to "Elastomeric Bearing Assembly Type II."



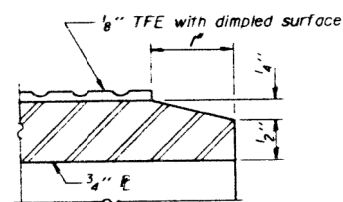
TOP BEARING ASSEMBLY, TYPICAL



PLAN-TFE SURFACE



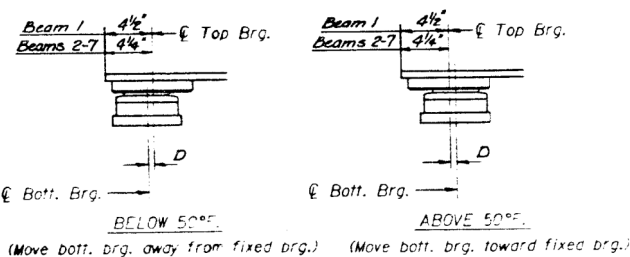
BOTTOM BEARING ASSEMBLY, TYPICAL



SECTION THRU TFE

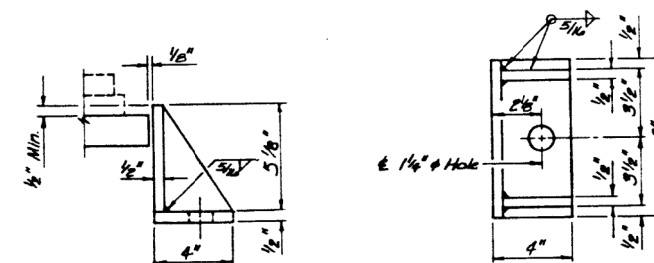
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

Bonding of 1/8" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



SETTING ANCHOR BOLTS AT EXP. BRG.

$D = 9''$ per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.



SIDE RETAINER

*Equivalent rolled angle with stiffeners
will be allowed in lieu of welded plates.*

See Sheet No. 12 of 20 for Add'l Notes.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	7

BEARING DETAILS - SOUTH ABUT.
F. A. ROUTE 328
(SBI 140) (U. S. ROUTE 45)
OVER CSX TRANSPORTATION RAILROAD
SECTION 108 VB-1
WHITE COUNTY
STRUCTURE NO. 097-0024
STA. 8+65

DESIGNED
CHECKED
DRAWN
CHECKED

I-2-E2 12-1-83

F. A. ROUTE 328 SECTION 108 VB-1 WHITE CO.

SHEET 19 OF 29 SHEETS 90043

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

097-0024

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	49
		CONTRACT NO. 78677		
		ILLINOIS	FED. AID PROJECT	

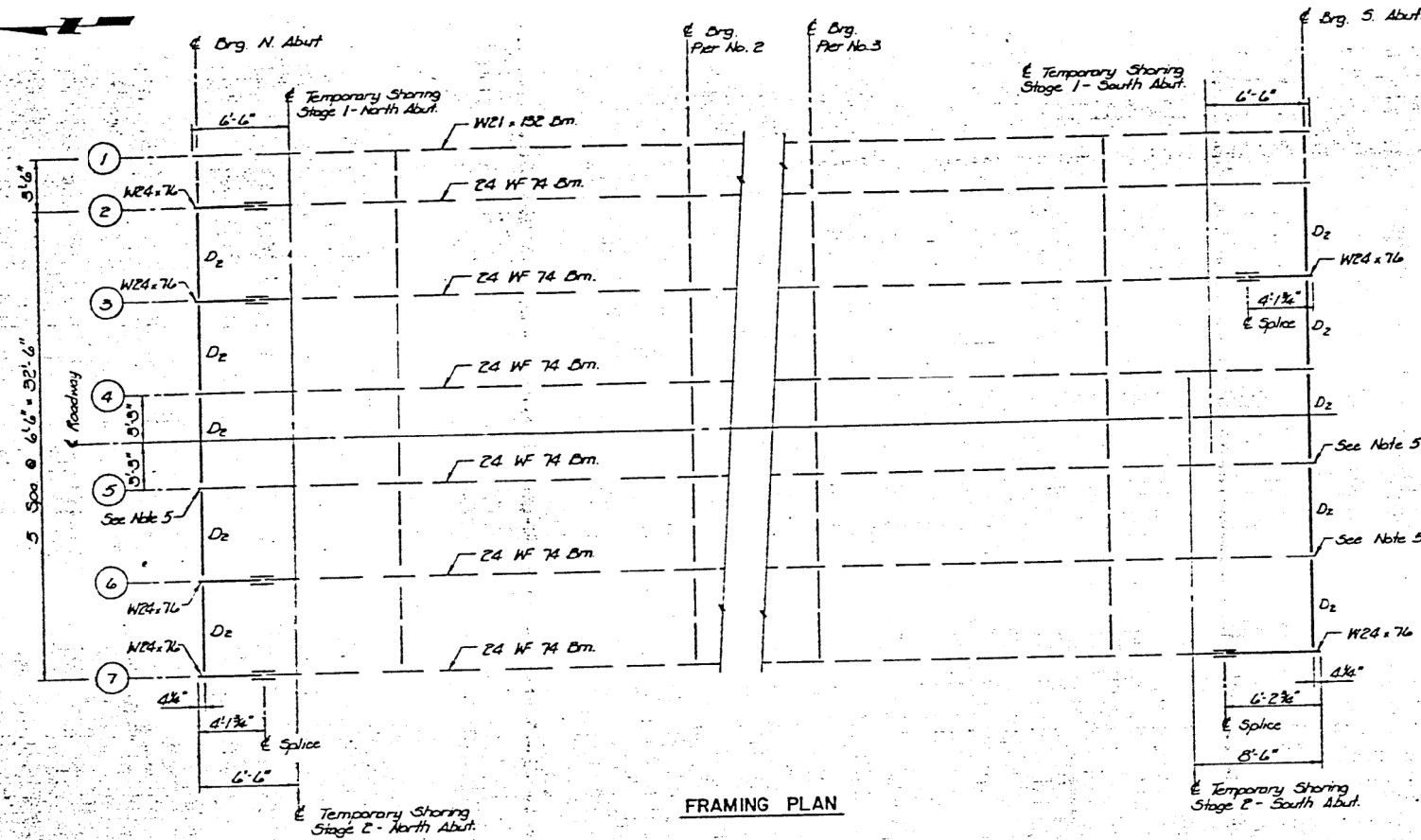
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ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 328	108 VB-1	WHITE	2	1

STA.	TO STA.
F.H.W.A. REG.	ILLINOIS PROJECT

Bridge Sheet 1 of 2 Sheets

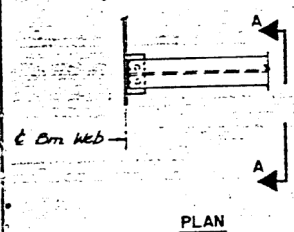
Note: Headed studs are shown in the area of the splice for reference only. The number and locations of headed studs shall be per previous contract documents as let.



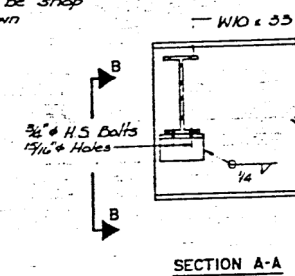
FRAMING PLAN

GENERAL NOTES

1. Structural steel elements shown dashed are existing or proposed under a separate contract.
2. The existing 24 WF 74 Beams shown above shall have the lengths shown removed from the ends and the remaining end ground and finished to accept the splice.
3. Calculated weight of structural steel = 6210 pounds (M183 G.34)
4. The Contractor shall drill all holes in the field with a magnetic drill. Torch or flame cutting of holes is prohibited.
5. The North end of Beam 5 and the South ends of Beams 5 & 6 shall be inspected subsequent to deck removal to determine need to splice.
6. Painting - Painting of all new structural steel shall be per previous contract documents as let.
7. Bearings - The new structural steel shall be shop fabricated for the bearing details shown on previous contract documents.

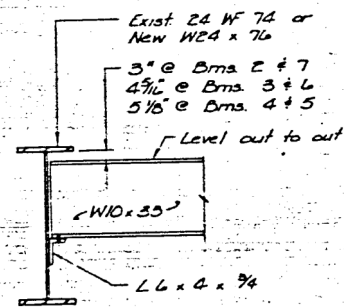


PLAN

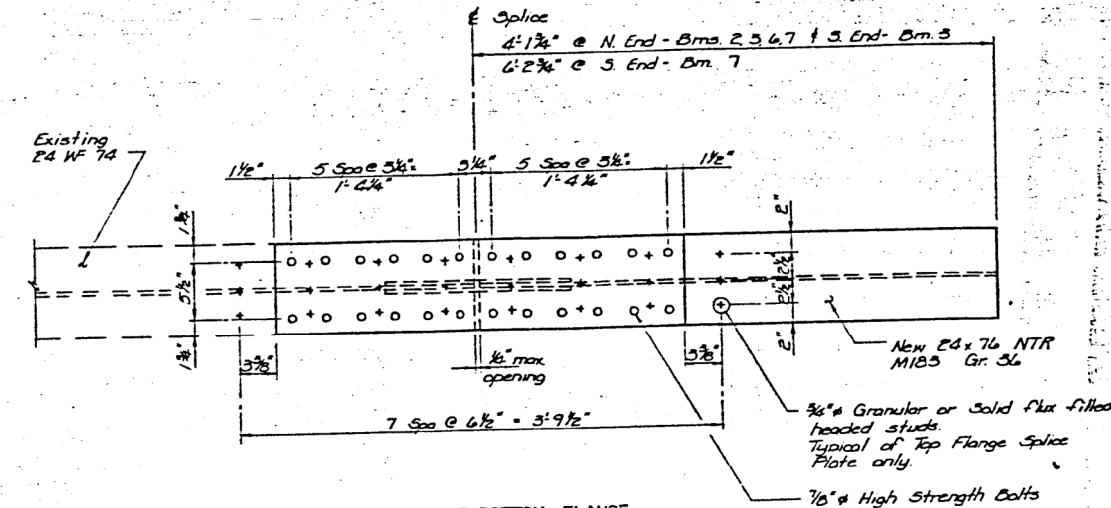


SECTION A-A

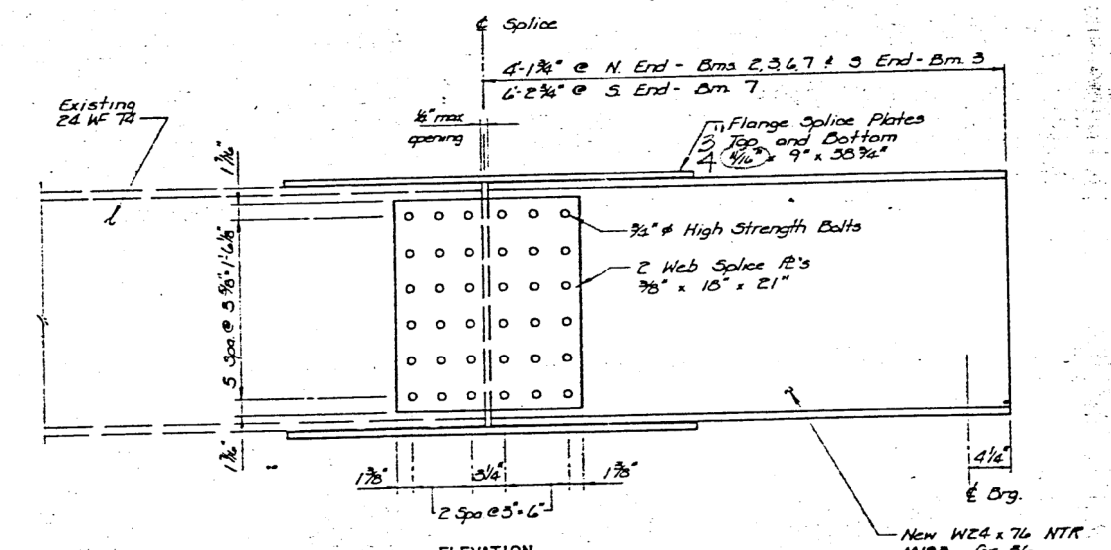
END DIAPHRAGM "D2"
(10 Req'd)



SECTION B-B



PLAN - TOP & BOTTOM FLANGE



ELEVATION

FIELD SPICE DETAILS

FIELD SPICE DETAILS & DIAPHRAGMS
F.A. ROUTE 328
(SBI 140) (U.S. ROUTE 45)
OVER CSX TRANSPORTATION RAILROAD
SECTION 108 VB-1
WHITE COUNTY
STRUCTURE NO. 097-0024
STA. 8+65

FOR INFORMATION ONLY 097-0024

F.A. ROUTE 328 SECTION 108 VB-1 WHITE COUNTY SHEET 1 OF 2 SHEETS 90043

USER NAME = WILSONDA	DESIGNED -	REVISED -
PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -
PLOT DATE = 10/10/2018	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

097-0024

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2019-1	VARIOUS	50	50
CONTRACT NO. 78677				
ILLINOIS FED. AID PROJECT				