03-05-2021 LETTING ITEM 048

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	1
	ILLINOIS	CONTRACT NO. 78836		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED
HIGHWAY PLANS

VARIOUS ROUTES
SECTION D9 BRIDGE PAINT 2021-1
PROJECT STP-5YAC(792)
VARIOUS COUNTIES

C-99-019-21

FOR INDEX OF SHEETS, SEE SHEET NO. 3

FOR SUMMARY OF QUANTITIES, SEE SHEETS NO. 5-10

BRIDGE NO. 1
SN. 041-0059
FAI-57/RAMP (ONE LANE)
2019 ADT=1450, 29% TRUCKS
TOWNSHIP-MCCLELLAN
POSTED SPEED: 50 MPH

BRIDGE NO. 2
SN. 041-0007
I-57 NB
2019 ADT = 14500, 24% TRUCKS
TOWNSHIP-MCCLELLAN
POSTED SPEED: 65 MPH

BRIDGE NO. 3
SN. 041-0075
I-64 EB
2019 ADT = 13250, 28% TRUCKS
TOWNSHIP-SHILOH
POSTED SPEED: 70 MPH

BRIDGE NO. 4
SN. 041-0076
I-64 WB
2019 ADT = 13250, 28% TRUCKS
TOWNSHIP-SHILOH
POSTED SPEED: 70 MPH

BRIDGE NO. 5
SN. 041-0046
IL 142
2019 ADT = 3050, 6% TRUCKS
TOWNSHIP-PENDLETON
POSTED SPEED: 40 MPH

BRIDGE NO. 6
SN. 041-0064
TR-26
2016 ADT = 125, 6% TRUCKS
TOWNSHIP-CASNER
POSTED SPEED: 55 MPH

BRIDGE NO. 7
SN. 097-0040
I-64 EB
2019 ADT = 6350, 39% TRUCKS
TOWNSHIP-BURNT PRAIRIE
POSTED SPEED: 70 MPH

BRIDGE NO. 8
SN. 100-3010
FAS 903
2016 ADT = 6300, 7% TRUCKS
TOWNSHIP-CO UNIT ROAD DIST
POSTED SPEED: 55 MPH

BRIDGE NO. 9
SN. 100-3011
FAS 903
2016 ADT = 6300, 7% TRUCKS
TOWNSHIP-CO UNIT ROAD DIST
POSTED SPEED: 55 MPH

BRIDGE NO. 10
SN. 100-0029
IL 166
2019 ADT = 2800, 9% TRUCKS
TOWNSHIP-CO UNIT ROAD
POSTED SPEED: 55 MPH

BRIDGE NO. 11
SN. 028-0037
IL 149
2019 ADT = 2550, 8% TRUCKS
TOWNSHIP-DENNING
POSTED SPEED: 55 MPH

BRIDGE NO. 12
SN. 002-0014
IL 3
2019 ADT = 1850, 18% TRUCKS
TOWNSHIP-CO UNIT ROAD
POSTED SPEED: 55 MPH

BRIDGE NO. 13
SN. 002-0033
IL 127
2017 ADT = 700, 10% TRUCKS
TOWNSHIP-CO UNIT ROAD
POSTED SPEED: 55 MPH

BRIDGE NO. 14
SN. 077-0028
FAS 940
2018 ADT = 325, 21% TRUCKS
TOWNSHIP-CO UNIT ROAD
POSTED SPEED: 55 MPH

BRIDGE NO. 15
SN. 044-0033
TR-15
2016 ADT = 1150, 3% TRUCKS
TOWNSHIP-CO UNIT ROAD
POSTED SPEED: 45 MPH

BRIDGE NO. 16
SN. 044-0034
TR-82
2016 ADT = 350, 5% TRUCKS
TOWNSHIP-CO UNIT ROAD
POSTED SPEED: 45 MPH

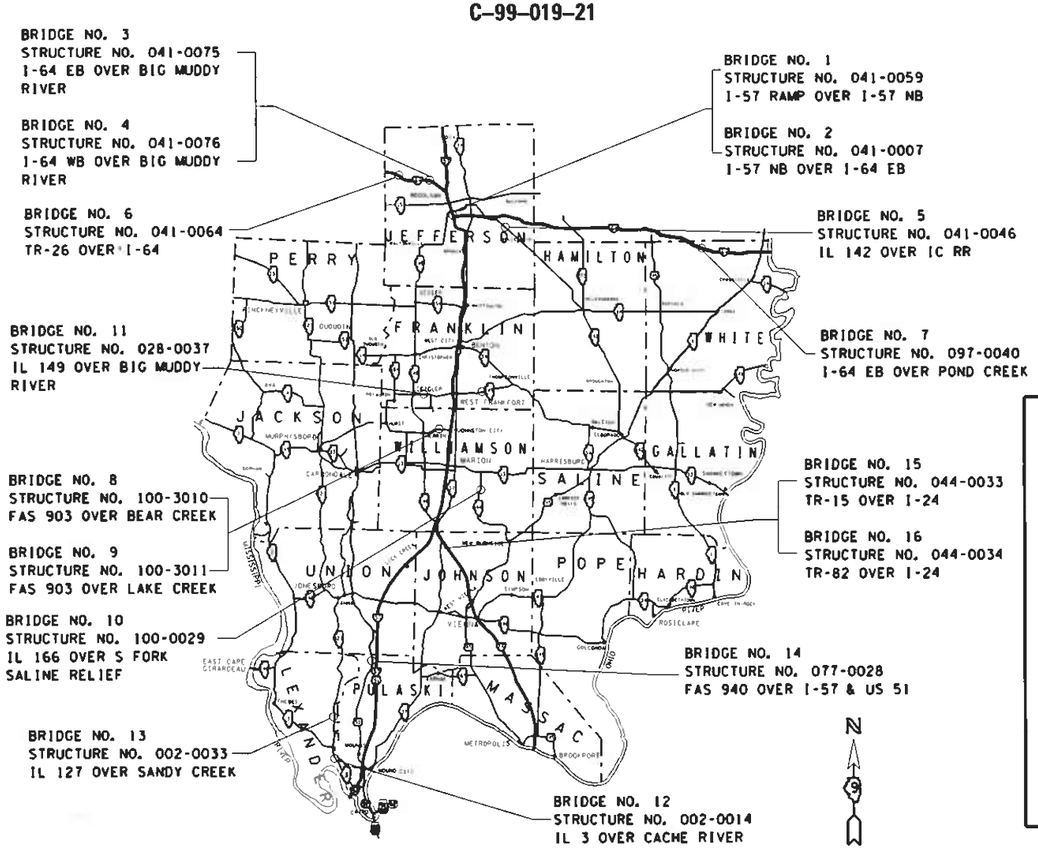
DESIGN DESIGNATION : N/A

COORDINATE SYSTEM : N/A

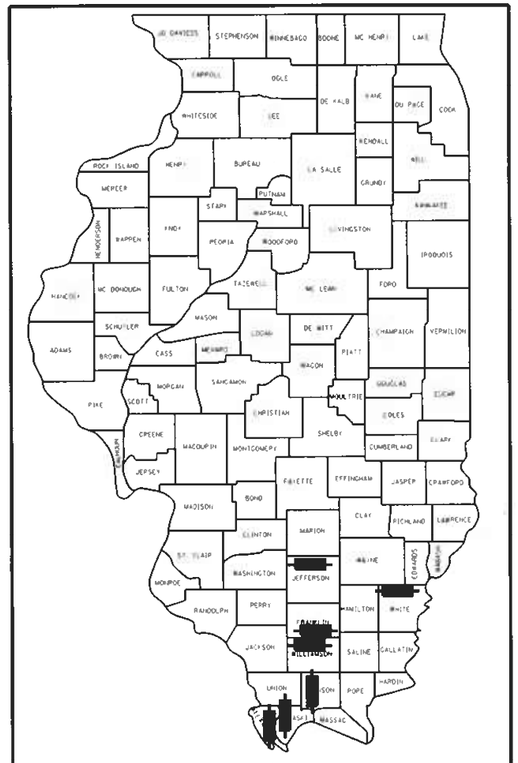
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

PROJECT ENGINEER: MICHAEL STEPHENSON
PROJECT DESIGNER: DAVID WILSON

CONTRACT NO. 78836



D-99-012-21



LOCATION OF SECTION INDICATED THUS: —

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED 12-07-2020

REGION FIVE ENGINEER

January 29, 2021

ENGINEER OF DESIGN AND ENVIRONMENT

January 29, 2021

DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

Prepared By: Charles Stein

DISTRICT STUDIES & PLANS ENGINEER

Examined By:

DISTRICT LAND ACQUISITION ENGINEER

Examined By: Carrie Nelson

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

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/25/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SIGNATURE SHEET

SCALE: ____ SHEET ___ OF ___ SHEETS STA. ____ TO STA. ____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	2
		CONTRACT NO. 78836		
		ILLINOIS FED. AID PROJECT		

GENERAL NOTES

THE CONTRACTOR IS REQUIRED TO BE SSPC OP1 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 STRUCTURE 041-0059, 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 10'(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 BLUE, MUNSELL NO. 10B 3/6.

FOR STRUCTURE 041-0007, 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 BLUE, MUNSELL NO. 10B 3/6.

FOR STRUCTURES 041-0075, 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 041-0076, 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 041-0046, 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' (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 GREEN, MUNSELL NO. 7.5B 4/8. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR SURFACES AND BOTTOM OF THE FLANGE OF THE FASCIA BEAMS SHALL BE GREEN, MUNSELL NO. 7.5G 4/8.

FOR STRUCTURE 041-0064, 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 AND 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 BLUE, MUNSELL NO. 10B 3/6.

FOR STRUCTURE 097-0040, 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 GREEN, MUNSELL NO. 7.5G 4/8.

FOR STRUCTURE 100-3010 and 100-3011, 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 WITHIN 5 FT. OF SPECIFIED DECK JOINTS AND THE OUTSIDE AND BOTTOM FLANGE OF THE 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 STRUCTURES 100-0029, 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 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 028-0037, 002-0014, 002-0033, 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 044-0033, 044-0034, 077-0028 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 GREEN, MUNSELL NO. 7.5G 4/8.

A TOTAL OF 18 AIR MONITORS ARE REQUIRED TO MONITOR ABRASIVE BLASTING OPERATIONS AT 10 LOCATIONS.
4 AT BRIDGE NO. 5 (SN 041-0046), 1 AT BRIDGE NO. 6 (SN 041-0064), 1 AT BRIDGE NO. 7 (SN 097-0040),
1 AT BRIDGE NO. 8 (SN 100-3010), 2 AT BRIDGE NO. 9 (SN 100-3011), 1 AT BRIDGE NO. 10 (SN 100-0029),
2 AT BRIDGE NO. 11 (SN 028-0037), 1 AT BRIDGE NO. 13 (SN 002-0033), 3 AT BRIDGE NO. 15 (SN 044-0033),
AND 2 AT BRIDGE NO. 16 (SN 044-0034).

COMMITMENTS: NONE

INDEX OF SHEETS

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
701400-10	APPROACH TO LANE CLOSURE FREEWAY/EXPRESSWAY
701401-12	LANE CLOSURE, FREEWAY/ EXPRESSWAY
701402-12	LANE CLOSURE, FREEWAY/ EXPRESSWAY, WITH BARRIER
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
701428-01	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY

REV. - MS

MODEL: Default
FILE NAME: pw:\\planroom.dot.illinois.gov:PWIDOT\Documents\IDOT Offices\District 9\Projects\78836\CADData\CADsheets\DXxxxx-slit-plan.dgn

USER NAME = WILSONDA	DESIGNED - _____	REVISED - _____	
	DRAWN - _____	REVISED - _____	
PLOT SCALE = 100.0000 ' / in.	CHECKED - _____	REVISED - _____	
PLOT DATE = 1/4/2021	DATE - _____	REVISED - _____	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS, STANDARDS AND GENERAL NOTES

SCALE: _____ | SHEET __ OF __ SHEETS | STA. _____ | TO STA. _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	3
		CONTRACT NO. 78836		
	ILLINOIS	FED. AID PROJECT		

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	ALL STRUCTURAL STEEL
1	041-0059	YES		X		
2	041-0007	YES	X			
3	041-0075	YES	X		X	
4	041-0076	YES	X		X	
5	041-0046	YES	X			
6	041-0064	YES				X
7	097-0040	YES				X
8	100-3010	YES	X		X	
9	100-3011	YES	X		X	
10	100-0029	NO		X		
11	028-0037	NO	X *			
12	002-0014	NO	X			
13	002-0033	NO	X			
14	077-0028	YES				X
15	044-0033	YES				X
16	044-0034	YES				X

* Abut. & Pier #1 and #3

TEMPORARY CONCRETE BARRIER/RELOCATE TEMPORARY CONCRETE BARRIER

STRUCTURE NUMBER	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER
041-0064	350	200
077-0028	450	450
044-0033	450	450
044-0034	450	450
TOTAL	1700	1550

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	AREAS OF CLEANING AND PAINTING	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	4
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 78836		
PLOT DATE = 12/4/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.			ILLINOIS	FED. AID PROJECT	

SUMMARY OF QUANTITIES (BRIDGES 1-8)

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	BRIDGE NO. 1	BRIDGE NO. 2	BRIDGE NO. 3	BRIDGE NO. 4	BRIDGE NO. 5	BRIDGE NO. 6	BRIDGE NO. 7	BRIDGE NO. 8
			COUNTY:	JEFFERSON						WHITE	WILLIAMSON
			ROUTE:	I-57 RAMP/ I-57 NB	I-57 NB/ I-64 EB	I-64 EB/ BIG MUDDY RIVER	I-64 WB/ BIG MUDDY RIVER	IL 142/ IC RR	TR-26/ I-64	I-64 EB/ POND CREEK	FAS 903/ BEAR CREEK
			FUNDING:	90% FEDERAL; 10% STATE	90% FEDERAL; 10% STATE	90% FEDERAL; 10% STATE	90% FEDERAL; 10% STATE	80% FEDERAL; 20% STATE	80% FEDERAL; 20% STATE	90% FEDERAL; 10% STATE	80% FEDERAL; 20% STATE
			LOCATION:	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL
				041-0059	041-0007	041-0075	041-0076	041-0046	041-0064	097-0040	100-3010
64300260	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW) TEST LEVEL 3	EACH	8						2		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	25	1	1	1	1	1	2	2	1
67100100	MOBILIZATION	L SUM	1	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1					0.09	0.09		0.09
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	378	14	14	14	14	28	28	14	28
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1						1		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1700						350		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1550						200		
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW) TEST LEVEL 3	EACH	8						2		
X7010216	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	L SUM	1						1		
X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH	378						90		
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1							

REV. - MS

SUMMARY OF QUANTITIES (BRIDGES 1-8)

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	COUNTY:	JEFFERSON						WHITE	WILLIAMSON
				ROUTE:	I-57 RAMP/ I-57 NB	I-57 NB/ I-64 EB	I-64 EB/ BIG MUDDY RIVER	I-64 WB/ BIG MUDDY RIVER	IL 142/ IC RR	TR-26/ I-64	I-64 EB/ POND CREEK	FAS 903/ BEAR CREEK
				FUNDING:	90% FEDERAL; 10% STATE	90% FEDERAL; 10% STATE	90% FEDERAL; 10% STATE	90% FEDERAL; 10% STATE	80% FEDERAL; 20% STATE	80% FEDERAL; 20% STATE	90% FEDERAL; 10% STATE	80% FEDERAL; 20% STATE
				LOCATION:	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL
					BRIDGE NO. 1	BRIDGE NO. 2	BRIDGE NO. 3	BRIDGE NO. 4	BRIDGE NO. 5	BRIDGE NO. 6	BRIDGE NO. 7	BRIDGE NO. 8
					041-0059	041-0007	041-0075	041-0076	041-0046	041-0064	097-0040	100-3010
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1			1						
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1				1					
Z0007104	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 4	L SUM	1					1				
Z0007105	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 5	L SUM	1						1			
Z0007106	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 6	L SUM	1							1		
Z0007107	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 7	L SUM	1								1	
Z0007108	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 8	L SUM	1									1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1								
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1		1							
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1			1						

REV. - MS

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	SUMMARY OF QUANTITIES (BRIDGES 1-8)
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	SCALE: SHEET OF SHEETS STA. TO STA.
PLOT DATE = 11/25/2020	DATE -	REVISED -	

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	6
		CONTRACT NO. 78836		
	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES (BRIDGES 1-8)

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	JEFFERSON						WHITE	WILLIAMSON
			COUNTY:	JEFFERSON						WHITE	WILLIAMSON
			ROUTE:	I-57 RAMP/ I-57 NB	I-57 NB/ I-64 EB	I-64 EB/ BIG MUDDY RIVER	I-64 WB/ BIG MUDDY RIVER	IL 142/ IC RR	TR-26/ I-64	I-64 EB/ POND CREEK	FAS 903/ BEAR CREEK
			FUNDING:	90% FEDERAL; 10% STATE	90% FEDERAL; 10% STATE	90% FEDERAL; 10% STATE	90% FEDERAL; 10% STATE	80% FEDERAL; 20% STATE	80% FEDERAL; 20% STATE	90% FEDERAL; 10% STATE	80% FEDERAL; 20% STATE
			LOCATION:	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL
				BRIDGE NO. 1	BRIDGE NO. 2	BRIDGE NO. 3	BRIDGE NO. 4	BRIDGE NO. 5	BRIDGE NO. 6	BRIDGE NO. 7	BRIDGE NO. 8
				041-0059	041-0007	041-0075	041-0076	041-0046	041-0064	097-0040	100-3010
Z0010504	CLEANING AND PAINTING STEEL BRIDGE NO. 4	L SUM	1				1				
Z0010505	CLEANING AND PAINTING STEEL BRIDGE NO. 5	L SUM	1					1			
Z0010506	CLEANING AND PAINTING STEEL BRIDGE NO. 6	L SUM	1						1		
Z0010507	CLEANING AND PAINTING STEEL BRIDGE NO. 7	L SUM	1							1	
Z0010508	CLEANING AND PAINTING STEEL BRIDGE NO. 8	L SUM	1								1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1					1			

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USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES (BRIDGES 1-8)
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.
PLOT DATE = 11/25/2020	DATE -	REVISED -		

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	7
		CONTRACT NO. 78836		
	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES (BRIDGES 9-16)

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	COUNTY:	WILLIAMSON		FRANKLIN	ALEXANDER		PULASKI	JOHNSON	
				ROUTE:	FAS 903/ LAKE CREEK	IL 166/ S FORK SALINE RELIEF	IL 149/ BIG MUDDY RIVER	IL 3/ CACHE RIVER	IL 127/ SANDY CREEK	FAS 940/ I-57& US 51	TR 15/ I-24	TR 82/ I-24
				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	80% FEDERAL; 20% STATE	80% FEDERAL; 20% STATE
				LOCATION:	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL
					BRIDGE NO. 9	BRIDGE NO. 10	BRIDGE NO. 11	BRIDGE NO. 12	BRIDGE NO. 13	BRIDGE NO. 14	BRIDGE NO. 15	BRIDGE NO. 16
					100-3011	100-0029	028-0037	002-0014	002-0033	077-0028	044-0033	044-0034
64300260	IMPACT ATTENUATORS (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH								2	2	2
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO		1	1	1	1	1	2	2	2	
67100100	MOBILIZATION	L SUM		0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM		0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	6						2	2	2	
70107025	CHANGEABLE MESSAGE SIGN	CAL DA		28	28	28	28	28	28	28	28	
70400100	TEMPORARY CONCRETE BARRIER	FOOT							450	450	450	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT							450	450	450	
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH							2	2	2	
X7040125	PINNING TEMPORARY CONCRETE BARRIER	EACH							96	96	96	
X5060610	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 12	L SUM	1				1					
X5060611	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 10	L SUM	1		1							

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
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PLOT DATE = 11/25/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES (BRIDGES 9-16)

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	8
		CONTRACT NO. 78836		
	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES (BRIDGES 9-16)

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	WILLIAMSON		FRANKLIN	ALEXANDER		PULASKI	JOHNSON	
			COUNTY:	WILLIAMSON		FRANKLIN	ALEXANDER		PULASKI	JOHNSON	
			ROUTE:	FAS 903/ LAKE CREEK	IL 166/ S FORK SALINE RELIEF	IL 149/ BIG MUDDY RIVER	IL 3/ CACHE RIVER	IL 127/ SANDY CREEK	FAS 940/ I-57& US 51	TR 15/ I-24	TR 82/ I-24
			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	80% FEDERAL; 20% STATE	80% FEDERAL; 20% STATE
			LOCATION:	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL
				BRIDGE NO. 9	BRIDGE NO. 10	BRIDGE NO. 11	BRIDGE NO. 12	BRIDGE NO. 13	BRIDGE NO. 14	BRIDGE NO. 15	BRIDGE NO. 16
				100-3011	100-0029	028-0037	002-0014	002-0033	077-0028	044-0033	044-0034
X5060612	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 11	L SUM	1			1					
X5060613	CONTAINMENT AND DISPOSAL OF NON-LEAD PAINT CLEANING RESIDUES NO. 13	L SUM	1					1			
Z0007109	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 9	L SUM	1	1							
Z0007115	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 14	L SUM	1						1		
Z0007131	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 15	L SUM	1							1	
Z0007117	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 16	L SUM	1								1
Z0010509	CLEANING AND PAINTING STEEL BRIDGE NO. 9	L SUM	1	1							
Z0010510	CLEANING AND PAINTING STEEL BRIDGE NO. 10	L SUM	1		1						
Z0010511	CLEANING AND PAINTING STEEL BRIDGE NO. 11	L SUM	1			1					
Z0010512	CLEANING AND PAINTING STEEL BRIDGE NO. 12	L SUM	1				1				
Z0010513	CLEANING AND PAINTING STEEL BRIDGE NO. 13	L SUM	1					1			
Z0010514	CLEANING AND PAINTING STEEL BRIDGE NO. 14	L SUM	1						1		

REV. - MS

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PLOT DATE = 11/25/2020	DATE -	REVISED -	

SUMMARY OF QUANTITIES (BRIDGES 9-16)

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	9
		CONTRACT NO. 78836		
	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES (BRIDGES 9-16)

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	WILLIAMSON		FRANKLIN	ALEXANDER		PULASKI	JOHNSON	
			COUNTY:	WILLIAMSON		FRANKLIN	ALEXANDER		PULASKI	JOHNSON	
			ROUTE:	FAS 903/ LAKE CREEK	IL 166/ S FORK SALINE RELIEF	IL 149/ BIG MUDDY RIVER	IL 3/ CACHE RIVER	IL 127/ SANDY CREEK	FAS 940/ I-57& US 51	TR 15/ I-24	TR 82/ I-24
			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	80% FEDERAL; 20% STATE	80% FEDERAL; 20% STATE
			LOCATION:	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL	RURAL
				BRIDGE NO. 9	BRIDGE NO. 10	BRIDGE NO. 11	BRIDGE NO. 12	BRIDGE NO. 13	BRIDGE NO. 14	BRIDGE NO. 15	BRIDGE NO. 16
				100-3011	100-0029	028-0037	002-0014	002-0033	077-0028	044-0033	044-0034
Z0010515	CLEANING AND PAINTING STEEL BRIDGE NO. 15	L SUM	1							1	
Z0010516	CLEANING AND PAINTING STEEL BRIDGE NO. 16	L SUM	1								1

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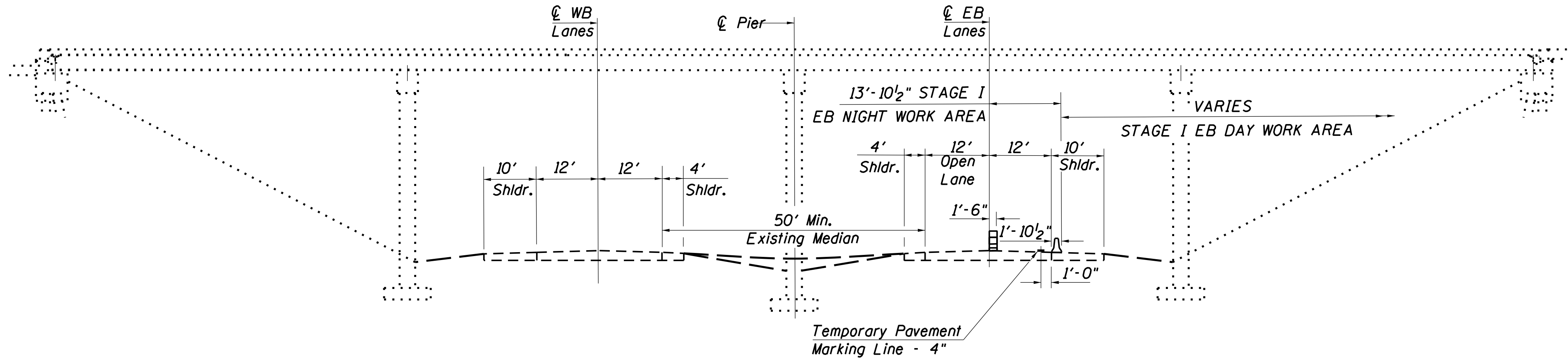
PLOT DATE = 11/25/2020	DATE -	REVISED -	

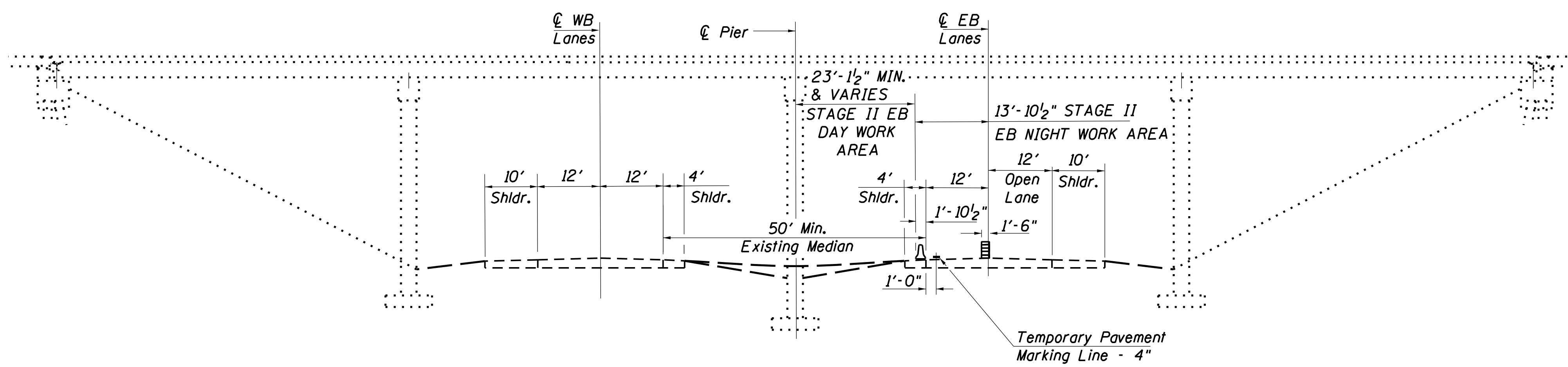
SUMMARY OF QUANTITIES (BRIDGES 9-16)

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	10
		CONTRACT NO. 78836		
	ILLINOIS FED. AID PROJECT			



TYPICAL BRIDGE
STAGE I CONSTRUCTION
SHOWING EB LANES
WB LANES SIMILAR BY 180° ROTATION
(LOOKING NORTH)



TYPICAL BRIDGE
STAGE II CONSTRUCTION
SHOWING EB LANES
WB LANES SIMILAR BY 180° ROTATION
(LOOKING NORTH)

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 041-0064 STAGE CONSTRUCTION DETAILS	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	11
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 78836		
PLOT DATE = 11/25/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT			

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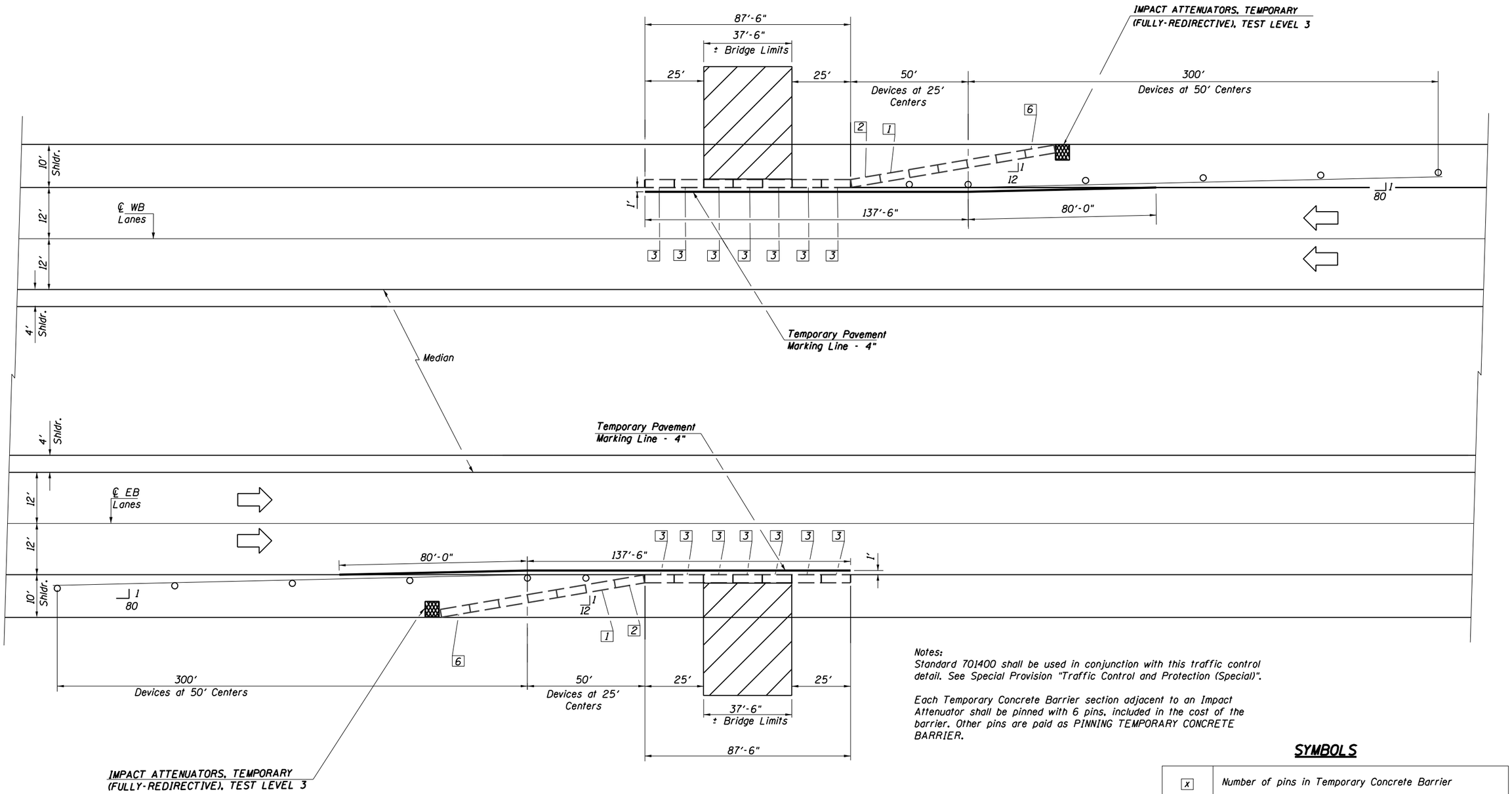

Notes:
Standard 701400 shall be used in conjunction with this traffic control detail. See Special Provision "Traffic Control and Protection (Special)".

Each Temporary Concrete Barrier section adjacent to an Impact Attenuator shall be pinned with 6 pins, included in the cost of the barrier. Other pins are paid as PINNING TEMPORARY CONCRETE BARRIER.

SYMBOLS

[x]	Number of pins in Temporary Concrete Barrier
⧸⧸	Work Area
= =	Temporary Concrete Barrier. See Standard 704001
○	Type II Barricade, Drum, Or Vertical Barricade With Steady Burn Monodirectional Light. See Standard 701901.
—	Temporary Pavement Marking Tape. Yellow Along 4' Shoulder. White Along 10' Shoulder.

TYPICAL STAGE I SHOULDER CLOSURE - PLAN VIEW

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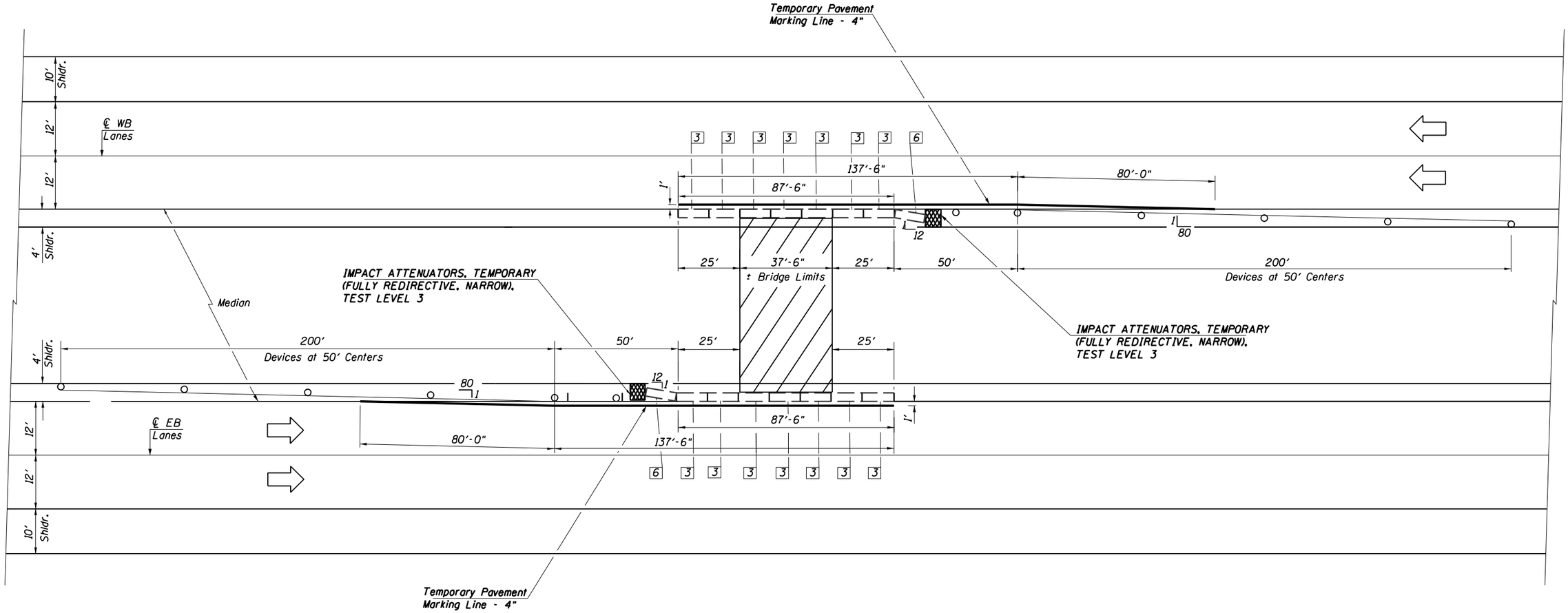
USER NAME = WILSONDA	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 11/25/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 041-0064 STAGE I TYPICAL SHOULDER CLOSURE

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	12
		CONTRACT NO. 78836		
	ILLINOIS FED. AID PROJECT			



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	Work Area
	Temporary Concrete Barrier. See Standard 704001
○	Type II Barricade, Drum, Or Vertical Barricade With Steady Burn Monodirectional Light. See Standard 701901.
	Temporary Pavement Marking Tape. Yellow Along 4' Shoulder. White Along 10' Shoulder.

TYPICAL STAGE II SHOULDER CLOSURE - PLAN VIEW

MODEL: Default
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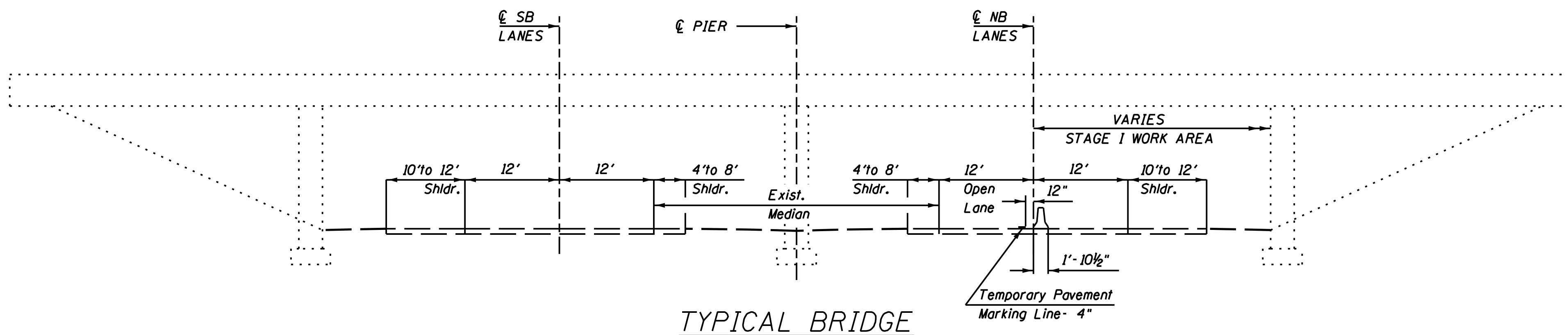
USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/25/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

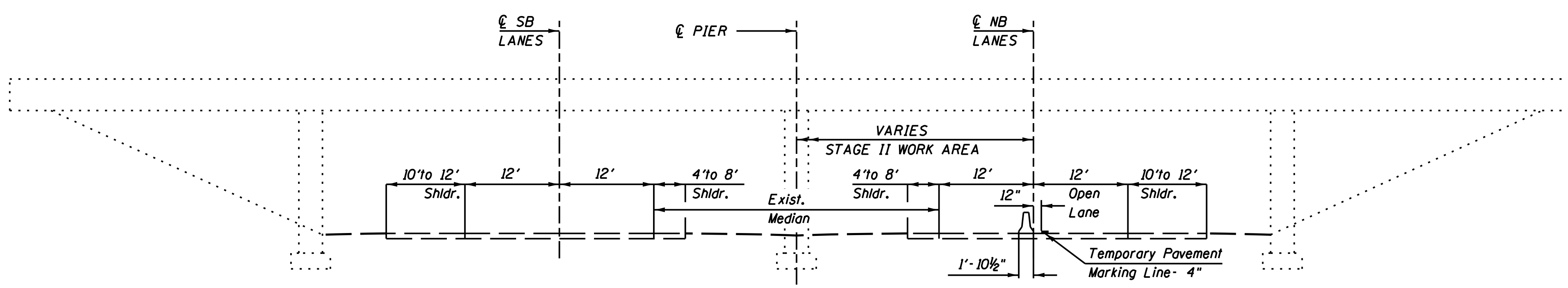
SN 041-0064 STAGE II TYPICAL SHOULDER CLOSURE

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	13
		CONTRACT NO. 78836		
	ILLINOIS FED. AID PROJECT			



TYPICAL BRIDGE
STAGE I CONSTRUCTION
SHOWING NB LANES
SB LANES SIMILAR BY 180° ROTATION
(LOOKING NORTH)



TYPICAL BRIDGE
STAGE II CONSTRUCTION
SHOWING NB LANES
SB LANES SIMILAR BY 180° ROTATION
(LOOKING NORTH)

MODEL: Default

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 11/25/2020	DATE -	REVISED -	

SN 077-0028, 044-0033, 044-0034 STAGE CONSTRUCTION DETAILS

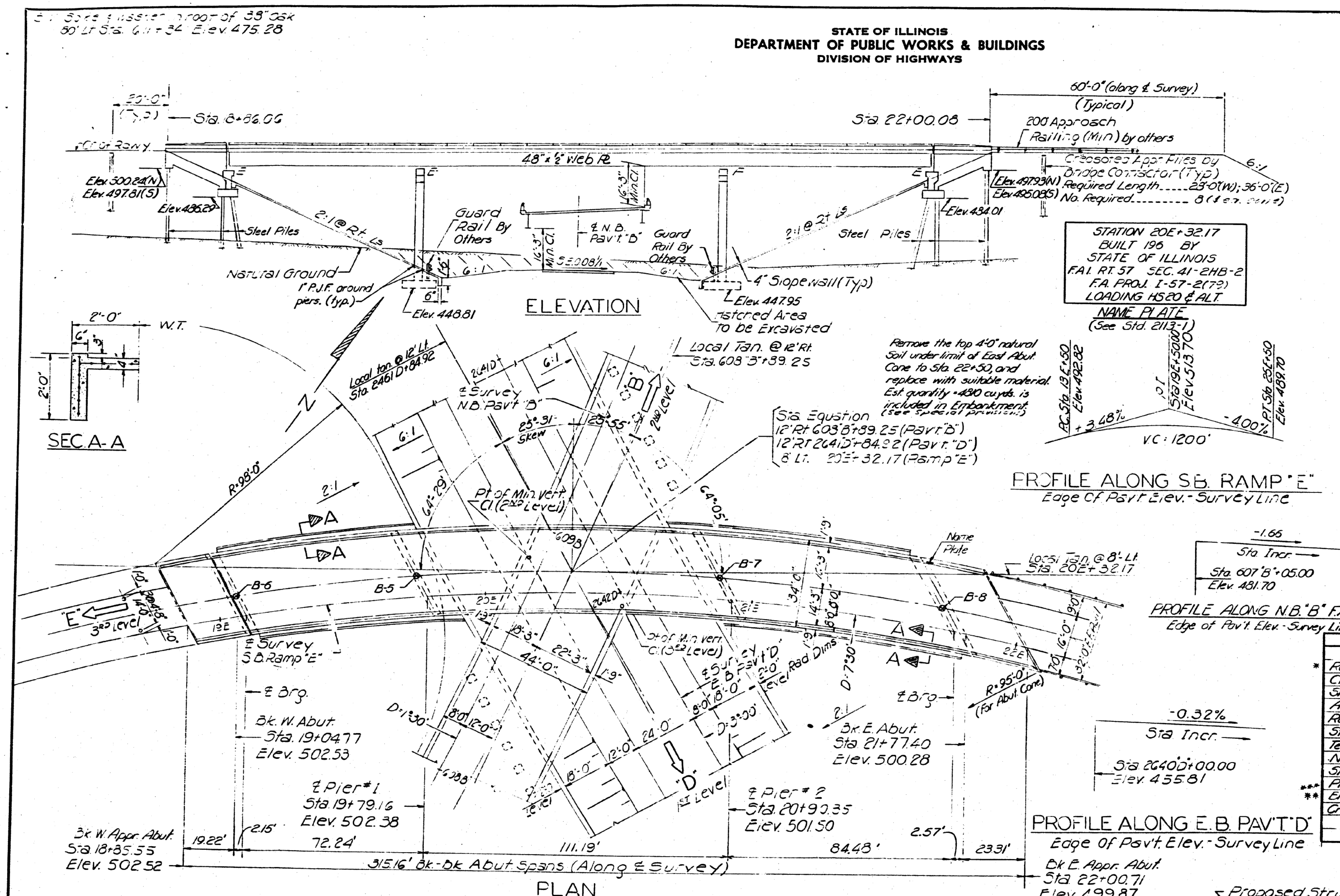
SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	14
		CONTRACT NO. 78836		
		ILLINOIS FED. AID PROJECT		

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	41-2HB-2	JEFFERSON	54	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT- I-57-2(79)92		

SHEET NO. 1
16 SHEETS



GENERAL NOTES

Coarse aggregate to be used in parapet handrails and end post must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Art. 51.19 of the Standard Specifications.

Slope Wall shall be reinforced with welded wire fabric 6" x 6" mesh, weighing 58 # per 100 Sq. Ft.

All reinforcement bars shall be lapped 20 diameters unless otherwise shown.

All structural steel shall conform to ASTM Designation A-36.

All welding shall conform to the current Specifications for Welded Highway and Railway Bridges of The American Welding Society.

Rivets ¾" ⌀, Open Holes 13/16" ⌀, unless otherwise noted.

Anchor bolts shall be set before fastening diaphragms over supports.

Exposed surfaces of the expansion devices, inaccesible after erection, shall receive two shop coats of red lead paint. All other surfaces shall be given one shop coat of red lead paint. Anchor studs shall not be painted.

Expansion devices are included in the quantity of structural steel. Est. weight = 1930 Lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 56.1 to 56.5 inclusive of the Standard Specifications.

Permanent Forms will not be permitted in forming the concrete floor.

All steel piles shall be driven to refusal.

The contractor shall drive one steel test pile at the East Abutment, in a permanent location as directed by the Engineer before ordering the remainder of piles.

Excavation for portions of structures in the embankments shall not be classified.

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF ¼ OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

TOTAL BILL OF MATERIAL

ITEMS	UNIT	SUPER.	SUB.	TOTAL
* Rock Excavation For Structures	Cu. Yds.		170	170
Class X Concrete	Cu. Yds.	337.1	390.5	727.6
Structural Steel	Lbs.	277,820		277,820
Aluminum Handrail	Lin. Ft.	537		537
Reinforcement Bars	Lbs.	86,410	34,730	121,140
Steel Piles (8BP36)	Lin. Ft.		1402	1402
Test Piles Steel (8BP36)	Ea.		1	1
Name Plates	Ea.	1		1
Slope Wall (4")	Sq. Yds.			850
*** Protective Coat	Sq. Yds.	1380		1380
** Bridge Seat Sealant	Lump Sum		0.5	0.5
Creosoted Piles (20.1' to 38')	Lin. Ft.		256	256

* Includes Excavation for slope wall
** At Abutments only
*** Includes application on inside vertical face, top, & exposed end of end posts.

CURVE DATA

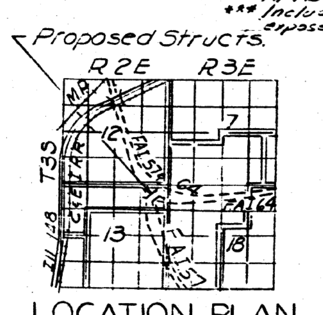
SOUTH BOUND RAMP "E"
P.I. Sta. 21E+90.81
Δ = 96°-05'-45"
D = 7°-30'-00"
R = 763.94'
L = 1281.50'
T = 850.12'
E = 378.99'
S.E = 0.08'/'

EAST BOUND PAV'T "D"
P.I. Sta. 2643D+44.89
Δ = 63°-45'-57"
D = 3°-00'-00"
R = 1909.86'
L = 2125.53'
T = 1188.00'
E = 339.34'
S.E = 0.08'/'

NORTH BOUND F.A.I. 57 (PAV'T "B")
P.I. Sta. 613B+05.87
Δ = 26°-35'-31"
D = 1°-30'-00"
R = 3819.72'
L = 1772.80'
T = 902.67'
E = 105.20'
S.E = 0.042'/'

DESIGN STRESSES

fc = 1,400 psi. Super & Sub.
Vc = 75 psi. Ftgs.
fs = 20,000 psi. Reinf.
fs = 20,000 psi. Struct. (A-36)
n = 10
Max. footing pressure: 6.5 ksf (P-1), 9 ksf (P-2)
LOADING HS20-44 & ALT.



LOCATION PLAN

DESIGNED Wei Hung	Aug. 9 1966	EXAMINED	
CHECKED Stanley S. L.		PASSED H. J. Alton	
DRAWN S.G. Ferchow		APPROVED V. G. Staff	
CHECKED Stanley S. L.			

PROJ. I-57-2(79)92
GENERAL PLAN & ELEVATION
3rd LEVEL STRUCTURE
F.A.I. RT. 57 SEC. 41-2HB-2
JEFFERSON COUNTY
STA. 20E+32.17 (RAMP "E")

7-47

Revised 11-13-66 ... Protective Coat changed from 1230 Sq. Yds. to 1380 Sq. Yds. Class X Conc. changed from 725.1 Cu. Yds. to 727.6 Cu. Yds. Rev. WH. 6-14-67 Reinf. bars changed from 117,040 lbs. to 121,140 lbs.

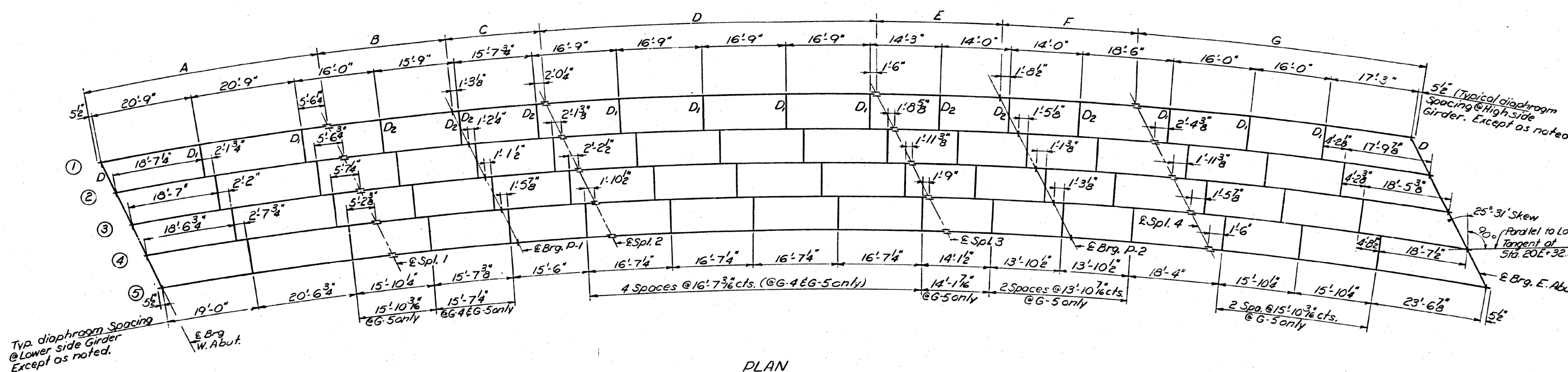
Rev. 6-14-67

FOR INFORMATION ONLY SN 041-0059

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	41-2HB-2	JEFFERSON	54	31

SHEET NO. 9
16 SHEETS



PLAN

Note: Girder spacing is 7'-0" radially.
Girder shall be fabricated according to its respective radius.
All horizontal dimensions are given along ℄ Girder.

	A	B	C	D	E	F	G	Total	Radius
G-1	47'-5 3/4"	24'-11 5/8"	18'-11 1/8"	66'-5 3/4"	25'-0 1/2"	27'-7 1/8"	56'-3 7/8"	266'-9 3/4"	786.94'
G-2	47'-6 1/4"	25'-0"	18'-11 3/8"	66'-7 1/8"	25'-1 1/4"	27'-8 1/8"	56'-6 3/8"	267'-4 5/8"	779.94'
G-3	47'-6 3/4"	25'-0 1/4"	18'-11 3/4"	66'-8 7/8"	25'-2 1/4"	27'-9 1/8"	56'-9 1/8"	268'-0 1/8"	772.94'
G-4	47'-7 3/8"	25'-0 3/4"	19'-0 1/8"	66'-10 1/2"	25'-2 7/8"	27'-10 1/4"	56'-11 7/8"	268'-7 3/4"	765.94'
G-5	47'-7 7/8"	25'-1 1/8"	19'-0 3/8"	67'-0 1/4"	25'-3 3/4"	27'-11 3/8"	57'-2 3/4"	269'-3 1/2"	758.94'

ELEVATION TOP OF WEB
(For Fabrication Only)

	℄ Brg. W. Abt.	℄ Spl. 1	℄ Brg. P-1	℄ Spl. 2	℄ Spl. 3	℄ Brg. P-2	℄ Spl. 4	℄ Brg. E. Abt.
G-1	503.72	503.64	503.51	503.41	503.01	502.72	502.42	501.77
G-2	503.16	503.08	502.95	502.85	502.42	502.13	501.83	501.13
G-3	502.60	502.51	502.38	502.28	501.82	501.53	501.23	500.49
G-4	502.04	501.94	501.81	501.71	501.23	500.94	500.64	499.85
G-5	501.48	501.37	501.24	501.14	500.63	500.34	500.04	499.20

Note:
See sheet #10 & #11 for Structural Steel Details.
For details of welding designations see AWS D2.0-66 Specifications.
Wt. of structural steel billed on sheet #6.
Contact surface of all field splices shall be free of all oil & paint.
Brg. Stiffener shall be tight fit at the top & milled to bear at the bottom.

DESIGNED Wei Hsiung
CHECKED Stanley S. Lin
DRAWN Thomas A. Lewis
CHECKED Stanley S. Lin

Aug 9 1966
EXAMINED Carl E. Thunman Jr.
PASSED H. J. Alton
APPROVED V. L. Staff

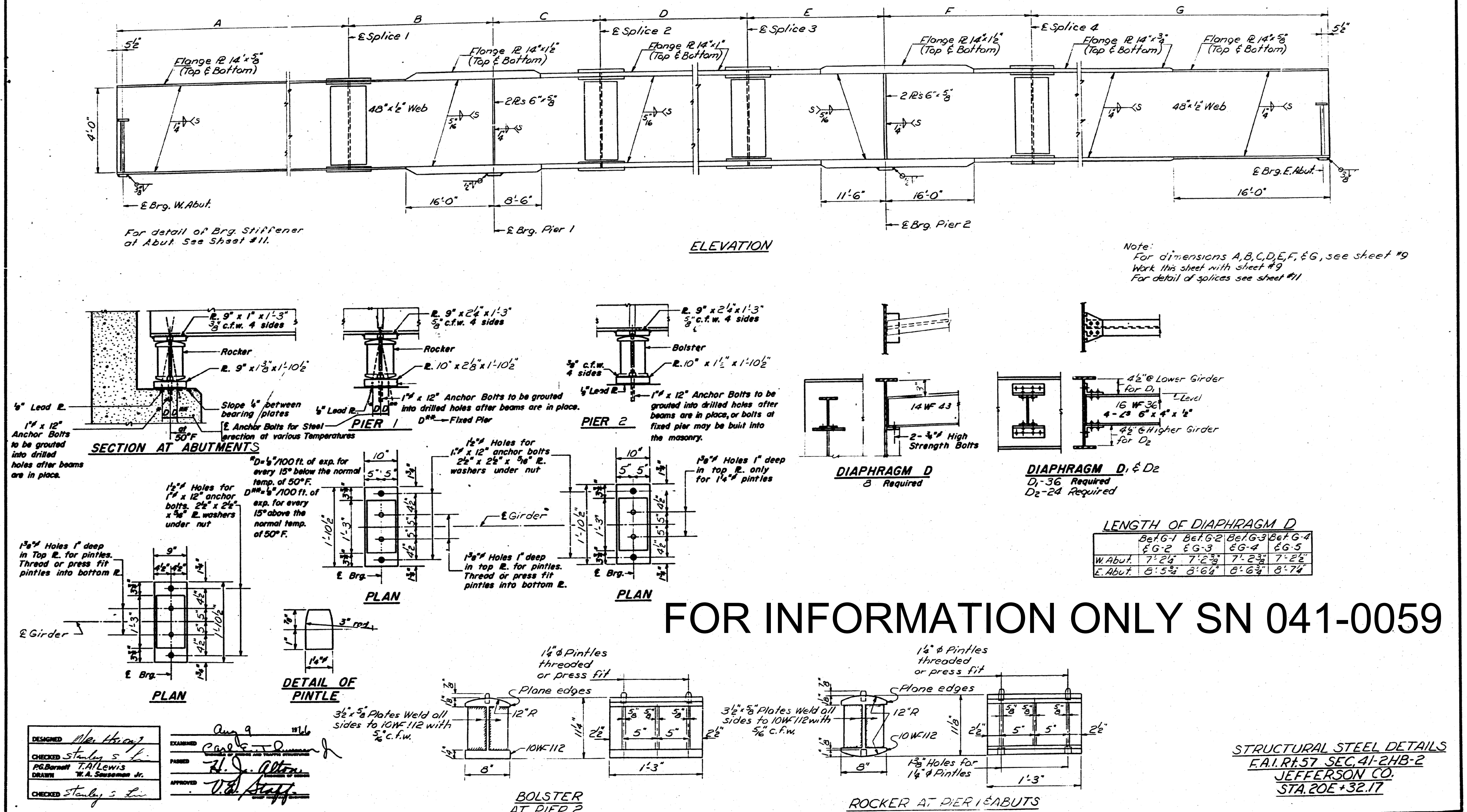
FOR INFORMATION ONLY SN 041-0059

STRUCTURAL STEEL
F.A.I. Rt. 57 SEC. 41-2HB-2
JEFFERSON CO.
STA. 20E+32.17

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

F.A.I. RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	41-2HB-2	JEFFERSON	54	32

SHEET NO. 10
16 SHEETS



Note:
For dimensions A, B, C, D, E, F, & G, see sheet #9
Work this sheet with sheet #9
For detail of splices see sheet #11

LENGTH OF DIAPHRAGM D

	Bet. G-1 & G-2	Bet. G-2 & G-3	Bet. G-3 & G-4	Bet. G-4 & G-5
W. Abut.	7'-2 1/4"	7'-2 3/8"	7'-2 3/8"	7'-2 1/2"
E. Abut.	8'-5 3/4"	8'-6 1/4"	8'-6 3/4"	8'-7 1/4"

FOR INFORMATION ONLY SN 041-0059

STRUCTURAL STEEL DETAILS
F.A.I. RT. 57 SEC. 41-2HB-2
JEFFERSON CO.
STA. 20E+32.17

I-2 7-2-62 Rev. 11-9-62 Rev. 8-16-63 Rev. 12-10-63

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/25/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 041–0059

SCALE: SHEET 07 OF SHEETS STA. TO STA.

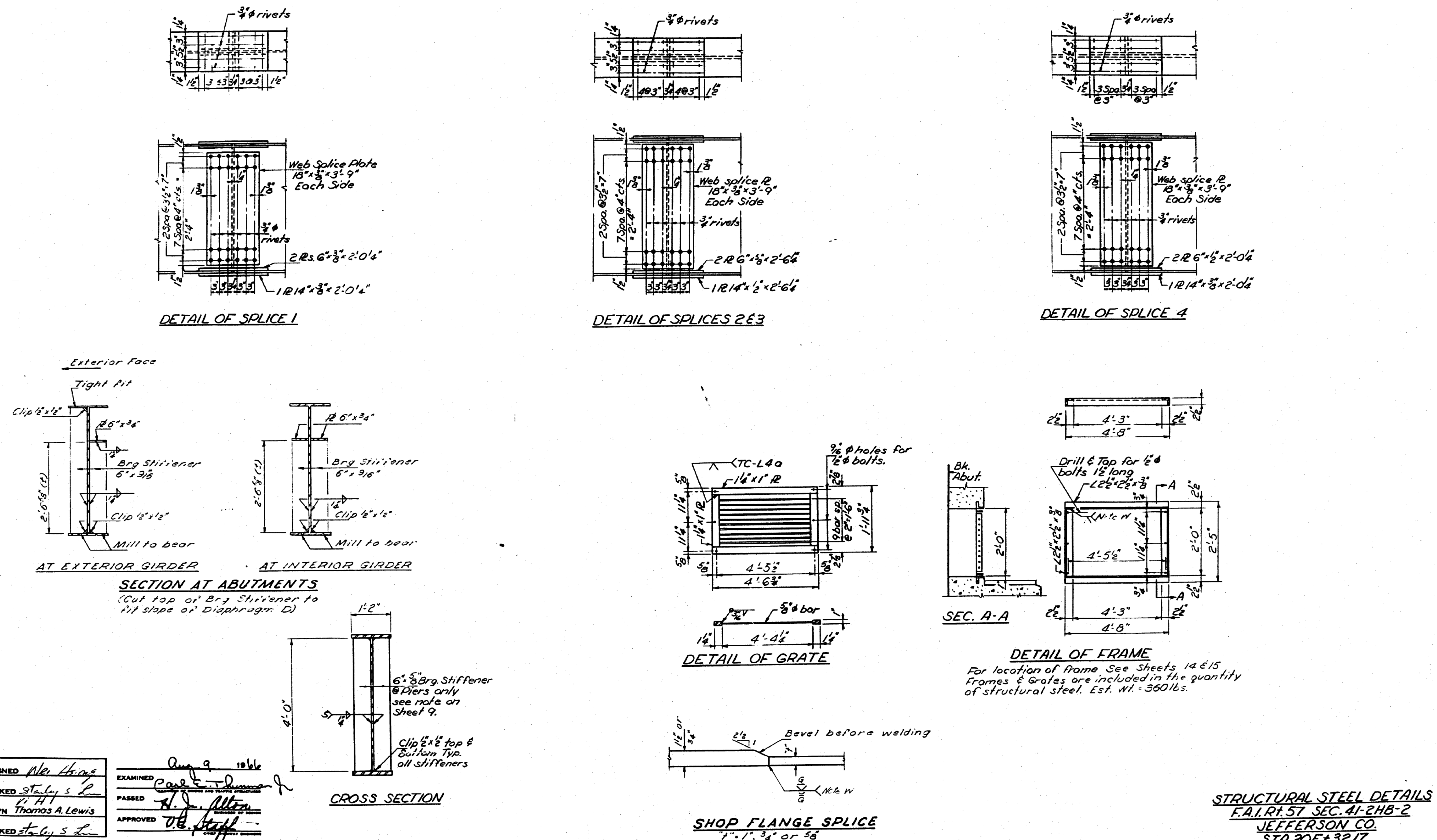
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	17

CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. Rt. 57	41-2HB-2	JEFFERSON	54	33

SHEET NO. 11 — 16 SHEETS



DESIGNED / CHECKED / DRAWN Thomas A. Lewis / CHECKED
EXAMINED / PASSED / APPROVED — Aug 9 1966

STRUCTURAL STEEL DETAILS
F.A.I. Rt. 57 SEC. 41-2HB-2
JEFFERSON CO.
STA. 20E+32.17

Rev 6-16-67 NH Shop Flange Splice, Detail of Frame

Rev 6-16-67

FOR INFORMATION ONLY SN 041-0059

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 041-0059
	DRAWN	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 11/25/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	18

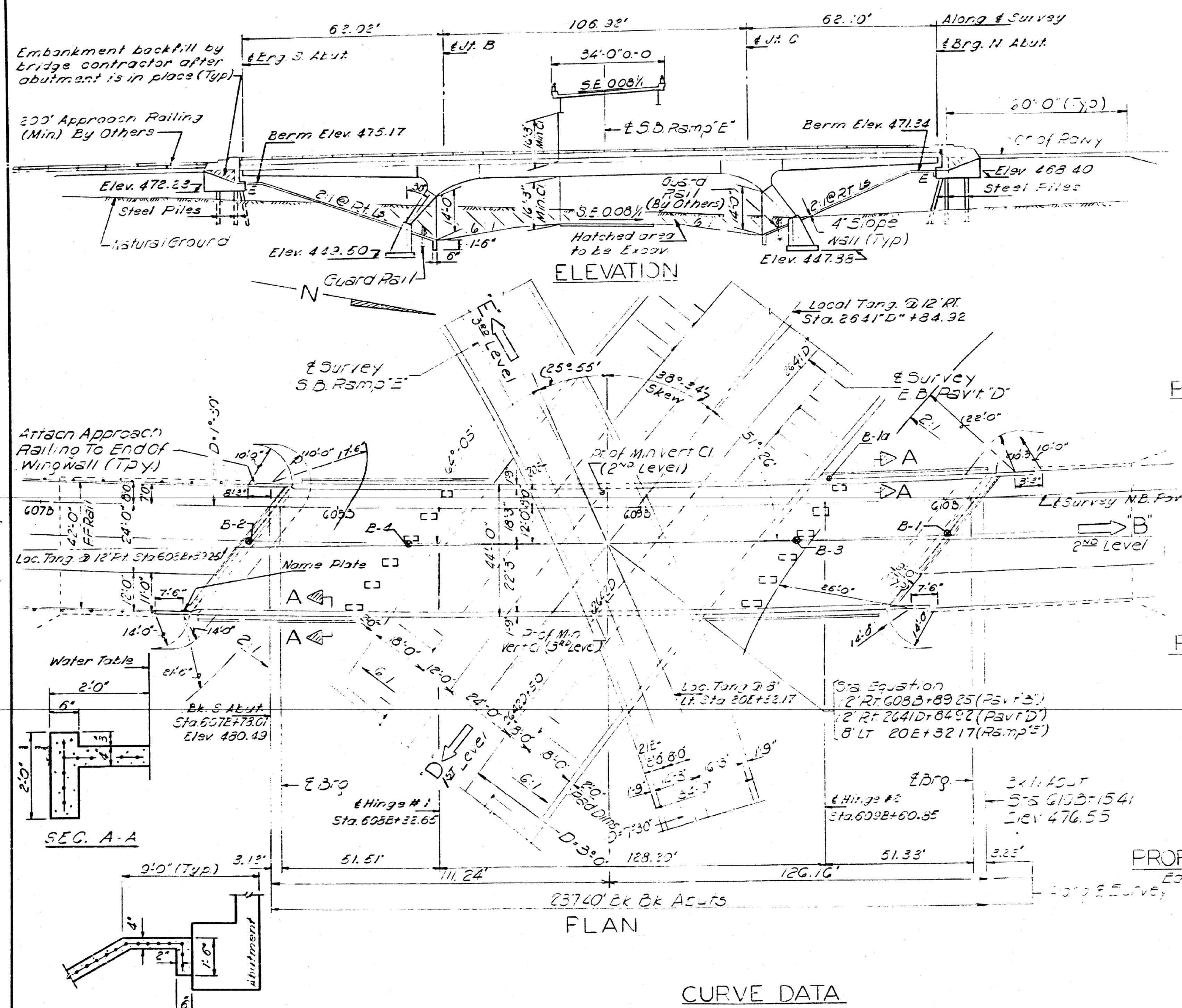
CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

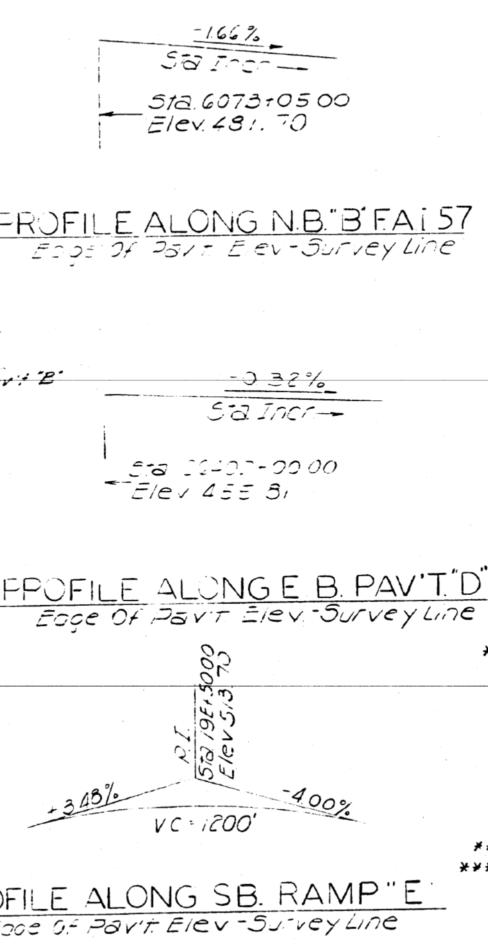
3/4" Spike & Washer in root of 30" Oak
80' Lt Sta 611+34 Elev. 475.28

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 57	41-2 HB-2	JEFFERSON	54	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-I-57-2(79)92		

SHEET NO. 1
13 SHEETS





GENERAL NOTES

Coarse aggregate to be used in parapet handrails and end post must be free of chert, flint, limonite, lignite and soft sandstone.

The concrete floor slab shall be finished in accordance with Art 51.19 of the Std. Specs.

Slope Wall shall be reinforced with welded wire fabric 6"x6" mesh, weighing 58# per 100 Sq. Ft.

All structural steel shall conform to A.S.T.M. Designation A-36.

All welding shall conform to the current specifications for Welded Highway and Railway Bridges of the American Welding Society.

Anchor bolts shall be set before bolting diaphragms over supports.

Exposed surfaces of the expansion devices inaccessible after erection, shall receive two shop coats of red lead paint. All other surfaces shall be given one shop coat of red lead paint. Anchor studs shall not be painted.

Expansion devices are included in the quantity of structural steel. Est. Wt = 2880 Lbs.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Art. 56.1 to 56.5 inclusive of the Standard Specifications.

The contractor shall drive 1 Steel test pile at the North abutment, in a permanent location, as directed by the engineer before ordering the remainder of piles.

Excavation for portions of structures in the embankments shall not be classified.

Permanent forms will not be permitted in forming the concrete floor.

All steel piles shall be driven to refusal.

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF ¼ OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.	Total
* Rock Excav. for Structures	Cu. Yds.		265	265
Class X Concrete	Cu. Yds.	286.4	264.5	550.9
Structural Steel	Lbs.	331120		331120
Aluminum Handrail	Lin. Ft.	465		465
Reinforcement Bars	Lbs.	90,130	21,230	111,360
Steel Piles (8BP36)	Lin. Ft.		273	273
Test Piles Steel (8BP36)	Each		1	1
Name Plates	Each		1	1
Slope Wall (4")	Sq. Yds.			770
** Protective Coat	Sq. Yds.	1290		1290
*** Bridge Seat Sealant	L.S.		0.5	[illegible]

* Includes excavation for slope walls
** Includes applications on inside vertical face, top & exposed end of the abut. wings
*** At Abut. only

CURVE DATA

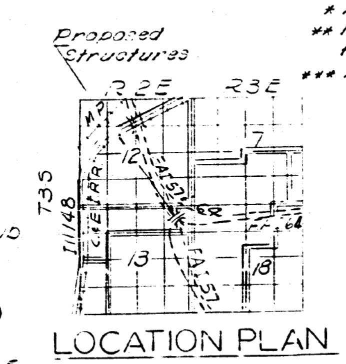
SOUTH BOUND RAMP "E"
P.I. Sta. 21E+90.81
Δ = 96°-06'-45"
D = 7°-30'-00"
R = 763.94'
L = 1281.50'
T = 850.12'
E = 378.99'
SE = 0.08'/'

EAST BOUND PAV'T "D"
P.I. Sta. 2643D+44.39
Δ = 63°-45'-57"
D = 3°-00'-00"
R = 1909.86'
L = 2125.53'
T = 1188.00'
E = 339.34'
SE = 0.08'/'

NORTH BOUND FAI 57 PAV'T "B"
PI Sta 6135+05.87
Δ = 26°-35'-31"
D = 1°-30'-00"
R = 3819.72'
L = 1772.85'
T = 902.67'
E = 105.20'
SE = 0.042'/'

DESIGN STRESSES

f'c = 1400 psi Super & Sub
Vc = 75 psi Ftgs.
fs = 20000 psi Reinf.
fs = 20,000 psi Struct (A-36)
n = 9
Max Ftg. Pressure = 5.8 K.S.F.
LOADING HS20-44 & ALT.



DESIGNED Wes Hering
CHECKED Gene McCormick
DRAWN J. Kessler
CHECKED Gene McCormick

Aug 9 1966
EXAMINED Carl E. Thunman Jr. — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED H. J. Alton — ENGINEER OF DESIGN
APPROVED V. E. Staff — CHIEF HIGHWAY ENGINEER

GENERAL PLAN & ELEVATION
2ND LEVEL STRUCTURE
PROJ. I-57-2 (79) 92
F.A.I. RT. 57 SEC. 41-2HB-2
JEFFERSON COUNTY
STATION 608B+89.25 (PAV'T. "B")

Rev. 11-17-66 W.H. 2640 Cu. Yd. Borrow Excav. removed; Rock Excavation for Str. changed from 358 Cu. Yds. to 265 Cu. Yds. Rev. W.H. [illegible] Reinf. Bars changed from [illegible] lbs. to 111,360 lbs.

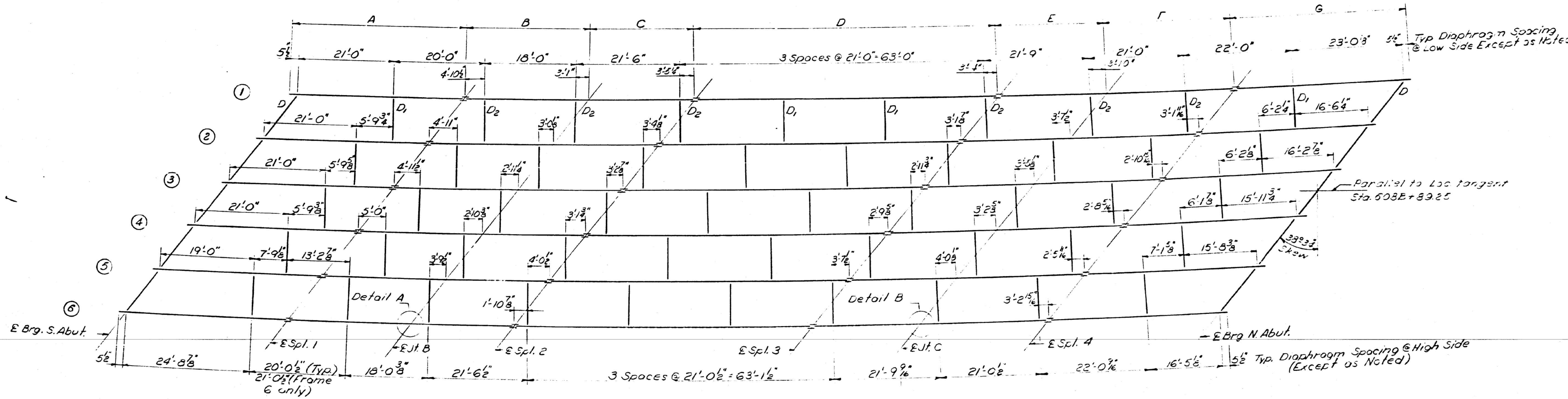
Rev. 6-16-67

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 041-0007
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 11/25/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	19
CONTRACT NO. 78836				
ILLINOIS FED. AID PROJECT				

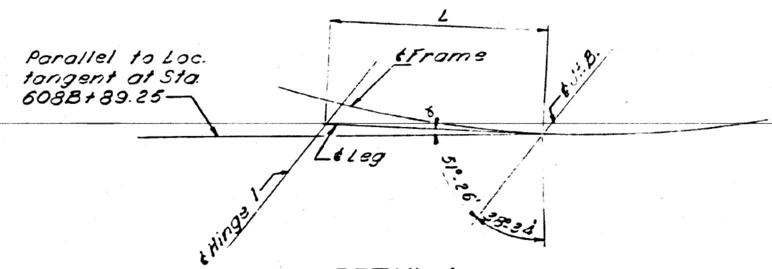
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 57	41-2HB-2	JEFFERSON	54	15

SHEET NO. 6
13 SHEETS



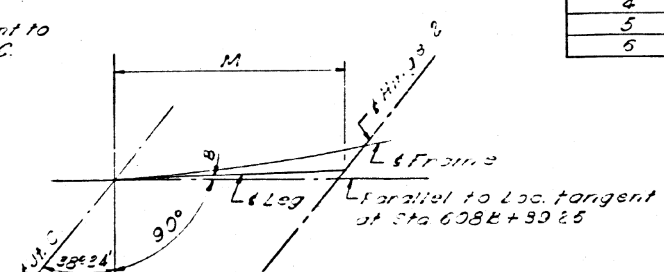
PLAN

Frames are spaced at 7'-3" cts. along radial line.
Fabricate frames according to their respective radius.
All horizontal dimensions are given along ℄ of frames.



DETAIL A

Fabricate the ℄ leg tangent to the ℄ frame at ℄ Jts. B or C.



DETAIL B

TABLE OF DIMENSIONS

Frame	Radius	A	B	C	D	E	F	G	Total	H	I	J	K	α	L	β	M
1	3814.55'	36'-7"	25'-11 1/2"	21'-10 1/4"	62'-10 3/4"	22'-3"	26'-8 3/8"	35'-11 1/4"	232'-2 1/8"	10'-5 5/8"	10'-8 1/2"	21'-0 3/4"	21'-0 5/8"	0°37'-52"	10'-6 3/8"	0°58'-35"	10'-9 1/4"
2	3822.22'	36'-6 1/2"	25'-11 1/8"	21'-10"	62'-9 3/4"	22'-2 5/8"	26'-7 7/8"	35'-10 5/8"	231'-10 1/2"	10'-5 1/2"	10'-8 1/4"	21'-0 3/4"	[illegible]	0°43'-13"	[illegible]	0°52'-54"	10'-9 1/8"
3	3829.89'	36'-6"	25'-10 3/4"	21'-9 5/8"	62'-8 7/8"	22'-2 3/8"	26'-7 3/8"	35'-10"	231'-7"	10'-5 3/8"	10'-8 1/8"	21'-0 5/8"	21'-0 1/2"	0°48'-34"	10'-6 1/8"	0°47'-14"	10'-8 7/8"
4	3837.55'	36'-5 1/2"	25'-10 3/8"	21'-9 3/8"	62'-7 7/8"	22'-2"	26'-7"	35'-9 1/2"	231'-3 5/8"	10'-5 1/8"	10'-7 7/8"	21'-0 5/8"	21'-0 3/8"	0°53'-53"	10'-6"	0°41'-36"	10'-8 3/4"
5	3845.22'	36'-5"	25'-10"	21'-9"	62'-7"	22'-1 5/8"	26'-6 5/8"	35'-6 3/4"	231'-0"	10'-5"	10'-7 3/4"	21'-0 1/2"	21'-0 3/8"	0°59'-11"	10'-5 3/4"	0°36'-00"	10'-8 5/8"
6	3852.89'	36'-4 1/2"	25'-9 5/8"	21'-8 3/4"	62'-6"	22'-1 1/4"	26'-6 1/8"	35'-8 1/4"	230'-8 1/2"	10'-4 7/8"	10'-7 5/8"	21'-0 3/8"	21'-0 1/4"	1°-04'-26"	10'-5 5/8"	0°30'-26"	10'-8 3/8"

LENGTHS OF DIAPHRAGM D

	Bet. F-1 & F-2	Bet. F-2 & F-3	Bet. F-3 & F-4	Bet. F-4 & F-5	Bet. F-5 & F-6
S. Abut.	9'-6 1/8"	9'-6"	9'-5 7/8"	9'-5 3/4"	9'-5 5/8"
N. Abut.	9'-11 7/8"	9'-11 5/8"	9'-11 1/2"	9'-11 3/8"	9'-11 1/8"

Note:
For elevations, other details, see sheets 7 & 8
Quantity of structural steel billed on sheet 4.

DESIGNED	
CHECKED	Gene McCormick
DRAWN	Thomas A. Lewis
CHECKED	Gene McCormick

EXAMINED Aug 9 1966
PASSED
APPROVED

FOR INFORMATION ONLY SN 041-0007

STRUCTURAL STEEL
F.A.I. Rt. 57 SEC. 41-2HB-2
JEFFERSON CO.
STA. 608B+89.25

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/25/2020	DATE -	REVISED -

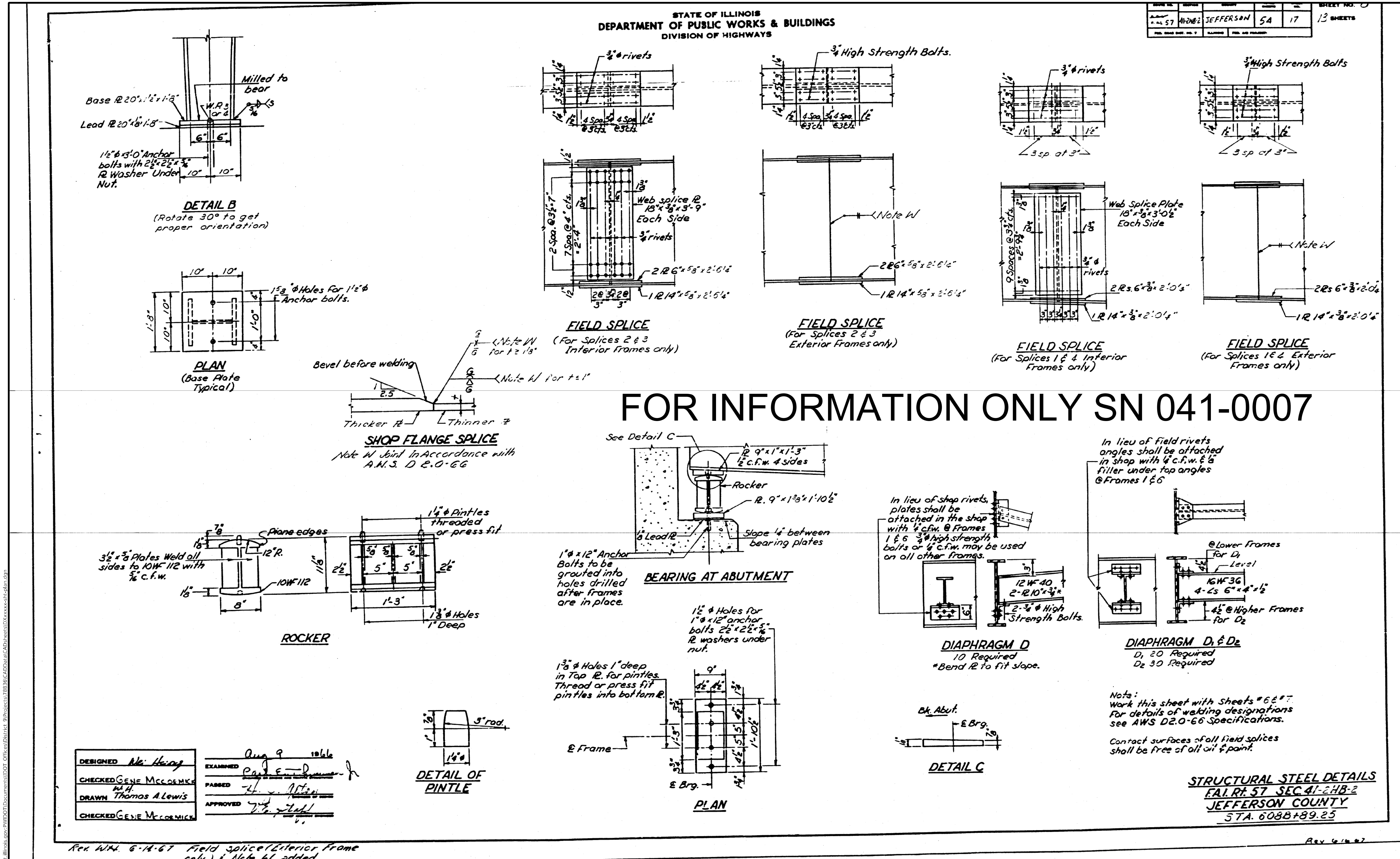
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 041-0007

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	20

CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

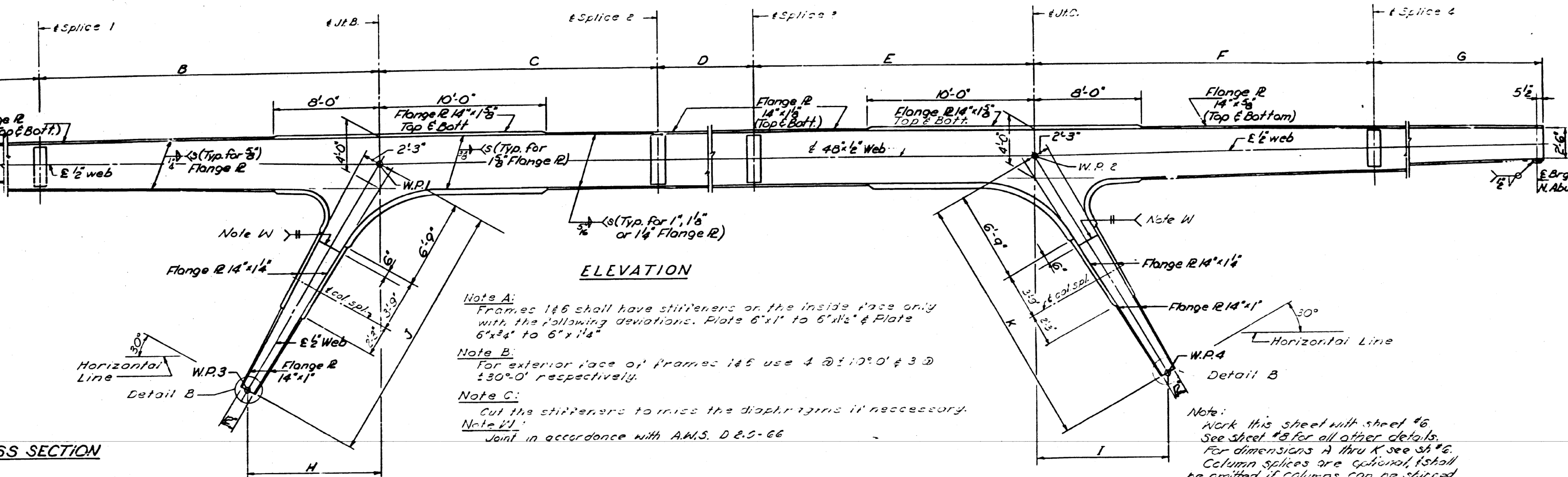

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
JEFFERSON
54
17
13 SHEETS
Milled to bear
DETAIL B
(Rotate 30° to get proper orientation)
PLAN
(Base Plate Typical)
FIELD SPLICE
(For Splices 2 & 3 Interior Frames only)
FIELD SPLICE
(For Splices 2 & 3 Exterior Frames only)
FIELD SPLICE
(For Splices 1 & 4 Interior Frames only)
FIELD SPLICE
(For Splices 1 & 4 Exterior Frames only)
3/4" High Strength Bolts.
Web splice ℞ 18"x3/8"x3'-9" Each Side
Web Splice Plate 18"x3/8"x3'-0 1/2" Each Side
Bevel before welding
Thicker ℞
Thinner ℞
SHOP FLANGE SPLICE
Note W Joint In Accordance with A.W.S. D 2.0-66
FOR INFORMATION ONLY SN 041-0007
See Detail C
Rocker
Slope 1/4" between bearing plates
1"φ x 12" Anchor Bolts to be grouted into holes drilled after frames are in place.
BEARING AT ABUTMENT
In lieu of shop rivets, plates shall be attached in the shop with 1/4" c.f.w. @ Frames 1 & 6 3/4"φ high strength bolts or 1/4" c.f.w. may be used on all other frames.
In lieu of field rivets angles shall be attached in shop with 1/4" c.f.w. & 1/8" filler under top angles @ Frames 1 & 6
ROCKER
1 3/8"φ Holes 1" deep in Top ℞ for pintles. Thread or press fit pintles into bottom ℞.
PLAN
DIAPHRAGM D
10 Required
*Bend ℞ to fit slope.
DIAPHRAGM D1 & D2
D1 20 Required
D2 30 Required
DETAIL OF PINTLE
DETAIL C
Note:
Work this sheet with Sheets #6 & #7.
For details of welding designations see AWS D2.0-66 Specifications.
Contact surfaces of all field splices shall be free of all oil & paint.
STRUCTURAL STEEL DETAILS
F.A.I. Rt. 57 SEC. 41-2HB-2
JEFFERSON COUNTY
STA. 6088+89.25
DESIGNED
CHECKED Gene McCormick
DRAWN Thomas A. Lewis
CHECKED Gene McCormick
EXAMINED
PASSED
APPROVED
Rev. W.H. 6-14-67 Field splice (Exterior Frame only) & Note W added.

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 041-0007	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN	REVISED -			VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	21
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -				CONTRACT NO. 78836			
PLOT DATE = 11/25/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT			

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	41-2HB-2	JEFFERSON	54	16

SHEET NO. 7 — 13 SHEETS



ELEVATION

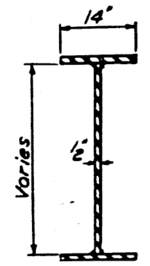
Note A:
Frames 1 & 6 shall have stiffeners on the inside face only with the following deviations. Plate 6"x1" to 6"x1/2" & Plate 6"x3/4" to 6"x1 1/4"

Note B:
For exterior face of frames 1 & 6 use 4 @ ± 10°-0' & 3 @ ± 30°-0' respectively.

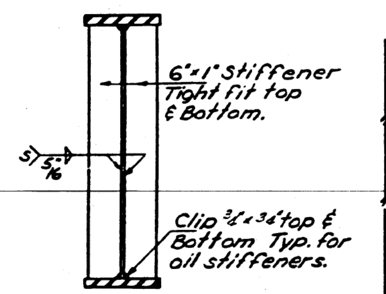
Note C:
Cut the stiffeners to miss the diaphragms if necessary.

Note W:
Joint in accordance with A.W.S. D 2.0-66

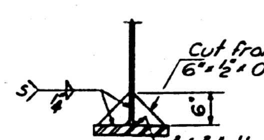
Note:
Work this sheet with sheet #6
See sheet #8 for all other details.
For dimensions A thru K see sh. #6.
Column splices are optional, & shall be omitted if columns can be shipped in one piece.



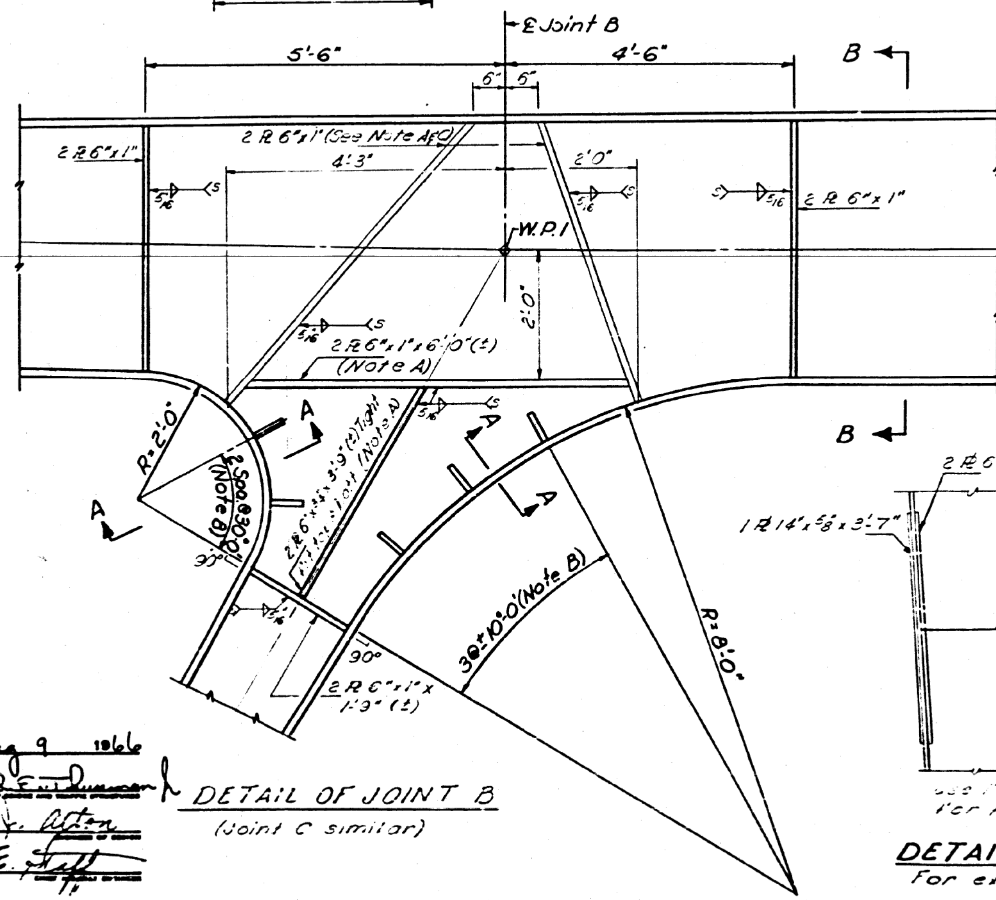
TYPICAL CROSS SECTION



SECTION B-B



SECTION A-A

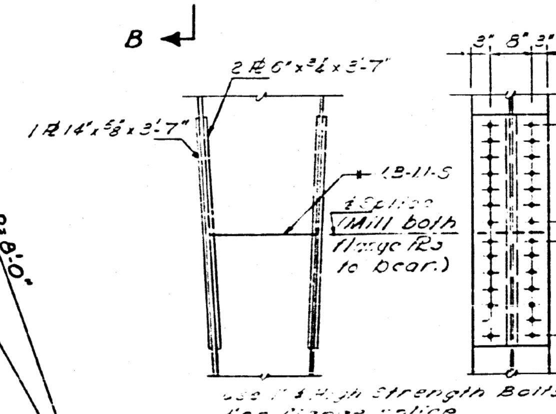


DETAIL OF JOINT B
(Joint C similar)

TOP OF WEB ELEVATIONS (For Fabrication Only)

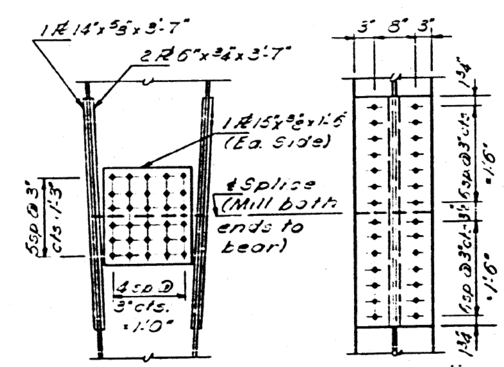
Frame	℄ Brg. S.A.	℄ Spl. 1	℄ Jt. B.	℄ Spl. 2	℄ Spl. 3	℄ Jt. C	℄ Spl. 4	℄ Brg. N.A.
1	479.43	478.83	478.40	478.04	477.00	476.63	476.19	475.60
2	479.86	479.26	478.83	478.47	477.43	477.06	476.62	476.03
3	480.28	479.68	479.25	478.89	477.85	477.48	477.04	476.45
4	480.70	480.10	479.67	479.31	478.27	477.90	477.46	476.87
5	481.12	480.52	480.09	479.73	478.69	478.32	477.88	477.29
6	481.54	480.94	480.51	480.15	479.11	478.74	478.30	477.71

FOR INFORMATION ONLY
SN 041-0007



Use 7/8" ⌀ High Strength Bolts for flange splice.

DETAIL of COLUMN SPLICE
For exterior frames only



Use 7/8" ⌀ rivets for flange splices & 3/4" ⌀ rivets for web splices.

DETAIL of COLUMN SPLICE
For interior frames only

FRAME ELEVATION
F.A.I. Rt. 57 SEC. 41-2HB-2
JEFFERSON CO.
STA. 608B+89.25

DESIGNED	[signature]
CHECKED	Gene McCormick
DRAWN	Thomas A. Lewis
CHECKED	Gene McCormick
EXAMINED	Aug 9 1966 [signature]
PASSED	[signature]
APPROVED	[signature]

Rev. W.H. 6-14-67 Detail of column splice (exterior frame only) & Note W added.

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 041-0007	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	22
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 78836				
PLOT DATE = 11/25/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

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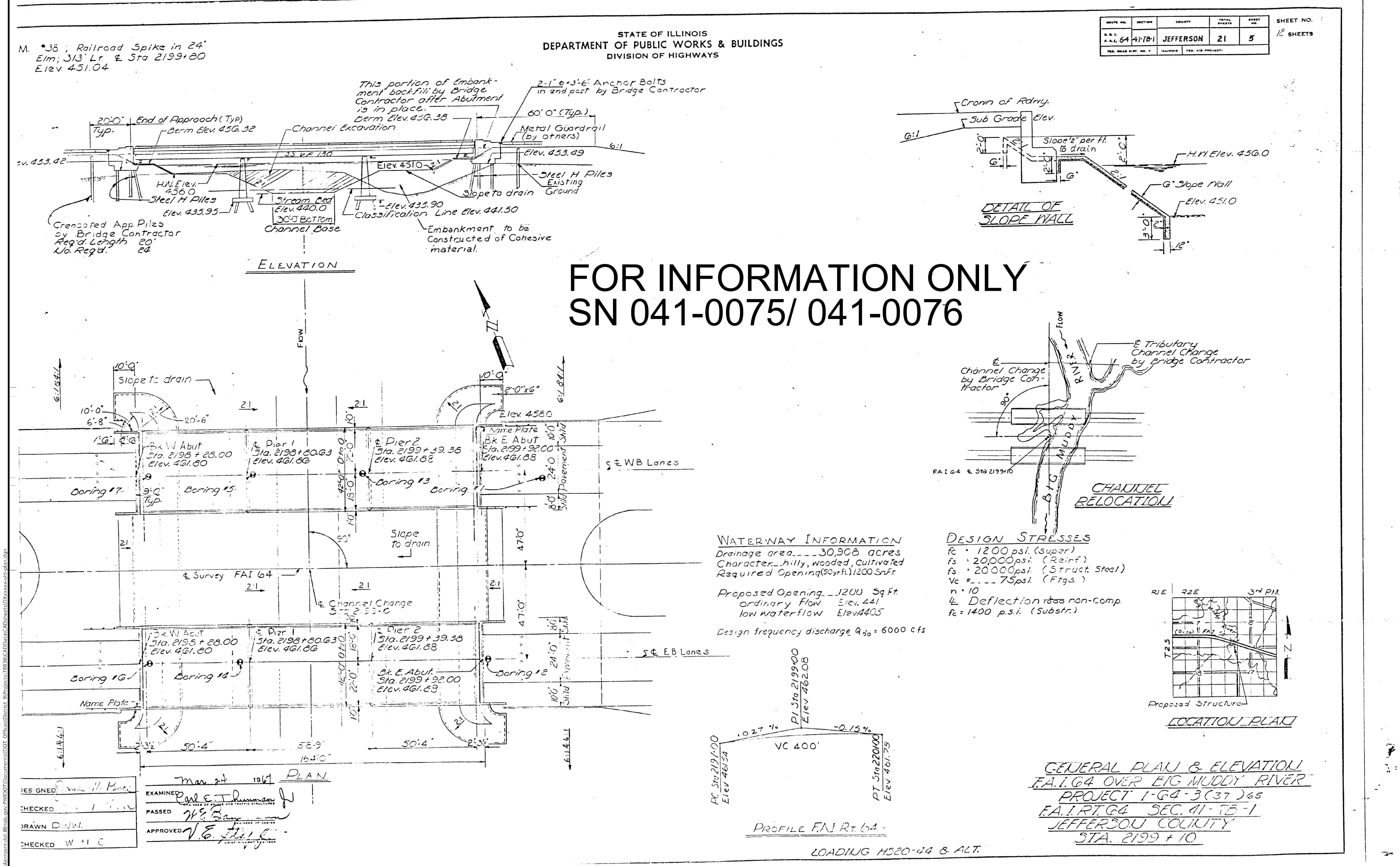
FOR INFORMATION ONLY
SN 041-0075/ 041-0076



USER NAME = WILSONDA	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 11/25/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 041-0075/041-0076

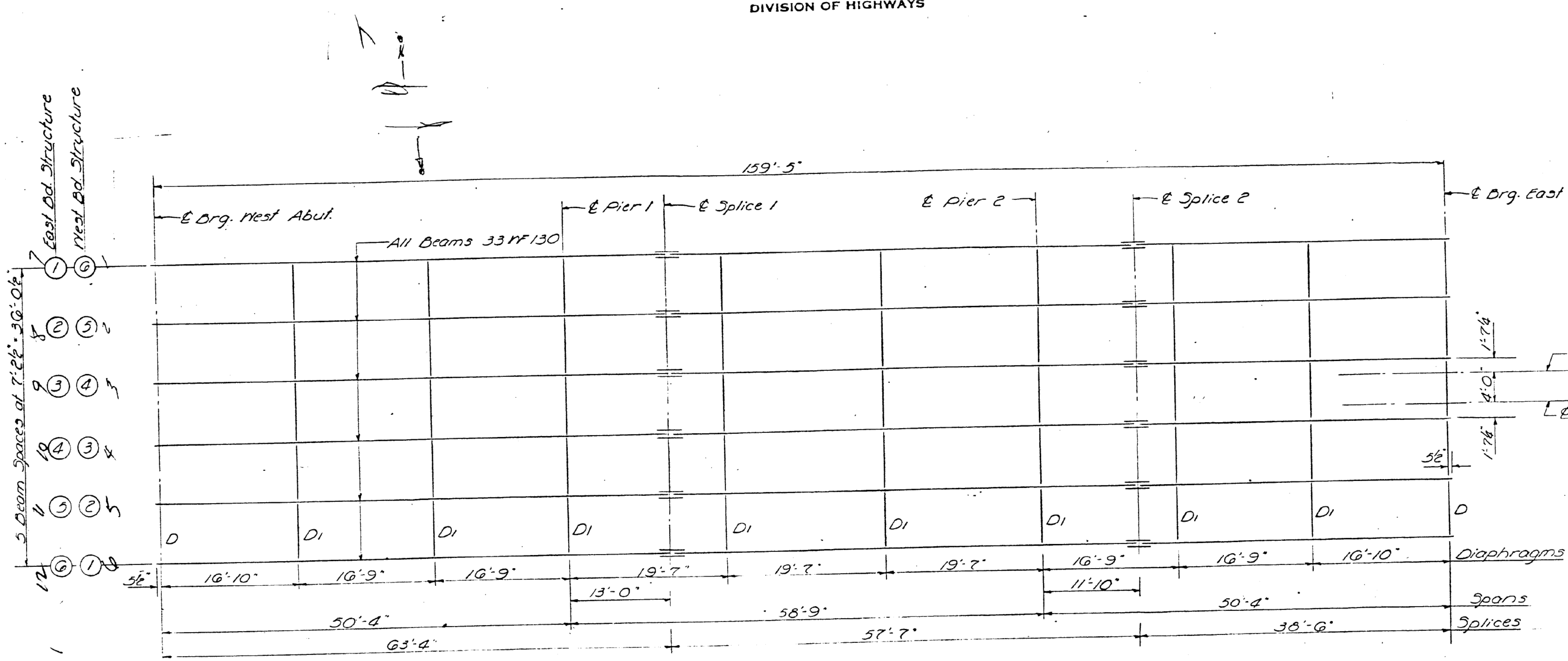
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	23
		CONTRACT NO. 78836		
		ILLINOIS FED. AID PROJECT		

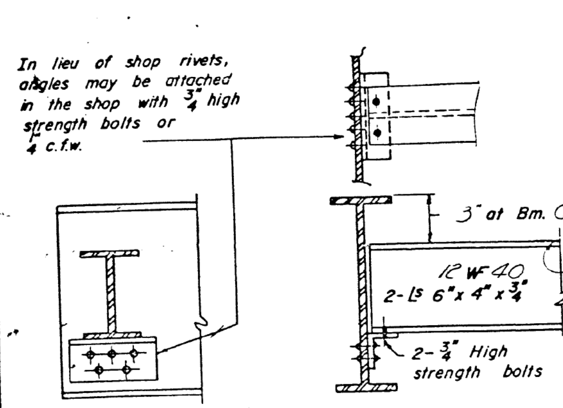
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 64	41-7B-1	JEFFERSON	21	10

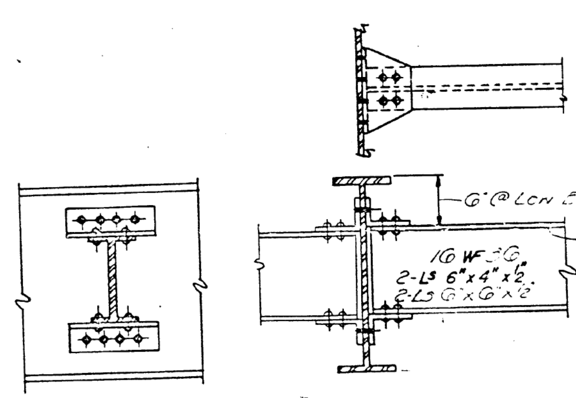
SHEET NO. 5
12 SHEETS



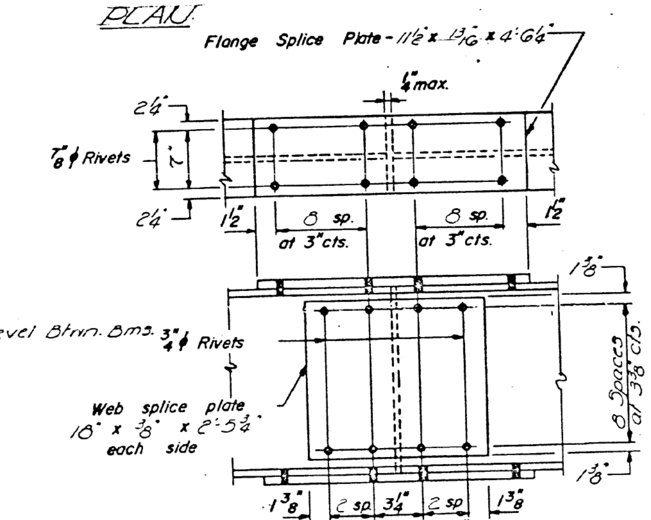
PLAN



DIAPHRAGM D
20 Required



DIAPHRAGM D1
80 Required



SPLICE

ELEVATIONS TOP OF WF

Location \ Beam	1	2	3	4	5	6
℄ Brg. W. Abut.	460.901	461.034	461.147	461.084	460.968	460.818
℄ Pier 1	460.922	461.055	461.168	461.105	460.989	460.839
℄ Splice 1	460.927	461.060	461.173	461.110	460.994	460.844
℄ Pier 2	460.946	461.079	461.192	461.129	461.013	460.863
℄ Splice 2	460.951	461.084	461.197	461.134	461.018	460.868
℄ Brg. E. Abut.	460.967	461.100	461.213	461.150	461.034	460.884

DESIGNED [signature]
CHECKED [signature] Jacobs
DRAWN J. Schneller
CHECKED [signature]

Mar. 27 1967
EXAMINED Carl E. Thunman Jr. — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED W. E. Baumann — ENGINEER OF DESIGN
APPROVED V. E. [signature] — CHIEF HIGHWAY ENGINEER

FOR INFORMATION ONLY
SN 041-0075/ 041-0076

STRUCTURAL STEEL
F.A.I. RT. 64 - SEC. 41-7B-1
JEFFERSON COUNTY
STA. 2199+10

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 11/25/2020	DATE -	REVISED -	

SN 041-0075/041-0076

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	24

CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

MODEL: Default
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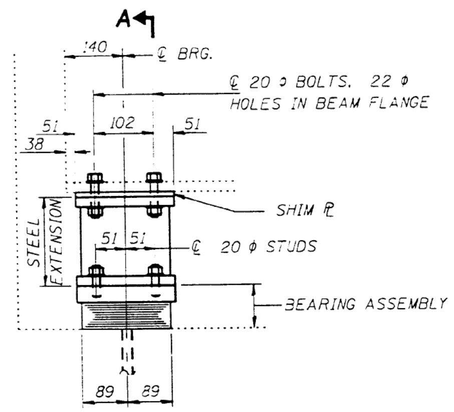
FAI RTE. 64 | SECTION • | COUNTY JEFFERSON | TOTAL SHEETS 58 | SHEET NO. 25

• D-7 BRIDGE DECK REPAIR 1999-1

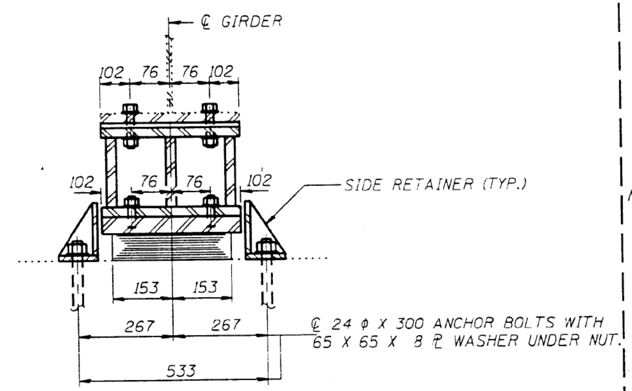
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GIRDER REACTIONS

R DL	(KN)	99.2
R LL	(KN)	162.8
IMP.	(KN)	46.7
R (TOTAL)	(KN)	308.7

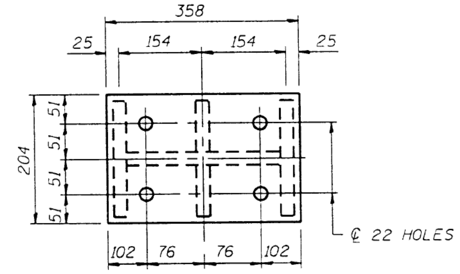


ELEVATION AT WEST ABUTMENT



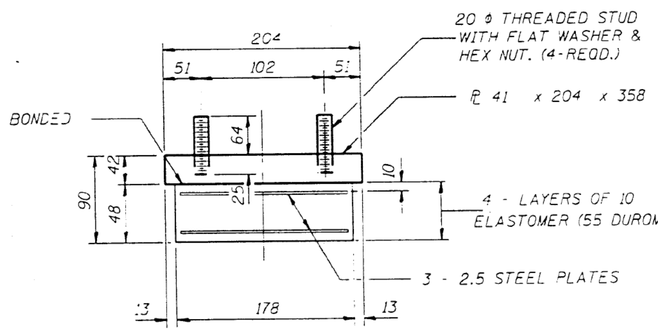
SECTION A-A

NOTES: DIAPHRAGM REMOVAL AND REPLACEMENT MAY BE REQUIRED TO FACILITATE DRILLING HOLES. COST SHALL BE INCLUDED IN THE COST OF "FURNISHING AND ERECTING STRUCTURAL STEEL".
NEW STEEL EXTENSIONS, SIDE RETAINERS, SHIM ℞'S, CONNECTION BOLTS, AND ANCHOR BOLTS ARE INCLUDED IN "FURNISHING AND ERECTING STRUCTURAL STEEL".
SEE "ANCHOR BOLT DETAILS" SHEET FOR ANCHOR BOLT INSTALLATION.
PRIOR TO ORDERING ANY MATERIAL, THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL BEARING HEIGHT AND SHIM THICKNESS DIMENSIONS.
MIN. JACK CAPACITY = 27.2 METRIC TONS.



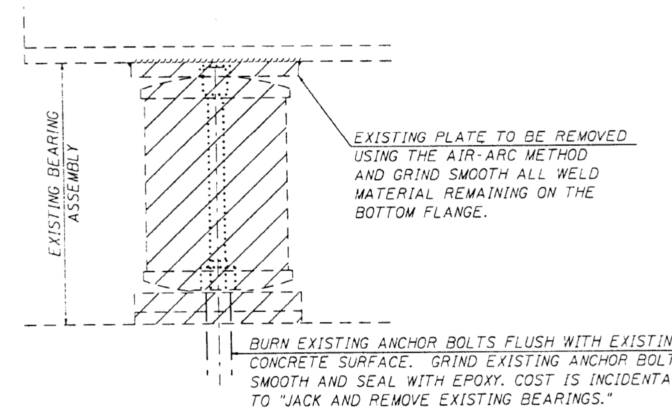
PLAN TOP AND BOTTOM PLATE

TYPE I ELASTOMERIC EXP. BRG.

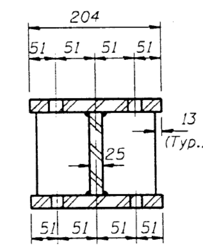


BEARING ASSEMBLY

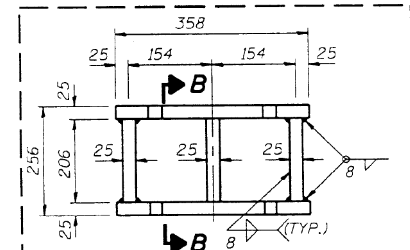
NOTE: SHIM PLATES SHALL NOT BE PLACED UNDER BEARING ASSEMBLY.



EXISTING BEARING REMOVAL DETAIL



SECTION B-B



STEEL EXTENSION DETAIL

[1]

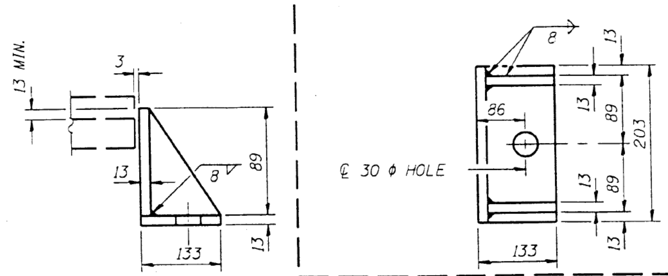
[1]

FOR INFORMATION ONLY
SN 041-0075/ 041-0076

BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE I	Each	12

ESTIMATED WEIGHT OF STRUCTURAL STEEL PER BEARING - 77 KG



SIDE RETAINER

EQUIVALENT ROLLED ANGLE WITH STIFFENERS WILL BE ALLOWED IN LIEU OF WELDED PLATES.

NOTE:
ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ELASTOMERIC BEARING DETAILS
WEST ABUTMENT
SN 041-0075 & 041-0076
LOCATION 3
DRAWN BY
DATE CHECKED BY

BIG MUDDY RIVER

DESIGNED | CHECKED | DRAWN | CHECKED
EXAMINED 19
PASSED
ENGINEER OF STRUCTURAL SERVICES
ENGINEER OF BRIDGES AND STRUCTURES

TYI/REPS 8-03-98

[1] As Revised 4-16-99 VHV

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1 2 3 4 5 6 7 8 9 $$DATE$$ •DGN-SPEC• MMO REV: C9-01-98 EBW75

•DATE•

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 041-0075/041-0076	F.A. RTE. VAR	SECTION D9 BRIDGE PAINT 2021-1	COUNTY VARIOUS	TOTAL SHEETS 71	SHEET NO. 25
	DRAWN -	REVISED -					CONTRACT NO. 78836		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -							
PLOT DATE = 11/25/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

MODEL: Default
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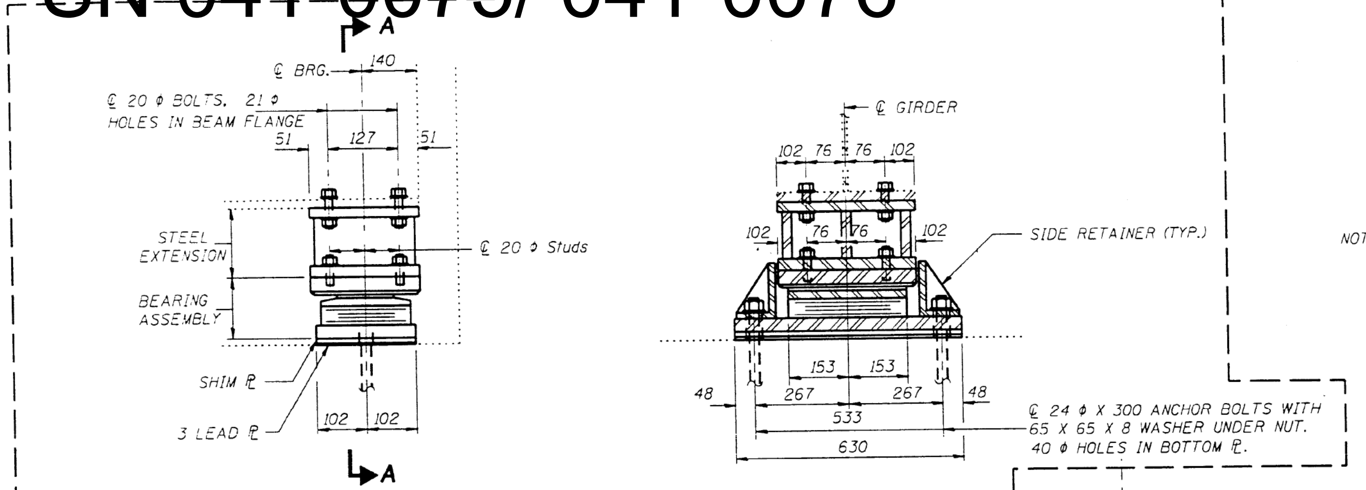
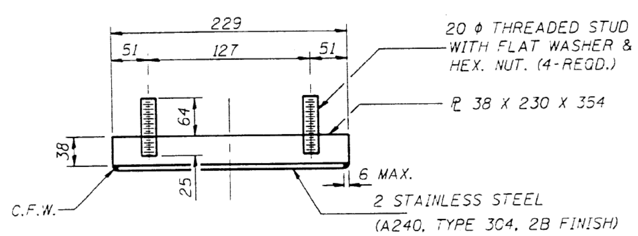
$$DATE$$ •DGN-SPEC• MMO REV: 09-01-98 EBE75



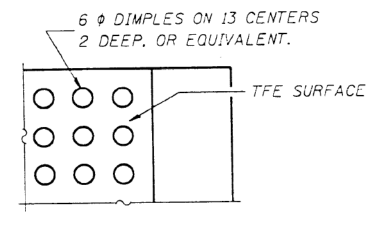
ELEVATION AT EAST ABUTMENT

SECTION A-A

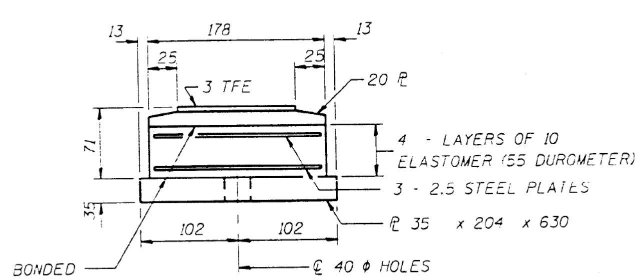
TYPE II TFE ELASTOMERIC EXP. BRG.



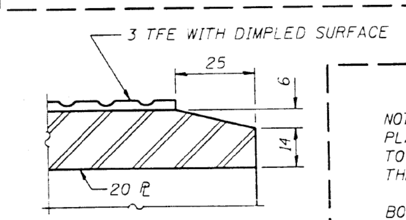
TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



BOTTOM BEARING ASSEMBLY

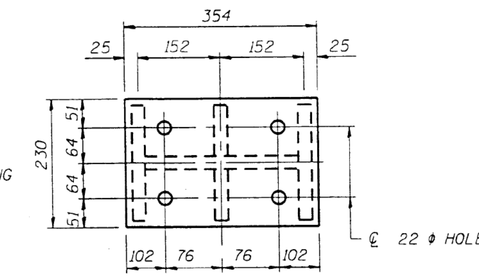


SECTION THRU TFE

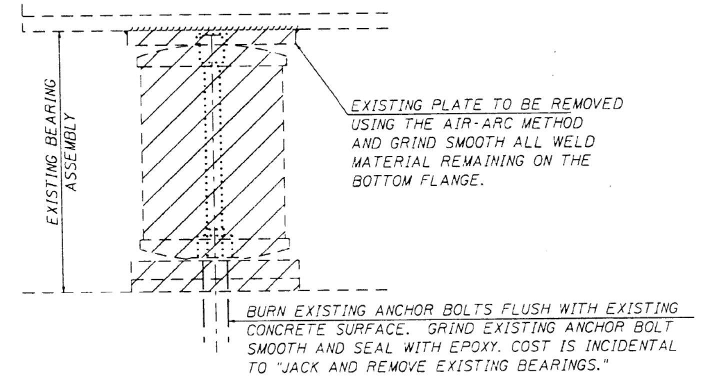
GIRDER REACTIONS

R℘	(KN)	98.7
Rℓ	(KN)	162.3
IMP.	(KN)	46.7
R (TOTAL)	(KN)	308.5

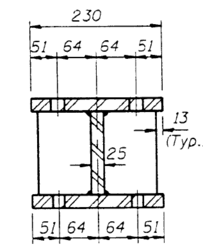
NOTES: DIAPHRAGM REMOVAL AND REPLACEMENT MAY BE REQUIRED TO FACILITATE DRILLING HOLES. COST SHALL BE INCLUDED IN THE COST OF "FURNISHING AND ERECTING STRUCTURAL STEEL".
NEW STEEL EXTENSIONS, SIDE RETAINERS, SHIM ℙ'S, CONNECTION BOLTS, ANCHOR BOLTS AND LEAD PLATES ARE INCLUDED IN "FURNISHING AND ERECTING STRUCTURAL STEEL".
SEE "ANCHOR BOLT DETAIL" SHEET FOR ANCHOR BOLT INSTALLATION.
PRIOR TO ORDERING ANY MATERIAL, THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL BEARING HEIGHT AND SHIM THICKNESS DIMENSIONS.
MIN. JACK CAPACITY = 27.2 M TONS.



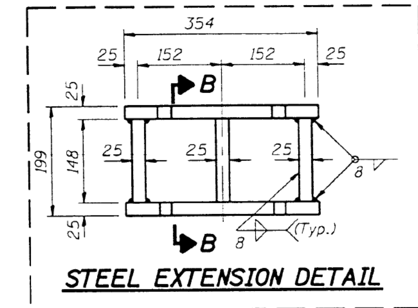
PLAN TOP AND BOTTOM PLATE



EXISTING BEARING REMOVAL DETAIL



SECTION B-B



STEEL EXTENSION DETAIL

NOTE: THE 3 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.

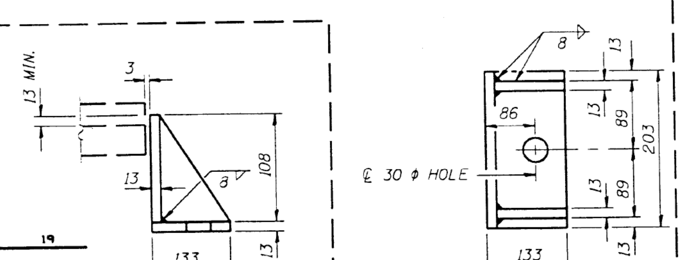
BONDING OF 3 TFE SHEET DURING VULCANIZING PROCESS WILL BE PERMITTED PROVIDED THE PROCESS AND METHOD OF ADJUSTING ASSEMBLY HEIGHT IS APPROVED BY THE ENGINEER.

NOTE:

ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED

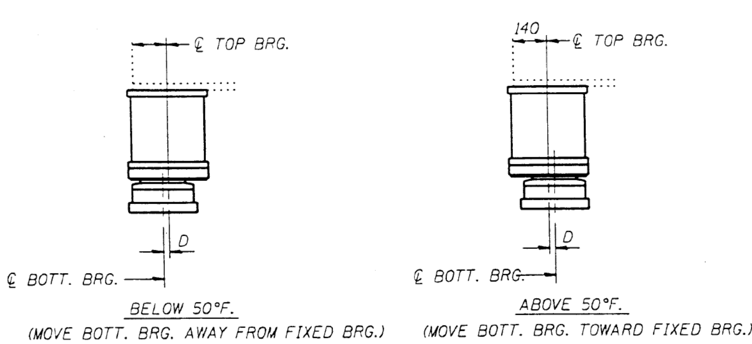
BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE II	EACH	12



SIDE RETAINER

EQUIVALENT ROLLED ANGLE WITH STIFFENERS WILL BE ALLOWED IN LIEU OF WELDED PLATES.



SETTING ANCHOR BOLTS AT EXP. BRG.

D=3 PER EACH 100' OF EXPANSION FOR EVERY 15° TEMP. CHANGE FROM THE NORMAL TEMP. OF 50°F.

ESTIMATED WEIGHT OF STRUCTURAL STEEL PER BEARING - 75 KG

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ELASTOMERIC BEARING DETAILS
EAST ABUTMENT
SN 041-0075 & 041-0076
LOCATION 3
DRAWN BY
DATE CHECKED BY

BIG MUDDY RIVER

DESIGNED	
CHECKED	
DRAWN	
CHECKED	

19
EXAMINED
ENGINEER OF STRUCTURAL SERVICES
PASSED
ENGINEER OF BRIDGES AND STRUCTURES

TYII/REPS 8-03-98

1 As Revised 4-16-99 VHV

•DATE•

c:\projects\jfs00004\94678eb.dgn Apr. 16, 1999 09:45:37

Bench Mark : Chiseled "O" on top of S.W. wing of L. & N. R.R. Structure. Elev. 473.65

Existing Structure : Str. No. 041-0046 Built as S.B.I. Route 142, Sec. 113V-NRS, Sta. 583+66.65 in 1933 - three span steel H-Beam Total length 129'-1½", Roadway width 28'-7" (Widened in 1952 under Sec. 113-BY) Superstructure and parts of the substructure to be removed by the contractor Stage Construction to be utilized. No Salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 849	113VBR	Jefferson	22	5

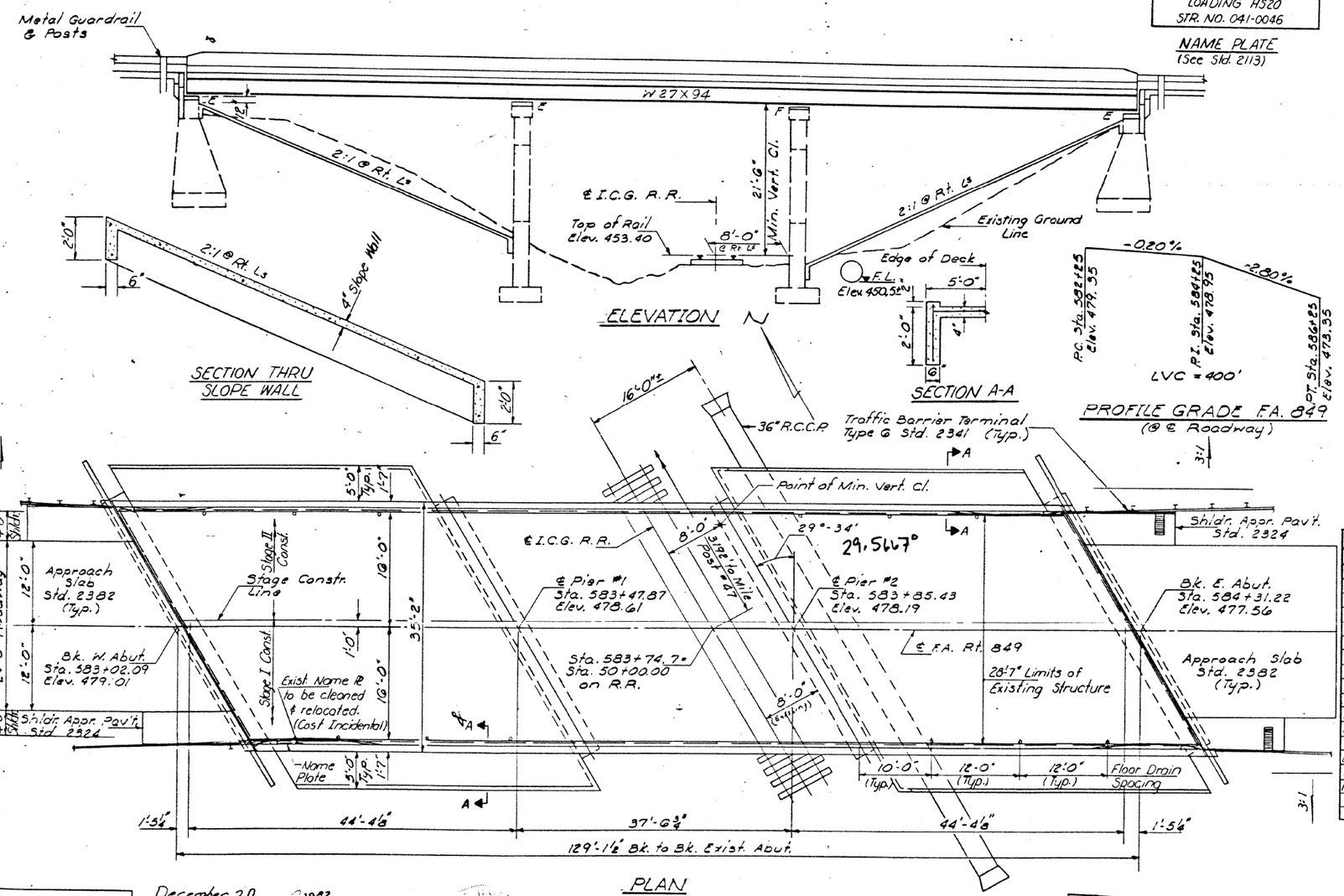
SHEET NO. 1
14 SHEETS

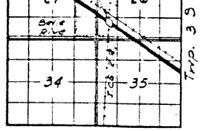
FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT: BR-F-849(1)

FOR INFORMATION ONLY SN 041-0046

STATION 583+66.65
REBUILT 19 BY
STATE OF ILLINOIS
F.A. RT. 849 SEC. 113-VBR
F.A. PROJECT BR-F-849(1)
LOADING HS20
STR. NO. 041-0046

NAME PLATE
(See Std. 2113)





GENERAL NOTES

FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 3/4" DIA., OPEN HOLES 13/16" DIA. OR BOLTS 7/8" DIA., OPEN HOLES 15/16" DIA., UNLESS OTHERWISE NOTED.

CALCULATED WEIGHT OF STRUCTURAL STEEL = 60,670 LBS. (AASHTO M223 Gr. 50) AND M,250 LBS. (AASHTO M183).
THE BASIC LEAD SILICO 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 THE WIDE FLANGE BEAMS AND ALL SPLICE PLATE MATERIAL.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 31 OR M 53 GRADE 60.

SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC, 6" X 6" - W4.0 X W4.0, WEIGHING 58 LBS. PER 100 SQ. FT.

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 3/4" DIA. 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 1/8" 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 DIMENSION OF TOP PLATE SHALL BE PROVIDED AND PLACED AS DETAILED.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Structure Excavation	Cu. Yd.		58	58
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		10	10
Floor Drains	Each	12		12
Protective Coat	Sq. Yd.	577		577
Class X Concrete	Cu. Yd.	144.1	19.3	163.4
Structural Steel	Lump Sum	1		1
Reinforcement Bars	Pound	14,190	4200	18,390
Reinforcement Bars (Epoxy Coated)	Pound	21,100		21,100
Name Plates	Each	1		1
Slope Wall 4 Inch	Sq. Yd.		469	469
Temporary Bridge Rail	Lin. Ft.	130		130
Expansion Bolts ¾"	Each		20	20
Elastomeric Bearing Assembly (Type I)	Each	10		10
Elastomeric Bearing Assembly (Type II)	Each	5		5
Preformed Joint Seal 2½"	Lin. Ft.	40		40
Preformed Joint Seal 4"	Lin. Ft.	40		40

DESIGN STRESSES

f'c = 3,500 psi
fy = 60,000 psi (Reinf.)
fy = 50,000 psi (AASHTO M-223-Grade 50) Struct.
fy = 36,000 psi (AASHTO M-183, Struct.)
Design Specifications: 1971 AASHTO, 1978, 1979, 1980, 1981 and 1982 Interim Specifications.
Allow 25 #/Sq. Ft. for future wearing surface.
LOADING HS20

DESIGNED	Rick Brunette
CHECKED	Mary Bloxdorf
DRAWN	J. SCHNELLER
CHECKED	Mary Bloxdorf

December 20, 1982
EXAMINED James J. Kaufmann
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
APPROVED
DIRECTOR OF HIGHWAYS

STATE OF ILLINOIS 2297

Revised: 2-20-82 R.D.

GENERAL PLAN
F.A. RTE. 849 OVER I.C.G. R.R.
F.A. RTE. 849 (ILL. 142) SEC. 113-VBR
JEFFERSON COUNTY
STA. 583+66.65

USER NAME = WILSONDA	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 11/25/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 041-0046

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	27
		CONTRACT NO. 78836		
	ILLINOIS FED. AID PROJECT			

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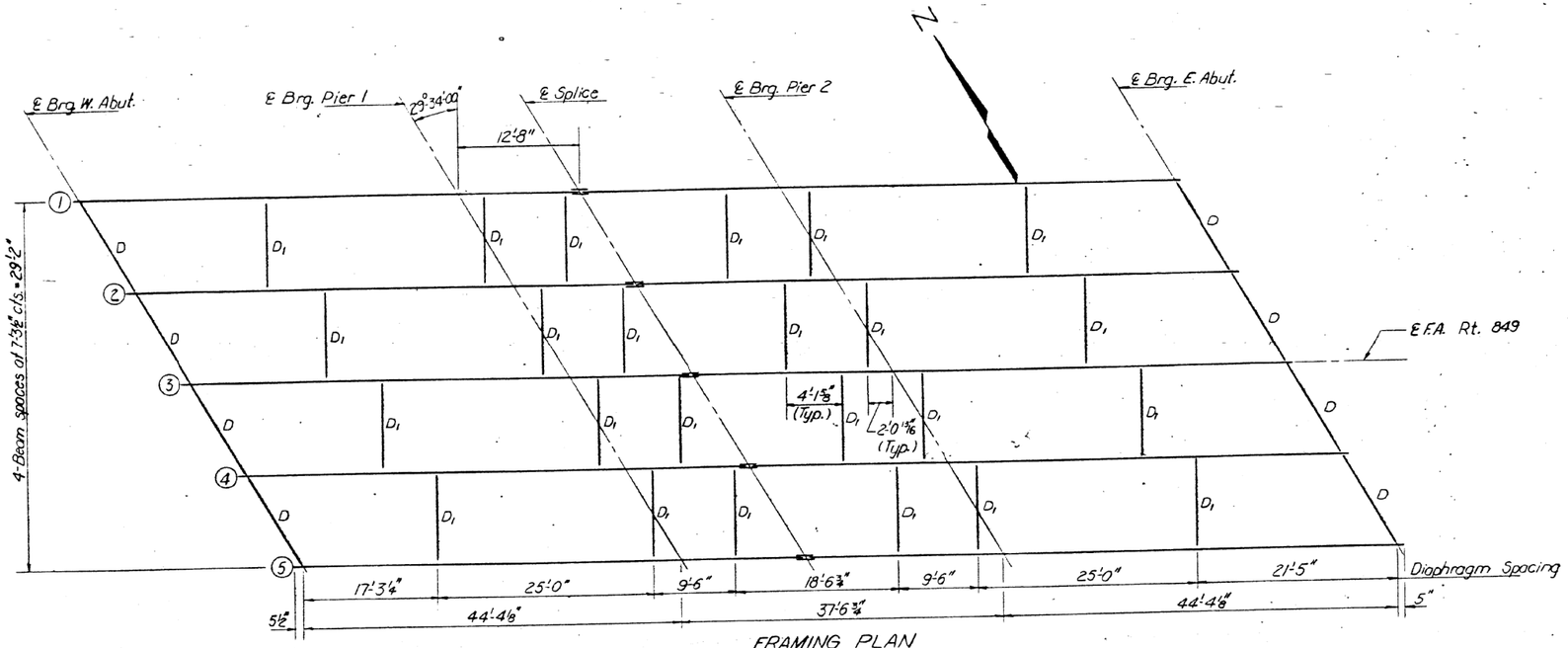
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 849	VIBVBR	Jefferson	22	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7
14 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN
(All beams are W27x94)

126'-3"
C-C Abutments

*TOP OF FLANGE ELEVATIONS TABLE
(Before any deflection)

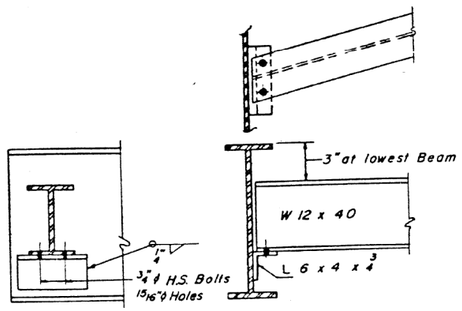
Location	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5
℄ Brg. W. Abut.	478.14	478.24	478.33	478.18	478.02
℄ Brg. Pier 1	477.71	477.80	477.87	477.72	477.55
℄ Splice	477.59	477.68	477.75	477.59	477.41
℄ Brg. Pier 2	477.30	477.38	477.45	477.28	477.10
℄ Brg. E. Abut.	476.79	476.86	476.91	476.73	476.54

* For fabrication only.

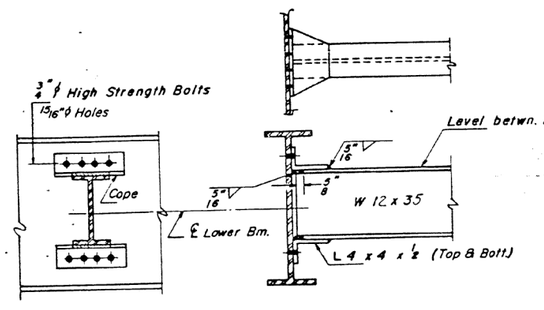
INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 or 3	Pier 1 or 2	0.5 Sp. 2
Is	(in⁴)	3270	3270	3270
Ss	(in.³)	243	243	243
ℓ	(Kft)	1.153	1.153	1.153
M℄	(1k)	249.34	-260.88	3.48
M℄	(1k)	581.94	-408.69	383.07
M Imp.	(1k)	174.59	-122.62	114.93
Total	(1k)	1005.87	-792.19	501.48
fs Total	(ksi)	49.67	39.12	24.76

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
R_ℓ	(k)	21.04	51.74
$R_{\text{℄}}$	(k)	35.40	44.84
Imp.	(k)	10.62	13.45
R_{TOTAL}	(k)	67.06	110.03

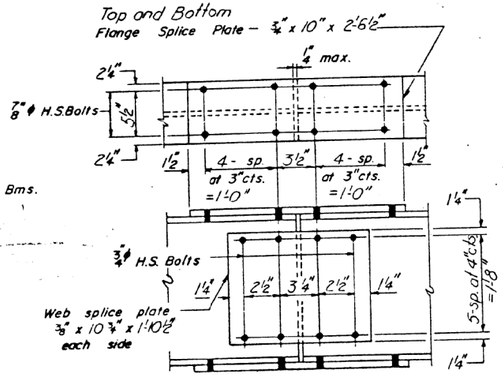
Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs Total. The load factor (1.3)[℄+⅓(℄+Imp.)] is used in computing moments and stresses.



DIAPHRAGM D
8- Required



DIAPHRAGM D1
24 - Required



Note : Two hardened washers shall be required over all 15/16" ϕ holes. All contact surfaces of joints shall be free of paint or lacquer.

SPLICE

DESIGNED	Rick Brunette
CHECKED	Mary Bloxdorf
DRAWN	R. Doty
CHECKED	Mary Bloxdorf

December 20, 1982
EXAMINED
PASSED
APPROVED

NOTES:
For note on Notch Toughness Requirements see sheet #1.
Diaphragms and connecting angles shall be AASHTO M183.
Beams and splice plates shall be AASHTO M223, Gr.50.

FOR INFORMATION ONLY
SN 041-0046

STRUCTURAL STEEL
F.A. RT. 849 SEC. 113-VIBR
JEFFERSON COUNTY
STA. 583+66.65

USER NAME = WILSONDA	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 11/25/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 041-0046

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	28
		CONTRACT NO. 78836		
		ILLINOIS	FED. AID PROJECT	

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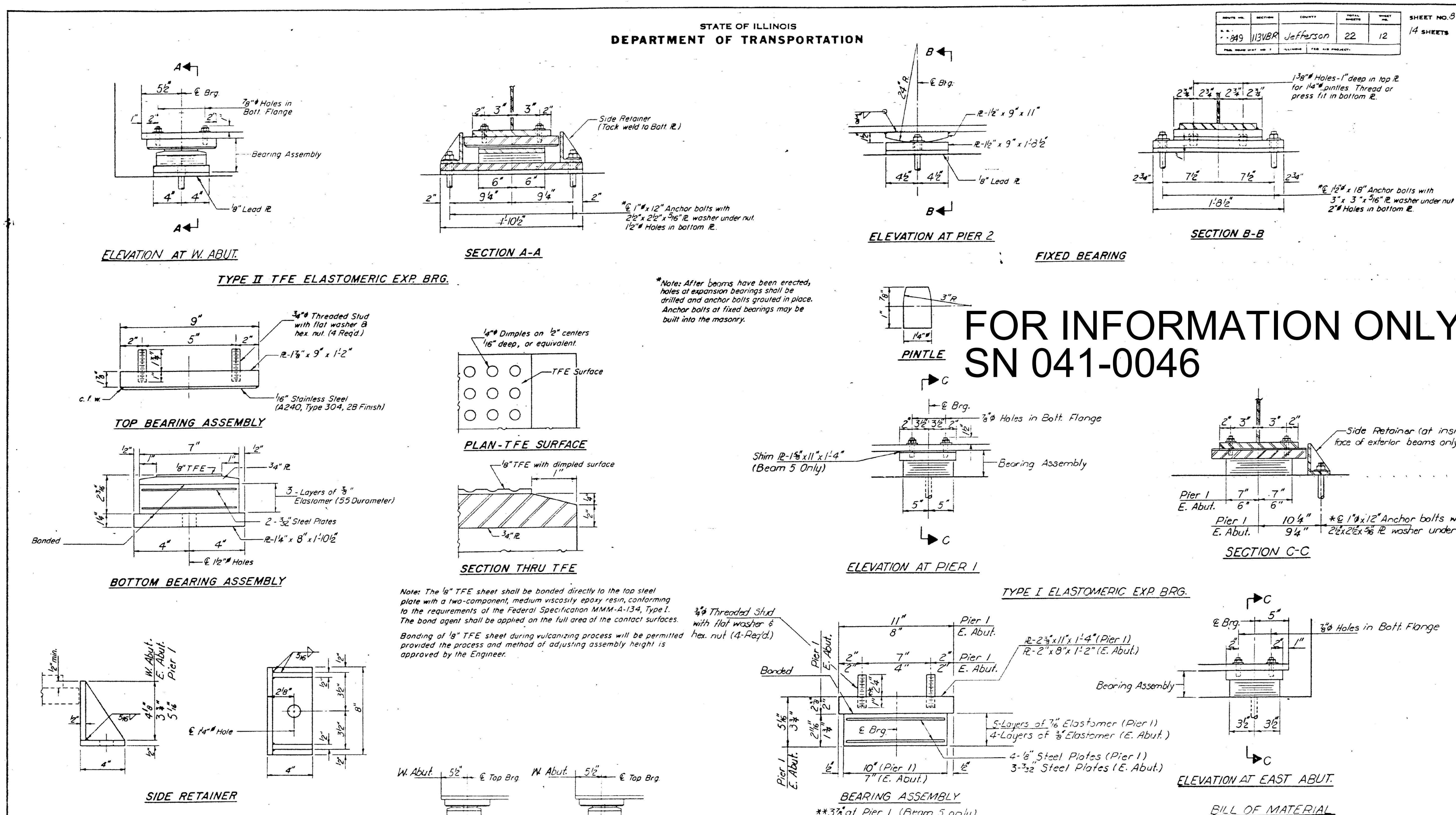


BILL OF MATERIAL

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

BEARING DETAILS
F.A. RT. 849 SEC. 113-VBR
JEFFERSON COUNTY
STA. 583+66.65

DESIGNED	Rick Brunette
CHECKED	Mary Bloxdorf
DRAWN	R. Doty
CHECKED	Mary Bloxdorf

December 20, 1982
EXAMINED
PASSED
APPROVED
DIRECTOR OF HIGHWAYS

I-2-F2

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/25/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 041-0046

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	29

CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

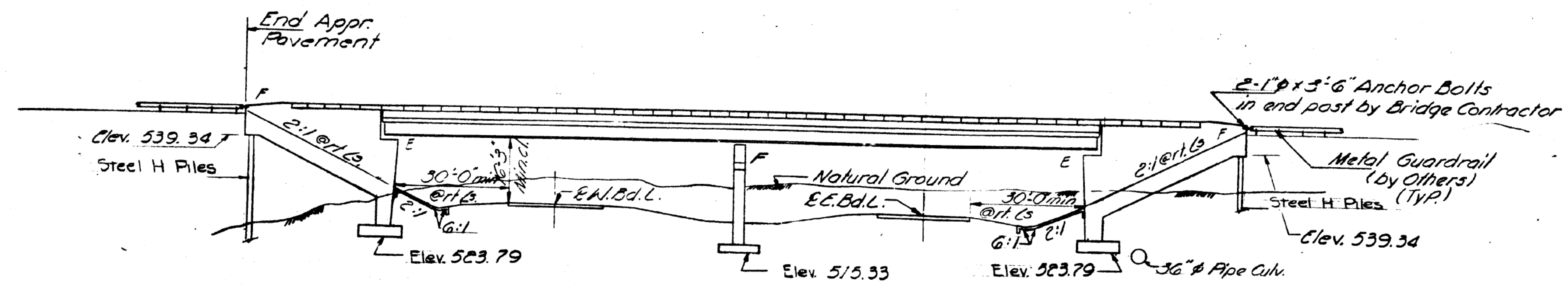
BM : 60d Spike in power pole, 24' left of Station 3+84, Elev. 528.23

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 64	41-GHB-1	JEFFERSON	27	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
13 SHEETS

FOR INFORMATION ONLY SN 041-0064



GENERAL NOTES

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

H.S. Bolts 7/8" φ, open holes 15/16" φ, unless otherwise noted.

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

Calculated weight of Structural Steel. = 147,370 Lbs

The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.

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 bolting 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 Handrail Concrete.

The Contractor shall drive one steel test pile in a permanent location at the North Approach Abutment as directed by the Engineer before ordering remainder of piles.

STATION 3409+20.89
BUILT 1970 BY
STATE OF ILLINOIS
F.A.I. RT. 64 SEC. 41-GHB-1
PROJ. I-64-3(47)
LOADING HS 15

CURVE DATA

Δ = 23°38'
D = 0°28'
T = 2568.67
L = 5064.29
R = 12277.67
E = 265.22
PI = 3403+33.42
PC = 3377+64.75
PT = 3428+29.04

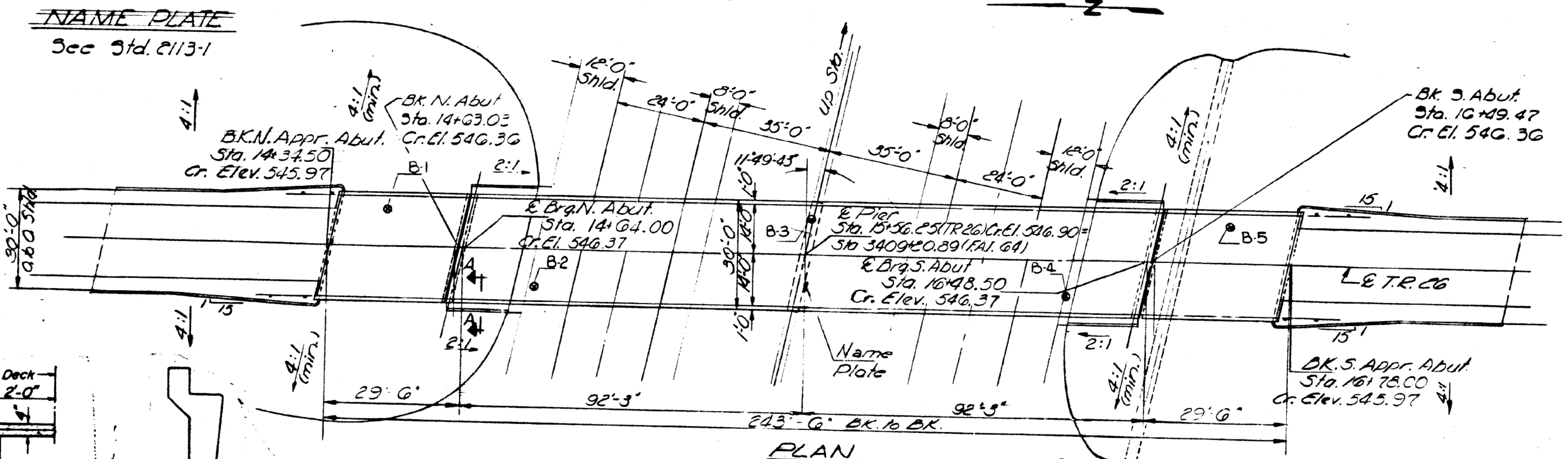
ELEVATION

SE = .015 Ft. Per Ft. Width Attained
From Sta. 3376+31.4 to 3378+31.4
From Sta. 1867+06.7 to 1865+06.7

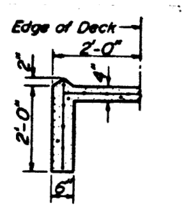
NAME PLATE
See Std. 2113-1

TOTAL BILL OF MATERIAL

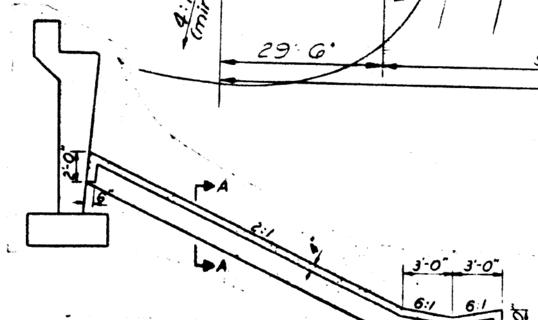
Item	Unit	Super	Sub	Total
Class A Excav. for Structures	Cu. Yds.		315	315
Class X Concrete	Cu. Yds.	239.6	210.7	450.3
Structural Steel	Lump Sum	1		1
Reinforcement Bars	Lbs.	54,020	22,940	76,960
Steel Piles 8 BP 36	Lin. Ft.		243	243
Test Piles, Steel 8 BP 36	Ea.		1	1
Name Plates	Ea.		1	1
Slope Wall 4"	Sq. Yds.		195	195
Protective Coat	Sq. Yds.	900		900
Aluminum Railing	Lin. Ft.	445		445
Preformed Joint Sealer	Lin. Ft.	62		62
Stud Shear Connectors	Ea.	1248		1248
Precast Pre-stressed Concrete I-Beams 36"	Lin. Ft.	219		219



PLAN



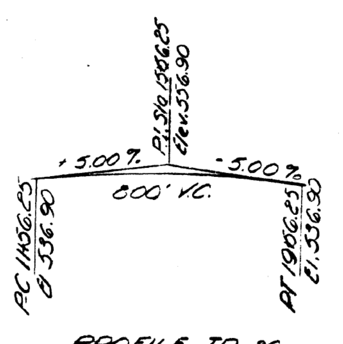
SECTION A-A



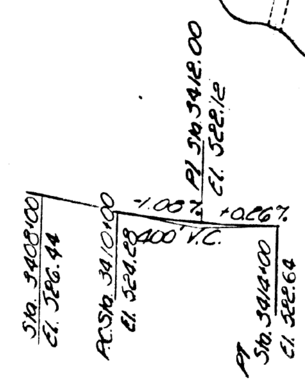
SECTION THRU SLOPEWALL

PRECAST PRESTRESSED UNITS

f'c = 5,000 psi
f'ci = 4,000 psi
f's = 248,000 psi-strands
fsi = 173,600 psi-strands



PROFILE T.R. 26



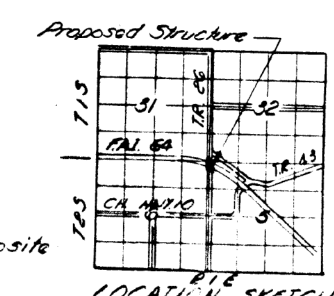
PROFILE FAI 64

DESIGN STRESSES

fc = 1800 psi (Deck Slab)
fc = 1400 psi (Curb, parapet, Sub.)
fs = 20,000 psi (Reinf.)
fs = 20,000 psi (Struct.)
Vc = 75 psi (Ftgs.)
n = 10

Allowable Future W.S. 25#/sq. ft.
Allowable ℄ a 41200 Composite

LOADING HS 15-44



LOCATION SKETCH

PROJ. I-64-5(47)60
GENERAL PLAN & ELEVATION
T.R. 26 over FAI. RT. 64
FAI RT. 64 SEC. 41-GHB-1
JEFFERSON COUNTY
STATION 3409+20.89 (FAI)
STATION 15+56.25 (T.R.)

DESIGNED	[signature]	EXAMINED	[signature] ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
CHECKED	Suresh T Desai	PASSED	[signature] ENGINEER OF DESIGN
DRAWN	D.N. Williams Sr.	APPROVED	Richard H. Golterman CHIEF HIGHWAY ENGINEER
CHECKED	Suresh T Desai		

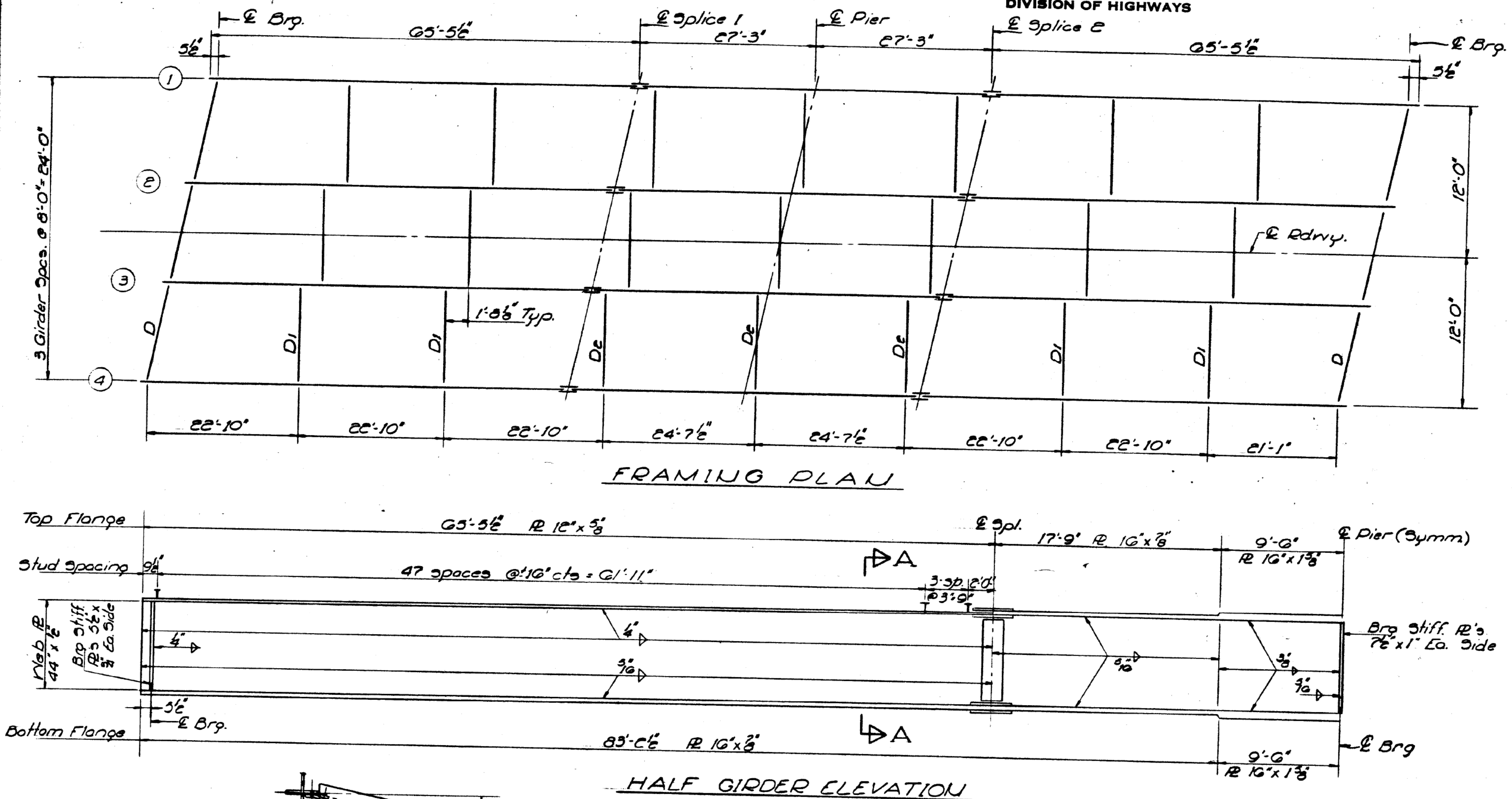
April 28 1969

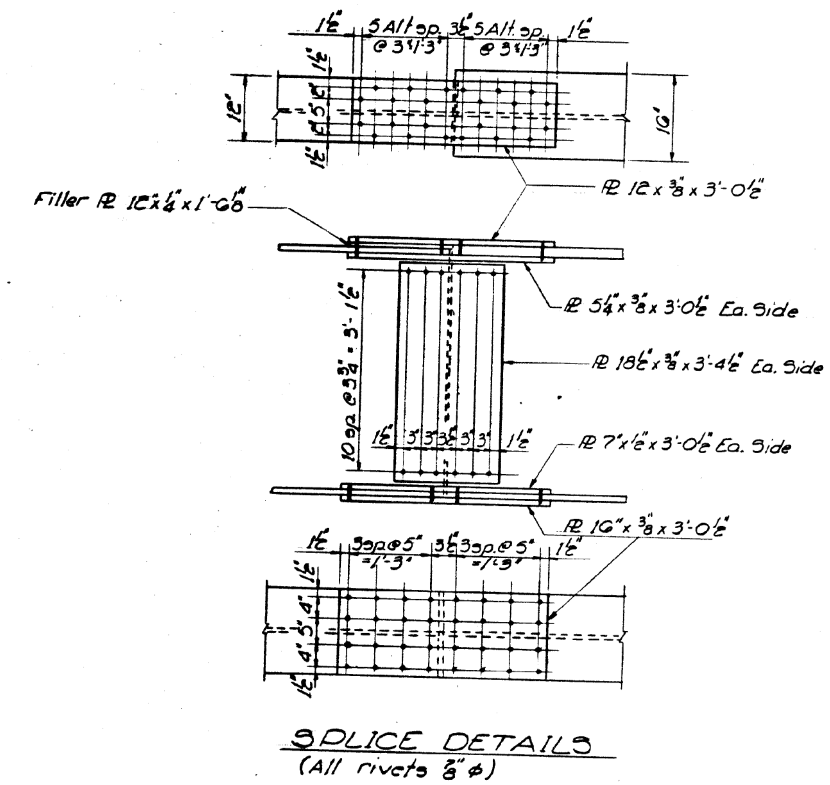
USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 041-0064	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	30
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 78836				
PLOT DATE = 11/25/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

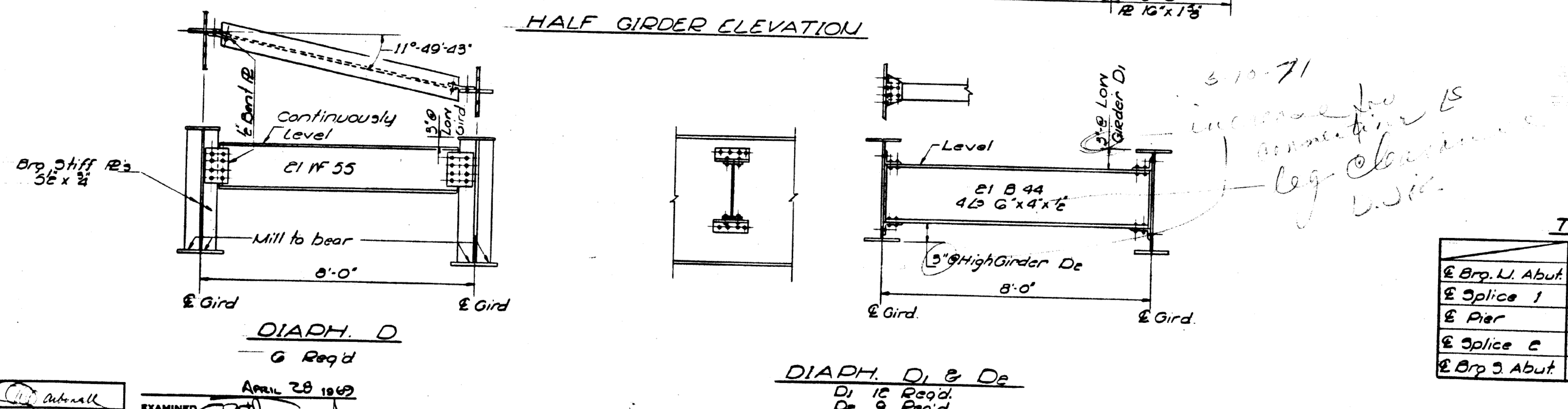
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

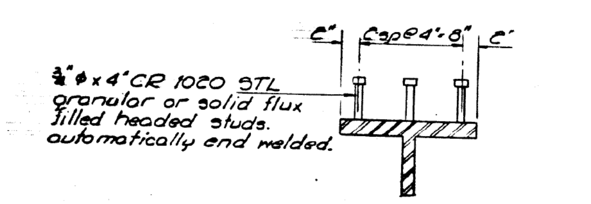
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 64	41-GHB-1	JEFFERSON	37	16

SHEET NO. 8 / 13 SHEETS









SEC. A-A
(312 Studs per Girder)

TOP OF WEB ELEVATIONS

	Girder 1	Girder 2	Girder 3	Girder 4
℄ Brg. W. Abut.	545.57	545.66	545.66	545.55
℄ Splice 1	545.94	546.03	546.03	545.92
℄ Pier	545.93	546.02	546.02	545.91
℄ Splice 2	545.92	546.01	546.01	545.90
℄ Brg. E. Abut.	545.53	545.62	545.62	545.61

DESIGNED	(signature)
CHECKED	Suresh T. Desai
DRAWN	Schneller
CHECKED	Suresh T. Desai

April 28 1969
EXAMINED (signature)
PASSED W. E. Baumann
APPROVED Richard H. Golterman

FOR INFORMATION ONLY SN 041-0064

STRUCTURAL STEEL
F.A.I. RT. 64 SEC 41-GHB-1
JEFFERSON COUNTY
STA. 3409+20.89

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USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/25/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 041-0064

SCALE: SHEET OF SHEETS STA. TO STA.

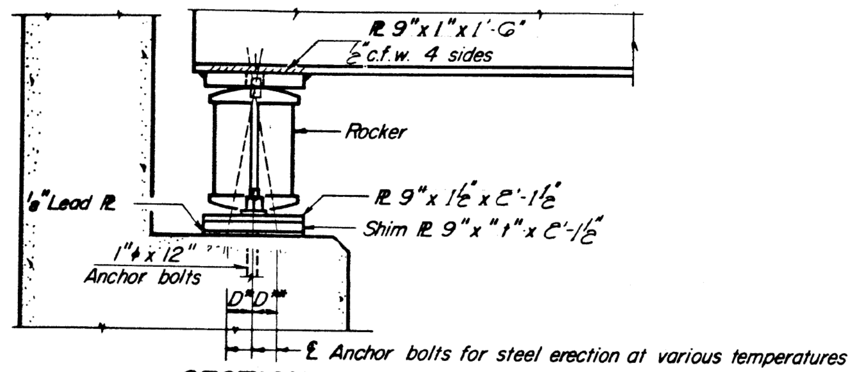
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	31

CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

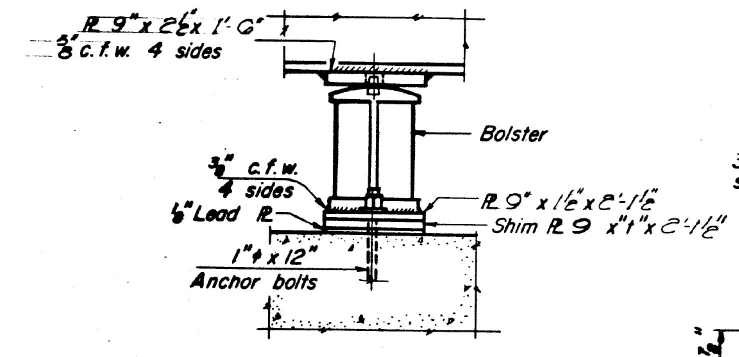
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. 64	41-6HB-1	JEFFERSON	27	17

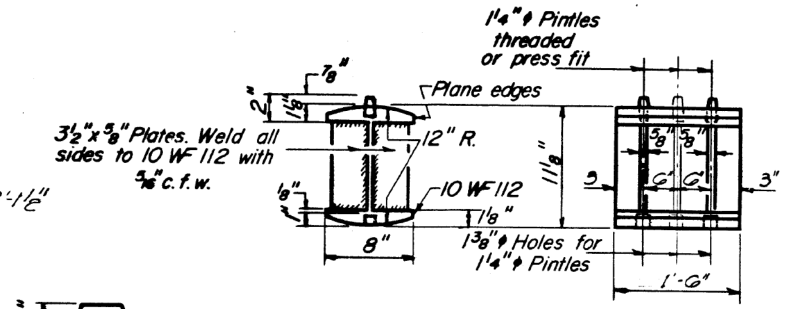
SHEET NO. 9
13 SHEETS



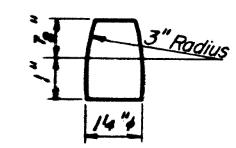
SECTION



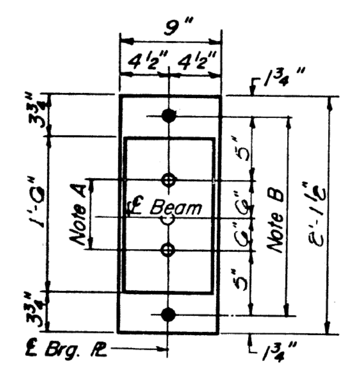
ELEVATION



ROCKER



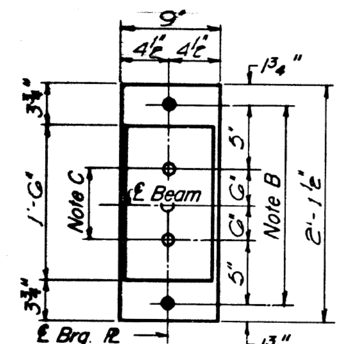
PINTLE



PLAN

AT ABUTMENT

NOTE A
1 3/8"⌀ Holes - 1" deep in top PL for pintles. Thread or press fit pintles into bottom PL.

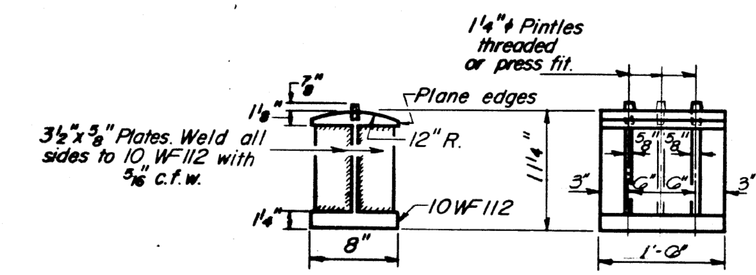


NOTE B
1 1/2"⌀ Holes for 1"⌀ anchor bolts. 2 1/2"x2 1/2"x5/16" PL. Washers under nut.

PLAN

AT PIER

NOTE C
1 3/8"⌀ Holes 1" deep in top PL only for 1 1/4"⌀ pintles.



BOLSTER

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

a) D* (Side of brg. away from fixed brg.)
D* = 1/8" per each 100' of expansion for every 15° fall below the normal temp. of 50°F.
D** (Side of brg. toward fixed brg.)
D** = 1/8" per each 100' of expansion for every 15° rise above the normal temp. of 50°F.

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.

BEARING ASSEMBLY DETAILS

FOR INFORMATION ONLY SN 041-0064

~~SHIM PLATES "t"~~

	Girder 1	Girder 2	Girder 3	Girder 4
North Abut.	1/4"	0	0	0
Pier	1/4"	0	0	0
South Abut.	0	0	0	1"

~~PROPERTIES~~

Steel	
I.4 sp	13838 in⁴
I Pier	30615 in⁴
Composite Sec.	
Ic	36957 in⁴
Sct	4292 in³
Scb	1002 in³

~~TABLE OF MOMENT & SHEARS INT. BEAMS~~

Moments - Ft. kips	.4 Span	Pier
D.L.	492.5	1186.4
S.D.L	292.4	375.0
LL + Imp.	728.8	598.1

Shear - kips	Abut.	.2 sp	.5 sp	.7 sp.	Pier
D.L.	30.8	22.0	20.2	32.7	56.5
S.D.L.	14.1	9.8	7.4	12.4	22.2
LL + Imp.	42.5	39.2	38.1	39.6	41.6

DESIGNED	[signature]
CHECKED	Suresh T. Desai
DRAWN	SCHUELLER P.G. Barnett
CHECKED	Suresh T. Desai

APRIL 28 1969
EXAMINED [signature] ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED [signature] ENGINEER OF DESIGN
APPROVED Richard H. Golterman CHIEF HIGHWAY ENGINEER

BEARING DETAILS
F.A.I. RT. 64 SEC. 41-6HB-1
JEFFERSON COUNTY
STA. 3409+20.89

I-2-B 9-1-65

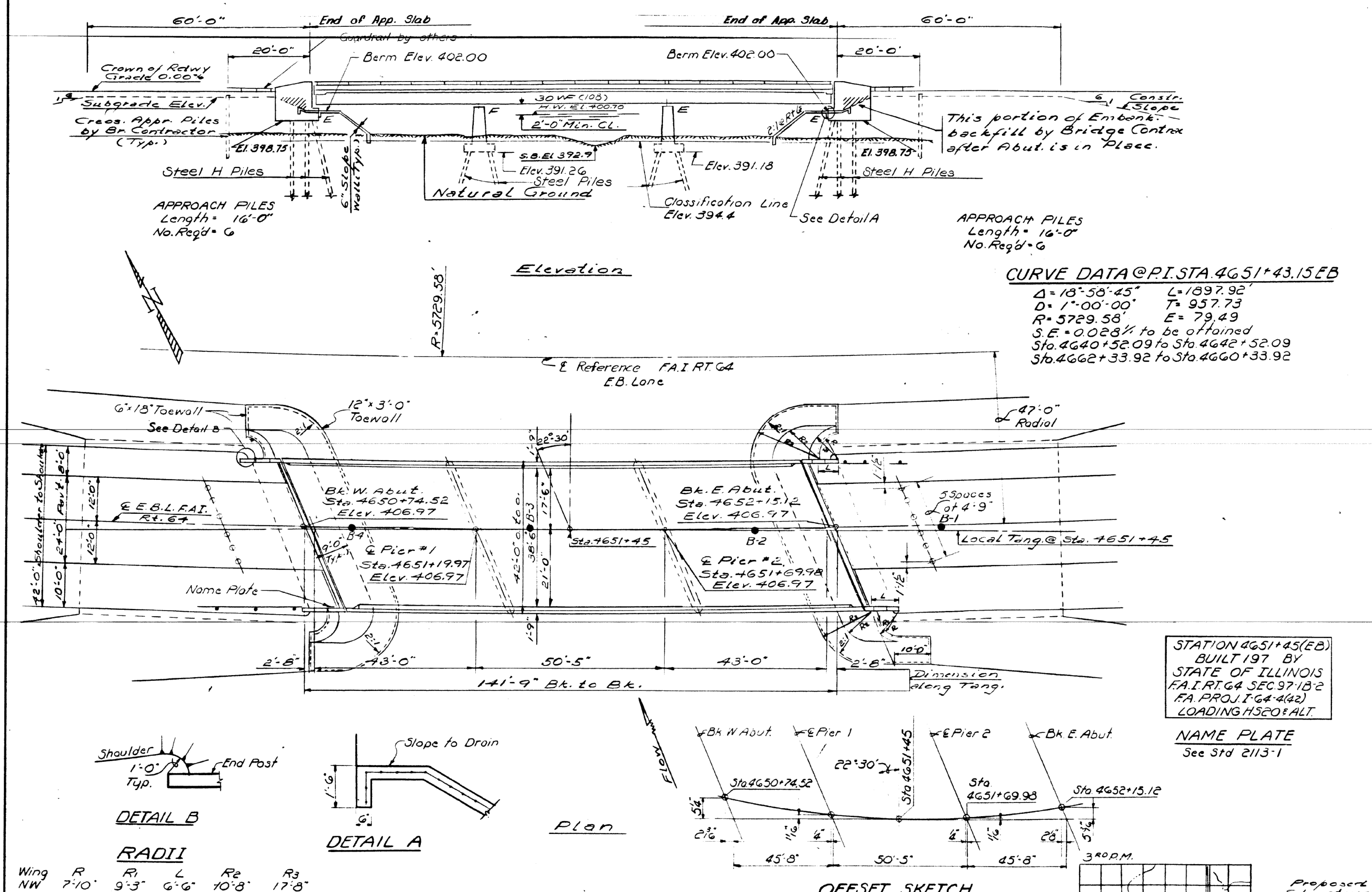
B.M. #40 - 60' Rt. Sta. 4648+30 E.B. F.A.I. 64 - Conc. Nail in 12" Tree - Elev. 401.64

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

96-4B-4, 96-48-5
97-18-1, 97-18-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 64	#	WAYNE WHITE	54	36
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
SHEETS 10



GENERAL NOTES

Calculated plan weight of structural steel = 115,100 Lbs.

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

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

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

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

Expansion guards are included in the quantity of steel. Est. Wt. = 2410 Lbs.

Anchor bolts shall be set before fastening diaphragms over support.

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 Handrail Concrete.

All structural steel shall conform to ASTM A-36.

Excavation for portions of the structure in the embankment shall not be classified.

The basic lead silico chromate paint system shall be used for shop and field painting of structural steel.

The contractor shall drive one steel pile at the East Abut. and one steel pile at Pier 1, in permanent ~~locations as directed by the Engineer before ordering the remainder of piles.~~

Steel piles are to be driven to refusal.

FIELD WELDING OF CONSTRUCTION ACCESSORIES TO THE BOTTOM FLANGES OR FOR A DISTANCE OF ¼ OF THE SPAN EACH WAY FROM PIER SUPPORTS ON THE TOP FLANGES OF BEAMS OR GIRDERS WILL NOT BE PERMITTED. FIELD WELDING IN OTHER AREAS WILL BE PERMITTED ONLY WHEN APPROVED BY THE ENGINEER.

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.

Fasteners shall be high strength bolts. Bolts ¾"φ, open holes 13/16"φ, unless otherwise noted.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Class A Excavation For Structures	Cu Yds			155
Class B Excavation For Structures	Cu. Yds.			115
Class X Concrete	Cu. Yds.	162.7	200.0	362.7
Structural Steel	L.S.	0.14		0.14
Aluminum Railing	Lin. Ft.	276		276
Reinforcement Bars	Lbs.	48720	13,080	61,800
Steel Piles (8BP36)	Lin. Ft	——	1370	1370
Test Piles Steel ~ 8BP36	Each	——	2	2
Creosoted Piles (Up to 20')	Lin. Ft	——	——	192
Name Plates	Each			1
Slope Wall (6")	Sq. Yds.			448.5
Protective Coat	Sq. Yds.			747
* Bridge Seat Sealant	Lump Sum			.20

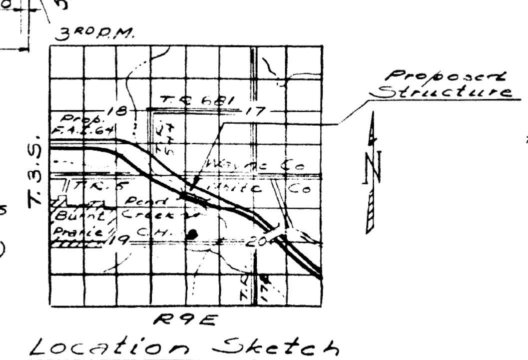
* At Abutments only.

WATERWAY INFORMATION

Drainage Area 2270 Acres
Character - Level, rolling, wooded, cultivated
Required Opening (50 Y F) 370 Sq. Ft.
Proposed Opening 370 Sq. Ft.
Ordinary Water El. 394.4
Low Water Elev. 393.4

Design Stresses

f_c = 1400 psi Super & Sub.
V_c = 75 psi Ftgs & Wing Walls
f_s = 20000 psi Reinf.
f_s = 20,000 psi Struct. (A-36)
n = 10
℄ Deflection = L/1000
Loading: HS20-44 & Alt.

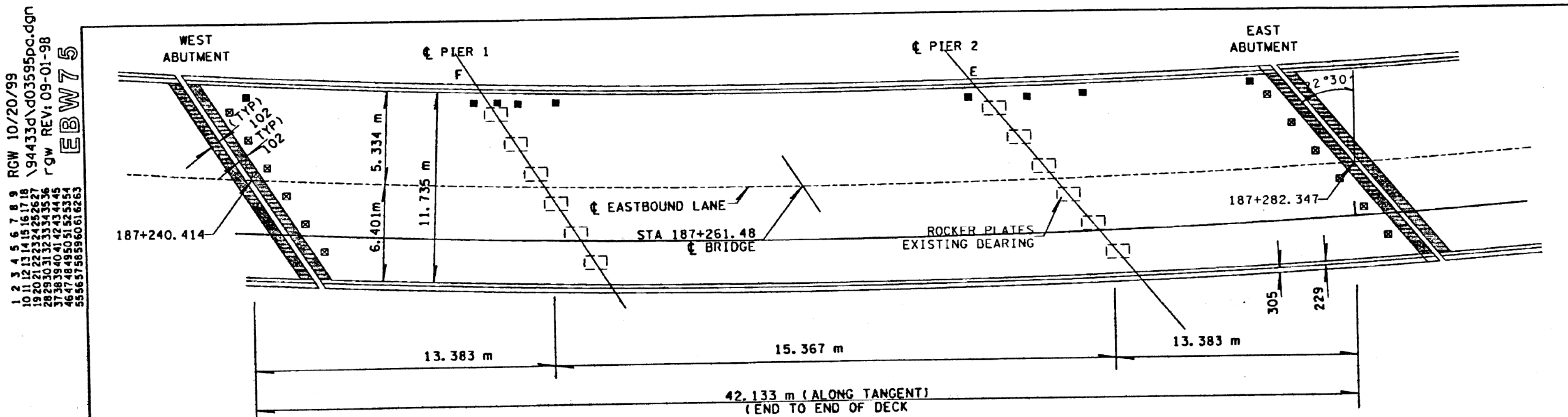


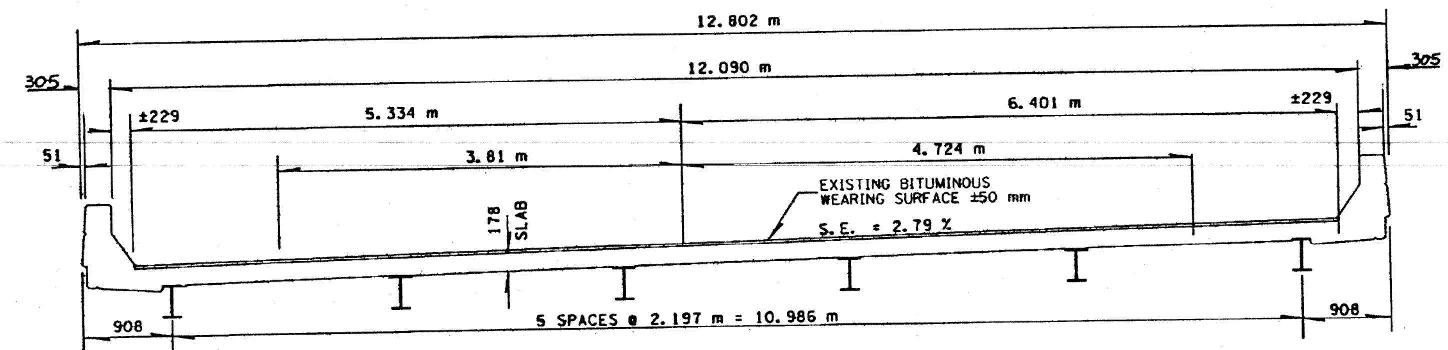
DESIGNED	
CHECKED	
DRAWN	
CHECKED	SFM

EXAMINED
PASSED
APPROVED

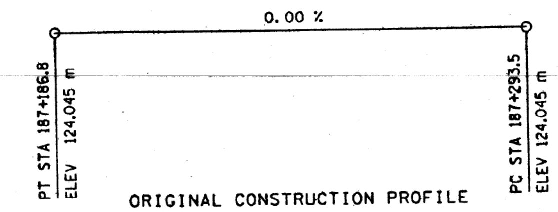
PROJECT I-64-4(42) 107
GENERAL PLAN & ELEVATION
F.A.I. RT. 64 OVER POND CREEK
F.A.I. RT. 64 SEC. 97-1B-2
WHITE COUNTY
STA 4651+45 (EB)

7-68





CROSS SECTIONS
(LOOKING EAST)

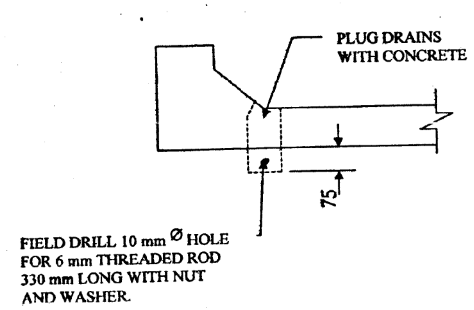


ORIGINAL CONSTRUCTION PROFILE

NOTE: ALL MEASUREMENTS ARE IN mm UNLESS OTHERWISE NOTED.

LEGEND

- ▪ EXPANSION BEARINGS TO BE REPLACED WITH NEW ELASTOMETRIC BEARINGS
- ▪ PLUG EXISTING DECK DRAIN WITHIN 3 m OF SUBSTRUCTURE



DRAIN PLUGGING DETAIL

RGW 10/20/99

STRUCTURE NO. 097-0040

CODE NO.	ITEM	UNIT	TOTAL
MX032077	POLYMER CONCRETE	CU M	0.3
MX032195	SILICONE JOINT SEALER, 40 MM	M	28
MZ006110	BRIDGE DECK MICROSILICA CONCRETE OVERLAY	SQ M	495
MZ006200	BRIDGE DECK SCARIFICATION	SQ M	495
MZ016001	DK SLAB REP FD TYP I	SQ M	5
MZ016002	DK SLAB REP FD TYP II	SQ M	5
MZ016200	DECK SLAB REPAIR (PARTIAL)	SQ M	13
M4402110	BITUMINOUS CONCRETE REMOVAL (DECK)	SQ M	495
M5030390	BRIDGE DECK GROOVING	SQ M	469
M5050405	FURNISHING AND ERECTING STRUCTURAL STEEL	KG	860
X0321467	PLUG EXISTING DECK DRAINS	EACH	9
50300310	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	6
50300320	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	6
50500715	JACK AND REMOVE EXISTING BEARINGS	EACH	12

GENERAL NOTES FOR ALL STRUCTURES

PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING STRUCTURE HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIAL. 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.

A QUANTITY OF EPOXY PAVEMENT MARKING LINE - 100MM HAS BEEN CALCULATED TO ALLOW FOR THE PLACEMENT OF TWO EDGELIINES AND A CENTERLINE ON THE CONCRETE OVERLAY AFTER THE COMPLETION OF THE REPAIR WORK. THE TOTAL QUANTITY OF 100MM WIDTH MARKING CONSISTS OF 167 METERS OF WHITE AND 130 METERS OF YELLOW.

THE QUANTITY OF TEMPORARY PAVEMENT MARKING - LINE 100MM HAS BEEN CALCULATED TO ALLOW FOR THE PLACEMENT OF TWO EDGELINES DURING THE DECK REPAIR OPERATIONS AND TWO EDGELINES AND A CENTERLINE ON THE PAVEMENT AFTER THE COMPLETION OF THE REPAIR WORK.

THE LOCATIONS OF THE EXISTING DECK DRAINS TO BE PLUGGED ARE APPROXIMATE. THESE LOCATIONS WERE DERIVED FROM THE ORIGINAL BRIDGE PLANS. ANY DRAINS THAT ARE LOCATED WITHIN THREE METERS OF A SUBSTRUCTURE ELEMENT ARE TO BE PLUGGED.

FOLLOWING THE REMOVAL OF THE BITUMINOUS SURFACE AND WATERPROOFING, THE BRIDGE DECK SHALL BE SCARIFIED TO A DEPTH OF 15MM. THE BRIDGE DECK MICROSILICA CONCRETE OVERLAY SHALL BE CONSTRUCTED TO A MINIMUM THICKNESS OF 60MM.

BASE COURSE WIDENING CONSTRUCTED FOR THIS PROJECT WILL REMAIN IN PLACE. THE WIDENING SHALL BE CONSTRUCTED AS PORTLAND CEMENT CONCRETE BASE COURSE WIDENING, 200MM. THE REMOVAL OF THE EXISTING BITUMINOUS SHOULDER SHALL BE PAID FOR SEPARATELY AS BITUMINOUS SHOULDER REMOVAL. ALL OTHER EXCAVATION AND DISPOSAL OF MATERIAL WILL BE INCLUDED IN THE BID PRICE FOR BASE COURSE WIDENING.

THE PORTLAND CEMENT CONCRETE BASE COURSE WIDENING, 200MM SHALL BE REINFORCED WITH WELDED WIRE FABRIC, 152 X 152 - MW25.8 X MW25.8, WITH A MASS OF 2.91 KG/SQ. METER. THIS WELDED WIRE FABRIC WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE PCC BASE COURSE WIDENING.

BITUMINOUS SHOULDER REMOVAL SHALL CONSIST OF REMOVAL OF THE BITUMINOUS SHOULDER TO A MINIMUM DEPTH OF 200MM TO OBTAIN THE REQUIRED THICKNESS FOR THE PCC BASE COURSE WIDENING.

EXISTING REINFORCEMENT BARS SHALL BE CLEANED AND USED FOR NEW CONSTRUCTION. ALL NEW REINFORCEMENT BARS SHALL BE EPOXY COATED WITH EPOXY COATED BAR SPLICERS FOR STAGE CONSTRUCTION.

EXISTING STRUCTURAL STEEL SHALL ONLY BE CLEANED AND PAINTED AS REQUIRED BY THE SPECIAL PROVISION CLEANING AND PAINTING ADJACENT AREAS OF EXISTING STEEL STRUCTURES.

ANY REINFORCEMENT BARS THAT ARE DAMAGED DURING CONCRETE REMOVAL OPERATIONS SHALL BE REPAIRED OR REPLACED USING AN APPROVED BAR SPLICER OR ANCHORAGE SYSTEM (COST INCLUDED IN CONCRETE REMOVAL).

ALL NEW STRUCTURAL STEEL SHALL CONFORM TO AASHTO CLASSIFICATION M-270 GRADE 250.

THE EXISTING STRUCTURAL STEEL COATING CONTAINS LEAD. THE CONTRACTOR SHALL TAKE APPROPRIATE PRECAUTIONS TO DEAL WITH THE PRESENCE OF LEAD ON THIS PROJECT.

REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31M, M-42M OR M-53M, GRADE 400.

THE STATE OWNED TEMPORARY CONCRETE BARRIERS WHICH ARE TO BE USED IN THIS PROJECT ARE STORED AT THE IDOT MAINTENANCE YARD AT KNIGHTS PRAIRIE WHICH IS LOCATED APPROXIMATELY 11.3 KM WEST OF MCLEANSBORO ON ILLINOIS ROUTE 14 IN HAMILTON COUNTY. A MINIMUM OF 48 HOURS NOTICE WILL BE REQUIRED TO ARRANGE FOR PICK UP AND RETURN OF THE BARRIERS. STATE MAINTENANCE FORCES WILL NOT LOAD OR UNLOAD THE BARRIERS.

REVISIONS	
NAME	DATE

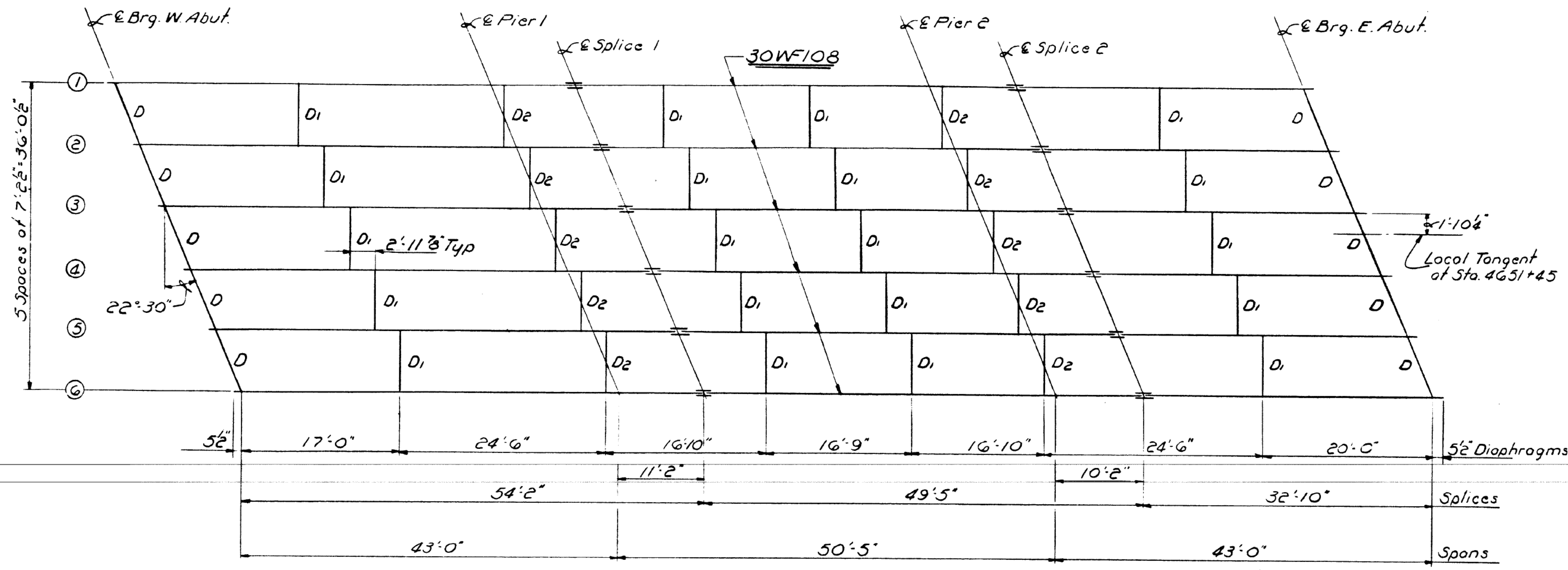
ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING STRUCTURE DETAILS
SN 097- 0040
POND CREEK (EBL)
STA 187+261.48
DRAWN BY
DATE
CHECKED BY

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

* 96-4B-4, 96-4B-5
97-1B-1, 97-1B-2

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 64	*	WAYNE WHITE	54	38
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT.		

SHEET NO. 3
SHEETS 10

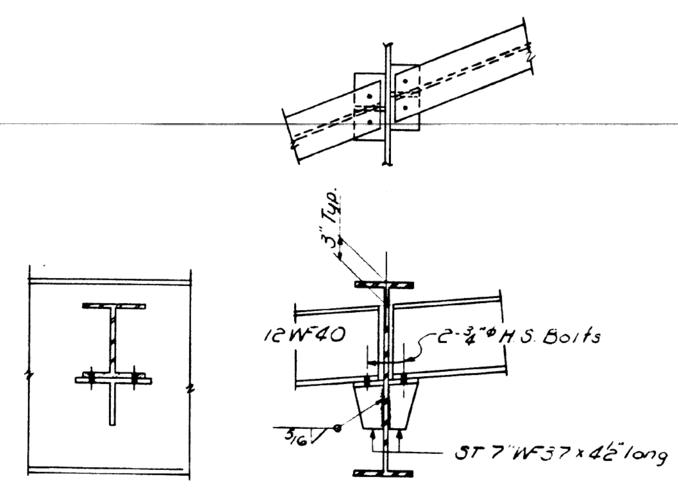


LAYOUT OF STRUCTURAL STEEL

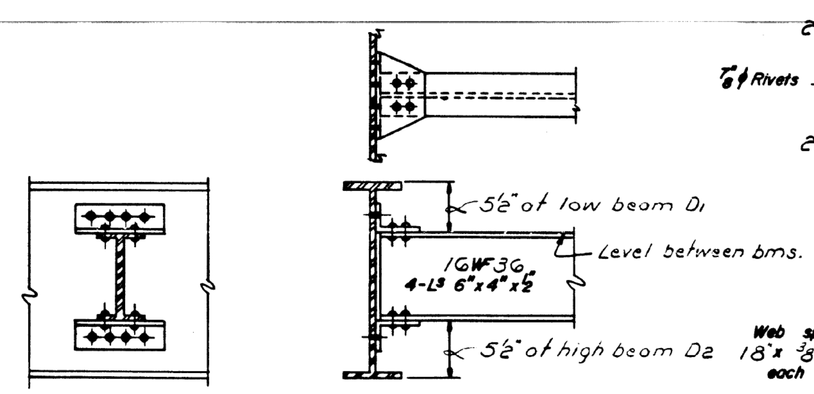
ELEVATIONS TOP WF

All bearing & splices

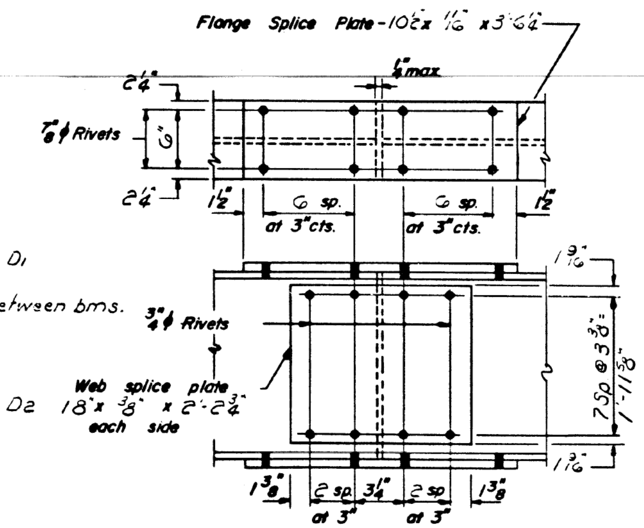
Bm. 1	405.870
2	406.072
3	406.274
4	406.476
5	406.678
6	406.880



DIAPHRAGM D
10-Required



DIAPHRAGM D1 & D2
20-D1 & 10-D2-Required



SPLICE

STRESS TABLE

TABLE OF MOMENTS & REACTIONS INTERIOR BEAM					
	MOMENTS			REACTIONS	
	.4 Sp. 1	Pier 1	.5 Sp 2	Abut.	Pier
D.L.	143.0	232.0	104.0	17.4	55.0
L.L.	264.0	203.3	255.0	39.8	48.5
Imp.	78.0	59.4	73.0	—	—
Total	485.0	494.7	432.0	57.2	103.5

Moments are in Ft-Kips
Reactions are in Kips

DESIGNED [signature]
CHECKED [signature]
DRAWN J. Schneller
CHECKED SFM

EXAMINED Dec. 9 1966 [signature]
ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED W. E. Baumann
ENGINEER OF DESIGN
APPROVED V. E. Staff
CHIEF HIGHWAY ENGINEER

FOR INFORMATION ONLY SN 097-0040

STRUCTURAL STEEL
F.A.I. RT 64 SEC 97-1B-2
WHITE COUNTY
STA. 4651+45

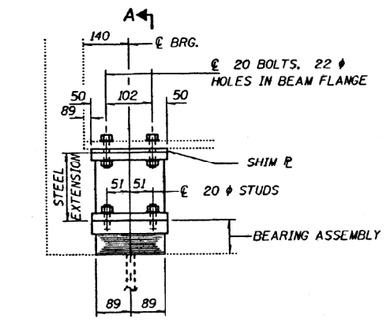
FAI	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	197-1, 97-1-1RS	WHITE	47	25
FED. ROAD DIST. NO. 7	STATE	FED. AID PROJECT NO.		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

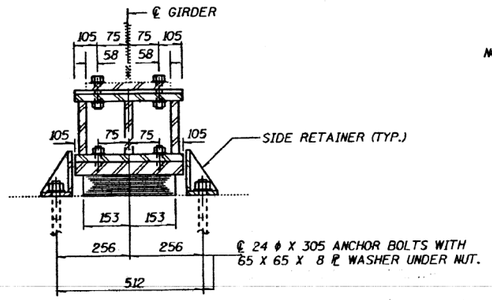
GIRDER REACTIONS

RP	(kN)	79.2
RL	(kN)	155.2
IMP.	(kN)	46.2
R (TOTAL)	(kN)	280.7

NOTES: DIAPHRAM REMOVAL AND REPLACEMENT MAY BE REQUIRED TO FACILITATE DRILLING HOLES. COST SHALL BE INCLUDED IN THE COST OF "FURNISHING AND ERECTING STRUCTURAL STEEL". NEW STEEL EXTENSIONS. SIDE RETAINERS. SHIM P'S. CONNECTION BOLTS. AND ANCHOR BOLTS ARE INCLUDED IN "FURNISHING AND ERECTING STRUCTURAL STEEL". SEE SHEET 40 OF 47 FOR ANCHOR BOLT INSTALLATION. PRIOR TO ORDERING ANY MATERIAL. THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL BEARING HEIGHT AND SHIM THICKNESS DIMENSIONS. MIN. JACK CAPACITY = 281 KN.

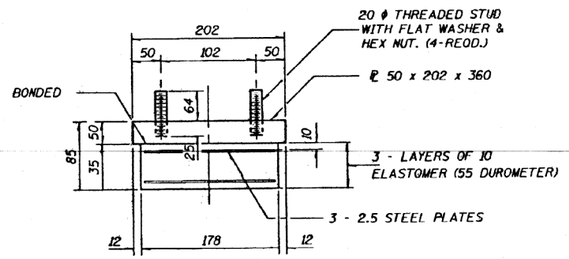


ELEVATION AT ABUTMENT



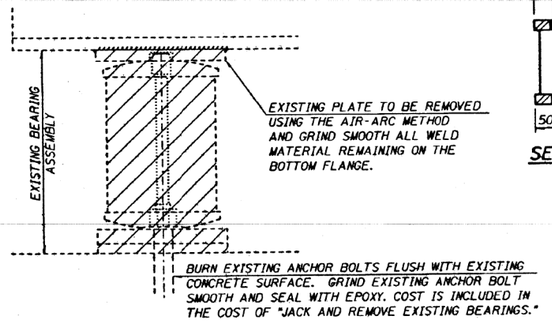
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

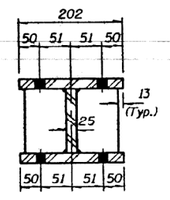


BEARING ASSEMBLY

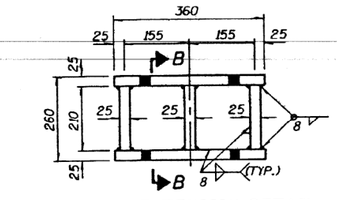
NOTE: SHIM PLATES SHALL NOT BE PLACED UNDER BEARING ASSEMBLY.



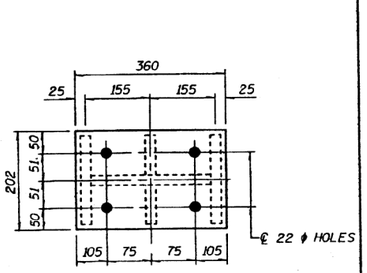
EXISTING BEARING REMOVAL DETAIL



SECTION B-B



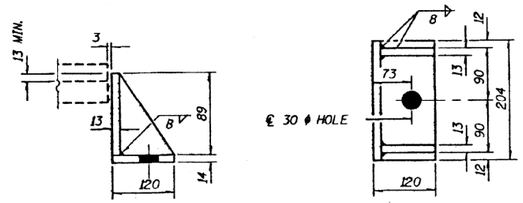
STEEL EXTENSION DETAIL



PLAN TOP AND BOTTOM PLATE

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M 300, Type 1. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".

FOR INFORMATION ONLY SN 097-0040



SIDE RETAINER

EQUIVALENT ROLLED ANGLE WITH STIFFENERS WILL BE ALLOWED IN LIEU OF WELDED PLATES.

NOTE:
ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE NOTED

BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE I	Each	6
FURNISHING AND ERECTING STRUCTURAL STEEL	kg	383

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ELASTOMERIC BEARING TYPE 1 DETAILS
POND CREEK (WEST ABUTMENT)
FAI ROUTE 64
SN 097-0040
DRAWN BY
DATE CHECKED BY

RGW 10/20/99

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/25/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 097-0040

SCALE: | SHEET OF SHEETS | STA. | TO STA.

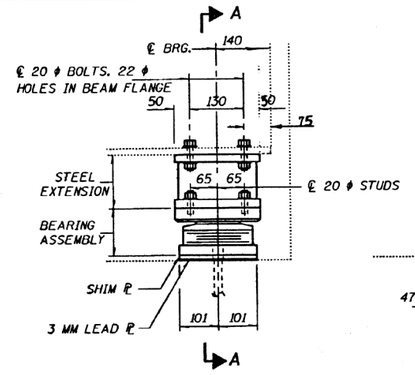
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	36
		CONTRACT NO. 78836		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

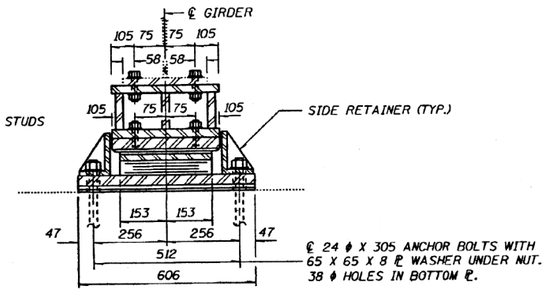
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	97-1, 97-1-1DRS	WHITE	47	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO.		

GIRDER REACTIONS

R℄	(KN)	79.2
R℄	(KN)	155.2
IMP.	(KN)	46.2
R (TOTAL)	(KN)	280.7



ELEVATION AT ABUTMENT

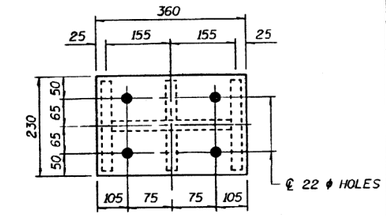


SECTION A-A

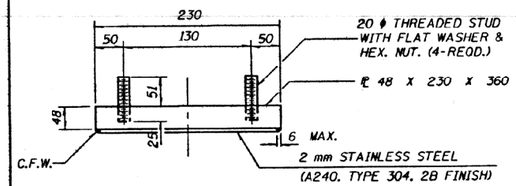
TYPE II TFE ELASTOMERIC EXP. BRG.

NOTES

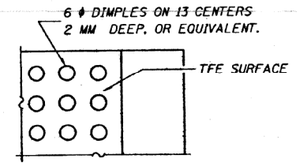
DIAPHRAM REMOVAL AND REPLACEMENT MAY BE REQUIRED TO FACILITATE DRILLING HOLES. COST SHALL BE INCLUDED IN THE COST OF "FURNISHING AND ERECTING STRUCTURAL STEEL".
NEW STEEL EXTENSIONS, SIDE RETAINERS, SHIM ℄'S, CONNECTION BOLTS, AND ANCHOR BOLTS ARE INCLUDED IN "FURNISHING AND ERECTING STRUCTURAL STEEL".
SEE SHEET 40 OF 47 FOR ANCHOR BOLT INSTALLATION.
PRIOR TO ORDERING ANY MATERIAL, THE CONTRACTOR SHALL VERIFY IN THE FIELD ALL BEARING HEIGHT AND SHIM THICKNESS DIMENSIONS.
MIN. JACK CAPACITY = 281 KN



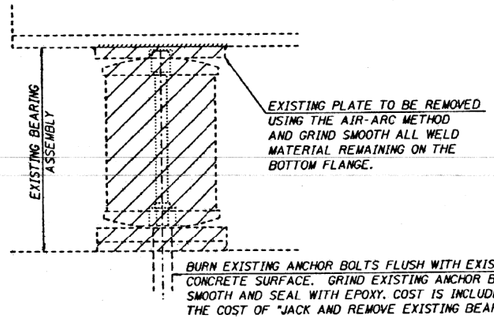
PLAN TOP AND BOTTOM PLATE



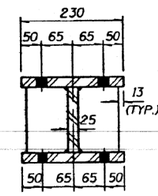
TOP BEARING ASSEMBLY



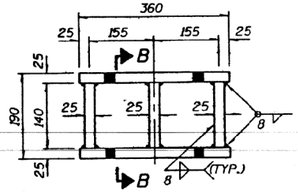
PLAN-TFE SURFACE



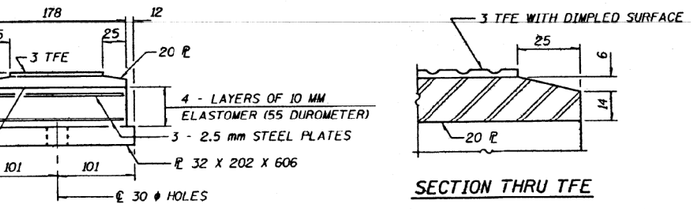
EXISTING BEARING REMOVAL DETAIL



SECTION B-B



STEEL EXTENSION DETAIL



BOTTOM BEARING ASSEMBLY

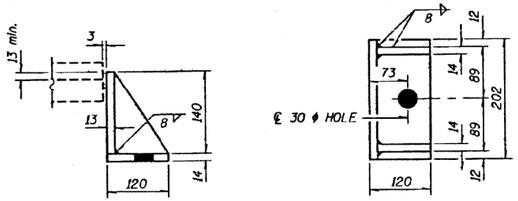
SECTION THRU TFE

NOTE: THE 3 MM 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 3 MM TFE SHEET DURING VULCANIZING PROCESS WILL BE PERMITTED PROVIDED THE PROCESS AND METHOD OF ADJUSTING ASSEMBLY HEIGHT IS APPROVED BY THE ENGINEER.

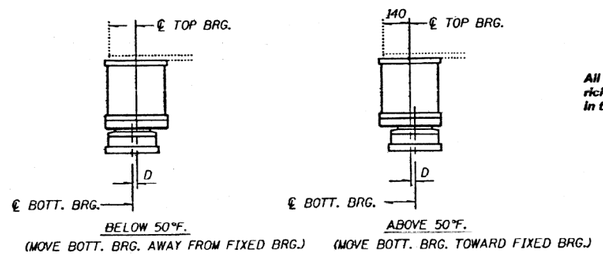
BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE II	Each	6
FURNISHING AND ERECTING STRUCTURAL STEEL	kg	474



SIDE RETAINER

EQUIVALENT ROLLED ANGLE WITH STIFFENERS WILL BE ALLOWED IN LIEU OF WELDED PLATES.



SETTING ANCHOR BOLTS AT EXP. BRG.

D=3 MM PER EACH 30.5 M OF EXPANSION FOR EVERY 15° TEMP. CHANGE FROM THE NORMAL TEMP. OF 50°F.

All structural steel shall be shop painted with the inorganic zinc rich primer per AASHTO M 300, Type 1. Cost shall be included in the cost of "Furnishing and Erecting Structural Steel".

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
ELASTOMERIC BEARING DETAILS TYPE 2
POND CREEK (EAST ABUTMENT)
FAI ROUTE 64
SN 097-0040
DRAWN BY
DATE CHECKED BY

RGW 10/20/99

FOR INFORMATION ONLY SN 097-0040

USER NAME = WILSONDA	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 11/25/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 097-0040

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	37
		CONTRACT NO. 78836		
	ILLINOIS	FED. AID PROJECT		

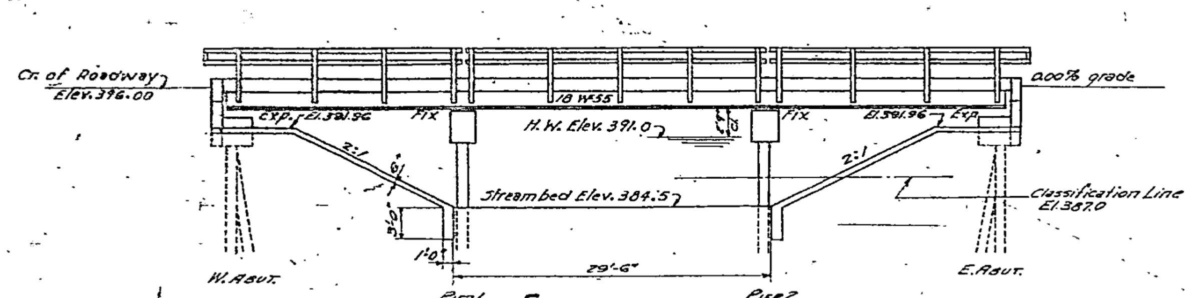
B.M. S & □ in 18" Maple Tree Lt. Sta. 157+00
Elev. 399.27

Existing structure:- Wood structure, 1 span @ 40' clear with a 15' Roadway on wood mudsills, piers, caps and steel I-beams to be removed by Bridge Contractor prior to construction of new bridge

FOR INFORMATION ONLY SN 100-3010

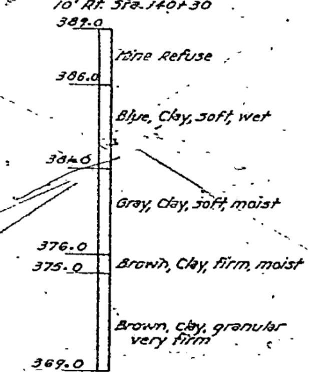
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 906	39Q	WILLIAMSON	54	46
FED. ROAD DISTRICT NO. 7		ILLINOIS	PROJECT - S - 87 (6)	

SHEET 1
4 SHEETS

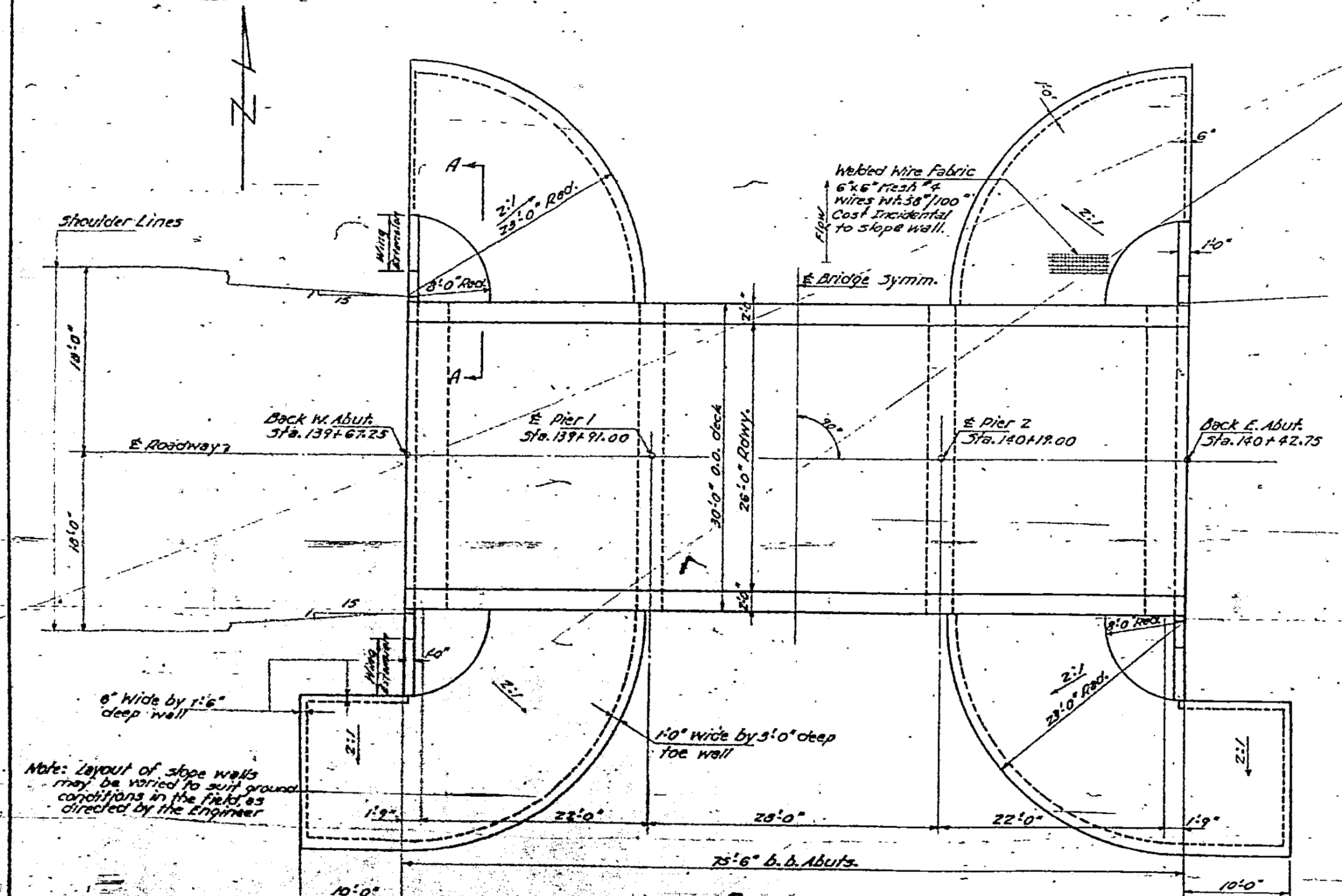


ELEVATION

Note: 25 cu. yds. Class B Excavation for toe wall.



BORING DATA



PLAN

GENERAL NOTES

Class X Concrete shall be used throughout.

The concrete floor slab shall be poured in one continuous operation between and outside the longitudinal banded constr. joints.

The concrete floor slab shall be finished in accordance with Art. 51.18 (a) of the Standard Specifications.

Rivets ¾" Open Holes 13/16" unless noted.

Railings shall be adjusted to true alignment after curbs have been poured.

All rollers, bearing plates, lead plates, pintles and anchor bolts shall be fabricated and set in accordance with Art. 51.14 of the Standard Specifications, and are included for payment as Structural Steel.

Anchor Bolts shall be set before riveting diaphragms over supports.

Except as otherwise provided, all Structural Steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Art. 57.1 to 57.5 inclusive of the Standard Specifications.

All paint shall be furnished and applied by the Contractor.

The Contractor shall drive two 12" R.C. test piles, in permanent locations as directed by the Engineer before casting remainder of piles.

Boring Data are shown only as a guide to bidders in estimating soil conditions which may be encountered in the work.

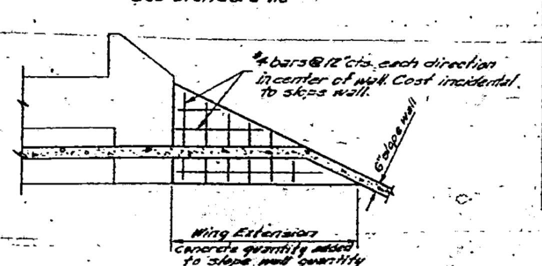
WATERWAY INFORMATION

Drainage Area	3500 Acres
Character	Level, Rolling, Clay, Wooded, cultivated
Talbots "C"	0.5
Req'd. Opg.	230 Sq. Ft.
Present Opg.	100 Sq. Ft.
Proposed Opening	260 Sq. Ft.

STA. 140+05
BEAR CREEK
BUILT 1956
F.A.S. RT. 906 SEC. 39 Q
F.A. PROJ. S-87 (6)
LOADING H15-S12

LETTERING FOR NAME PLATE

See Standard 113



SECTION A-A

TOTAL BILL OF MATERIAL

ITEM		SUPER.	SUB	TOTAL
Class X Concrete	Cu. Yds.	60.1	44.4	104.5
Reinforcement Bars	Lbs.	11350	3430	14780
Structural Steel	Lbs.	41920		41920
12" Precast Concrete Piles	Lin. Ft.		405	405
Precast Concrete Test Piles (12")	Each		2	2
Name Plate	Each	1		1
Slope Wall	Sq. Yds.			550
Removal of Existing Structure No. 2	Each			1
Class B Excavation for Structures	Cu. Yds.			25

STRESSES

f_c	1400 #/□"	Super.
f_c	800 #/□"	Sub.
f_s	20000 #/□"	Reinf.
f_s	18000 #/□"	Structural steel
n	10	

Piles per A.A.S.H.O.

GENERAL PLAN
PROJ. S-87 (6)
F.A.S. RT. 906 SEC. 39Q
WILLIAMSON COUNTY
STATION 140+05

Loading H15-S12-44

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 100-3010	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	38
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 78836				
PLOT DATE = 11/25/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

MODEL: Default
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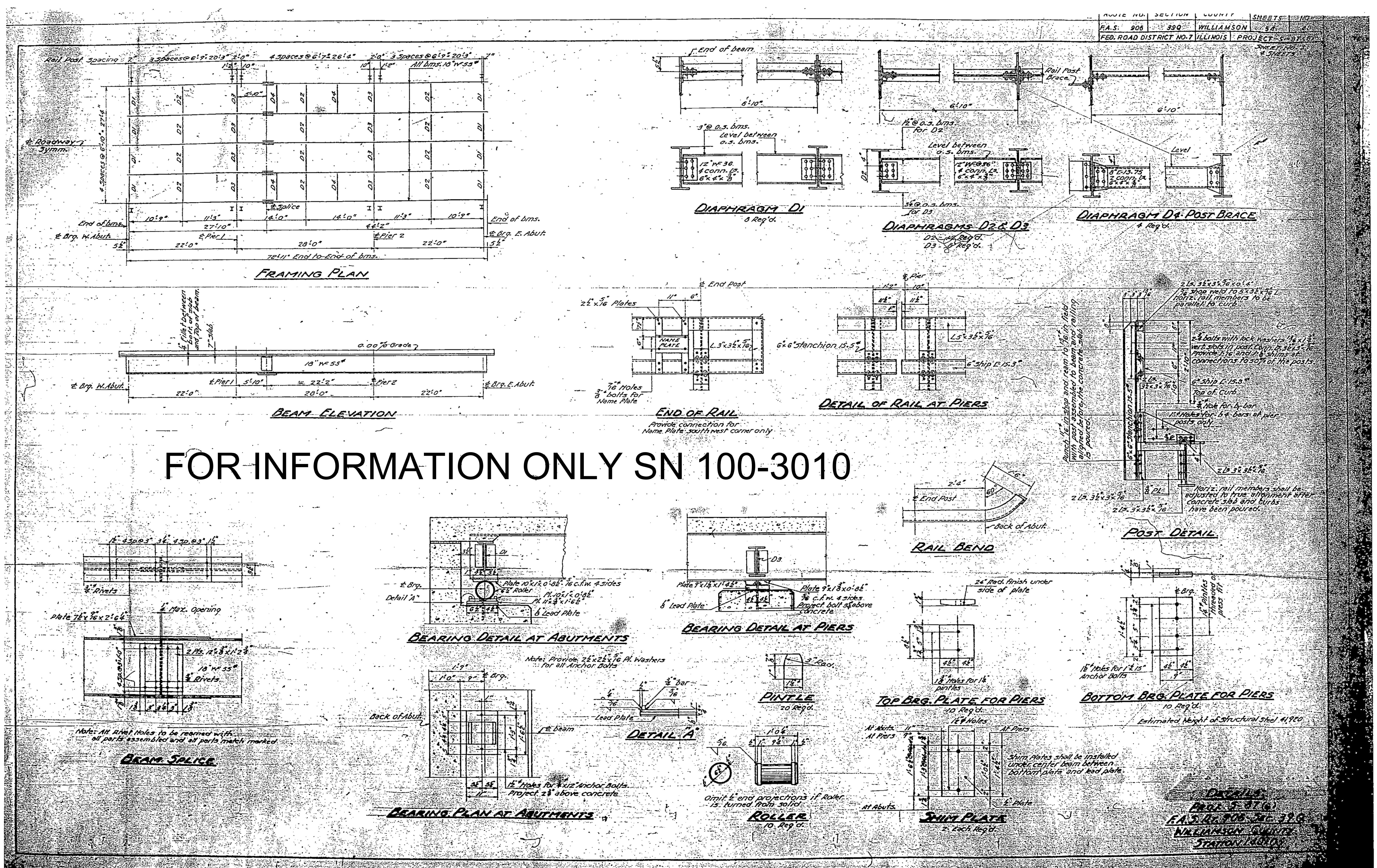


FOR INFORMATION ONLY SN 100-3010

USER NAME = WILSONDA	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 11/25/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 100-3010

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	39

CONTRACT NO. 78836

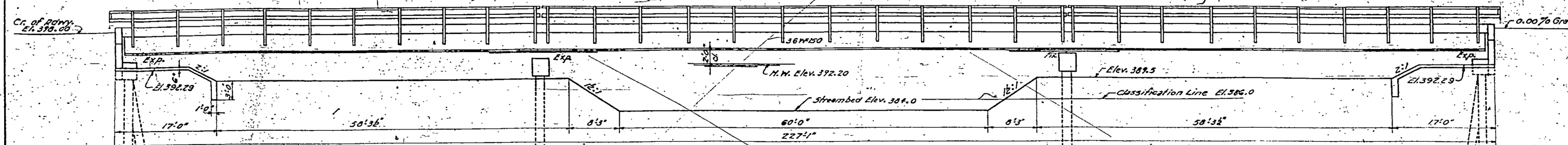
ILLINOIS FED. AID PROJECT

FOR INFORMATION ONLY SN 100-3011

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 906	39Q	WILLIAMSON	54	50
FED. ROAD DISTRICT NO. 7	ILLINOIS	PROJECT-S-87 (6)		

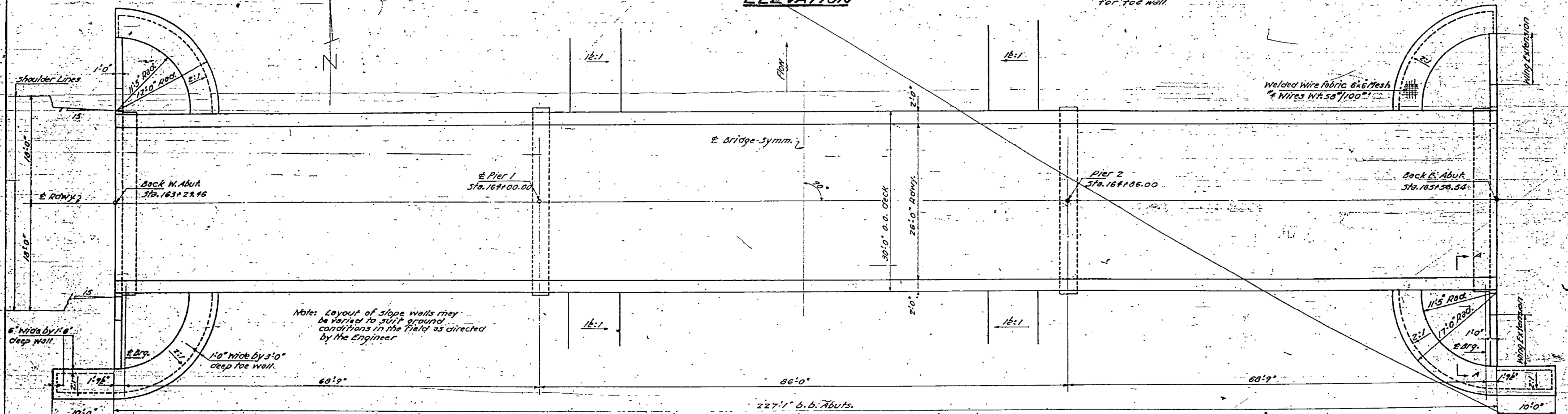
SHEET 1
4 SHEETS

B.M. S.c.c in 10" Maple tree Lt. Sta. 157+00 - Elev. 397.27
Existing Structure: Pony Truss, 1 span @ 60'-0" with a 14'-0" Rdwy. on concrete abutments, to be removed by Bridge Contractor prior to construction of new bridge. No salvage value.



ELEVATION

Note: 20 cu. yds. of Class A Excavation for toe wall.



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

PLAN

GENERAL NOTES

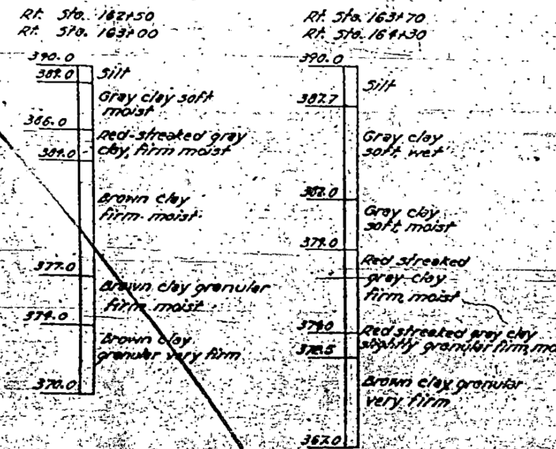
Class-X-Concrete shall be used throughout.
The concrete floor slab shall be poured in one continuous operation between and outside the longitudinal banded const. joints.
The concrete floor slab shall be finished in accordance with Art. 51.18 (a) of the Standard Specifications.
Rivets ¾", Open Holes 13/16" unless noted.
Railings shall be adjusted to true alignment after curbs have been poured.
All rollers, rockers, bearing plates, lead plates an anchor bolts shall be fabricated and set in accordance with Art. 51.14 of the Standard Specifications, and are included for payment as Structural Steel.
Anchor Bolts shall be set before riveting diaphragms over supports.
Except as otherwise provided, all Structural Steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Art. 57.1 to 57.5 inclusive of the Standard Specifications.
All paint shall be furnished and applied by the Contractor.
The Contractor shall drive four 18" Reinforced Concrete test Piles in permanent locations as directed by the Engineer before casting remainder of Piles.
Boring Data are shown only as a guide to bidders in estimating soil conditions which may be encountered in the work.

STA. 164+43
LAKE CREEK
BUILT 1956
F.A.S. RT. 906-SEC. 39Q
F.A. PROJ. S-87(6)
LOADING H15-S12

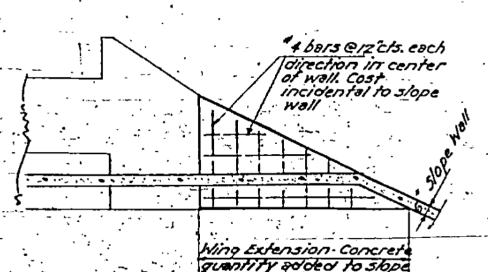
LETTERING FOR NAME PLATE
See Standard 2113

TOTAL BILL OF MATERIAL

ITEM		SUPER.	SUBSTR.	TOTAL
Class-X-Concrete	Cu. Yds.	181.0	52.9	233.9
Reinforcement Bars	Lbs.	33340	4550	37890
Structural Steel	Lbs.	236,050		236,050
18" Precast Concrete Piles	Lin. Ft.		680	680
Precast Concrete Test Piles (18")	Each		4	4
Name Plates	Each	1		1
Slope Wall	Sq. Yds.			360
Class-A-Excav. for Structures	Cu. Yds.			40
Removal of Existing Structure No. 3	Each			1



BORING DATA



SECTION A-A

WATERWAY INFORMATION

Drainage Area	17000 Acres
Character	Rolling, clay, wooded, cultivated
Req'd. Opening	900 Sq. Ft.
Present Opening	302 Sq. Ft.
Proposed Opening	900 Sq. Ft.

STRESSES

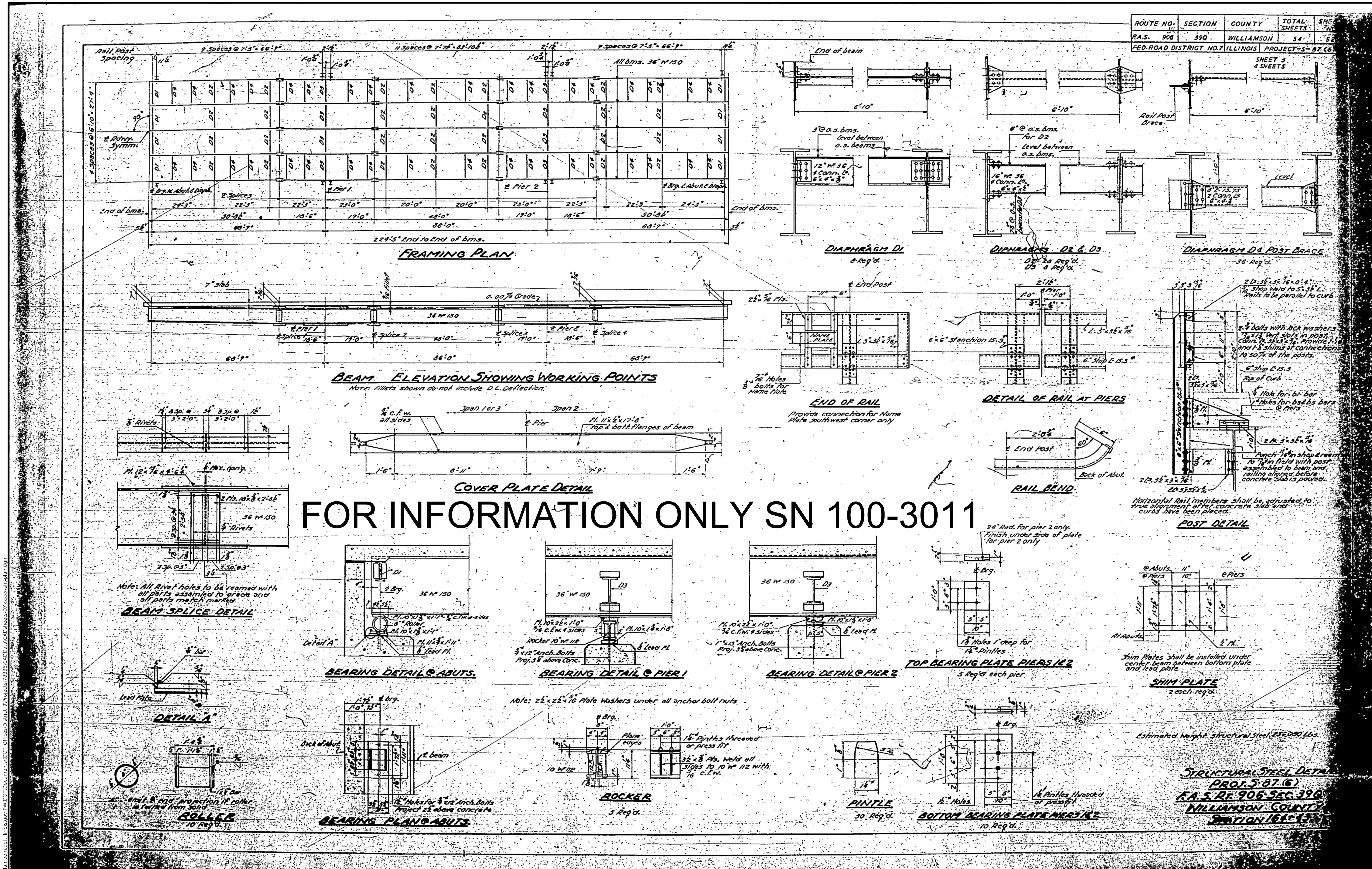
fc - - - 1400 #/□" Super.
fc - - - 800 #/□" Sub.
fs - - - 20000 #/□" Reinf.
fs - - - 18000 #/□" Struct. Steel
n - - - 10
Piles per A.A.S.H.O.

GENERAL PLAN
PROJ. S-87(6)
F.A.S. RT. 906-SEC. 39Q
WILLIAMSON COUNTY
STATION 164+43

Loading H15-S12-44

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 100-3011	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	40
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 78836				
PLOT DATE = 1/4/2021	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

MODEL: Default
FILE NAME: pw://idarroom.dot.illinois.gov:PWIDOT/Documents/IDOT Offices/District 9/Projects/78836/CAD Data/CADSheets/DXxxxxx-sht-plan.dgn



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USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 1/4/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 100–3011

SCALE: ____ SHEET __ OF __ SHEETS STA. ____ TO STA. ____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	41
		CONTRACT NO. 78836		
	ILLINOIS	FED. AID PROJECT		

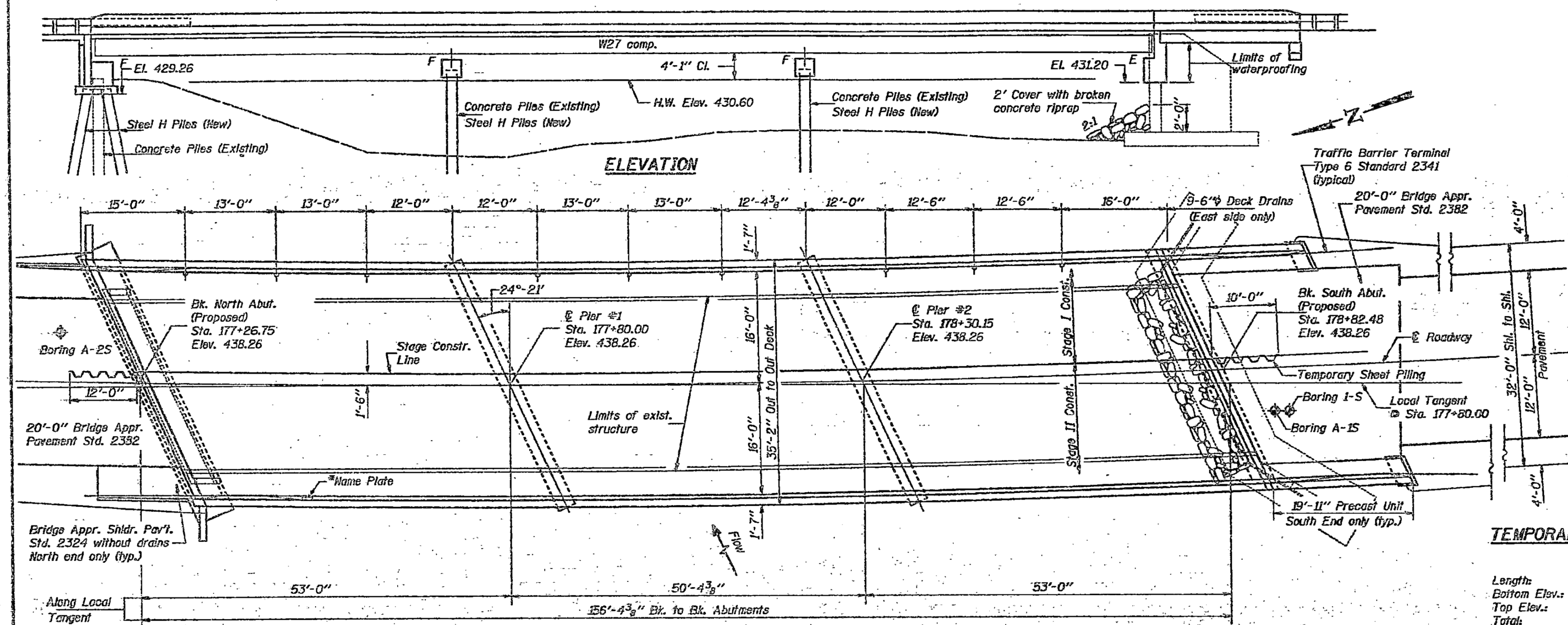
Bench Mark: "□" cut in Southwest wingwall - 14' Rt. Sta. 178+86 Elev. 438.25

Exist. Struct.: No. 100-0029 is 152'-9"± long by 25'-0"± wide was built as S.A. Rte. 6 & 4A, Sec. 17NRH, at Sta. 177+80 in 1935. The existing 3 span stl. bm. (s.s.) superstructure and bent caps shall be removed. The existing bent piles shall be reused with new caps and the existing closed abutment shall be rebuilt as required. Additional bent piles will be needed for the new widened superstructure. Stage Construction shall be utilized so as to maintain one lane traffic during reconstruction.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1
24 SHEETS

F.A.S. RTE. 904 | SEC. 17C-DR | WILLIAMSON | 58 | 24

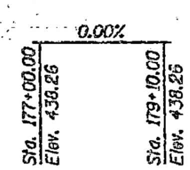


TEMPORARY SHEET PILING DATA

	No. Abut.	So. Abut.
Length:	12'-0"	10'-0"
Bottom Elev.:	±421.0'	±425.0'
Top Elev.:	±439.0'	±439.0'
Total:	356 Sq. Ft.	

Note: The information shown for the Temporary Sheet Piling is estimated. It is the contractors responsibility to provide a design and computations of the Temporary Sheet Piling and associated members, if required, subject to the approval of the Engineer.

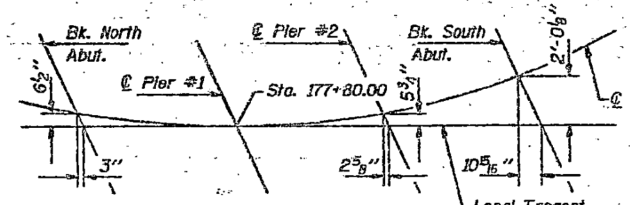
* Existing name plate shall be cleaned, and relocated next to the new Name Plate. Cost incidental to Name Plate.



PROFILE GRADE

CURVE DATA

Δ= 38°-54'-02.75" L= 1770.50
D= 2°-11'-49.79" T= 920.90
R= 2607.72 E= 157.83'
S.E.= 0.042'/'
ATT. Sta. 169+56.80 to Sta. 171+96.80
REM. Sta. 188+07.30 to Sta. 190+51.30



OFFSET SKETCH

WATERWAY INFORMATION

Drainage Area = 63.0 Sq. Mi. Low Grade Elev. 438.21 ⊕ Sta. 194+00

Flood		Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	Main Channel	30	2900	690	690	430.6	0.6	0.6	431.2	431.2
	Overflow		3700	980	980					
	Total		6600	1670	1670					
Base	Main Channel	100	3100	720	720	430.9	0.8	0.8	431.7	431.7
	Overflow		5400	1020	1020					
	Total		8500	1740	1740					
[illegible] Overtopping	Main Channel	500	3200	755	755	431.2	1.2	1.2	432.4	432.4
	Overflow		7600	1060	1060					
	Total		10800	1815	1815					

DESIGN SPECIFICATIONS

1983 AASHTO, 1984, 1985 Thru 1988 Interims

LOADING HS20-44 (NEW CONSTR.)

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

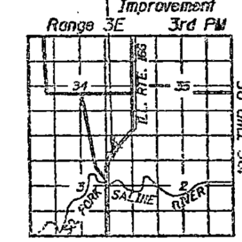
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (reinf.)
fy = 50,000 psi (M223 Gr. 50) Struct. Steel
fy = 36,000 psi (M183)

PRECAST UNITS

f'c = 4,500 psi
fc = 1800 psi
fs = 20,000 psi
n=8



LOCATION SKETCH

GENERAL PLAN
IL. RTE. 166 OVER
SOUTH FORK SALINE RELIEF
F.A.S. RTE. 904 SEC. 17C-DR
WILLIAMSON COUNTY
STATION 177+80.00
STRUCTURE NO. 100-0029

DESIGNED Angela L. Nemsky
CHECKED Walt A. Hly
DRAWN J.T.D. jas
CHECKED [illegible]

January 4 1990
EXAMINED [signature]
PASSED Ralph E. Anderson
APPROVED

4-14-89

FOR INFORMATION ONLY SN 100-0029

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 100-0029
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 11/25/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	42

CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

MODEL: Default
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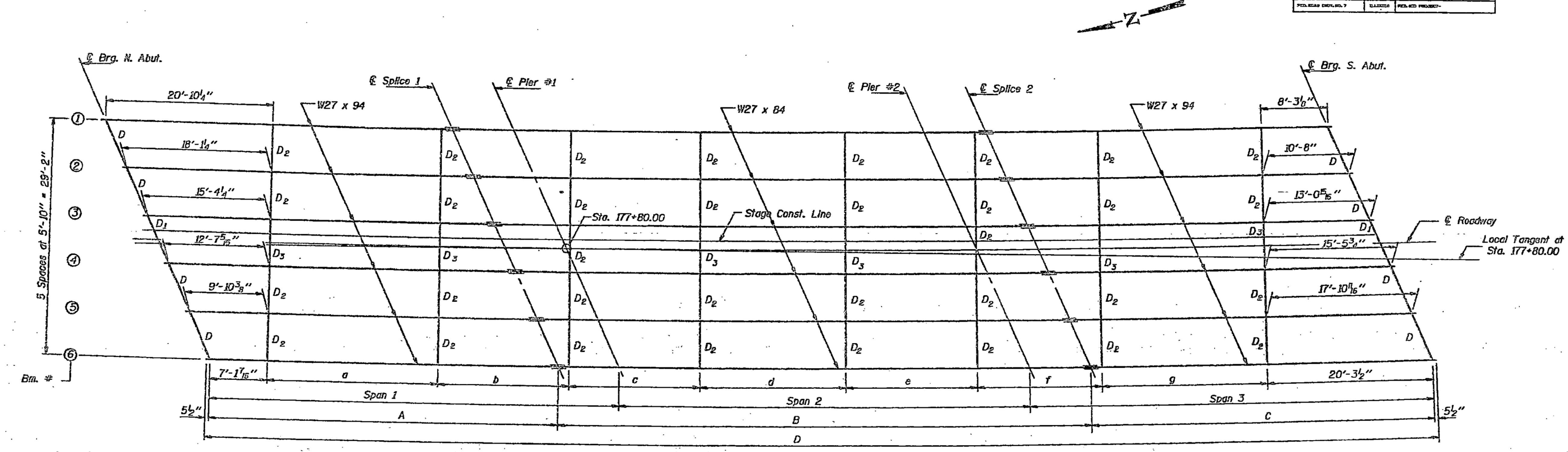
Notes: All beams shall be (AASHTO M223, Grade 50) and shall meet Notch Toughness Requirements.
For details of diaphragms and splices see sheet # 11 of 24.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
904	17C-DR	WILLIAMSON	58	33

SHEET NO. 10
24 SHEETS



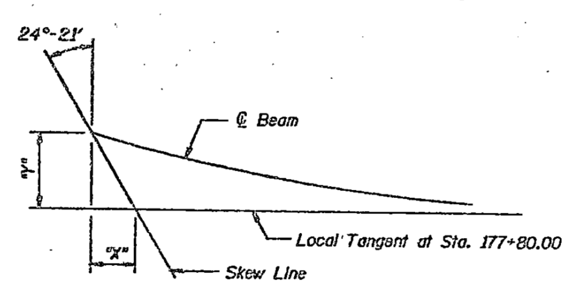
FRAMING PLAN

DIAPHRAGM SPACING

Bm. # \ Loc.	a	b	c	d	e	f	g
1	20'-10 3/16"	15'-0"	16'-0"	18'-0 7/16"	15'-2"	15'-3"	20'-0"
2	20'-10 3/4"	16'-0 7/16"	16'-0 7/16"	18'-0 15/16"	15'-2 7/16"	15'-3 7/16"	20'-0 1/2"
3	20'-11 5/16"	16'-0 7/8"	16'-0 7/8"	18'-1 7/16"	15'-2 13/16"	15'-3 13/16"	20'-1 1/16"
4	20'-11 7/8"	16'-1 5/16"	16'-1 5/16"	18'-1 15/16"	15'-3 1/4"	15'-4 1/4"	20'-1 5/8"
5	21'-0 7/16"	16'-1 3/4"	16'-1 3/4"	18'-2 3/8"	15'-3 5/8"	15'-4 5/8"	20'-2 3/16"
6	21'-1 1/16"	16'-2 3/16"	16'-2 3/16"	18'-2 7/8"	15'-4 1/16"	15'-5 1/16"	20'-2 11/16"

BEAM DIMENSIONS

Bm. # \ Loc.	Radius	Span 1	Span 2	Span 3	A	B	C	D
1	2593.14	50'-6 7/16"	50'-2 7/16"	49'-8 1/8"	43'-0 7/16"	65'-2 7/16"	42'-2 1/8"	151'-4"
2	2598.97	50'-6 1/8"	50'-2 3/16"	49'-7 7/8"	43'-0 3/16"	65'-2 1/8"	42'-1 7/8"	151'-3 3/16"
3	2604.80	50'-5 13/16"	50'-1 15/16"	49'-7 5/8"	42'-11 15/16"	65'-1 3/4"	42'-1 11/16"	151'-2 3/8"
4	2610.64	50'-5 9/16"	50'-1 11/16"	49'-7 3/8"	42'-11 11/16"	65'-1 7/16"	42'-1 1/2"	151'-1 5/8"
5	2616.47	50'-5 1/4"	50'-1 3/8"	49'-7 3/16"	42'-11 7/16"	65'-1 1/16"	42'-1 5/16"	151'-0 15/16"
6	2622.30	50'-5"	50'-1 1/8"	49'-6 15/16"	42'-11 3/16"	65'-0 3/4"	42'-1 1/8"	151'-0 1/16"



"X" & "Y" OFFSETS

X & Y OFFSETS

	Beam 1		Beam 2		Beam 3		Beam 4		Beam 5		Beam 6	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
℄ Brg. N. Abut.	3 7/16"	7 9/16"	3 1/8"	6 7/8"	2 13/16"	6 3/16"	2 1/2"	5 9/16"	2 1/4"	4 15/16"	2"	4 3/8"
℄ Splice 1	3/16"	7/16"	1/8"	5/16"	1/16"	3/16"	1/16"	1/16"	0	0	0	0
℄ Pier #1	1/16"	1/8"	0	1/16"	0	0	0	0	0	1/16"	1/16"	1/8"
℄ Pier #2	2"	4 3/8"	2 1/4"	4 15/16"	2 1/2"	5 1/2"	2 3/4"	6 1/16"	3 1/16"	6 11/16"	3 5/16"	7 3/8"
℄ Splice 2	2 3/4"	6 1/16"	3"	6 11/16"	3 5/16"	7 5/16"	3 5/8"	8"	3 15/16"	8 11/16"	4 1/4"	9 7/16"
℄ Brg. S. Abut.	9 1/8"	1'-8 1/8"	9 5/8"	1'-9 3/16"	10 1/8'	1'-10 5/16"	10 5/8"	1'-11 1/2"	11 1/8"	2'-0 5/8"	11 11/16"	2'-1 13/16"

DESIGNED Anelia L. Nemsky
CHECKED Walter J. Hely
DRAWN J.T. Downing
CHECKED A.L.N. WJH

Jan 4 1990
SUBMITTED [signature] ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES
APPROVED ENGINEER OF ECONOMY

FOR INFORMATION ONLY SN 100-0029

STRUCTURAL STEEL
F.A.S. RT. 904 SECTION 17C-DR
WILLIAMSON COUNTY
STATION 177+80.00

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 100-0029
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 11/25/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

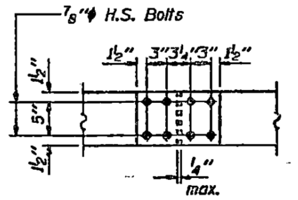
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	43

CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

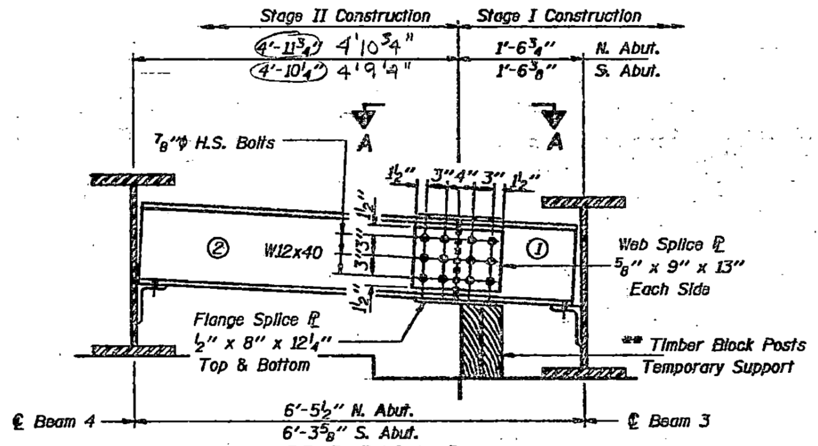
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
904	17C-DR	WILLIAMSON	58	34

SHEET NO. 11
24 SHEETS



VIEW A-A



DIAPHRAGM D1
2 Required
(Looking North)

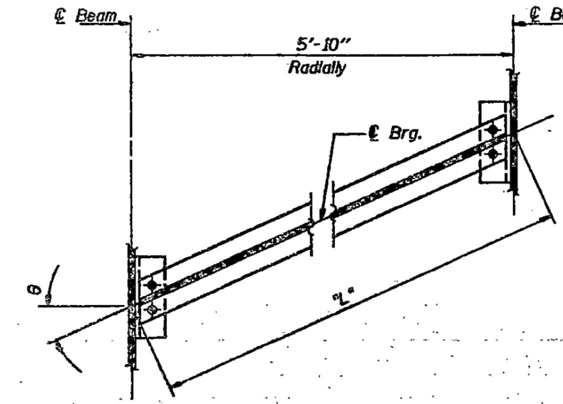
** Cost of Timber Block Posts Is Incidental to Structural Steel.

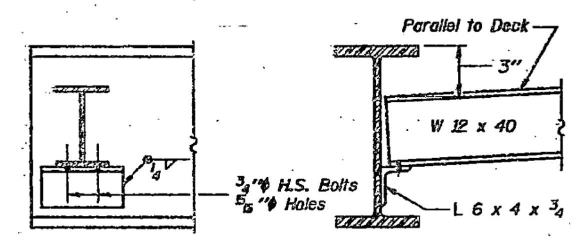
For details of connections to beams see diaphragm D.
Dimensions are measured along ℄ Brg.

DIAPHRAGM D1 CONSTRUCTION SEQUENCE

1.) Order Diaphragm D1 in two sections with lengths of ***.
2.) Attach section ① of Diaphragm to Beam 3 and flange splice ℙs during Stage I Construction
3.) Place Timber Block Posts between section ① of diaphragm and abutment bearing seat.
4.) Attach section ② of diaphragm to both Beam 4 and section ① of diaphragm during Stage II Construction.
5.) Attach web splice plates to sections ① and ② of diaphragms.
6.) Remove Timber Block Posts.

1'5⅝
*** Section ① 1'-6" N. Abut.; 4'-11" S. Abut.
Section ② 1'-5⅝" N. Abut.; 4'-9½" S. Abut.
4'11"





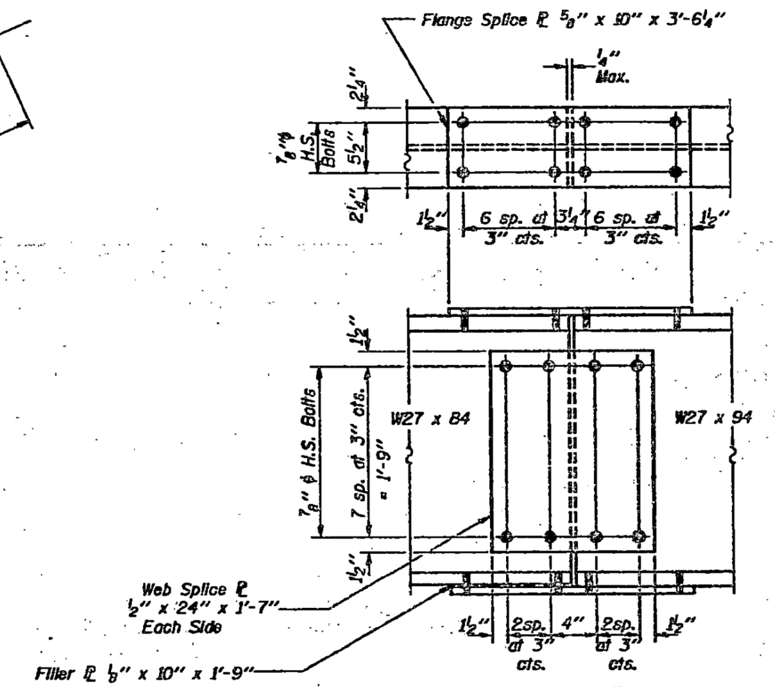
DIAPHRAGM D
8 Required

DIMENSIONS "L"

Loc. \ Bm.	Betwn. Bm. #1 & #2	Betwn. Bm. #2 & #3	Betwn. Bm. #3 & #4	Betwn. Bm. #4 & #5	Betwn. Bm. #5 & #6
℄ Brg. N. Abut.	6'-5⅝"	6'-5½"	6'-5½"	6'-5½"	6'-5⅜"
℄ Brg. S. Abut.	6'-3⅝"	6'-3⅝"	6'-3⅝"	6'-3½"	6'-3½"

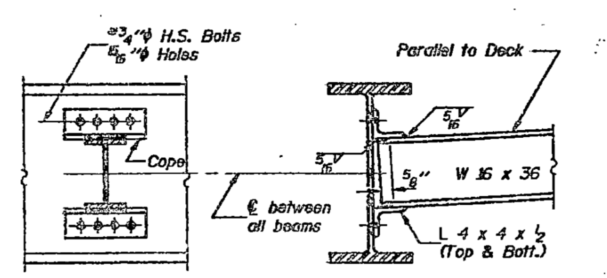
VALUE OF θ

Loc. \ Bm.	#1	#2	#3	#4	#5	#6
℄ Brg. N. Abut.	25°-36'-45"	25°-33'-3 "	25°-29'-22"	25°-25'-43"	25°-22'-4 "	25°-18'-27"
℄ Brg. S. Abut.	22°-17'-21"	22°-14'-11"	22°-11'-2 "	22°-7 '-54"	22°-4 '-47"	22°-1 '-41"



SPLICE

* 1½" x 13/16" Slotted holes in Ls for Beam 4 at Diaphragm D3



DIAPHRAGMS D2 & D3
34 D2 Required
6 D3 Required

Notes: Two hardened washers shall be required over all holes for diaphragms.
The bolts for the slotted holes shall only be finger-tightened prior to the deck pouring and then shall be fully-tightened after completion of the pouring.
All splice plate material for the W27 beams shall be AASHTO M223, Grade 50, and shall meet Notch Toughness Requirements ~~except fill plates of the wide flange beams.~~

DESIGNED	Angela L. Nemsky
CHECKED	Walter J. Helly
DRAWN	J.T.Downing
CHECKED	A.L.N. WJH

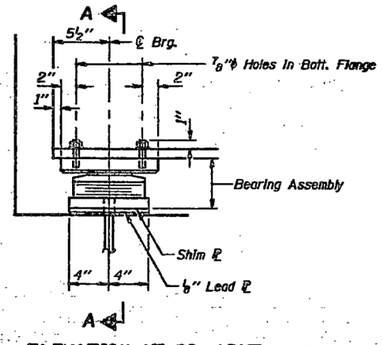
Jan 4 1990
EXAMINED Dragi D. Kaspar — ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson — ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

I-2-D 8-30-80

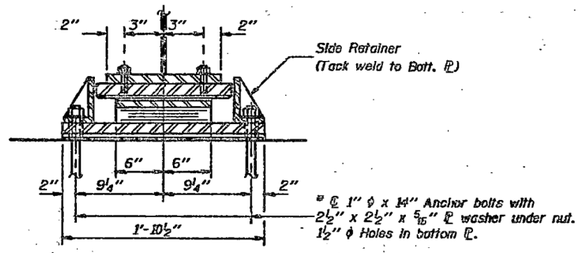
STRUCTURAL STEEL DETAILS
F.A.S. RT. 904 SECTION 17C-DR
WILLIAMSON COUNTY
STATION 177+80.00

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

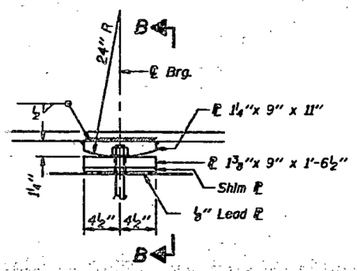
					SHEET NO. 13
F.A.S. 904	17C-DR	WILLIAMSON	58	36	24 SHEETS
PROJ. BRDG. CONT. NO. 7		CLEARED	PROJECT		



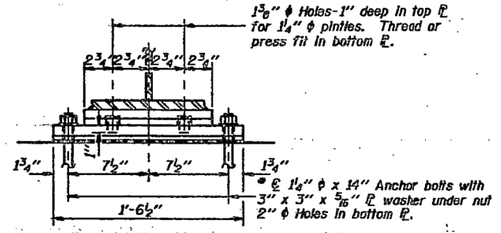
ELEVATION AT SO. ABUT.



SECTION A-A

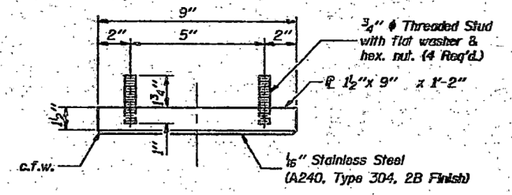


ELEVATION AT PIERS

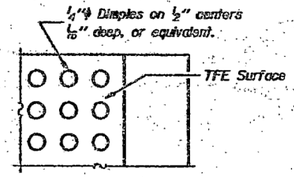


SECTION B-B

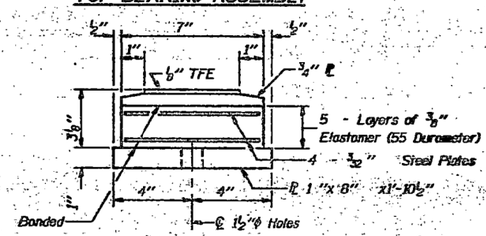
TYPE II TFE ELASTOMERIC EXP. BRG.

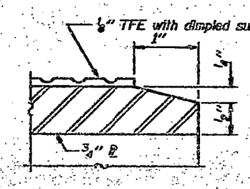


TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



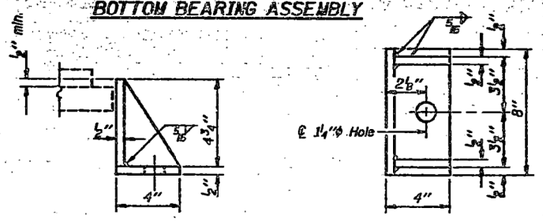


SECTION THRU TFE

Note: The ⅛" 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.

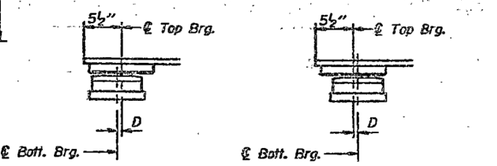
Bonding of ⅛" TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

BOTTOM BEARING ASSEMBLY



SIDE RETAINER

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



SETTING ANCHOR BOLTS AT EXP. BRG.

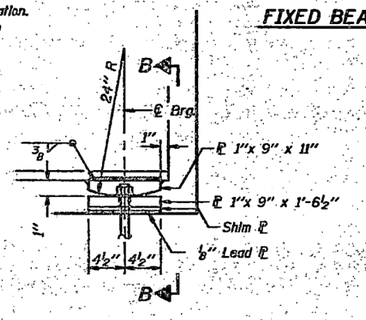
D=⅛" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

DESIGNED	Greg A. Nemeth	Jan 4 1990
CHECKED	Walter J. Hilty	EXAMINED Greg O. Kasper, ENGINEER OF BRIDGE DESIGN
DRAWN	J.T.Downing	PASSED Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES
CHECKED	A.T.H.	APPROVED, DIRECTOR OF HIGHWAYS

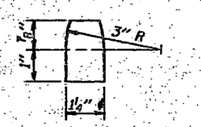
I-2-E2 12-1-83

[1] Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet #24 of 24 for Anchor Bolt Installation.
Steel used for bearing plates shall conform to AASHTO M223 Gr. 50.

FIXED BEARING



ELEVATION AT NO. ABUT.



PINTLE

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	6

BEARINGS
F.A.S. RT. 904 SECTION 17C-DR
WILLIAMSON COUNTY
STATION 177+80.00

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 11/25/2020	DATE -	REVISED -	

SN 100-0029

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	45
		CONTRACT NO. 78836		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default
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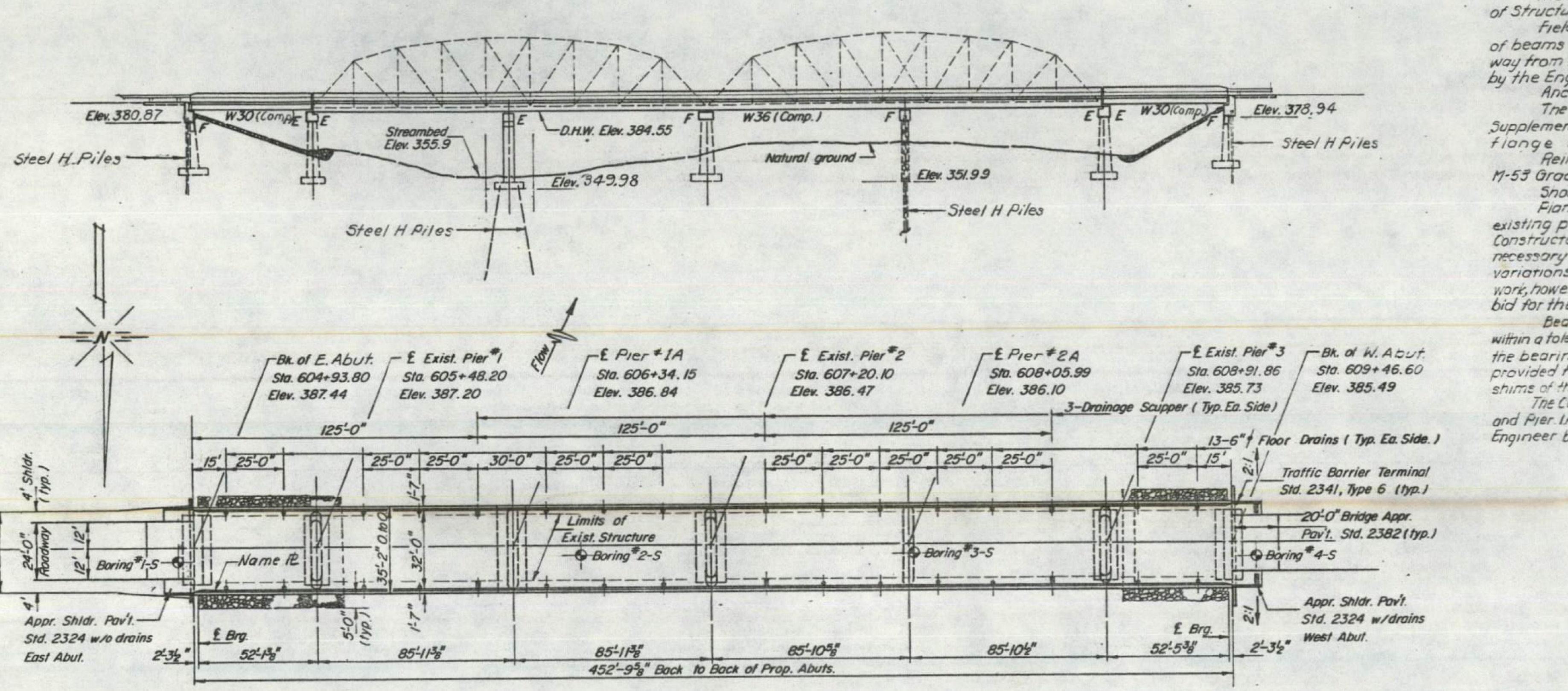
Route No.	Section	County	Total Sheets	Sheet No.
S.B.I. F.A. 873	105BC-BR	FRANKLIN	37	14

SHEET NO. 1
24 SHEETS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Bench Mark: "□" Cut in top of handrail, 11' Rt., Sta. 605+00, Elev. 387.88

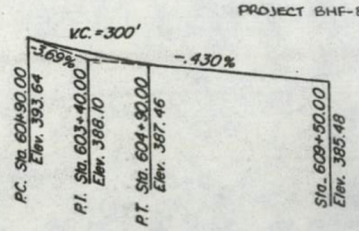
Existing Structure: A four span structure, consisting of two simple span R.C. tee girders (52'± spans) and two simple span Warren trusses (170'± spans). The length of existing structure is 449'-9" back to back of abutments and the width is 24'-4". Out to Out of Deck. The existing superstructure shall be removed and the existing substructure shall be widened to accommodate the new superstructure. Traffic shall be maintained during reconstruction over a temporary run around detour with a 450'-0" one lane bridge.
No Salvage.



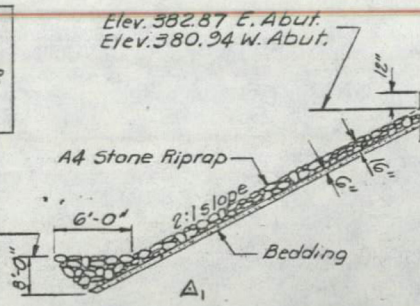
STATION 607+20.00
BUILT 198 BY
STATE OF ILLINOIS
F.A. RT. 873 SEC. 105 BC-BR
LOADING HS 20
STR. NO. 028-0037

PROJECT BHF-813(12)

NAME PLATE
See Std. 2118



PROFILE GRADE
Ill. Rte. 149
(Along ℄ Roadway)



SECTION THRU SLOPEWALL

Layout of Stone Riprap may be varied in the field to suit ground conditions as directed by the Egineer.

Tightening and inspection of all high strength bolt connections shall conform to the requirements of the latest issue of the Specification for Structural Joints using ASTM A-325 (M164) or A490 (M253) bolts for slip-critical connections. Except thightening methods using either the load indicating washers or the calibrated wrench are not allowed.

GENERAL NOTES

See Proposal for Boring Data.

Fasteners shall be high strength bolts. Bolts ⅞" ϕ, open holes 15/16" ϕ, unless otherwise noted.

Calculated weight of Structural Steel: 39,290 pounds (M183) and 326,320 pounds (M-223 Grade 50.)

The zinc-silicate and vinyl paint system shall be used for shop and field painting of Structural Steel except where otherwise noted.

Field welding of construction accesories 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 main load carriying 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.

Shoulder transition to wingwall shall be shaped with broken concrete. Cost incidental.

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 Constructor'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 shall be constructed or adjusted to the designated elevations within a tolerance of ⅛ inch. Adjustment shall be made either by grinding the surface or shimming the bearing. Two ⅛" 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 in a permanent locations two Steel HP8×36 test piles, one each at East Abut. and Pier 1A and two Steel HP10×42 test piles, one each at West Abut. and Pier 2A as directed by the Engineer before ordering the remainder of piles.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Protective Coat	Sq. Yd.	367		367
Removal of Exist. Superstruct.	Each	1		1
Concrete Removal	Cu. Yd.		65	65
Neoprene Expansion Joint 4"	Lin. Ft.	68		68
Structure Excavation	Cu. Yd.		216	216
Cofferdam Excavation	Cu. Yd.		66	66
Cofferdams	Each		1	1
Floor Drains	Each	26		26
Preformed Joint Seal 1¼"	Lin. Ft.	70		70
Elastomeric Brg. Assembly, Type I	Each	15		15
Elastomeric Brg. Assembly, Type II	Each	10		10
Class X Concrete	Cu. Yd.		209.9	209.9
Class X Concrete Superstructure	Cu. Yd.	481.8		481.8
Class X Concrete Encasement	Cu. Yd.		8.0	8.0
Structural Steel	Lump Sum	1		1
Stud Shear Connectors	Each	5440		5440
Reinforcement Bars	Pound		22,750	22,750
Reinf. Bars, Epoxy coated	Pound	121,000		121,000
Steel Piles HP8×36	Lin. Ft.		205	205
Steel Piles HP10×42	Lin. Ft.		570	570
Furnishing Steel Piles HP8×36	Lin. Ft.		100	100
Test Piles Steel HP8×36	Each		2	2
Test Piles Steel HP10×42	Each		2	2
Metal Shoes	Each		12	12
Name Plates	Each		1	1
Stone Riprap Class A-4	Sq. Yd.		582	582
Drainage Scuppers	Each	6		6

WATERWAY INFORMATION

Drainage Area = 795 sq. mi. Low Grade Elev. 384.36 @ Sta. 615+00.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head Ft. Exist.	Head Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	50	20,750	6395	6060	384.55	0.28	0.28	384.83	384.83
Base	100	24,500	6395	6060	386.06	0.20	0.22	386.26	386.28
Overtopping	45	19,750		6060	384.10		0.27		384.37
Max. Calc.	500								

DESIGN SPECIFICATIONS

1983 AASHTO, 1984 and 1985 Interims.

LOADING HS 20-44

(New Construction)

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

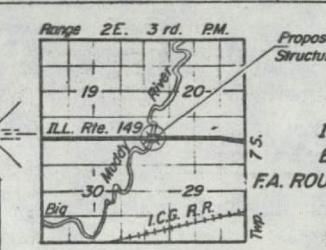
DESIGN STRESSES

$f'c$ = 3,500 psi

fy = 60,000 psi (Reinf.)

fy = 50,000 psi (Struct. Stl.) (M223 Grade 50)

fs = 36,000 psi (Struct Stl) (M183)



LOCATION SKETCH

GENERAL PLAN
ILL. ROUTE 149 OVER
BIG MUDDY RIVER
F.A. ROUTE 873 SECTION 105 BC-BR
FRANKLIN COUNTY
STATION 607+20.00
STRUCTURE NUMBER 028-0037

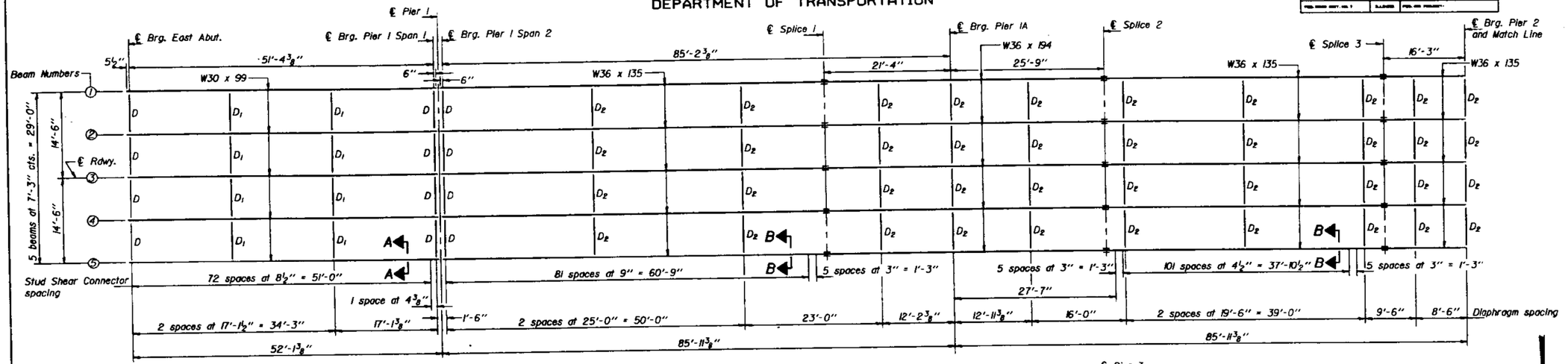
DESIGNED	Shayla S. Ali
CHECKED	Suresh Desai
DRAWN	PWS F.M.
CHECKED	S.D.

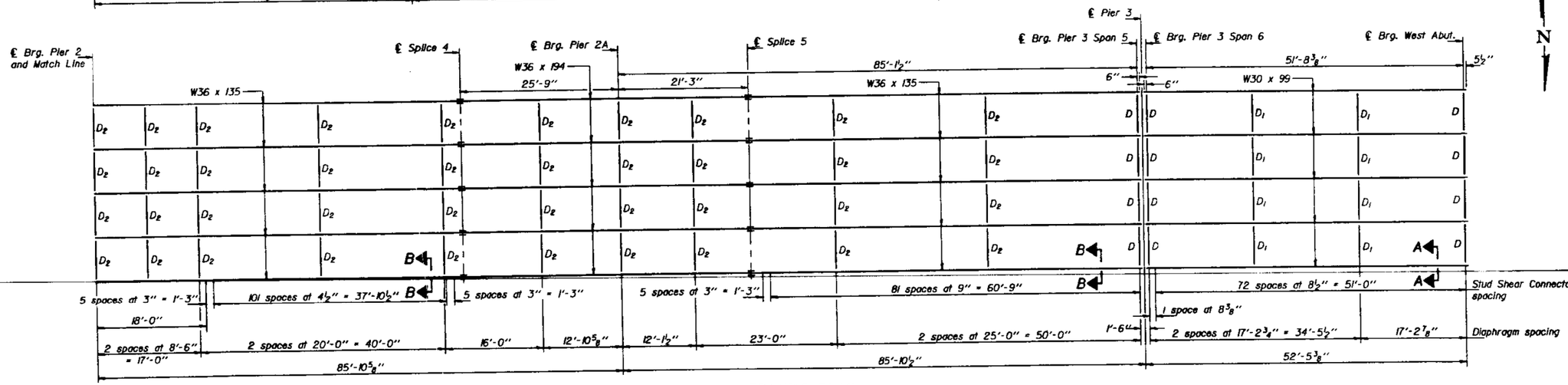
Dec. 28 1987
EXAMINED Iraj I. Kaspar — ENGINEER OF BRIDGE DESIGN
PASSED James T. [illegible] — ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

Rev 1-25-88

ROUTE NO.	SECTION	COUNTY	DIST.	SHEET NO.	SHEET NO. 12
F.A.S. 873	105BC-BR	FRANKLIN	9	25	24 SHEETS
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



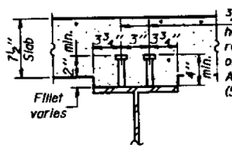


FRAMING PLAN

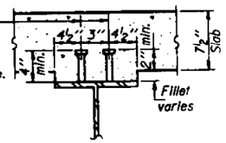
All structural steel fabricators performing work on the main load carrying components of steel structures shall be certified under Category I (AISC) of the Quality Certification Program.

Notes: All beams shall be AASHTO M 223, Grade 50 and shall meet Notch Toughness Requirements.

For details of diaphragms and splices see sheet 13 of 24.



SECTION A-A



SECTION B-B

¾"ϕ Granular or solid flux filled headed studs, conforming to the requirements of Article 710.38 of the Standard Specifications. Automatically end welded to flange. (5440 Required)

DESIGNED	Shayla S. Ali
CHECKED	SureshDesai
DRAWN	Joe Sutherland
CHECKED	S.D.

Dec 7, 1970

EXAMINED: Engineer of Bridge Design

PASSED: James T. Hayhurst, Engineer of Bridges and Structures

APPROVED: Director of Highways

STRUCTURAL STEEL DETAILS
F.A. RT. 873 SEC. 105 BC-BR
FRANKLIN COUNTY
STATION 607+20.00

FOR INFORMATION ONLY SN 028-0037

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 11/30/2020	DATE -	REVISED -	

SN 028-0037

SCALE: | SHEET OF SHEETS | STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	47
		CONTRACT NO. 78836		
	ILLINOIS	FED. AID PROJECT		

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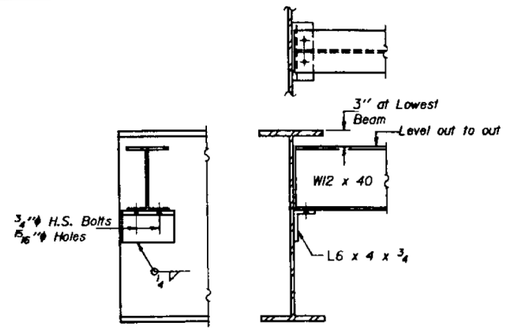
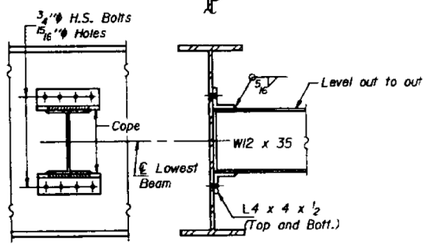
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. RTE. 873	105BC-BR	FRANKLIN	37	26

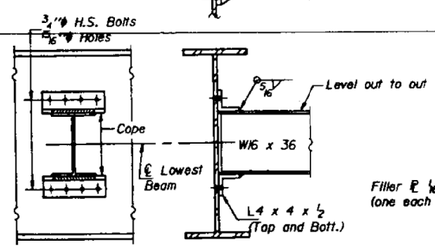
SHEET NO. 13
24 SHEETS



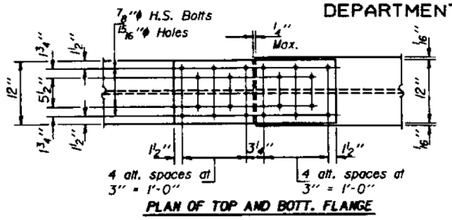
DIAPHRAGM D
(24 Required)



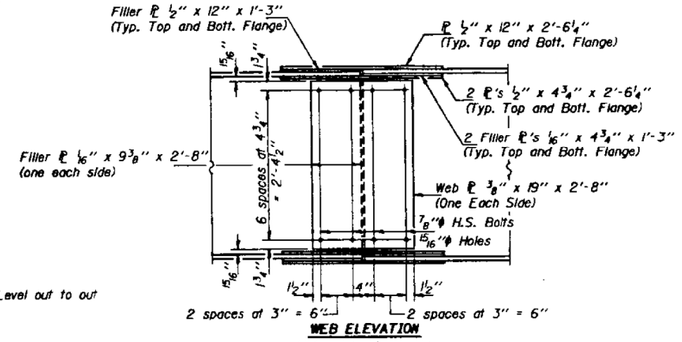
DIAPHRAGM D_1
(16 Required)



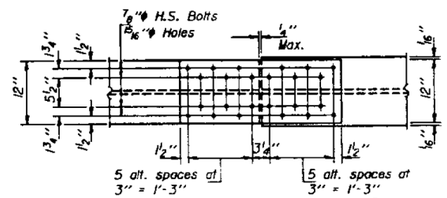
DIAPHRAGM D_2
(76 Required)



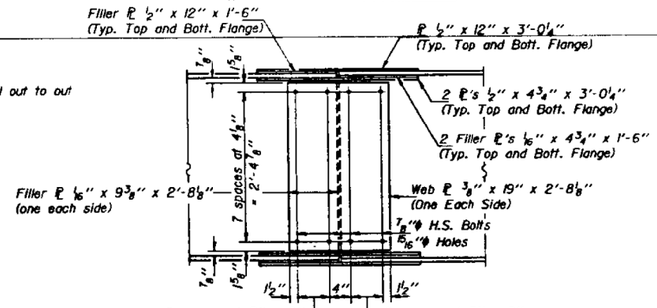
PLAN OF TOP AND BOTT. FLANGE



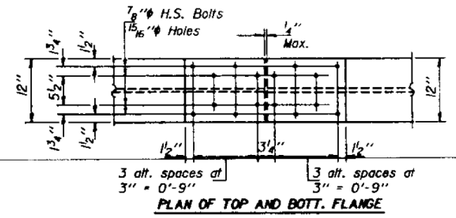
WEB ELEVATION
Splice 1 looking south.
Splice 5 looking north.



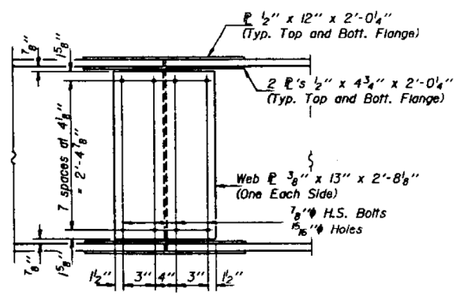
PLAN OF TOP AND BOTT. FLANGE



WEB ELEVATION
Splice 2 looking north.
Splice 4 looking south.



PLAN OF TOP AND BOTT. FLANGE



WEB ELEVATION
Splice 3

DESIGNED	Shayla S. Ali	
CHECKED	Suresh Desai	Dec 29, 1987
DRAWN	Joe Sutherland	EXAMINED Engineer of Bridge Design
CHECKED	S.D.	PASSED James T. Kaufman, Engineer of Bridges and Structures
		APPROVED Director of Highways

Notes: Two hardened washers shall be required over all bolt holes in diaphragms.
All splice plate material, except filler plates, shall meet Notch Toughness Requirements.
All splice plate material shall be AASHTO M 223, Grade 50.

INTERIOR BEAM MOMENT TABLE

		.5 Span 1 or .5 Span 6	.4 Span 2 or .6 Span 5	Pier 1A or Pier 2A	.5 Span 3 or .5 Span 4	Pier 2
Is	(in4)	3990	7800	12,100	7800	7800
Ic	(in4)	11,900	20,670	——	20,670	——
Ss	(in3)	269	439	664	439	439
Sc	(in3)	417	642	——	642	——
w	(K/ft.)	.804	.925	1.27	.925	1.27
MP	('K)	269	473	1068	214	600
sP	(K/ft.)	.345	.345	——	.345	——
MsP	('K)	115	206	——	125	——
ML	('K)	434	693	474	595	374
M (Imp)	('K)	122	166	114	143	90
5/3(ML+I)	('K)	927	1432	980	1230	773
Ma	('K)	1704	2744	2662	2040	1785
Mu	('K)	2461	3688	——	3688	——
fsP non-comp	(k.s.i.)	12	13	19.3	5.8	16.4
fsP (comp)	(k.s.i.)	3.3	3.9	——	2.3	——
fs 5/3(L+I)	(k.s.i.)	26.7	26.8	17.7	23.0	21.1
fs (Overload)	(k.s.i.)	42	43.7	37.0	31.1	37.5
fs (Total)	(k.s.i.)	——	——	48.1	——	48.8
VR	(K)	49.9	55.4	——	47.6	——

INTERIOR BEAM REACTION TABLE

		Abuts.	Pier 1 Sp. 1 or Pier 3 Sp. 6	Pier 1 Sp. 2 or Pier 3 Sp. 5	Pier 1A or Pier 2A	Pier 2
RP	(K)	29.7	29.7	41.5	126.7	98.3
RL	(K)	38.9	38.9	41.3	60.0	56.5
Imp.	(K)	10.9	10.9	9.9	14.4	13.6
R (Total)	(K)	79.5	79.5	92.7	201.1	168.4

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).
VR is the maximum Live Load + Impact shear range in span.
Ma (Applied Moment)=1.3[MP + MsP + 5/3(ML + I)].
Mu is the Full Plastic Moment Capacity for Compact, Braced section.
fs (Overload) is the sum of the stresses due to MP + MsP + 5/3(ML + I).
fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[MP + MsP + 5/3(ML + I)].
MP-Moment due to dead loads on noncomposite section.
MsP-Moment due to dead loads on composite section.
ML-Moment due to live load on noncomposite or composite section.
I-Live load impact.

*TOP OF FLANGE ELEVATIONS

Location	Beam 1 & 5	Beam 2 & 4	Beam 3
℄ Brg. East Abut.	386.53	386.65	386.77
℄ Brg. Pier 1 Span 1	386.31	386.43	386.55
℄ Brg. Pier 1 Span 2	386.30	386.43	386.54
℄ Splice 1	386.04	386.16	386.28
℄ Brg. Pier 1A	385.92	386.04	386.15
℄ Splice 2	385.77	385.89	386.01
℄ Splice 3	385.58	385.71	385.82
℄ Brg. Pier 2	385.51	385.64	385.75
℄ Splice 4	385.25	385.38	385.49
℄ Brg. Pier 2A	385.18	385.30	385.42
℄ Splice 5	385.11	385.24	385.35
℄ Brg. Pier 3 Span 5	384.83	384.96	385.07
℄ Brg. Pier 3 Span 6	384.82	384.95	385.06
℄ Brg. West Abut.	384.60	384.73	384.84

* For fabrication purposes only.
Elevations at splices have been adjusted for deflection.

STRUCTURAL STEEL DETAILS
F.A. RT. 873 SEC. 105 BC-BR
FRANKLIN COUNTY
STATION 607+20.00

FOR INFORMATION ONLY SN 028-0037

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 11/30/2020	DATE -	REVISED -	

SN 028-0037

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	48
		CONTRACT NO. 78836		
		ILLINOIS FED. AID PROJECT		

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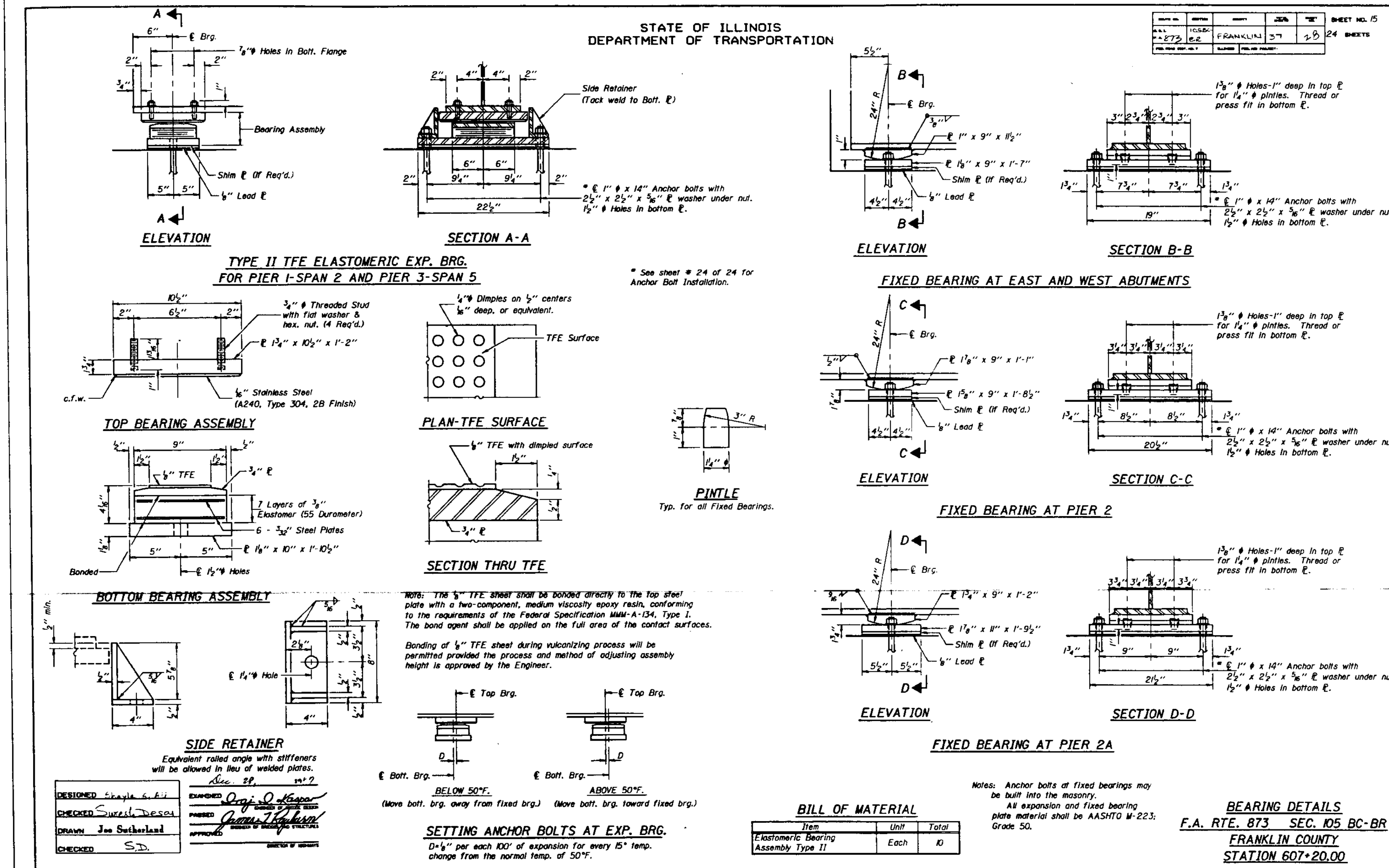

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.I. RTE. 873 | SECTION 105BC-BR | COUNTY FRANKLIN | TOTAL SHEETS 37 | SHEET NO. 28
SHEET NO. 15
24 SHEETS
ELEVATION
SECTION A-A
TYPE II TFE ELASTOMERIC EXP. BRG.
FOR PIER 1-SPAN 2 AND PIER 3-SPAN 5
7/8"φ Holes in Bott. Flange
Bearing Assembly
Shim ℙ (If Req'd.)
1/8" Lead ℙ
Side Retainer
(Tack weld to Bott. ℙ)
* ℙ 1" φ x 14" Anchor bolts with 2½" x 2½" x 5/16" ℙ washer under nut. 1½" φ Holes in bottom ℙ.
* See sheet # 24 of 24 for Anchor Bolt Installation.
TOP BEARING ASSEMBLY
3/4" φ Threaded Stud with flat washer & hex. nut. (4 Req'd.)
ℙ 1¾" x 10½" x 1'-2"
1/16" Stainless Steel (A240, Type 304, 2B Finish)
PLAN-TFE SURFACE
1/4"φ Dimples on ½" centers 1/16" deep, or equivalent.
TFE Surface
BOTTOM BEARING ASSEMBLY
1/8" TFE
7 Layers of 3/8" Elastomer (55 Durometer)
6 - 3/32" Steel Plates
ℙ 1⅛" x 10" x 1'-10½"
ℙ 1½"φ Holes
Bonded
SECTION THRU TFE
1/8" TFE with dimpled surface
PINTLE
Typ. for all Fixed Bearings.
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.
SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
ℙ 1¼"φ Hole
SETTING ANCHOR BOLTS AT EXP. BRG.
BELOW 50°F. (Move bott. brg. away from fixed brg.)
ABOVE 50°F. (Move bott. brg. toward fixed brg.)
D=1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.
FIXED BEARING AT EAST AND WEST ABUTMENTS
ELEVATION
SECTION B-B
1⅜" φ Holes-1" deep in top ℙ for 1¼" φ pintles. Thread or press fit in bottom ℙ.
ℙ 1" x 9" x 11½"
ℙ 1⅛" x 9" x 1'-7"
FIXED BEARING AT PIER 2
ELEVATION
SECTION C-C
ℙ 1⅞" x 9" x 1'-1"
ℙ 1⅝" x 9" x 1'-8½"
FIXED BEARING AT PIER 2A
ELEVATION
SECTION D-D
ℙ 1¾" x 9" x 1'-2"
ℙ 1⅞" x 11" x 1'-9½"
Notes: Anchor bolts at fixed bearings may be built into the masonry.
All expansion and fixed bearing plate material shall be AASHTO M-223; Grade 50.
DESIGNED Shayle S. Fii
CHECKED Suresh Desai
DRAWN Joe Sutherland
CHECKED S.D.
EXAMINED
PASSED
APPROVED

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	10

BEARING DETAILS
F.A. RTE. 873 SEC. 105 BC-BR
FRANKLIN COUNTY
STATION 607+20.00

FOR INFORMATION ONLY SN 028-0037

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 11/25/2020	DATE -	REVISED -	

SN 028-0037

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	49

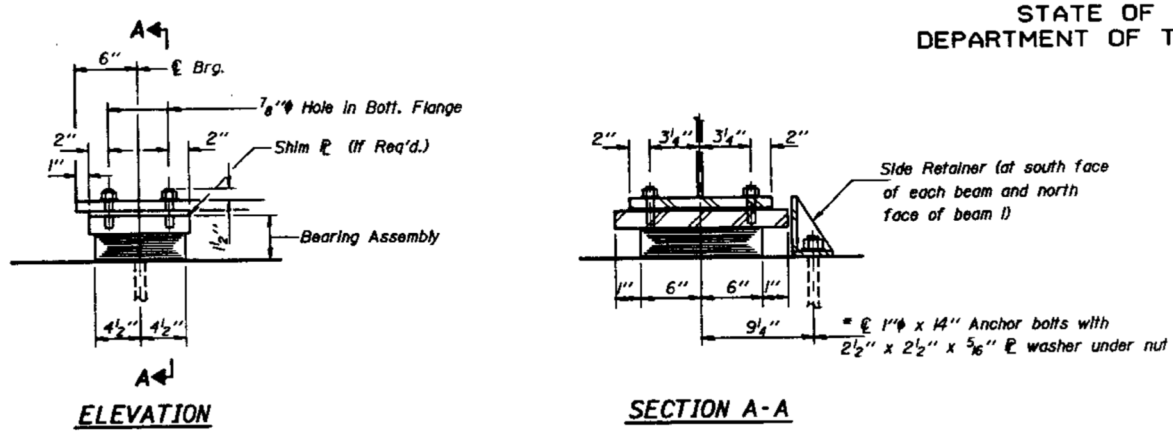
CONTRACT NO. 78836

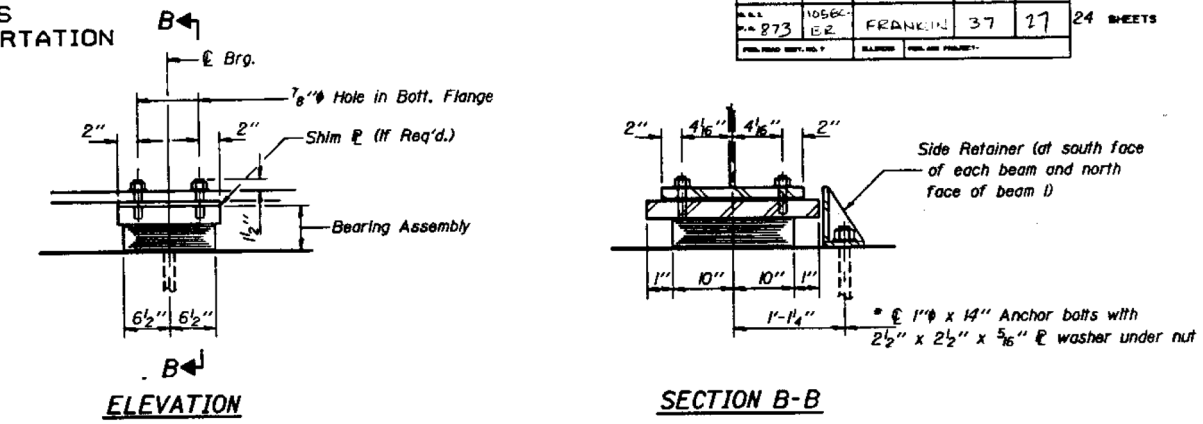
ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

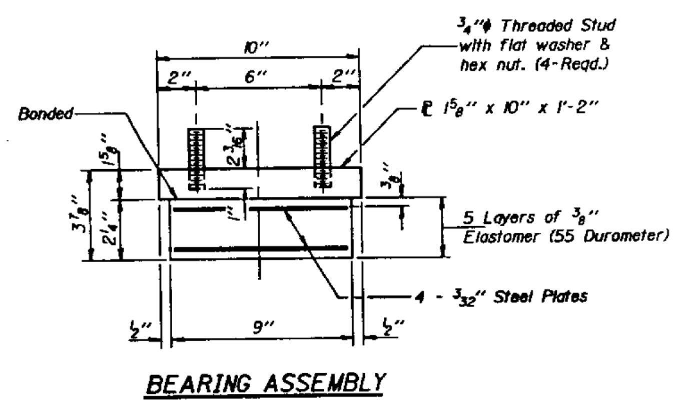
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 873	105BC-BR	FRANKLIN	37	27

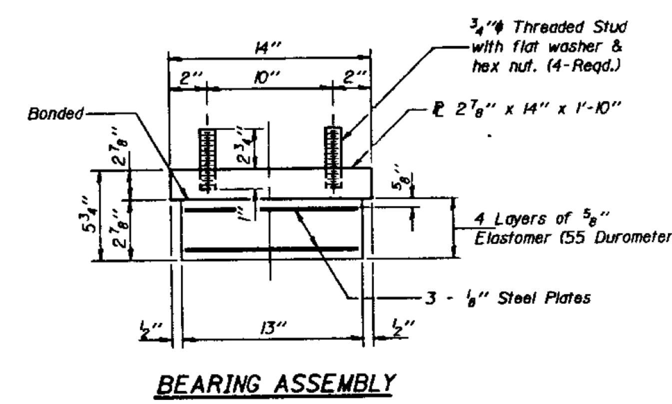
SHEET NO. 14
24 SHEETS





* See sheet # 24 of 24 for Anchor Bolt Installation.

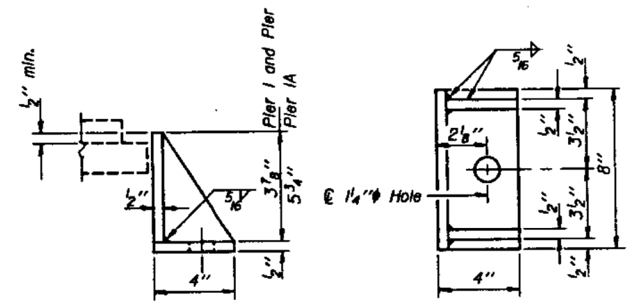




BEARING DETAILS FOR PIER 1-SPAN 1 AND PIER 3-SPAN 6

BEARING DETAILS FOR PIER 1A

Notes: Shim plates shall not be placed under Bearing Assemblys.
All bearing plate material shall be AASHTO M-223, Grade 50.



SIDE RETAINER
(Typical except as noted.)
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	15

DESIGNED Shayla S. Ali
CHECKED Suresh Desai
DRAWN Joe Sutherland
CHECKED S.D.

Dec 28 1987
EXAMINED Oraj D. Kaspar — ENGINEER OF BRIDGE DESIGN
PASSED James T. Rayburn — ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

DETAILS FOR TYPE I ELASTOMERIC EXPANSION BEARINGS
F.A. RT. 873 SEC. 105 BC-BR
FRANKLIN COUNTY
STATION 607+20.00

FOR INFORMATION ONLY SN 028-0037

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 028-0037
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 11/25/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	50

CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

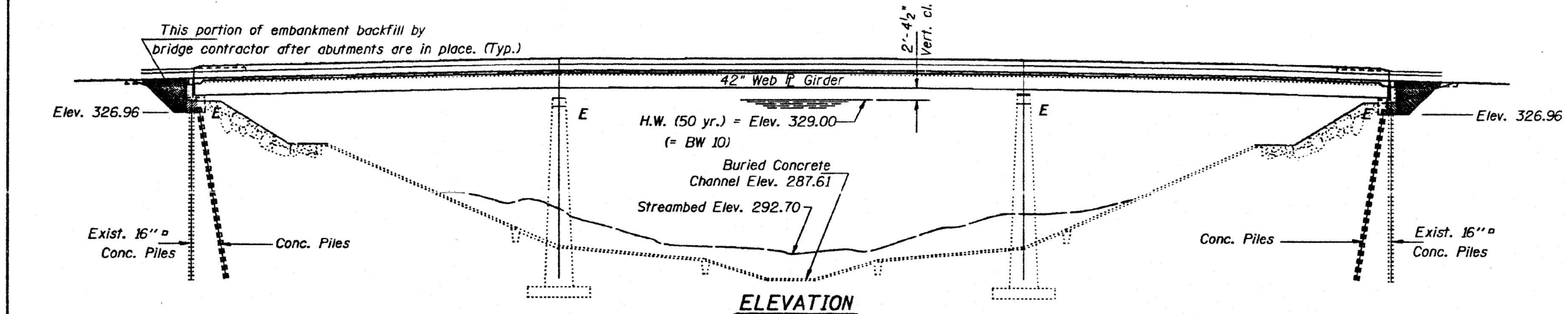
Bench Mark: B.M. "□" Cut in S.E. corner at east end of existing S. Abut. Elev. 335.80

Existing Structure: #002-0014 is 282'-0" long by 32'-4" wide, built as S.B.I. Route 150, Sec. 136-B-2 at Station 357+20.80 in 1946. The existing superstructure and abutments shall be replaced. The existing abutment piles shall be incorporated into the new abutments. The existing pier caps shall be modified as required for the new superstructure. Stage construction shall be utilized so as to maintain one lane traffic during reconstruction.

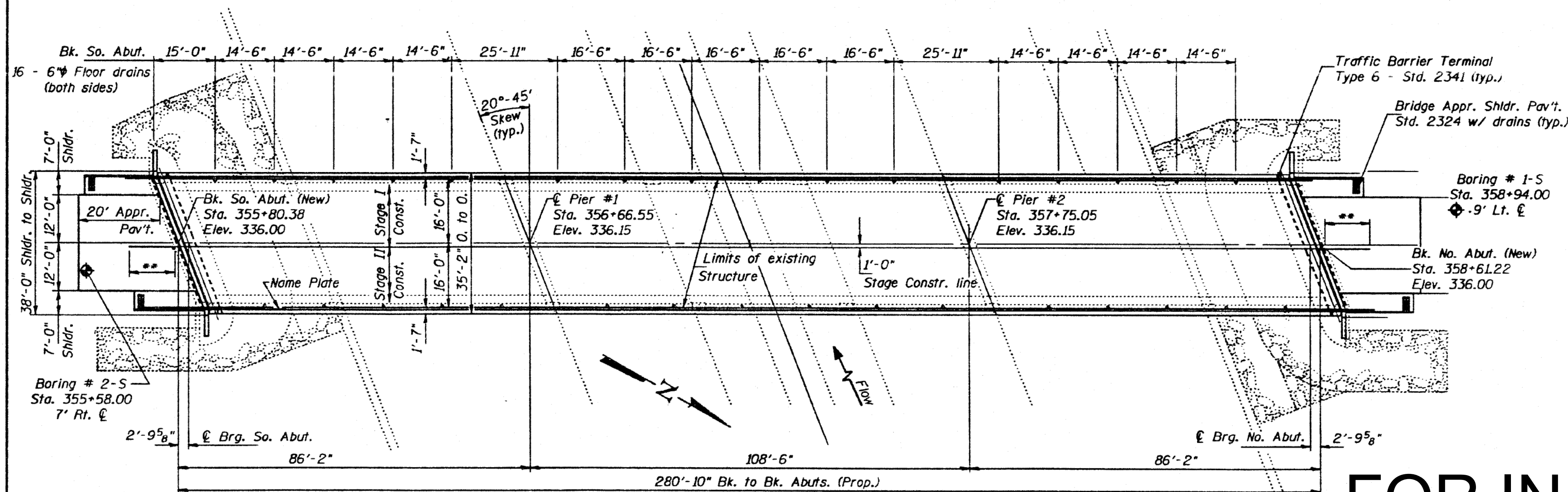
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 14	(136B-2)DR	ALEXANDER	32	12

SHEET NO. 1
21 SHEETS



ELEVATION



PLAN

** Limits of temporary sheet piling. Top of sheet piling Elev. = 336.00 & min Tip Elev. = 318.00. The information shown for the temporary sheet piling is estimated. It is the contractors responsibility to provide a design and computations of the temporary sheet piling and associated members. If required, subject to the approval of the Engineer. See Sheet 2 of 21 for additional details.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Concrete Removal	Cu. Yd.		51	51
Expansion Bolts ¾"	Each		88	88
Structure Excavation	Cu. Yd.		96	96
Floor Drains	Each	32		32
Class X Concrete Superstructure	Cu. Yd.	297.0		297.0
* Protective Coat	Sq. Yd.	1.212		1.212
Class X Concrete	Cu. Yd.		75.8	75.8
Structural Steel	L.S.	1		1
Stud Shear Connectors	Each	3.080		3.080
Temporary Bridge Rail	Lin. Ft.	282		282
Reinforcement Bars, Epoxy Coated	Pound	76.620	7.320	83.940
Concrete Piles	Lin. Ft.		440	440
Test Pile Concrete	Each		2	2
Temporary Sheet Piling	Sq. Ft.	419		419
Name Plates	Each	1		1
Bridge Seat Sealer	L.S.		1	1
Neoprene Expansion Joint 2"	Lin. Ft.	73		73
Seismic Isolation Bearing 12" x 12"	Each	10		10
Seismic Isolation Bearing 14" x 14"	Each	10		10

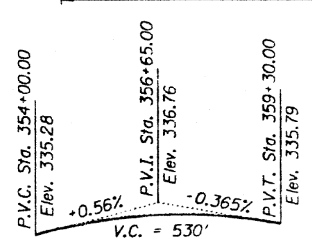
* Quantity includes top and inside face surfaces of parapets and top surface of slab.

STATION 357+20.80
BUILT 19 BY
STATE OF ILLINOIS
F.A. RT. 14 SEC. (136B-2)DR
LOADING HS20-44
STR. NO. 002-0014

PROJECT BHF-14 (123)

NAME PLATE
See Std. 2113

FOR INFORMATION ONLY
SN 002-0014



PROPOSED PROFILE GRADE
F.A. Route 14

DESIGNED	Kevin J. Riechers
CHECKED	Richard M. List
DRAWN	Paul W. Sweet
CHECKED	GKF

March 26 1990
EXAMINED — Engineer of Bridge Design
PASSED — Engineer of Bridges and Structures
APPROVED — Director of Highways

WATERWAY INFORMATION

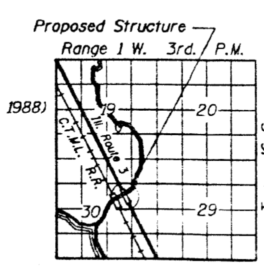
Drainage Area = 365 Sq. Mi. Low Grade Elev. *334.32 @ Sta. 364+00.00									
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	17.600	2.827	2.827	318.10	0.06	0.06	318.16	318.16
Base	100	19.900	3.146	3.146	319.78	0.00	0.00	319.78	319.78
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	25.000	3.778	3.778	322.77	0.28	0.28	323.05	323.05

L.S. Elev. 331.41
*The lowest point in the vicinity of the bridge.
The lowest known point is 3 miles to the north at elev. 333.2 . Station 96+00.00

DESIGN SPECIFICATIONS
AASHTO (1983) and applicable Interims (1984 thru 1988)
(Seismic Zone 3)

LOADING HS 20-44
(New Construction)
Allow 25#/sq. ft. for future wearing surface.

DESIGN STRESSES
FIELD UNITS
f'_c = 3.500 psi
f_y = 60.000 psi (Reinf.)
f_y = 36.000 psi (M183 Struct. Steel)
f_y = 50.000 psi (M223 Grade 50 Struct. Steel)



LOCATION SKETCH

GENERAL PLAN
ILL. ROUTE 3 OVER
CACHE RIVER DIVERSION CHANNEL
F.A. ROUTE 14 SECTION (136B-2)DR
ALEXANDER COUNTY
STATION 357+20.80
STRUCTURE NUMBER 002-0014

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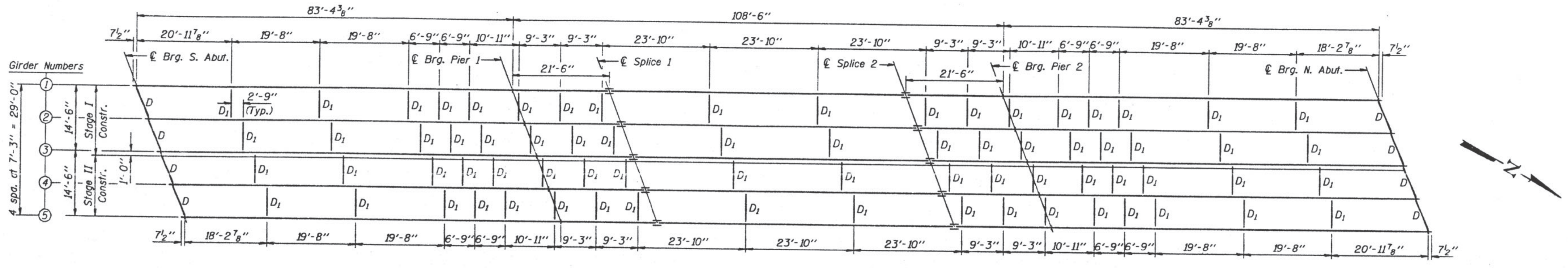
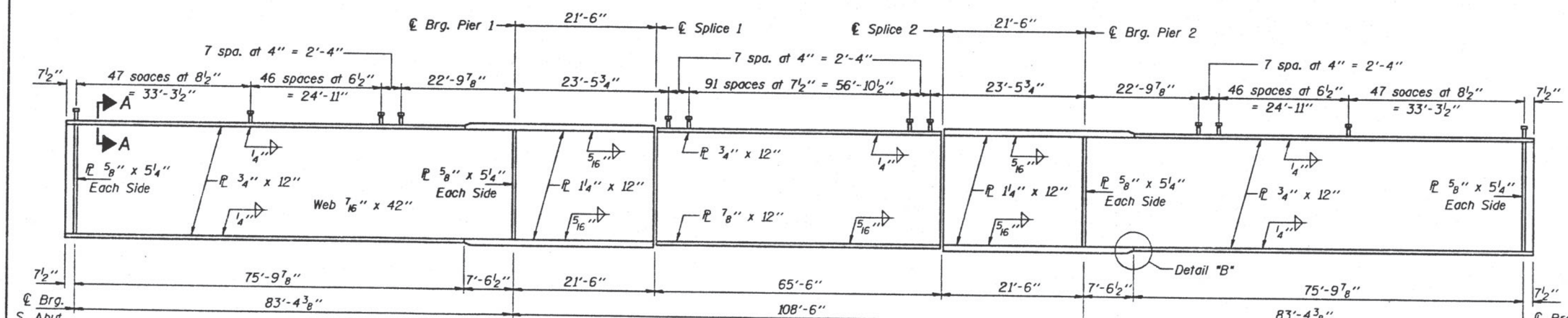
USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 002-0014	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	51
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 78836		
PLOT DATE = 11/25/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 14	(136B-2)DR	ALEXANDER	32	21

SHEET NO. 10
21 SHEETS

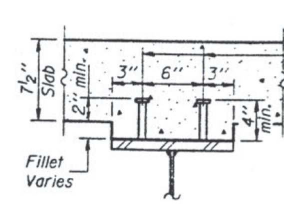


FRAMING PLAN



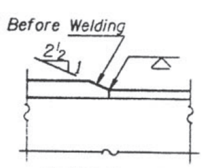
GIRDER ELEVATION

All flanges, webs, stiffeners and splice plate material excluding fill plates shall be AASHTO M 223 Grade 50 and conform to the Supplemental Requirements for Notch Toughness Zone 2.



3/4"φ Granular or solid flux filled headed studs, conforming to the requirements of Art. 710.38 of the Std. Specs. Automatically end welded to flange. (3,080 Req'd.)

SECTION A-A



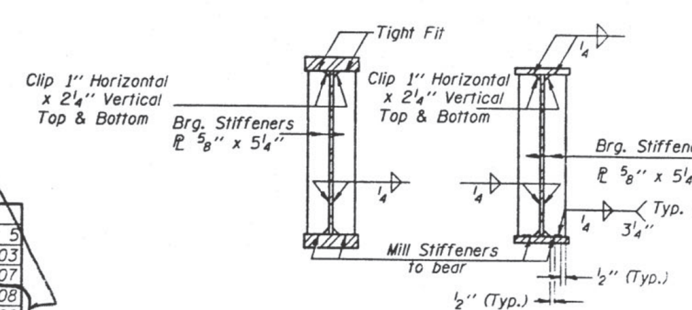
DETAIL "B"

335.12
335.25
335.36

Top of Web Elevations					
	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5
℄ Brg. S. Abut.	335.01	335.14	335.26	335.15	335.03
℄ Brg. Pier 1	335.06	335.19	335.31	335.20	335.07
℄ Splice 1	335.08	335.21	335.32	335.21	335.08
℄ Splice 2	335.08	335.21	335.32	335.21	335.08
℄ Brg. Pier 2	335.07	335.20	335.31	335.20	335.06
℄ Brg. N. Abut.	335.03	335.15	335.26	335.14	335.01

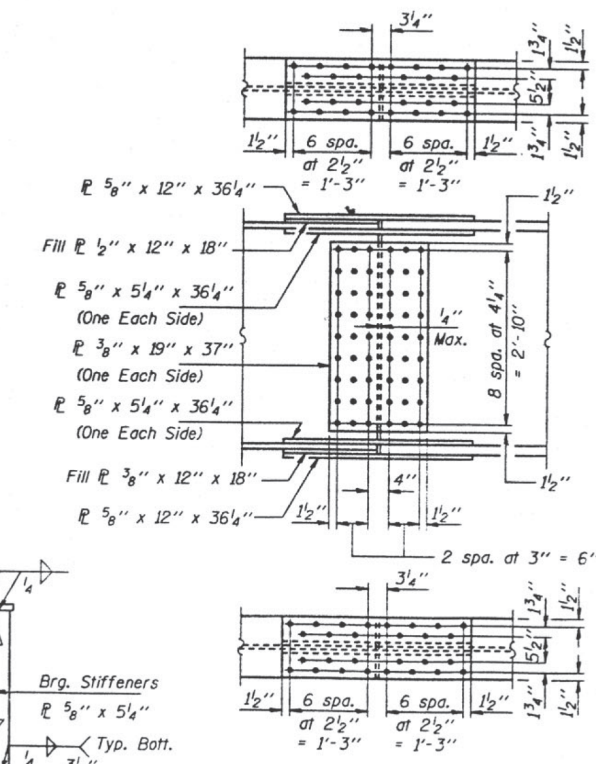
For Fabrication only, does not include dead load deflections.

See memo 7-12-90 GRA



SECTION AT PIERS   SECTION AT ABUTMENTS

BEARING STIFFENER SECTIONS



FIELD SPLICE DETAIL

STRUCTURAL STEEL
F.A. RT. 14 SEC. (136B-2)DR
ALEXANDER COUNTY
STA. 357+20.80

DESIGNED Kevin L. Riechers
CHECKED Richard M. Bt
DRAWN Paul Summer
CHECKED GRA

March 26 1990
EXAMINED Eraj J. Kaspar — ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson — ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

G-1 4-1-79

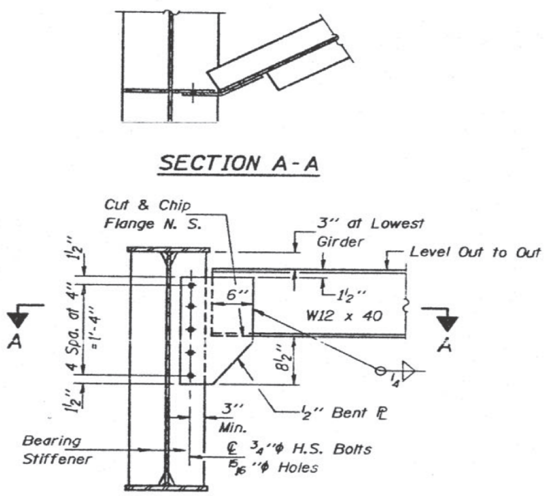
Revised 7-12-90

FOR INFORMATION ONLY SN 002-0014

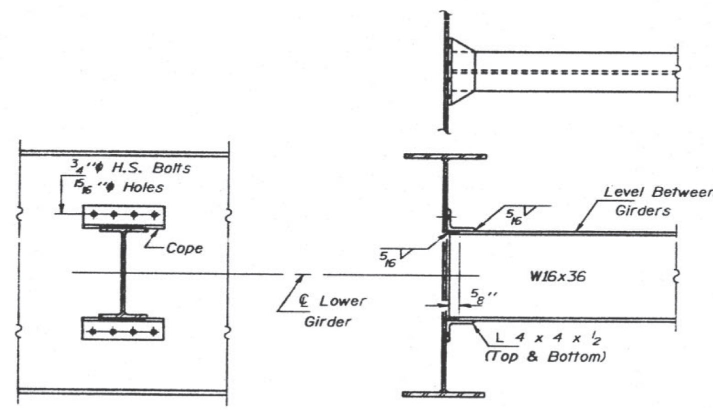
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 14	(136B-2)DR	ALEXANDER	32	22

SHEET NO. 11
21 SHEETS



DIAPHRAGM D
8 Required



DIAPHRAGM D1
72 Required

Note: Two hardened washers shall be required over all $^{15}/_{16}$"ϕ holes.

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Piers	0.5 Sp. 2
Is	(in⁴)	10,926	16,734	11,610
Ic	(in⁴)	27,985		30,282
Ss	(in³)	502	752	553
Sc	(in³)	712		779
D℄	(K/ft.)	0.843	1.207	0.843
M℄	('K)	361	1,141	406
s℄	(K/ft.)	0.345		0.345
Ms℄	('K)	177		229
ML	('K)	676	545	794
M (Imp)	('K)	162	123	170
$^5/_3$(ML + I)	('K)	1,397	1,113	1,607
Ma	('K)	2,516	2,930	2,915
fs℄ non-comp	(k.s.i.)	8.6	18.2	8.8
fs℄ (comp)	(k.s.i.)	3.0		3.5
fs$^5/_3$(L + I)	(k.s.i.)	23.5	17.8	24.8
fs (Overload)	(k.s.i.)	35.1	36.0	37.1
fs (Total)	(k.s.i.)	45.6	46.8	48.2
VR	(K)	56.0		50.0

INTERIOR GIRDER REACTION TABLE			
		Abuts.	Piers
R℄	(K)	36.0	128.8
RL	(K)	41.2	63.9
Imp.	(K)	9.9	14.4
R (TOTAL)	(K)	87.1	207.1

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).

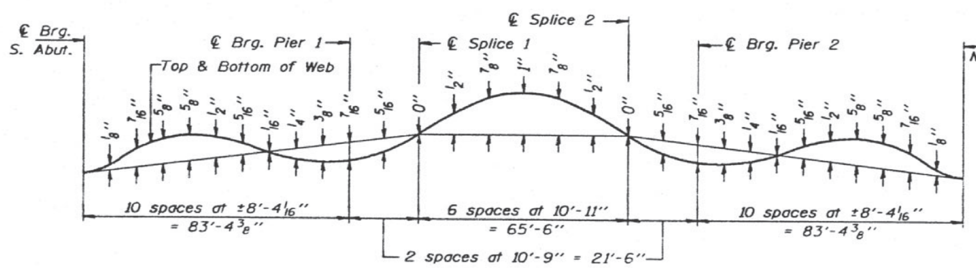
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).

VR is the maximum Live Load + Impact shear range in span.

Ma (Applied Moment) = 1.3[M℄ + Ms℄ + $^5/_3$(ML + I)].

fs (Overload) is the sum of the stresses due to M℄ + Ms℄ + $^5/_3$(ML + I).

fs (Total) (Non-compact section) is the sum of the stresses due to 1.3[M℄ + Ms℄ + $^5/_3$(ML + I)].



CAMBER DIAGRAM

DESIGNED	Dwen J. Riechard
CHECKED	Richard M. Lint
DRAWN	Paul Summer
CHECKED	GKP

March 26 1996
EXAMINED — Engineer of Bridge Design
PASSED — Engineer of Bridges and Structures
APPROVED — Director of Highways

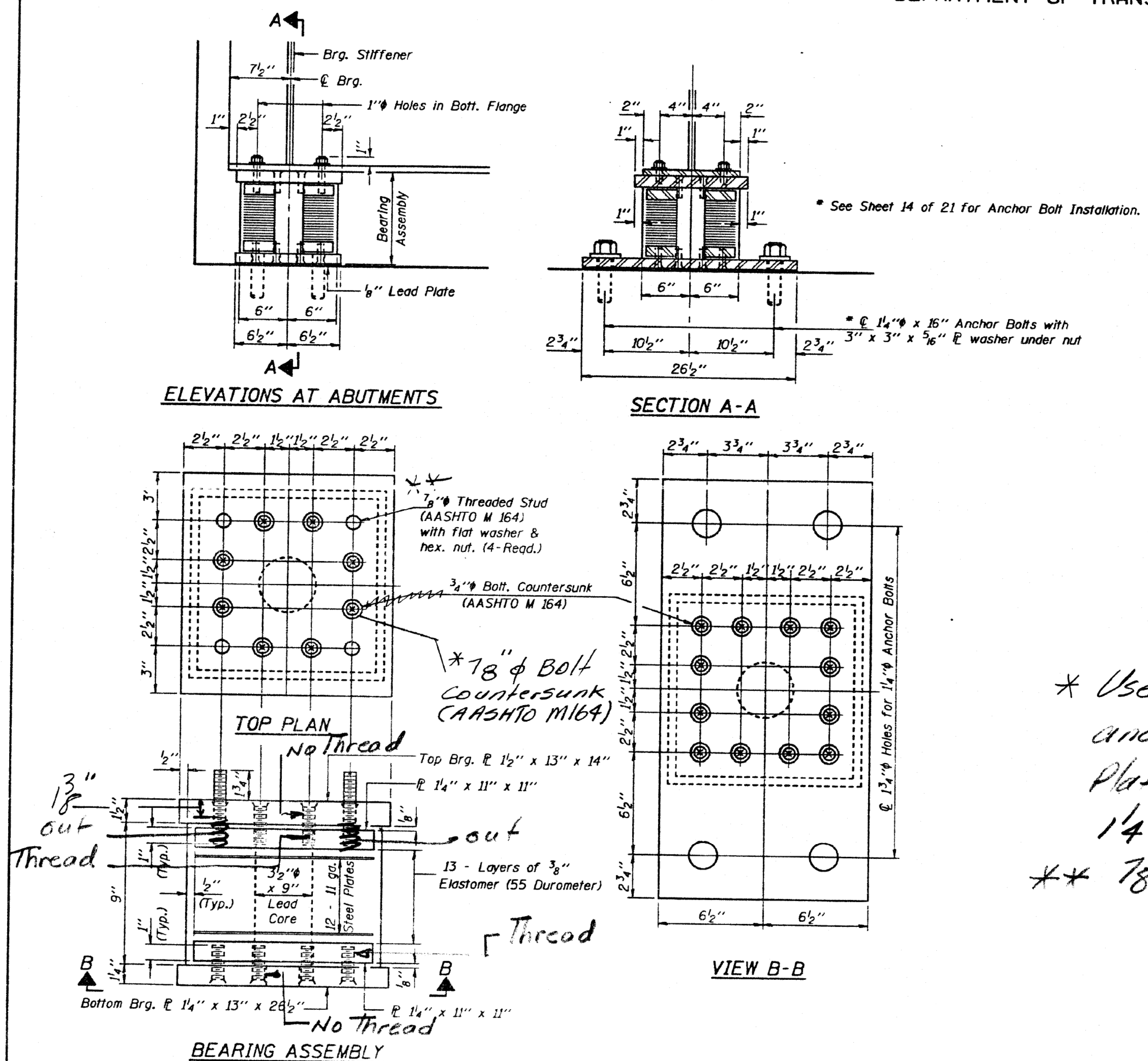
STRUCTURAL STEEL DETAILS
F.A. RT. 14 SEC. (136B-2)DR
ALEXANDER COUNTY
STA. 357+20.80

FOR INFORMATION ONLY
SN 002-0014

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 14	(136B-2)DR	ALEXANDER	32	23

SHEET NO. 12
21 SHEETS



Notes: The Top and Bottom plates of the Bearing Assembly shall be AASHTO M 223 Grade 50 and shall be painted with the same system of paint used for structural steel.
It is the Contractor's responsibility to jack horizontally the top plate of the bearing for the proper deflection if there is a temp. rise or fall from the normal temp. of 50° F. The deflection required in the top plate shall be 1/8" per each 100' of expansion length. measured from the center of the structure along the beam line. for every 15° temp. change from the normal temp. of 50° F. The bearings shall be held in the deflected position until erection of the beam is complete. Jacking of the bearing and Jacking brackets if required shall be incidental to SEISMIC ISOLATION BEARING ASSEMBLY 12" x 12".

* Use 8-7/8"⌀ bolt countersunk for top bearing plate and keep 12-3/4"⌀ bolt countersunk for bottom bearing plate. The bolt countersunk are threaded in plate 1¼"x11"x11" only.

** 7/8"⌀ studs are threaded in top bearing plate only.

GRA

BILL OF MATERIAL

Item	Unit	Total
Seismic Isolation Bearing Assy. 12" x 12"	Each	10

DESIGNED	[signature]
CHECKED	[signature]
DRAWN	
CHECKED	GRA

March 26 1996

EXAMINED [signature] ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS

FOR INFORMATION ONLY
SN 002-0014

BEARING DETAILS
AT ABUTMENTS
F.A. RT. 14 SEC. (136B-2)DR
ALEXANDER COUNTY
STA. 357+20.80

Bench Mark: Std. tablet stamped "I HB 1965" in S.E. wingwall, 14' Lt., Sta. 23+20.00, Elev. 336.76

Existing Structure: A three span continuous WF (27) superstructure with a 6½" R.C. deck. The superstructure is supported by R.C. bents with 16"□ P.C. concrete piles. Built in 1935, the existing length of the structure is 181'-6" Bk. to Bk. Abuts. and the existing width is 25'-8" Out to Out. Exist. Structure Number 002-0018. The existing structure shall be removed by the contractor, except for the 16"□ P.C. concrete piles at all Abuts. and Piers. The existing 16"□ P.C. piles shall be incorporated into the new construction. Stage construction will be used to maintain one lane of traffic during all phases of the project.

No Salvage.

GENERAL NOTES

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 shall be constructed or adjusted to the designated elevations within a tolerance of ⅛ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two ⅛" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

The contractor shall drive 2 Metal Shell test piles in permanent locations 1 at the South Abutment and 1 at Pier 2 as directed by the Engineer before ordering the remainder of piles.

Bridge Seat Sealer shall be applied to the seat area of the abutments Est. quantity = [illegible] Sq. Ft.

Temporary bracing shall be provided behind each abutment during both stages of construction to support the approach traffic lane. Cost incidental to "Removal of Existing Structures".

For cantilever forming brackets, see special provisions.

See Proposal for Boring Data.

Fasteners shall be high strength bolts. Bolts ⅞"Φ, open holes 15/16"Φ, unless otherwise noted.

Calculated weight of Structural Steel M223 Grade 50 = 103,990 lbs.

Calculated weight of Structural Steel M183 = 18,640 lbs.

The Zinc-silicate and vinyl paint system shall be used for shop and field painting of Structural Steel except where otherwise noted.

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.

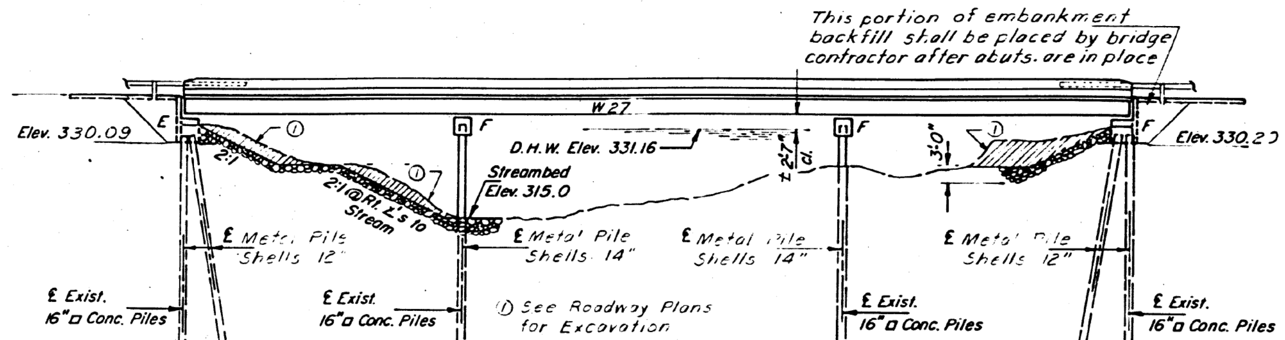
Anchor bolts shall be set before bolting diaphragms over supports.

The 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.

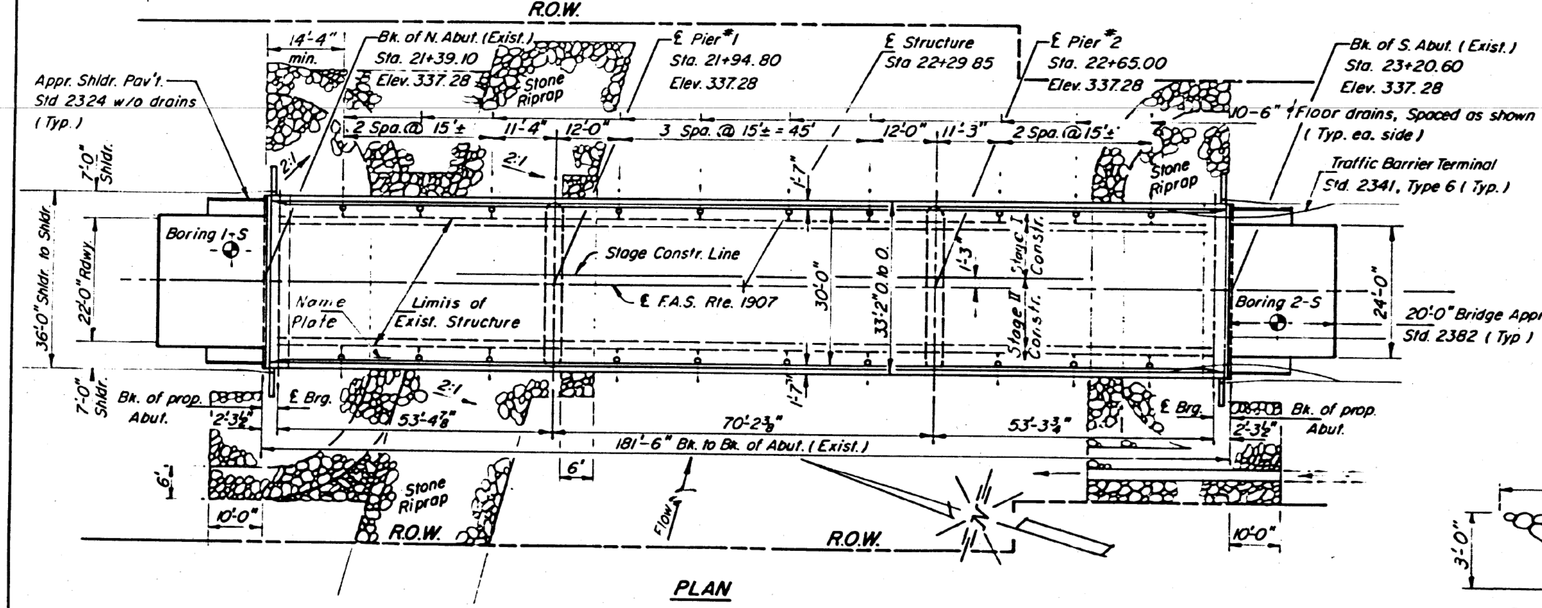
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

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

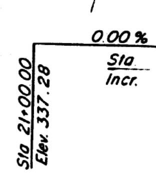


ELEVATION

FOR INFORMATION ONLY SN 002-0033



PLAN



PROFILE GRADE

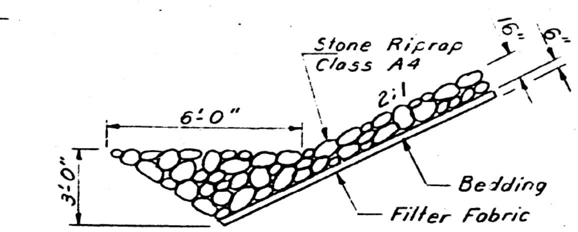
F.A.S. Rte. 1907

(Along ℄ Roadway)

STATION 22+29.85
BUILT 198 BY
STATE OF ILLINOIS
F.A.S. RT. 1907 SEC. 15B-DR
F.A. PROJECT ACBRS-1907(112)
LOADING HS 20-44
STR. No. 002.0033

NAME PLATE

See Std. 2113



STONE RIPRAP DETAIL

Quantity included with Roadway Plans.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
** Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.			[illegible]
Floor Drains	Each	20		20
Preformed Joint Seal [illegible]	Lin. Ft.	33		33
Protective Coat	Sq. Yd.	146		146
Elastomeric Bearing Assembly, Type II	Each			6
Class X Concrete	Cu. Yd.		78.2	78.2
Class X Concrete Superstructure	Cu. Yd.	184.8		184.8
Structural Steel	L.S.	1		1
Stud Shear Connectors	Each	2,520		2,520
Temporary Bridge Rail	Lin. Ft.	181		181
Reinforcement Bars	Lbs.		2,000	2,000
Reinforcement Bars (Epoxy Coated)	Lbs.	41,900	3,810	45,710
Furnishing Metal Pile Shells 12"	Lin. Ft.		827	827
Furnishing Metal Pile Shells 14"	Lin. Ft.		590	590
Test Pile Metal Shells	Each		2	2
Driving and Filling Shells	Lin. Ft.		1,417	1,417
Name Plates	Each	1		1
Neoprene Expansion Joint 2½"	Lin. Ft.	32		32
Bridge Seat Sealer	L.S.		1	1
Class X Concrete Encasement	Cu. Yd.		30.3	30.3

** Leave existing piles intact to be used for new construction. The Contractor shall take care as not to damage piles. Any damage to the existing piles shall be repaired at Contractor's expense.

* Headwater elevation. This Bridge site is in the influence of Mississippi River Backwater. From Corps of Engineer:
10 Yr. Elev. 329.00 30 Yr. Elev. 333.60
100 Yr. Elev. 336.50 500 Yr. Elev. 340.40

WATERWAY INFORMATION

Drainage Area = 29.2 sq. mi. Low Grade Elev. 336.60 @ Sta. 18+00.00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater-El. Exist.	Headwater-El. Prop.
Design	30	8068	1155	1199	331.16*	0.0	0.0	331.16	331.16
Base	100	10492	1282	1330	331.95*	0.14	0.0	332.09	331.95
Overtopping									
Max. Calc.	500	13713	1443	1487	332.88*	0.90	0.44	333.78	333.32

DESIGN SPECIFICATIONS

1983 AASHTO, 1984, 1985 and 1986 Interims

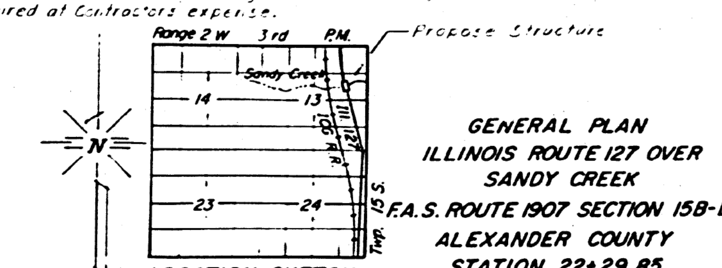
LOADING HS 20-44

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

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinf.)
fy = 50,000 psi (Structural Steel) M223, Grade 50
fy = 36,000 psi (Structural Steel) M183



LOCATION SKETCH

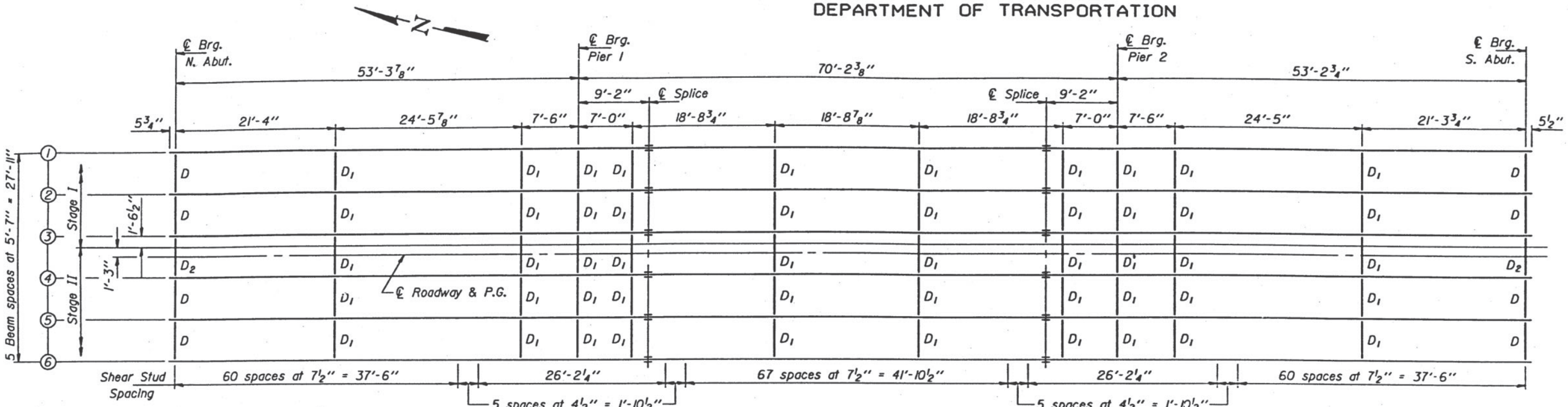
GENERAL PLAN
ILLINOIS ROUTE 127 OVER
SANDY CREEK
F.A.S. ROUTE 1907 SECTION 15B-DR
ALEXANDER COUNTY
STATION 22+29.85
STRUCTURE NUMBER 002-0033

DESIGNED	Mary H Blezdorf
CHECKED	David Zwickl
DRAWN	PWS
CHECKED	DB

September 28 1988
EXAMINED Iraj I. Kaspar — ENGINEER OF BRIDGE DESIGN
PASSED James T. Raykovich — ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

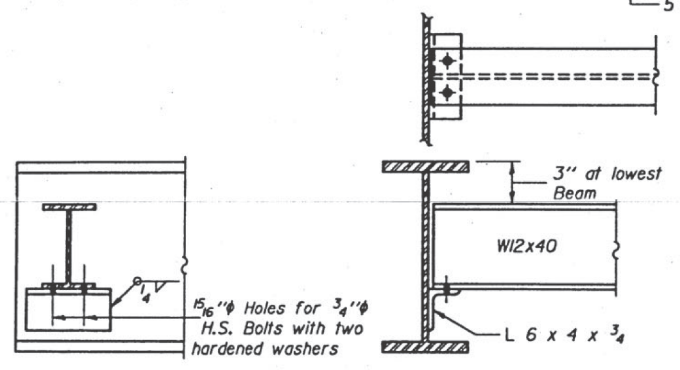
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 10
18 SHEETS



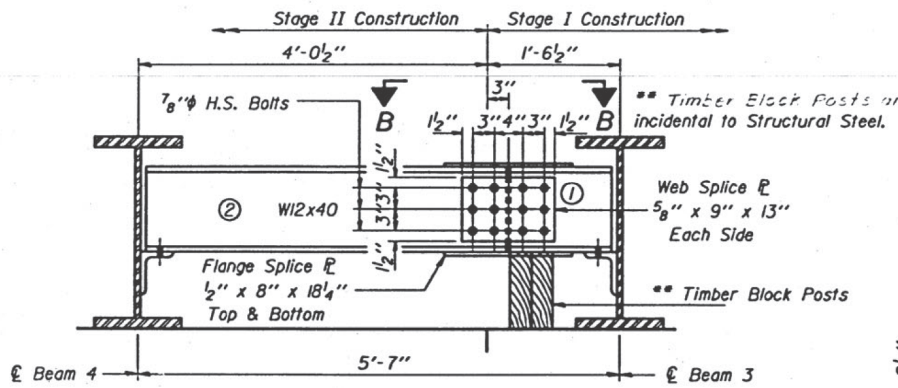
FRAMING PLAN

All beams are W27x94.
Removing and reinstalling of bolts for Diaphragm D_1 at Beam 3 for Stage II Construction shall be cost incidental to Structural Steel.



DIAPHRAGM D

8 Required

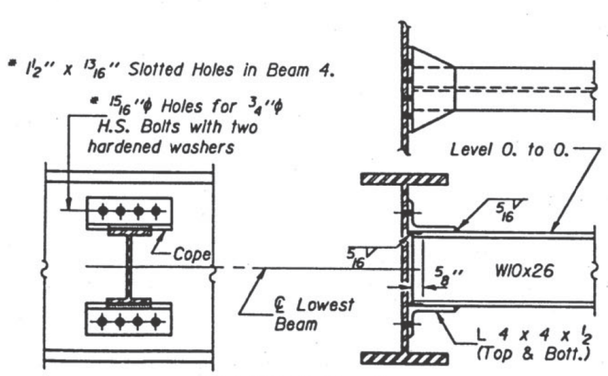


DIAPHRAGM D2

2 Required
(Looking North)
For details of connections to beams see diaphragm D.

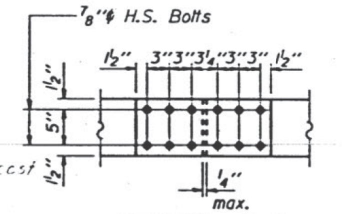
DIAPHRAGAM D2 CONSTRUCTION SEQUENCE

1.) Order Diaphragm D_2 in two sections with lengths of 1'-2 3/4" and 4'-2 3/4".
2.) Attach ① of Diaphragm to Beam 3 and top flange splice ℙ and bolts during Stage I Construction.
3.) Place Timber Block Posts between part ① of diaphragm and abutment bearing seat.
4.) Attach part ② of diaphragm to both Beam 4 and part ① of diaphragm during Stage II Construction.
5.) Attach all remaining splice plates to part ① and ② of diaphragms.
6.) Remove Timber Block Posts.

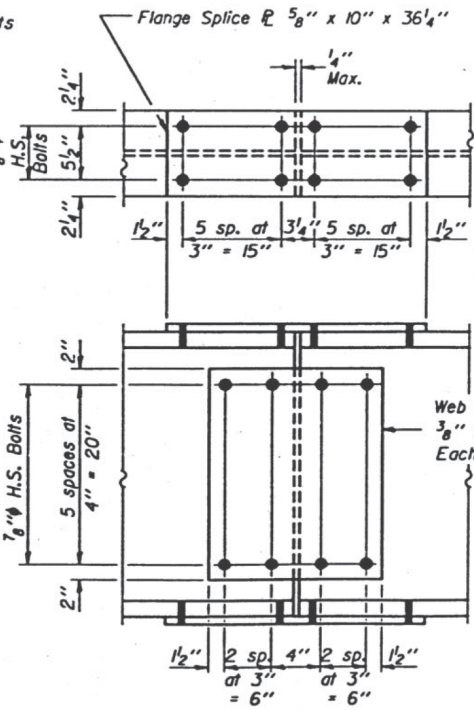


DIAPHRAGM D1

50 Required



SECTION B-B



SPLICE

INTERIOR BEAM MOMENT TABLE

		0.4 Sp. 1 or 0.6 Sp. 3	Piers	0.5 Sp. 2
Is	(in4)	3.270	3.270	3.270
Ic	(in4)	9.015		9.015
Ss	(in3)	243	243	243
Sc	(in3)	361		361
Z	(in3)		278	
D	(K/ft.)	0.646	0.923	0.646
Mℓ	('K)	119	338	145
sℓ	(K/ft.)	0.277		0.277
Msℓ	('K)	61		87
Mℓ	('K)	300	180	359
M (Imp)	('K)	84	48	92
5/3(Mℓ+I)	('K)	640	380	752
Ma	('K)	1.066	934	1.279
Mu	('K)	2.116		2.116
fsℓ non-comp	(k.s.i.)	5.9	16.7	7.2
fsℓ (comp)	(k.s.i.)	2.0		2.9
fs 5/3(ℓ+I)	(k.s.i.)	21.3	18.8	25.0
fs (Overload)	(k.s.i.)	29.2	35.5	35.1
VR	(K)	41.2		35.2

INTERIOR BEAM REACTION TABLE

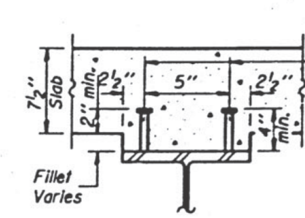
		Abuts.	Piers
Rℓ	(K)	18.2	63.4
Rℓ	(K)	29.3	36.0
Imp.	(K)	8.2	9.6
R (Total)	(K)	55.7	109.0

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing fs (Total & Overload).
VR is the maximum Live Load + Impact shear range in span.
Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.
Ma (Applied Moment)=1.3[Mℓ + Msℓ + 5/3(Mℓ + I)].
Mu is the Full Plastic Moment Capacity for Compact, Braced section.
fs (Overload) is the sum of the stresses due to Mℓ + Msℓ + 5/3(Mℓ + I).

Top of Beam Elevations

	Beam 1	Beam 2	Beam 3	Beam 4	Beam 5	Beam 6
℄ Brg. N. Abut.	336.33	336.43	336.52	336.52	336.43	336.33
℄ Brg. Pier 1	336.33	336.43	336.52	336.52	336.43	336.33
℄ Splice 1	336.33	336.43	336.52	336.52	336.43	336.33
℄ Splice 2	336.33	336.43	336.52	336.52	336.43	336.33
℄ Brg. Pier 2	336.33	336.43	336.52	336.52	336.43	336.33
℄ Brg. S. Abut.	336.33	336.43	336.52	336.52	336.43	336.33

(For Fabrication Only)



3/4"ϕ Granular or solid flux filled headed studs, conforming to the requirements of Art. 710.38 of the Std. Specs. Automatically end welded to flange. (2.520 Req'd.)

SECTION A-A

FOR INFORMATION ONLY SN 002-0033

Notes: The bolts for the slotted holes shall only be finger-tightened prior to the deck slab pouring and then be fully-tightened after the completion of the pouring.
The beams and splice plate material shall be AASHTO M223, Grade 50.
All beams and splice plate material shall conform to the Supplemental Requirements for Notch Toughness Zone 2.

DESIGNED Mary H. Bloxdorf
CHECKED David Budik
DRAWN Paul Summer
CHECKED DB MHB
I-2-D 8-30-80

Sept 28 1988
EXAMINED [signature] ENGINEER OF BRIDGE DESIGN
PASSED [signature] ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS

STRUCTURAL STEEL DETAILS
F.A.S. RT. 1907 SEC. 15B-DR
ALEXANDER COUNTY
STA. 22+29.85

USER NAME = WILSONDA	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 11/30/2020	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 002-0033

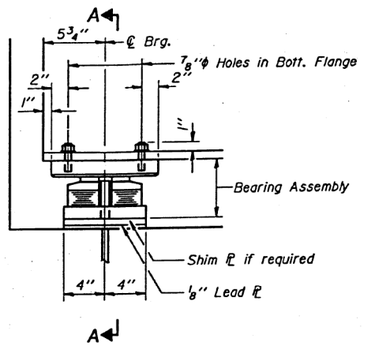
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	56

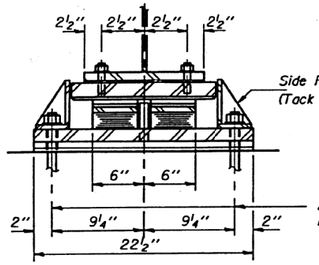
CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

					SHEET NO. 11
					18 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

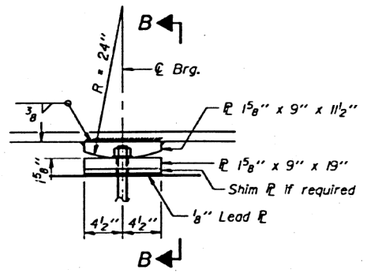


ELEVATION AT N. ABUTMENT

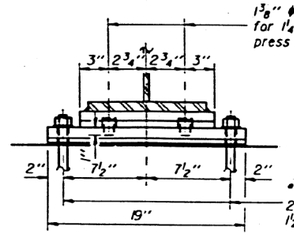


* ℄ 1"ϕ x 14" Anchor bolts with 2 1/2" x 2 1/2" x 5/16" ℙ washer under nut
1 1/2"ϕ Hole in bottom ℙ.

SECTION A-A



ELEVATION AT PIERS

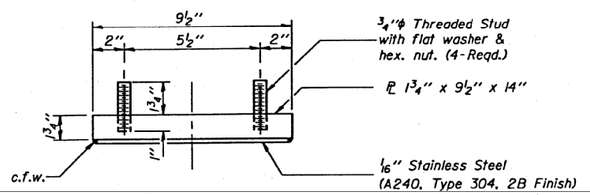


* ℄ 1" ϕ x 14" Anchor bolts with 2 1/2" x 2 1/2" x 5/16" ℙ washer under nut
1 1/2" ϕ Holes in bottom ℙ.

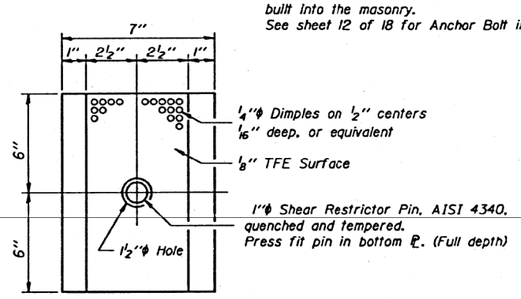
SECTION B-B

TYPE III ELASTOMERIC EXP. BRG.

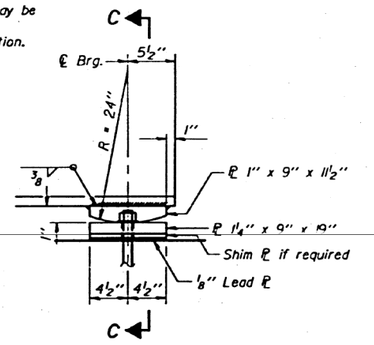
* Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet 12 of 18 for Anchor Bolt installation.



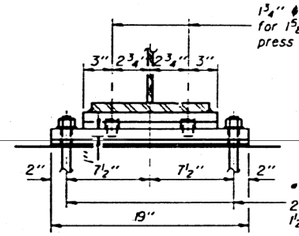
TOP BEARING ASSEMBLY



PLAN-TFE ELASTOMERIC BRG.

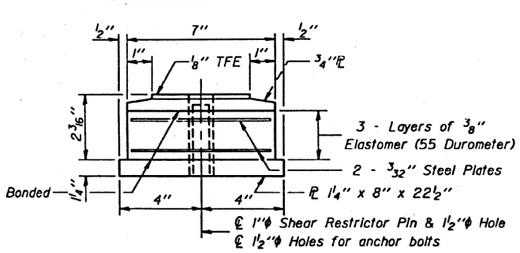


ELEVATION AT S. ABUTMENT

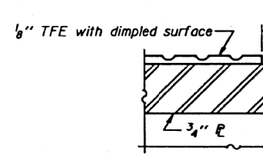


* ℄ 1" ϕ x 14" Anchor bolts with 2 1/2" x 2 1/2" x 5/16" ℙ washer under nut
1 1/2" ϕ Holes in bottom ℙ.

SECTION C-C



BOTTOM BEARING ASSEMBLY

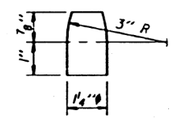


SECTION THRU TFE

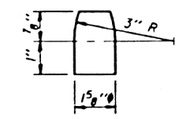
Note: The 1/8" TFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.

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.

FIXED BEARINGS

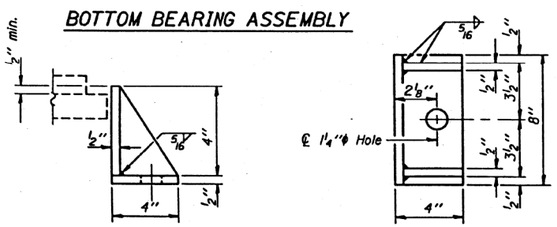


PIERS



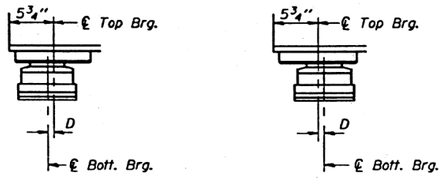
AT S. ABUTMENT

PINTLE



SIDE RETAINER

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



BELOW 50° F.
(Move bott. brg. away from fixed brg.)

ABOVE 50° F.
(Move bott. 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.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type III	Each	6

DESIGNED	Mary H. Bloxdorf	Sept 28 1988
CHECKED	David Burdick	
DRAWN	Paul Summer MHB	
CHECKED	DB	

EXAMINED Engineer of Bridge Design
PASSED Engineer of Bridges and Structures
APPROVED Director of Highways

I-2-E3 12-1-83

FOR INFORMATION ONLY
SN 002-0033

BEARING DETAILS
F.A.S. RT. 1907 SEC. 15B-DR
ALEXANDER COUNTY
STA. 22+29.85

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 11/30/2020	DATE -	REVISED -	

SN 002-0033

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	57
		CONTRACT NO. 78836		
	ILLINOIS FED. AID PROJECT			

MODEL: Default
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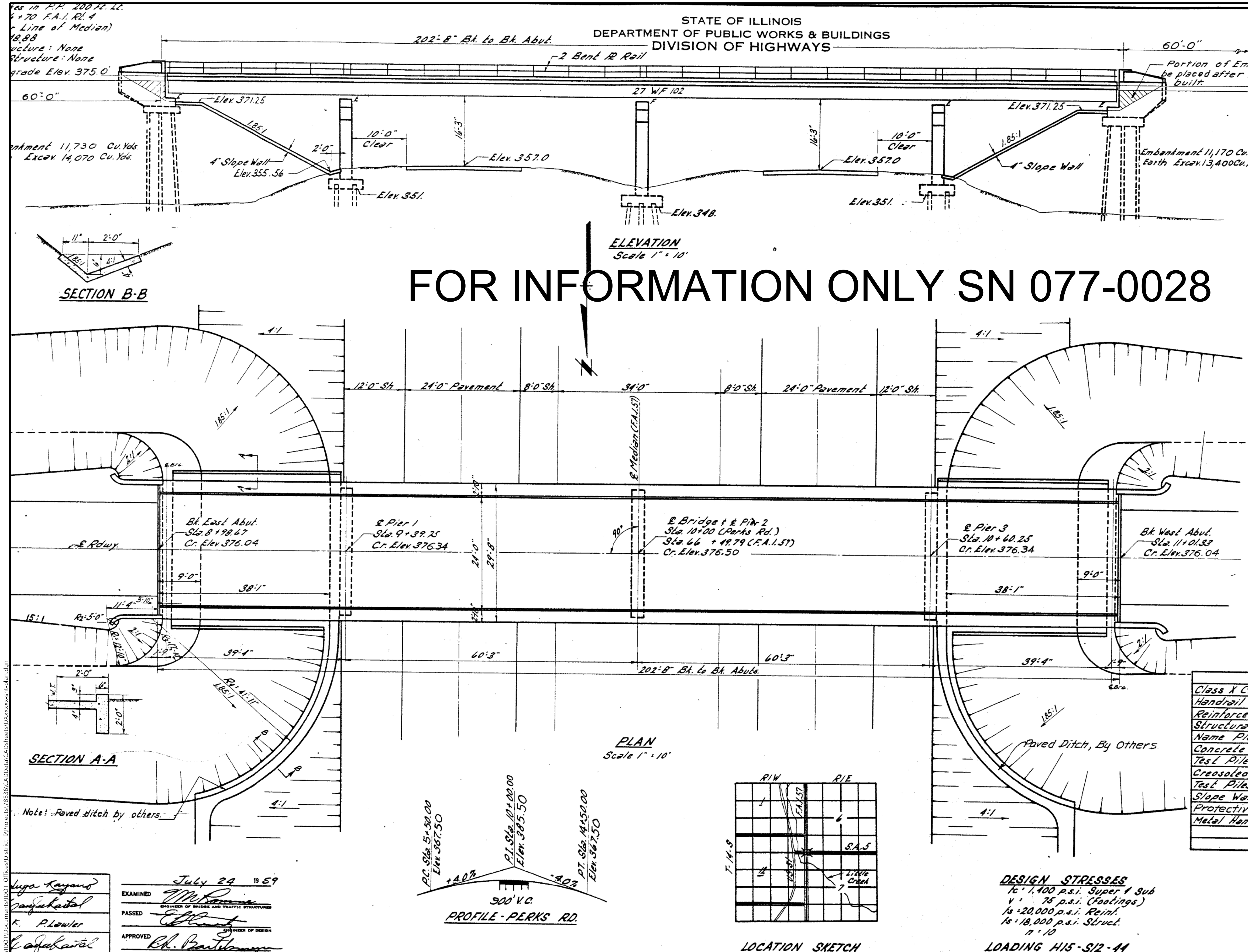
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. 57	77-IHB-1	PULASKI	24	6
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT I-57-1(56)21	

SHEET NO. 1
9 SHEETS

FOR INFORMATION ONLY SN 077-0028



GENERAL NOTES

Class X Concrete shall be used throughout except in end posts.

Handrail Concrete shall be used in end posts.

The concrete floor slab shall be finished in accordance with Article 51.19 of the Standard Specifications.

Slope wall shall be reinforced with welded wire fabric 6"x6" mesh, #4 wires, weighing 58# per 100 sq. ft.

Rivets 3/4" ϕ, Open holes 13/16" ϕ, unless noted.

Railings shall be adjusted to true alignment after falsework has been removed.

All bolsters, rockers, bearing plates, lead plates, pintles and anchor bolts shall be fabricated and set in accordance with Article 51.15 of the Standard Specifications and are included in quantity of Structural Steel. Est. Wt. 6,870#

Anchor bolts shall be set before riveting diaphragms over supports.

All steel handrail posts shall be vertical.

Except as otherwise provided, all structural steel shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Article 56.1 to 56.5 inclusive of the Standard Specifications.

All paint shall be furnished and applied by the Contractor.

The contractor shall drive one concrete test pile in a permanent location at each abutment and one timber test pile in the vicinity of Pier 2 as directed by the engineer before ordering remainder of piles.

STATION 66 +49.79
BUILT 19 BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. 77-IHB-1
F.A. PROJ. I-57-1(56)
LOADING H15-S12

NAME PLATE
See Std. 2113

TOTAL BILL OF MATERIAL

Item		Super	Sub	Total
Class X Concrete	Cu. Yds.	159.5	153.4	312.9
Handrail Concrete	Cu. Yds.	2.3		2.3
Reinforcement Bars	Lbs.	~~34,590~~ 30,120	12,580	~~47,170~~ 42,700
Structural Steel	Lbs.	130,870		130,870
Name Plates	Ea.		2	2
Concrete Piles	Lin. Ft.		1344	1,344
Test Piles (Concrete)	Ea.		2	2
Creosoted Timber Piles	Lin. Ft.		1,606	1,606
Test Piles (Timber)	Ea.		1	1
Slope Wall	Sq. Yds.		278	278
Protective Coat	Sq. Yds.	702		702
Metal Handrail	Lin. Ft.	401		401

DESIGN STRESSES
fc = 1,400 p.s.i. Super & Sub
v = 75 p.s.i. (Footings)
fs = 20,000 p.s.i. Reinf.
fs = 18,000 p.s.i. Struct.
n = 10

LOADING H15-S12-44

PROJ. I-57-1(56)21
GENERAL PLAN & ELEVATION
PERKS ROAD
OVER
F.A.I. RT. 57 SEC. 77-IHB-1
PULASKI COUNTY
STA. 66 +49.79 (F.A.I. 57)

EXAMINED July 24 1959 — ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED — CHIEF HIGHWAY ENGINEER

K. P. Lawler

Reel 9-40

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 077-0028
	DRAWN -	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 11/30/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

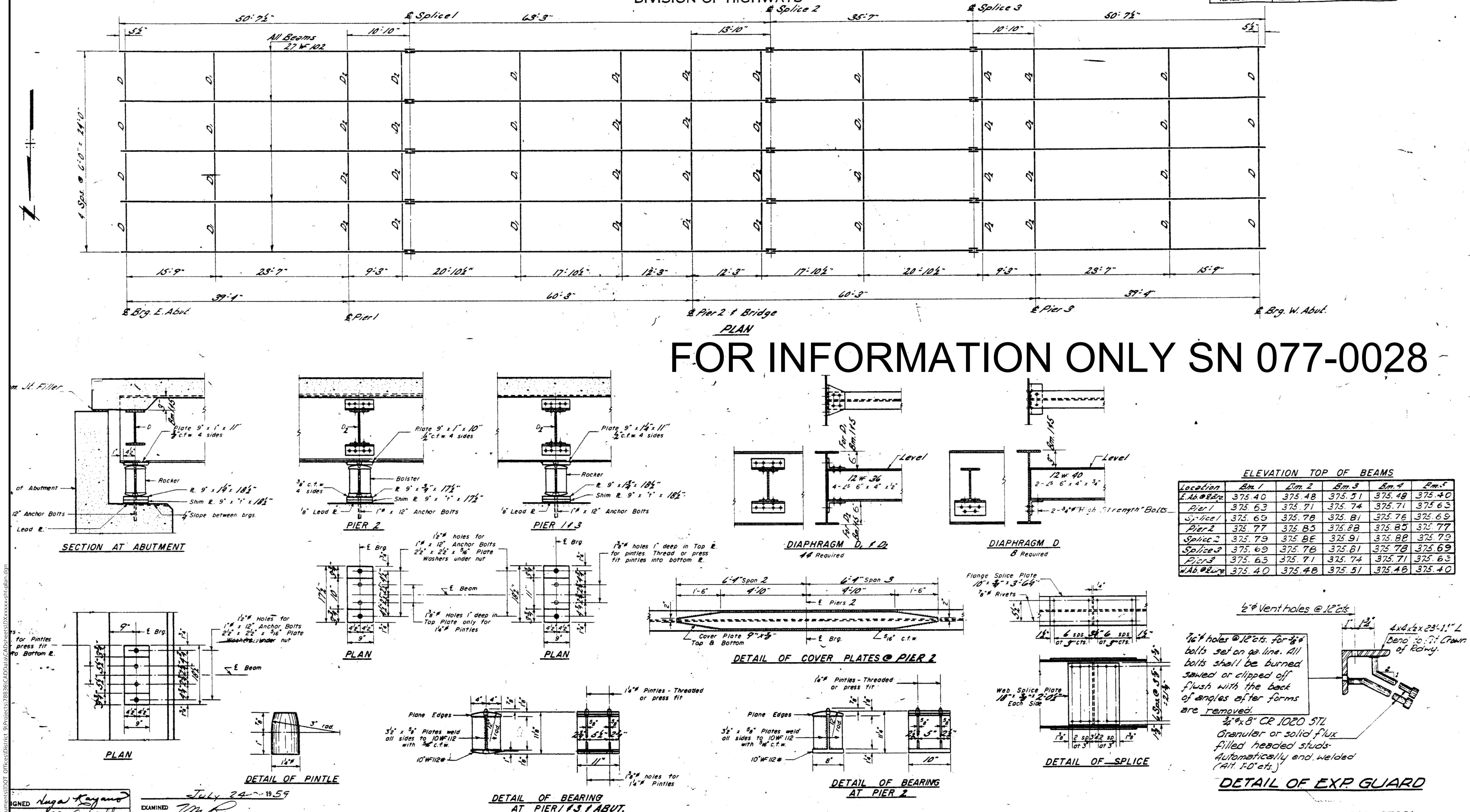
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	58
		CONTRACT NO. 78836		
		ILLINOIS	FED. AID PROJECT	

MODEL: Default

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I. 57	77-IHB-1	PULASKI	24	8

SHEET NO. 3
9 SHEETS



ELEVATION TOP OF BEAMS

Location	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
E. Ab. @ ℄ Brg.	375.40	375.48	375.51	375.48	375.40
Pier 1	375.63	375.71	375.74	375.71	375.63
Splice 1	375.69	375.78	375.81	375.76	375.69
Pier 2	375.77	375.85	375.88	375.85	375.77
Splice 2	375.79	375.86	375.91	375.88	375.79
Splice 3	375.69	375.78	375.81	375.78	375.69
Pier 3	375.63	375.71	375.74	375.71	375.63
W. Ab. @ ℄ Brg.	375.40	375.48	375.51	375.46	375.40

TABLE OF "t" DIMENSIONS

	Bm. 1	Bm. 2	Bm. 3	Bm. 4	Bm. 5
E. Abut.	0"	1"	1 3/8"	1"	0"
Pier 1	0"	1"	1 3/8"	1"	0"
Pier 2	0"	1"	1 3/8"	1"	0"
Pier 3	0"	1"	1 3/8"	1"	0"
W. Abut.	0"	1"	1 3/8"	1"	0"

STRUCTURAL STEEL
PERKS ROAD
OVER
F.A.I. RT. 57 SEC. 77-IHB-1
PULASKI COUNTY
STA. 66 +49.79 (F.A.I. 57)

July 24 1959
DESIGNED Hugo Kayano
CHECKED
H.K. P. Lawler
DRAWN W. A. Sousamon
CHECKED
EXAMINED — ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED — ENGINEER OF DESIGN
APPROVED R. R. Bartelsmeyer — CHIEF HIGHWAY ENGINEER
DRAWN 5-10-57

Changed 2-¾" Bolts to 2-¾" High Strength Bolts. Top of Bm. Elev. from a grade of +.5% to -.5% to a grade of +.47% -.47%

Rev. 6/27/62 Added Detail of Exp. Guard. DES.

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 077-0028	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	59
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 78836				
PLOT DATE = 11/30/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

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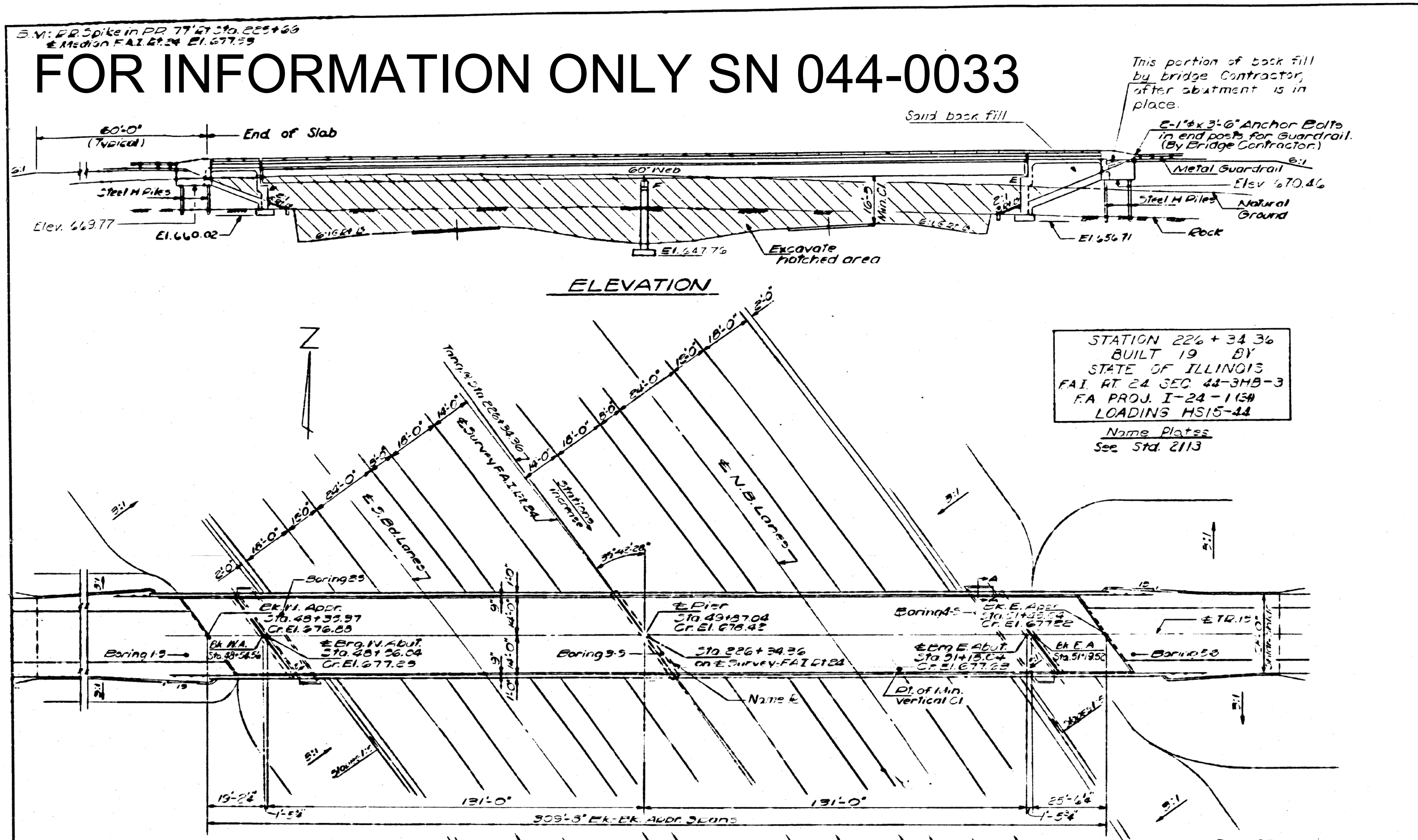
FOR INFORMATION ONLY SN 044-0033

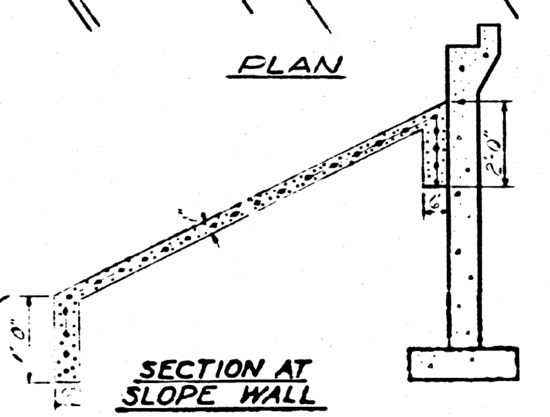
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 24	44-3HB-3	JOHNSON	76	16

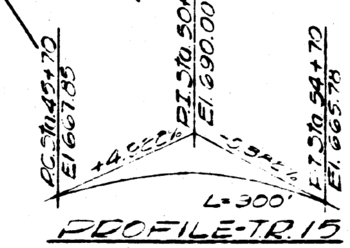
SHEET NO. 1
12 SHEETS

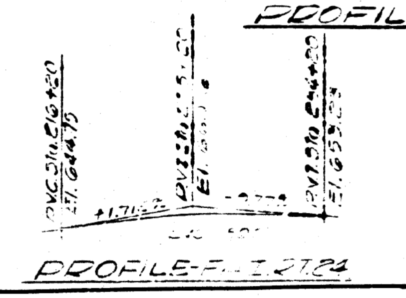


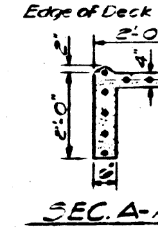
F.A.I. RTE 24 CURVE DATA

Δ = 16°-12'-02"
D = 00°-30'-00"
R = 11,459.156'
T = 1833.52'
L = 3240.11'
E = 146.07'
P.I. Sta. 213+28.29
S.A. .0131
Sta. 193+39.44 to Sta. 195+39.44
Sta. 230+66.21 to Sta. 232+66.21





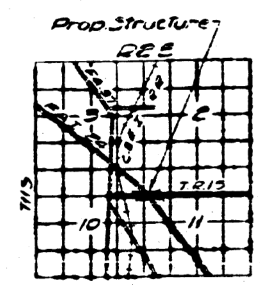




DESIGN STRESSES

fc = 1200 psi. Deck Slab
fc = 1400 psi. Curb, Parapet, Sub.
fs = 20,000 psi. Reinf.
fs = 20,000 psi. Struct.
fc = 75 psi. Ftgs.
n = 13
Allowable Fut. W.S. 25#/□'
Allowable 4Δ 1/1200 Comp.

LOADING HS15-44



DESIGNED	
CHECKED	
DRAWN	C. E. Wilkins
CHECKED	A. K

EXAMINED June 26 1969
PASSED
APPROVED

GENERAL NOTES

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

Field connections shall be bolted using high strength bolts. Bolts ¾" ø, open holes 13/16" ø, unless otherwise noted.

Calculated weight of Structural Steel. = 264,300 Lbs

Cast steel shall be Class 70 Structural steel weldments of equal sections and meeting A.S.T.M. A-36 may be substituted for castings at the option of the Contractor, subject to approval by the Engineer prior to fabrication. No additional compensation will be allowed the Contractor for this substitution.

The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.

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 bolting crossframes over supports.

Slope wall shall be reinforced with welded wire fabric 6"x 6" 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 X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

The Contractor shall drive one Steel Test Pile in a permanent location at East Appr. Bent as directed by the Engineer before ordering the remainder of piles.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Rock Excavation for Structures	Cu. Yds.		150	150
Structure Excavation	Cu. Yds.		160	160
Cl. X Concrete	Cu. Yds.	299.3	259.3	558.6
Protective Coat	Sq. Yds.	1150		1150
Structural Steel	L.S.	L.S.		L.S.
Stud Shear Connectors	Each	1,280		1,280
Reinforcement Bars	Lbs.	77,170	29,920	107,090
Steel Piles (BP36)	Lin. Ft.		130	130
Test Piles Steel (BP36)	Each		1	1
Name Plates	Each		1	1
Slope Wall (4")	Sq. Yds.		95	95
Aluminum Railing	Lin. Ft.	607		607
Neoprene Expansion Jt. (2")	Lin. Ft.	71		71
Sand Back Fill	Cu. Yds.		250	250

PROJ. I-24-1(34)2
T.R. 15 OVER F.A.I. RT. 24
F.A.I. ROUTE 24
SECTION 44-3HB-3
JOHNSON COUNTY
STATION 226+34.36

Rev. 7-8-71 WH

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USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/30/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 044-0033

SCALE: SHEET OF SHEETS STA. TO STA.

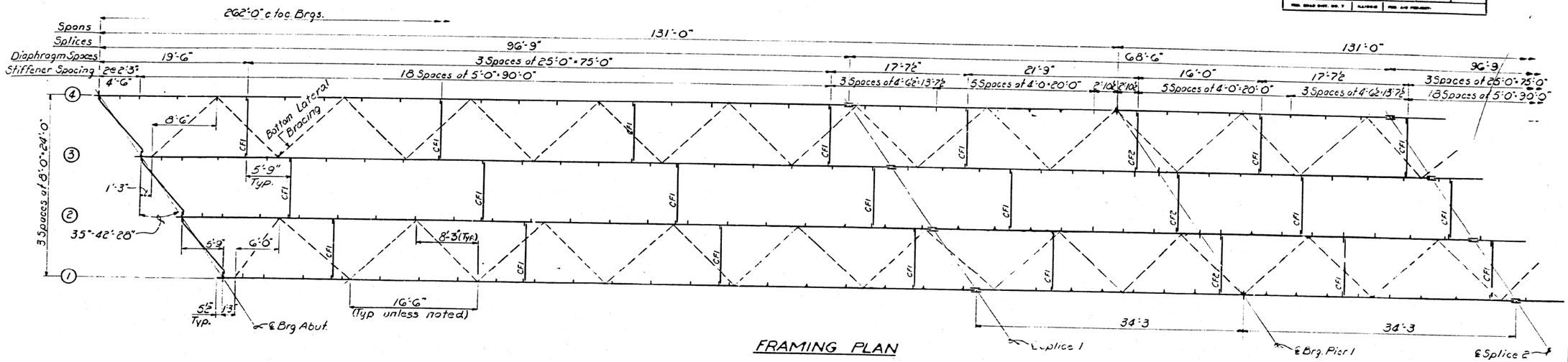
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	60

CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

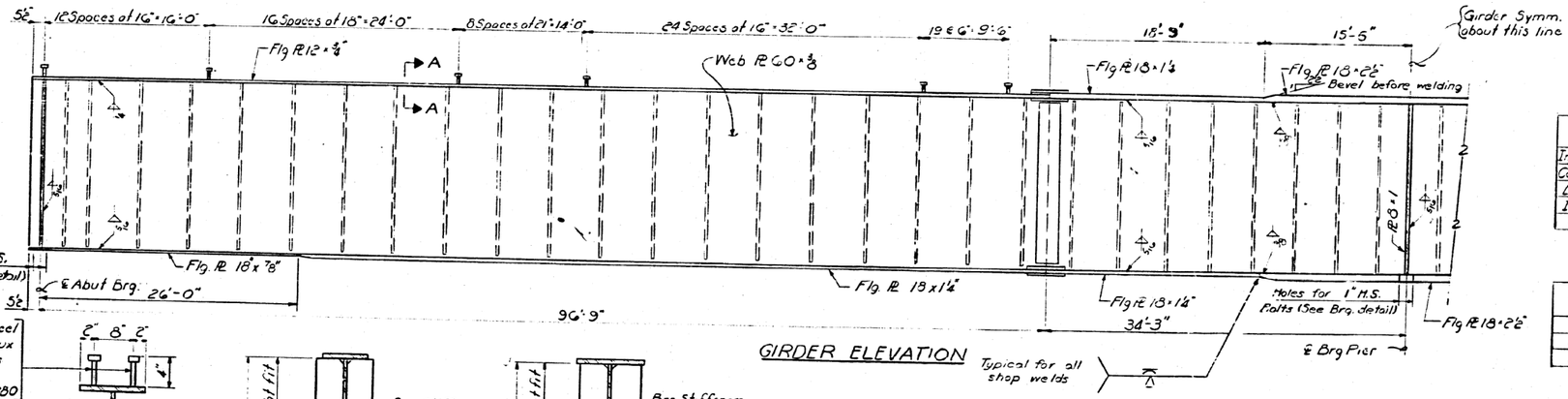
STATE OF ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 24	44-3HB-3	JOHNSON	76	20

SHEET NO. 5
12 SHEETS



FRAMING PLAN



GIRDER ELEVATION

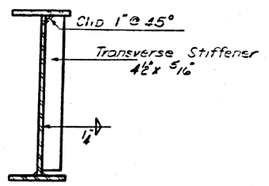
Typical for all shop welds

NOTE :
Transverse stiffeners between splices shall be welded to bottom flange with 5/16" fillet weld and shall have ¾" undercut at top. Remainder of stiffeners shall be welded to top flange with ¼" fillet weld and shall have ⅜" undercut at bottom.
Transverse stiffeners shall be placed on inside face of w.b.

TABLE OF MOMENT & REACTIONS

	Moments		Reactions	
	℄ Span 1 & 2	Pier	Abut.	Pier
Initial D.L.	1019.2	2754.6	46.4	177.0
Comp D.L.	463.4	798.3	19.0	62.4
Live Load	932.9	963.3	35.5	71.0
Impact	181.9	192.6	6.9	13.8
Total		4708.8	107.8	324.2

	Steel Section		Comp. Sec.
	℄ Span 1 & 2	Pier	℄ Span 1 & 2
I	329671in⁴	348,960 in⁴	822847in⁴
St.	8574 in³	1,506 in.³	4936.8in³
Sb	1400 in³	1,506 in.³	1,824.0 in³



TYPICAL SECTION NEAR ABUTMENT

DESIGNED	Harbal Singh
CHECKED	A Keramati
DRAWN	W E Dickerson
CHECKED	A. K.

EXAMINED
PASSED
APPROVED

FOR INFORMATION ONLY
SN 044-0033

STRUCTURAL STEEL
F.A.I. RT. 24 SEC. 44-3HB-3
JOHNSON COUNTY
STA. 226+34.36

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/30/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 044-0033

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	61
		CONTRACT NO. 78836		
	ILLINOIS FED. AID PROJECT			

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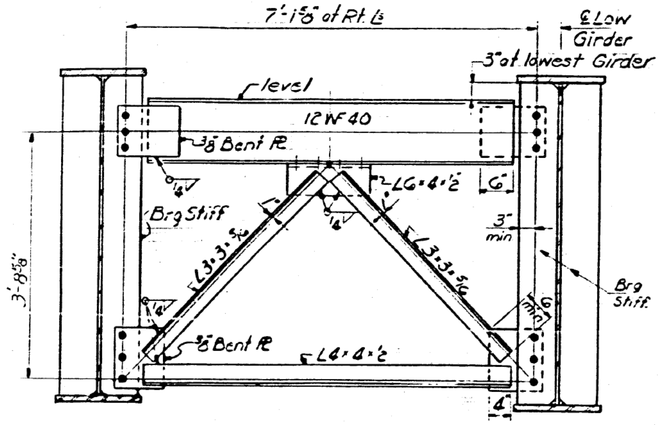
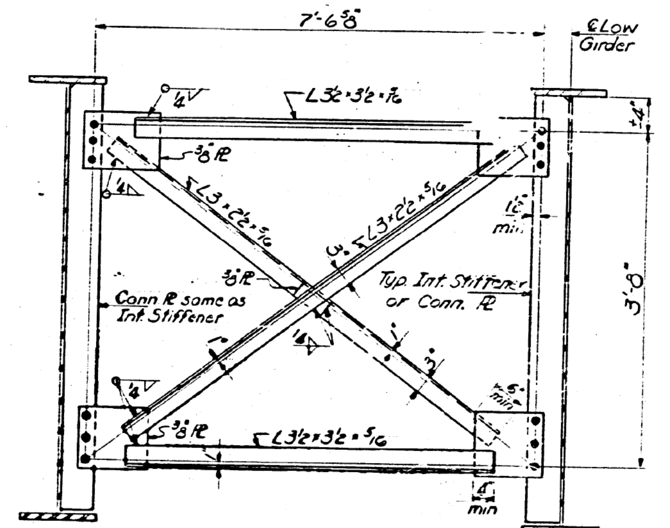
STATE OF ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 24	44-3HB-3	JOHNSON	76	22

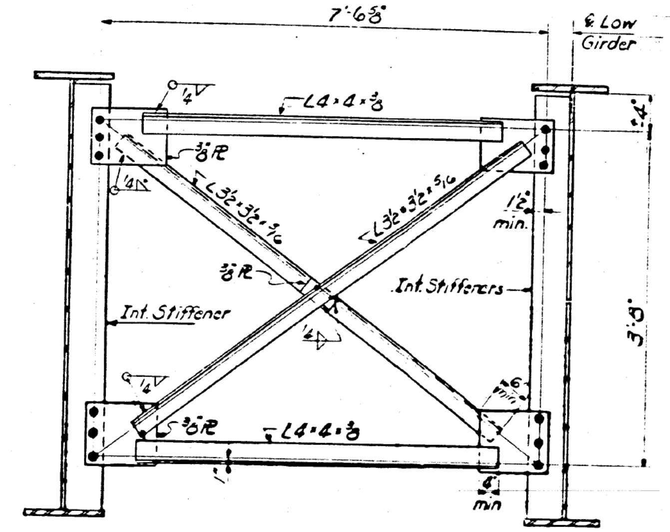
SHEET NO. 7
12 SHEETS



TYPICAL END CROSS FRAME
(No. Req'd 6)



CROSS FRAME-CF1
(No. Req'd 30)



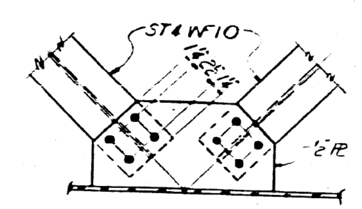
CROSS FRAME-CF2
(No. Req'd 3)

TOP OF WEB ELEVATIONS

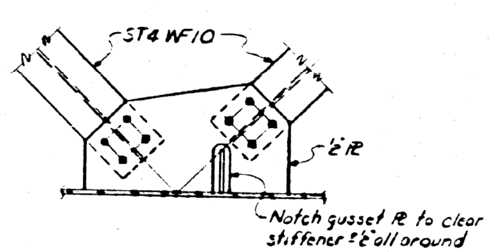
Location	Bm. 1	Bm. 2	Bm. 3	Bm. 4
W. Abut.	676.58	676.58	676.50	676.30
Pier	677.47	677.55	677.58	677.47
E. Abut.	676.71	676.89	676.95	676.95

TOP OF WEB ELEVATIONS
(Adjusted for Camber)

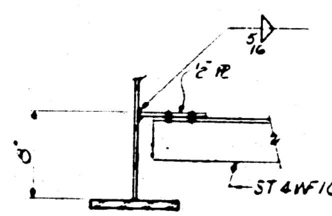
Location	Bm. 1	Bm. 2	Bm. 3	Bm. 4
Splice 1	677.53	677.60	677.60	677.45
Splice 2	677.55	677.70	677.70	677.63



TYPICAL LATERAL BRACING



LATERAL BRACING NEAR INT. STIFFENER

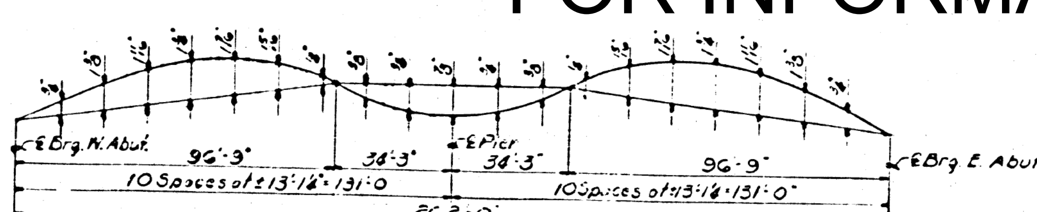


LATERAL BRACING

FOR INFORMATION ONLY SN 044-0033

DESIGNED	Harbel Singh
CHECKED	A. Kraemer
DRAWN	W. E. Dickerson
CHECKED	A.K.

EXAMINED June 26 1962
PASSED
APPROVED Richard H. Golterman



CAMBER DIAGRAM

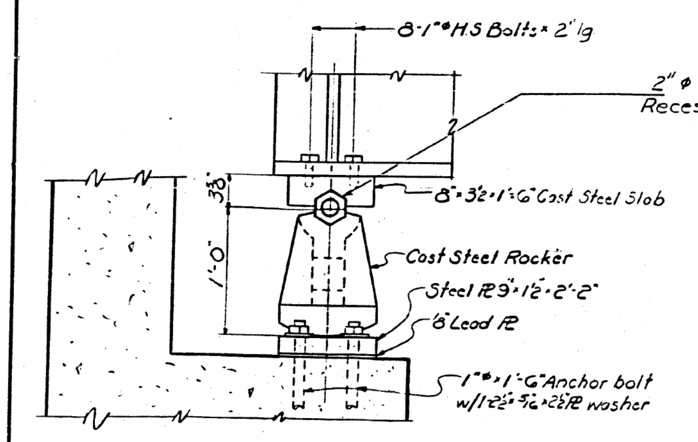
CROSS FRAME & LATERAL BRACES
F.A.I. RT. 24 SEC. 44-3HB-3
JOHNSON COUNTY
STA. 226+34.36

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 044-0033	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	62
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -			CONTRACT NO. 78836				
PLOT DATE = 11/30/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.	ILLINOIS FED. AID PROJECT				

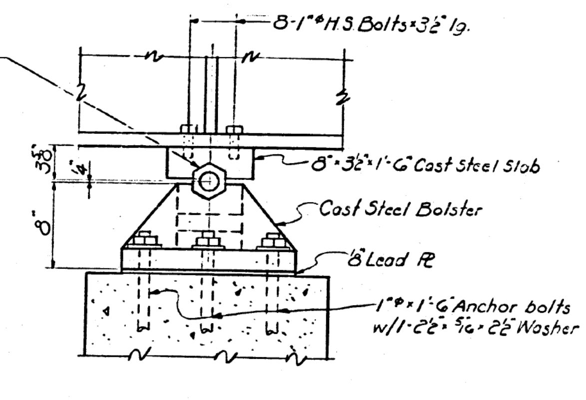
STATE OF ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A.I.-24	44-3HB-3	JOHNSON	76	21

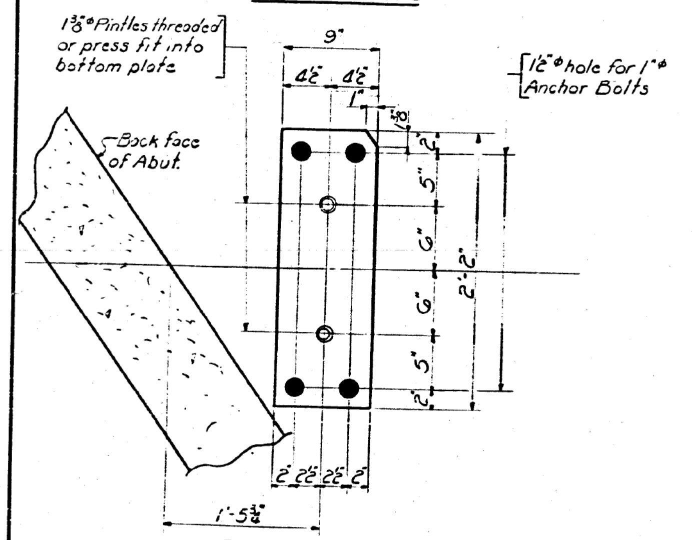
SHEET NO. 6
12 SHEETS



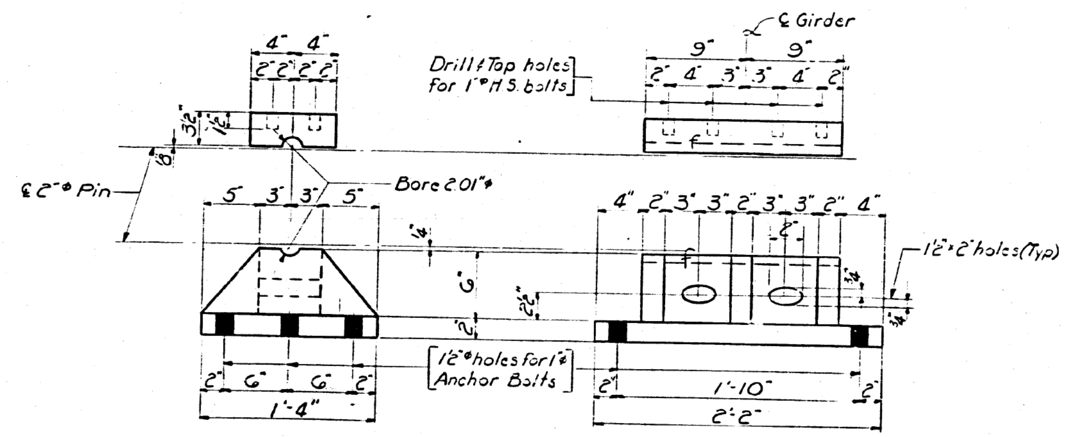
ABUTMENTS



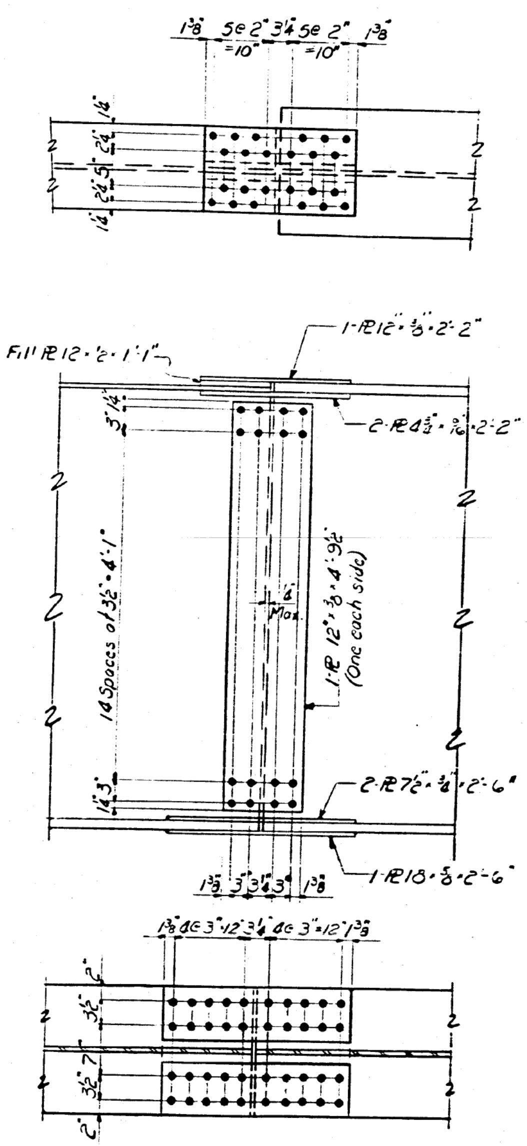
PIER



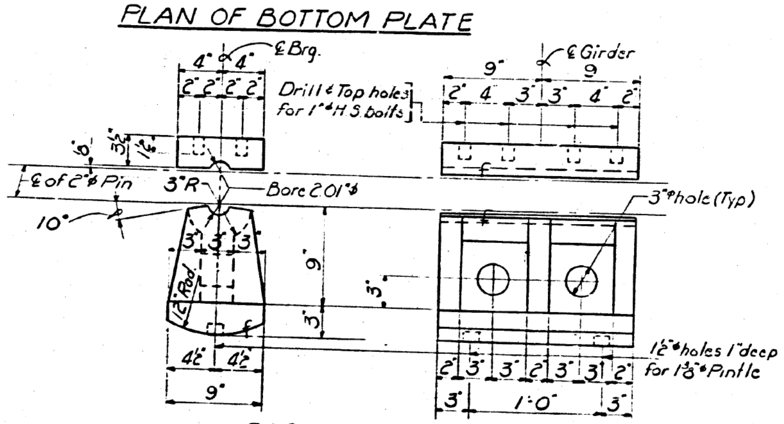
PLAN OF BOTTOM PLATE



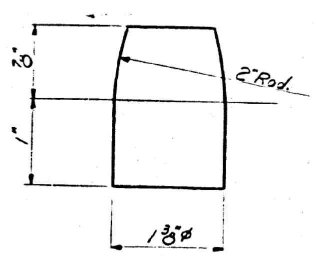
CAST STEEL BOLSTER



SPLICE DETAIL



CAST STEEL ROCKER



PINTLE DETAIL

BILL OF MATERIAL BEARINGS

Item	Unit	Quanity
Carbon Steel	lbs.	1600
Cast Steel	lbs.	6460
Total	lbs.	8060

NOTE:
Pins, Steel ℞s, Bolts, Anchor Bolts, and lead ℞s are included in Carbon Steel.
The above quantities are included in Structural Steel on sheet 4.
Cast Steel shall conform to ASTM A-486 class 70.

DESIGNED Harbel Singh
CHECKED A. Keramati
DRAWN W.E. Dickerson
CHECKED A.K.

EXAMINED
PASSED W.E. Baumann
APPROVED Frank H. Holterman

FOR INFORMATION ONLY SN 044-0033

BEARING & SPLICE DETAILS
F.A.I. RT. 24 SEC. 44-3HB-3
JOHNSON COUNTY
STA. 226+34.36

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/30/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 044-0033

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	63

CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

44-3HB 333+01.64

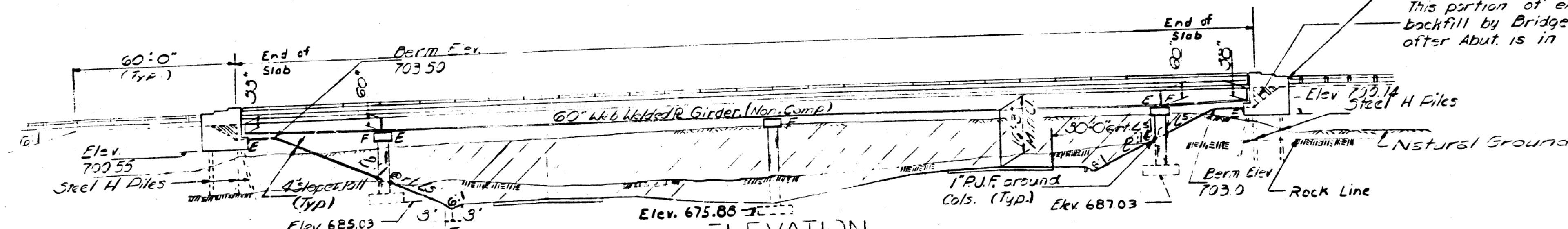
STATE OF ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 24	44-3HB	JOHNSON	187	26
FED. ROAD DIST. NO. 9	ILLINOIS	FED. AID PROJECT I-24-1(45)4		

SHEET NO. 1
18 SHEETS

FAI. 24 X44-3HB

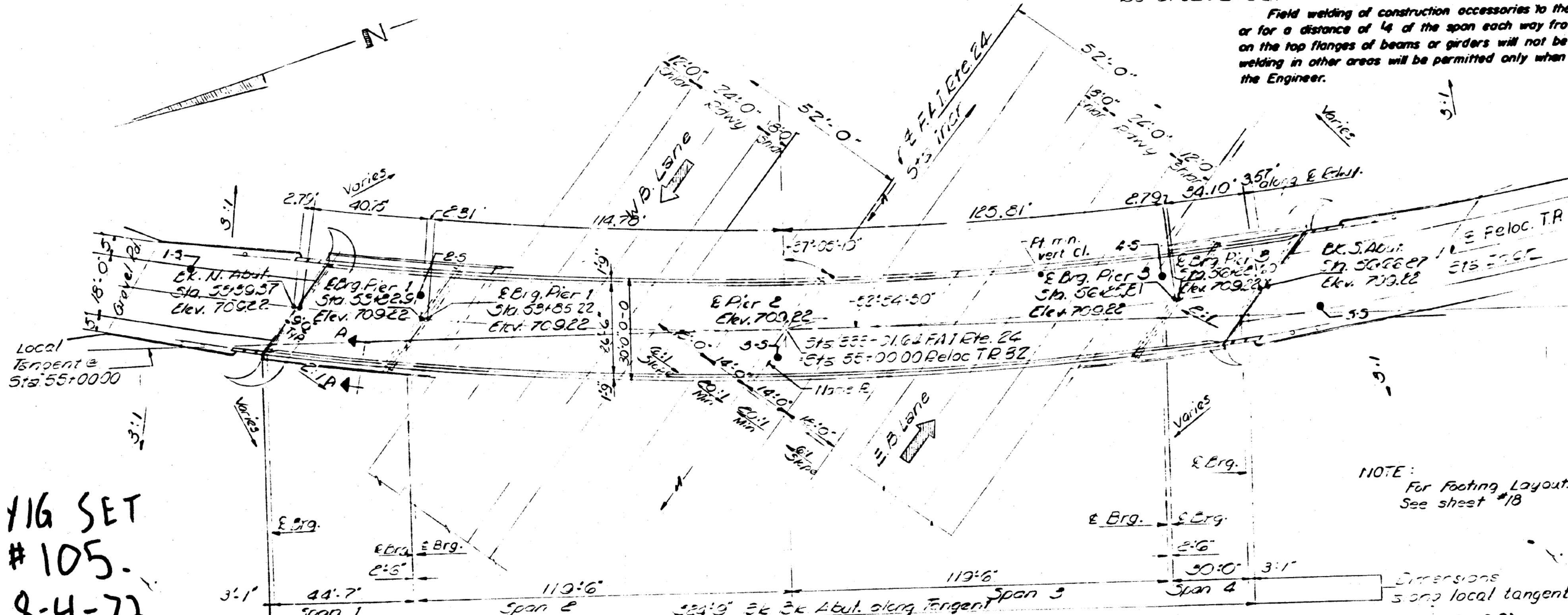
B.M. Rs. road scrw in power pole 33' Rt. Sta 331+94 Ele. 701.13
No existing structure



ELEVATION

Hatched area to be excavated.

Field welding of construction accessories to the bottom flanges or for a distance of ¼ of the span each way from pier supports on the top flanges of beams or girders will not be permitted. Field welding in other areas will be permitted only when approved by the Engineer.

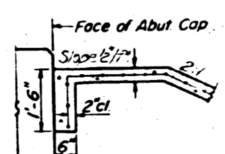


PLAN

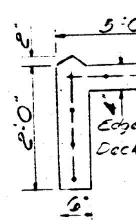
NOTE: For Footing Layout See sheet #18

Y1G SET
#105.
8-4-72

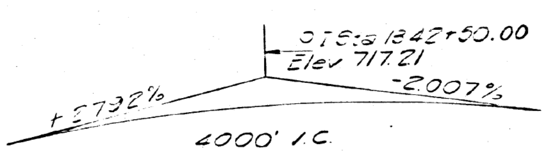
STATION EQUATION
EQ. P.O.T. STA. 333+29.18 ℄ F.A.I. 24
= 52' LT. EQ. P.C. STA. 1333+29.18 WBL.
= 52' RT. P.O.T. STA. 333+29.18 EBL.



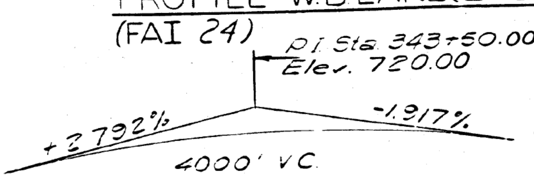
SECTION AT ABUTMENT



SEC. A-A



PROFILE W.B. LANE (℄ RDWY)
(FAI 24)



PROFILE E.B. LANE (℄ RDWY)
(FAI 24)

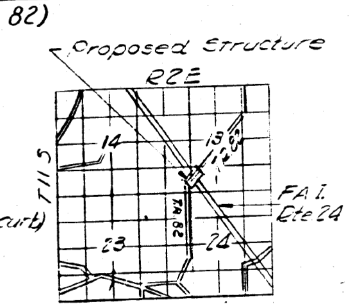
Note: Allow 25#/□' for future wearing surface.

HORIZ. CURVE DATA (RELOC. T.R. 82)
Δ = 52°-33'-10"
D = 5°-43'-47"
T = 493.72'
L = 917.21'
E = 115.24'
R = 1000'
S.E. = .045 '/'
P.I. Sta. 55+51.01
S.E. Attained Sta. 49+73 to Sta 51+00
S.E. Removed Sta. 59+32 to Sta. 60+56

Sta. 50+00. Elev. 709.22 — 0.00% — Sta. 58+00. Elev. 709.22

PROFILE GRADE (℄ RDWY)
(T.R. 82)

DESIGN STRESSES
f'c = 1400 psi. (Sub., parapet, curb)
fs = 20,000 psi. (Reinf.)
fs = 20,000 psi. (Struct.)
Vc = 75 psi. (Ftgs.)
n = 10
f'c = 1200 psi. (Deck Slab)
LOADING HS15-44
Allowable LL Deflection = 1/1000 (Non-Comp.)



LOCATION PLAN

GENERAL NOTES

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

Field connections shall be bolted using high strength bolts. Bolts ¾" φ, open holes 13/16" φ, unless otherwise noted.

Calculated weight of Structural Steel = 353,380 lbs.

The basic lead silico chromate paint system shall be used for shop and field painting of Structural Steel.

Anchor bolts shall be set before bolting cross frames over supports.

Slope wall shall be reinforced with welded wire fabric 6" x 6" 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 X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

The Contractor shall drive two steel test piles in permanent locations, one each at North and South Abutment, as directed by the Engineer, before ordering remainder of piles.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Structure Excavation	Cu. Yds.		20	20
Protective Coat	Sq. Yds.	1160		1160
Class X Concrete	Cu. Yds.	293.7	2.51	513.8
Rock Excavation for Structures	Cu. Yds.		109.	109.
Neoprene Expansion Jt. (2")	Lin. Ft.	73		73
Structural Steel	L.S.	L.S.		L.S.
Aluminum Railing	Lin. ft.	646		646
Reinforcement Bars	lbs.	76,790	29,890	106,680
Steel Piles (HP8x36)	Lin. ft.		192	192
Test Piles - Steel (HP8x36)	Each.		2	2
Name Plates	Each.		1	1
Slope Wall (4")	Sq. Yds.			575

STATION 333+01.64
BUILT 19 BY
STATE OF ILLINOIS
F.A.I. RT. 24 SEC. 44-3HB
F.A. PROJ. I-24-1(45)
LOADING HS15

NAME PLATE
(See Std. 2113-1)

GENERAL PLAN & ELEVATION
T.R. 82 OVER F.A.I. RTE 24
PROJ. I-24-1(45)4
F.A.I. RTE. 24 SEC. 44-3HB
JOHNSON COUNTY
STA. 333+01.64 (FAI 24)

DESIGNED	Emile A. Samara
CHECKED	A. Keramati
DRAWN	M. Meyer C.E.W.
CHECKED	A.K.

December 23 1969
EXAMINED — Engineer of Bridge and Traffic Structures
PASSED W.E. Baumann — Engineer of Design
APPROVED Richard H. Golterman — Chief Highway Engineer

044-0034

Revised 2-3-70 W.H. Revised 6-30-71 W.H. Rev. 2-23-72 W.H.

9-82 333+01.64 9-6

044-0034

FOR INFORMATION ONLY SN 044-0034

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/30/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 044-0034

SCALE: SHEET OF SHEETS STA. TO STA.

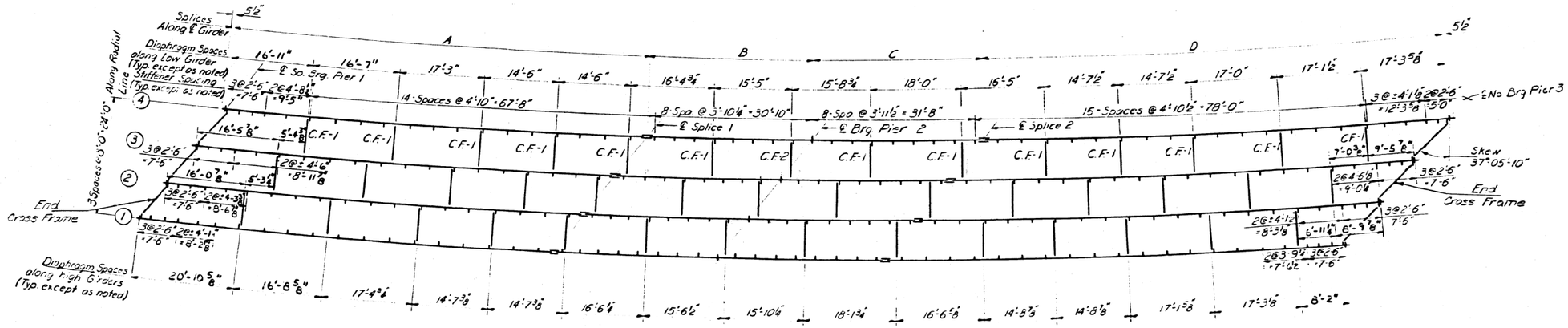
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	64

CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS

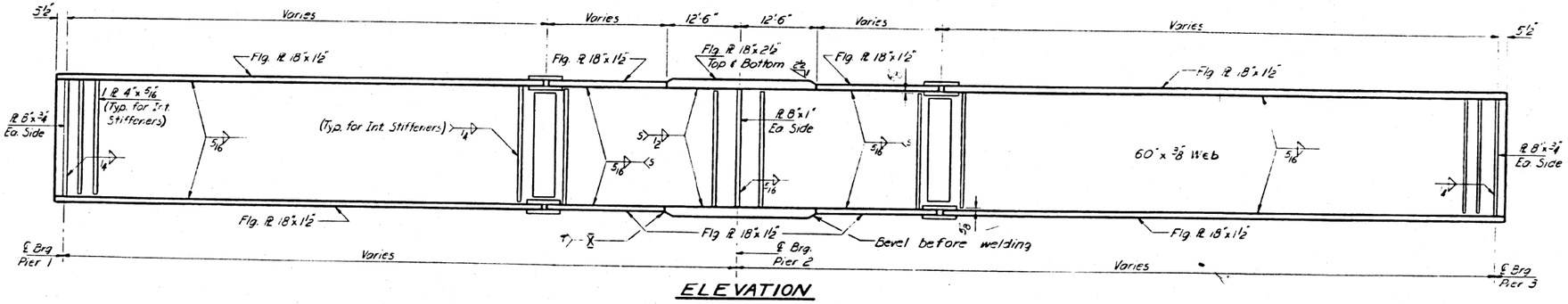
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 24	44-3HB	JOHNSON	187	30
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	I-24-4(43)214	

SHEET NO. 5
18 SHEETS



PLAN

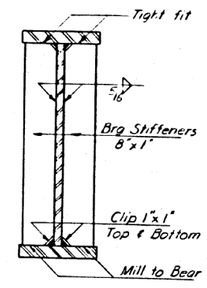
FOR INFORMATION ONLY SN 044-0034



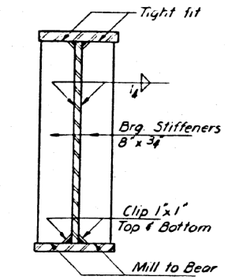
ELEVATION

STEEL SECTION PROPERTIES

I-4 L = 57,807 in⁴
I-Pier 2=94,635 in⁴



SECTION AT PIER 2



SECTION AT PIERS 1 & 3

GIRDER LENGTHS

(Measured along ℄ of Girders)

	Beam 1	Beam 2	Beam 3	Beam 4
Radius	1012'	1004'	996'	988'
A	81'-9 1/4"	82'-0 1/2"	82'-3 3/4"	82'-7 1/8"
B	32'-4 7/8"	32'-6 3/8"	32'-8 1/8"	32'-9 7/8"
C	33'-2 1/4"	33'-4 7/8"	33'-6 1/8"	33'-8 1/8"
D	91'-6 1/4"	92'-1"	92'-8 1/8"	93'-3 1/2"
Total of A,B,C,&D	238'-10 5/8"	240'-0"	241'-2 1/8"	242'-4 5/8"
Total Length of Girder	239'-9 5/8"	240'-11"	242'-1 1/8"	243'-3 5/8"

NOTE :
Intermediate Stiffeners shall be welded to compression flange with 5/16" c.f.w and shall have 3/8" undercut at tension flange as shown on Elevation

DESIGNED Emile A. Sumaan
CHECKED A. Keramati C.E.W.
DRAWN R. P. Summer
CHECKED A.K.

EXAMINED Dec. 23 1965
PASSED
APPROVED Richard H. Gutterman

STRUCTURAL STEEL
SPANS 2 & 3
F.A.I. RT. 24 SEC. 44-3HB
JOHNSON COUNTY
STATION 333+01.64

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/30/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 044-0034

SCALE: | SHEET OF SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	65
			CONTRACT NO. 78836	
		ILLINOIS	FED. AID PROJECT	

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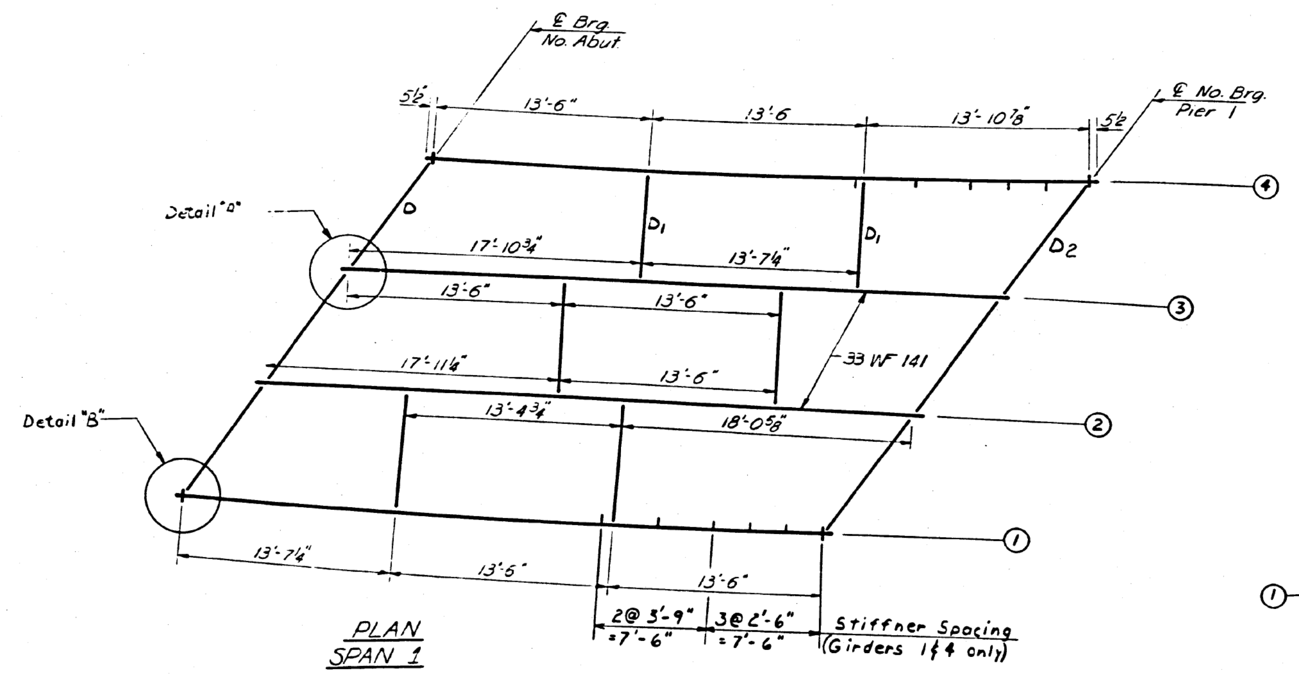
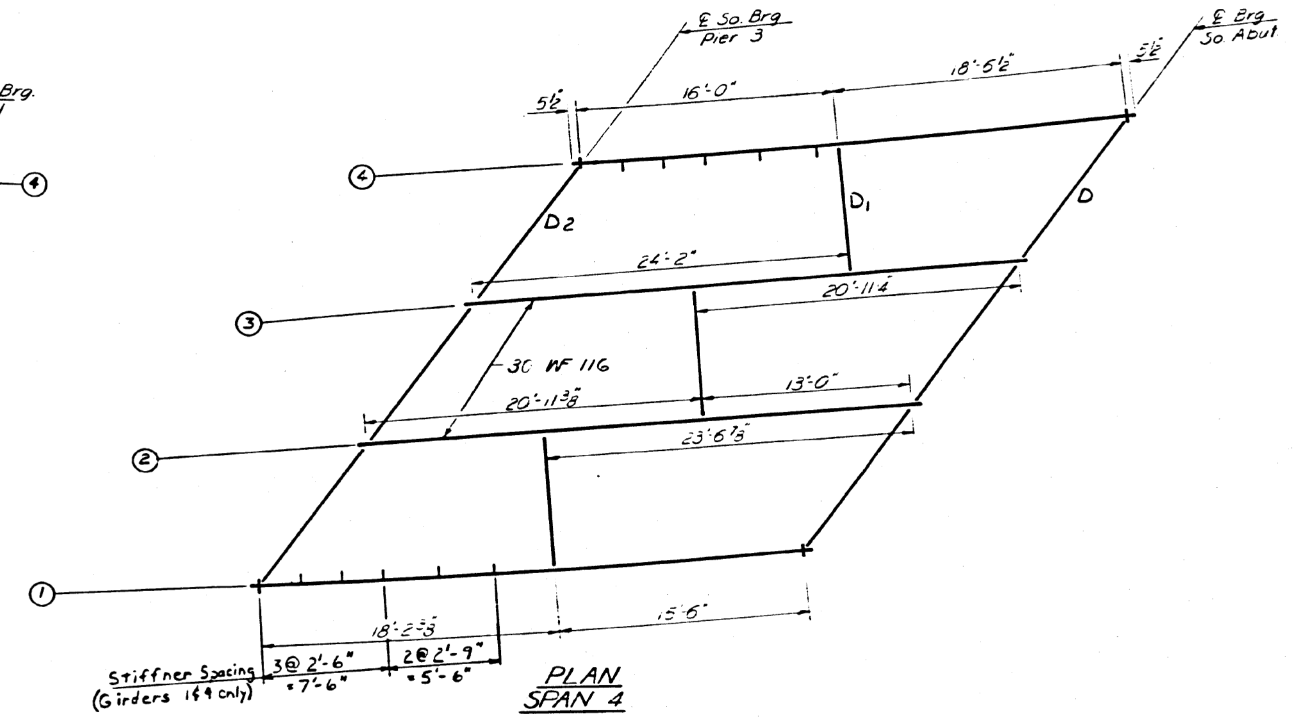
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S.B.I. F.A. 24	44-3HB	JOHNSON	187	32
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	I-24-1(40)	

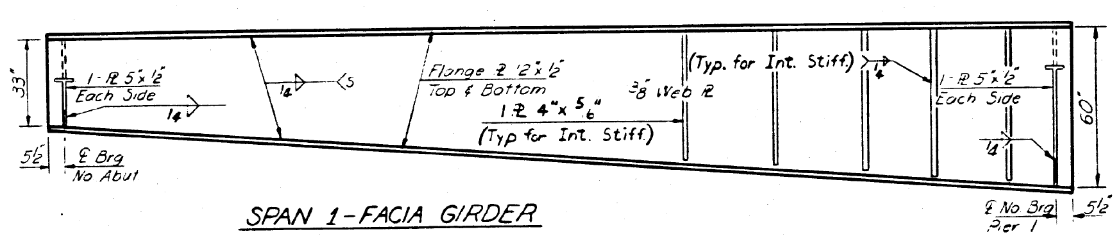
STATE OF ILLINOIS



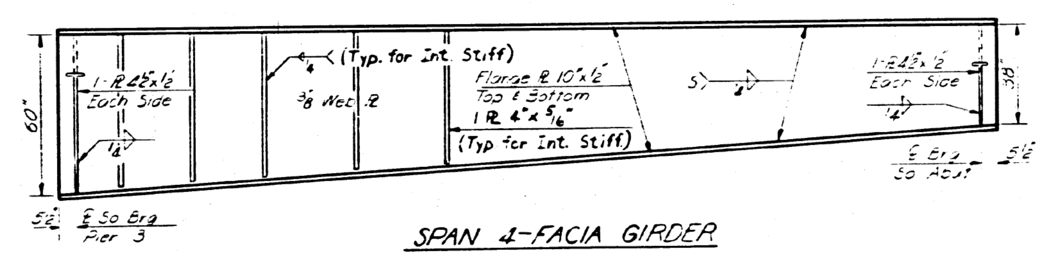
PLAN
SPAN 1



PLAN
SPAN 4



SPAN 1-FACIA GIRDER



SPAN 4-FACIA GIRDER

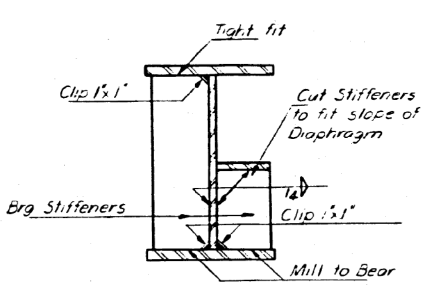
ELEVATION

BEAMS

SPAN 1			
Bm No	Type	Shape	Length
1	Tapered ℞ Girder	Curved	41'-6¼"
2	33 WF 141	Straight	41'-7⅛"
3	33 WF 141	Straight	41'-8¾"
4	Tapered ℞ Girder	Curved	41'-9⅞"

SPAN 4			
Bm No	Type	Shape	Length
1	Tapered ℞ Girder	Curved	34'-7⅜"
2	30 WF 116	Straight	34'-10⅜"
3	30 WF 116	Straight	35'-1⅝"
4	Tapered ℞ Girder	Curved	35'-5½"

NOTE: For Radii of Beams 1&4, see sheet #5



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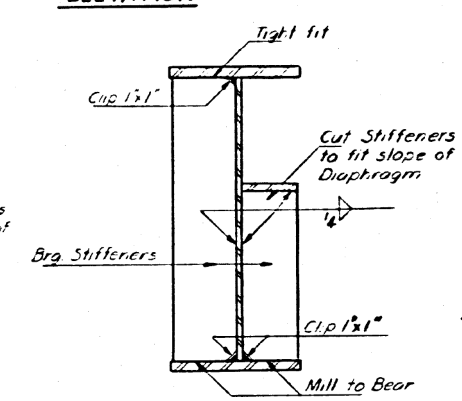
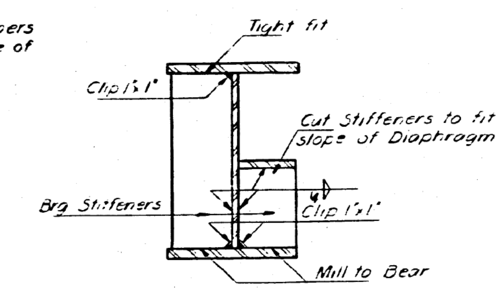


SECTION AT PIERS 1&3



SECTION AT SO. ABUT

TYPICAL GIRDER STIFFENERS

TOP OF FLANGE ELEVATIONS

	Beam 1	Beam 2	Beam 3	Beam 4
at ℄ Brgs	709.135	708.775	708.915	708.055

NOTE:
Interior Stiffeners shall be welded to top flange with 5/16" c.f.w. and shall have 5/8" undercut at bottom.

DESIGNED	Emile A. Samara
CHECKED	A. Keramati
DRAWN	R. P. Summer MDM
CHECKED	A. K.

Dec. 23 1963
EXAMINED [signature] ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES
PASSED [signature] ENGINEER OF DESIGN
APPROVED Richard H. Golterman CHIEF HIGHWAY ENGINEER

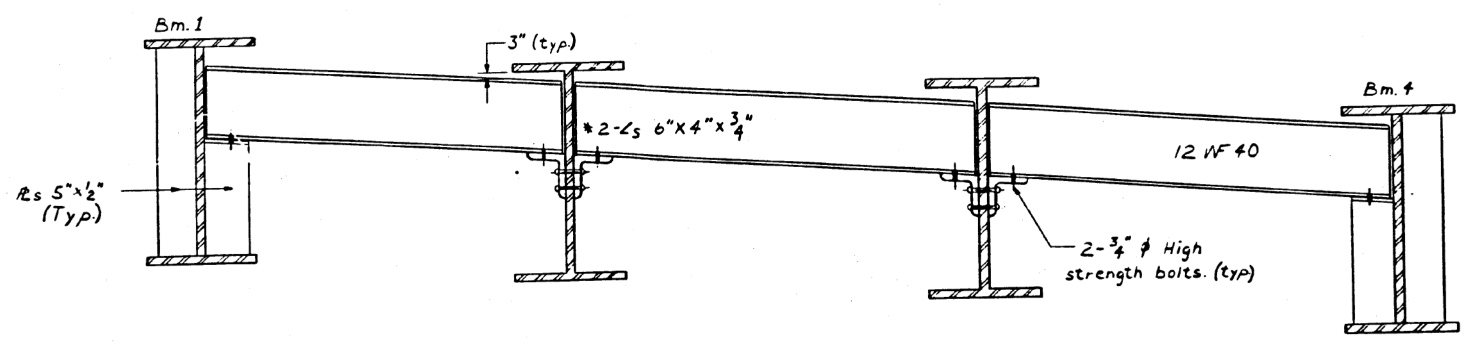
STRUCTURAL STEEL
SPANS 1&4
F.A.I. RT. 24 SEC. 44-3HB
JOHNSON COUNTY
STATION 333+01.64

FOR INFORMATION ONLY SN 044-0034

STATE OF ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 24	44-3HB	JOHNSON	187	33
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT I-24-1(6)7		

SHEET NO. 8
18 SHEETS



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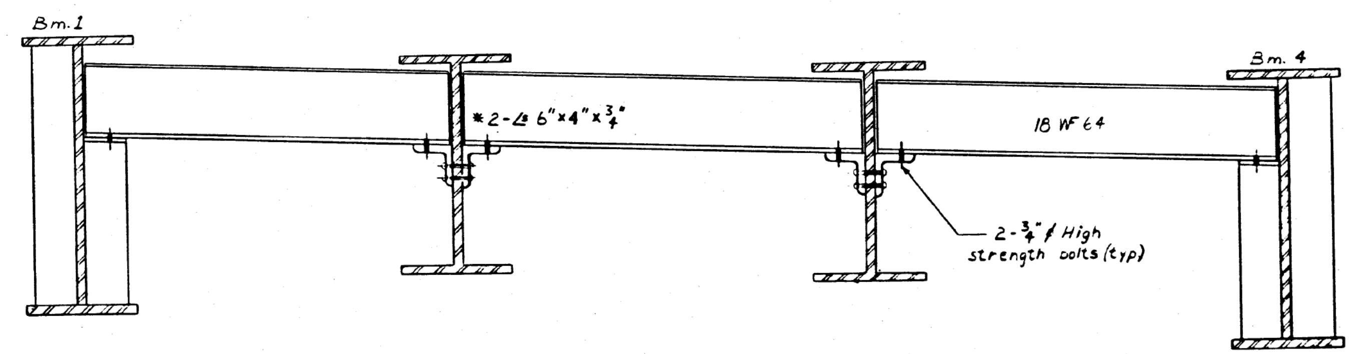
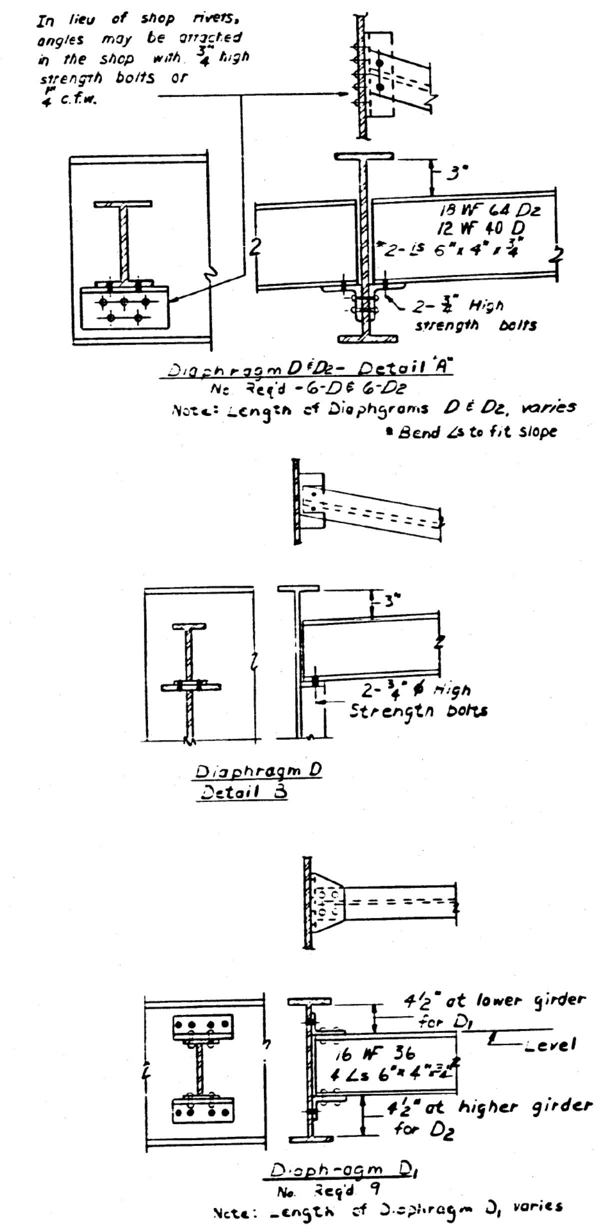
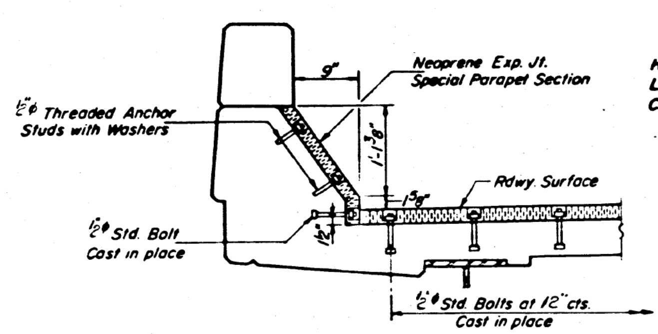


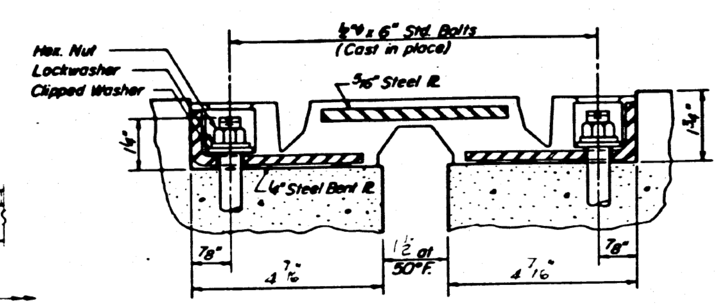
AT Piers 1 & 3

FOR INFORMATION ONLY SN 044-0034





SECTION AT CURB JOINT



NEOPRENE EXPANSION JOINT (2")
See Special Provisions

DESIGNED	Emile A. Samara
CHECKED	A. Keramati
DRAWN	M. D. M.
CHECKED	A. K.

Dec. 23 1963
EXAMINED — ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED M. E. Baumann — ENGINEER OF DESIGN
APPROVED Richard H. Golterman — CHIEF HIGHWAY ENGINEER

DIAPHRAGM DETAILS
SPANS 1 & 4
F.A.I. RT. 24 SEC. 44-3HB
JOHNSON COUNTY
STATION 333+01.64

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USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/30/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 044-0034

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	67

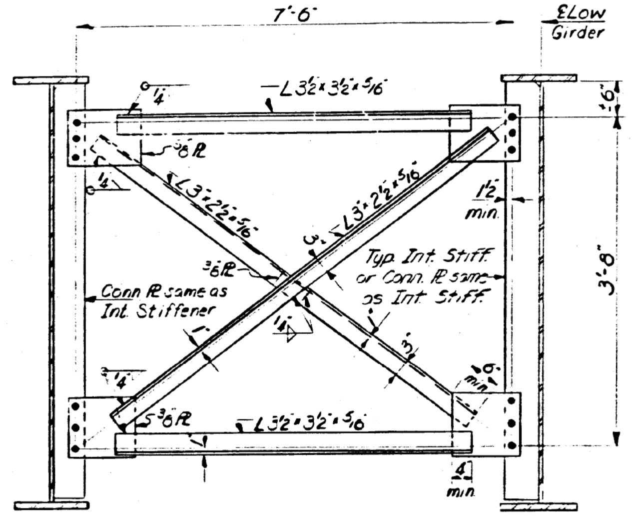
CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS

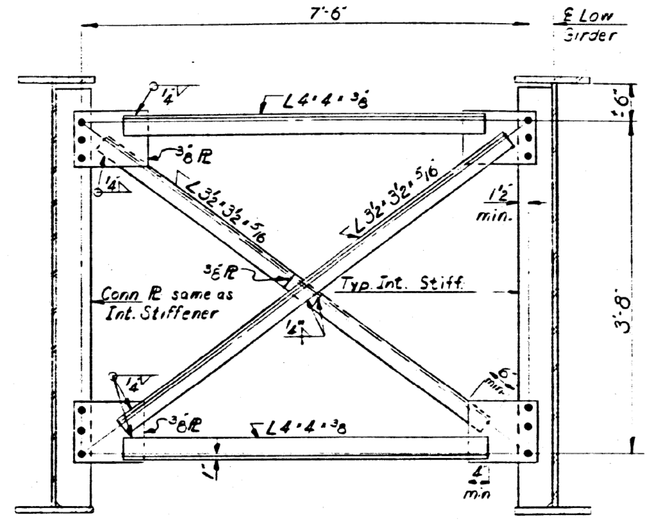
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	44-3HB	JOHNSON	187	31

SHEET NO. 6
16 SHEETS

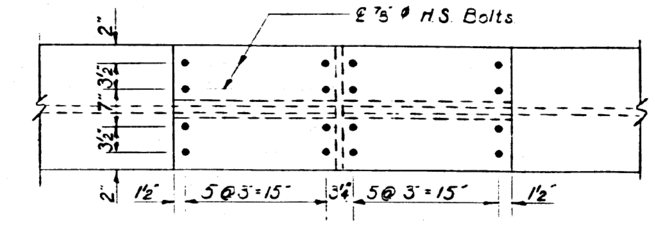
FED. AID PROJECT I-24-1(RS)4



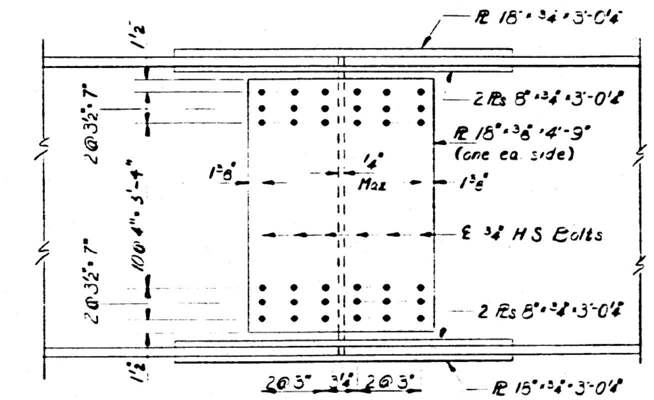
CROSS FRAME - CF1
(No Req'd - 39)



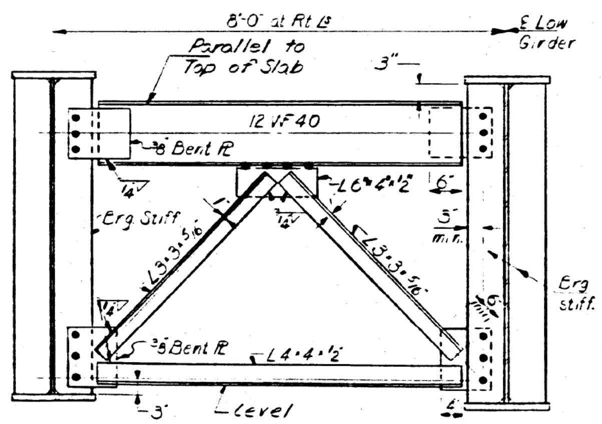
CROSS FRAME - CF2
(No. Req'd - 3)



PLAN TOP FLANGE
(Bottom Similar)



DETAIL OF FIELD SPLICES



TYPICAL END CROSS FRAME
(No Req'd - 6)

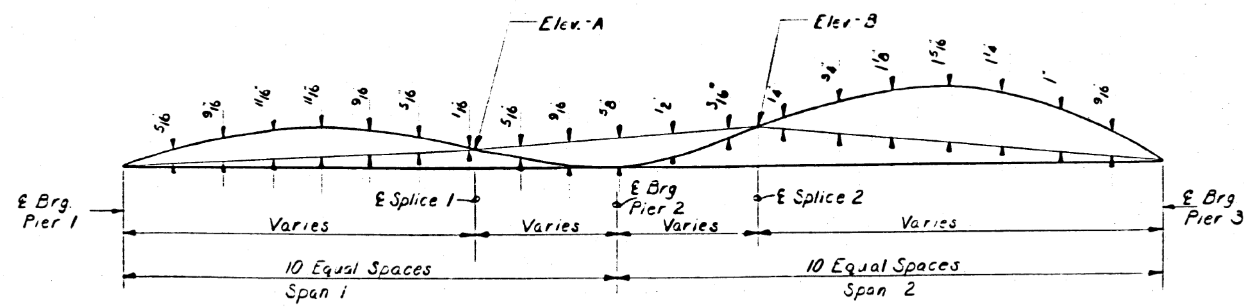
TOP OF WEB ELEVATIONS

Location	Bm # 1	Bm # 2	Bm # 3	Bm # 4
℄ Brg Pier 1	708.927	708.567	708.207	707.847
℄ Brg Pier 2	708.927	708.567	708.207	707.847
℄ Brg Pier 3	708.927	708.567	708.207	707.847

TOP OF WEB ELEVATIONS A & B AT SPLICES
(Adjusted for Camber)

Location	Bm # 1	Bm # 2	Bm # 3	Bm # 4
Splice 1-A	708.958	708.598	708.238	707.875
Splice 2-B	709.000	708.640	708.280	707.920

FOR INFORMATION ONLY
SN 044-0034



CAMBER DIAGRAM

DESIGNED	Emile A. Samara
CHECKED	A. Keramati
DRAWN	M.L. McGee
CHECKED	A.K.

Dec. 23 1963
EXAMINED
FASSED
APPROVED

SPANS 2 & 3
CROSS FRAME & SPLICE DETAILS
F.A.I. RT. 24 - SEC. 44 - 3HB
JOHNSON COUNTY
STATION - 333 + 01.64

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/30/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 044-0034

SCALE: SHEET OF SHEETS STA. TO STA.

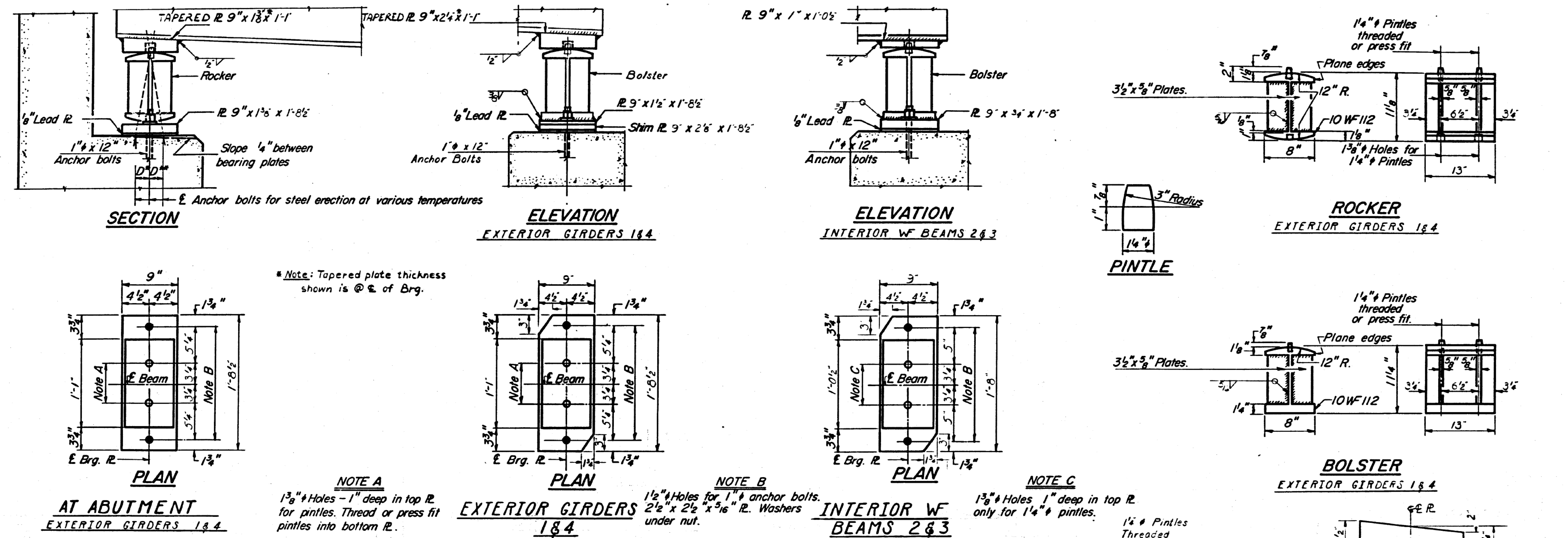
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	68

CONTRACT NO. 78836
ILLINOIS FED. AID PROJECT

STATE OF ILLINOIS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
24	44-3HB	JOHNSON	187	35
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT I-24-1(45)4		

SHEET NO. 10
18 SHEETS



* Note: Tapered plate thickness shown is @ ℄ of Brg.

NOTE A
$1\frac{3}{8}$"ϕ Holes – 1" deep in top ℞ for pintles. Thread or press fit pintles into bottom ℞.

NOTE B
$1\frac{1}{2}$"ϕ Holes for 1"ϕ anchor bolts. $2\frac{1}{2}$" x $2\frac{1}{2}$" x $\frac{5}{16}$" ℞. Washers under nut.

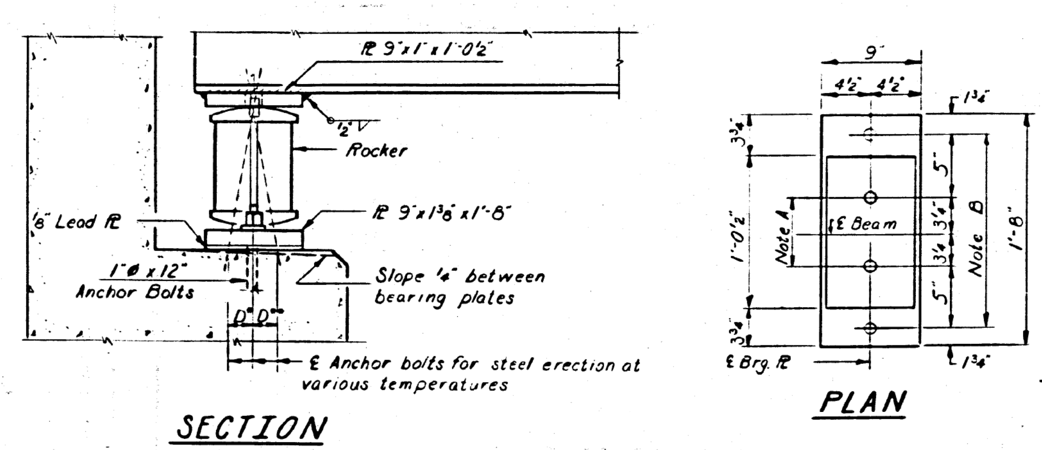
NOTE C
$1\frac{3}{8}$"ϕ Holes 1" deep in top ℞ only for $1\frac{1}{4}$"ϕ pintles.

BEARING ASSEMBLY DETAILS (PIER 1)

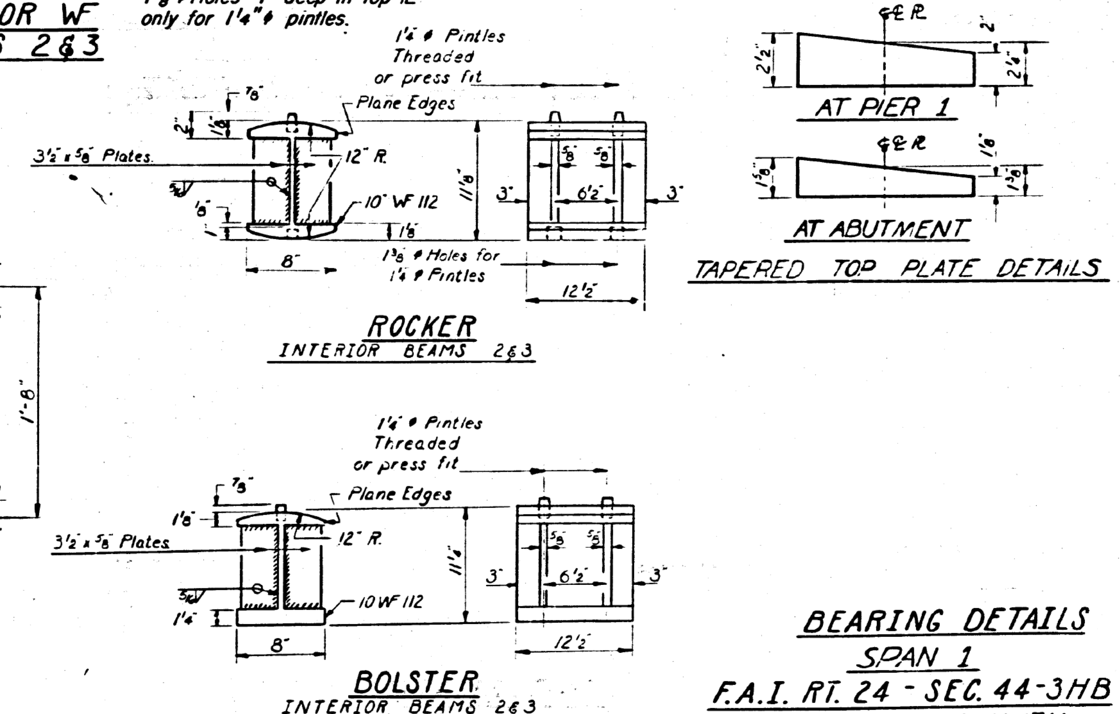
NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

a) D* (Side of brg. away from fixed brg.)
D* = $\frac{1}{8}$" per each 100' of expansion for every 15° fall below the normal temp. of 50°F.
D** (Side of brg. toward fixed brg.)
D** = $\frac{1}{8}$" per each 100' of expansion for every 15° rise above the normal temp. of 50°F.

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.



INTERIOR WF BEAMS 2 & 3
AT ABUTMENT



BEARING DETAILS
SPAN 1
F.A.I. RT. 24 - SEC. 44-3HB
JOHNSON COUNTY
STA. 333+01.64

DESIGNED	Emil A. Samara
CHECKED	A. Kermani
DRAWN	M.L. McGee, P.G. Barnett, C.E.W.
CHECKED	A.K.

DEC. 23 1963
EXAMINED: [signature] ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED: W. E. Baumann ENGINEER OF DESIGN
APPROVED: Richard H. Golterman CHIEF HIGHWAY ENGINEER

I-2-B 9-1-65

FOR INFORMATION ONLY SN 044-0034

USER NAME = WILSONDA	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 11/30/2020	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 044-0034

SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	69
	CONTRACT NO. 78836			
	ILLINOIS FED. AID PROJECT			

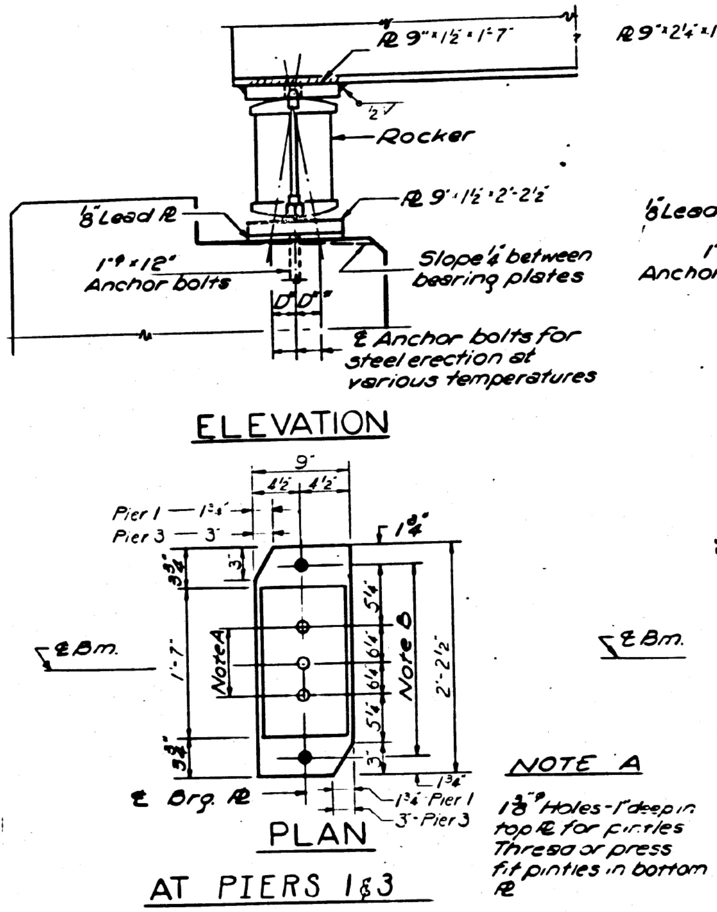
MODEL: Default
FILE NAME: pw://plamroom.dot.illinois.gov:PWIDOT/Documents/IDOT Offices/District 9/Projects/78836/CADData/CADSheets/DXxxxxx-sht-plan.dgn

STATE OF ILLINOIS

24	44-3HB	JOHNSON	187	34

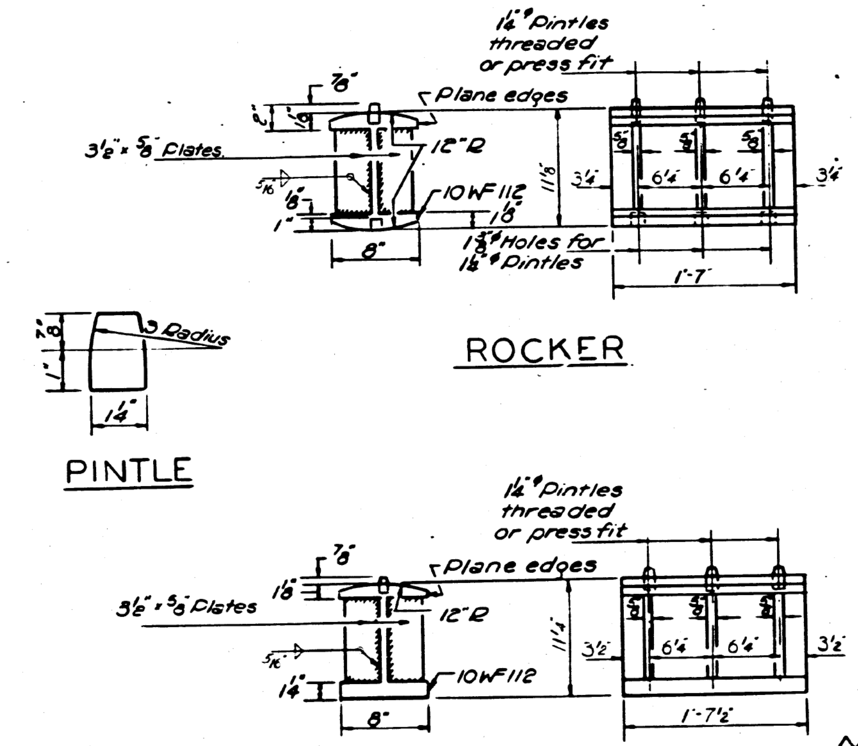
18 SHEETS

F.A.I. 2-24-1(65)?



NOTE A

1⅛"ϕ Holes-1" deep in top PL for pintles. Thread or press fit pintles in bottom PL

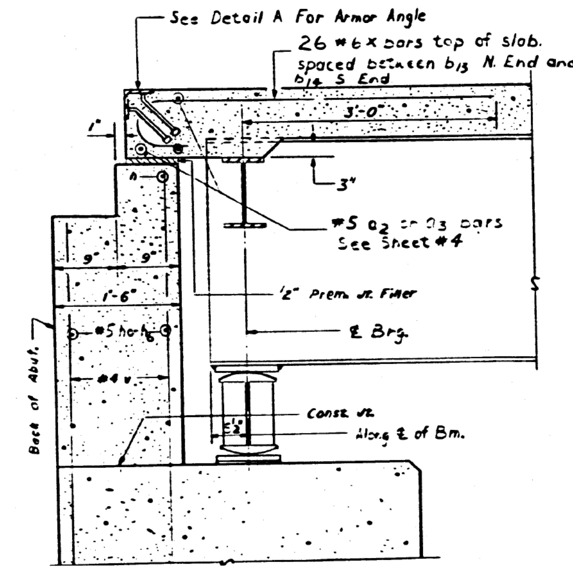


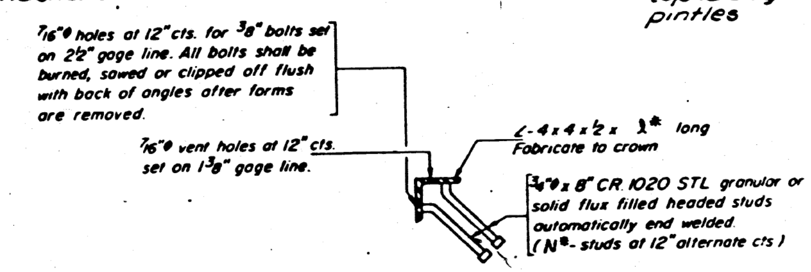
NOTE B

1½" Holes for 1"ϕ anchor bolts 2½"×2½"×⅜" PL washers under nut

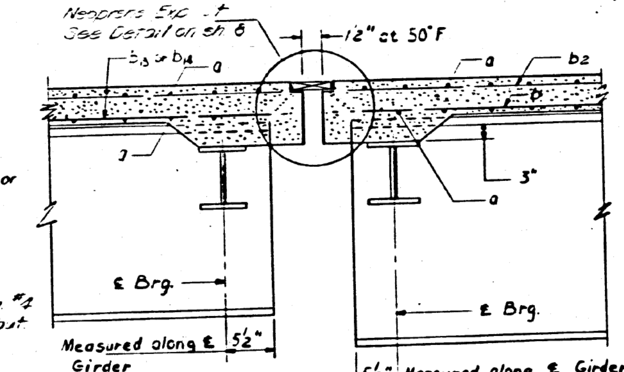
NOTE C

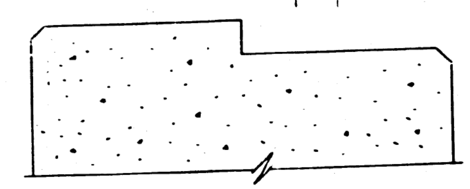
1⅜"ϕ Holes 1" deep in top PL only for 1¼"ϕ pintles





L*-Length of ∠, See sh. #4
N*-32 N Abut; 41 S. Abut.





SECTION B-B

NOTES ON SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS

a) D* (Side of brg. away from fixed brg.) D* = ⅛" per each 100' of expansion for every 15° fall below the normal temperature of 50° F

D** (Side of brg. toward fixed brg.) D** = ⅛" per each 100' of expansion for every 15° rise above the normal temperature of 50° F

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, SHEARS, & REACTIONS

	MOMENTS			SHEARS						REACTIONS-KIPS		
				Span 2			Span 3					
	.4 Span 2	.6 Span 3	Pier 2	¼	½	¾	¼	½	¾	Pier 1	Pier 2	Pier 3
D.L.+S.D.L.	1149.4	1614.2	-2923.0	16.6	-25.4	-67.4	69.2	23.2	-22.8	58.6	224.7	68.8
L.L.	790.6	855.0	951.2	24.0	-21.2	-30.7	31.3	21.7	-23.9	35.3	67.8	35.6
IMP.	158.1	171.0	190.3	4.8	-4.2	-6.2	6.2	4.4	-4.8	7.1	13.6	7.1
TOTAL	2098.1	2640.2	4064.5	45.4	-50.8	-104.3	106.7	49.3	-51.5	101.0	306.1	111.5

DESIGNED Emile A. Samara
CHECKED A. Kranianti
DRAWN M.L. McGee
CHECKED A.K.

DEC. 23 1963
EXAMINED
PASSED
APPROVED

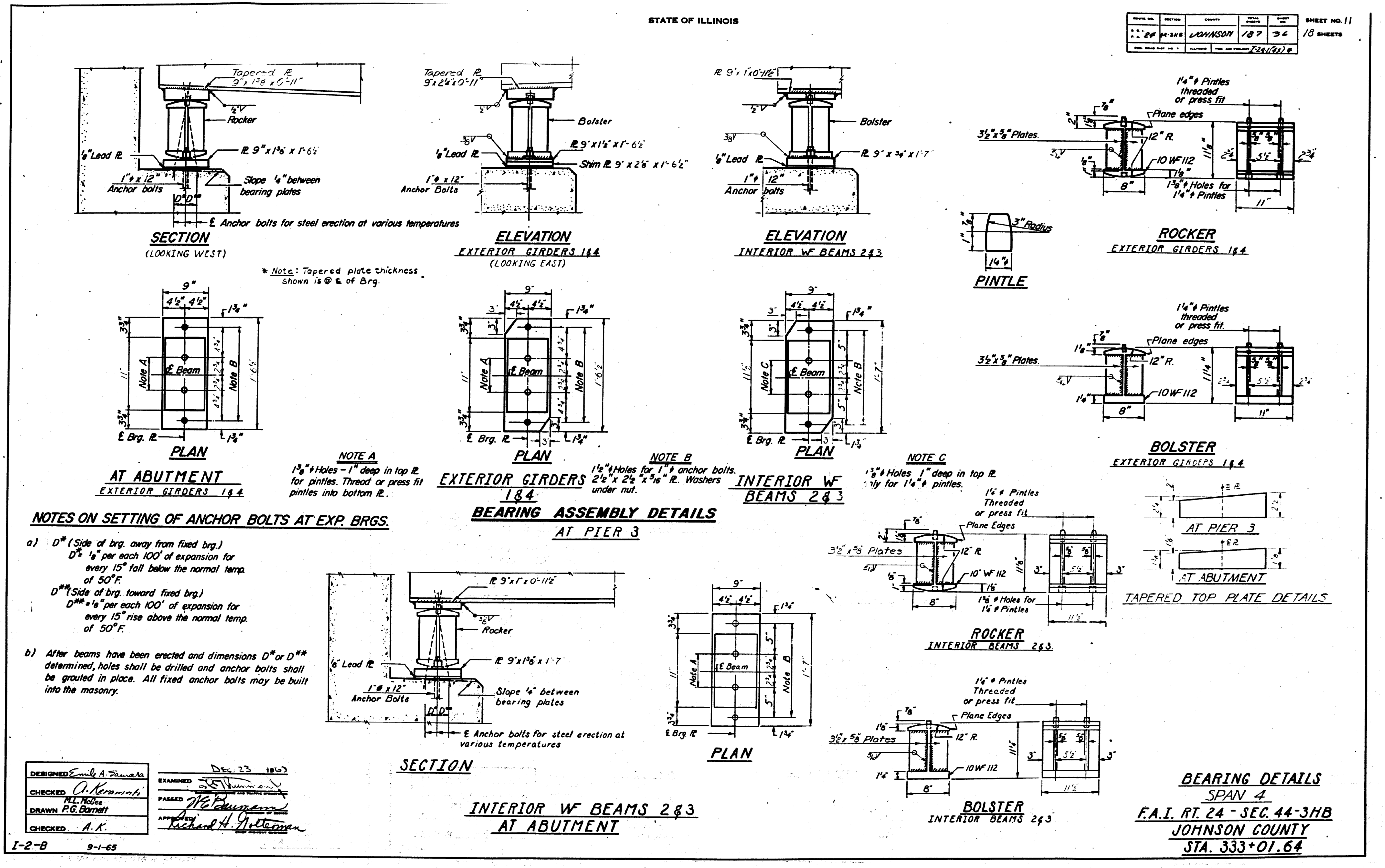
FOR INFORMATION ONLY
SN 044-0034

SPANS 2 & 3 BEARING DETAILS
F.A.I. RT.-24 SEC.-44-3HB
JOHNSON COUNTY
STA. 333+01.64

MODEL: Default
FILE NAME: pw://plamroom.dot.illinois.gov:PWIDOT/Documents/IDOT Offices/District 9/Projects/78836/CADData/CADSheets/DXxxxx-sht-plan.dgn

USER NAME = WILSONDA	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 044-0034
	DRAWN	REVISED -		
PLOT SCALE = 100.0000 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 11/30/2020	DATE -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	70
		CONTRACT NO. 78836		
		ILLINOIS FED. AID PROJECT		


STATE OF ILLINOIS
SHEET NO. 11
18 SHEETS
JOHNSON
187
36
SECTION
(LOOKING WEST)
ELEVATION
EXTERIOR GIRDERS 1&4
(LOOKING EAST)
ELEVATION
INTERIOR WF BEAMS 2&3
Tapered ℞ 9" x 1⅜" x 0'-11"
Rocker
Bolster
⅛" Lead ℞
1"⌀ x 12" Anchor bolts
Anchor Bolts
Slope ¼" between bearing plates
℄ Anchor bolts for steel erection at various temperatures
* Note: Tapered plate thickness shown is @ ℄ of Brg.
PINTLE
3" Radius
ROCKER
EXTERIOR GIRDERS 1&4
1¼"⌀ Pintles threaded or press fit
Plane edges
3½"x⅝" Plates
12" R.
10 WF 112
1⅜"⌀ Holes for 1¼"⌀ Pintles
BOLSTER
EXTERIOR GIRDERS 1&4
PLAN
AT ABUTMENT
EXTERIOR GIRDERS 1&4
℄ Beam
Note A
Note B
Note C
℄ Brg. ℞
NOTE A
1⅜"⌀ Holes - 1" deep in top ℞ for pintles. Thread or press fit pintles into bottom ℞.
PLAN
EXTERIOR GIRDERS 1&4
NOTE B
1½"⌀ Holes for 1"⌀ anchor bolts. 2½" x 2½" x 5⁄16" ℞. Washers under nut.
PLAN
INTERIOR WF BEAMS 2&3
NOTE C
1⅜"⌀ Holes 1" deep in top ℞ only for 1¼"⌀ pintles.
BEARING ASSEMBLY DETAILS
AT PIER 3
NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.
a) D* (Side of brg. away from fixed brg.)
D* = ⅛" per each 100' of expansion for every 15° fall below the normal temp. of 50°F.
D** (Side of brg. toward fixed brg.)
D** = ⅛" per each 100' of expansion for every 15° rise above the normal temp. of 50°F.
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.
ROCKER
INTERIOR BEAMS 2&3
TAPERED TOP PLATE DETAILS
AT PIER 3
AT ABUTMENT
SECTION
PLAN
INTERIOR WF BEAMS 2&3
AT ABUTMENT
BOLSTER
INTERIOR BEAMS 2&3
BEARING DETAILS
SPAN 4
F.A.I. RT. 24 - SEC. 44-3HB
JOHNSON COUNTY
STA. 333+01.64
DESIGNED
CHECKED
DRAWN P.G. Barnett
CHECKED A.K.
EXAMINED
PASSED
APPROVED
Dec. 23 1963
I-2-B 9-1-65

FOR INFORMATION ONLY SN 044-0034

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2021-1	VARIOUS	71	71
		CONTRACT NO. 78836		
	ILLINOIS FED. AID PROJECT			