01-19-2024 LETTING ITEM 092

"A" RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	1
	ILLINOIS	CONTRACT NO. 78A04		

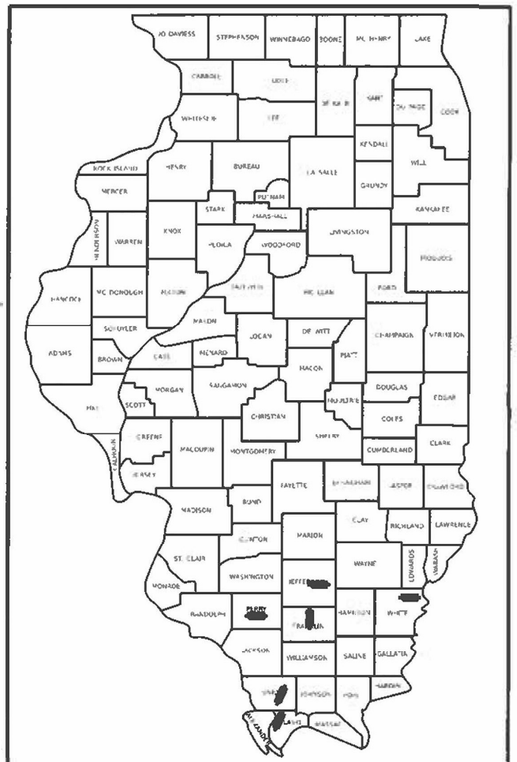
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PROPOSED HIGHWAY PLANS

VARIOUS ROUTES
SECTION D9 BRIDGE PAINT 2023-2
PROJECT STP-GIR9(368)
BRIDGE PAINT
VARIOUS COUNTIES

C-99-054-23

D-99-038-23



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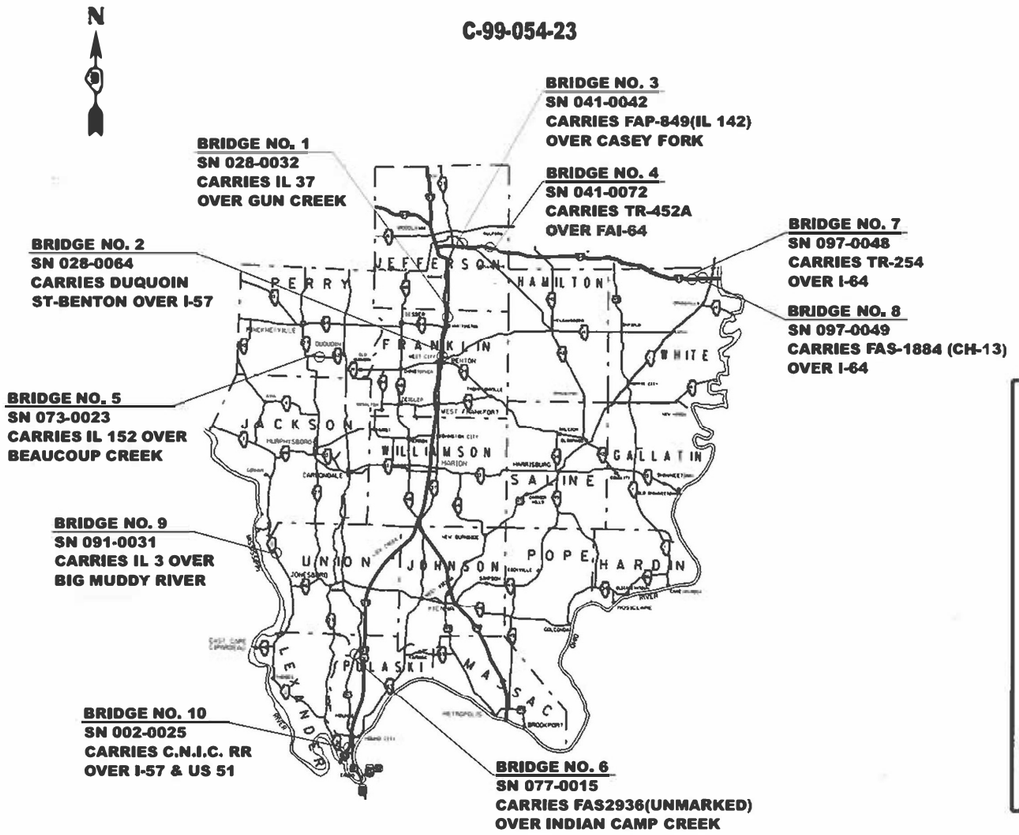

FOR INDEX OF SHEETS, SEE SHEET NO. 3

FOR SUMMARY OF QUANTITIES, SEE SHEET NO. 4-9

BRIDGE NO. 1
SN 028-0032
IL 37 2021 2-WAY
ADT=3900, 6% TRUCKS
TOWNSHIP-EWING
POSTED SPEED: 55 MPH

BRIDGE NO. 2
SN 028-0064
I-57 2022 2-WAY
ADT=35600, 32% TRUCKS
TOWNSHIP-BENTON
POSTED SPEED: 70 MPH

BRIDGE NO. 3
SN 041-0042
FAP-849 (IL 142) 2019 2-WAY
ADT=5150, 4% TRUCKS
TOWNSHIP-DODDS
POSTED SPEED: 55 MPH

BRIDGE NO. 4
SN 041-0072
FAI-64 2022 2-WAY
ADT=12000, 30% TRUCKS
TOWNSHIP-PENDLETON
POSTED SPEED: 70 MPH

BRIDGE NO. 5
SN 073-0023
IL 152 2021 2-WAY
ADT=2100, 8% TRUCKS
TOWNSHIP-DUQUOIN
POSTED SPEED: 55 MPH

BRIDGE NO. 6
SN 077-0015
FAS 2936 (UNMARKED) 2018 2-WAY
ADT=850, 10% TRUCKS
TOWNSHIP-ULLIN
POSTED SPEED: 55 MPH

BRIDGE NO. 7
SN 097-0048
FAI-64 2022 2-WAY
ADT=12400, 29% TRUCKS
TOWNSHIP-GRAY
POSTED SPEED: 70 MPH

BRIDGE NO. 8
SN 097-0049
FAI-64 2022 2-WAY
ADT=12400, 29% TRUCKS
TOWNSHIP-GRAY
POSTED SPEED: 70 MPH

BRIDGE NO. 9
SN 091-0031
IL 3 2021 2-WAY
ADT=1400, 17% TRUCKS
TOWNSHIP-GRAND TOWER
POSTED SPEED: 55 MPH

BRIDGE NO. 10
SN 002-0025
I-57 2022 2-WAY
ADT=14700, 36% TRUCKS
TOWNSHIP-CACHE NO. 1
POSTED SPEED: 70 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: EHREN KIRBY
PROJECT DESIGNER: DAVID WILSON

CONTRACT NO. 78A04

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Oct 18 2023

Kirk H. Brown
REGION FIVE ENGINEER

December 8, 2023
ENGINEER OF DESIGN AND ENVIRONMENT

December 8, 2023
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

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Prepared By: *[signature]*
DISTRICT STUDIES & PLANS ENGINEER

Examined By: *[signature]*
DISTRICT LAND ACQUISITION ENGINEER

Examined By: *[signature]*
DISTRICT PROGRAM DEVELOPMENT ENGINEER

Examined By: *[signature]*
DISTRICT OPERATIONS ENGINEER

Examined By: *[signature]*
DISTRICT PROJECT IMPLEMENTATION ENGINEER

Examined By: *[signature]*
DISTRICT CONSTRUCTION ENGINEER

Examined By: *[signature]*
DISTRICT MATERIALS ENGINEER

GENERAL NOTES

THE CONTRACTOR IS REQUIRED TO BE SSPC QP1 AND SSPC QP2 CERTIFIED.

PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO ROUTINE VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

FOR STRUCTURES 028-0032, 041-0072, 097-0048, 097-0049, CLEANING AND PAINTING OF THE 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 FLANGE OF THE FASICA BEAMS SHALL BE BLUE, MUNSELL NO. 10B 3/6.

FOR STRUCTURE 041-0042, CLEANING AND PAINTING OF EXISTING STRUCTURAL STEEL SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS FOR "CLEANING AND PAINTING EXISTING STEEL STRUCTURES" AND "CONTAINMENT AND DISPOSAL OF 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 FINIAL 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 FLANGE OF THE FASCIA BEAMS SHALL BE GRAY, MUNSELL NO. 5B 7/1.

FOR STRUCTURE 073-0023, 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 20 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 FLANGE OF THE FASCIA BEAMS SHALL BE GRAY, MUNSELL NO. 5B 7/1.

FOR STRUCTURE 091-0031, 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 FT. (MEASURED ALONG THE BEAM) OF EITHER SIDE OF SPECIFIED DECK JOINTS. 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 FLANGE OF THE FASICA BEAMS SHALL BE GRAY MUNSELL NO. 5B 7/1.

FOR STRUCTURE 077-0015, 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. 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 FLANGE OF THE FASCIA BEAMS SHALL BE GRAY, MUNSELL NO. 5B 7/1.

FOR STRUCTURE 028-0064, CLEANING AND PAINTING OF EXISTING STRUCRUAL 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." CLEAN AND PAINT THE NORTH FASCIA BEAM INCLUDING THE BOTTOM OF THE TOP FLANGE, THE WEB, AND THE TOP OF THE BOTTOM FLANGE ±15 FT. (MEASURED ALONG THE BEAM), APPROXIMATELY 5 FT. WEST OF THE WEST PIER. THIS AREA SHALL BE CLEANED PER POWER TOOL CLEANING - MODIFIED -SSPC- SP3. THE STEEL PAINTED SHALL BE PAINTED ACCORDING TO THE REQUIRMENTS OF PAINT SYSTEM 2 - PS/EM/U. THE COLOR OF THE FINAL FINISH COAT FOR THE SURFACES CLEANED ON THE FASCIA BEAM SHALL BE REDDISH BROWN, MUNSELL NO. 2.5 YR 3/4.

FOR STRUCTURE 002-0025, 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 5B 7/1. THE COLOR OF THE FINAL FINISH COAT FOR THE EXTERIOR SURFACES ANS BOTTOM OF THE FLANGE OF THE FASCIA BEAMS SHALL BE INTERSTATE GREEN, MUNSELL NO. 7.5G 4/8.

A TOTAL OF 14 AIR MONITORS ARE REQUIRED TO MONITOR ABRASIVE BLASTING OPERATIONS AT 10 LOCATIONS. 0 AT BRIDGE NO. 1 (SN 028-0032), 4 AT BRIDGE NO. 2 (SN 028-0064), 0 AT BRIDGE NO. 3 (SN 041-0042), 2 AT BRIDGE NO. 4 (SN 041-0072), 2 AT BRIDGE NO. 5 (SN 073-0023), 0 AT BRIDGE NO. 6 (SN 077-0015), 1 AT BRIDGE NO. 7 (SN 097-0048), 2 AT BRIDGE NO. 8 (SN 097-0049), 1 AT BRIDGE NO. 9 (SN 091-0031), 2 AT BRIDGE NO. 10 (SN 002-0025).

COMMITMENTS: NONE.

INDEX OF SHEETS

STANDARDS

000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001006	DECIMAL OF AN INCH AND OF A FOOT
701001-02	OFF-ROAD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5m) AWAY
701006-05	OFF-ROAD OPERATIONS, 2L, 2W, 15' (4.5M) TO 24" (600mm) FROM PAVEMENT EDGE
701101-05	OFF-ROAD OPERATIONS, MULTILANE, 15' (4.5m) TO 24" (600mm) FROM PAVEMENT EDGE
701106-02	OFF-ROAD OPERATIONS, MULTILANE, MORE THAN 15' (4.5m) AWAY
701201-05	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS ≥ 45 MPH
701316-13	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR FOR SPEEDS > 45 MPH
701400-12	APPROACH TO LANE CLOSURE, FREEWAY / EXPRESSWAY
701402-12	LANE CLOSURE, FREEWAY / EXPRESSWAY, WITH BARRIER
701428-01	TRAFFIC CONTROL SETUP AND REMOVAL FREEWAY/EXPRESSWAY
701901-09	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
862001-01	UNINTERUPTABLE POWER SUPPLY (UPS)

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MODEL: General Notes-Index of Sheets-Standards [Sheet]
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES, INDEX OF SHEETS AND STANDARDS

SCALE: | SHEET 3 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	3
		CONTRACT NO. 78A04		
	ILLINOIS	FED. AID PROJECT		

SUMMARY OF QUANTITIES (BRIDGES 1-5)

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	FRANKLIN		JEFFERSON		PERRY
			COUNTY:	FRANKLIN		JEFFERSON		PERRY
			ROUTE:	IL 37/ GUN CREEK	DUQUOIN STREET-BENTON/ I-57	FAP-849 (IL 142)/ CASEY FORK	TR-452A/ I-64	IL 152/ BEAUCOUP CREEK
			FUNDING:	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
				BRIDGE NO. 1	BRIDGE NO. 2	BRIDGE NO. 3	BRIDGE NO. 4	BRIDGE NO. 5
				028-0032	028-0064	041-0042	041-0072	073-0023
67000400	ENGINEER'S FIELD OFFICE TYPE A	CAL MO	18	1.8	1.8	1.8	1.8	1.8
67100100	MOBILIZATION	L SUM	1	0.1	0.1	0.1	0.1	0.1
70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	2	1		1		
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	8				2	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.14	0.14	0.14	0.14	0.14
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	1		1		
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	252	28		28	28	28
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1750				425	
70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH	156				36	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1750				425	
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	8				2	
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	8				2	
86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH	2	1		1		
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1				
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	

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
BRIDGES 1-5

SCALE: | SHEET 4 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	4
		CONTRACT NO. 78A04		
	ILLINOIS FED. AID PROJECT			

SUMMARY OF QUANTITIES (BRIDGES 1-5)

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	FRANKLIN		JEFFERSON		PERRY
			ROUTE:	IL 37/ GUN CREEK	DUQUOIN STREET-BENTON/ I-57	FAP-849 (IL 142)/ CASEY FORK	TR-452A/ I-64	IL 152/ BEAUCOUP CREEK
			FUNDING:	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
				BRIDGE NO. 1	BRIDGE NO. 2	BRIDGE NO. 3	BRIDGE NO. 4	BRIDGE NO. 5
				028-0032	028-0064	041-0042	041-0072	073-0023
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					
Z0007107	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 7	L SUM	1					
Z0007108	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 8	L SUM	1					
Z0007109	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 9	L SUM	1					
Z0007110	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 10	L SUM	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		
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					
Z0010507	CLEANING AND PAINTING STEEL BRIDGE NO. 7	L SUM	1					
Z0010508	CLEANING AND PAINTING STEEL BRIDGE NO. 8	L SUM	1					

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
BRIDGES 1-5

SCALE: | SHEET 5 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	5
		CONTRACT NO. 78A04		
		ILLINOIS FED. AID PROJECT		

SUMMARY OF QUANTITIES (BRIDGES 1-5)

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	FRANKLIN		JEFFERSON		PERRY
			COUNTY:	FRANKLIN		JEFFERSON		PERRY
			ROUTE:	IL 37/ GUN CREEK	DUQUOIN STREET-BENTON/ I-57	FAP-849 (IL 142)/ CASEY FORK	TR-452A/ I-64	IL 152/ BEAUCOUP CREEK
			FUNDING:	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
				BRIDGE NO. 1	BRIDGE NO. 2	BRIDGE NO. 3	BRIDGE NO. 4	BRIDGE NO. 5
				028-0032	028-0064	041-0042	041-0072	073-0023
Z0010509	CLEANING AND PAINTING STEEL BRIDGE NO. 9	L SUM	1					
Z0010510	CLEANING AND PAINTING STEEL BRIDGE NO. 10	L SUM	1					
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1					

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SUMMARY OF QUANTITIES BRIDGES 1-5

SCALE: | SHEET 6 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	6
		CONTRACT NO. 78A04		
		ILLINOIS	FED. AID PROJECT	

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SUMMARY OF QUANTITIES (BRIDGES 6-10)

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	COUNTY:	PULASKI	WHITE		UNION	ALEXANDER
				ROUTE:	FAS-2936 (UNMARKED)/ INDIAN CAMP CREEK	TR-254/ I-64	FAS-1884 (CH-13)/ I-64	IL 3/ BIG MUDDY RIVER	C.N.I.C. RR/ I-57 & US51
				FUNDING:	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
					BRIDGE NO. 6	BRIDGE NO. 7	BRIDGE NO. 8	BRIDGE NO. 9	BRIDGE NO. 10
					077-0015	097-0048	097-0049	091-0031	002-0025
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO			1.8	1.8	1.8	1.8	1.8
67100100	MOBILIZATION	L SUM			0.1	0.1	0.1	0.1	0.1
70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH							
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH				2	2		2
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM			0.14	0.14	0.15	0.15	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH							
70107025	CHANGEABLE MESSAGE SIGN	CAL DA			28	28	28	28	28
70400100	TEMPORARY CONCRETE BARRIER	FOOT				425	425		475
70400125	PINNING TEMPORARY CONCRETE BARRIER	EACH				36	36		48
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT				425	425		475
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH				2	2		2
86200300	UNINTERRUPTABLE POWER SUPPLY, EXTENDED	EACH							
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH				2	2		2
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM							
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM							
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM							
Z0007104	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 4	L SUM							

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
BRIDGES 6-10

SCALE: | SHEET 7 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	7
		CONTRACT NO. 78A04		
		ILLINOIS | FED. AID PROJECT		

SUMMARY OF QUANTITIES (BRIDGES 6-10)

CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	BRIDGE NO. 6	BRIDGE NO. 7	BRIDGE NO. 8	BRIDGE NO. 9	BRIDGE NO. 10
			COUNTY:	PULASKI	WHITE	WHITE	UNION	ALEXANDER
			ROUTE:	FAS-2936 (UNMARKED)/ INDIAN CAMP CREEK	TR-254/ I-64	FAS-1884 (CH-13)/ I-64	IL 3/ BIG MUDDY RIVER	C.N.I.C. RR/ I-57 & US51
			FUNDING:	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
				077-0015	097-0048	097-0049	091-0031	002-0025
Z0007105	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 5	L SUM						
Z0007106	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 6	L SUM		1				
Z0007107	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 7	L SUM			1			
Z0007108	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 8	L SUM				1		
Z0007109	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 9	L SUM					1	
Z0007110	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 10	L SUM						1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM						
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM						
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM						
Z0010504	CLEANING AND PAINTING STEEL BRIDGE NO. 4	L SUM						
Z0010505	CLEANING AND PAINTING STEEL BRIDGE NO. 5	L SUM						
Z0010506	CLEANING AND PAINTING STEEL BRIDGE NO. 6	L SUM		1				
Z0010507	CLEANING AND PAINTING STEEL BRIDGE NO. 7	L SUM			1			
Z0010508	CLEANING AND PAINTING STEEL BRIDGE NO. 8	L SUM				1		

REV. - MS

SUMMARY OF QUANTITIES (BRIDGES 6-10)

			COUNTY:	PULASKI	WHITE		UNION	ALEXANDER
			ROUTE:	FAS-2936 (UNMARKED)/ INDIAN CAMP CREEK	TR-254/ I-64	FAS-1884 (CH-13)/ I-64	IL 3/ BIG MUDDY RIVER	C.N.I.C. RR/ I-57 & US51
			FUNDING:	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
CODE NUMBER	ITEM DESCRIPTION	UNIT	TOTAL QUANTITY	BRIDGE NO. 6	BRIDGE NO. 7	BRIDGE NO. 8	BRIDGE NO. 9	BRIDGE NO. 10
				077-0015	097-0048	097-0049	091-0031	002-0025
Z0010509	CLEANING AND PAINTING STEEL BRIDGE NO. 9	L SUM					1	
Z0010510	CLEANING AND PAINTING STEEL BRIDGE NO. 10	L SUM						1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM						1

REV. - MS

USER NAME = david.a.wilson	DESIGNED -	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/20/2023	DATE -	REVISED -	

SUMMARY OF QUANTITIES BRIDGES 6-10

SCALE: | SHEET 9 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	9
		CONTRACT NO. 78A04		
		ILLINOIS	FED. AID PROJECT	

MODEL: SOG6 [Sheet]
FILE NAME: pw:\\bdc-pw.bentley.com:PWBDOT\Documents\IDOT Offices\District 9\WORD Projects\78A04\CADdata\CADsheets\D978A04-Sht-Sv0.dgn

TEMPORARY CONCRETE BARRIER/ RELOCATE TEMPORARY CONCRETE BARRIER

BRIDGE NUMBER	STRUCTURE NUMBER	TEMPORARY CONCRETE BARRIER	RELOCATE TEMPORARY CONCRETE BARRIER
4	041-0072	425 ft	425 ft
7	097-0048	425 ft	425 ft
8	097-0049	425 ft	425 ft
10	002-0025	475 ft	475 ft
TOTAL		1750 ft	1750 ft

AREAS OF CLEANING AND PAINTING

BRIDGE NUMBER	STRUCTURE NUMBER	LEAD PRESENT	ALL STRUCTURAL STEEL	20 FT AT BEAM ENDS	10 FT AT BEAM ENDS	5 FT AT BEAM ENDS
1	028-0032	YES	X			
2	*028-0064	YES				
3	041-0042	YES	X			
4	041-0072	YES	X			
5	073-0023	YES		X		
6	077-0015	YES				X
7	097-0048	YES	X			
8	097-0049	YES	X			
9	091-0031	YES			X	
10	002-0025	YES	X			

* PAINT AS SPECIFIED IN THE GENERAL NOTES. WALKWAY AND SUPPORT FOR SIGN ARE NOT TO BE CLEANED AND PAINTED.

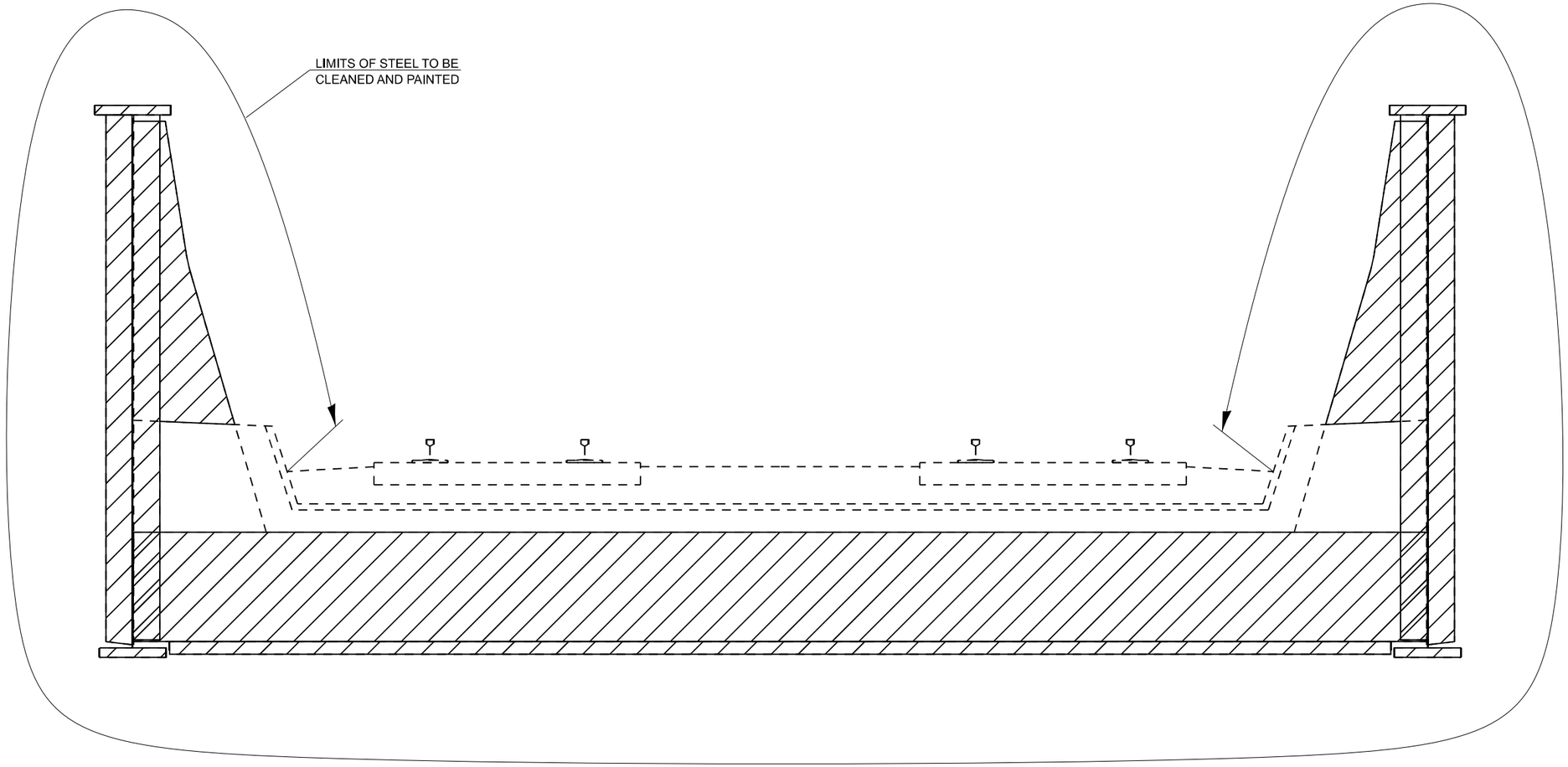
MODEL: Schedules [Sheet]
FILE NAME: pw:\\Bidcow.bentley.com:PWIDOT\Documents\IDOT Offices\District 9\WORD Projects\78A04\CADdata\CADSheets\D978A04-SHT-Schedules.dgn

USER NAME = david.a.wilson	DESIGNED -	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/19/2023	DATE -	REVISED -	

SCHEDULES

SCALE: | SHEET 10 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	10
		CONTRACT NO. 78A04		
	ILLINOIS FED. AID PROJECT			



SN 002-0025

(NOT TO SCALE)

CLEAN AND PAINT ALL VISABLE STEEL
INCLUDING ALL STEEL IN-BETWEEN THE
FLOOR BEAMS AND GIRDERS UNDERNEATH

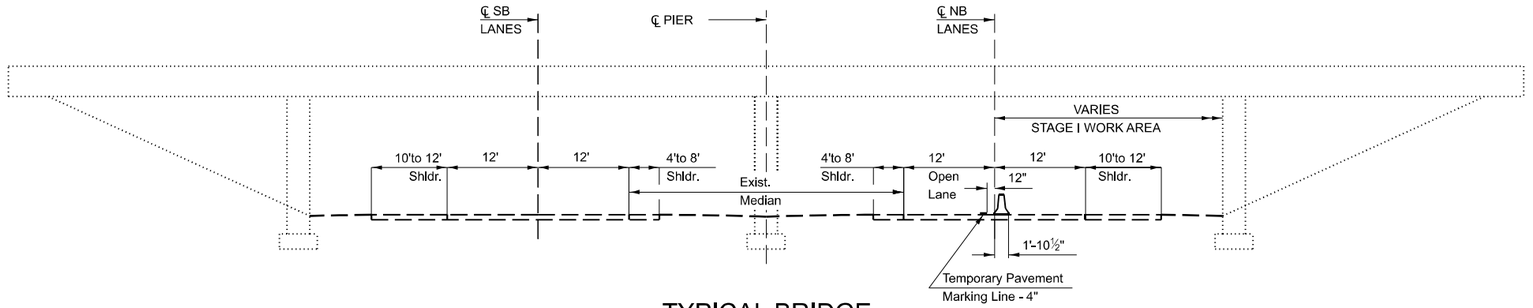
MODEL: SN 002-0025 PAINT LOCATIONS (Sheet)
FILE NAME: pw:\\bidopw.bentley.com:PWIDOT\Documents\IDOT Offices\District 9\ORD Projects\78A04\CADData\CADSheets\D978A04-SHT-Typicals.dgn

USER NAME = david.a.wilson	DESIGNED -	REVISED -	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

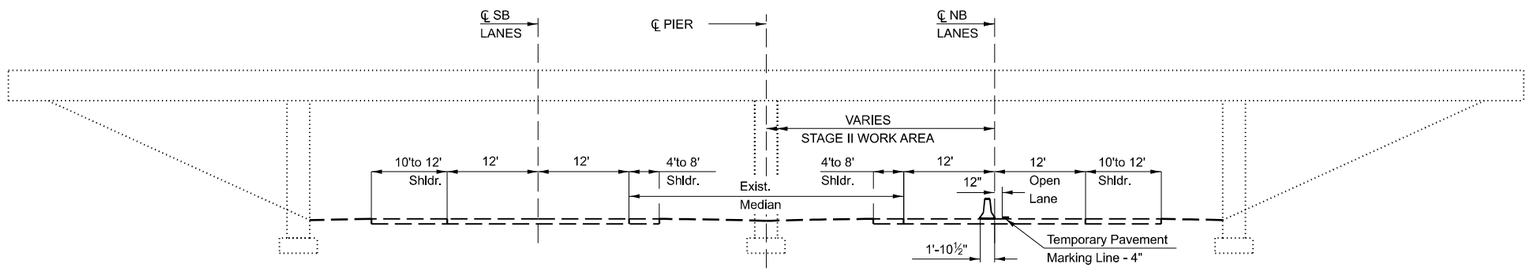
SN 002-0025
BRIDGE PAINT LOCATIONS

SCALE: | SHEET 11 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	11
		CONTRACT NO. 78A04		
		ILLINOIS	FED. AID PROJECT	



TYPICAL BRIDGE
STAGE I CONSTRUCTION
SHOWING NB LANES
SB LANES SIMILAR BY 180° ROTATION
(SN 002-0025 LOOKING NORTH)



TYPICAL BRIDGE
STAGE II CONSTRUCTION
SHOWING NB LANES
SB LANES SIMILAR BY 180° ROTATION
(SN 002-0025 LOOKING NORTH)

MODEL: SN 002-0025 Stage Construction Details [Sheet]
FILE NAME: pw://Bidview.bentley.com:PWIDOT/Documents/IDOT Offices\District 9\ORD Projects\78A04\CADData\CADSheets\D978A04-Sht5-Typicals.dgn

USER NAME = david.a.wilson	DESIGNED -	REVISED -	**STATE OF ILLINOIS** **DEPARTMENT OF TRANSPORTATION**
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

SN 002-0025
STAGE CONSTRUCTION DETAILS

SCALE: | SHEET 12 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	12
		CONTRACT NO. 78A04		
	ILLINOIS FED. AID PROJECT			

Bench Mark: Square cut in S.E. corner of S.W. hubguard of S.N. 028-0032. 15.2 feet Right of Station 728+55.2, Elevation 418.21.

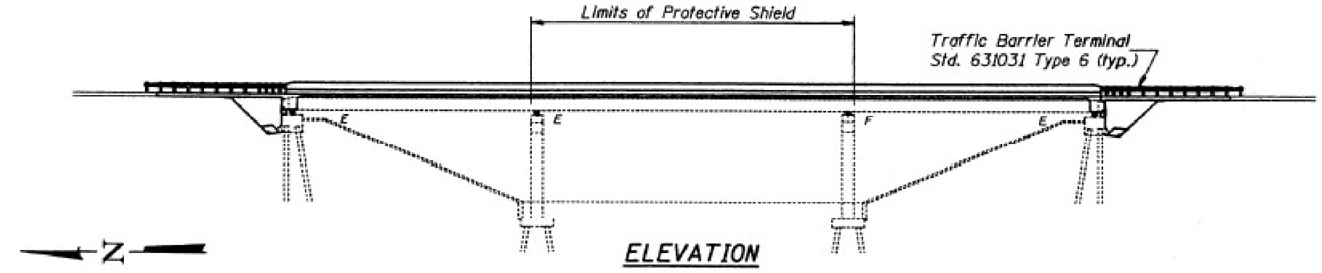
Existing Structure: S.N. 028-0032 built as SBI Rte. 37, Section 4-2BR in 1964. The existing structure is a 3-span wide flange structure. The abutments are pile bents on steel piles and the piers are single hammerhead piers supported on steel piles. 200'-3" Bk.-Bk. of abuts. and 36'-0" Out to Out of deck. Existing deck to be removed and replaced. Traffic to be maintained utilizing stage construction.

No salvage

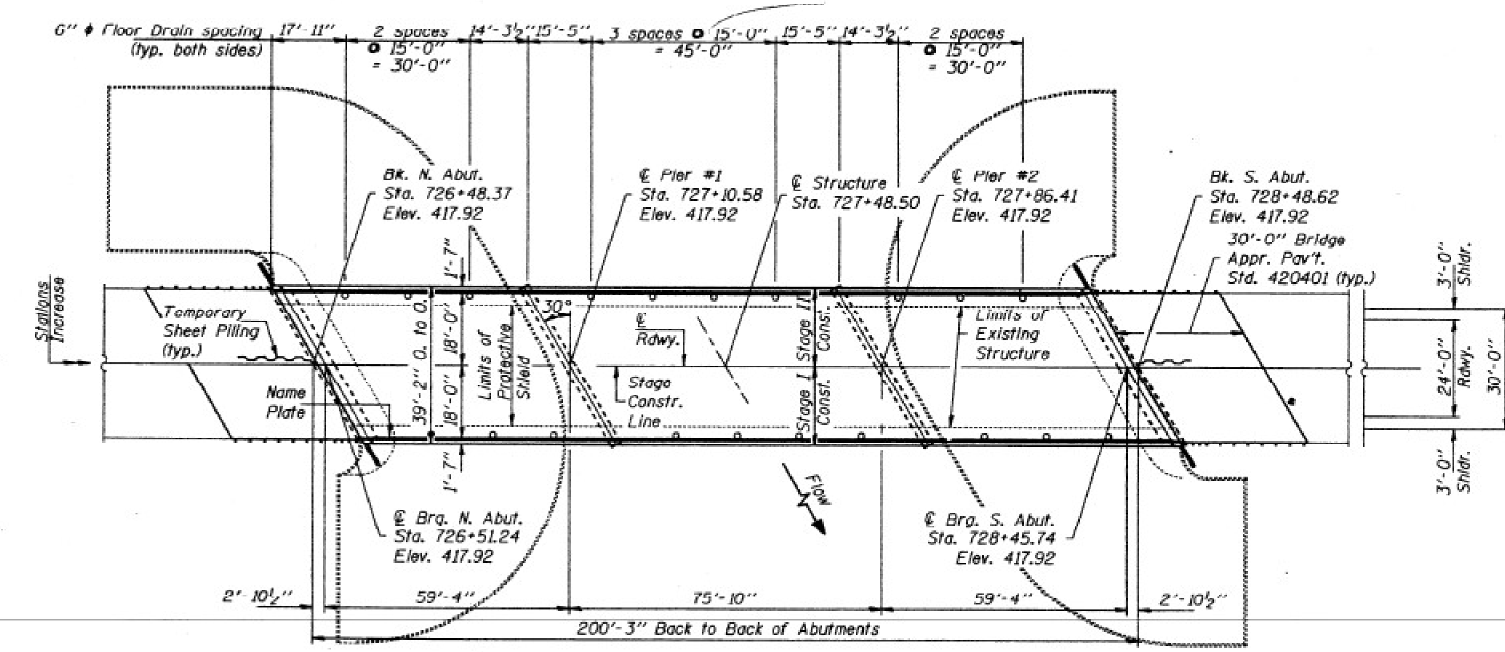
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2869	4-2DR	FRANKLIN	28	12

SHEET NO. 1
17 SHEETS



ELEVATION



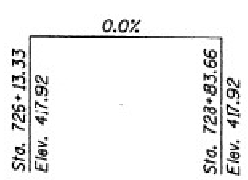
PLAN

PROJECT NO. ACBHS-2869(103)

STATION 727+48.50
REBUILT 20 BY
STATE OF ILLINOIS
F.A.S. RT. 2869 - SEC. 4-2DR
LOADING HS20
STR. NO. 028-0032

NAME PLATE
See Std. 515001

Note:
The existing Name Plate is to be cleaned and relocated next to the new Name Plate. Cost is included with Name Plates.



PROFILE GRADE
(along ℄ roadway)

DESIGNED	Chad Q Fnesting
CHECKED	William A. Bernan
DRAWN	BECKY M. CURRY
CHECKED	CJF/WAB

September 27, 2001
EXAMINED Thomas ... ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

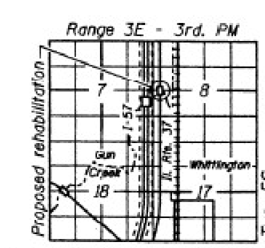
STATE OF ILLINOIS LICENSED STRUCTURAL ENGINEER 081-004625
EXPIRES 11-30-2002

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
1996 AASHTO with 1997, 1998 and 1999 Interims
1995 Seismic Retrofitting Manual for Highway Bridges
FHWA-RD-94-052

DESIGN STRESSES
FIELD UNITS
New Construction
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 36,000 psi Structural Steel (M270 Grade 36)
Existing Construction
f_s = 20,000 psi (reinforcement)
f_s = 20,000 psi (Structural Steel)
f'_c = 3,500 psi

SEISMIC DATA
Seismic Performance Category (SPC) = B
Bedrock Acceleration Coefficient (A) = 10.0%g
Site Coefficient (S) = 1.5



LOCATION SKETCH

FOR INFORMATION ONLY
SN 028-0032

GENERAL PLAN
ILLINOIS ROUTE 37 OVER
GUN CREEK
F.A.S. ROUTE 2869 - SECTION 4-2DR
FRANKLIN COUNTY
STATION 727+48.50
STRUCTURE NO. 028-0032

MODEL: SN 028-0032_1 [Sheet]
FILE NAME: pw://idot-pw.bentley.com:PWIDOT/Documents/IDOT Offices/District 9/ORD Projects/78A04/CADData/CADsheets/D978A04-Structure Information 1-3.dgn

USER NAME = david.a.wilson	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 028-0032 STRUCTURE INFORMATION	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	13
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 78A04		
PLOT DATE = 10/18/2023	DATE -	REVISED -		SCALE: SHEET 13 OF 65 SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2869	4-2DR	FRANKLIN	28	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 2
17 SHEETS

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts $\frac{3}{4}$" ϕ, open holes $\frac{13}{16}$" ϕ, unless 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.

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

Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two $\frac{1}{8}$" 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 1 Elastomeric Bearings, two $\frac{1}{8}$" adjusting shims shall be provided for each bearing and placed as detailed.

Prior to pouring the new concrete deck, all loose rust, loose mill scale, and other loose potentially detrimental foreign material shall be removed from the surfaces of the beams in contact with concrete. The cost of this work will be included in the pay item covering removal of the existing concrete. All heavy rust and other tightly adhered potentially detrimental foreign matter shall also be removed from the surfaces of the beams in contact with concrete. Tightly adhered paint may remain unless otherwise noted. This removal shall be accomplished by methods that will not damage the steel. The cost of this work will be paid for according to Article 109.04.

All existing construction accessories welded to the top flange over the pier between the quarter points of the beams shall be removed. The remaining weld shall be ground smooth and inspected for cracks using magnetic particle testing. Any cracks that can not be removed by grinding approximately $\frac{1}{4}$ inch deep shall be identified and reported to the Bureau of Bridges and Structures for further disposition. The cost of this work will be paid for according to Article 109.04.

Field painting of structural steel shall be done under a separate Painting contract.

All new structural steel shall be shop painted with the inorganic zinc rich primer per ~~AASHTO M300, Type 1.~~

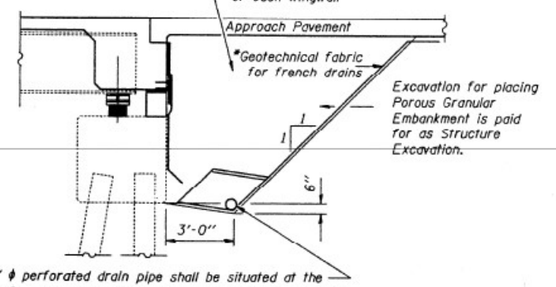
Existing structural steel shall only be cleaned as required by the special provision "Cleaning and Painting Adjacent Areas of Existing Steel Structures."

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

Slope wall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs. per 100 sq. ft.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Concrete Deck	Each	1		1
Concrete Removal	Cu. yd.		42.1	42.1
Jack and Remove Existing Bearings	Each		24	24
Reinforcement Bars, Epoxy Coated	Pound	57,750	1670	59,420
Concrete Superstructure	Cu. yd.	277.4		277.4
Protective Coat	Sq. yd.	955		955
Floor Drains	Each	20		20
Furnishing and Erecting Structural Steel	Pound	7200		7200
Temporary Sheet Piling	Sq. ft.		581	581
Elastomeric Bearing Assembly, Type I	Each		18	18
Concrete Structures	Cu. yd.		17.8	17.8
Stud Shear Connectors	Each	2976		2976
Bridge Deck Grooving	Sq. yd.	749		749
Name Plates	Each	1		1
Structure Excavation	Cu. yd.		275	275
Bar Splicers	Each	682	4	686
Porous Granular Embankment	Cu. yd.		219.0	219.0
Slopewall 6 inch	Sq. yd.		10.7	10.7
Protective Shield	Sq. yd.		303	303



A 6" ϕ perforated drain pipe shall be situated at the bottom of an approximate 2' x 2' area of porous granular embankment. The 2' x 2' area shall be wrapped completely in geotechnical fabric for french drains. Extend pipe parallel with the cap until intersecting with the sideslopes.

* Included in the cost of Porous Granular Embankment.

SECTION THRU SEMI-INTEGRAL ABUTMENT

(Dimensions ℄ Ht. L's)

DESIGNED	Chad J. Fuesting
CHECKED	William A. Beisner
DRAWN	BECKY M. CURRY
CHECKED	C.J.F. & W.A.B.

September 27, 2001

EXAMINED Thomas J. Domagalski, Division of Bridge Design

PASSED Robert F. Anderson, Engineer of Bridges and Structures

FOR INFORMATION ONLY
SN 028-0032

GENERAL DATA
F.A.S. ROUTE 2869 - SECTION 4-2DR
FRANKLIN COUNTY
STATION 727+48.50
STRUCTURE NO. 028-0032

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 028-0032
ST RUCTURE INFORMATION

SCALE: | SHEET 14 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	14
		CONTRACT NO. 78A04		
		ILLINOIS FED. AID PROJECT		

MODEL: SN 028-0032_2 [Sheet]
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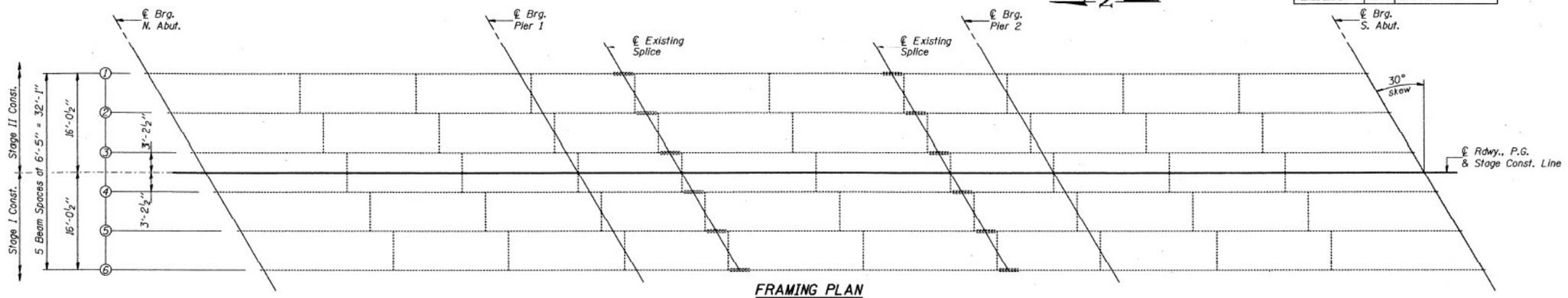
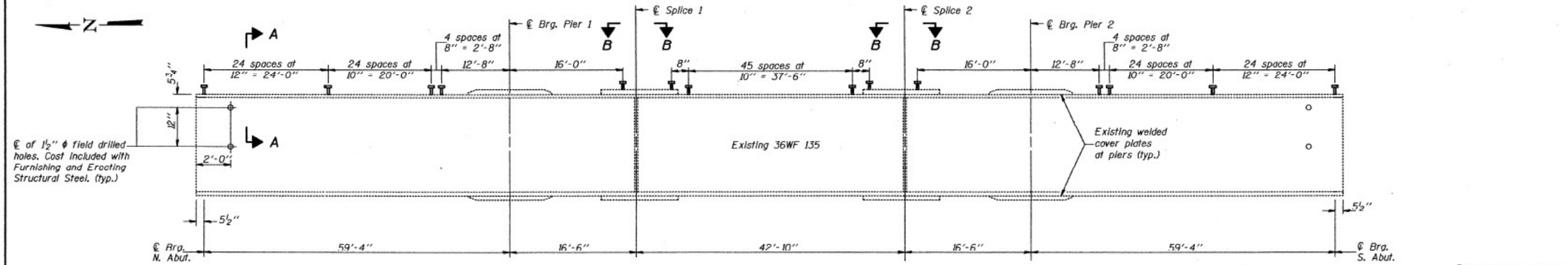
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2869	4-2DR	FRANKLIN	28	21
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
17 SHEETS

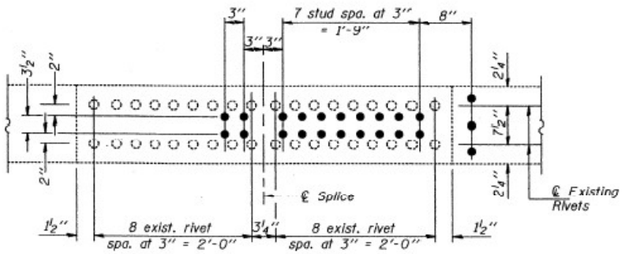
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN



BEAM ELEVATION



VIEW B-B

DESIGNED	Chad J. Fuesting
CHECKED	William A. Beisner
DRAWN	BECKY M. GUKKY
CHECKED	C.J.F. & W.A.B.

September 27, 2001
EXAMINED Thomas J. Domagalski, ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson, ENGINEER OF BRIDGES AND STRUCTURES

INTERIOR GIRDER MOMENT TABLE						
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.6 Sp. 3
Is	(in⁴)	7800	11374	7800	11374	7800
Ic (n)	(in⁴)	19998	——	19998	——	19998
Ic (3n)	(in⁴)	14643	——	14643	——	14643
Ss	(in³)	439	622	439	622	439
Sc	(in³)	637	——	637	——	637
Sc (3n)	(in³)	575	——	575	——	575
Z	(in³)	——	706	——	706	——
℄	(K/ft.)	0.806	1.301	0.806	1.301	0.806
M℄	('K)	182	582	184	582	182
s℄	(K/ft.)	0.457	——	0.457	——	0.457
Ms℄	('K)	119	——	137	——	119
M℄	('K)	392	272	413	272	392
M (Imp)	('K)	106	71	103	71	106
$5_3(M℄+M(imp)$	('K)	830	572	860	572	830
Ma	('K)	1470	1500	1535	1500	1470
Mu	('K)	2891	2118	2891	2118	2891
fs℄ non-comp	(k.s.i.)	5.0	11.2	5.0	11.2	5.0
fs℄ (comp)	(k.s.i.)	2.5	——	2.9	——	2.5
$fs\,5_3(℄+I)$	(k.s.i.)	15.6	11.0	16.2	11.0	15.6
fs (Overload)	(k.s.i.)	23.1	22.2	24.1	22.2	23.1
VR	(K)	48.5	——	41.5	——	48.5

INTERIOR GIRDER REACTION TABLE					
		N. Abut.	Pier 1	Pier 2	S. Abut.
R℄	(K)	*56.4	95.9	95.9	*56.4
R℄	(K)	34.5	44.2	44.2	34.5
Imp.	(K)	9.3	11.5	11.5	9.3
R (Total)	(K)	100.2	151.6	151.6	100.2

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

$I_{c(n)}$ and $S_{c(n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.

$I_{c(3n)}$ and $S_{c(3n)}$ are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads.

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

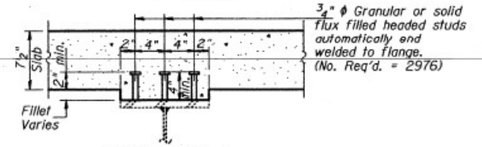
Z is the plastic section modulus used to determine the fully plastic moments in the non-composite areas.

Ma (Applied Moment)=1.3[M℄ + Ms℄ + 5_3(M℄ + M(Imp))].

The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1.

fs (Overload) is the sum of the stresses due to M℄ + Ms℄ + 5_3(M℄ + M(Imp)).

* Dead Load Reaction includes 28.7K for concrete diaphragm and approach pavement.



SECTION A-A

FOR INFORMATION ONLY
SN 028-0032

STRUCTURAL STEEL
F.A.S. ROUTE 2869 - SECTION 4-2DR
FRANKLIN COUNTY
STATION 727+48.50
STRUCTURE NO. 028-0032

USER NAME = david.a.wilson	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

SN 028-0032
STRUCTURE INFORMATION

SCALE: | SHEET 15 OF 65 SHEETS | STA. | TO STA.

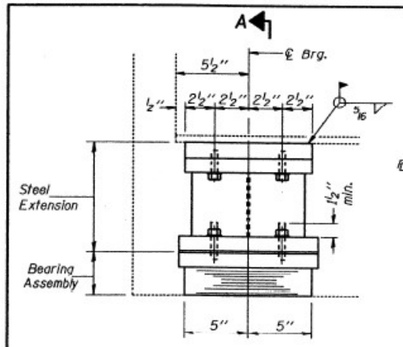
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	15
		CONTRACT NO. 78A04		
	ILLINOIS FED. AID PROJECT			

MODEL: SN 028-0032_3 [Sheet]
FILE NAME: pw://idot.pw.bentley.com:PWIDOT/Documents/IDOT Offices/District 9/ORD Projects/78A04/CADData/CADSheets/0978A04-Structure_Information_1.dgn

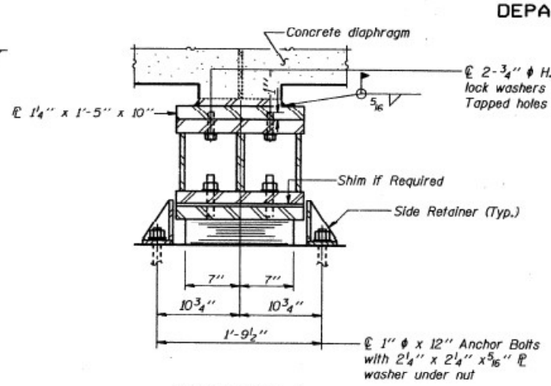
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2869	4-2DR	FRANKLIN	28	22
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 11
17 SHEETS

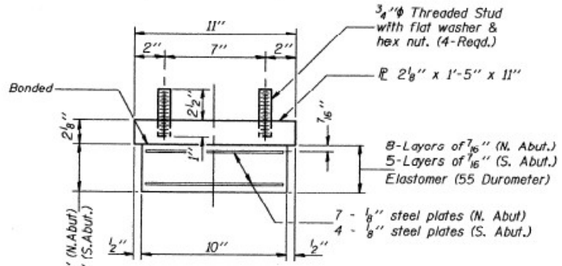


ELEVATION AT ABUT.



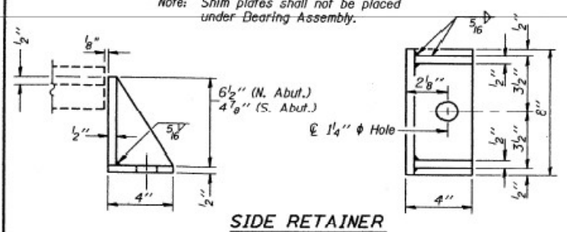
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



BEARING ASSEMBLY

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



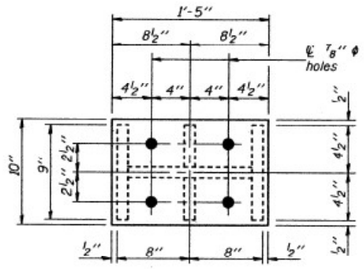
SIDE RETAINER

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

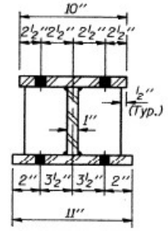
DESIGNED	Chad J. Fuesting
CHECKED	William A. Belsner
DRAWN	BECKY M. CURRY
CHECKED	C.J.F. & W.A.B.

September 27, 2001
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Rafat F. Andersen
ENGINEER OF BRIDGES AND STRUCTURES

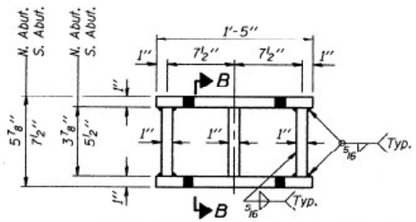
Notes:
New steel extensions, side retainers, connection bolts, fill plates, shim plates and anchor bolts are included with Furnishing and Erecting Structural Steel.
For anchor bolt location on the abutments, see sheet 15 of 17.
For anchor bolt installation, see sheet 14 of 17.



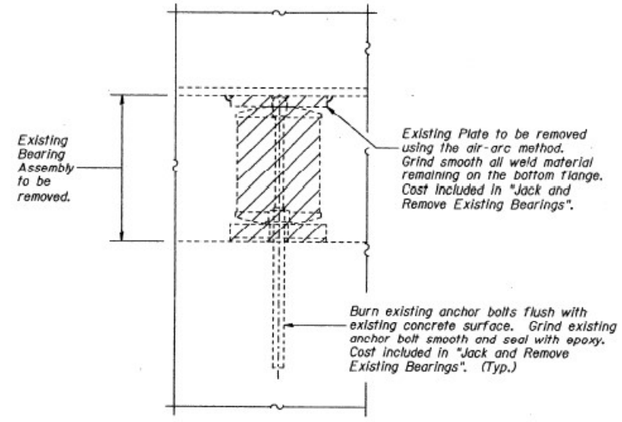
PLAN-TOP PLATE



SECTION B-B

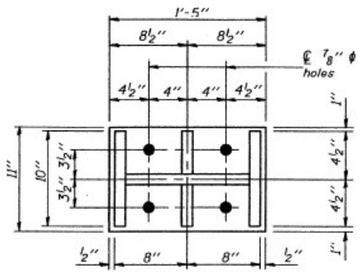


STEEL EXTENSION AT ABUTMENTS



JACK AND REMOVE EXISTING BEARING PROCEDURE

1. The contractor shall submit for approval by the Engineer, plans for jacking existing beams and installing new bearings prior to commencing any related work. The maximum dead load reaction per beam (weight of steel only) is 3.5^k at the abutments, and 12.3^k at piers respectively. Minimum jack capacity is 7.0^k at abutments and 24.6^k piers.
2. Prior to ordering any material, the contractor shall verify stool extension and shim plate thickness required at each bearing.
3. Jack and Remove Existing bearings shall be done after the existing deck is removed and prior to placing the new deck.
4. Jacking shall be limited to a maximum of ¼" lift to remove existing bearing.
5. The new bearings and steel extensions shall be in place and the jacks shall be lowered before the new concrete deck is poured



PLAN-BOTTOM PLATE

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type 1	Each	12
Jack and Remove Existing Bearings	Each	24

FOR INFORMATION ONLY
SN 028-0032

BEARING DETAILS
F.A.S. ROUTE 2869 - SECTION 4-2DR
FRANKLIN COUNTY
STATION 727+48.50
STRUCTURE NO. 028-0032

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 028-0032
ST RUCTURE INFORMATION
SCALE: | SHEET 16 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	16
		CONTRACT NO. 78A04		
	ILLINOIS	FED. AID PROJECT		

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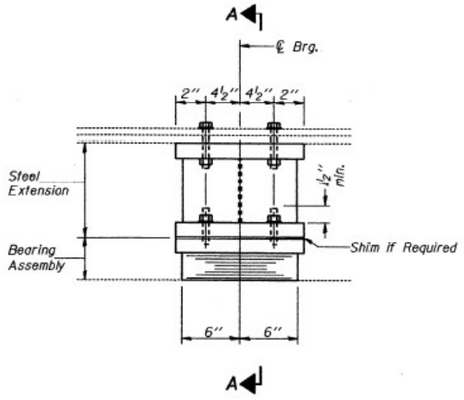
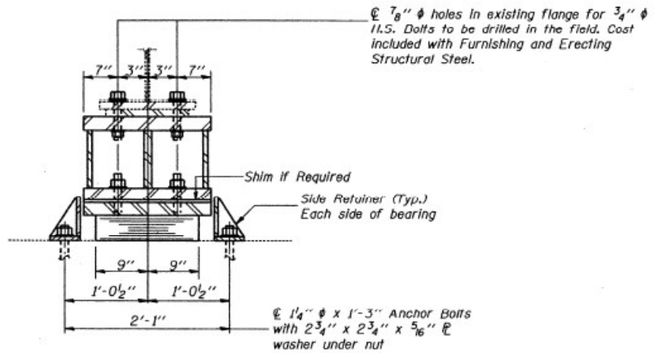
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2869	4-2DR	FRANKLIN	28	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

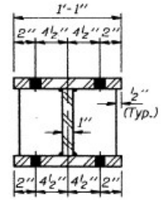
SHEET NO. 12
17 SHEETS



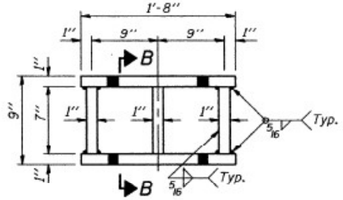
ELEVATION AT PIER 1



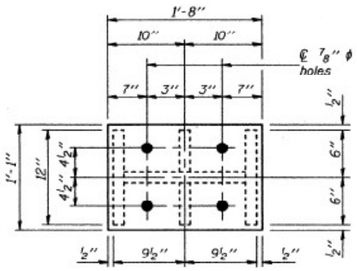
SECTION A-A



SECTION B-B

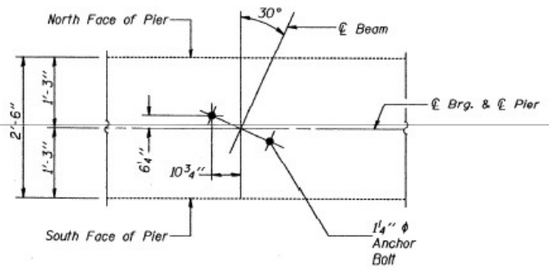


STEEL EXTENSION AT PIER 1

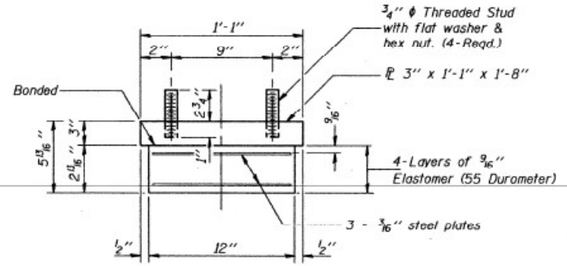


PLAN

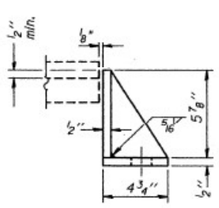
TYPE I ELASTOMERIC EXP. BRG.

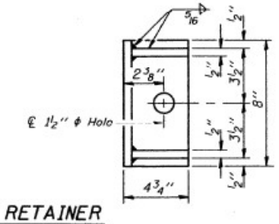


ANCHOR BOLT LOCATION LAYOUT AT PIER 1



BEARING ASSEMBLY





SIDE RETAINER

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

Notes:
New steel extensions, side retainers, connection bolts, fill plates, shim plates and anchor bolts are included with Furnishing and Erecting Structural Steel.
For anchor bolt installation, see sheet 14 of 17.
See sheet 11 of 17 for Jack and Remove Existing Bearing Procedure.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type 1	Each	6

FOR INFORMATION ONLY
SN 028-0032

BEARING DETAILS
F.A.S. ROUTE 2869 - SECTION 4-2DR
FRANKLIN COUNTY
STATION 727+48.50
STRUCTURE NO. 028-0032

DESIGNED	Chad J. Fuesting
CHECKED	William A. Beisner
DRAWN	BECKY M. CURRY
CHECKED	C.J.F. & W.A.B.

September 27, 2001
EXAMINED Thomas J. Domagalski
CHIEF OF BRIDGE DESIGN
PASSED Robert E. Gaumer
ENGINEER OF BRIDGES AND STRUCTURES

MODEL: SN 028-0032_2 [Sheet]
FILE NAME: pw://illdot.pw.bentley.com:PWIDOT/Documents/IDOT Offices/District 9/ORD Projects/78A04/CADData/CADSheets/D978A04-Structure Information_12.dgn

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 028-0032
ST RUCTURE INFORMATION

SCALE: | SHEET 17 OF 65 SHEETS | STA. | TO STA.

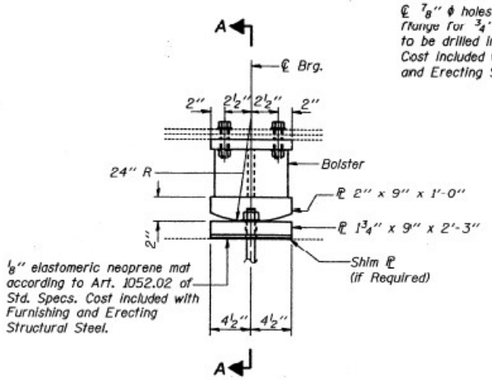
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	17
		CONTRACT NO. 78A04		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS

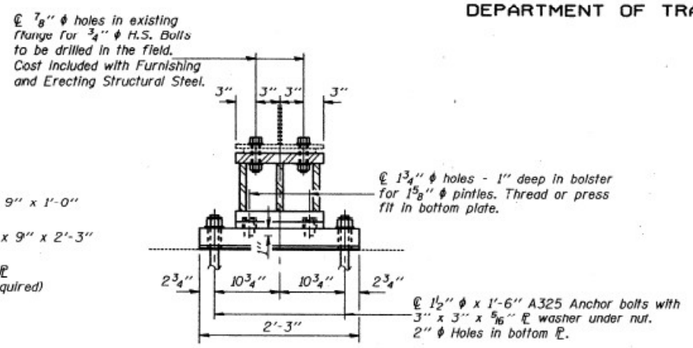
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAS 2869	4-2DR	FRANKLIN	28	24
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 13
17 SHEETS

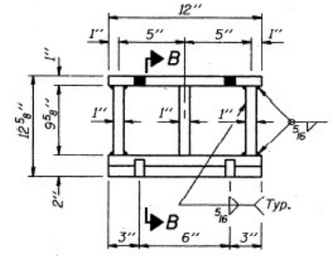


ELEVATION AT PIER 2

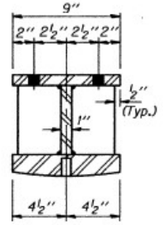


SECTION A-A

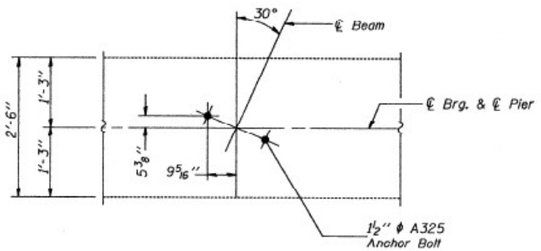
FIXED BEARING



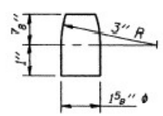
BOLSTER AT PIER 2



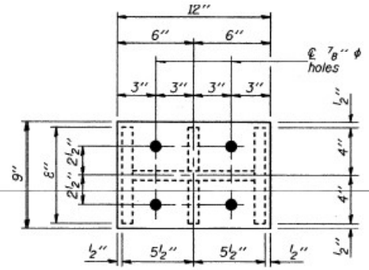
SECTION B-B



ANCHOR BOLT LOCATION
LAYOUT AT PIER 2



PINTLE



PLAN-TOP PLATE

Notes:
New bolster plates, side retainers, connection bolts, fill plates, shim plates and anchor bolts are included with Furnishing and Erecting Structural Steel.
For anchor bolt installation, see sheet 14 of 17.
See sheet 11 of 17 for Jack and Remove Existing Bearing Procedure.

FOR INFORMATION ONLY
SN 028-0032

BEARING DETAILS
F.A.S. ROUTE 2869 - SECTION 4-2DR
FRANKLIN COUNTY
STATION 727+48.50
STRUCTURE NO. 028-0032

DESIGNED	Chad J. Fuesting
CHECKED	William A. Belsner
DRAWN	BECKY M. GURRY
CHECKED	C.J.F. & W.A.B.

September 27, 2001
EXAMINED Thomas J. Domagalski
DIRECTOR OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

MODEL: SN 028-0032_S [Sheet]
FILE NAME: pw://illinois.bentley.com:PWIDOT/Documents/IDOT Offices/District 5/ORD Projects/78A04/CADData/CADSheets/D978A04-Structure_Information_142.dgn

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 028-0032
ST RUCTURE INFORMATION

SCALE: | SHEET 18 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	18
		CONTRACT NO. 78A04		
	ILLINOIS	FED. AID PROJECT		

B. M: Chiseled "X" S. end of W. Walkway Bridge
15 Ft. Rt. Sta. 728+25 Elev. 409.82

Existing Structure: R.C. Deck Girder, 3 Spans; 2@41'-10"&1@54'-4" on pile bents, 28 Ft. Roadway. To be removed by Bridge Contractor at time of Const. No Salvage

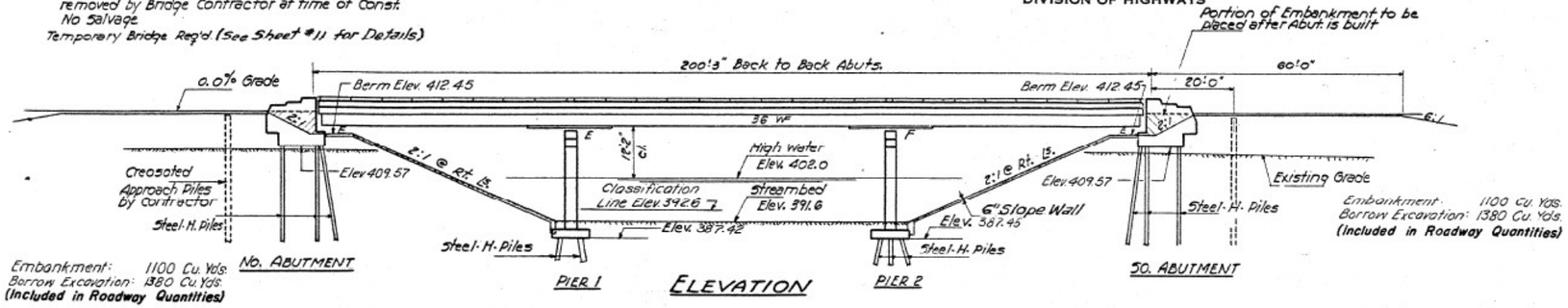
Temporary Bridge Req'd. (See Sheet #11 for Details)

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 37	*	JEFFERSON FRANKLIN	63	27
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 1
11 SHEETS

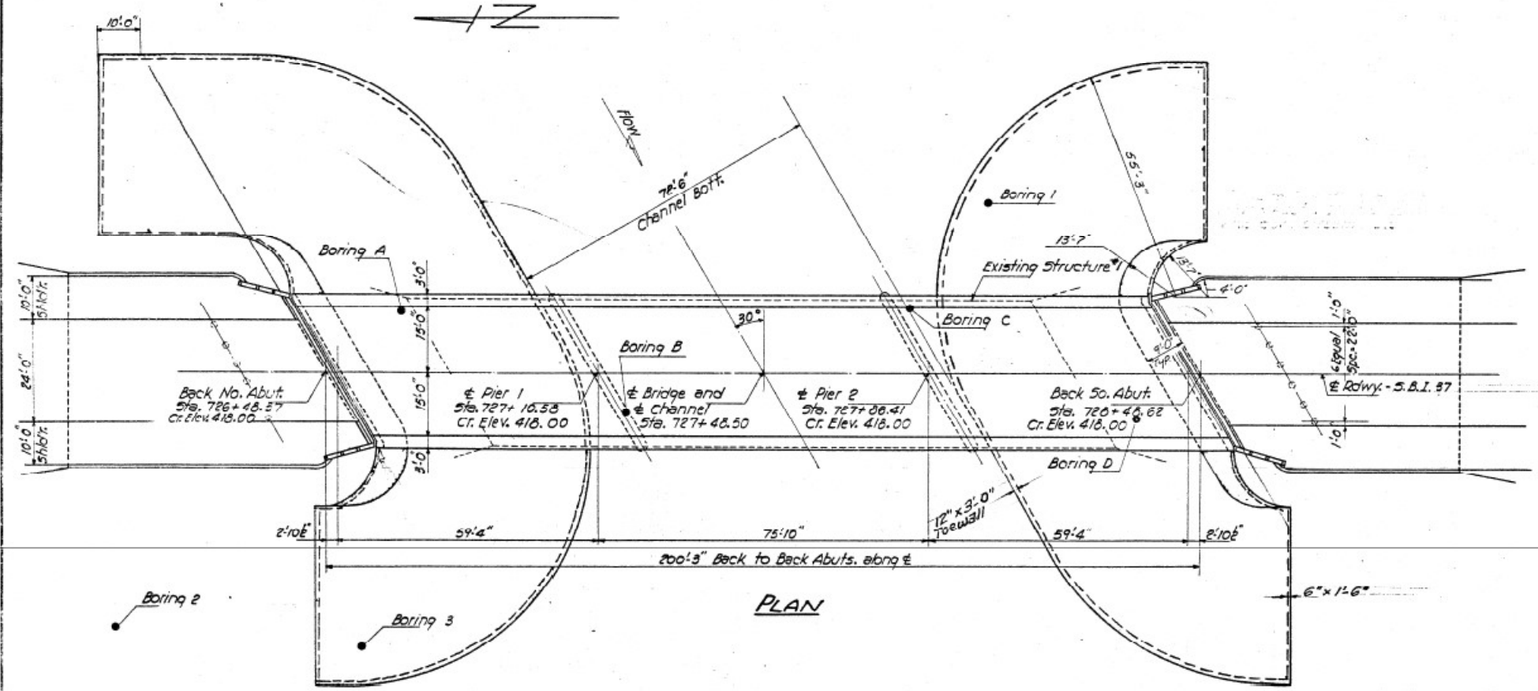
* ZRS-2, ZBR, 4-2-1, 4-2BR



ELEVATION

Embankment: 1100 Cu. Yds.
Borrow Excavation: 1380 Cu. Yds.
(Included in Roadway Quantities)

Embankment: 1100 Cu. Yds.
Borrow Excavation: 1380 Cu. Yds.
(Included in Roadway Quantities)



PLAN

STATION 727+48.5
BUILT 196 BY
STATE OF ILLINOIS
S.B.I. RT. 37-SEC. 4-2BR

LOADING H20-S16

NAME PLATE
See Standard 2113

WATERWAY INFORMATION

Drainage Area	23680 Acres
Character --- Hilly, Cultivated	
Required Opening (50 Year Flood)	920 Sq. Ft.
Present Opening	800 Sq. Ft.
Propoposed Opening (below El. 402.0)	920 Sq. Ft.
(below El. 402.5)	970 Sq. Ft.

DESIGN STRESSES

fc - - - - 1400 #/in² Super.
vc - - - - 75 #/in² Abts.
fs - - - - 20000 #/in² Reinf.
fs - - - - 20000 #/in² Struct. (A-36)
n - - - - 10

* Abutments only

Loading H20-S16-44

DESIGNED	J. M. Tyanock	EXAMINED	JUNE 25 1963
CHECKED	T. M. Yang	PASSED	
DRAWN	T.M.Y. M. Miller	APPROVED	
CHECKED	T. M. Yang		

GENERAL NOTES

Coarse aggregate to be used in parapet handrail 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.

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

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

Rivets are ⅞" Open holes 15/16 unless otherwise noted.

Anchor Bolts shall be set before riveting diaphragms over support.

The exposed surfaces of the expansion guard shall be given two shop coats of red lead paint. The contact surfaces shall given one coat of red lead paint. Anchor studs shall not be painted.

Expansion Guards are included in quantity of Structural Steel. Estimated Weight = 1680#

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

The Contractor shall drive two steel test piles in permanent location, one at North Abutment and one at Pier 2, as directed by the Engineer before ordering the remainder of piles.

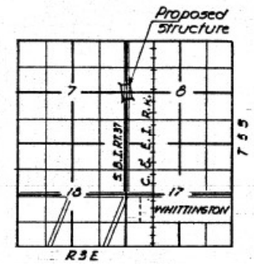
All structural steel shall conform to ASTM Specification Designation A-36.

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

Excavation for slope wall shall be incidental to the cost of the Slope Wall

APPR. PILE DATA

Type	Creosoted
Capacity	15 Tons
Estimated Length	20'-0"
No. Req'd	14



LOCATION PLAN

FOR INFORMATION ONLY
SN 028-0032

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER.	SUB.	TOTAL
Class-B Excavation for Structure	Cu.Yds.		125	125
Class-X Concrete	Cu.Yds.	217.6	248.8	466.4
Structural Steel	Lbs.	198,170		198,170
Aluminum Handrail	Lin.Ft.	393		393
Reinforcement Bars	Lbs.	47,070	17,210	64,280
Steel Piles (10 BP 42)	Lin. Ft.		1171	1171
Test Piles-Steel (10BP42)	Each		2	2
Name Plates	Each	1		1
Slope Wall	Sq.Yds.		2170	2170
Protective Coat	Sq.Yds.	914		914
Removal of Existing Structure No. 1	Ea.			1
* Bridge Seat Sealant	Lump Sum			1
Temporary Bridge Complete	Ea.			1

GENERAL PLAN & ELEVATION
GUN CREEK
S.B.I. RT. 37-SEC. 4-2BR
FRANKLIN COUNTY
STATION 727+48.5

2 & 3 VOID SHEETS 9-48

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 028-0032
STRUCTURE INFORMATION

SCALE: | SHEET 19 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	19
		CONTRACT NO. 78A04		
	ILLINOIS FED. AID PROJECT			

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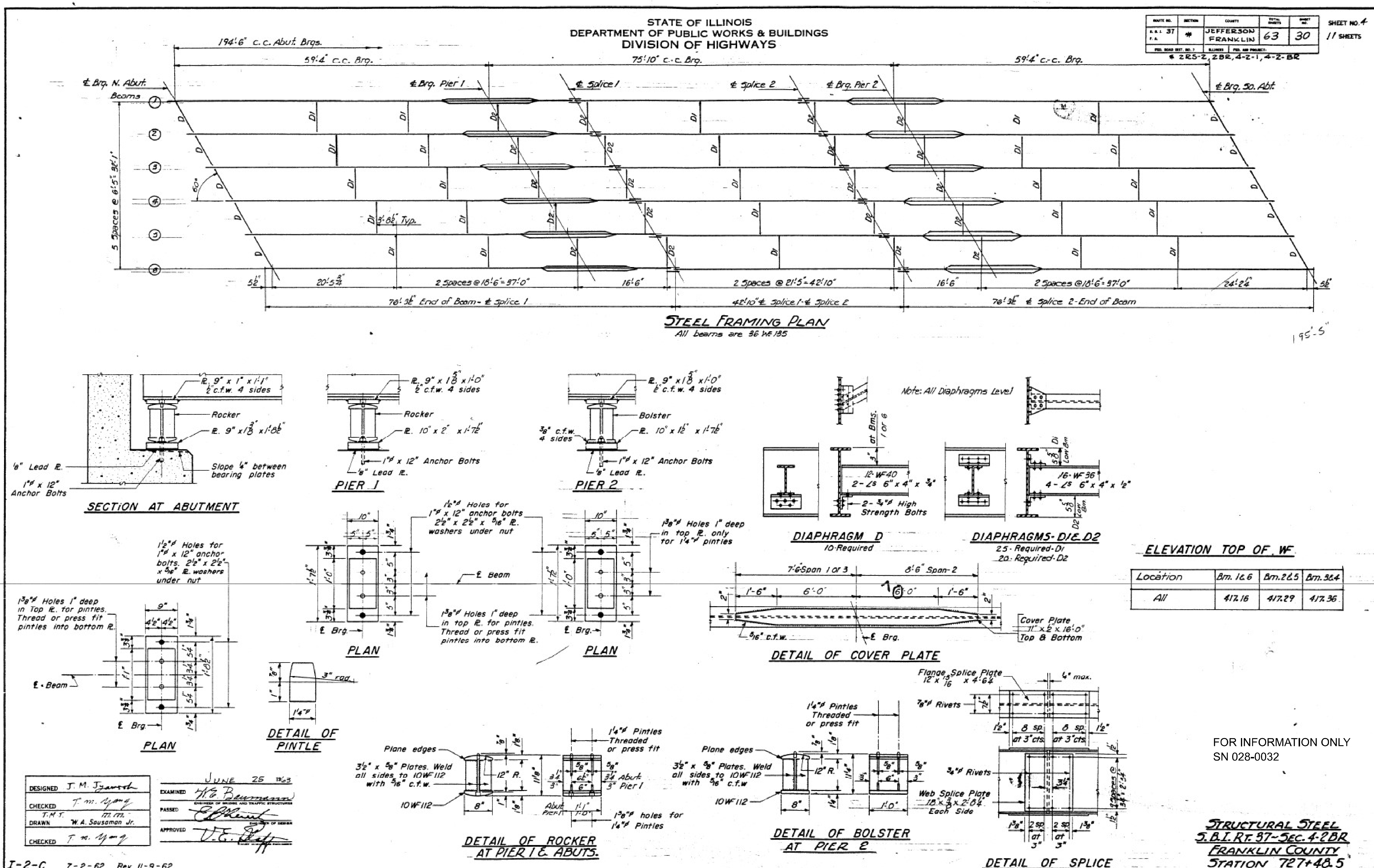

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
SHEET NO. 4
11 SHEETS
JEFFERSON FRANKLIN
63
30
* 2RS-2, 2BR, 4-2-1, 4-2-BR
194'-6" c.c. Abut. Brgs.
59'-4" c.c. Brg.
75'-10" c.-c. Brg.
59'-4" c.-c. Brg.
℄ Brg. N. Abut.
℄ Brg. Pier 1
℄ Splice 1
℄ Splice 2
℄ Brg. Pier 2
℄ Brg. So. Abt.
Beams
5 Spaces @ 6'-5" = 32'-1"
60°
3'-8½" Typ.
76'-3⅛" End of Beam - ℄ Splice 1
42'-10" ℄ Splice 1 - ℄ Splice 2
76'-3⅛" ℄ Splice 2 - End of Beam
STEEL FRAMING PLAN
All beams are 36 WF 185
195'-5"
SECTION AT ABUTMENT
PIER 1
PIER 2
Rocker
Bolster
1" ⌀ x 12" Anchor Bolts
⅛" Lead Pl.
Slope ¼" between bearing plates
DIAPHRAGM D
10 Required
DIAPHRAGMS - D1 & D2
25 - Required - D1
20 - Required - D2
Note: All Diaphragms Level
12 - WF 40
16 - WF 36
2 - ¾" ⌀ High Strength Bolts
DETAIL OF COVER PLATE
Cover Plate 11" x ½" x 16'-0" Top & Bottom
PLAN
DETAIL OF PINTLE
DETAIL OF ROCKER AT PIER 1 & ABUTS.
DETAIL OF BOLSTER AT PIER 2
DETAIL OF SPLICE
Flange Splice Plate
Web Splice Plate
⅞" ⌀ Rivets
¾" ⌀ Rivets
ELEVATION TOP OF WF
Location | Bm. 1 & 6 | Bm. 2 & 5 | Bm. 3 & 4
All | 417.16 | 417.29 | 417.36
FOR INFORMATION ONLY
SN 028-0032
STRUCTURAL STEEL
S.B.I. RT. 37 - SEC. 4-2BR
FRANKLIN COUNTY
STATION 727+48.5
DESIGNED J. M. Izaroch
CHECKED T. M. Yang
DRAWN W. A. Sousamon Jr.
EXAMINED
PASSED
APPROVED
JUNE 25 1963
I-2-C 7-2-62 Rev. 11-9-62

USER NAME = david.a.wilson	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 028-0032 STRUCTURE INFORMATION	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	20
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 78A04		
PLOT DATE = 10/18/2023	DATE -	REVISED -		SCALE: SHEET 20 OF 65 SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT			

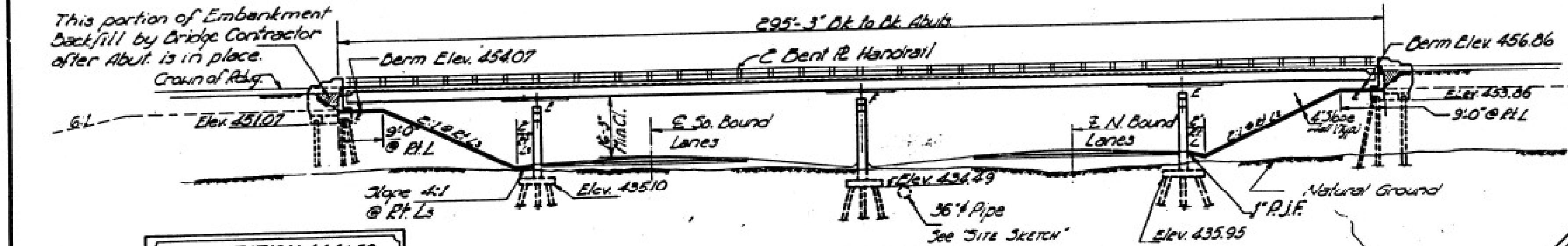
MODEL: SN 028-0032_8 [Sheet]

B.M. Conc. Monument 150' Rt. of Sta. 443+18
Elevation 440.26

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	28-3HB	Franklin	33	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT- I-57-2(41)72		

SHEET NO. 1
9 SHEETS



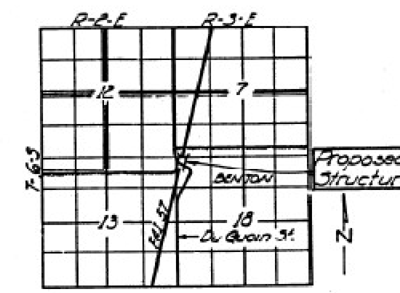
ELEVATION

Note: Earthwork included in Balance Quantities
See tabulation of Earthwork Quantities on Sheet #2

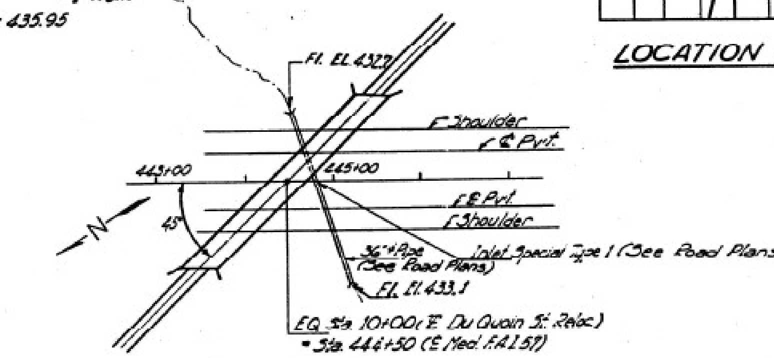
STATION 444+50
BUILT 196 BY
STATE OF ILLINOIS
F.A.I. RT. 57 SEC. 28-3HB
F.A. PROJ. I-57-2 (41)
LOADING H15-S12

NAME PLATE

(See Standard 2113)



LOCATION SKETCH



SITE SKETCH

GENERAL NOTES

Class X Concrete shall be used througtout.

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

The curb and slab outside of longitudinal construction joints, shown on cross section, shall be poured monolithically.

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

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

Coarse aggregate which is to be used in end posts must be absolutely free of chert, flint, lignite, limonite and soft sandstone.

Rivets ¾" ϕ, open holes 13/16" ϕ, unless noted.

All bolsters, rockers, bearing plates, lead plates shim plates, pintles and anchor bolts shall be fabricated and set in accordance with Art. 51.15 of the Standard Specifications and are included in quantity of Structural Steel. Estimated weight is 6710 Lbs.

Expansion guards shall be fabricated and erected in accordance with Art. 51.13(d) of the Standard Specifications.

Expansion guards are included in quantity of Structural Steel. Estimated weight 1035#

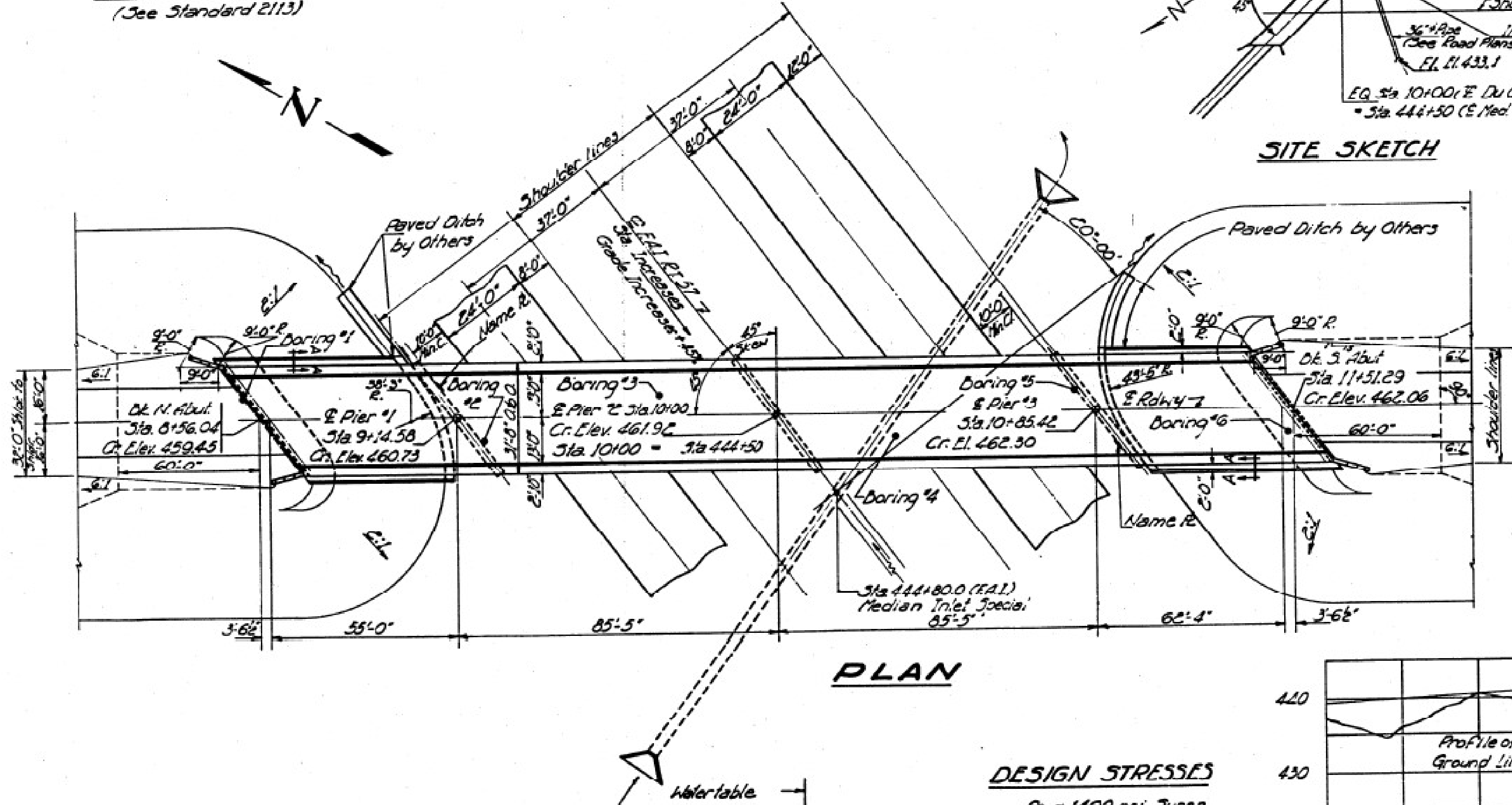
Anchor bolts shall be set before riveting diaphragms over supports.

Shear connectors are included in quantity of Structural Steel. Total No. 1840. Estimated weight 1155#

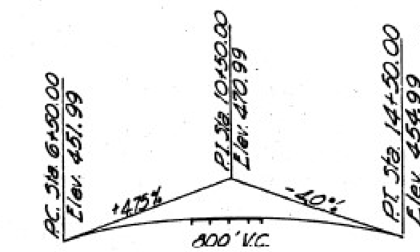
Except as otherwise provided, all Struct. Steel and Handrail shall receive one shop coat of red lead paint and two field coats of aluminum paint. See Art. 56.1 to 56.5 incl. of the Std. Specifications.

All paint shall be furnished & applied by the Contractor.

The Contractor shall drive 2 steel test piles (8BP36) in permanent locations, one at Pier #2 & one at North Abut., as directed by the Engineer before ordering remainder of piles.



PLAN

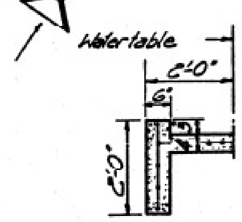


PROFILE Du Quoin St. Reloc.

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.	Total
* Class A Exc. for Structure	Cu. Yds.			200
Class X Concrete	Cu. Yds.	272.0	258.8	530.8
Structural Steel	Lbs.	227,100		227,100
Metal Handrail	Lin. Ft.	582		582
Reinforcement Bars	Lbs.	46,150	23980	70,130
Steel Piles (8BP36)	Lin. Ft.		1785	1785
Name Plates	Ea.			2
Slope Wall 4"	Sq. Yds.			483
Protective Coat	Sq. Yds.	1035		1035
Test Piles (8BP36)	Ea		2	2

* Includes excavation for slope wall

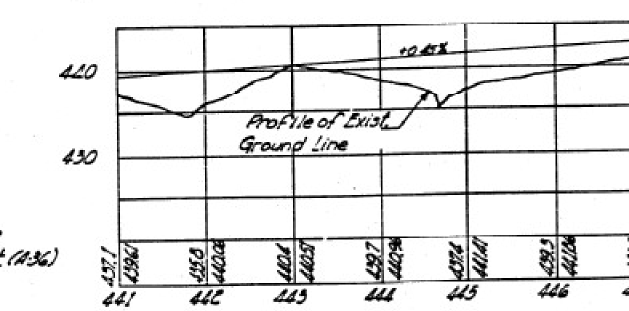


SEC. A-A

DESIGN STRESSES

fc = 1400 psi Super
vc = 75 psi Ftgs.
fs = 20,000 psi. Reinf.
fs = 20,000 psi Struct. (A36)
n = 10

LOADING H15-S12-44



F.A.I. 57 PROFILE

DESIGNED	C. Lawson Corbin
CHECKED	R.M. Hassard
DRAWN	A. Barneze
CHECKED	R.M.H.

June 12 1962
EXAMINED W. E. Bauman
PASSED
APPROVED

FOR INFORMATION ONLY
SN 028-0064

GENERAL PLAN & ELEVATION
PROJ. I-57-2 (41) 72
F.A.I. RT. 57 SEC. 28-3HB
FRANKLIN COUNTY
STA. 10+00.00 (Du Quoin St. Reloc.) STA. 444+50 (F.A.I.)

Revised 7/6/62 C.L.C. Removed quantities of Embankment & Borrow Exc. at Ea. Abut. In Total Bill of Mtl. removed from Borrow Exc. Removed "By others" from Median Inlet Special & added "See Road Plans" in parenthesis. Added note under ELEVATION. Chgd. elev. at upper left corner from 440.18 to 440.26
In Site Sketch Fl. Elev. chgd. from 432.8 to 432.7 & from 433.6 to 433.1

MODEL: SN 028-0064_1 [Sheet]
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	DRAWN -	REVISED -
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/18/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 028-0064
STRUCTURE INFORMATION

SCALE: SHEET 21 OF 65 SHEETS STA. TO STA.

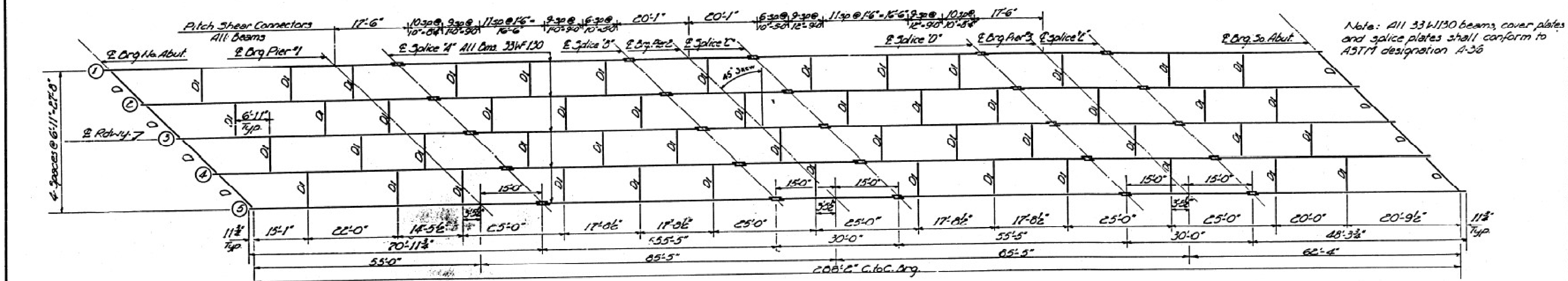
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	21
		CONTRACT NO. 78A04		
		ILLINOIS FED. AID PROJECT		

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

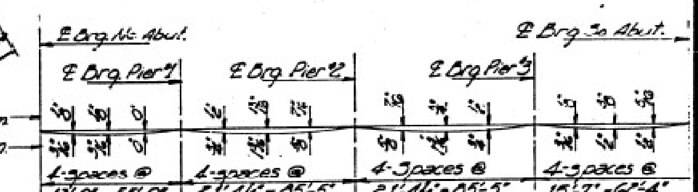
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	28-3HB	Franklin	33	13

SHEET NO. 3
9 SHEETS

Note: All 33 WF130 beams, cover plates and splice plates shall conform to ASTM designation A-36



FRAMING PLAN



NOTE: Dead load deflection does not include weight of Structural Steel.

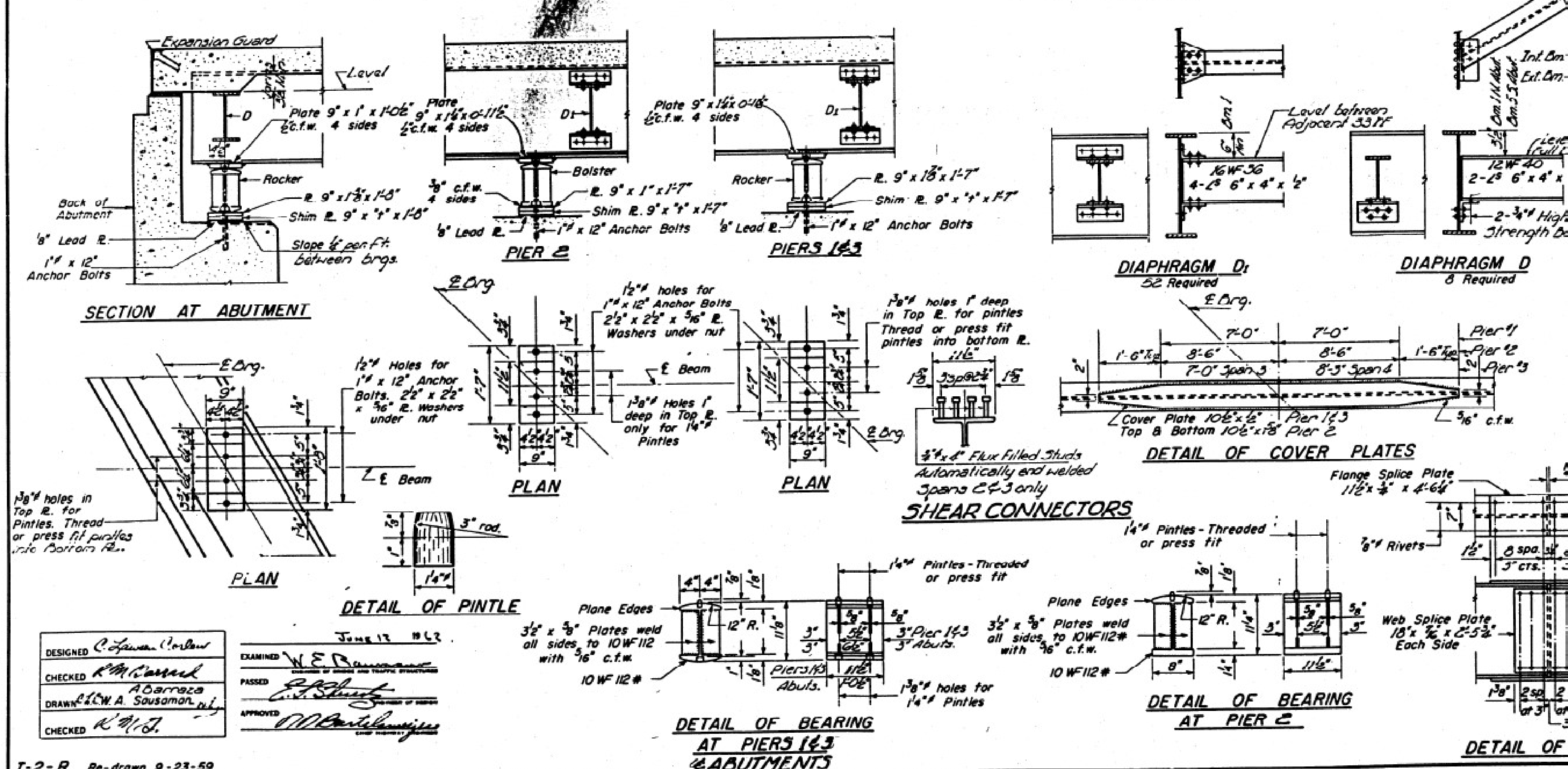
DEAD LOAD DEFLECTION DIAGRAM

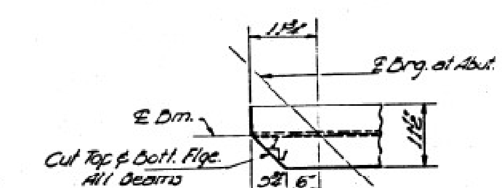
ELEVATION TOP OF BEAMS

Loc. / Bm.	℄ Brg. No. Abut.	℄ Brg. Pier #1	℄ Spl. "A"	℄ Spl. "B"	℄ Brg. Pier #2	℄ Spl. "C"	℄ Spl. "D"	℄ Brg. Pier #3	℄ Spl. "E"	℄ Brg. So. Abut.
1	458.465	459.657	459.902	460.835	462.996	461.157	461.493	461.514	461.535	461.442
2	458.757	459.901	460.214	461.026	461.176	461.325	461.619	461.630	461.640	461.520
3	458.963	460.078	460.373	461.143	461.282	461.420	461.672	461.670	461.668	461.504
4	459.091	460.157	460.448	461.176	461.303	461.430	461.640	461.627	461.613	461.414
5	459.145	460.170	460.450	461.136	461.251	461.347	461.555	461.510	461.486	461.350

TABLE OF "Y" DIMENSIONS

Loc. / Bm.	℄ Brg. No. Abut.	℄ Brg. Pier 1	℄ Brg. Pier 2	℄ Brg. Pier 3	℄ Brg. So. Abut.
1	0	0	0	0	5/16"
2	0	0	0	3/8"	3/8"
3	0	0	0	0	5/16"
4	0	5/16"	1/4"	1/8"	0
5	3/8"	7/16"	3/8"	0	0





DETAIL AT ABUTMENTS

STRUCTURAL STEEL
F.A.I. 57 SEC. 28-3HB
FRANKLIN COUNTY
STA. 10+00.00 (DuQuoin St. Reloc.) STA. 444+50 (F.A.I.)

DESIGNED	C. Lawson Carlson
CHECKED	R.M. Carrick
DRAWN	E.W.A. Sausaman / A. Barraza
CHECKED	R.M.J.

June 12 1962
EXAMINED W. E. [illegible]
PASSED [illegible]
APPROVED [illegible]

I-2-R Re-drawn 9-23-59

FOR INFORMATION ONLY
SN 028-0064

USER NAME = david.a.wilson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/18/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 028-0064
STRUCTURE INFORMATION

SCALE: SHEET 22 OF 65 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	22

CONTRACT NO. 78A04
ILLINOIS FED. AID PROJECT

MODEL: SN 028-0064_2 [Sheet]
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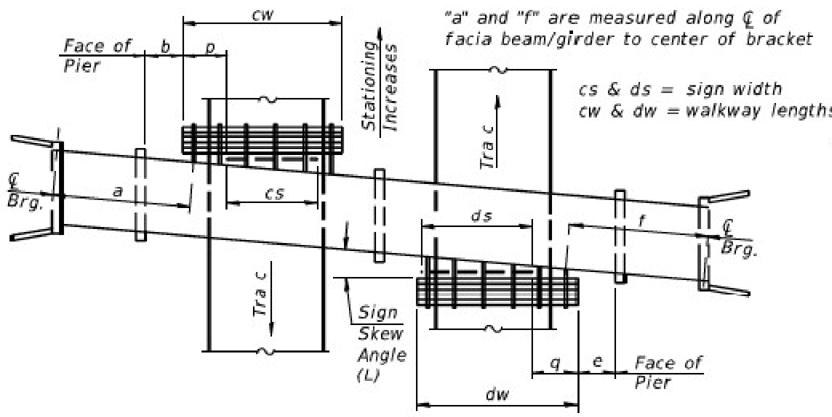
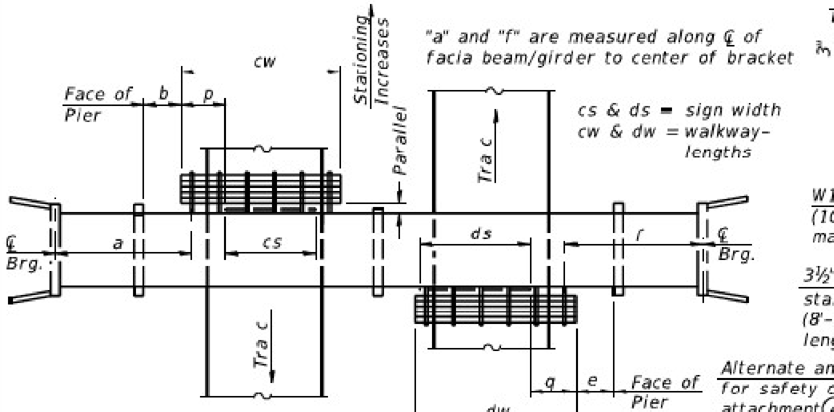


PLAN

(Left Sign Skew > 15°)

WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)

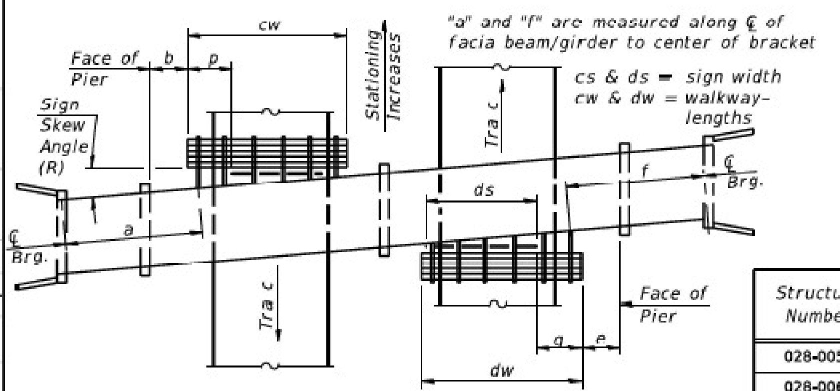


PLAN

(For Sign Skew ≤ 15°, all brackets constant)

WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)

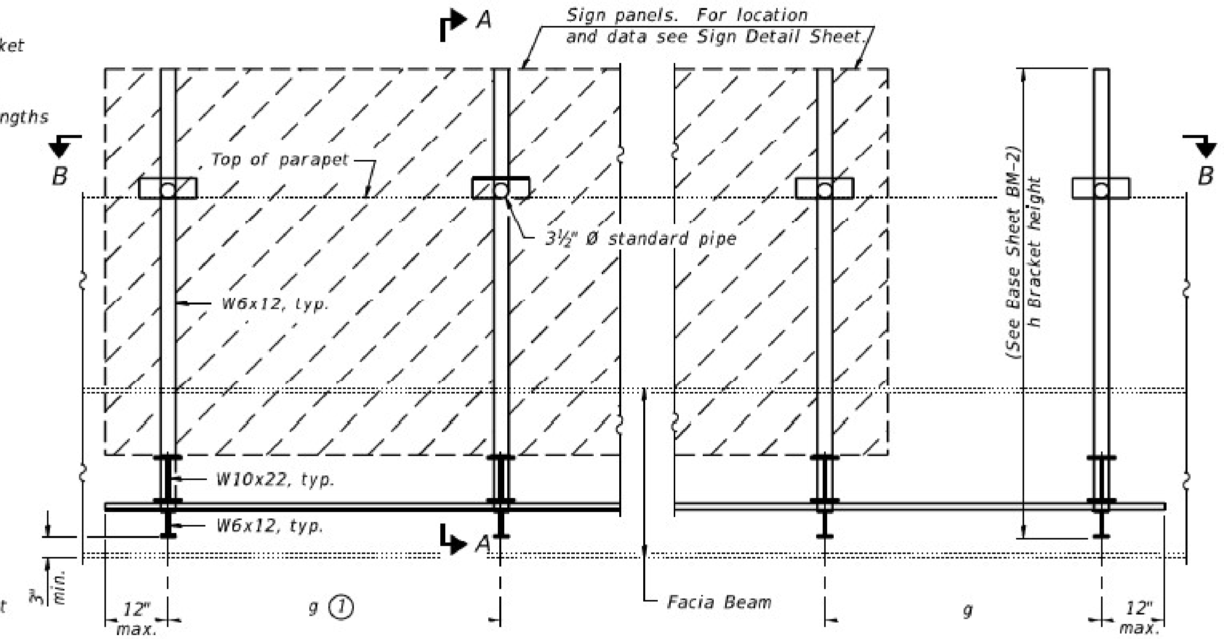


PLAN

(Right Sign Skew > 15°)

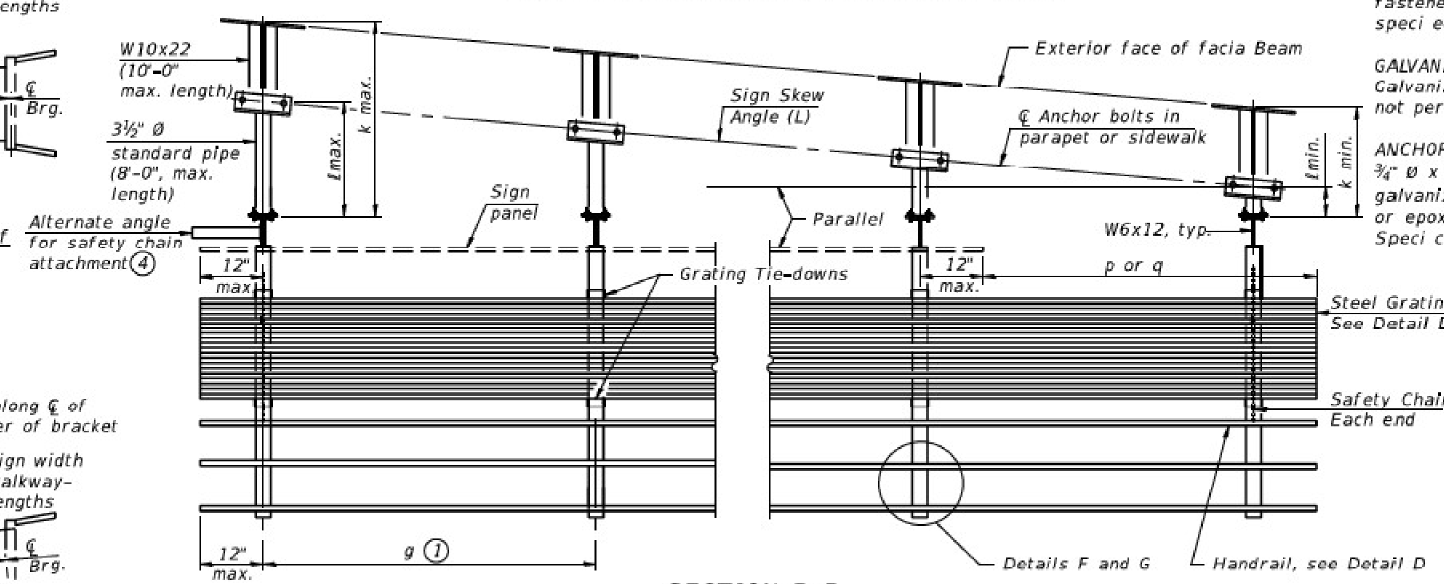
WALKWAY AND HANDRAIL SKETCH

(Road plan beneath structure varies.)



TYPICAL FRONT ELEVATION

(With lights, safety chain and handrail omitted for clarity.)



SECTION B-B

(Shown: Left Sign Skew > 15°)

Structure Number	Sign Skew Angle (L) or (R)	Bridge Station	Bridge Structure Number	Contract Route Designation	a	b	cs	cw	ds	dw	e	f	g	No. of Brackets (Total)	p	q	Total Grating/ Hndrl. Lengths (cw + dw) ④
028-0057	0	415+71.58		PETROFF RD	64' 9"	21' 10"	4'	0'	4'	0'	64' 9"	21' 10"	2'	4			0'
028-0064	0	444+50		N DUQUOIN ST	105' 0"	46' 5"	4'	0'	4'	0'	105' 0"	46' 5"	2'	4			0'
028-0022	0	490+08.72		IL 14			0'	0'	4'	0'	107' 4"	60' 10"	2'	2			0'
028-0010	0	480+01		ICG RR	66' 5"	23' 0"	4'	0'	0'	0'			2'	2			0'
028-0054	0	576+00		FOREST BAPTIST CHURCH RD	65' 10.5"	21' 5.5"	4'	0'	4'	0'	65' 10.5"	21' 5.5"	2'	4			0'
028-0062	0	629+65.1		YELLOW BANKS RD	65' 3"	23' 2"	4'	0'	4'	0'	65' 3"	23' 2"	2'	4			0'

Dimensions a, b, e, f & g may vary as approved by the Engineer, see ①.
When cw < cs and/or dw < ds, use alternate brackets without walkway supports where applicable, see ③.

GENERAL NOTES

SPECIFICATIONS:

DESIGN: AASHTO Standard Speci cations for Structural Supports for Highway Signs, Luminaires and Tra c Signals. ("AASHTO Speci cations") ②

CONSTRUCTION: Current (at time of letting) Illinois Department of Transportation Standard Speci cations for Road and Bridge Construction, Supplemental Speci cations and Special Provisions. ("Standard Speci cations")

LOADING: 90 M.P.H. WIND VELOCITY

WALKWAY LOADING: Dead load plus 500 lbs. concentrated live load.

MINIMUM CLEARANCE: 3" greater than bridge members at all locations. (All Obstructions)

WELDING: All welds to be continuous unless otherwise shown. All welding to be done in accordance with current AWS D1.1 Structural Welding Code (Steel) and the Standard Speci cations.

MATERIALS: All Structural Steel Pipe shall be ASTM A53 Grade B with a minimum yield of 35,000 p.s.i., or A500 Grade B or C with a minimum yield of 46,000 p.s.i. If A500 pipe is substituted for A53, then the outside diameter shall be as detailed and wall thickness greater than or equal to A53. All Structural Steel Plates and Shapes shall conform to AASHTO M270 Gr. 36, Gr. 50 (M183, M223 Gr. 50,).

HIGH STRENGTH BOLTS: All bolts, washers, nuts and locknuts shall satisfy the requirements of ASTM designation A307 unless noted as "H.S." which shall require AASHTO M164 (A325), ASTM A449, or approved alternate. All fasteners shall be hot dip galvanized per AASHTO M232 unless otherwise speci ed.

GALVANIZING: All Steel Grating, Plates, Shapes and Pipe shall be Hot Dip Galvanized after fabrication in accordance with AASHTO M111. Painting is not permitted.

ANCHOR RODS: All-threaded rod shall conform to ASTM F1554 Grade 105, ¾" Ø x 12" long, each with one plate washer and locknut and be hot dip galvanized per AASHTO M232. They shall be either cast into the concrete or epoxy grouted in accordance with Section 584 of the Standard Speci cations. Minimum embedment in concrete shall be 9".

① Bracket spacing g ≤ 6'-0", max. Spacing shall be uniform if possible but may vary ±6" to miss existing obstruction (rail post, light poles, web sti eners, splice plates, etc.). Adjust bracket lengths accordingly on skewed structures.

② Any design modi cations shall be based on the current version of applicable speci cations and submitted for the Engineer's approval.

③ Unit price includes grating, handrail, brackets, supports, anchor bolts, fasteners, fabrication, delivery, erection, eld drilling and other necessary items. Limits of payment are based on grating length (cw, dw) unless otherwise speci ed. For Safety Chain Details and Details D, F and G, see Base Sheet BM-4.

④ If walkway bracket at safety chain location is behind sign, add angle to bracket. See detail on Base Sheet BM-4.

FOR INFORMATION ONLY
SN 028-0064

TOTAL BILL OF MATERIAL

③ OVERHEAD SIGN STRUCTURE-BRIDGE MOUNTED	Foot	40'

BM-1 2-17-2017

USER NAME = deilyll	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -
PLOT DATE = 5/7/2021	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNTED SIGN STRUCTURE DETAIL

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	403	237
		CONTRACT NO. 78656		

ILLINOIS FED. AID PROJECT

*D9 I-57 Add Lane-4(28-5)B-5

MODEL: 32 Bridge Mounted
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USER NAME = david.a.wilson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/18/2023	DATE -	REVISED -

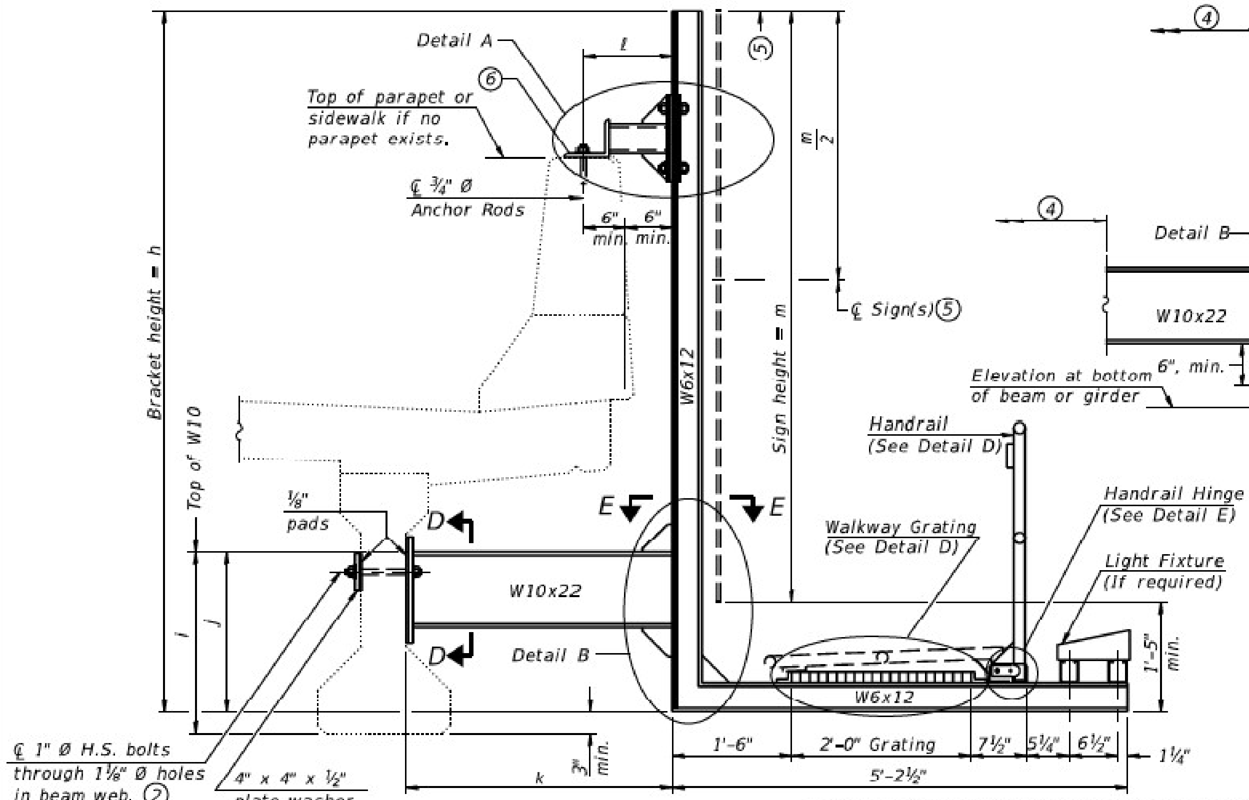
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 028-0064
STRUCTURE INFORMATION

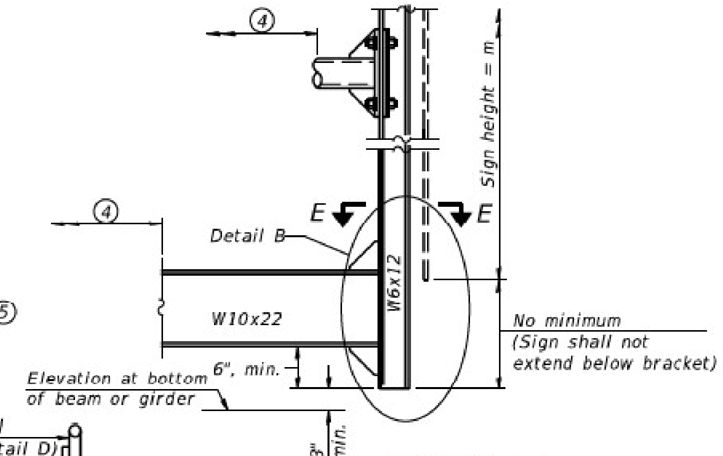
SCALE: SHEET 23 OF 65 SHEETS STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	23
		CONTRACT NO. 78A04		

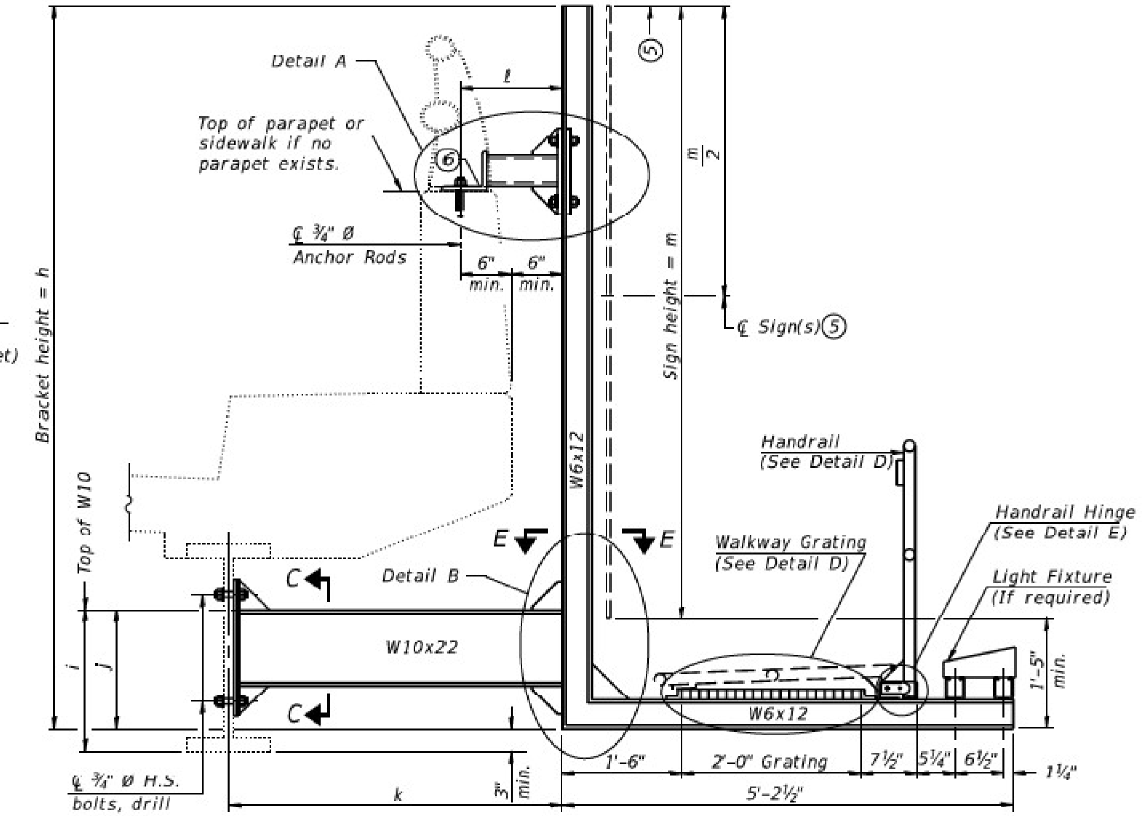
ILLINOIS FED. AID PROJECT



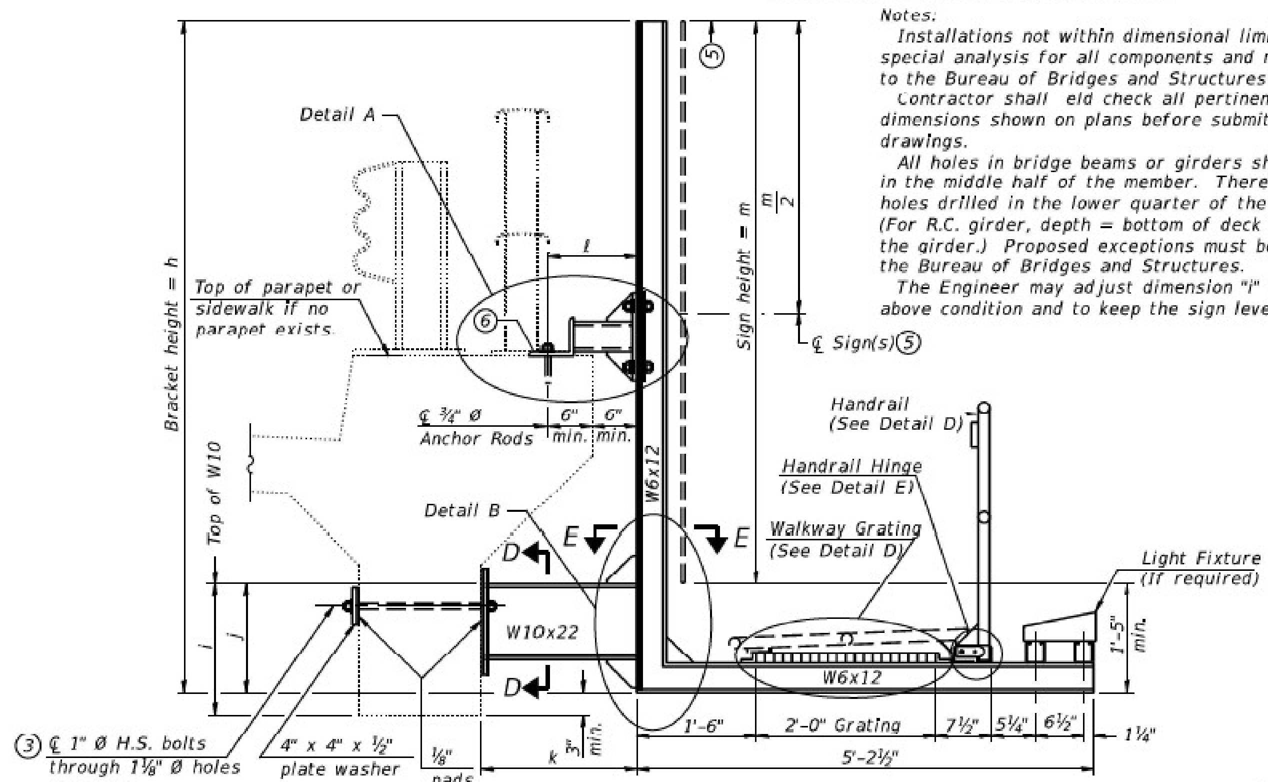
SECTION A-A
Details for mounting to PPC I Beam or Bulb "T" & Details for mounting to parapet w/o rail



SECTION A-A
Alternate with no lights or walkways



SECTION A-A
Details for mounting to steel beam or girder & Details for mounting with existing parapet mounted rail



SECTION A-A
Details for mounting to integral reinforced concrete girder & Details for mounting on safety curb with surface-mount bridge rail

Notes.

Installations not within dimensional limits shown require special analysis for all components and must be submitted to the Bureau of Bridges and Structures for approval.

Contractor shall eld check all pertinent existing bridge dimensions shown on plans before submitting shop drawings.

All holes in bridge beams or girders should be located in the middle half of the member. There shall be no holes drilled in the lower quarter of the member's depth. (For R.C. girder, depth = bottom of deck to bottom of the girder.) Proposed exceptions must be approved by the Bureau of Bridges and Structures.

The Engineer may adjust dimension "i" to meet the above condition and to keep the sign level.

① Holes in new steel members may be drilled in the fabrication shop or in the eld. Field drill existing members.

② For new PPC I beams, holes shall be formed during casting. For existing PPC I beams, prestressing strand locations shall be determined and spaced to miss strands by 6", min. Minimize spalling during eld drilling of existing beams.

③ For new construction, form holes. For existing RC beams, locate primary reinforcement and space holes to miss by 6", min. Minimize spalling and concrete fracturing/damage during eld drilling of existing concrete. Spalls over ¼" deep or beyond the coverage of the 4x4 plate washer shall be repaired with epoxy mortar before installing washer.

④ For attachment details of 3½" pipe and W10x22, see other sections as applicable.

⑤ Sign shall not extend more than 6" above top of bracket, and this dimension may vary to keep sign level if bridge is on grade or vertical curve. Multiple signs of various heights shall share a common horizontal centerline and use equal bracket heights. If no sign is attached to a W6x12 vertical (bracket only supporting walkway), dimension h shall be the same as an adjacent bracket with a sign attached, unless Engineer speci cally directs shorter brackets due to locational restraints on future uses. (See Detail A for minimum bracket height.)

⑥ For bridge mounted sign structures installed on new bridges with railing, during design, bracket spacing must be coordinated with railing post spacing and the Contractor must install upper brackets prior to railing installation. For bridge mounted sign structures installed on existing bridges with railing, during design, brackets spacing must be coordinated with railing post spacing and the Contractor must temporarily remove sections of railing to facilitate upper bracket installation. If it is determined during design that existing railings can't be removed, alternate upper connection details must be developed for the contract plans and approved by the Bureau of Bridges and Structures.

FOR INFORMATION ONLY
SN 028-0064

Structure Number	Station	h	i	j	k max. (10'-0" max.)	ℓ max. (8'-0" max.)	m (15'-0" max.)
028-0057	415+71.58	6' 6"	2' 0"	1' 9"	3' 0"	1' 0"	5' 0"
028-0064	444+50	6' 6"	2' 0"	1' 9"	3' 0"	1' 0"	5' 0"
028-0022	490+08.72	6' 6"	2' 0"	1' 9"	3' 0"	1' 0"	5' 0"
028-0010	480+01	6' 6"	2' 0"	1' 9"	3' 0"	1' 0"	5' 0"
028-0054	576+00	6' 6"	2' 0"	1' 9"	3' 0"	1' 0"	5' 0"
028-0062	629+65.1	6' 6"	2' 0"	1' 9"	3' 0"	1' 0"	5' 0"

For Details A & B, Sections C-C, D-D and E-E, see Base Sheet BM-3.
For Details D & E, see Base Sheet BM-4.

BM-2 2-17-2017

USER NAME = dailyll | DESIGNED - | REVISED -
DRAWN - | REVISED -
PLOT SCALE = 0.16666633 '/ in. | CHECKED - | REVISED -
PLOT DATE = 5/7/2021 | DATE - | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BRIDGE MOUNTED SIGN STRUCTURE DETAIL

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

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	*	FRANKLIN	403	238

CONTRACT NO. 78656
ILLINOIS | FED. AID PROJECT
*D9 I-57 Add Lane-4(28-5)B-3

USER NAME = david.a.wilson | DESIGNED - | REVISED -
DRAWN - | REVISED -
PLOT SCALE = 0.16666633 ' / in. | CHECKED - | REVISED -
PLOT DATE = 10/18/2023 | DATE - | REVISED -

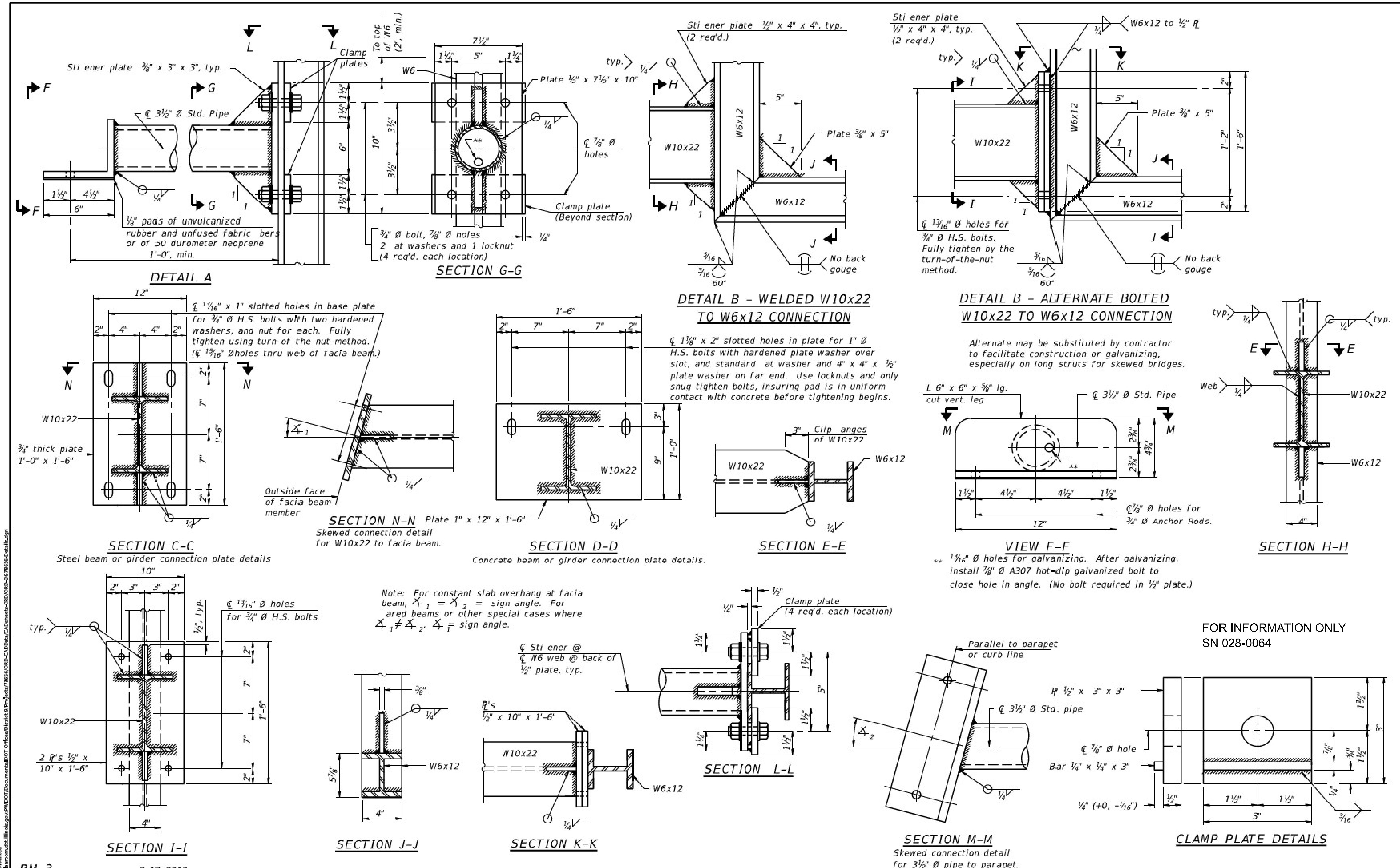
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 028-0064
STRUCTURE INFORMATION

SCALE: | SHEET 24 OF 65 SHEETS | STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	24

CONTRACT NO. 78A04
ILLINOIS | FED. AID PROJECT



DETAIL A
Sti ener plate 3/8" x 3" x 3", typ.
℄ 3½" Ø Std. Pipe
Clamp plates
To top of W6 (2", min.)
1/8" pads of unvulcanized rubber and unfused fabric bers or of 50 durometer neoprene
1'-0", min.
SECTION G-G
Plate ½" x 7½" x 10"
℄ 7/8" Ø holes
Clamp plate (Beyond section)
¾" Ø bolt, 7/8" Ø holes 2 at washers and 1 locknut (4 req'd. each location)
DETAIL B - WELDED W10x22 TO W6x12 CONNECTION
Sti ener plate ½" x 4" x 4", typ. (2 req'd.)
Plate 3/8" x 5"
No back gouge
DETAIL B - ALTERNATE BOLTED W10x22 TO W6x12 CONNECTION
W6x12 to ½" PL
℄ 13/16" Ø holes for ¾" Ø H.S. bolts. Fully tighten by the turn-of-the-nut method.
Alternate may be substituted by contractor to facilitate construction or galvanizing, especially on long struts for skewed bridges.
SECTION C-C
Steel beam or girder connection plate details
℄ 13/16" x 1" slotted holes in base plate for ¾" Ø H.S. bolts with two hardened washers, and nut for each. Fully tighten using turn-of-the-nut-method. (℄ 13/16" Øholes thru web of facia beam.)
¾" thick plate 1'-0" x 1'-6"
SECTION N-N
Skewed connection detail for W10x22 to facia beam.
Outside face of facia beam member
SECTION D-D
Concrete beam or girder connection plate details.
Plate 1" x 12" x 1'-6"
℄ 1⅛" x 2" slotted holes in plate for 1" Ø H.S. bolts with hardened plate washer over slot, and standard at washer and 4" x 4" x ½" plate washer on far end. Use locknuts and only snug-tighten bolts, insuring pad is in uniform contact with concrete before tightening begins.
SECTION E-E
Clip angles of W10x22
VIEW F-F
L 6" x 6" x 3/8" lg. cut vert. leg
℄ 3½" Ø Std. Pipe
℄ 7/8" Ø holes for ¾" Ø Anchor Rods.
** 13/16" Ø holes for galvanizing. After galvanizing, install 7/8" Ø A307 hot-dip galvanized bolt to close hole in angle. (No bolt required in ½" plate.)
SECTION H-H
SECTION I-I
℄ 13/16" Ø holes for ¾" Ø H.S. bolts
2 PL's ½" x 10" x 1'-6"
Note: For constant slab overhang at facia beam, ∡1 = ∡2 = sign angle. For ared beams or other special cases where ∡1 ≠ ∡2, ∡1 = sign angle.
SECTION J-J
SECTION K-K
PL's ½" x 10" x 1'-6"
℄ Sti ener @ ℄ W6 web @ back of ½" plate, typ.
SECTION L-L
Clamp plate (4 req'd. each location)
SECTION M-M
Skewed connection detail for 3½" Ø pipe to parapet.
Parallel to parapet or curb line
℄ 3½" Ø Std. pipe
CLAMP PLATE DETAILS
PL ½" x 3" x 3"
℄ 7/8" Ø hole
Bar ¼" x ¼" x 3"
¼" (+0, -1/16")
BM-3
2-17-2017

FOR INFORMATION ONLY
SN 028-0064

USER NAME = dailyll	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BRIDGE MOUNTED SIGN STRUCTURE DETAIL	F.A.I. RTE. 57	SECTION *	COUNTY FRANKLIN	TOTAL SHEETS 403	SHEET NO. 239
	DRAWN -	REVISED -					CONTRACT NO. 78656		
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -		SCALE: SHEET OF SHEETS STA. TO STA.					
PLOT DATE = 5/7/2021	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

*D9 I-57 Add Lane-4:(28-5)B-3

USER NAME = david.a.wilson	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 028-0064 STRUCTURE INFORMATION	F.A.* RTE. VAR	SECTION D9 BRIDGE PAINT 2023-2	COUNTY VARIOUS	TOTAL SHEETS 65	SHEET NO. 25
	DRAWN -	REVISED -					CONTRACT NO. 78A04		
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -		SCALE: SHEET 25 OF 65 SHEETS STA. TO STA.					
PLOT DATE = 10/18/2023	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				

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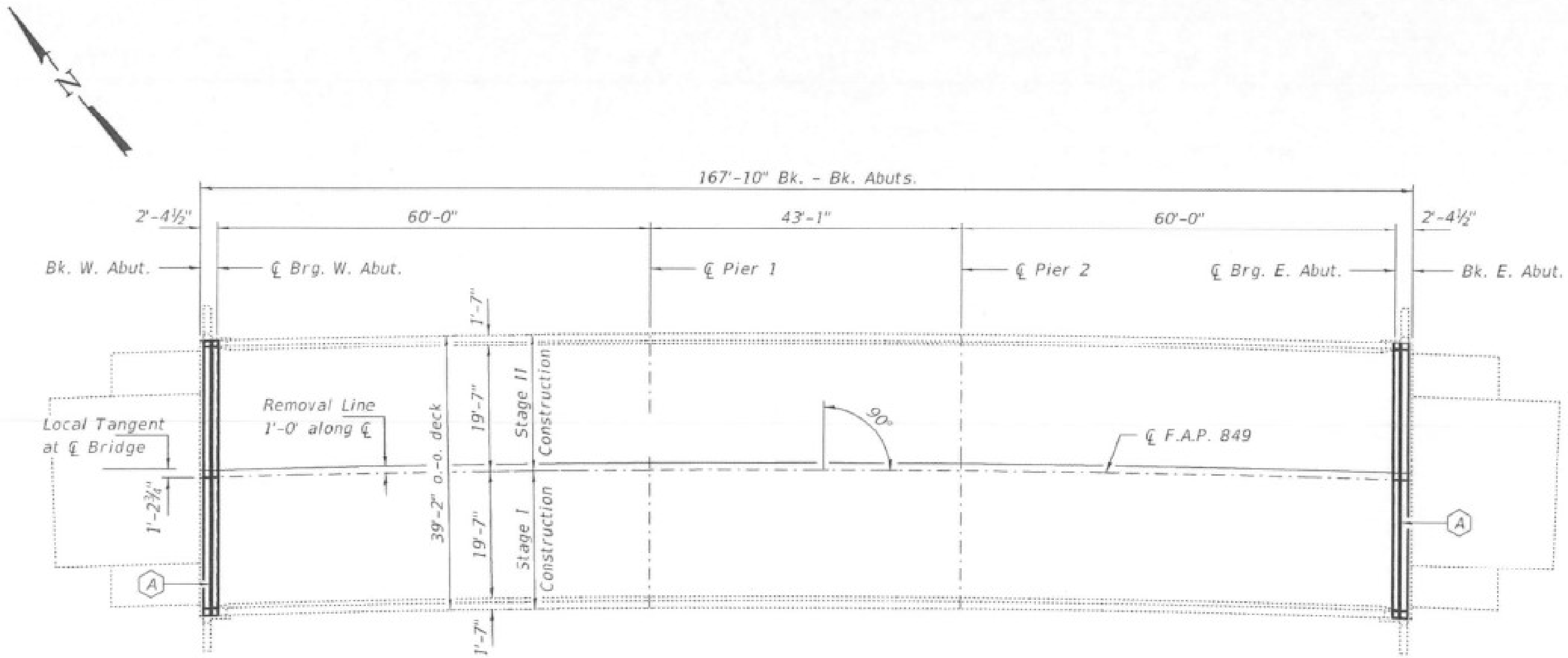
ELEVATION



PLAN

(A) - Remove and Replace Expansion Joints at Abutments.

(B)(C) - Beam End Repairs - See sheet 4 of 5.

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete deck, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be included in the pay item covering removal of the existing concrete.

Plan dimensions and details relative to existing plans are subject to nominal construction 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.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal.

Cost of removal and re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included with Structural Steel Repair.

The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

Joint openings shall be adjusted according to Article 520.04 of the Std. Specs. when the deck is poured at an ambient temperature other than 50° F.

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

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Steel Structures".

Diaphragm connection holes shall be ¹⁵⁄₁₆"Ø for ⅞"Ø bolts. Two hardened washers shall be required at diaphragm connections.

All new structural steel and bearing assembly shall be hot-dip galvanized. See Special Provisions for "Hot Dip Galvanizing for Structural Steel".

FOR INFORMATION ONLY
SN 041-0042

TOTAL BILL OF MATERIAL

	ITEM	UNIT	QUANTITY
	Concrete Removal	Cu. Yd.	5.4
	Concrete Superstructure	Cu. Yd.	5.4
	Structural Steel Repair	Pound	2500
	Reinforcement Bars, Epoxy Coated	Pound	720
	Bar Splicers	Each	12
	Preformed Joint Strip Seal	Foot	79
*	Protective Coat	Sq. Yd.	16.5

* On new deck surface and top and inside face of new concrete only.

LICENSED STRUCTURAL ENGINEER
DAVID CARL PUZEY
081-
STATE OF ILLINOIS

EXPIRES 11-30-2020

DESIGNED	Stephen M Ryan	EXAMINED	Timothy A. Armbrecht	DATE - DECEMBER 5, 2018	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	GENERAL PLAN AND ELEVATION FAP 849 (IL 142) OVER CASEY FORK SN 041-0042
CHECKED			ENGINEER OF STRUCTURAL SERVICES			
DRAWN	daburdell	PASSED		REVISED -		
CHECKED	SMR CDK		ENGINEER OF BRIDGES AND STRUCTURES	REVISED -		SHEET NO. 1 OF 5 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
849	D9 BRIDGE REPAIR 2019-4	JEFFERSON	61	48
		CONTRACT NO. 78650		
		ILLINOIS FED. AID PROJECT		

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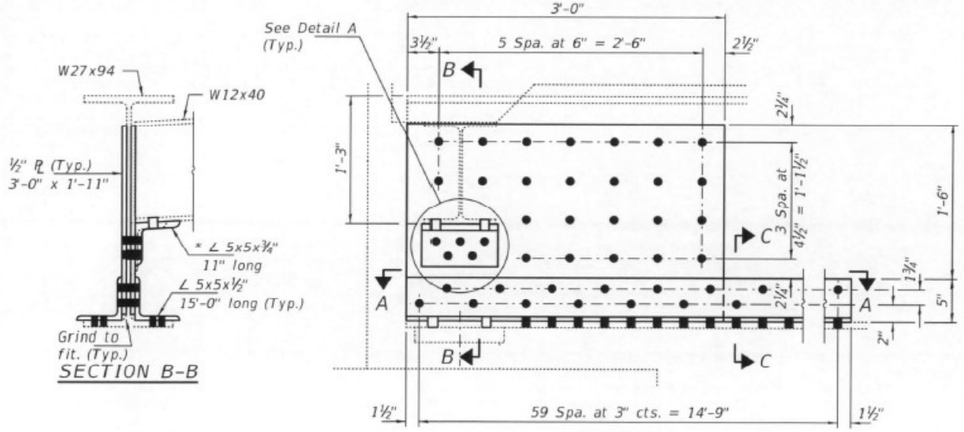
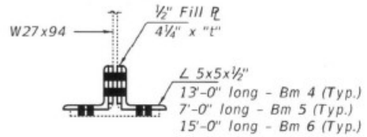
	DRAWN -	REVISED -		
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 10/18/2023	DATE -	REVISED -		SCALE: SHEET 26 OF 65 SHEETS STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	26
		CONTRACT NO. 78A04		
		ILLINOIS FED. AID PROJECT		

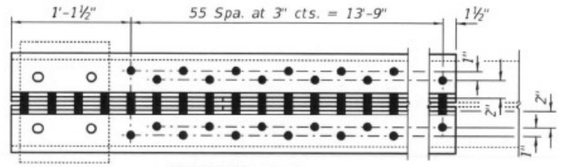


SECTION B-B

REPAIR B
(Beam 6)



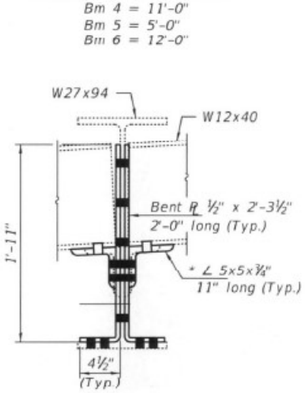
SECTION C-C



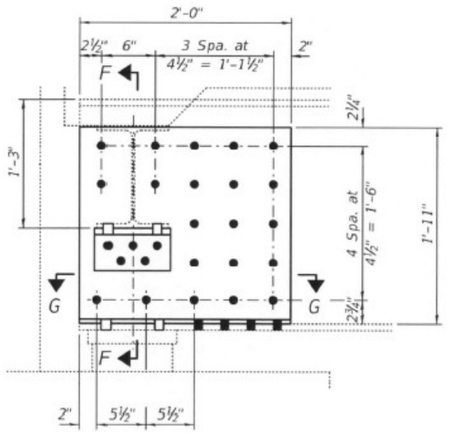
SECTION A-A

FILL PL LENGTH "t"

Bm 4 = 11'-0"
Bm 5 = 5'-0"
Bm 6 = 12'-0"

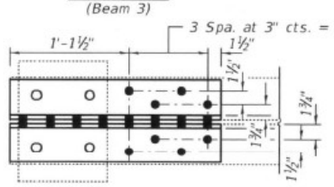


SECTION F-F



REPAIR B
(Beam 3)

* Bend to match existing. Welded steel plates can be used in lieu of the angle.

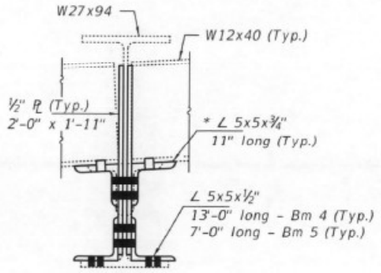


SECTION G-G

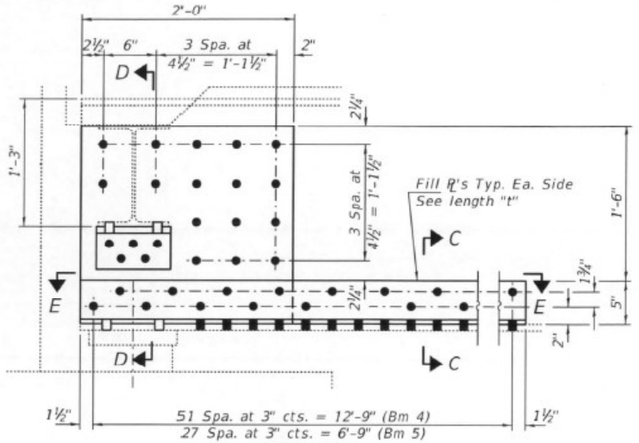
Notes:
Trim diaphragms as required for proper fit.
Remove existing clip angles using the air-arc method and grind smooth all remaining weld material.

BOLT HOLE LEGEND

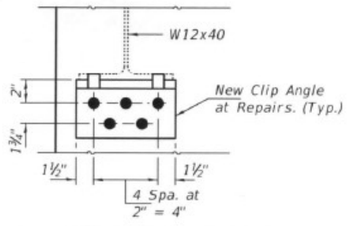
○ - Field drill using new steel as template.
● - Shop drill holes in new steel.



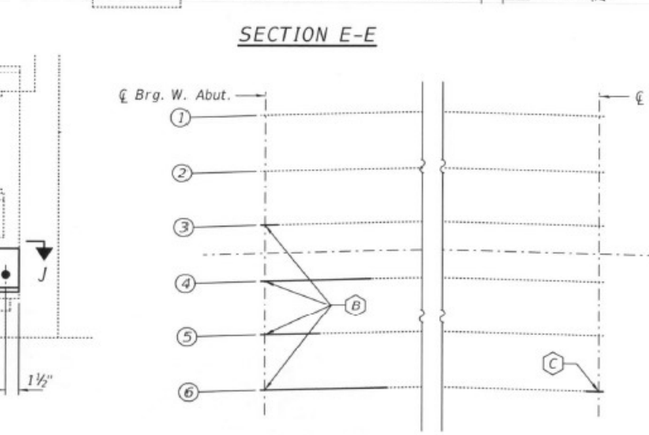
SECTION D-D



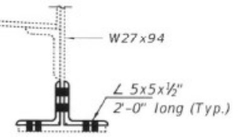
REPAIR A
(Beams 4 & 5)



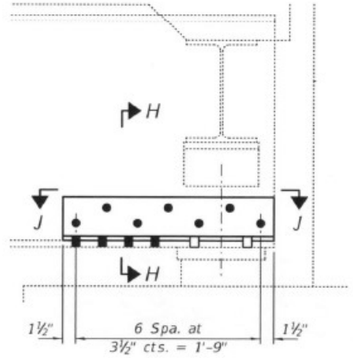
DETAIL A



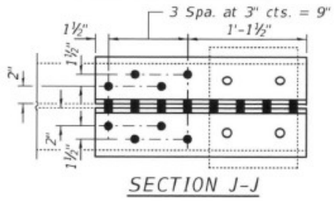
SECTION E-E



SECTION H-H



REPAIR C
(Beam 6)



SECTION J-J

PARTIAL FRAMING PLAN

(B) - Beam End Repairs & Remove and Replace Clip Angles
(C) - Beam End Repair

FOR INFORMATION ONLY
SN 041-0042

BILL OF MATERIAL

Item	Unit	Total
Structural Steel Repair	Pound	2500

DESIGNED - SMR	EXAMINED	DATE - DECEMBER 5, 2018	
CHECKED - CDK	PASSED	REVISED -	
DRAWN - daburdell	ENGINEER OF STRUCTURAL SERVICES	REVISED -	
CHECKED - SMR CDK	ENGINEER OF BRIDGES AND STRUCTURES		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

REPAIR DETAILS
SN 041-0042
SHEET NO. 4 OF 5 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
849	D9 BRIDGE REPAIR 2019-4	JEFFERSON	61	51
		CONTRACT NO. 78650		
		ILLINOIS FED. AID PROJECT		

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	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 041-0042
STRUCTURE INFORMATION
SCALE: SHEET 27 OF 65 SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	27
		CONTRACT NO. 78A04		
		ILLINOIS FED. AID PROJECT		

B.M. Chisled "D" Top of N.E. Wingwall of Existing Bridge. Elev. 439.12

Exist. Struct.: 041-0042. Three span R.C. deck girder on R.C. closed abutments and R.C. solid piers. Superstructure and abutments to be removed. No Salvage. Revise piers to accommodate new superstructure. Use Stage Construction to maintain one lane of traffic during construction.
Exist. Struct. 129'-3" x 37'-0"

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.

BRIDGE SHEET 1 OF 17

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 849	113BR-I	JEFFERSON	27	7

F.H.W.A. REG. NO. 5 | ILLINOIS | FED. AID PROJECT–

GENERAL NOTES

(1) Fasteners shall be high strength bolts (AASHTO) M164. Bolts ¾" ø, open holes 13/16" ø, or ⅞" ø, open holes 15/16" ø, unless otherwise noted.

(2) Calculated weight of structural steel equals 122,120 pounds.
(M183 ----- 15,150)
(M223, Gr. 50 ----- 106,970)

(3) The Zinc Silicate and Vinyl Paint System shall be used for shop and field painting of structural steel, except where otherwise noted.

(4) Field welding of construction accessories will not be permitted to the bottom flange of beams nor to the top flange for a distance equal to ¼ the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the engineer.

(5) Anchor bolts shall be set before bolting diaphragms over the supports.

(6) The main load carrying member components subject to tensile stress shall conform to the supplemental requirements for Notch Toughness Zone 2. These components are the splice plate material and steel wide flange beams.

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

(8) Riprap slopes may be varied in the field to suit ground conditions as directed by the Engineer.

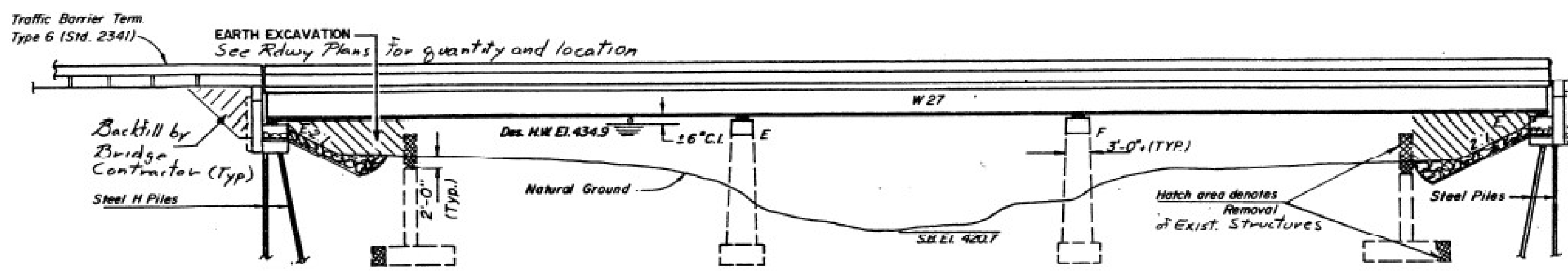
(9) Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ⅛". Adjustments shall be made either by grinding the surface or by shimming the bearing. Two ⅛" adjusting shims of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims. For type I Elastomeric Brgs., shims of the dimension of the top plate shall be provided and placed as detailed.

(10) See sh 16 For Boring Data

(11) The Contractor shall drive one (1) Steel Test Pile at the West Abutment; at a permanent location as directed by the Engineer. Test piles shall be driven prior to ordering the remainder of each type of piling.

** Except that the piers shall be rehabilitated for reuse

* quantity includes bridge deck surface



ELEVATION

CURVE DATA
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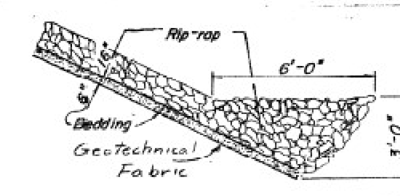
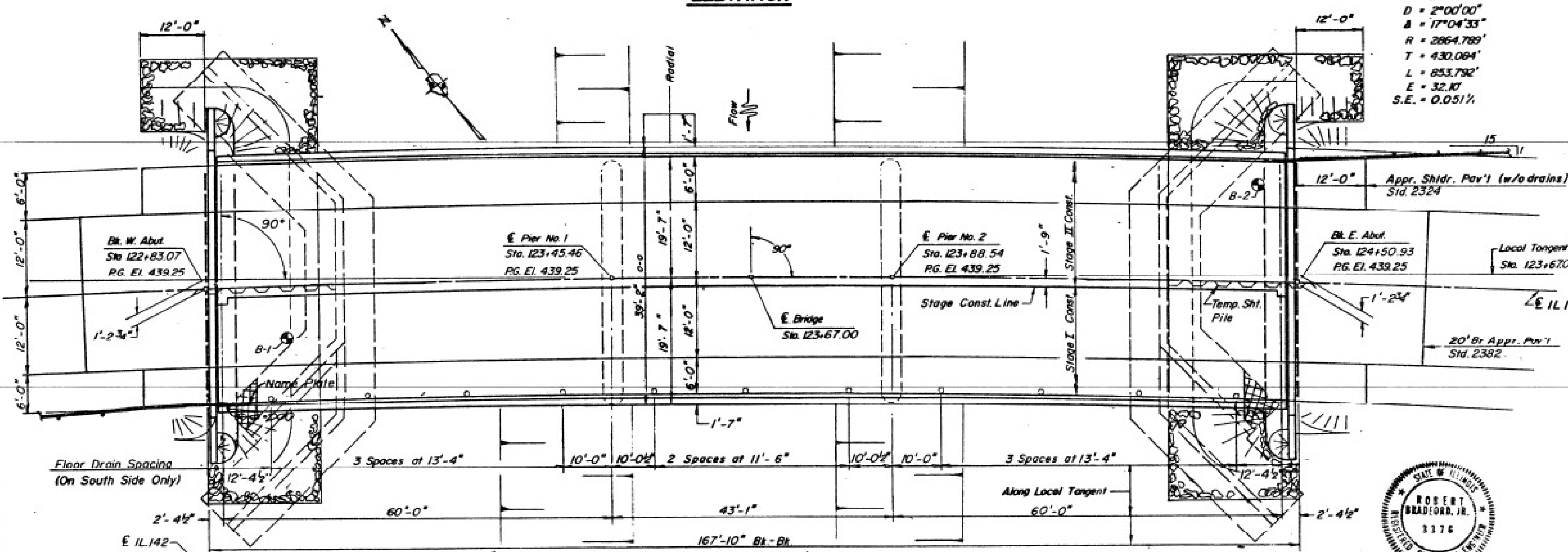
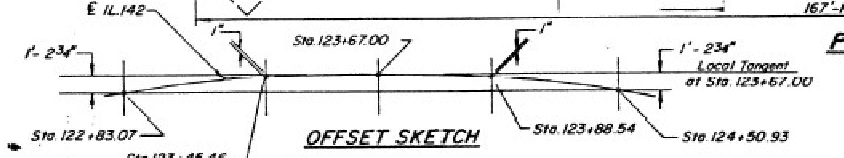
D = 2°00'00"
Δ = 17°04'33"
R = 2864.789'
T = 430.064'
L = 853.792'
E = 32.10
S.E. = 0.051%



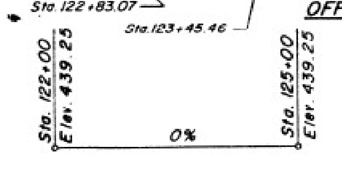
RIP-RAP ANCHOR DETAIL



PLAN



OFFSET SKETCH



PROFILE GRADE

STATION 123+67
REBUILT 198_ BY
STATE OF ILLINOIS
F.A. RT. 849 SEC. 113BR-I
F.A. PROJ. ACBHF-ACF-849(6)
LOADING HS20
STR. NO. 041-0042

NAME PLATE

(See Std. 2813)

* Locate Existing Name ℞ adjacent to New Cost incidental

WATERWAY INFORMATION TABLE

Drainage Area 77.54 Square Miles — Low Grade Elev. 438.52 at Sta. 124+50

Section	Flood	Freq. Yr.	Q Total C.F.S.	Opening (Sq. Ft.) Exist.	Opening (Sq. Ft.) Prop.	Nat. H.W.E.	Head (Ft.) Exist.	Head (Ft.) Prop.	Headwater Elev. Exist.	Headwater Elev. Prop.
113BR-I	Design	50	4100	950	999	434.9	0.52	0.39	435.42	435.29
	Base	100	4645	974	1027	435.1	0.68	0.48	435.78	435.58
	Max. Calc.	500	5885		1068	435.5		0.76		436.26

APPRO...

James T Rayburn

DESIGN STRESSES

f'c = 3,500 p.s.i.
fy = 60,000 p.s.i. (Reinf.)
fy = 50,000 p.s.i. (St. St. M223) Gr. 50
fy = 36,000 p.s.i. (St. St. M183)

LOADING HS20-44

Design Specifications: 1983 A.A.S.H.T.O. & 1984 thru 1988 interims.

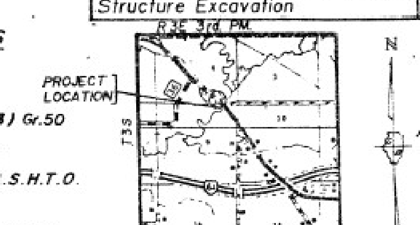
Allow 25 #/sq. ft. for future wearing surface.

STATE OF ILLINOIS
ROBERT BRADFORD, JR.
3376
REGISTERED STRUCTURAL ENGINEER

Robert Bradford

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUB	SUPER	TOTAL
Protective Coat *	sq.yd.		921	921
Class X Concrete	cu.yd.	81.4		81.4
Structural Steel	L.sum		0.4	0.4
Stud Shear Connectors	ea.		2016	2016
Reinforcement Bars	lb.	6400		6400
Reinforcement Bars (Epoxy coated)	lb.		43,450	43,450
Name Plates	ea.		1	1
Temporary Sheet Piling	Sq.ft.	1000		1000
Steel Piles HP 10x42	lin.ft.	860		860
Test Piles, Steel HP 10x 42	ea.	1		1
Class X Concrete Superstr's	cu yd		196.9	196.9
Riprap-Stone, Class A4	sq.yd.	320		320
Floor Drains	ea.		11	11
Concrete Removal	cu.yd.	11.0		11.0
Preformed Joint Seal 2½"	lin.ft.		39	39
Preformed Joint Seal 4"	lin.ft.		39	39
Removal of Existing Structures**	ea.		1	1
Elastomeric Bearing Assembly Ty I	ea.		18	18
Filter Fabric For use w/ Riprap	sq.yd.	320		320
Structure Excavation	cu.yd.	70		70



LOCATION MAP

GENERAL PLAN

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

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS

Rev. 5-18-89

FOR INFORMATION ONLY
SN 041-0042

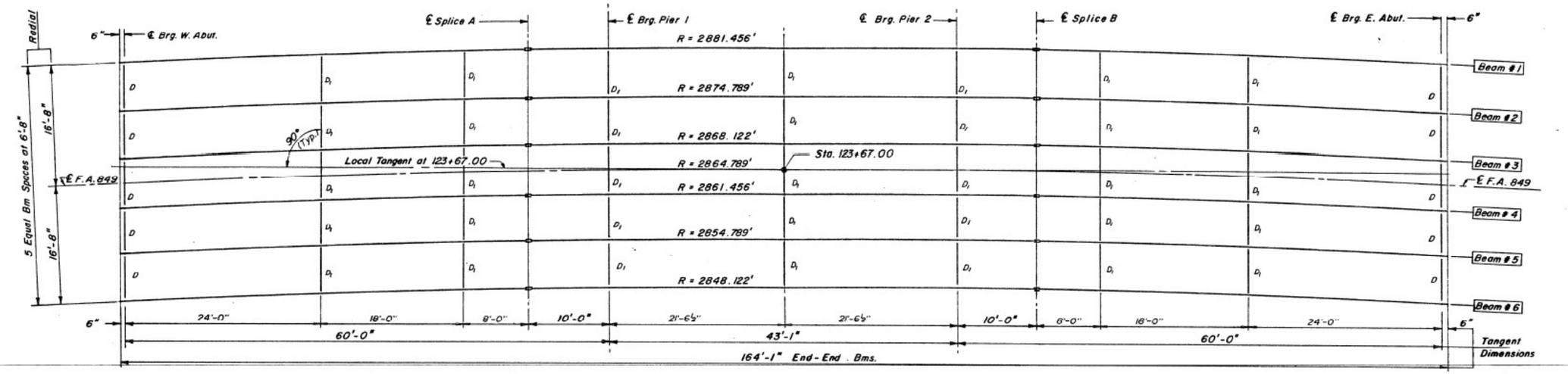
USER NAME = david.a.wilson	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 041-0042 STRUCTURE INFORMATION	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	28
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 78A04		
PLOT DATE = 10/18/2023	DATE -	REVISED -		SCALE: SHEET 28 OF 65 SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT			

MODEL: SN 041-0042_3 [Sheet]
FILE NAME: pw://idot-pw.bentley.com:PWIDOT/Documents/IDOT Offices/District 9/ORD Projects/78A04/CADData/CADsheets/D978A04-Structure Information_1-3.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

-849	113BR-1	JEFFERSON	27	14
	ILLINOIS	FED. AID PROJECT		

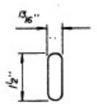
BRIDGE SHEET 8 OF 17



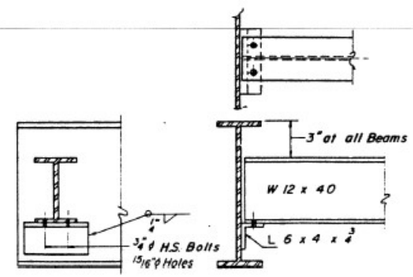
TOP OF WF ELEVATION *

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

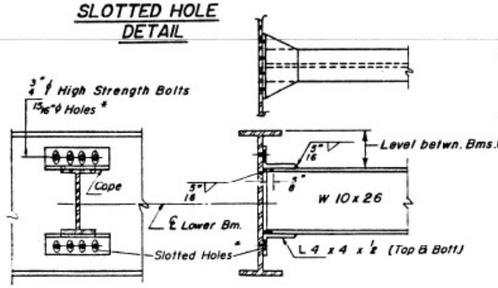
* Use designated elevation throughout for each beam line.
For Fabrication Only



SLOTTED HOLE DETAIL



DIAPHRAGM D
10 Required



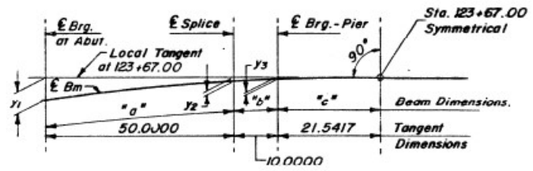
DIAPHRAGM D1
35 Required

Note: Two hardened washers shall be required over all 15/16" ø holes.
* Provide slotted holes in 4 x 4 x ½ angles for diaphrams between Bms. 3 & 4. Provide slots in angles at North end of diaphrams only. Provide 5/16" Str. ℄ washer at each slotted connector.
3/4" H.S. Bolts for diaphrams D1 between bms. 3 & 4 shall be tightened only after completing Stage II deck construction.
Slots to be 13/16" x 1½".

FRAMING PLAN

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

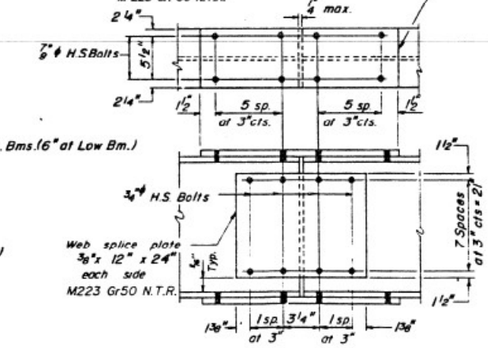
NOTE: Place diaphrams between Bms. #3 & #4 during Stage II construction.



Beam \ Dim.	BEAM DIMENSIONS "a"	"b"	"c"	LAYOUT DIMENSIONS Y1	Y2	Y3
1	50.0103	10.0004	21.5419	1.1540	0.1726	0.0805
2	50.0103	10.0004	21.5419	1.1567	0.1730	0.0807
3	50.0104	10.0004	21.5419	1.1594	0.1734	0.0809
4	50.0105	10.0004	21.5419	1.1621	0.1738	0.0811
5	50.0105	10.0004	21.5419	1.1648	0.1742	0.0813
6	50.0106	10.0004	21.5419	1.1675	0.1747	0.0815

BEAM GEOMETRY

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



SPLICE

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

N.T.R. = Notch Toughness Requirement

FOR INFORMATION ONLY
SN 041-0042

STRUCTURAL STEEL

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

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS
1916 STEVENSON DR. • 217-528-9581 • SPRINGFIELD, ILL.

MODEL: SN 041-0042_4 [Sheet]
FILE NAME: pw://dotpw.bentley.com:PWDOT/Documents/IDOT Offices/District 8/ORD Projects/78A04/CADData/CADSheets/D278A04-Structure_Information_24.dgn

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

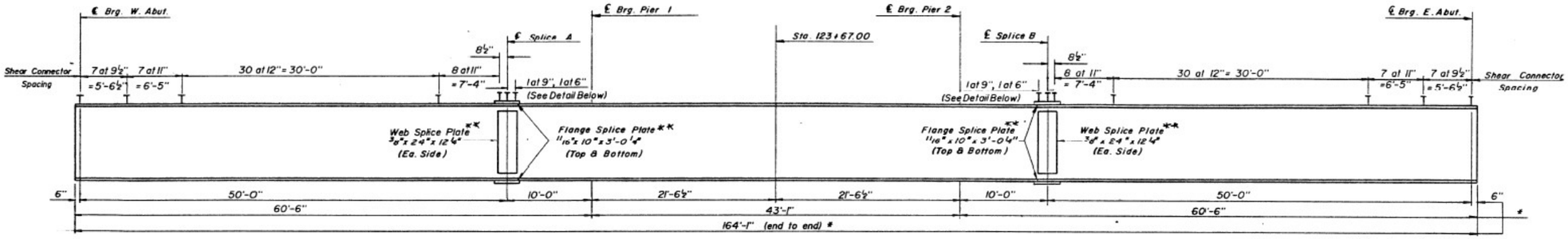
SN 041-0042
STRUCTURE INFORMATION

SCALE: | SHEET 29 OF 65 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	29
		CONTRACT NO. 78A04		
	ILLINOIS FED. AID PROJECT			

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.849	113BR-1	JEFFERSON	27	15
FHWA REG. NO. 5	ILLINOIS	FED. AID PROJECT -		

BRIDGE SHEET 9 OF 17



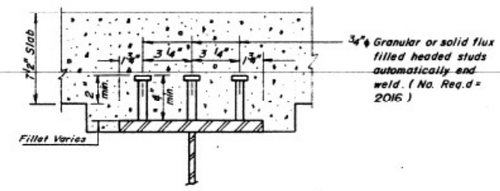
TYPICAL BEAM

(Use W 27x94 throughout)**

** NTR M223, Gr 50

Note: Fabricate beams to horizontal radius Shown on Sheet 8

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



3/4"ø Granular or solid flux filled headed studs automatically end weld. (No. Req.d = 2016)

SHEAR STUDS

INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp.1	Pier	0.5 Sp. 2
Is (in.4)	3270	3270	3270
Ic (in.4)	10434	—	—
Ss (in.3)	243	243	243
Sc (in.3)	374	—	—
ℓ (K/I)	.738	1.040	1.040
M ℓ ('K)	231	-286.3	-46
s ℓ (K/I)	.302	—	—
Ms ℓ ('K)	105	—	—
M L ('K)	424	-177	185
M imp.('K)	114	- 52	56
S3(MℓL + I) ('K)	891	- 382	402
Ma ('K)	1603	781	461
* Mu ('K)	2280		1158
fs ℓ non-comp (k.s.i)	11.4	-14.1	-2.2
fs ℓ (comp) (k.s.i.)	3.5	—	—
fs S3 (ℓL + I) (k.s.i.)	28.8	-18.8	19.5
fs (Overload) (k.s.i.)	43.7	-32.9	17.3
** fs (Total) (k.s.i.)	—	- 42.8	—
VH (K)	49.4	—	—

INTEROR GIRDER REACTION TABLE		
	Abut.	Pier
R ℓ (K)	26.5	58.4
R ℓL (K)	35.9	46.1
Imp. (K)	9.7	12.4
R Total (K)	72.1	116.9

* Mu = Full Plastic Moment Capacity for Compact, Braced section.
** Non-compact section
Ma (Applied Moment) = 1.3 [M ℓ + Ms ℓ + S3 (M ℓL + I)]

NOTES

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

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

VR is the maximum ℓL + impact shear range in span.

The Fully Plastic Moment capacity (M_u) is computed according to AASHTO 10.48.1 & 10.50.1.1.

f_s (Total) is the sum of the stresses due to $1.3[M\ell + M_s\ell + S_3(M\ell_L I)]$

f_s (Overload) is the sum of the stresses due to $M\ell + M_s\ell + S_3(M\ell_L I)$

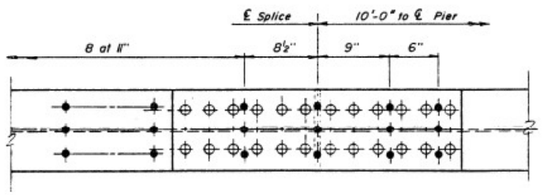
$M\ell$ – Moment due to dead loads on non-composite section.

$M_s\ell$ – Moment due to dead loads on composite section.

$M\ell_L$ – Moment due to live load on non-composite or composite section.

I – Live load impact

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



PLAN DETAIL

○ Splice Bolt

● Shear Connector

(Stud Spacing @ Flange Splice)

NOTE. Splice A shown, Splice B similar by rotation. Location of shear connectors may be adjusted slightly to avoid flange splice bolts.

FOR INFORMATION ONLY
SN 041-0042

STRUCTURAL STEEL DETAILS

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

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS
1815 STEVENSON DR. • 217/529-6661 • SPRINGFIELD, ILL.

USER NAME = david.a.wilson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -
PLOT DATE = 10/18/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 041-0042
ST RUCTURE INFORMATION

SCALE: | SHEET 30 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	30
		CONTRACT NO. 78A04		
	ILLINOIS	FED. AID PROJECT		

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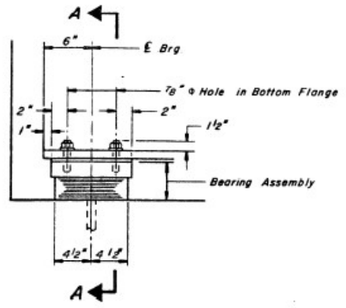
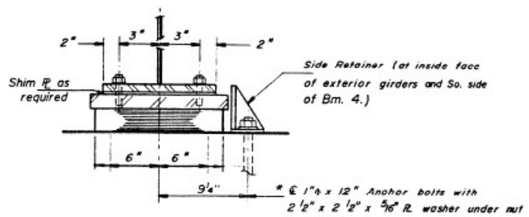
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.849	113BR-1	JEFFERSON	27	16
F.H.W.A. REG. NO. 5	ILLINOIS	FED. AID PROJECT-		

BRIDGE SHEET 10 OF 17

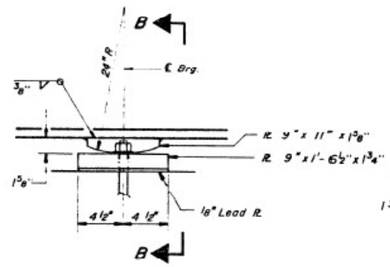


ELEVATION AT ABUT.

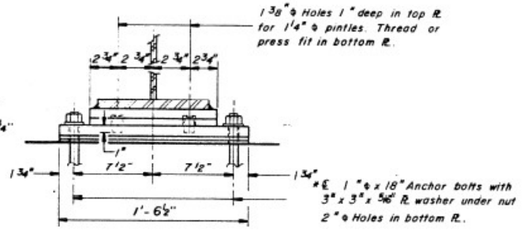


SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.



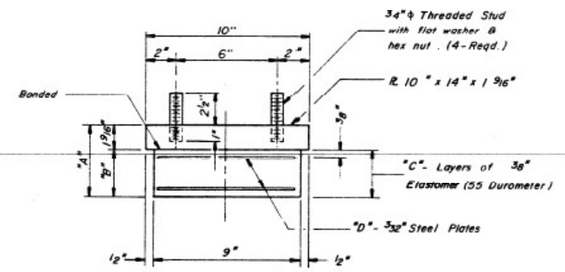
ELEVATION AT PIER



SECTION B-B

FIXED BEARING
(PIER - 2)

* NOTES: Anchor bolts at fixed bearings may be built into the masonry.
See sheet # 11 for Anchor Bolt installation.

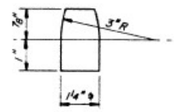


BEARING ASSEMBLY - ABUTS
(See Table for Values A, B, C, D)

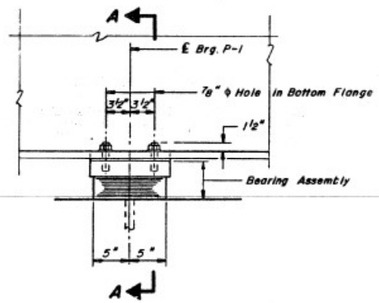
NOTES: Shim plates shall not be placed under Bearing Assembly.

TABLE OF VALUES

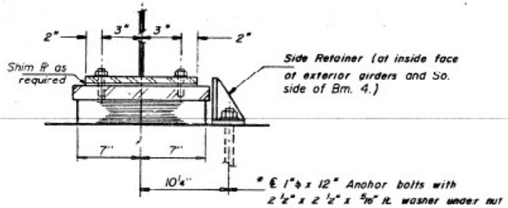
Value / Location	A	B	C	D
West Abut.	4 3/4"	3 3/16"	7	6
East Abut.	3 13/16"	2 1/4"	5	4



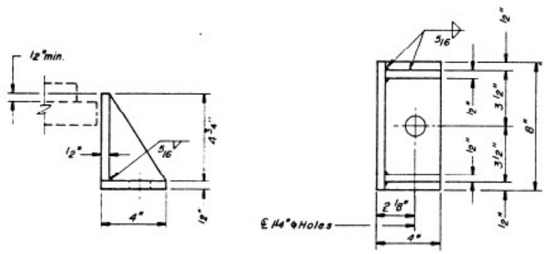
PINTLE



ELEVATION AT PIER 1

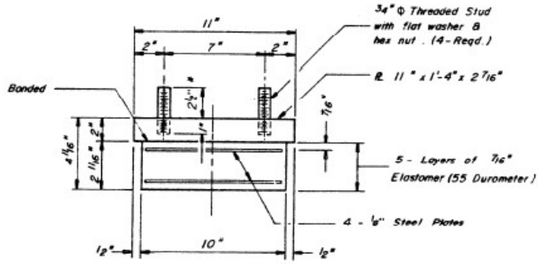


SECTION A-A



SIDE RETAINER

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



BEARING ASSEMBLY - PIER 1
TYPE I ELASTOMERIC EXP. BRG.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	18

BEARINGS

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

FOR INFORMATION ONLY
SN 041-0042

GREENE & BRADFORD, Ltd.
CONSULTING ENGINEERS

USER NAME = david.a.wilson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -
PLOT DATE = 10/18/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 041-0042
ST RUCTURE INFORMATION

SCALE: | SHEET 31 OF 65 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	31
		CONTRACT NO. 78A04		
		ILLINOIS FED. AID PROJECT		

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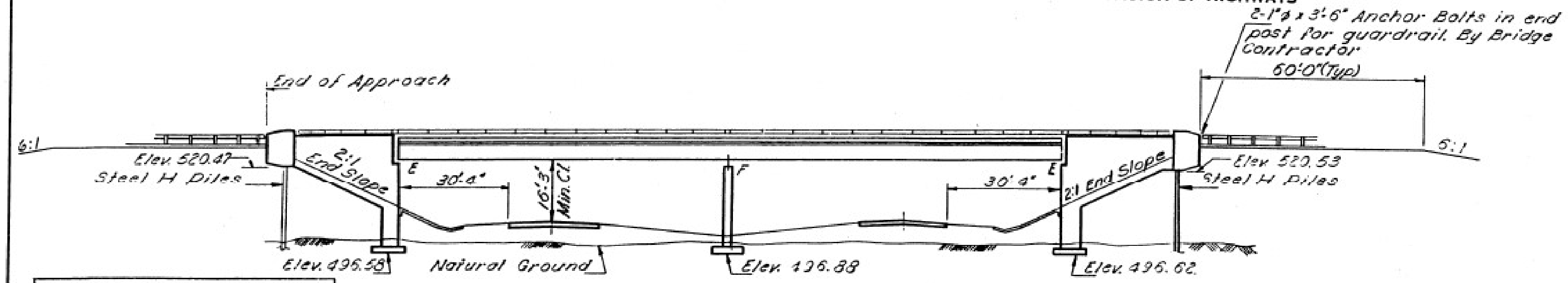
B.M. #18 Railroad Spike in Pole 300' Rt. of Station 3068+88 Elev. 508.02

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

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 64	41-9HB-2	JEFFERSON	31	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT:		

SHEET NO. 1
14 SHEETS



STATION 3068+62.53
BUILT 19 BY
STATE OF ILLINOIS
F.A.I. RT. 64 SEC. 41-9HB-2
F.A. PROJ. I-IG-64-3(13)
LOADING HS-15

NAME PLATE
(See Std. 2113-1)

ELEVATION

GENERAL NOTES

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

Field connections shall be bolted using high strength bolts. Bolts 3/4"φ, open holes 13/16"φ, unless otherwise noted.

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"x6" mesh, weighing 58 Lb. per 100 sq. ft.

The Contractor shall drive One steel (8BP36) test pile in a permanent location at the North Bent as directed by the Engineer before ordering the remainder of piles.

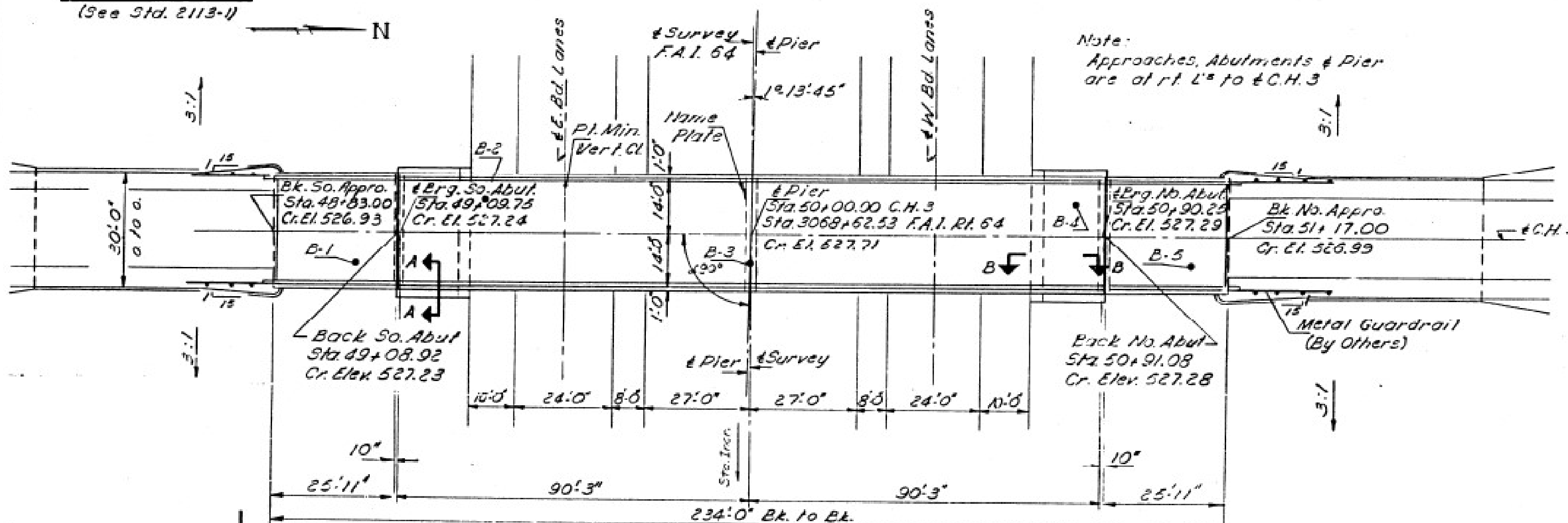
An alternate strand pattern using Extra High Strength Prestressing strand (270 K.S.I.) is permitted.

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

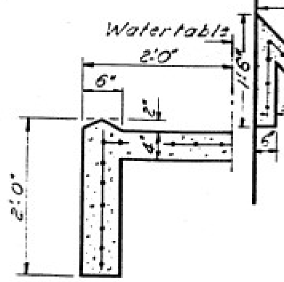
The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

Drive all piles to refusal.

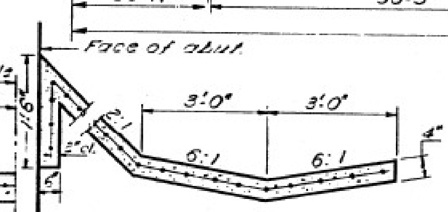
Calculated plan weight of structural steel 153,400 Lb.



PLAN



SECTION A-A



SECTION B-B

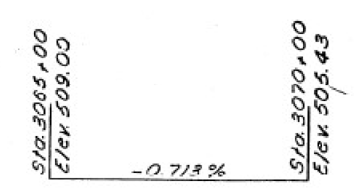
DESIGN STRESSES
FIELD UNITS

f'c = 1200 psi (Deck Slab)
f'c = 1400 psi (Sub, Curb, Parapet)
fs = 20,000 psi (Reinf. Struct.)
Vc = 75 psi (Ftgs)
n = 10

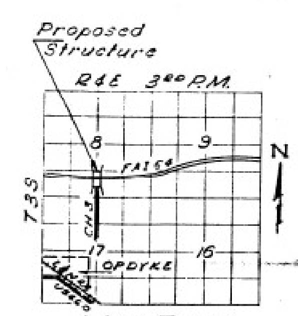
PRECAST PRESTRESSED UNITS

f'c = 5000 psi
f'ci = 4000 psi
f's = 248,000 psi Strands
fsi = 173,600 psi Strands

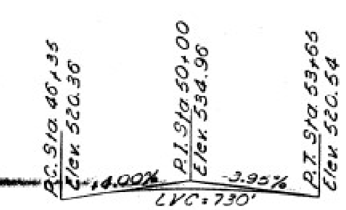
LOADING HS 15-44



PROFILE F.A.I. 64



LOCATION SKETCH



PROFILE C.H. 3

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Class A Excavation for Structures	Cu. Yds.			220
Protective Coat	Sq. Yds.	875		875
Class X Concrete	Cu. Yds.	226.3	225.7	455.0
Furnishing & Erecting Precast Prestressed Concrete I-Bm. (36")	Lin. Ft.	99		99
Structural Steel	L.S.	0.21		0.21
Stud Shear Connectors	Ea.	1152		1152
Aluminum Railing	Lin. Ft.	458		458
Reinforcement Bars	Lbs.	52,960	27,970	80,930
Steel Piles (10 BP 42)	Lin. Ft.		225	225
Test Piles Steel (10 BP42)	Ea.		1	1
Name Plate	Ea.		1	1
Slope Wall (4")	Sq. Yds.			175
Preformed Joint Sealer	Lin. Ft.	60		60

FOR INFORMATION ONLY
SN 041-0072

DESIGNED	
CHECKED	
DRAWN	J. Kessler
CHECKED	

EXAMINED November 21 1969
PASSED
APPROVED

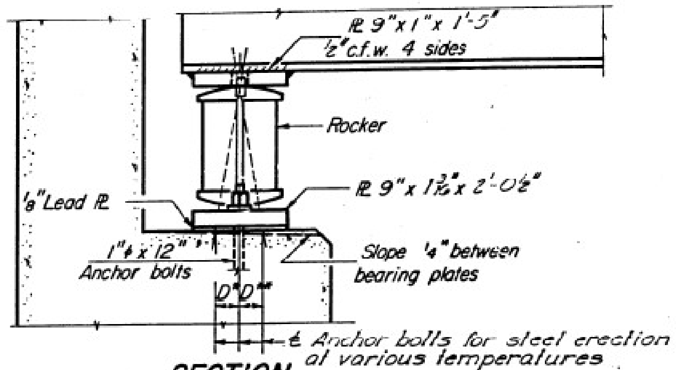
GENERAL PLAN & ELEVATION
PROJ. I-IG-64-3(13)78
C.H. 3 OVER F.A.I. RT. 64
F.A.I. RT. 64 SEC. 41-9HB-2
JEFFERSON COUNTY
STATION 3068+62.53

Revised 9-16-70
G.T.M.

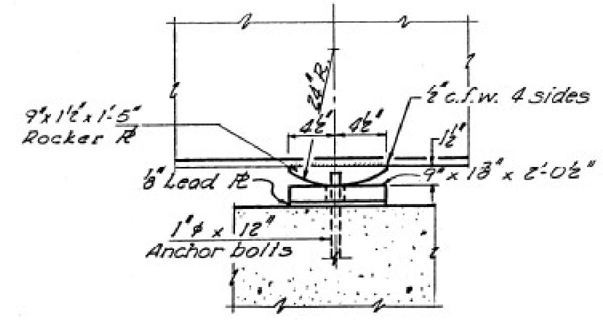
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 64	41-9HB-2	JEFFERSON	3	8

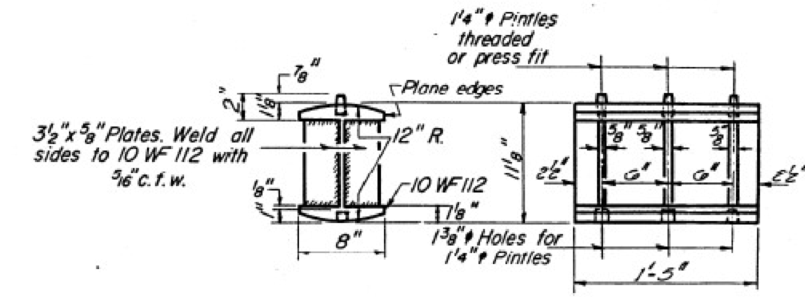
SHEET NO. 10
14 SHEETS



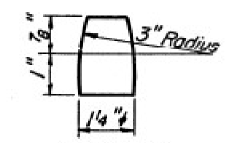
SECTION



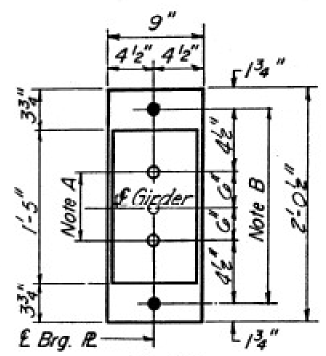
ELEVATION



ROCKER



PINTLE

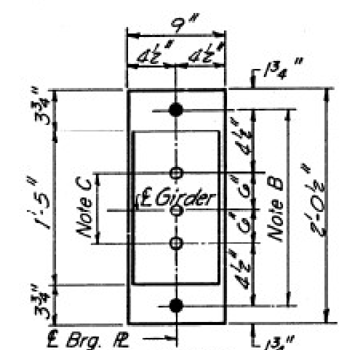


PLAN

AT ABUTMENT

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

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



PLAN

AT PIER

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

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.

SECTION PROPERTIES

	0 – .7PT.	.7PT. – .9PT.	.9 PT. PIER
NON COMPOSITE SECTION			
Is	15715.7 in⁴	19829.9 in⁴	31980.0 in⁴
Sts	627.1 in³	896.3 in³	1398.0 in³
SBs	835.1 in³	896.3 in³	1398.0 in³
COMPOSITE SECTION			
Ic	37629.4 in⁴	Non Comp.	Non Comp.
Stc	3938.2 in³	Non Comp.	Non Comp.
SBc	1090.4 in³	Non Comp.	Non Comp.

TOP OF WEB ELEV. (For fabrication only)

	Girder #1	Girder #2	Girder #3	Girder #4
℄ Brg. S. Abut.	526.46	526.56	526.56	526.46
℄ Splice #1	526.83	526.93	526.93	526.83
℄ Pier	526.83	526.93	526.93	526.83
℄ Splice #2	526.83	526.93	526.93	526.83
℄ Brg. N. Abut.	526.51	526.61	526.61	526.51

STRESS TABLE

TABLE OF MOMENTS, SHEARS AND REACTIONS – INTERIOR GIRDER

NON COMP. SECTION MAX. MOMENT	.4 Pt. span	℄ Brg. Pier
D.L.	492.70	-1162.89

COMP. SEC. MAX. MOMENT	.4 Pt. span	℄ Brg. Pier
S.D.L.	175.47	-269.95
L.L.	609.88	-480.79
Imp.	140.27	-110.58
Total	925.62	-861.32

COMP. SEC. MAX. SHEAR	Abut.	.2 Pt.	.4 Pt.	.7 Pt.
S.D.L.	10.10	4.86	-0.37	-8.23
L.L.	34.45	25.60	17.02	-27.49
Imp.	7.92	5.89	3.92	-6.32
Total	52.47	36.35	20.57	-42.04

MAXIMUM REACTION	Abut.	Pier
D.L.	31.34	114.22
S.D.L.	10.10	32.15
L.L.	34.98	52.87
Imp.	7.91	12.16
Total	83.73	211.40

Symm. about ℄ Pier.
Moments are in ft. kips.
Reactions & shears are in kips.

LEGEND
D.L. = Dead load
S.D.L. = Superimposed dead load acting on composite section.
L.L. = Live load
Imp. = Impact
Is. = Moment of inertia steel sec.
Sts. = Sec. mod. top steel section
SBs. = Sec. mod. bot. steel section
Ic. = Moment of inertia comp. sec.
Stc. = Sec. mod. top comp. sec.
SBc. = Sec. mod. bot. comp. sec.

FOR INFORMATION ONLY
SN 041-0072

DESIGNED G.M.
CHECKED J. Mullenix
DRAWN P.G. Barnett
CHECKED
EXAMINED Nov. 21 1969
PASSED
APPROVED

I-2-B 9-1-65

BEARING DETAILS
F.A.I. RT. 64 SEC. 41-9HB-2
JEFFERSON COUNTY
STATION 3068 + 62.53

USER NAME = david.a.wilson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666633 '/ in.	CHECKED -	REVISED -
PLOT DATE = 10/18/2023	DATE -	REVISED -

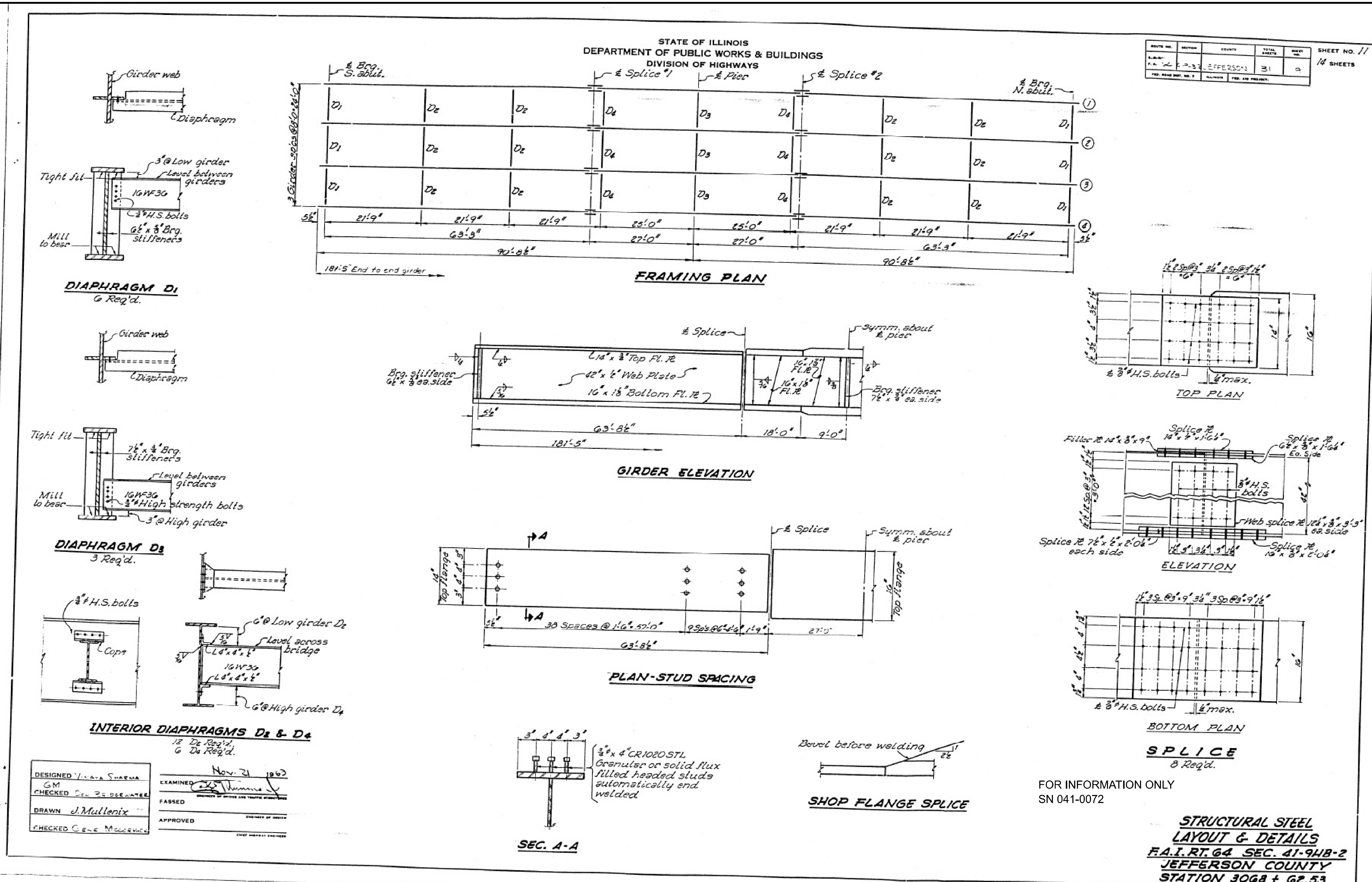
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 041-0072
STRUCTURE INFORMATION
SCALE: SHEET 33 OF 65 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	33

CONTRACT NO. 78A04
ILLINOIS FED. AID PROJECT

MODEL: SN 041-0072_2 [Sheet]
FILE NAME: pw://ildot-pw.bentley.com:PWIDOT/Documents/IDOT Offices/District 9/ORD Projects/78A04/CADData/CADsheets/D978A04-Structure_Information_4-10.dgn


STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS
SHEET NO. 11
14 SHEETS
JEFFERSON
FRAMING PLAN
GIRDER ELEVATION
PLAN-STUD SPACING
SEC. A-A
SHOP FLANGE SPLICE
DIAPHRAGM D1
6 Req'd.
DIAPHRAGM D3
3 Req'd.
INTERIOR DIAPHRAGMS D2 & D4
12 D2 Req'd.
6 D4 Req'd.
TOP PLAN
ELEVATION
BOTTOM PLAN
SPLICE
8 Req'd.
181'-5" End to end girder
90'-8½"
63'-3"
27'-0"
¾"φ x 4" CR1020 STL Granular or solid flux filled headed studs automatically end welded
Bevel before welding
DESIGNED
CHECKED
DRAWN J. Mullenix
CHECKED
EXAMINED
PASSED
APPROVED
Nov. 21 1963
STRUCTURAL STEEL
LAYOUT & DETAILS
F.A.I. RT. 64 SEC. 41-9HB-2
JEFFERSON COUNTY
STATION 3068 + 62.53

FOR INFORMATION ONLY
SN 041-0072

MODEL: SN 041-0072_3 [Sheet]
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USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 041-0072
STRUCTURE INFORMATION

SCALE: SHEET 34 OF 65 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	34
		CONTRACT NO. 78A04		
		ILLINOIS FED. AID PROJECT		

Bench Mark: "a" in top of hubguard 10± Rt. of Sta. 899+77, Elev. 399.32
Exist. Structure: #073-0023. Built in year 1927 as SBI Route 152, Section 104B of Sta. 904+29. 8 R.C.D.G. spans at ±53' and a 160' long Penn truss span. Total length bk. to bk. abuts. ±586'. O. to O. watertable ±24'-8". The Contractor shall remove the existing superstructure and replace it with a new one consisting of 24" deep wide flange beams and 7½" concrete deck. Existing substructure elements shall be repaired as necessary and widened as shown.
Traffic shall be maintained by utilizing Stage Construction.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

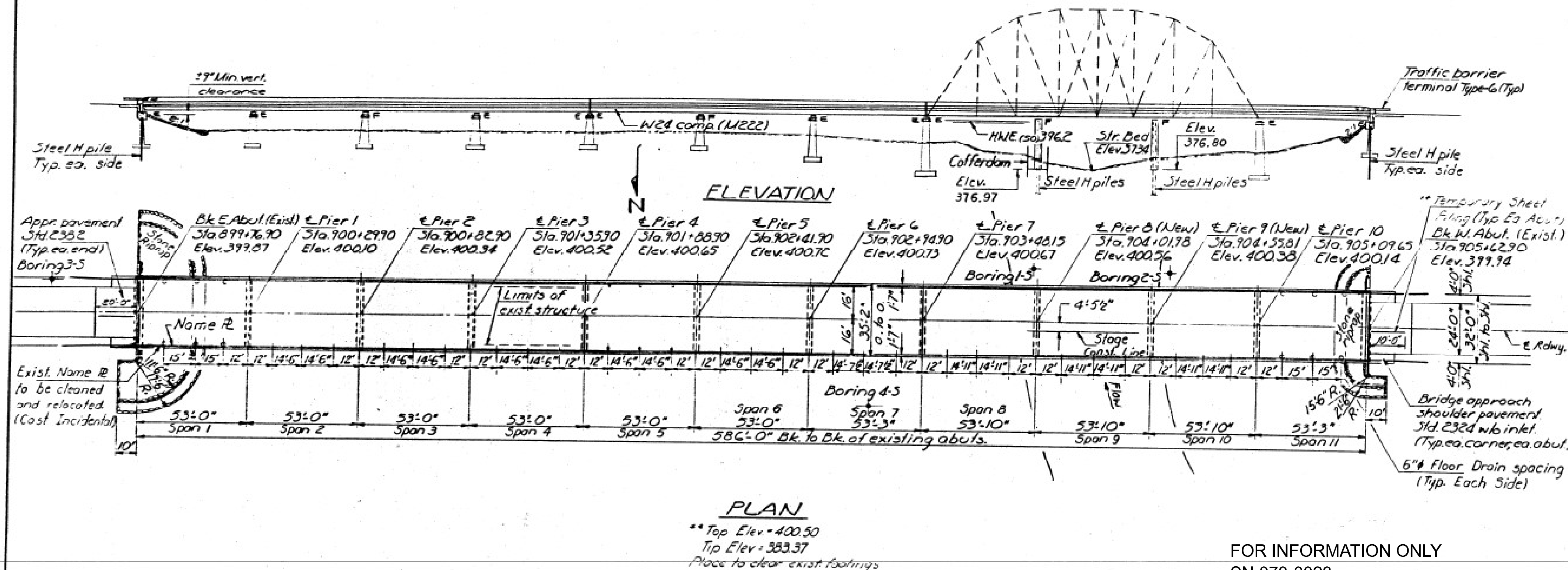
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
152	*	PERRY	39	8

SHEET NO. 1
30 SHEETS

* 104-BC-BR

GENERAL NOTES

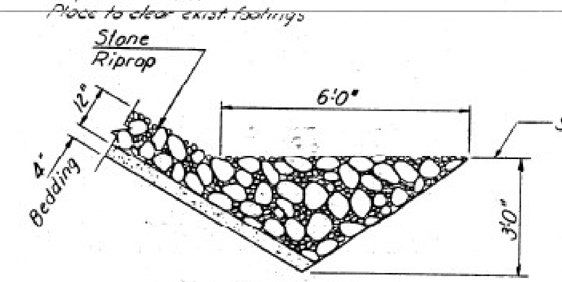
See Proposal for Boring Data.
Fasteners shall be high strength bolts AASHTO M 164, Type 1. Bolts ⅞" Φ, open holes 15/16" Φ, unless otherwise noted.
Calculated weight of AASHTO M 222 Structural Steel 334,420 Pounds.
AASHTO M 222 structural steel shall not be painted except, that for a distance of three times the depth of the beams (but not exceeding 6 feet) each way from deck joints, the AASHTO M 222 structural steel shall be cleaned and given one coat of the zinc-silicate primer and a dark maroon vinyl finish coat. Both coats may be applied in the shop with touch up in the field.
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.
All structural steel shall be AASHTO M 222 unless otherwise noted.
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 of the wide flange beams.
Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-53 Grade 60.
Layout of stone riprap may be varied in the field to suit ground condition as directed by the Engineer.
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. (For Type I Elastomeric Bearings, shims of the dimensions of top plate shall be provided and placed as detailed).
The contractor shall drive 2 steel HP10x42 test piles in permanent locations; 1 at Pier 1 (Temporary truss support) and 1 at the West Abut as directed by the Engineer before ordering the remainder of piles.



FOR INFORMATION ONLY
SN 073-0023

STATION 904+29.00
BUILT 198 BY
STATE OF ILLINOIS
F.A. RT. 865 SEC. 104 BC-BR
LOADING HS 20
STR. NO. 073-0023

NAME PLATE
(See Std. 2113)

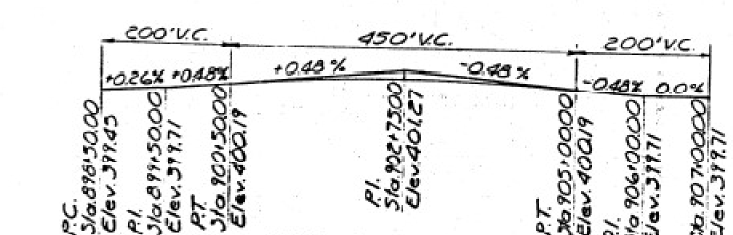


STONE RIPRAP ANCHOR DETAIL

* At Pier 8

TOTAL BILL OF MATERIAL

	Item	Unit	Super	Sub	Total
	Removal of Existing Superstructures	Each	1		1
	Concrete Removal	Cu. Yd.		63	63
	Structure Excavation	Cu. Yd.		125	125
	Floor Drains	Each	66		66
	Protective Coat	Sq. Yd.	2571		2571
	Class X Concrete	Cu. Yd.	620.6	227.7	848.3
	Structural Steel	Lump Sum	1		1
	Stud Shear Connectors	Each	10275		10275
	Reinforcement Bars	Pound		24860	24860
	Reinforcement Bars (Epoxy Coated)	Pound	168100		168100
	Steel Piles HP10 x 42	Lin. Ft.		1688	1688
	Test Piles Steel HP10 x 42	Each		2	2
	Name Plates	Each	1		1
	Stone Riprap	Tons		251	251
	Temporary Bridge Rail	Lin. Ft.	628		628
	Neoprene Expansion Joint 2"	Lin. Ft.	102		102
	Neoprene Expansion Joint 4"	Lin. Ft.	34		34
	Elastomeric Bearing Assembly, Type I	Each	50		50
*	Cofferdam Excavation	Cu. Yd.		31	31
*	Cofferdams	Each		1	1
	Temporary Sheet Piling	Sq. Ft.		342	342



PROFILE GRADE

DESIGNED	
CHECKED	
DRAWN	R.D.
CHECKED	

May 8, 1985
EXAMINED — ENGINEER OF BRIDGE DESIGN
PASSED — James T. Kaylor, ENGINEER OF BRIDGES AND STRUCTURES
APPROVED — DIRECTOR OF HIGHWAYS

JAMES T. BAYSURA 62-2143 (seal)

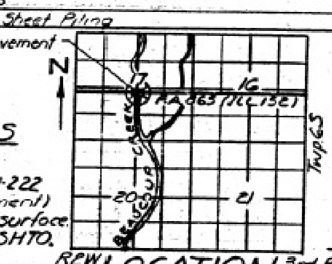
WATERWAY INFORMATION

Drainage Area 284 Sq. mi. Low Grade Elev. 397.40 @ Sta. 882+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	50	14400	4294	4507	396.21	.68	.64	396.89	396.85
	Overflow		5100	1670	1670					
	Total		19500	5964	6177					
Base	Main Channel	100	16900	4382	4890	396.95	.85	.69	397.80	397.64
	Overflow		5800	1797	1797					
	Total		22700	6179	6687					
Over-topping	Main Channel	90	16500	4350	4828	396.83	0.81	.69	397.64	397.52
	Overflow		5688	1776	1776					
	Total		22188	6126	6604					

DESIGN STRESSES
f'c = 3,500 psi
fy = 50,000 psi (Str. Steel) M-222
fy = 60,000 psi (Reinforcement)
Allow 25#/sq. ft. for future wearing surface
Design Specifications: 1983 AASHTO.

LOADING HS20-44

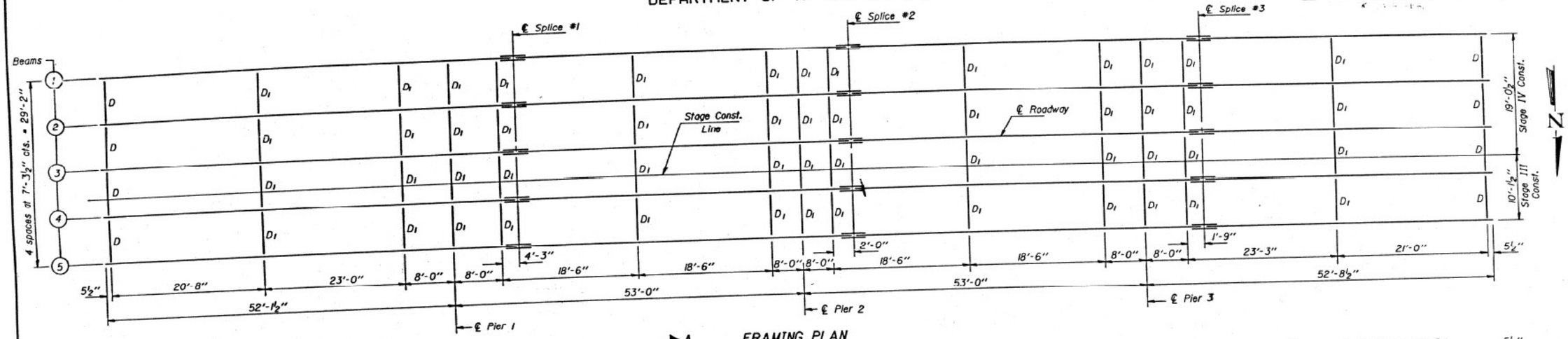


LOCATION SKETCH

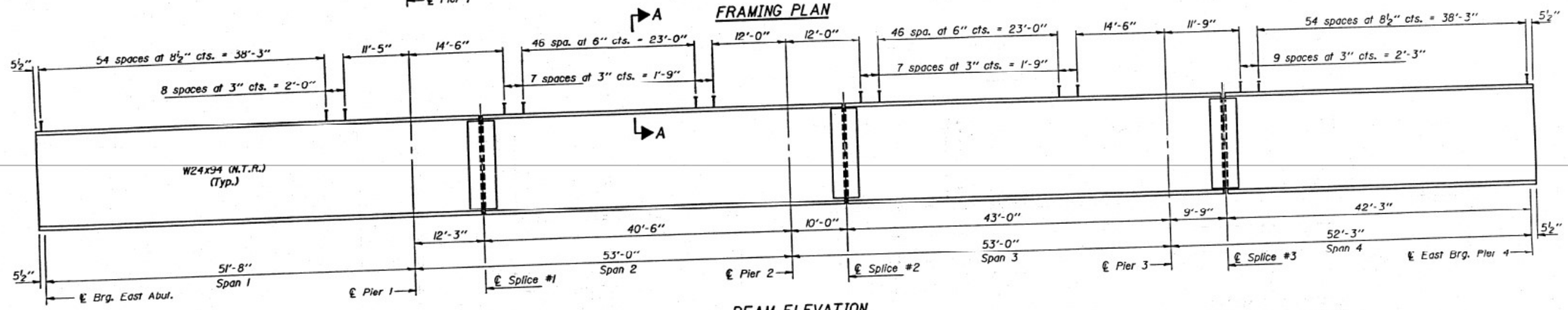
GENERAL PLAN
ILL. RTE. 152 OVER
BEAUCOUP CREEK
F.A. RTE. 865 SEC. 104 BC-BR
PERRY COUNTY
STA. 904+29

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

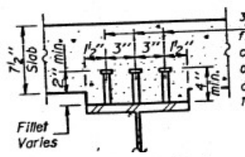
SHEET NO. 14
30 SHEETS



FRAMING PLAN



BEAM ELEVATION



¾"ϕ Granular or solid flux filled headed studs conforming to Art. 710.38 of the Std. Spec's. automatically end welded to flange.

SECTION A-A

Notes: N.T.R. denotes the members subject to "Notch Toughness Requirements."
See sheet #17 for the diaphragm and splice details.
The end diaphragms D between Beams 3 and 4 shall be connected during Stage IV Construction.
Number of shear studs required for Spans 1 thru 4 = 3735.

FOR INFORMATION ONLY
SN 073-0023

DESIGNED	K.R. Ghanta	EXAMINED	May 8 1985
CHECKED		PASSED	
DRAWN	Mercado R.D.	APPROVED	
CHECKED	TAB		

STRUCTURAL STEEL - SPANS 1 THRU 4
F.A. RTE. 865 SEC. 104BC-BR
PERRY COUNTY
STA. 904+29.00

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 073-0023
STRUCTURE INFORMATION

SCALE: | SHEET 36 OF 65 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	36
		CONTRACT NO. 78A04		
	ILLINOIS FED. AID PROJECT			

MODEL: SN 073-0023_2 [Sheet]
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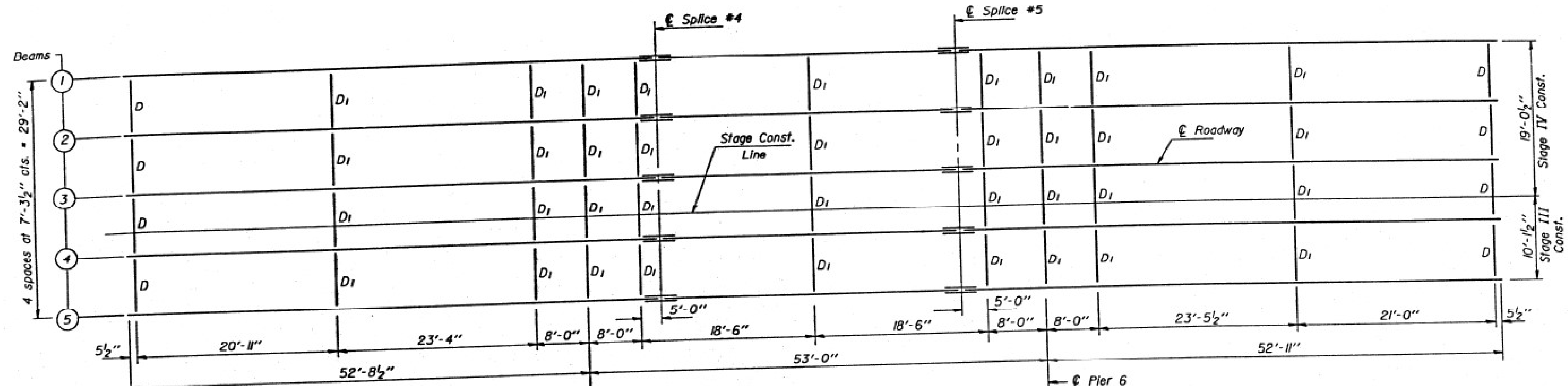
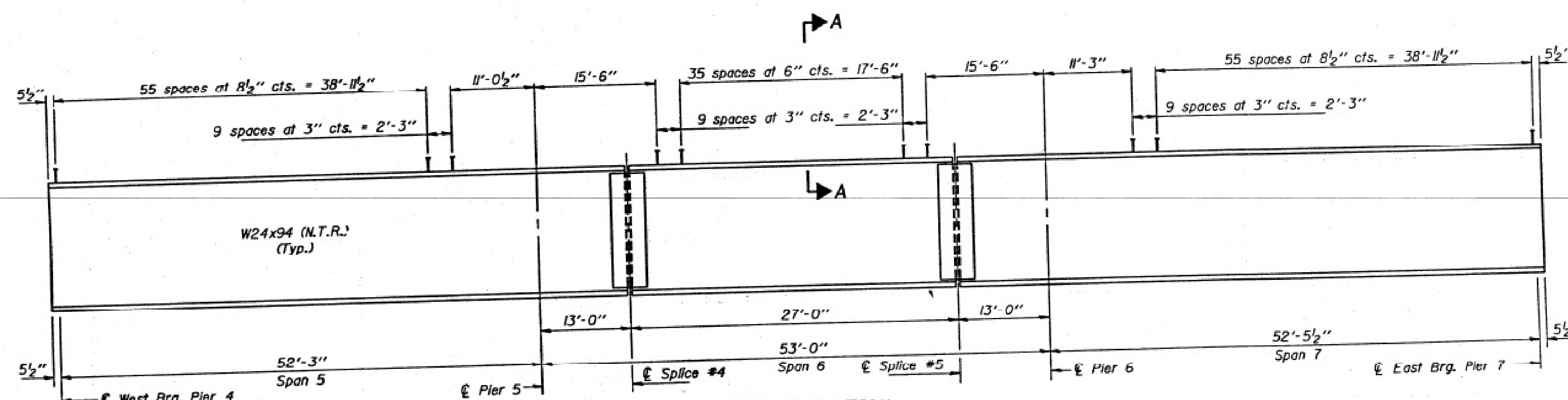
SHEET NO. 15
30 SHEETS

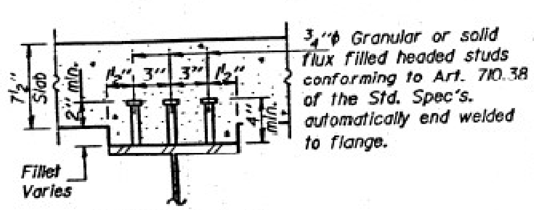
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



FRAMING PLAN



BEAM ELEVATION



SECTION A-A

Notes: N.T.R. denotes the members subject to "Notch Toughness Requirements."
See sheet #17 for the diaphragm and splice details.
The end diaphragms D between Beams 3 and 4 shall be connected during Stage IV Construction.
Number of shear studs required for Spans 5 thru 7 = 2760.

FOR INFORMATION ONLY
SN 073-0023

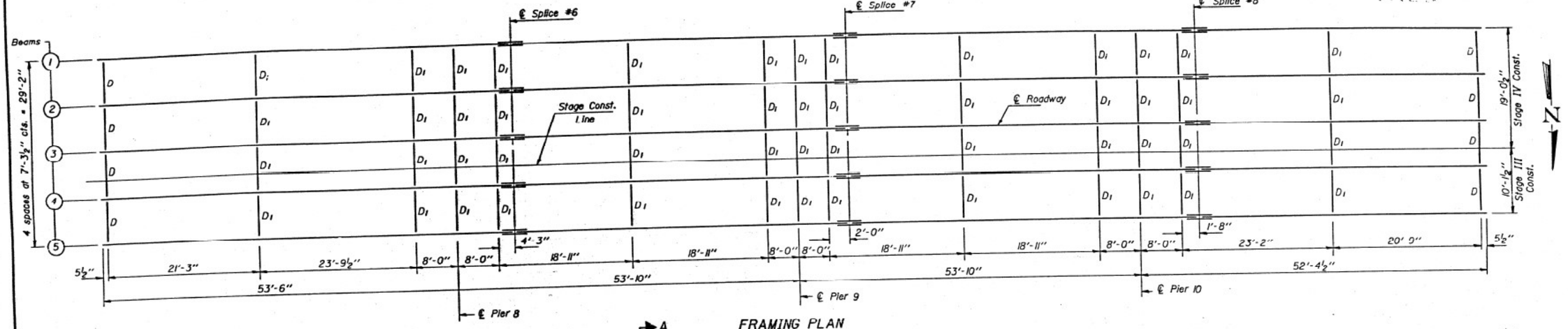
STRUCTURAL STEEL - SPANS 5 THRU 7
F.A. RTE. 865 SEC. 104BC-BR
PERRY COUNTY
STA. 904+29.00

DESIGNED K.P. Sharko
CHECKED Farmia Baker
DRAWN Mercado R.D.
CHECKED
EXAMINED May 8 1985
PASSED James T. Rayburn
APPROVED

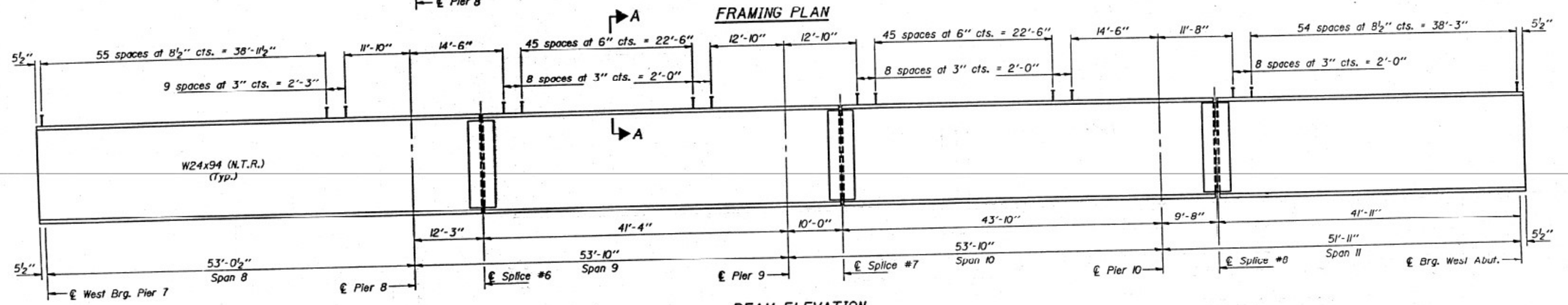
USER NAME = david.a.wilson	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 073-0023 STRUCTURE INFORMATION	F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	37
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 78A04		
PLOT DATE = 10/18/2023	DATE -	REVISED -		SCALE: SHEET 37 OF 65 SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 16
30 SHEETS

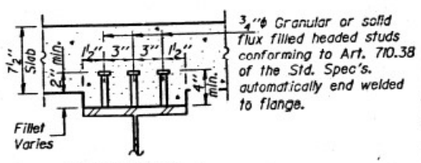


FRAMING PLAN



BEAM ELEVATION

Notes: N.T.R. denotes the members subject to "Notch Toughness Requirements." See sheet #17 for the diaphragm and splice details.
The end diaphragms D between Beams 3 and 4 shall be connected during Stage IV Construction.
Number of shear studs required for Spans 8 thru 11 = 3780.



¾"ϕ Granular or solid flux filled headed studs conforming to Art. 710.38 of the Std. Spec's. automatically end welded to flange.

SECTION A-A

DESIGNED V. R. Ghanta
CHECKED
DRAWN Mercado R.D.
CHECKED

May 8 19 81
EXAMINED
PASSED
APPROVED
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGE AND STRUCTURES
DIRECTOR OF HIGHWAYS

FOR INFORMATION ONLY
SN 073-0023

STRUCTURAL STEEL - SPANS 8 THRU 11
F.A. RTE. 865 SEC. 104BC-BR
PERRY COUNTY
STA. 904+29.00

MODEL: SN 073-0023_4 [Sheet]
FILE NAME: pw://ilsdocpw.bentley.com:PWIDOT/Documents/IDOT Offices/District 9/ORD Projects/78A04/CADData/CADSheets/D978A04-Structure_Information_4-10.dgn

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 073-0023
STRUCTURE INFORMATION

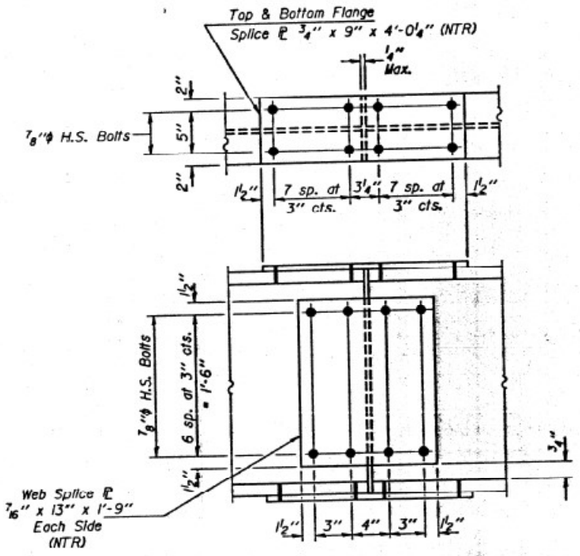
SCALE: | SHEET 38 OF 65 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	38
		CONTRACT NO. 78A04		
	ILLINOIS FED. AID PROJECT			

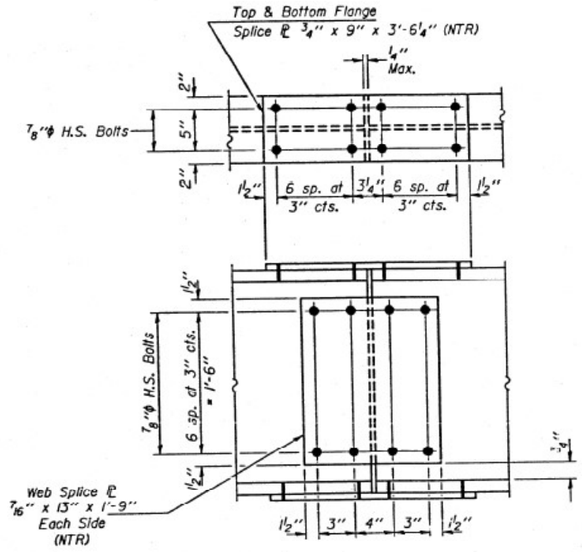
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.		PERRY	65	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 17
30 SHEETS

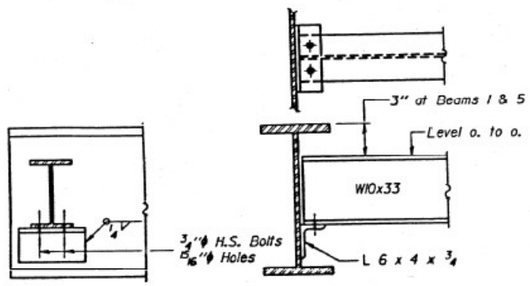
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



SPLICES #1, 4, 5, & 6

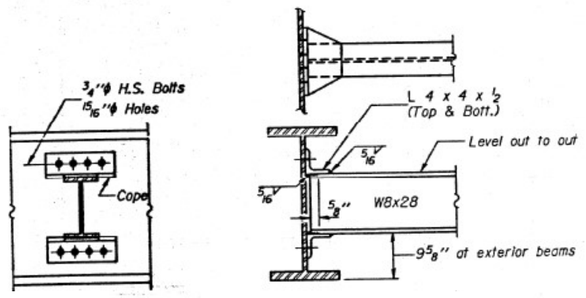


SPLICES #2, 3, 7 & 8



DIAPHRAGM D
24 Required

Note: Two hardened washers shall be required over all 15/16"ϕ holes.



DIAPHRAGM D1
140 Required

Notes: NTR denotes the members subject to "Notch Toughness Requirements". The end diaphragms between Beams 3 and 4 shall be connected after Stage III Construction is completed.

FOR INFORMATION ONLY
SN 073-0023

DESIGNED	K.A. Smania	May 8 1981
CHECKED	Illinois Division	EXAMINED
DRAWN	R. Daty	PASSED
CHECKED	AB	APPROVED

I-2-D 8-30-80

STRUCTURAL STEEL DETAILS
F.A. RTE. 865 SEC. 104BC-BR
PERRY COUNTY
STA. 904+29.00

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 073-0023
ST RUCTURE INFORMATION

SCALE: | SHEET 39 OF 65 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	39
		CONTRACT NO. 78A04		
	ILLINOIS FED. AID PROJECT			

MODEL: SN 073-0023_S [Sheet]
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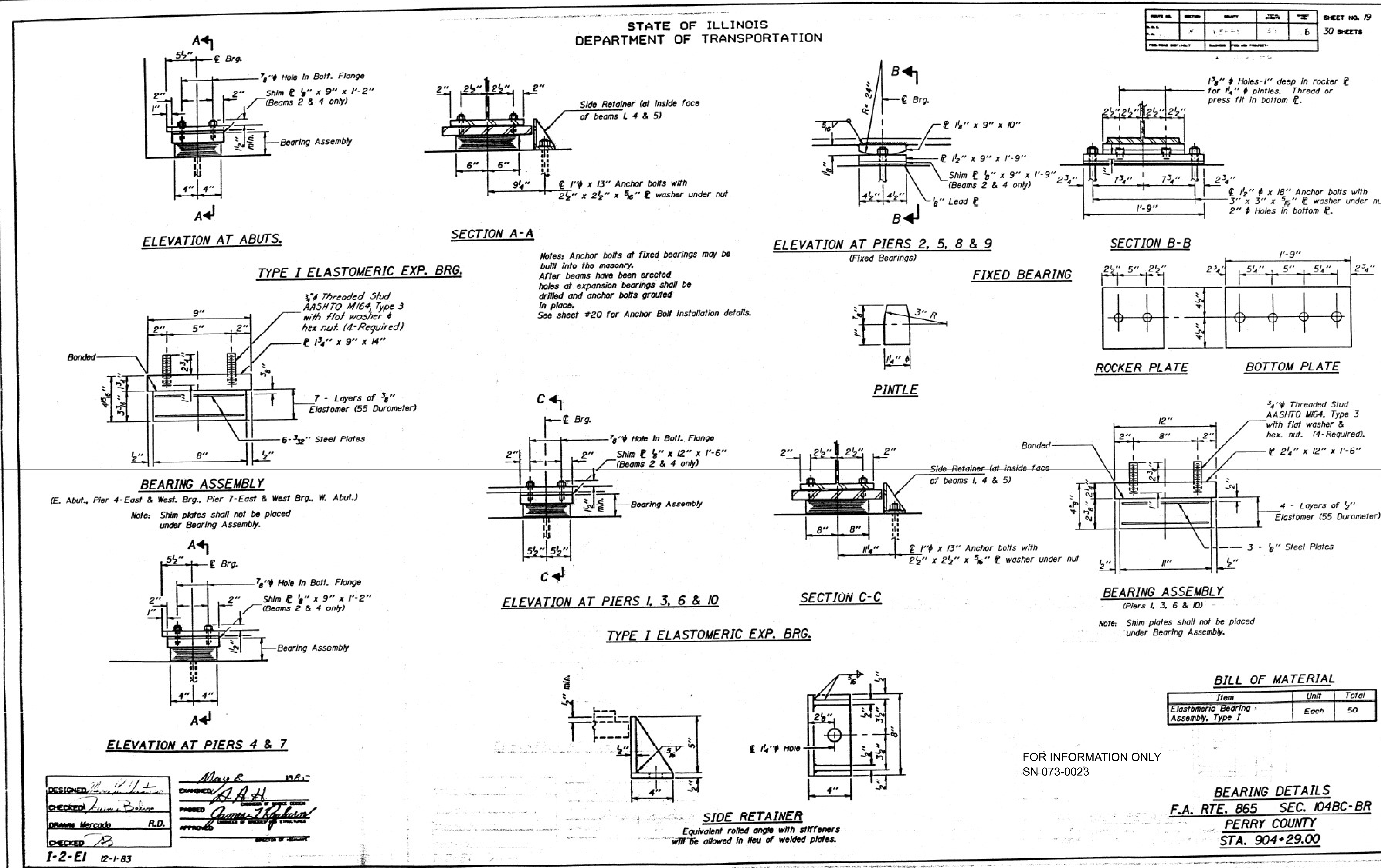


STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
SHEET NO. 19
30 SHEETS
ELEVATION AT ABUTS.
7/8″ϕ Hole in Bott. Flange
Shim ℄ 1/8″ x 9″ x 1′-2″ (Beams 2 & 4 only)
Bearing Assembly
SECTION A-A
Side Retainer (at inside face of beams 1, 4 & 5)
℄ 1″ϕ x 13″ Anchor bolts with 2 1/2″ x 2 1/2″ x 5/16″ ℄ washer under nut
TYPE I ELASTOMERIC EXP. BRG.
Notes: Anchor bolts at fixed bearings may be built into the masonry.
After beams have been erected holes at expansion bearings shall be drilled and anchor bolts grouted in place.
See sheet #20 for Anchor Bolt installation details.
ELEVATION AT PIERS 2, 5, 8 & 9
(Fixed Bearings)
℄ 1 1/8″ x 9″ x 10″
℄ 1 1/2″ x 9″ x 1′-9″
Shim ℄ 1/8″ x 9″ x 1′-9″ (Beams 2 & 4 only)
1/8″ Lead ℄
SECTION B-B
1 3/8″ ϕ Holes-1″ deep in rocker ℄ for 1 1/4″ ϕ pintles. Thread or press fit in bottom ℄.
℄ 1 1/2″ ϕ x 18″ Anchor bolts with 3″ x 3″ x 5/16″ ℄ washer under nut
2″ ϕ Holes in bottom ℄.
FIXED BEARING
PINTLE
ROCKER PLATE
BOTTOM PLATE
3/4″ϕ Threaded Stud AASHTO M164, Type 3 with flat washer & hex nut. (4-Required)
℄ 1 3/4″ x 9″ x 14″
Bonded
7 - Layers of 3/8″ Elastomer (55 Durometer)
6 - 3/32″ Steel Plates
BEARING ASSEMBLY
(E. Abut., Pier 4-East & West Brg., Pier 7-East & West Brg., W. Abut.)
Note: Shim plates shall not be placed under Bearing Assembly.
ELEVATION AT PIERS 1, 3, 6 & 10
Shim ℄ 1/8″ x 12″ x 1′-6″ (Beams 2 & 4 only)
SECTION C-C
BEARING ASSEMBLY
(Piers 1, 3, 6 & 10)
℄ 2 1/4″ x 12″ x 1′-6″
4 - Layers of 1/2″ Elastomer (55 Durometer)
3 - 1/8″ Steel Plates
Note: Shim plates shall not be placed under Bearing Assembly.
ELEVATION AT PIERS 4 & 7
SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.
℄ 1 1/4″ϕ Hole
BILL OF MATERIAL
BEARING DETAILS
F.A. RTE. 865 SEC. 104BC-BR
PERRY COUNTY
STA. 904+29.00
DESIGNED
CHECKED
DRAWN Mercado R.D.
CHECKED
EXAMINED
PASSED
APPROVED
I-2-EI 12-1-83

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	50

FOR INFORMATION ONLY
SN 073-0023

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 073-0023
STRUCTURE INFORMATION

SCALE: SHEET 40 OF 65 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	40

CONTRACT NO. 78A04
ILLINOIS FED. AID PROJECT

Bench Mark: '□' Cut in Southeast wingwall Lt. at Sta. 780+62 Elev. 340.41

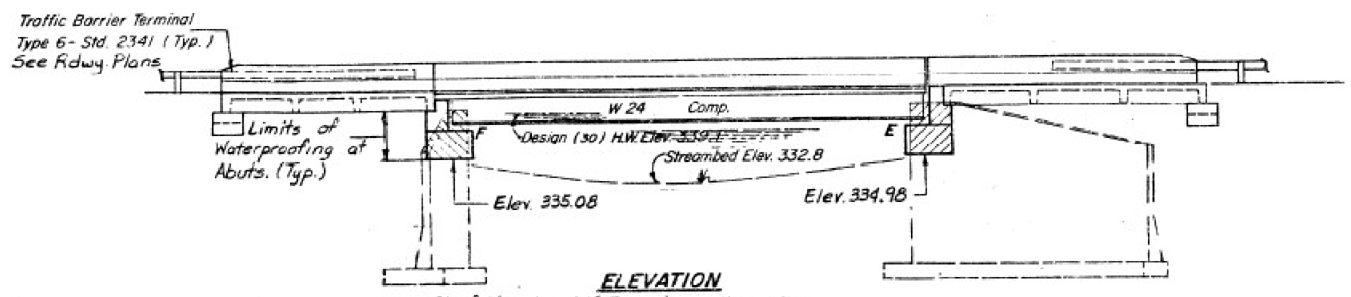
Existing Structure: #077-0015 is 45'-3" long x 24'-0" wide. Built as S.B.I. Rte. 2, Sec. 14A, at Sta. 780+47 in 1920. The existing single span Conc. Thru Girder Superstructure shall be removed and replaced with @ 7½" Slab on wide flange beams. The existing Abuts. shall be rebuilt as required for the new widened superstructure. Stage construction shall be utilized so as to maintain one way traffic during reconstruction.

No Salvage:

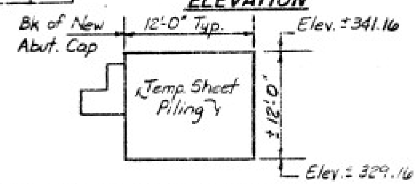
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

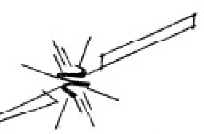
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 2936	14A-BR	PULASKI	26	10

SHEET NO. 1
17 SHEETS



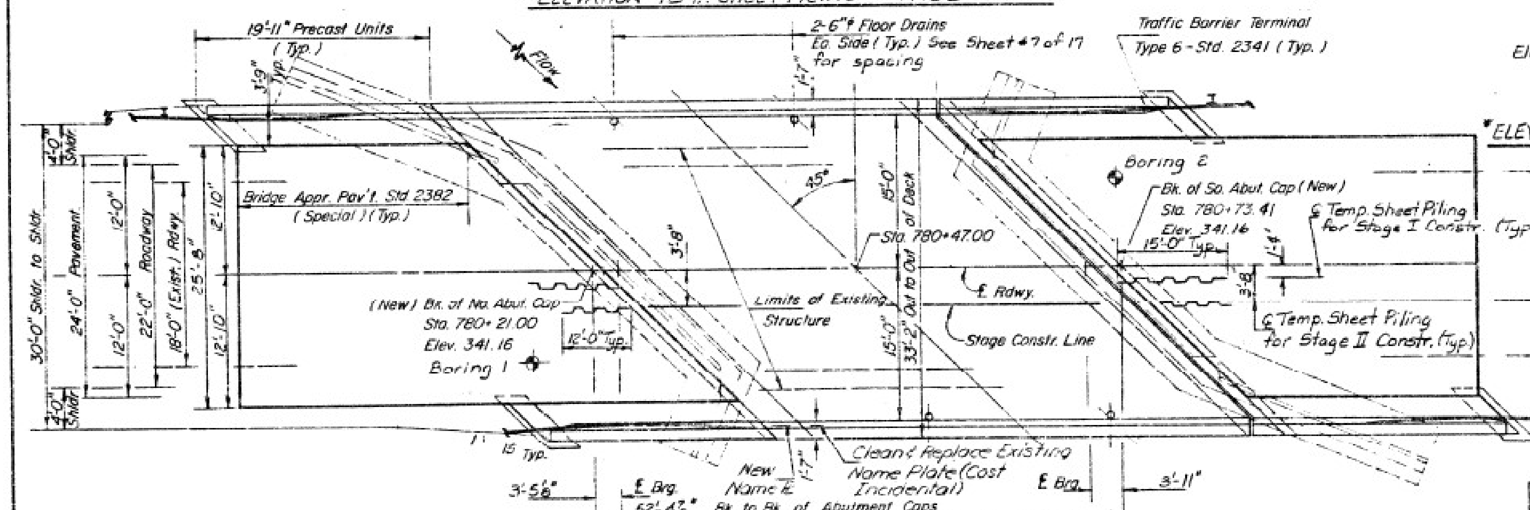
ELEVATION



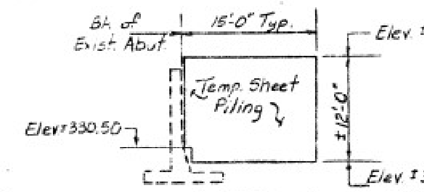


*ELEVATION-TEMP. SHEET PILING - STAGE II CONSTR.

* The information shown for the temporary sheet piling is estimated. It is the Contractor's responsibility to provide a design of the temporary sheet piling and associated members, if required, subject to the approval of the Engineer.



PLAN



*ELEVATION-TEMP. SHEET PILING - STAGE I CONSTR.

GENERAL NOTES

See Proposal for Boring Data.

Fasteners shall be high strength bolts (AASHTO M 164, Type 3). Bolts ¾" ⌀, open holes 15/16" ⌀, unless otherwise noted.

Calculated weight of AASHTO M222 Structural Steel = 23,230 Lbs.

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

All structural steel shall be AASHTO M 222.

Anchor bolts shall be set before bolting diaphragms over supports.

AASHTO M 222 structural steel shall not be painted except, that for a distance of three times the depth of the beams each way from deck joints, the AASHTO M 222 structural steel shall be cleaned and given one coat of the zinc-silicate primer and a dark maroon vinyl finish coat. Both coats may be applied in the shop with spot painting only in the field.

Field welding of construction accessories will not be permitted to the bottom flange of the wide flange beams (W24 x 76). Field welding in other areas will be permitted only when approved by the Engineer.

The structural steel bearing plates of the Elastomeric Bearing Assembly and the fixed bearings shall conform to the requirements of AASHTO M222.

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 (W24 x 76).

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

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

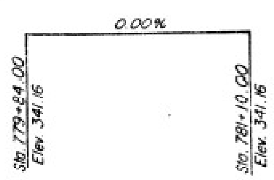
The back face of Closed Abutments shall be waterproofed according to Art. 503.11 of the Std. Specs.

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 -4,090 lbs., and ¾"x 12" hooked bolts.

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Class X Concrete	Cu. Yd.	62.0	52.6	114.6
Reinforcement Bars	Lbs.	1,660	5,730	7,390
Reinforcement Bars (Epoxy Coated)	Lbs.	13,920		13,920
Removal of Existing Superstructure	Each	1		1
Concrete Removal	Cu. Yd.		14	14
Expansion Bolts (¾" ⌀)	Each		67	67
Floor Drains	Each	4		4
Structural Steel	L. Sum	1		1
Name Plates	Each	1		1
Stud Shear Connectors	Each	770		770
Elastomeric Bearing Assembly, Type I	Each		5	5
Repair Concrete Structure	Sq. Ft.		5.5	5.5
Temporary Bridge Rail	Lin. Ft.	116		116
Precast Concrete Bridge Slab	Sq. Ft.	299		299
Protective Coat	Sq. Yds.	207		207
Epoxy Crack Sealing	Lin. Ft.		9	9
Neoprene Expansion Joint (2")	Lin. Ft.	46		46
Structure Excavation	Cu. Yds.		67	67
Temporary Support System	L. Sum		1	1
Temporary Sheet Piling	Sq. Ft.		648	648
Furnishing Steel Piles (HP8 x 36)	Lin. Ft.		20	20
Preformed Joint Seal (1¾")	Lin. Ft.	46		46



PROFILE GRADE

F.A.S. Rte. 2936
(Along ℄ Roadway)

STATION 780+47.00
REBUILT 198_ BY
STATE OF ILLINOIS
F.A.S. RT. 2936 SEC 14A-BR
F.A. PROJ. BHS-2936(107)
LOADING HS20
STR. NO. 077-0015

NAME PLATE
See Std. 2113

FOR INFORMATION ONLY
SN 077-0015

WATERWAY INFORMATION

Drainage Area = 2.0 sq. mi. Low Grade Elev. 340.71 @ Sta. 775+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	272	174	152	339.1	0.10	0.08	339.20	339.18
Base	100	347	174	152	339.8	0.10	0.12	339.90	339.92
Overtopping									
Max. Calc.	500	440		152	340.4		0.20		340.60

DESIGN SPECIFICATIONS

Design Specifications: AASHTO (1983) and applicable Interims (1984 and 1985 Interim Specifications.)

LOADING HS 20-44

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

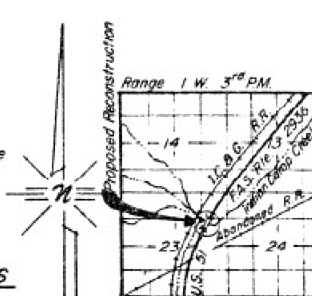
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinf.)
fy = 50,000 psi (Struct.) M 222

PRECAST UNITS

f'c = 4,500 psi
fc = 1,800 psi
fs = 20,000 psi n = 8



LOCATION SKETCH

GENERAL PLAN

U.S. Rte. 51 Over INDIAN CAMP CREEK Trib.
F.A.S. Rte. 2936 SECTION 14A-BR
PULASKI COUNTY
Sta. 780+47.00
Str. No. 077-0015

DESIGNED	[signature]	EXAMINED	[signature] ENGINEER OF BRIDGE DESIGN
CHECKED	[signature]	PASSED	James T. [signature] ENGINEER OF BRIDGES AND STRUCTURES
DRAWN	DAS L.W.	APPROVED	DIRECTOR OF HIGHWAYS
CHECKED	GRA TKM		

September 2, 1986

3-15-84
4-19-84

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 077-0015
STRUCTURE INFORMATION

SCALE: SHEET 41 OF 65 SHEETS STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	41
		CONTRACT NO. 78A04		
		ILLINOIS FED. AID PROJECT		

MODEL: SN 077-0015_1 [Sheet]
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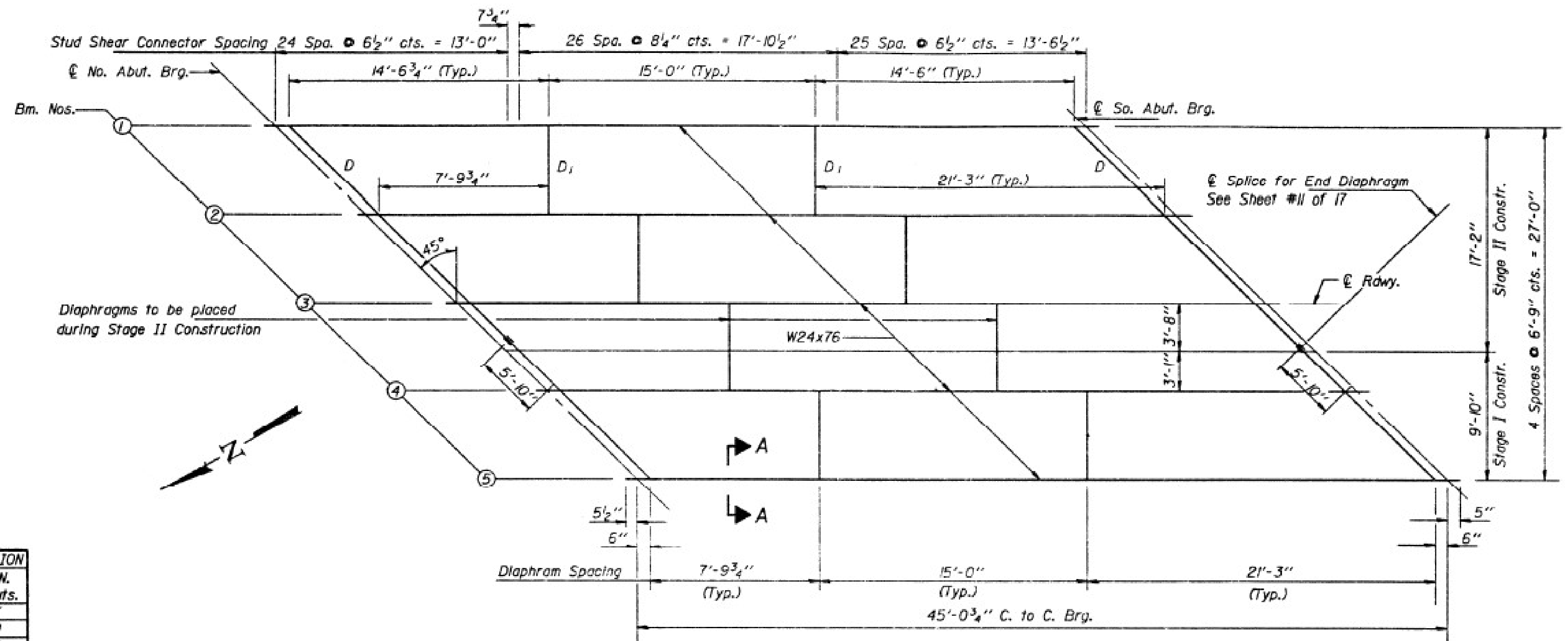
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 2936	14A-BR	PULASKI	26	15

SHEET NO. 10
17 SHEETS

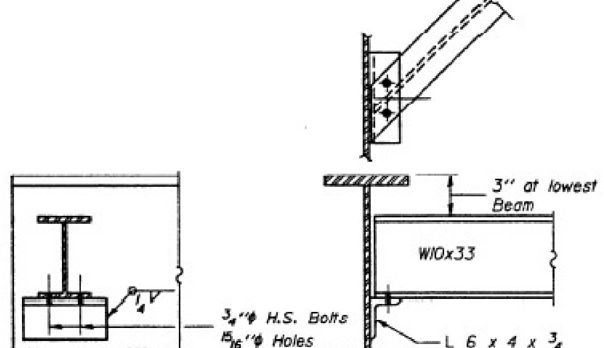


*** TOP OF FLANGE ELEVATION	℄ Brg. N. & S. Abuts.
Beam #1	340.27
Beam #2	340.39
Beam #3	340.49
Beam #4	340.39
Beam #5	340.27

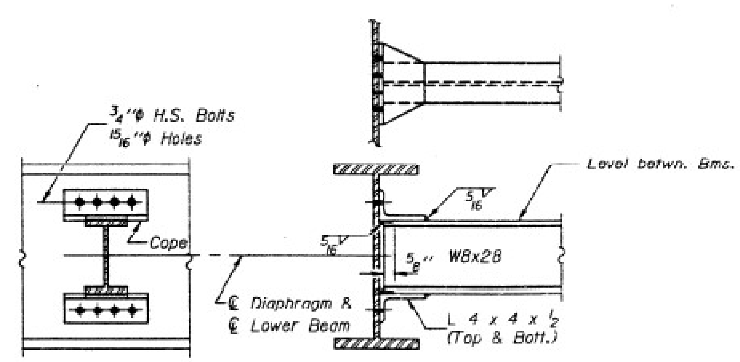
*** For Fabrication Only

FRAMING PLAN

(All structural steel shall be AASHTO M-222.)

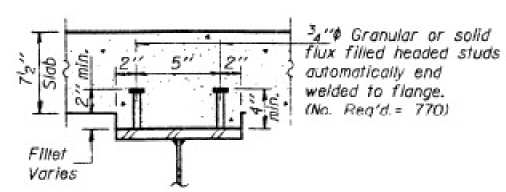


DIAPHRAGM D
8 Required



DIAPHRAGM D1
8 Required

Note: Two hardened washers shall be required over all 15/16"⌀ holes.



SECTION A-A

INTERIOR BEAM MOMENT TABLE		0.5Span
Is	(In⁴)	2100
Ic	(In⁴)	6834
Ss	(In³)	176
Sc	(In³)	283
℄	(K/ft.)	0.74
* M℄	('K)	187
s℄	(K/ft.)	0.333
* Ms℄	('K)	84
* M℄	('K)	329
* M (Imp)	('K)	99
5/3(M℄ + I)	('K)	713
Ma	('K)	1279
** Mu	('K)	1659
* fs℄ non-comp	(k.s.i.)	12.8
* fs℄ (comp)	(k.s.i.)	3.6
fs 5/3(℄ + I)	(k.s.i.)	30.2
fs (Overload)	(k.s.i.)	46.6
* VR	(K)	45.3

INTERIOR BEAM REACTION TABLE		No. Abuts.	So. Abut.
* R℄	(K)	24.1	24.1
* R℄	(K)	35.0	35.0
* Imp.	(K)	10.5	10.5
* R (Total)	(K)	69.6	69.6

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

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

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

Ma (Applied Moment)=1.3[M℄ + Ms℄ + 5/3(M + I)].

** Mu is the Full Plastic Moment Capacity for Compact, Braced section.

fs (Overload) is the sum of the stresses due to M℄ + Ms℄ + 5/3(M℄ + I).

* These Values are Service Load.

FOR INFORMATION ONLY
SN 077-0015

STRUCTURAL STEEL
F.A.S. RTE. 2936 SEC. 14A-BR
PULASKI COUNTY
STA. 780+47.00

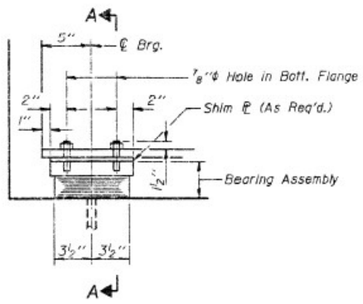
DESIGNED [signature]
CHECKED [signature]
DRAWN RON SOMMER
CHECKED [signature] DKM
EXAMINED [signature] ENGINEER OF BRIDGE DESIGN
PASSED [signature] ENGINEER OF BRIDGES AND STRUCTURES
APPROVED DIRECTOR OF HIGHWAYS
September 2, 19[illegible]

I-2-D 8-30-80

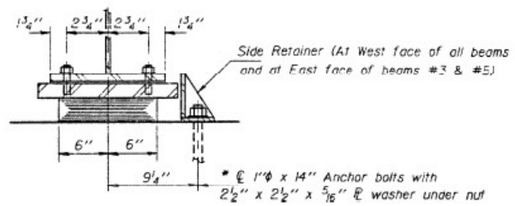
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.S. 2936	14A-BR	PULASKI	26	20
PROJ. NUMB. SEGMT. NO.	ILLINOIS	FED. AID PROJECT		

SHEET NO. 11
17 SHEETS

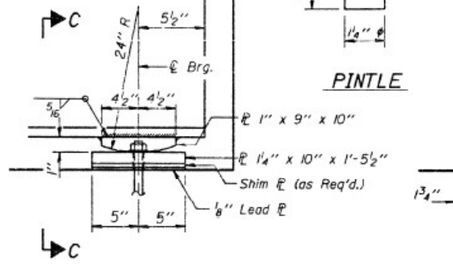


ELEVATION AT S. ABUT.

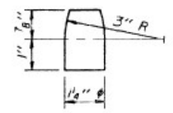


SECTION A-A

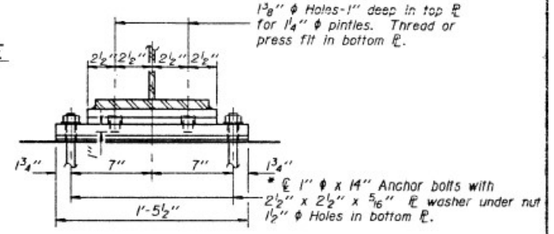
* Notes: Anchor bolts at fixed bearings may be built into the masonry.
See sheet #12 of 17 for Anchor Bolt installation.



ELEVATION AT N. ABUT.

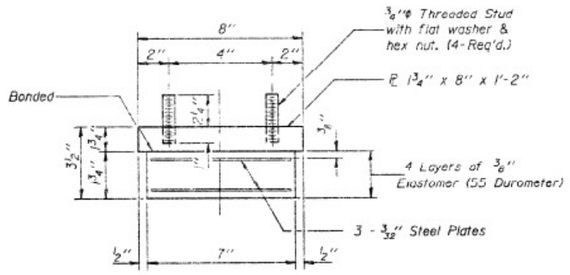


PINTLE



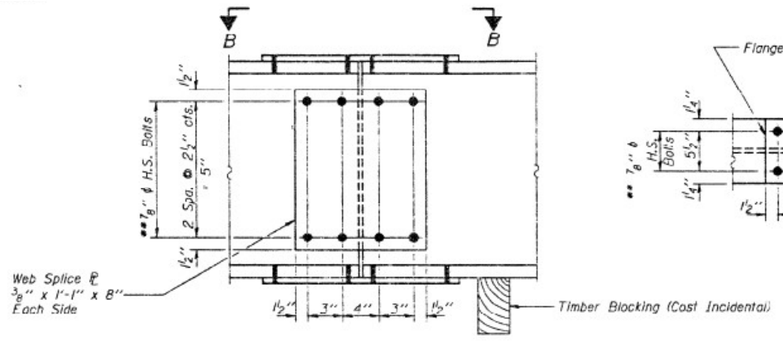
SECTION C-C

TYPE I ELASTOMERIC EXP. BRG.



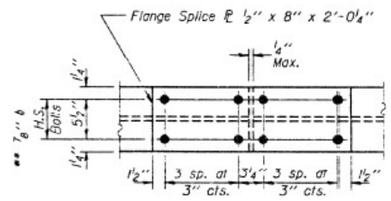
BEARING ASSEMBLY

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

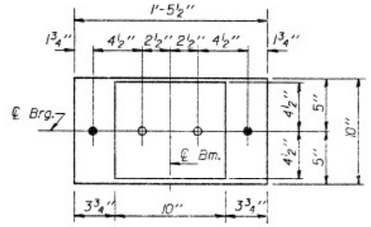


VIEW A-A

FIXED BEARING

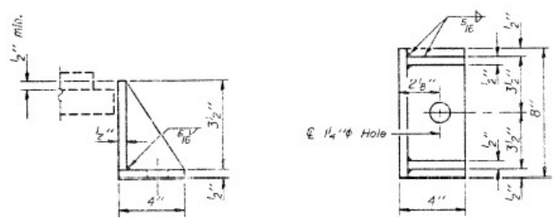


VIEW B-B



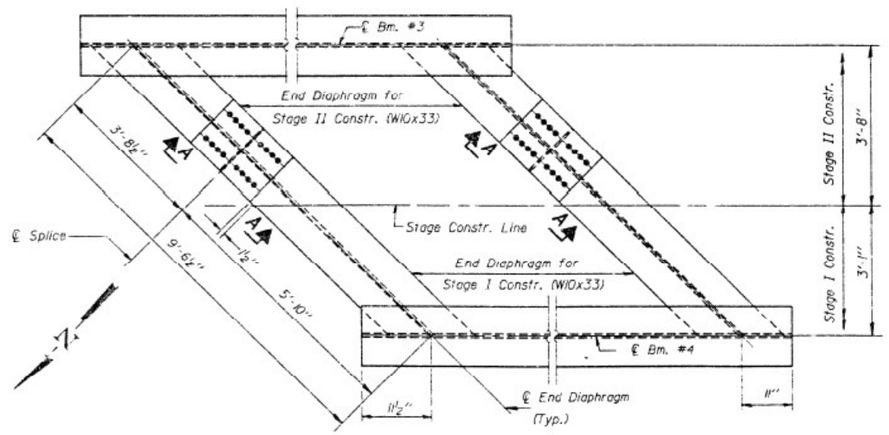
PLAN

** Fasteners shall be High Strength Bolts (AASHTO M164-Type 3). Bolts 7/8"ϕ. open holes 15/16"ϕ.



SIDE RETAINER

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. (7 Required)



END DIAPHRAGM DETAIL AT ABUTMENTS

FOR INFORMATION ONLY
SN 077-0015

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type I	Each	5

BEARING DETAILS

F.A.S. RTE. 2936 SEC. 14A-BR
PULASKI COUNTY
STA. 780+47.00

DESIGNED	
CHECKED	
DRAWN	RON SOMMER
CHECKED	DKM

EXAMINED _____ 19__
PASSED _____ ENGINEER OF BRIDGES AND STRUCTURES
APPROVED _____ ENGINEER OF BRIDGES AND STRUCTURES
DIRECTOR OF HIGHWAYS

V-2-E1 12-1-83

MODEL: SN 077-0015_3 [Sheet]
FILE NAME: //ils04pw.bentley.com:PWIDOT\Documents\IDOT Offices\District 8\ORD Projects\78A04\CADData\CADSheets\D78A04-Structure Information_4-10.dgn

USER NAME = david.a.wilson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -
PLOT DATE = 10/18/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 077-0015
ST RUCTURE INFORMATION

SCALE: | SHEET 43 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	43
		CONTRACT NO. 78A04		
	ILLINOIS	FED. AID PROJECT		

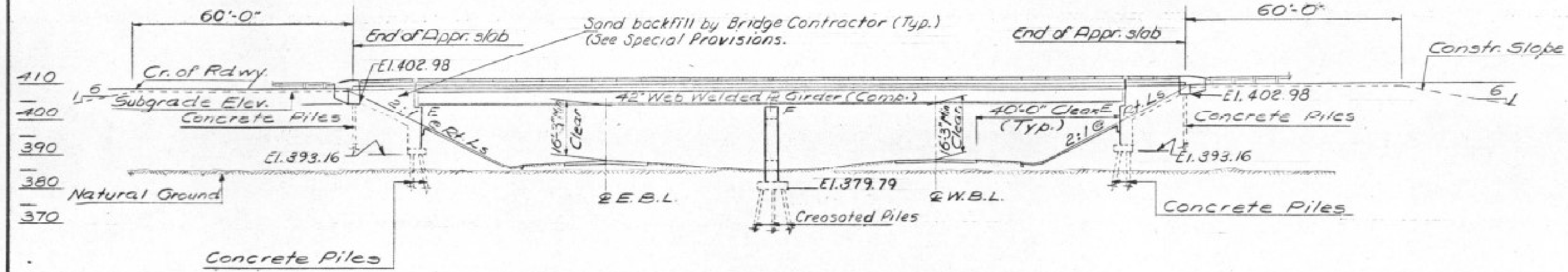
812-19

BM: 20± ft. rt. Sta. 34+10 - U.S.C. & G.S. Concord, 1961 - Elev. 384.43

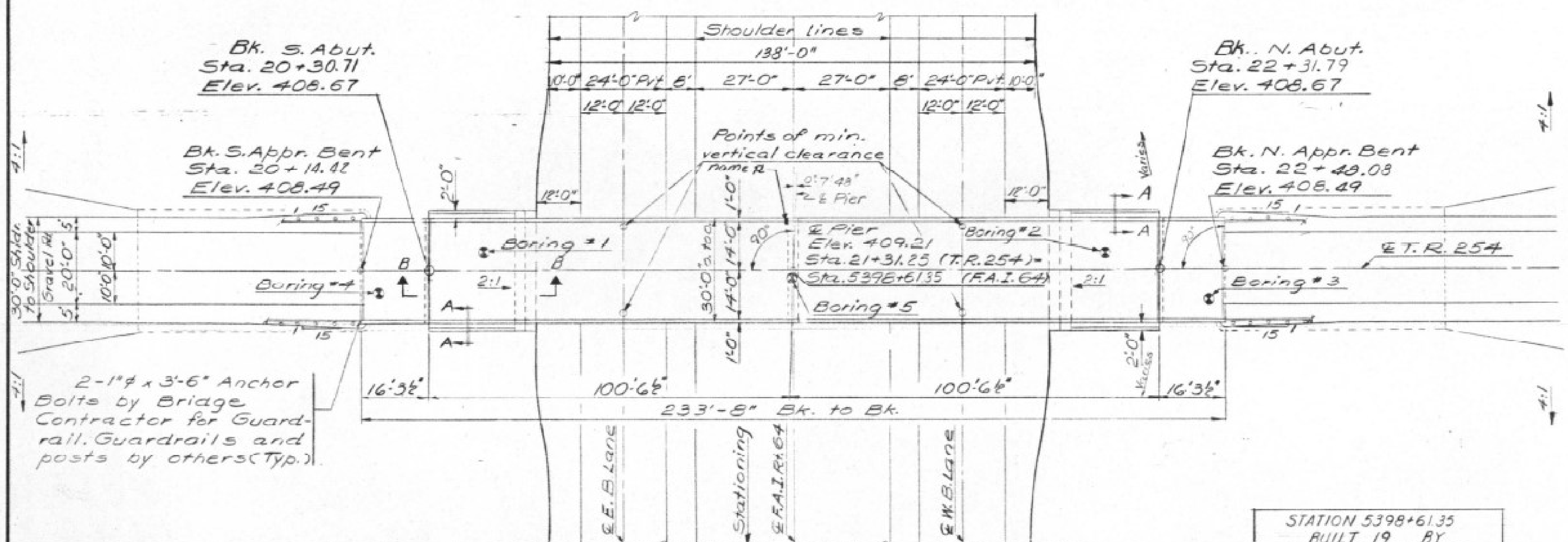
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 64	97-1HB3	WHITE	26	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
12 SHEETS



ELEVATION
Scale 1" = 20'-0"



PLAN
Scale 1" = 20'-0"

STATION 5398+61.35
BUILT 19 BY
STATE OF ILLINOIS
F.A.I. RT. 64 - SEC. 97-1HB-3
F.A. PROJECT: I-64-4(47)
LOADING HS15

NAME PLATE
(See Std. 2113-1)

GENERAL NOTES

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

The Basic Lead Silico Chromate paint system shall be used for shop & 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 riveting diaphragms over supports.

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

The Contractor shall drive Two Concrete test piles in a permanent location. One at the South Appr. Bent and one at the North Appr. Bent and one creosoted test pile in a permanent location @ Pier as directed by the Engineer before ordering the remainder of piles.

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

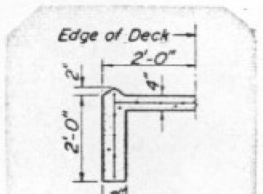
The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

Calculated plan weight of Structural Steel = 176,180 #

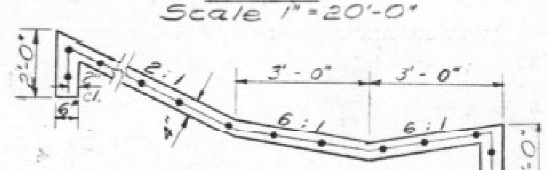
Field connections shall be bolted using high strength bolts. Bolts 7/8" φ, open holes 15/16" φ unless otherwise noted.

Item	Unit	Super	Sub.	Total
Structure Excavation	Cu. Yds.		52	52
Protective Coat	Sq. Yds.	866		866
Class X Concrete	Cu. Yds.	224.0	155.7	379.7
Structural Steel	L.S.	0.29		0.29
Stud Shear Connectors	Each	1488		1488
Aluminum Railing	Lin. ft.	456		456
Reinforcement Bars	Lbs.	55,830	19,190	75,020
Concrete Piles	Lin. ft.		1756	1756
Test Piles (Concrete)	Each		2	2
Creosoted Piles over 38'	Lin. ft.		1000	1000
Test Piles (timber)	Each		1	1
Name Plates	Each		1	1
Slope Wall (4")	Sq. Yds.		257	257
Preformed Jt. Sealer	Lin. ft.	60		60
Sand Backfill	Cu. Yds.		160	160

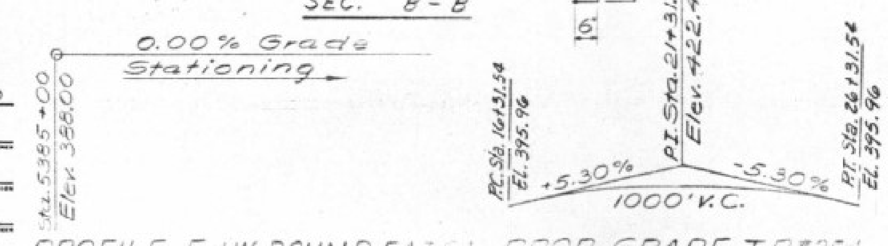
FOR INFORMATION ONLY
SN 097-0048



SECTION A-A



SEC. B-B



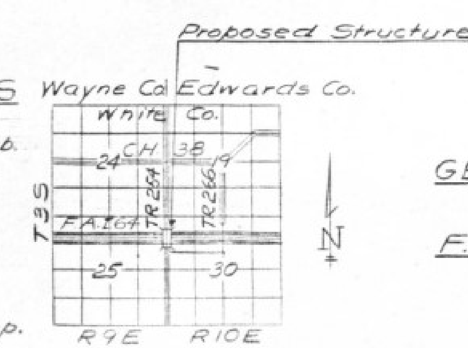
PROFILE E. & W. BOUND F.A.I. 64 PROP. GRADE T.R. #254

DESIGN STRESSES

f'c = 1200 psi - Deck Slab
f'c = 1400 psi - Curb, parapet, Sub.
fs = 20,000 psi - Reinf.
fs = 20,000 psi - Struct.
Vc = 75 psi - Ftgs
n = 10

Loading HS15-44

Allowable L. Defl. 1/1200 Comp.
Note: Allow 25#/□' for Fut. Wearing Surf.



LOCATION SKETCH

GENERAL PLAN & ELEVATION
PROJECT: I-64-4(47)112
F.A.I. RT. 64 - SECTION 97-1HB-3
WHITE COUNTY
STA. 21+31.25 (T.R. 254)
STA. 5398+61.35 (F.A.I. 64)

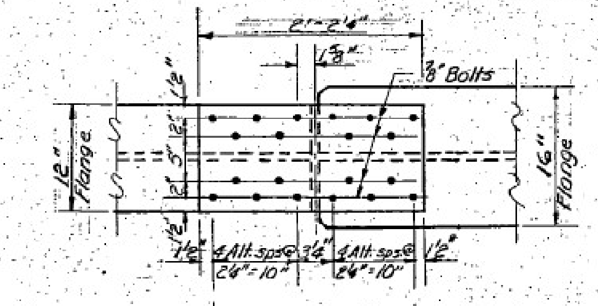
DESIGNED	A. A. Hunsaidek (signature)	EXAMINED	January 21 1970 (signature) ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
CHECKED	D. A. Ryan (signature)	PASSED	ENGINEER OF DESIGN
DRAWN	Bev Robinson	APPROVED	CHIEF HIGHWAY ENGINEER
CHECKED	D. A. Ryan (signature)		

Rev. 7-20-71

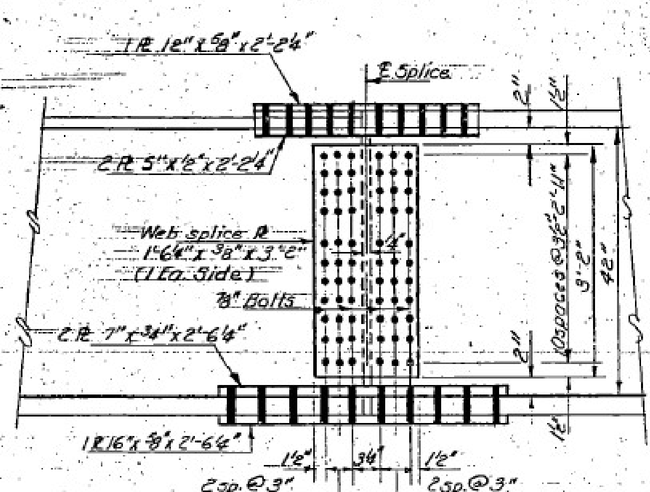
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 64	97-1HB-3	WHITE	26	14

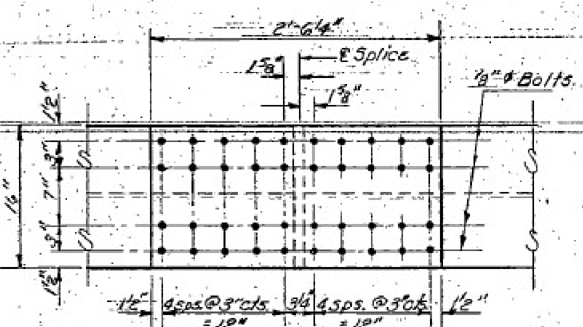
SHEET NO. 6
12 SHEETS



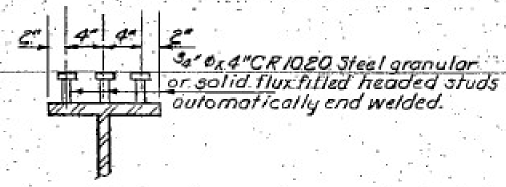
TOP FLANGE SPLICE



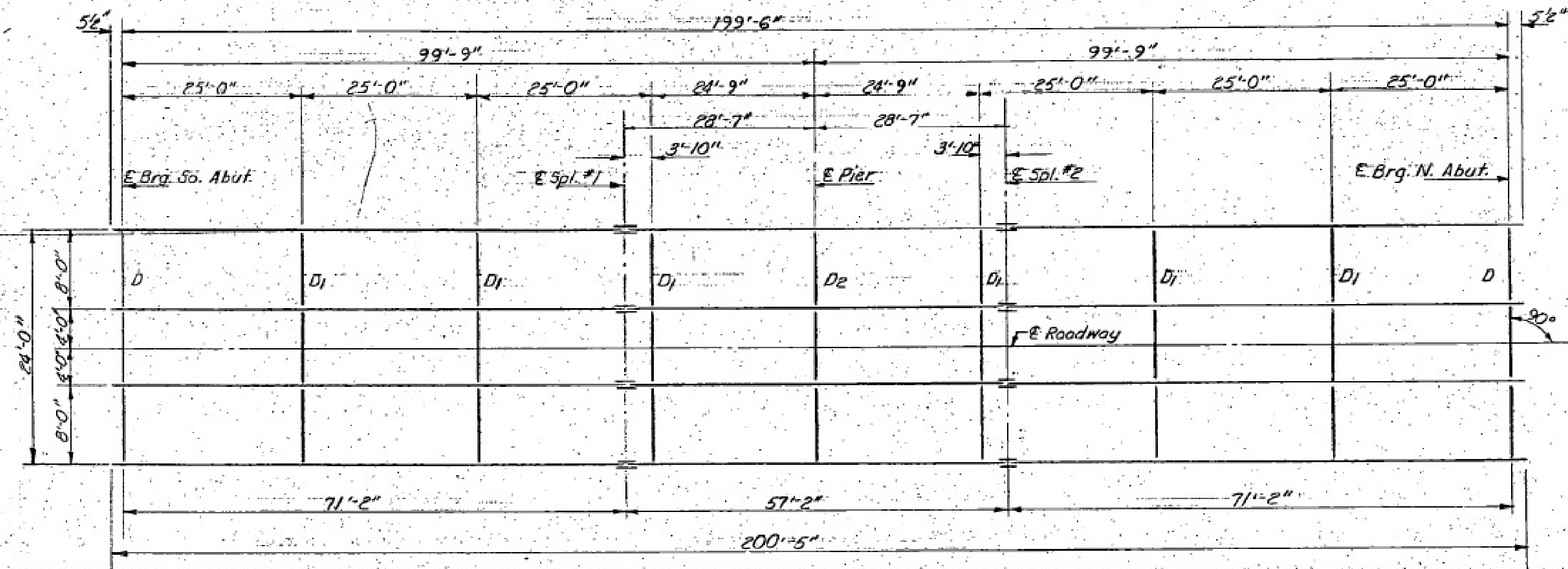
WEB SPLICE



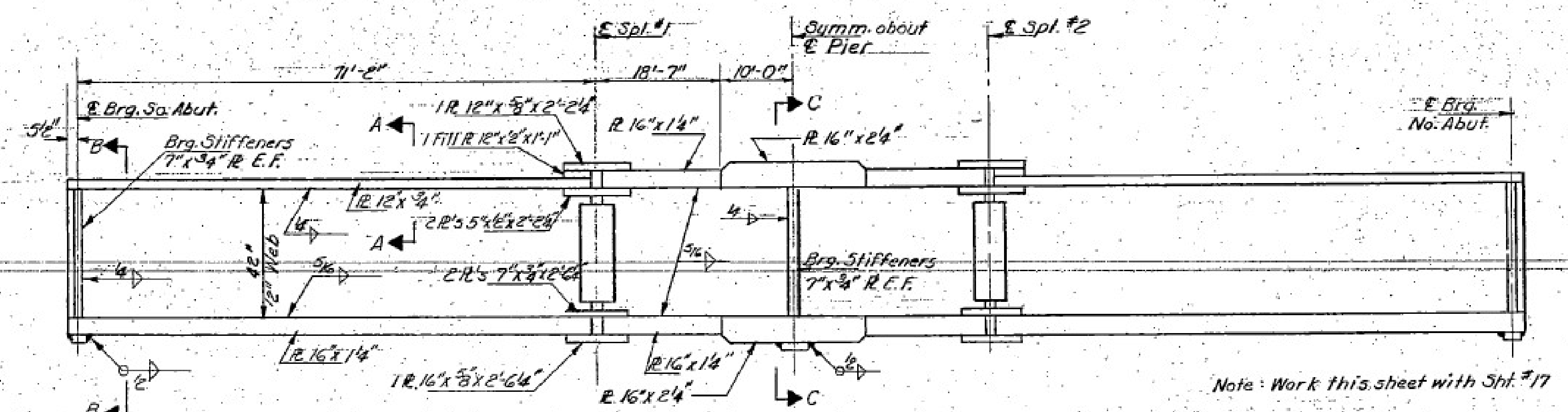
BOTTOM FLANGE SPLICE



SEC. A-A

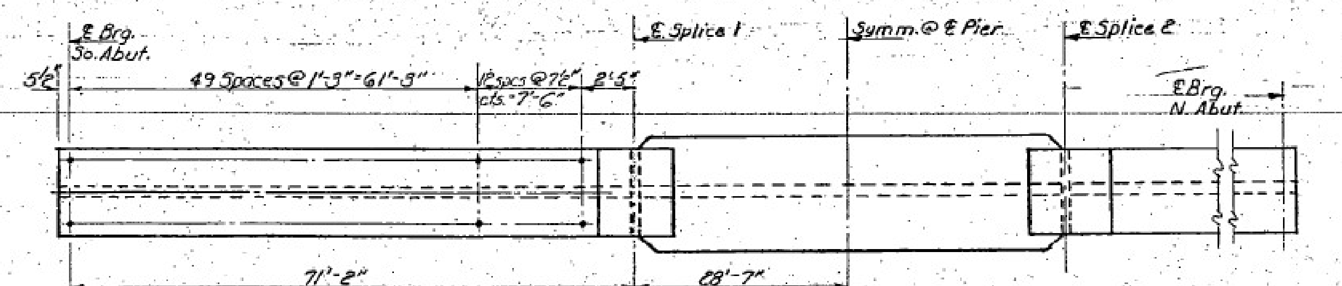


FRAMING PLAN

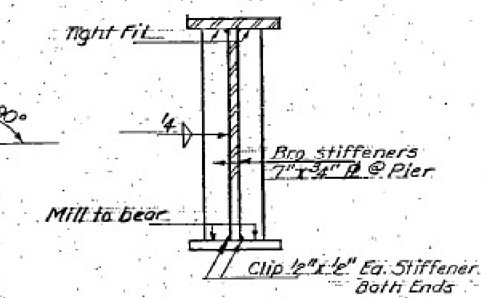


GIRDER ELEVATION

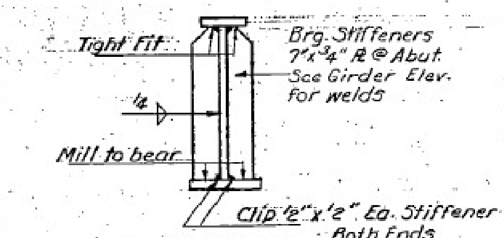
Note: Work this sheet with Sht. #17



HALF PLAN-STUD SPACING



SEC. C-C



SEC. B-B

INTERIOR GIRDER REACTION TABLE

	Abut.	Pier
R DL+SDL (K)	48.7	168.0
R LL (K)	34.9	56.7
Imp (K)	7.8	12.6
R TOTAL (K)	91.4	237.3

INTERIOR GIRDER MOMENT TABLE

	0.4 Sp. 1	Pier
I_s (in⁴)	15399	38332
I_c (in⁴)	40863	
S_s (in³)	882.6	1648.7
S_c (in³)	1203	
DL (K/')	0.964	1.329
M DL ('K)	576.4	-1851
fs DL (Ksi)	7.8	13.5
S DL (K/')	0.365	
Ms DL ('K)	270.2	
M LL ('K)	653	-538
M Imp ('K)	187	-155
TOTAL ('K)	1110	-693
fs LL (ksi)	11.1	5.1
fs TOTAL (ksi)	18.9	18.6
VR (K)	46.6	

FOR INFORMATION ONLY
SN 097-0048

I_s and S_s are the moment of inertia and section modulus of the steel section
I_c and S_c are the moment of inertia and section modulus of the composite section used in computing fs.
VR is the maximum LL + Impact shear range.

STRUCTURAL STEEL DETAILS
F.A.I. RT. 64 SEC. 97-1HB-3
WHITE COUNTY
STA. 5398.61.35 (F.A.I. 64)

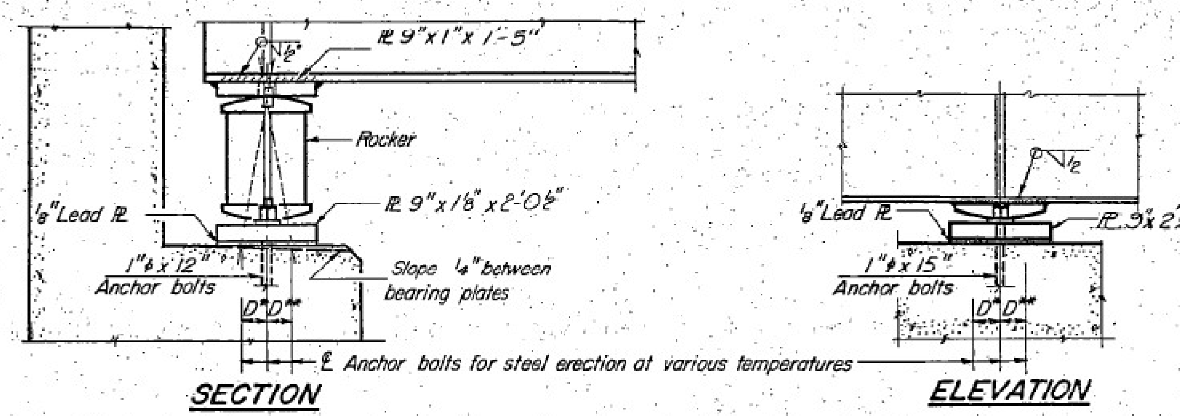
DESIGNED A.R. Hummel
CHECKED D. A. Rye
DRAWN Bev Robinson
CHECKED D. A. Rye

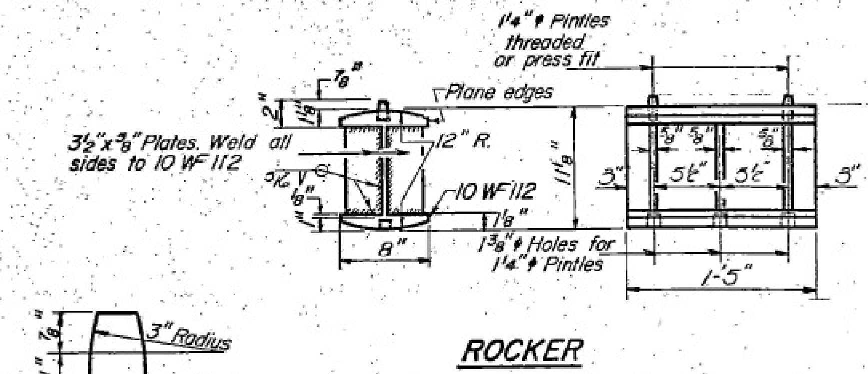
EXAMINED JAN. 21 1970
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED
ENGINEER OF DESIGN
APPROVED
CHIEF HIGHWAY ENGINEER

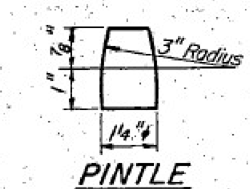
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

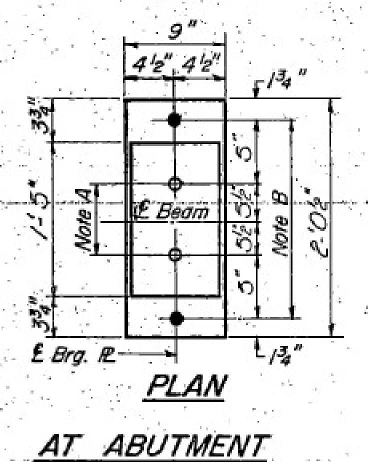
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. RT. 64	97-IHB-3	WHITE	26	15

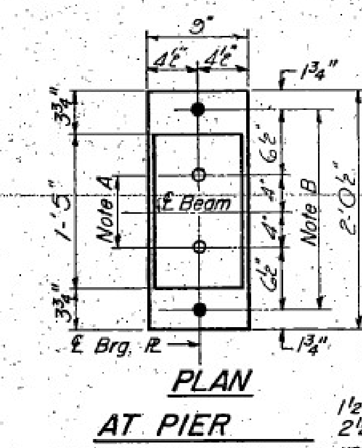
SHEET NO. 7 — 12 SHEETS









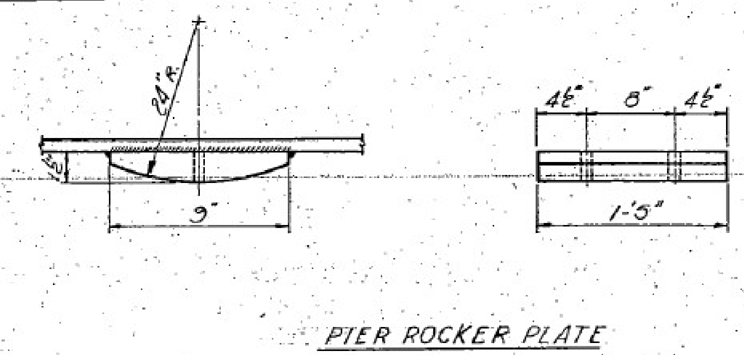


NOTE A
1 3/8"φ Holes – 1" deep in top PL for pintles. Thread or press fit pintles into bottom PL.

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

BEARING ASSEMBLY DETAILS

Note: See Sheet #6 for framing plan.



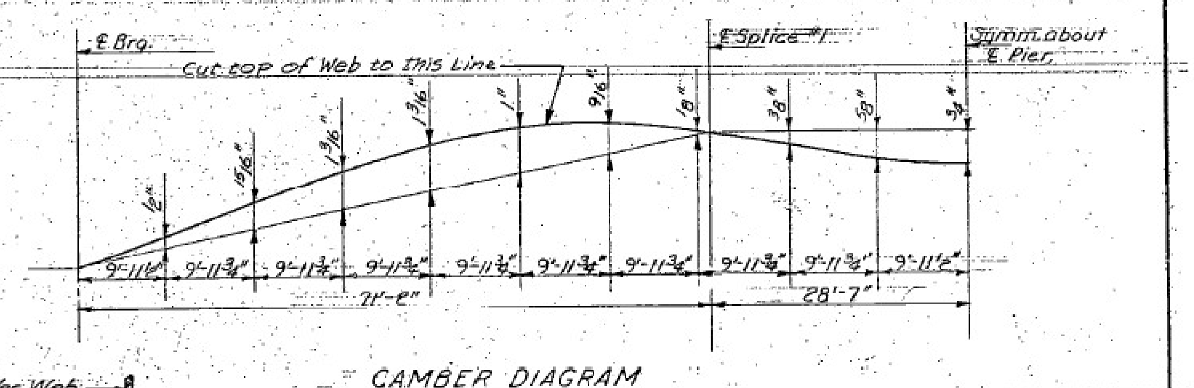
NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

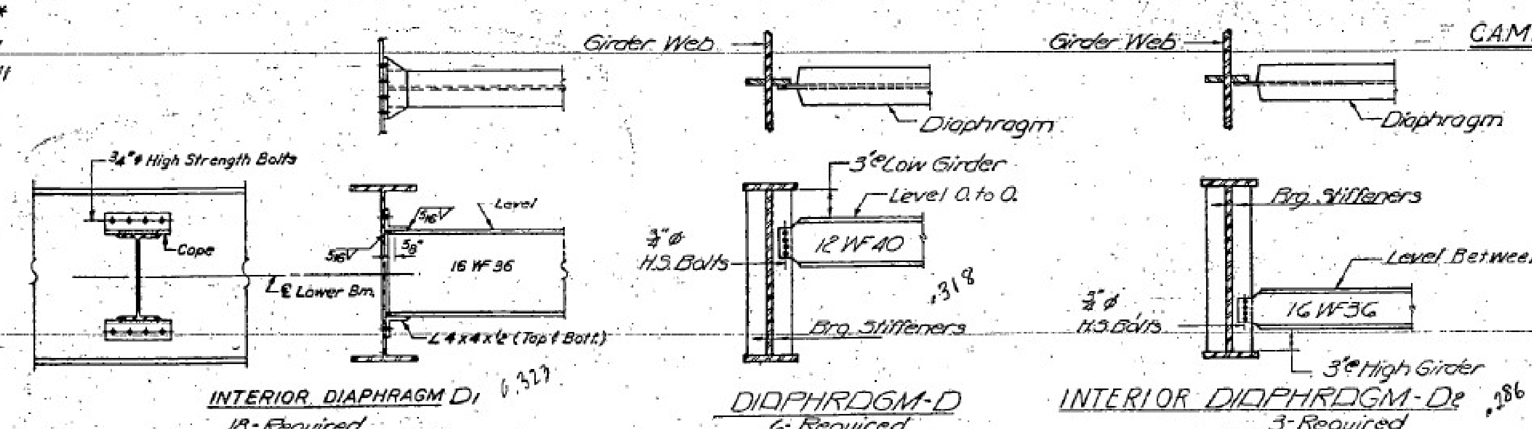
a) D* (Side of brg. away from fixed brg.)
D* = 1/8" per each 100' of expansion for every 15° fall below the normal temp of 50°F.
D** (Side of brg. toward fixed brg.)
D** = 1/8" per each 100' of expansion for every 15° rise above the normal temp. of 50°F.

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.

ELEVATION TOP OF WEB
For Fabrication only

Loc. of Girder	1 & 4	2 & 3
℄ Brg. So. Abut.	407.88	407.98
℄ Field Splice 1	408.34	408.44
℄ Brg. Pier 1	408.28	408.38
℄ Field Splice 2	408.34	408.44
℄ Brg. No. Abut.	407.88	407.98





FOR INFORMATION ONLY
SN 097-0048

CROSS FRAMES & BEARING DETAILS
F.A.I. RT. 64 SEC. 97-IHB-3
WHITE COUNTY
STA. 5398+61.35 (F.A.I. 64)

DESIGNED — CHECKED D.A. Ryan — DRAWN J.D. — CHECKED D.A. Ryan
EXAMINED JAN. 21 1970 — PASSED — APPROVED

I-2-B 9-1-65

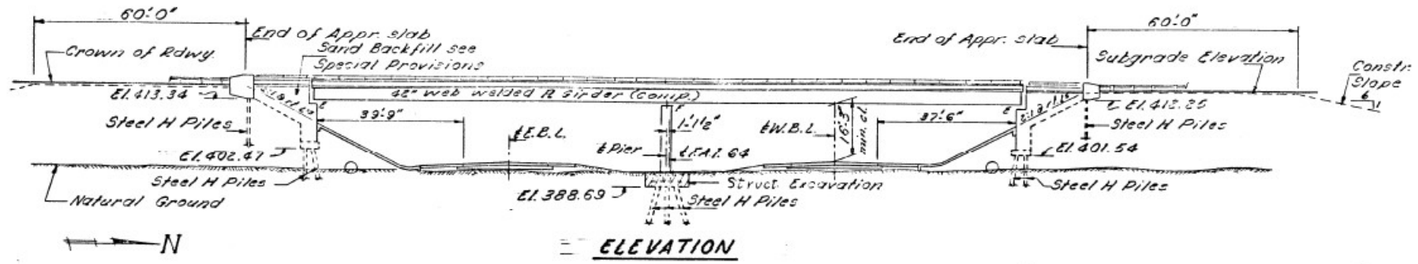
B.M.: 30± ft. rt. Sta. 47+25 R.R. Spike in telephone pole East side of road Elev. 399.58

STATE OF ILLINOIS

DIVISION OF HIGHWAYS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 64	97-2HB-2	White	31	11
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

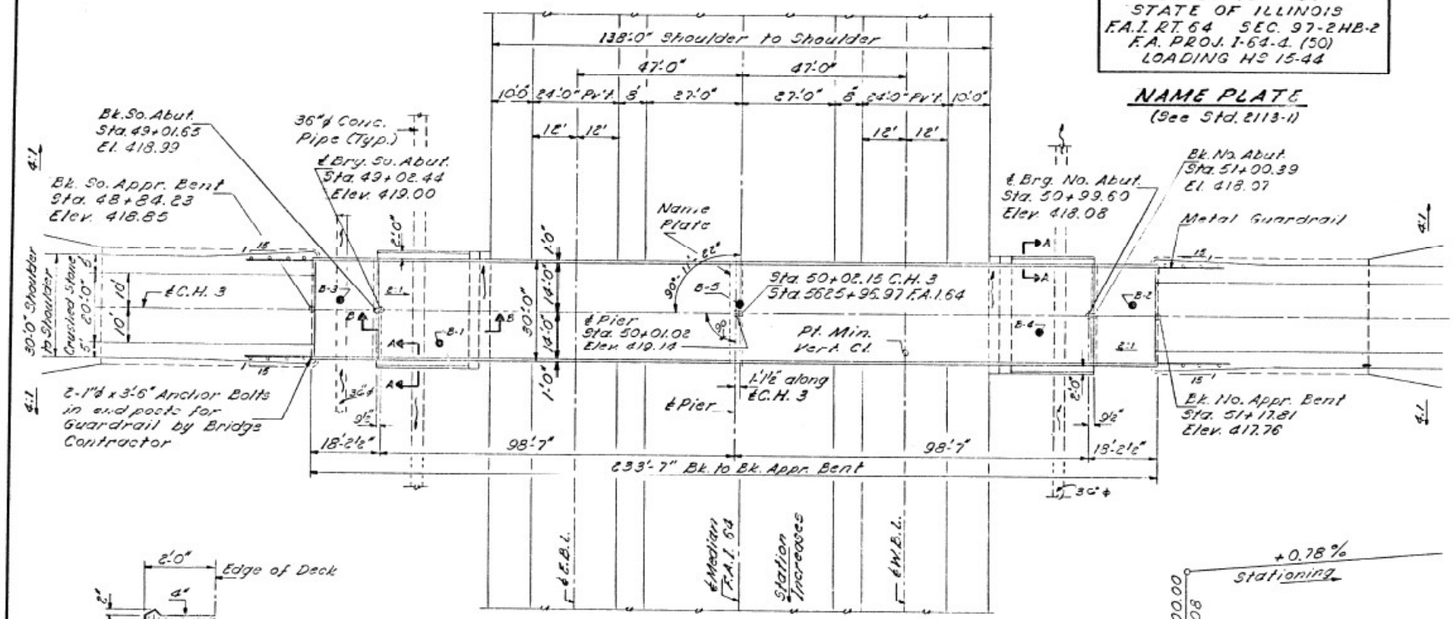
SHEET NO. 1 // SHEETS



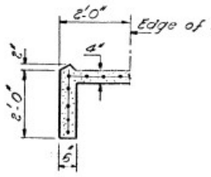
ELEVATION

STATION 5625+96.97
BUILT 19 BY
STATE OF ILLINOIS
F.A.I. RT. 64 SEC. 97-2HB-2
F.A. PROJ. I-64-4 (50)
LOADING HS 15-44

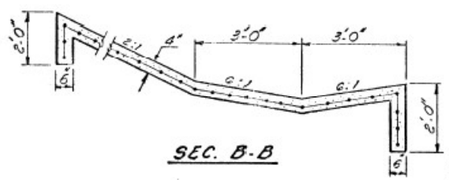
NAME PLATE
(See Std. 2113-1)



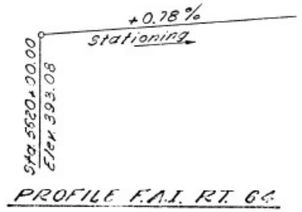
PLAN



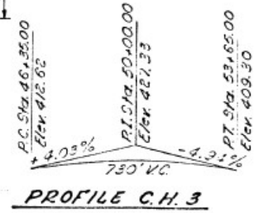
SEC. A-A



SEC. B-B



PROFILE F.A.I. RT. 64

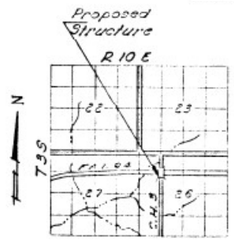


PROFILE C.H. 3

DESIGN STRESSES

f_c = 1200 psi - Deck Slab
f_c = 1400 psi Curb, Parapet, Sub.
f_s = 20,000 psi Reinf.
f_s = 20,000 psi Struct
V_c = 75 psi - Flgs
n = 10
Allowable ε Defl. = L/333

Loading HS 15-44



LOCATION SKETCH

DESIGNED		
CHECKED		
DRAWN		
CHECKED		

EXAMINED _____ 19__

PASSED _____
ENGINEER OF BRIDGES AND TRAFFIC STRUCTURES

APPROVED _____
ENGINEER OF DESIGN

CHIEF HIGHWAY ENGINEER

GENERAL NOTES

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

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

The basic Lead Silica 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"x6" mesh, weighing 58 Lb. per 100 sq. ft.

The Contractor shall drive 2 steel rest piles in a permanent location one at the No. Abut. & one at the pier as directed by the Engineer before ordering the remainder of piles.

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.

Calculated plan weight of structural steel = 174610 Lbs.

TOTAL BILL OF MATERIAL

Item	Unit	Super.	Sub.	Total
Protective Coat	Sq. Yds.	870		870
Structure Excavation	Cu. Yds.			75
Class X Concrete	Cu. Yds.	336.0	161.0	587.0
Structural Steel	L.S.	0.33		0.33
Stud Shear Connectors	Ea.	1392		1392
Aluminum Railing	Lin. Ft.	458		458
Reinforcement Bars	Lbs.	51820	20260	72080
Steel Piles (10BP42)	Lin. Ft.			1532
Test Piles Steel (10BP42)	Ea.			2
Name Plates	Ea.		1	1
Slope Wall (4")	Sq. Yds.			280
Sand Backfill	Cu. Yds.			130
Preformed Joint Sealer	Lin. Ft.	60		60

FOR INFORMATION ONLY
SN 097-0049

GENERAL PLAN & ELEVATION
PROJ. I-64-4 (50)
C.H. 3 OVER F.A.I. RT. 64
F.A.I. RT. 64 SEC. 97-2HB-2
WHITE COUNTY
STATION 5625+96.97

MODEL: SN 097-0049_1 [Sheet]
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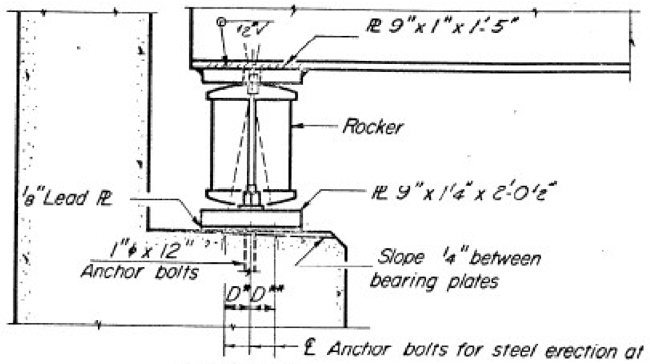
USER NAME = david.a.wilson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/18/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

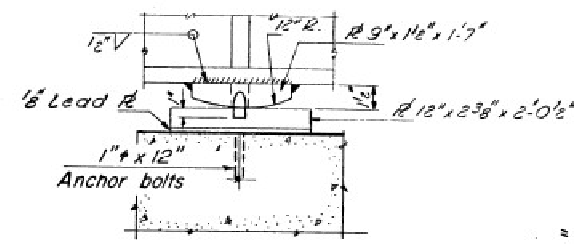
SN 097-0049
STRUCTURE INFORMATION

SCALE: | SHEET 47 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	47
		CONTRACT NO. 78A04		
	ILLINOIS	FED. AID PROJECT		



SECTION



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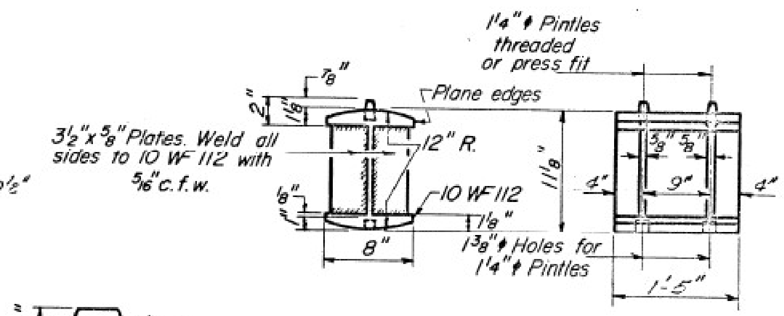
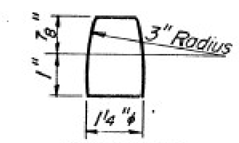
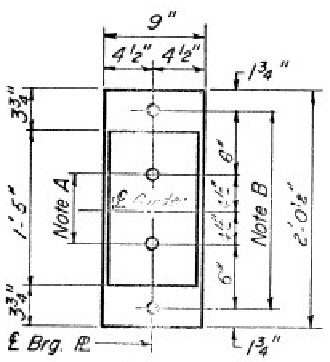


ROCKER

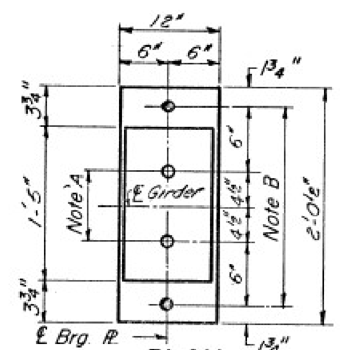


PINTLE



PLAN

AT ABUTMENT



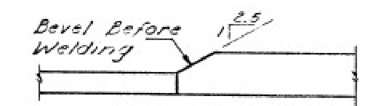
PLAN

AT PIER

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

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

BEARING ASSEMBLY DETAILS

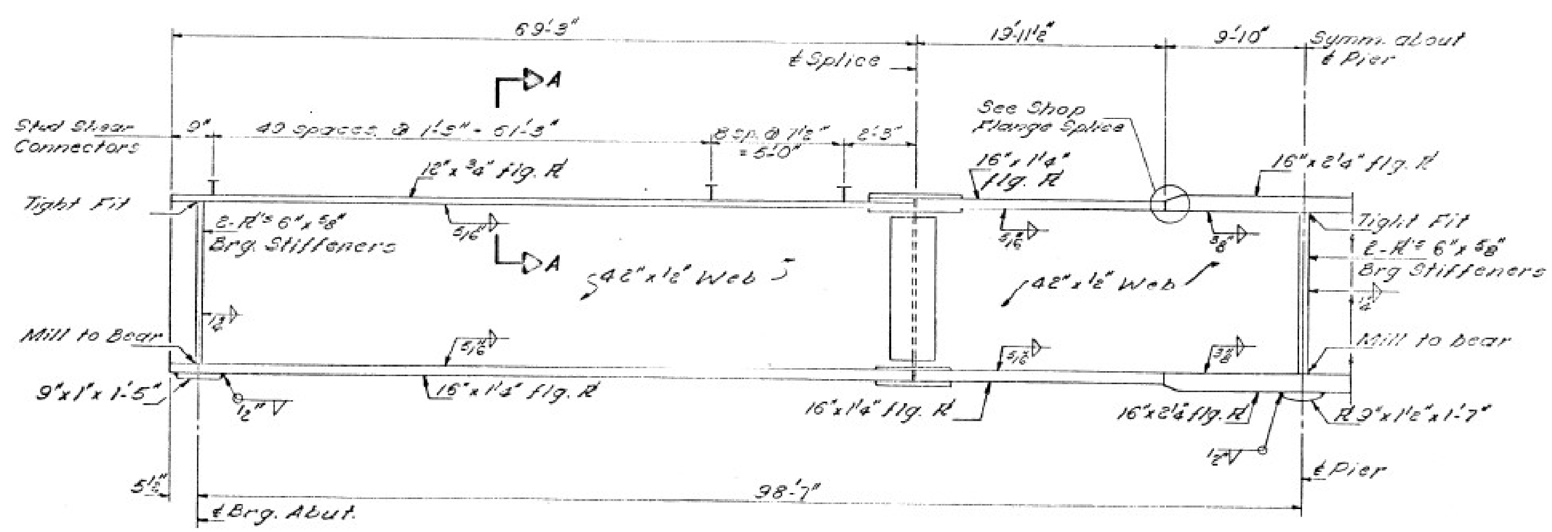


SHOP FLANGE SPLICE

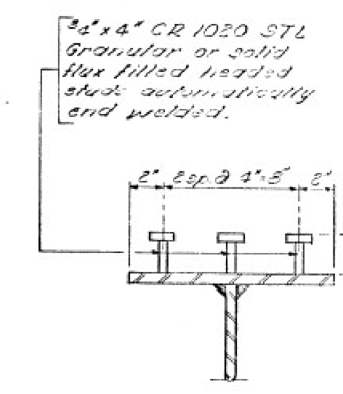
NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

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.



HALF ELEVATION
Clip 5/8"x5/8" top & bottom of brg. stiffeners to clear the flange to web fillet welds.



SEC. A-A

FOR INFORMATION ONLY
SN 097-0049

STRUCTURAL STEEL DETAILS
F.A.I. RT. 64 SEC. 97-2HB-2
WHITE COUNTY
STATION 5625+96.97

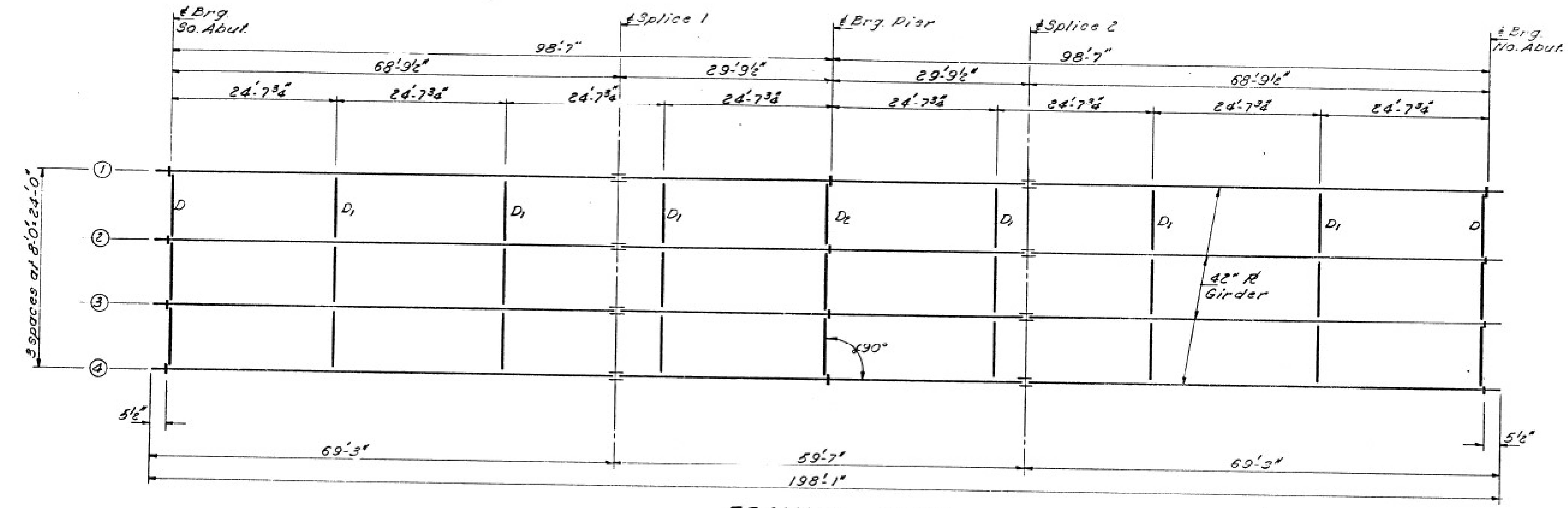
DESIGNED	[signature]
CHECKED	[signature]
DRAWN	J Kessler
CHECKED	[signature]

EXAMINED [signature] 1970
ENGINEER OF BRIDGE AND TRAFFIC STRUCTURES
PASSED W E Brunemann
ENGINEER OF DESIGN
APPROVED Richard H Golterman
CHIEF HIGHWAY ENGINEER

I-2-B 9-1-65

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 64	97-2HB-2	White	31	17

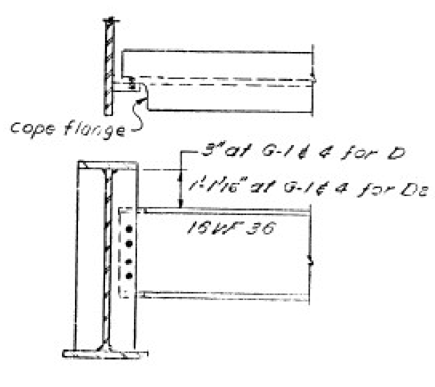
SHEET NO. 7
11 SHEETS



FRAMING PLAN

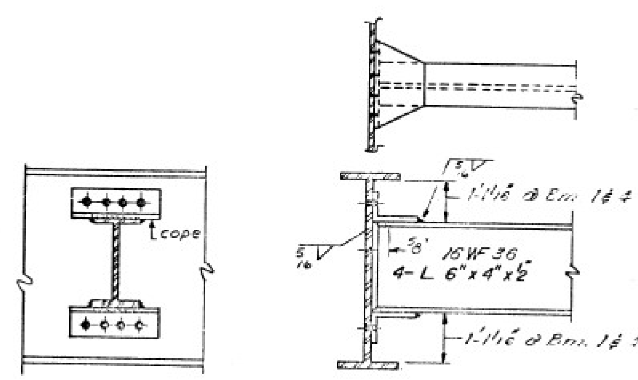
TOP OF WEB ELEVATIONS	Girders 1 & 4	Girders 2 & 3
℄ Brg. So. Abut.	418.20	418.30
℄ Splice Span 1	418.35	418.45
℄ Pier	418.21	418.31
℄ Splice Span 2	418.07	418.17
℄ Brg. No. Abut.	417.27	417.37

For fabrication only



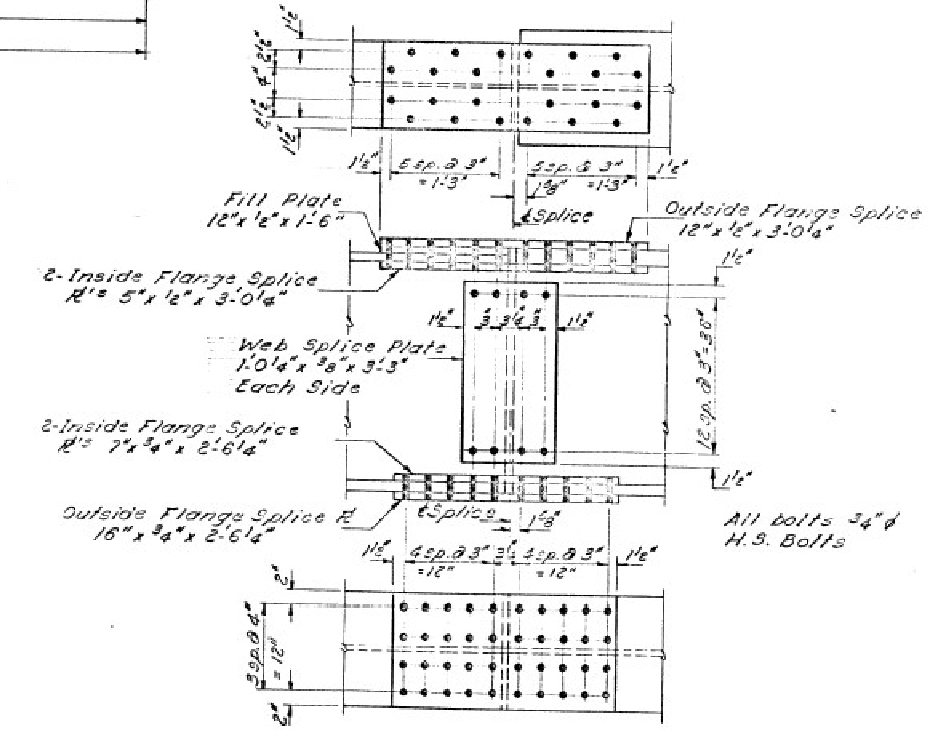
DIAPHRAGM D & D2

6 D Required
3 D2 Required



DIAPHRAGM D1

18 D1 Required



SPLICE

8 Required

INT. GIRDER MOMENT TABLE	0.4 Span 1	Pier
Is (in⁴)	15393.7	33352.5
Ic (in⁴)	40042.7	
Ss (in³)	882.5	1650.0
Sc (in³)	1188.6	
℞ (K/')	1.00	1.00
M℞ (′K)	574.77	1478.66
fs℞ (ksi)	7.31	10.75
S℞ (K/')	0.35	0.35
fs s℞ (ksi)	2.51	2.90
M s℞ (′K)	248.92	398.15
M (′K)	574.11	570.50
M imp (′K)	151.00	127.31
Total (′K)	1548.80	2575.82
[illegible]	0.22	5.09
[illegible]	18.65	18.72
VR (K)	39.35	45.17

INT. GIRDER REACTION TABLE	Abut.	Pier
R℞ (K)	34.29	128.56
Rs℞ (K)	13.21	42.56
R℄ (K)	34.73	56.65
Imp (K)	7.78	12.67
R TOTAL (K)	90.06	240.48

Is and Ss are the moment of inertia and section modulus of the steel section.
Ic and Sc are the moment of inertia and section modulus of the composite section used in computing f℄.
VR is the maximum ℄ + Impact shear range.

DESIGNED	John Hogan	EXAMINED Feb. 10 1970 — Engineer of Bridge and Traffic Structures
CHECKED	Charles Ohrel	PASSED W.E. Baumann — Engineer of Design
DRAWN	W. Kessler	APPROVED Richard H. Golterman — Chief Highway Engineer
CHECKED	Charles Ohrel	

I-2-D 9-1-65

FOR INFORMATION ONLY
SN 097-0049

STRUCTURAL STEEL DETAILS
F.A.I. RT. 64 SEC. 97-2HB-2
WHITE COUNTY
STATION 5625+96.97

Bench Mark: "□" cut in hubguard 5.8 m Rt. of S.E. wingwall. Elev. 113.277

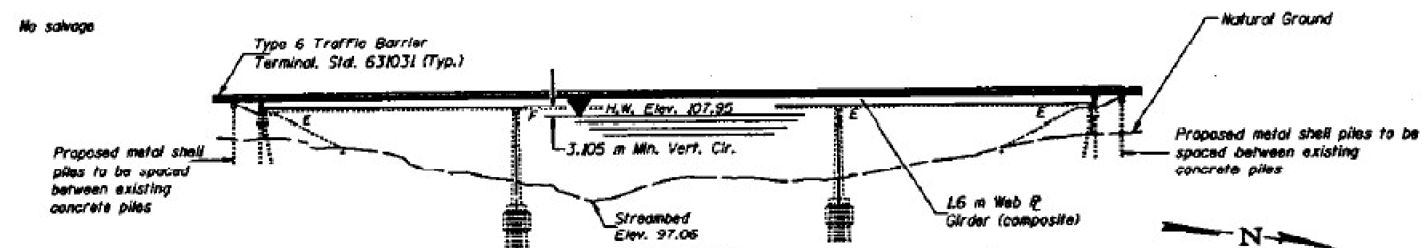
Existing Structure: S.N. 091-0031 Built in 1958 as S.B.I. Rte. 150, Sec. 131-B-1 at Sta. 27+439.370. The structure is a three-span continuous plate girder on vaulted abutments and hammerhead piers on concrete piles. The length is 138.252 m bk. to bk. abutments, and the width is 10.871 m O. to O. deck. The contractor shall remove and replace the existing superstructure. Traffic shall be maintained by using stage construction.

No salvage

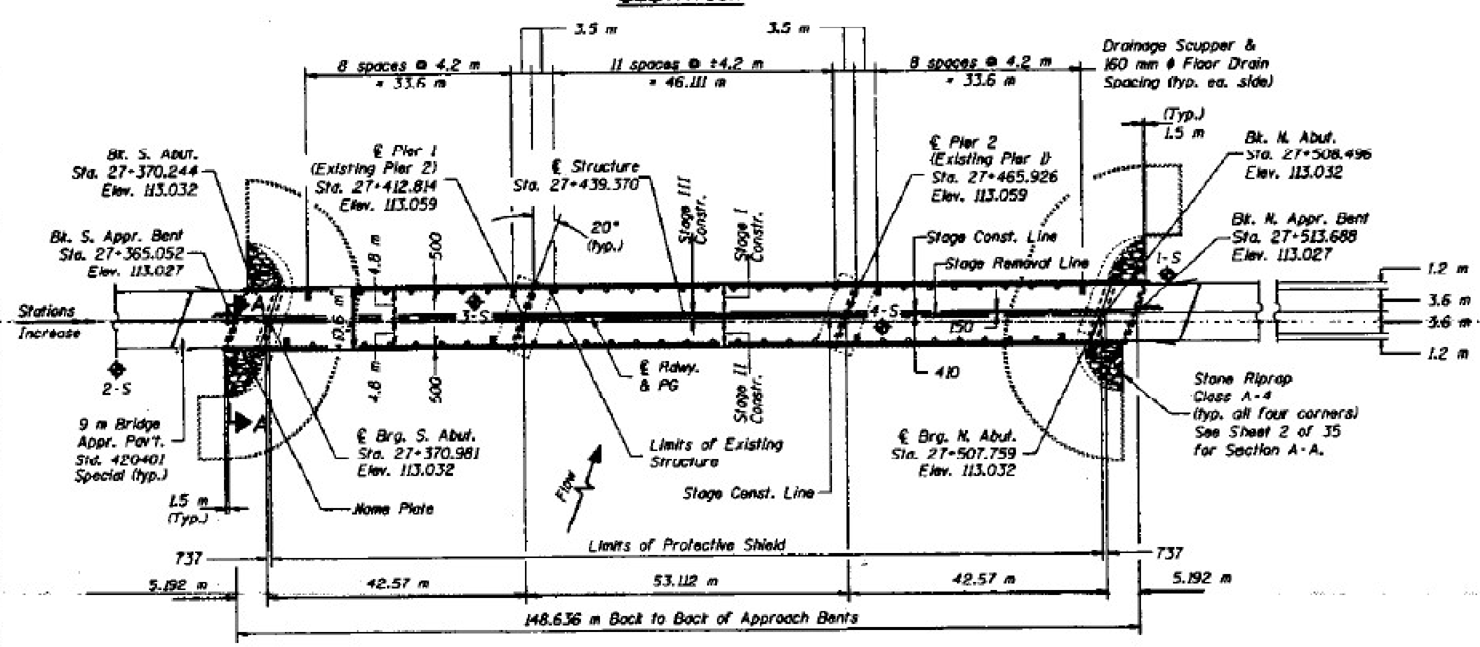
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 312	(131B-1)DR	JACKSON/UNION	54	20

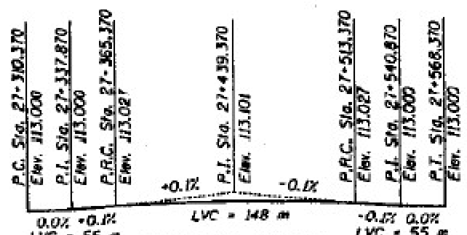
SHEET NO. 1 · 35 SHEETS



ELEVATION



PLAN



PROFILE GRADE
(along ℄ roadway)

DESIGNED	Ted Marty
CHECKED	
AMC / DRAWN	W.D. Collins / S. Vern Taylor
CHECKED	

February 25, 1998
EXAMINED — Chief of Bridge Design
PASSED — Ralph E. Anderson, Engineer of Bridges and Structures

EXPIRES 11-30-98

WATERWAY INFORMATION

Flood	Freq. Yr.	Q m^3/s	Opening m^2 Exist.	Opening m^2 Prop.	Nat. H.W.E.	Head - m Exist.	Head - m Prop.	Headwater El. Exist.	Headwater El. Prop.
Drainage Area = 6182.01 km^2 Low Grade Elev. 113.0 m @ Sta. 27+600									
Design	50	1132.0	834.6	890.0	107.95	0.03	0.03	107.98	107.98
Base	100	1273.5	889.5	944.8	108.43	0.03	0.03	108.46	108.46
Overtopping	-	-	-	-	-	-	-	-	-
Max. Calc.	500	1570.7	997.8	1054.4	109.33	0.06	0.06	109.39	109.39

STATION 27+439.370
REBUILT 199_ BY
STATE OF ILLINOIS
F.A.P. RT. 312 SEC. (131B-1)DR
PROJECT ACBHF-312(12)
LOADING MS18
STR. NO. 091-0031

NAME PLATE
See Std. 515001

Note: Existing Name Plate to be cleaned and relocated next to the new Name Plate. Cost included with "Name Plates".

TOTAL BILL OF MATERIAL

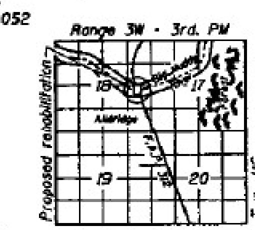
ITEM	UNIT	SUPER	SUB	TOTAL
Stone Riprap, Class A4	m^2		263	263
Filter Fabric for use with Riprap	m^2		263	263
Protective Coat	m^2	1756		1756
Removal of Existing Superstructures	Each	1		1
Concrete Removal	m^3		57	57
Structure Excavation	m^3		670	670
Floor Drains	Each	52		52
Neoprene Expansion Joint 50 mm	m	10.8		10.8
Neoprene Expansion Joint 100 mm	m	10.8		10.8
Concrete Structures	m^3		133.3	133.3
Concrete Superstructures	m^3	417.6		417.6
Bridge Deck Grooving	m^2	1236		1236
Elastomeric Bearing Assembly, Type II	Each	6		6
Elastomeric Bearing Assembly, Type III	Each	6		6
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	3006		3006
Reinforcement Bars, Epoxy Coated	kg	59710	5890	65600
Bar Splicers	Each	1341	68	1409
Furnishing Metal Pile Shells 305 mm	m		130	130
Driving and Filling Shells	m		130	130
Test Pile Metal Shell	Each		1	1
Name Plates	Each	1		1
Floating Bearing, Guided Expansion 1250 kN	Each	6		6
Drainage Scuppers	Each	8		8
Temporary Sheet Piling	m^2		15.3	15.3

LOADING MS18
Allow 1.2 kN/m² for future wearing surface.

DESIGN SPECIFICATIONS
1996 AASHTO with 1997 Interims and 1995 Seismic Retrofitting Manual for Highway Bridges FHWA-RD-94-052

DESIGN STRESSES
FIELD UNITS
f'_c = 24 MPa
f_y = 400 MPa (reinforcement)
f_y = 345 MPa (structural steel M270 Grade 345)

SEISMIC DATA
Seismic Performance Category (SPC) = B
Bedrock Acceleration Coefficient (A) = 15%g
Site Coefficient (S) = 1.5



LOCATION SKETCH

FOR INFORMATION ONLY
SN 091-0031

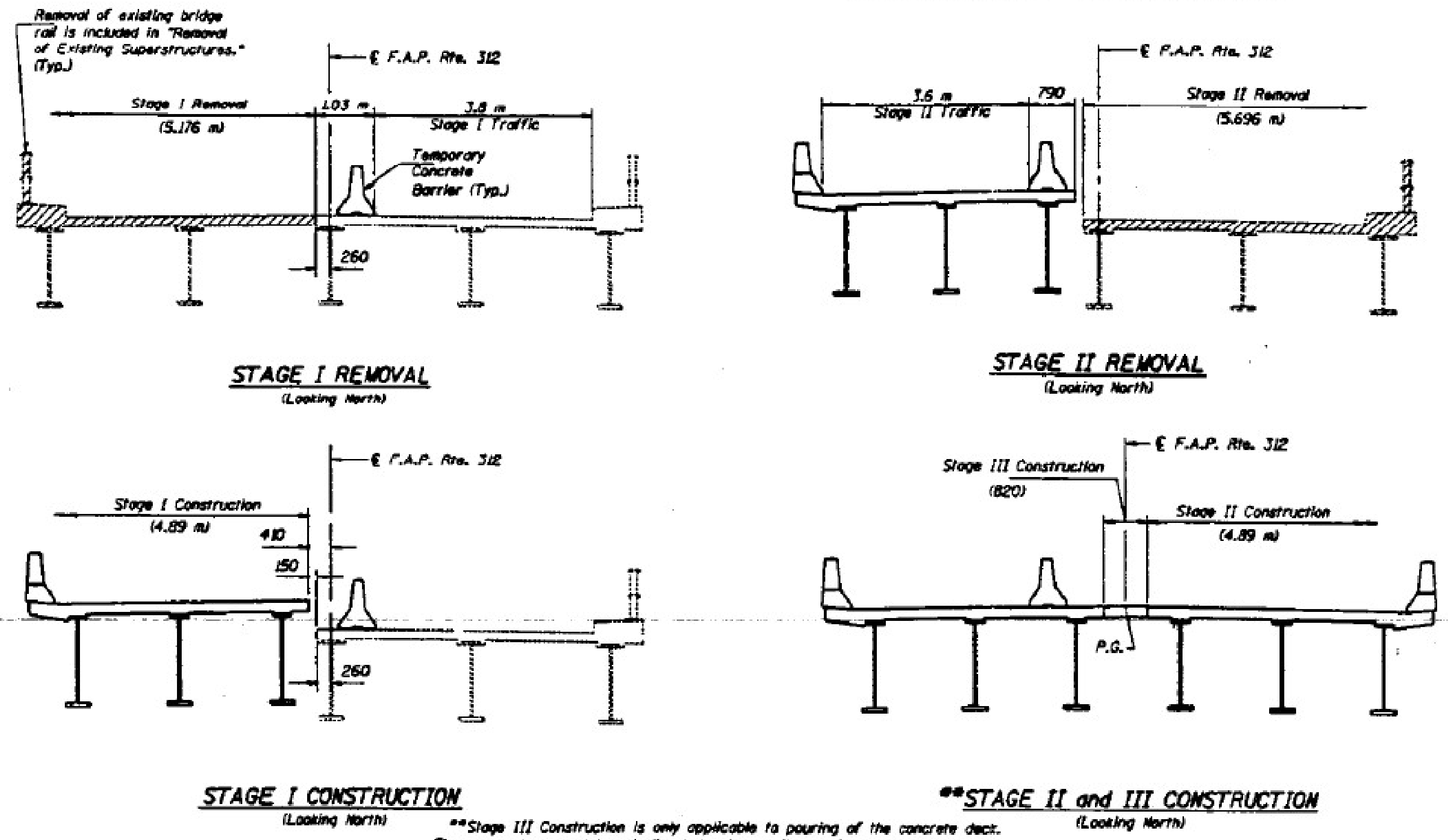
GENERAL PLAN
ILLINOIS ROUTE 3 OVER
BIG MUDDY RIVER*
F.A.P. ROUTE 312 - SECTION 131 B-2
UNION COUNTY
STATION 27+439.370
STRUCTURE NO. 091-0031
*PUBLIC WATER

4-24-97; 6-3-97

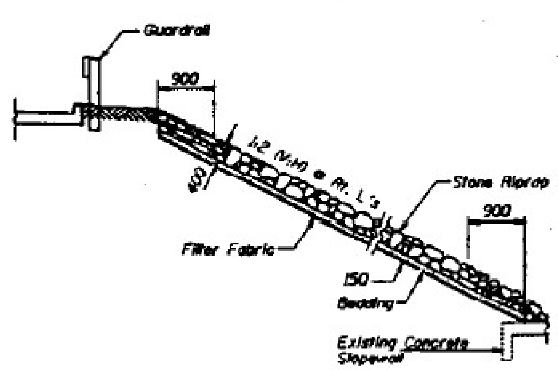
D-99-014-95

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

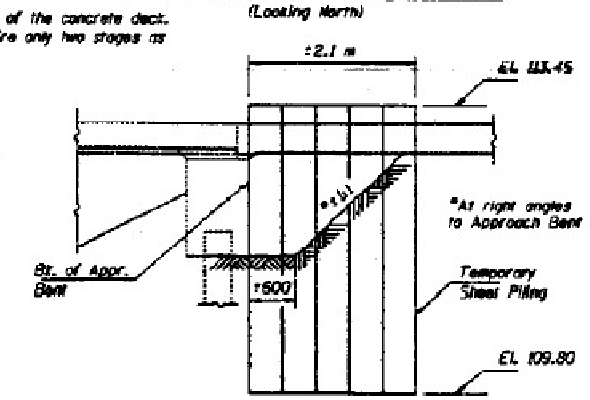
F.A.P. 312	398-0(B)	JACKSON/UNION	64	21	SHEET NO. 2
					35 SHEETS



**Stage III Construction is only applicable to pouring of the concrete deck. The approach span slab and all substructure units require only two stages as shown on sheets 17, 19 and 21 of 35.



SECTION A-A



TEMPORARY SHEET PILING NOTES

If the contractor chooses to alter Temporary Cantilevered Sheet Piling design requirements shown on the plans for lesser design requirements, then full design submittals with the required seals will be expected by the Department, for review and approval.
Required embedment = 4.5 m
Required section modulus = 54760 mm³/m

GENERAL NOTES

Fasteners shall be high strength bolts. Bolts M20, open holes 22 mm ϕ, unless otherwise noted.

Calculated mass of Structural Steel = 254,760 kg (M270M Grade 345) 17,840 kg (M270M Grade 250) [1]

The Inorganic zinc rich primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all steel surfaces shall be gray, Munsell No. 5B 7/1. See Special Provision for "Cleaning and Painting New Metal Structures".

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 cross frames 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 tension flanges, webs and all splice plate material except fill plates.

Reinforcement bars shall conform to the requirements of AASHTO M-31M, M-42M or M-53M Grade 400.

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

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 3 mm. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 3 mm adjusting shims, of the dimension of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

Bridge Seat Sealer shall be applied to the seat areas of the abutments.

The contractor shall drive one (1) test pile in a permanent location at the south abutment as directed by the Engineer before ordering the remainder of piles.

In addition to all other requirements of section 512 of the Standard Specifications, splices for Metal Shell piles shall develop the full capacity of the steels cross sectional area of the pile for tension, shear and bending forces. One approved method of achieving this requirement is full penetration butt welding of the entire cross section. Other types of splices meeting the full capacity requirement may be allowed subject to the approval of the Engineer. Any proposal by the contractor to use an alternate splice method must include adequate documentation demonstrating that the full tension, shear and bending capacities will be met. Appropriate welder qualifications will be required for the positions and processes used in splicing all piles. Nondestructive testing of completed welds will be limited to visual inspection.

All dimensions are in millimeters (mm) except as noted.

The Contractor shall make allowance for the deflection of forms, shrinkage and settlement of falsework, in addition to allowance for dead load deflection.

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

The contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc.

FOR INFORMATION ONLY
SN 091-0031

DESIGNED Ted Motray
CHECKED
AMC
DRAWN S. VICK TAYLOR
CHECKED TMM
February 25 1998
EXAMINED
PASSED

STAGE CONSTRUCTION DETAILS
F.A.P. ROUTE 312 - SECTION 131 B-2
UNION COUNTY
STATION 27+439.370

[1] Revised 8/14/98 TMM

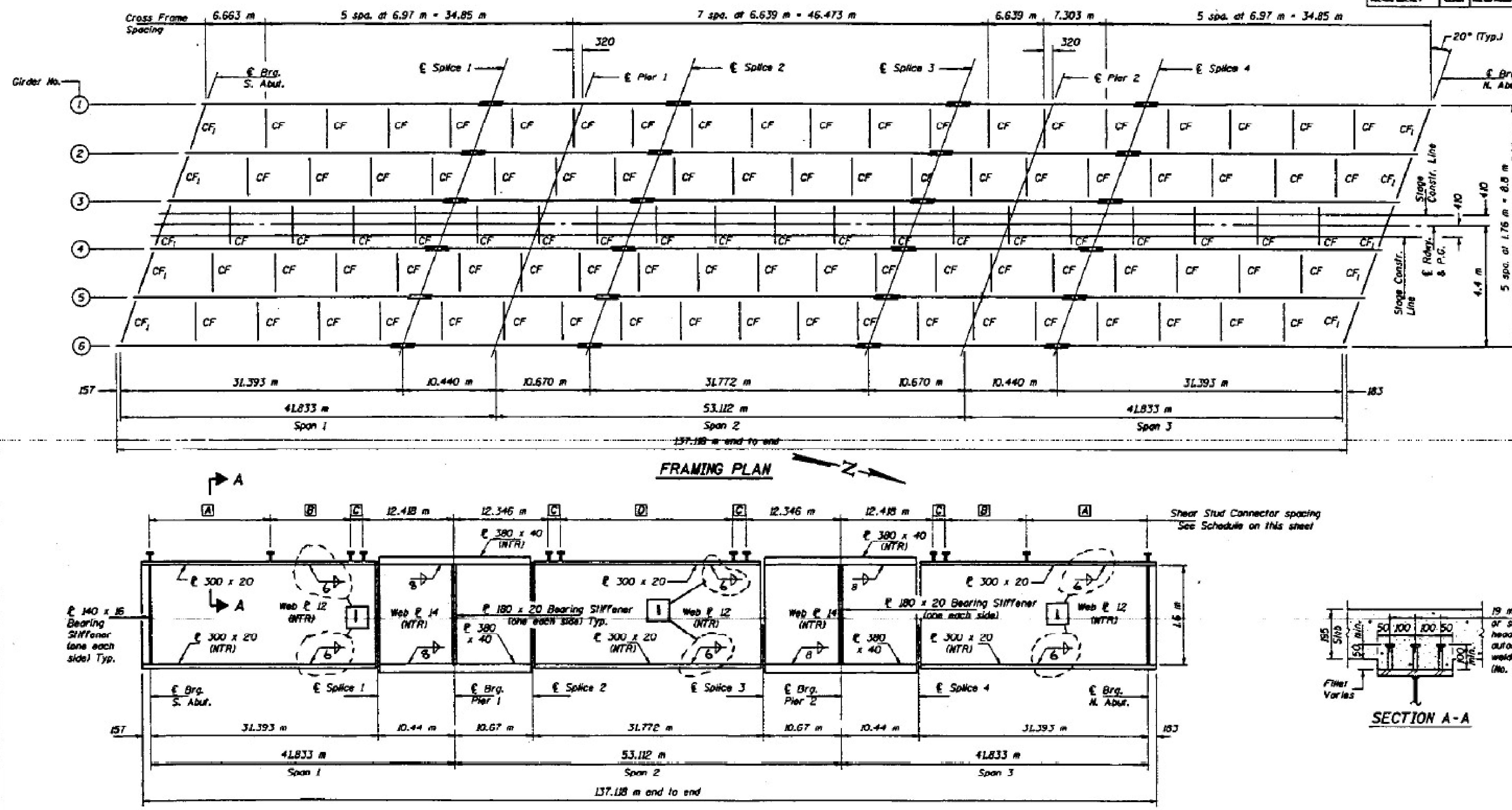
USER NAME = david.a.wilson	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 091-0031 STRUCTURE INFORMATION	F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN -	REVISED -			VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	51
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 78A04		
PLOT DATE = 10/18/2023	DATE -	REVISED -		SCALE: SHEET 51 OF 65 SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT			

MODEL: SN 091-0031_2 [Sheet]
FILE NAME: pw://ilodot-pw.bentley.com:PWIDOT/Documents/IDOT Offices/District 9/ORD Projects/78A04/CADData/CADsheets/D978A04-Structure_Information_4-10.dgn

SHEET NO. 11
35 SHEETS

F.A.P.	SECTION	COUNTY	TOTAL	SHEET
F.A.P. 312	(131B-1) BR	JACKSON/UNION	54	30

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



GIRDER ELEVATION

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

SHEAR STUD CONNECTOR SCHEDULE

TYPE	DESCRIPTION
A	27 spa. @ 610 = 16.47 m
B	24 spa. @ 515 = 12.36 m
C	3 spa. @ 195 = 585
D	50 spa. @ 545 = 27.25 m

Notes: See Sheet 12 of 35 for Structural Steel Details.
All dimensions are in millimeters (mm) except as noted.
All girders, splice plates, and bearing stiffeners shall be AASHTO M270 Grade 345.

1 Revised 8/14/98 TMM

FOR INFORMATION ONLY
SN 091-0031

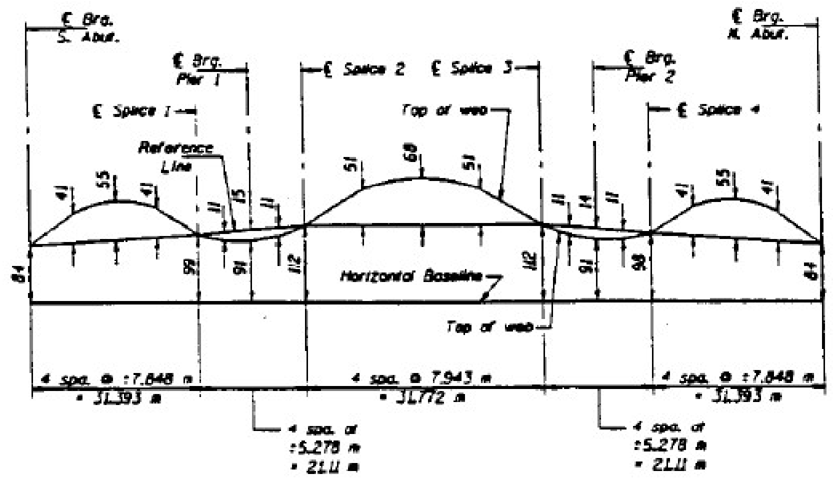
DESIGNED Ted Montry
CHECKED AMC
DRAWN S. VERN TAYLOR
CHECKED TMM OTC

February 25 1998
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

G-1 (M) 4-30-97

FRAMING PLAN AND GIRDER DETAILS
F.A.P. ROUTE 312 - SECTION 131 B-2
UNION COUNTY
STATION 27+439.370

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



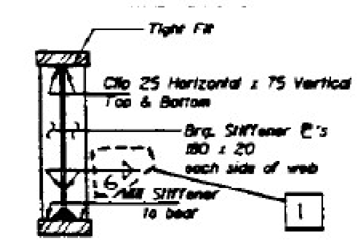
CAMBER DIAGRAM

2

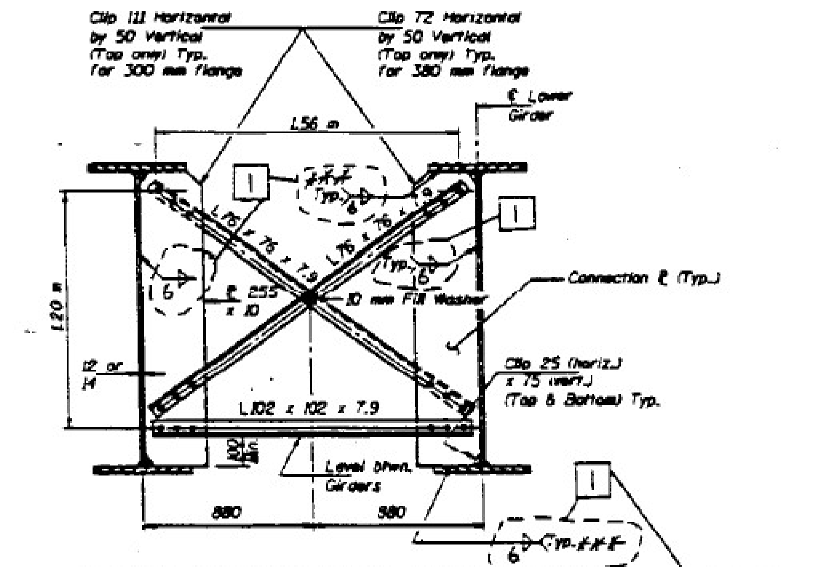
TOP OF WEB ELEVATIONS
(For Fabrication Only)

	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6
℄ Brg. S. Abut.	112.729	112.759	112.784	112.784	112.757	112.726
℄ Splice 1	112.743	112.773	112.799	112.798	112.772	112.741
℄ Brg. Pier 1	112.735	112.765	112.791	112.791	112.764	112.734
℄ Splice 2	112.756	112.786	112.812	112.812	112.785	112.755
℄ Splice 3	112.755	112.785	112.812	112.812	112.786	112.756
℄ Brg. Pier 2	112.734	112.764	112.791	112.791	112.765	112.735
℄ Splice 4	112.741	112.772	112.798	112.799	112.773	112.743
℄ Brg. N. Abut.	112.726	112.757	112.784	112.784	112.759	112.729

*Installation Sequence for Interior Cross Frames between Girders 3 and 4
*Optional
1. Complete Stage I Construction.
2. Erect Girders 4, 5 and 6.
3. Attach angles to Girder 3. Finger tighten bolts only.
4. Complete Stage II Construction.
5. Attach angles to Girder 4. Finger tighten bolts only.
6. Complete Stage III Deck Construction.
7. Fully tighten all crossframe bolts between Girders 3 and 4.

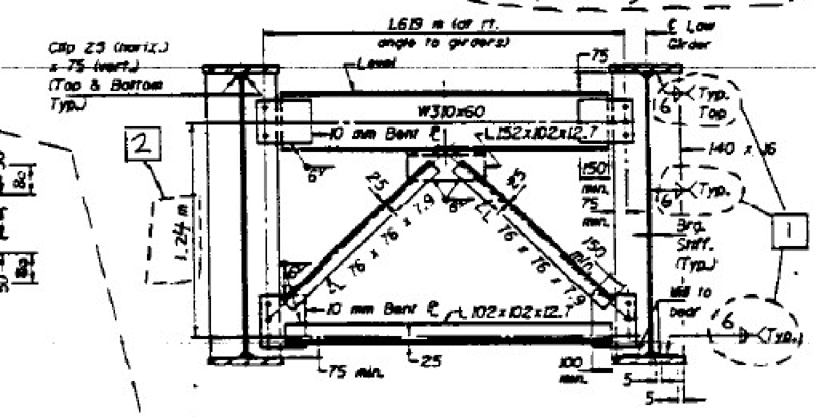


BEARING STIFFENER AT PIER

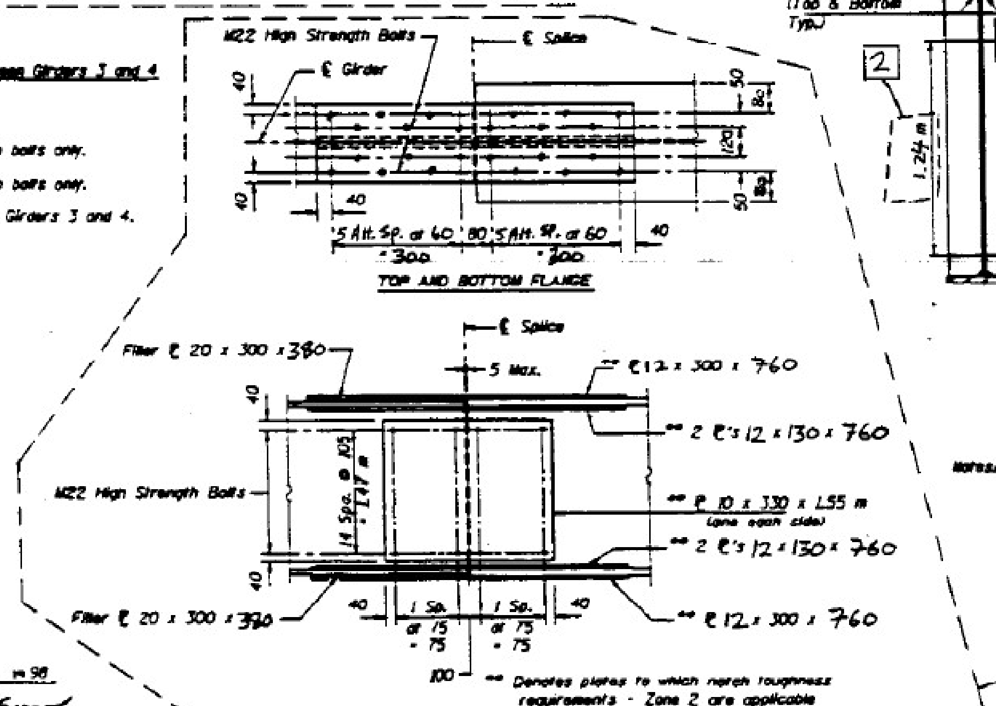


TYPICAL INTERIOR CROSS FRAME (CF)
(No. Required = 95)

*** use 5mm fillet welds at 40mm thick flange locations



TYPICAL END CROSS FRAME (CF1)
(No. Required = 10)



** Denotes plates to which notch toughness requirements - Zone 2 are applicable

SPLICE WITH INSIDE AND OUTSIDE FLANGE PLATES

1

Notes: 26 mm ϕ holes for all M22 H.S. Bolts will be used in all cross frames.
Two hardened washers shall be required over all oversize holes in cross frames.
All dimensions are in millimeters (mm) except as noted.
All bearing stiffeners and splice plates shall be AASHTO M270 Grade 345.

F.A.P. 312	131B-2	JACKSON/UNION	54	31	SHEET NO. 12
					35 SHEETS

INTERIOR GIRDER MOMENT TABLE	0.4 Sp. #1 or 0.6 Sp. #3	Pier 1 or Pier 2	0.5 Sp. #2
Is (10^6 mm⁴)	11970	25224	11970
Ic (n) (10^6 mm⁴)	27334		27334
Ic (3n) (10^6 mm⁴)	20033		20033
Ss (10^3 mm³)	14597	30028	14597
Sc (n) (10^3 mm³)	20423		20423
Sc (3n) (10^3 mm³)	18331		18331
ℓ (kN/m)	10.85	16.71	10.85
Mℓ (kN-m)	1121	4021	996
sℓ (kN/m)	4.23		4.23
Msℓ (kN-m)	480		470
Mℓ (kN-m)	1289	1583	1372
M (Imp) (kN-m)	246	282	229
5/3(Mℓ+M(Imp)) (kN-m)	2557	3109	2669
Ma (kN-m)	5405	9269	5375
Mu (kN-m)	5818		7528
fsℓ non-comp (MPa)	77	134	68
fsℓ (comp) (MPa)	26		26
fs5/3(ℓ+Imp) (MPa)	125	104	131
fs (Overload) (MPa)	228	238	225
fs (Total) (MPa)		309	
VR (kN)	177		180

INTERIOR GIRDER REACTION TABLE	Abuts.	Pier 1 or 2
Rℓ (kN)	222	847
Rℓ (kN)	156	335
Imp. (kN)	30	38
R (Total) (kN)	408	1220

Is and Ss are the moment of inertia and section modulus of the steel section used in computing fs (Total & Overload).
Icsw and Scsw are the moment of inertia and section modulus of the composite section used in computing stresses due to Live Load.
Ic3sw and Sc3sw are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads. (see AASHTO 10.38)
VR is the maximum Live Load + Impact shear range in span.
~~Ma (Applied Moment)=1.3(Mℓ + Msℓ + 5/3(Mℓ + M Imp)).~~
The Plastic Moment capacity (Mu) is computed according to AASHTO 10.48.1 and 10.50.1.1
fs (Overload) is the sum of the stresses due to Mℓ + Msℓ + 5/3(Mℓ + M Imp).
fs (Total) (Non-compact section) is the sum of the stresses due to 1.3(Mℓ + Msℓ + 5/3(Mℓ + M Imp)).
Mℓ - Is the moment due to dead loads on non-composite section.
Msℓ - Is the moment due to dead loads on the composite section.
Mℓ - is the moment due to live load on the composite section.
M (Imp) - is the moment due to live load impact.

FOR INFORMATION ONLY
SN 091-0031

STRUCTURAL STEEL DETAILS
F.A.P. ROUTE 312 - SECTION 131 B-2
UNION COUNTY
STATION 27+439.370

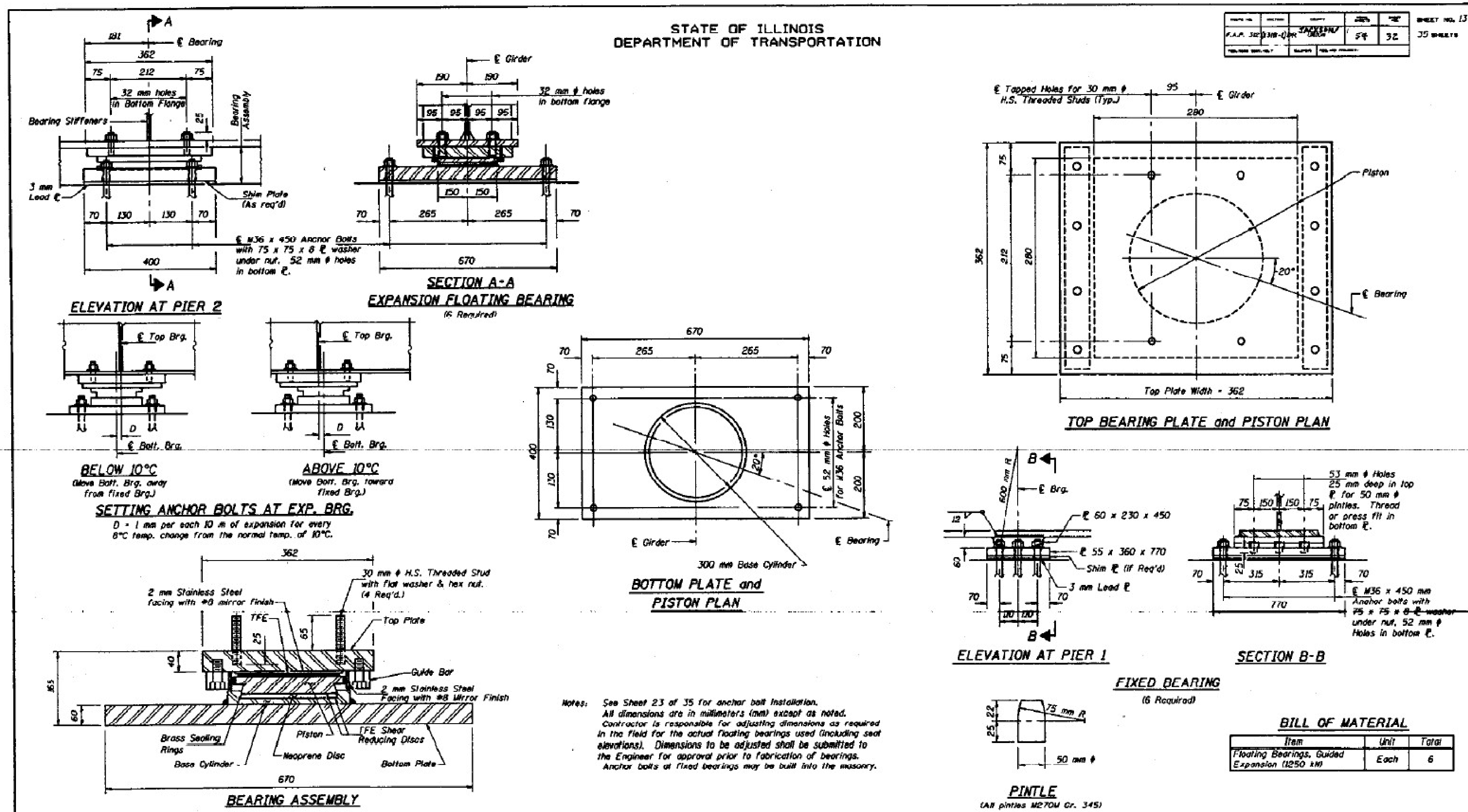
2 Revised 10/8/98 TMM
1 Revised 8/14/98 TMM

DESIGNED Ted Marting
CHECKED
AHC DRAWN S. WREN TAYLOR
CHECKED TMM DB
February 25, 1998
EXAMINED
PASSED Ralph E. Anderson

USER NAME = david.a.wilson	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 091-0031 STRUCTURE INFORMATION	F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN	REVISED -			VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	53
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -					CONTRACT NO. 78A04		
PLOT DATE = 10/18/2023	DATE -	REVISED -		SCALE: SHEET 53 OF 65 SHEETS STA. TO STA.		ILLINOIS FED. AID PROJECT			

MODEL: SN 091-0031_4 [Sheet]
FILE NAME: pw://ildot-pw.bentley.com:PWIDOT/Documents/IDOT Offices/District 9/ORD Projects/78A04/CADData/CADsheets/D978A04-Structure Information_4-10.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION AT PIER 2
℄ Bearing
Bearing Stiffeners
32 mm holes in Bottom Flange
Bearing Assembly
3 mm Lead ℄
Shim Plate (As req'd)
SECTION A-A
EXPANSION FLOATING BEARING
(6 Required)
℄ Girder
32 mm ϕ holes in bottom flange
℄ M36 x 450 Anchor Bolts with 75 x 75 x 8 ℄ washer under nut. 52 mm ϕ holes in bottom ℄.
BELOW 10°C
(Move Bott. Brg. away from fixed Brg.)
ABOVE 10°C
(Move Bott. Brg. toward fixed Brg.)
℄ Top Brg.
℄ Bott. Brg.
SETTING ANCHOR BOLTS AT EXP. BRG.
D = 1 mm per each 10 m of expansion for every 8°C temp. change from the normal temp. of 10°C.
BEARING ASSEMBLY
2 mm Stainless Steel facing with #8 mirror finish
30 mm ϕ H.S. Threaded Stud with flat washer & hex nut. (4 Req'd.)
TFE
Top Plate
Guide Bar
2 mm Stainless Steel Facing with #8 Mirror Finish
Brass Sealing Rings
Base Cylinder
Piston
Neoprene Disc
TFE Shear Reducing Discs
Bottom Plate
BOTTOM PLATE and PISTON PLAN
℄ Girder
℄ Bearing
300 mm Base Cylinder
℄ 52 mm ϕ Holes for M36 Anchor Bolts
TOP BEARING PLATE and PISTON PLAN
℄ Tapped Holes for 30 mm ϕ H.S. Threaded Studs (Typ.)
Piston
Top Plate Width - 362
ELEVATION AT PIER 1
600 mm R
℄ Brg.
℄ 60 x 230 x 450
℄ 55 x 360 x 770
Shim ℄ (If Req'd)
3 mm Lead ℄
SECTION B-B
53 mm ϕ Holes 25 mm deep in top ℄ for 50 mm ϕ pintles. Thread or press fit in bottom ℄.
℄ M36 x 450 mm Anchor bolts with 75 x 75 x 8 ℄ washer under nut, 52 mm ϕ Holes in bottom ℄.
FIXED BEARING
(6 Required)
PINTLE
(All pintles M270M Gr. 345)
75 mm R
50 mm ϕ

Notes: See Sheet 23 of 35 for anchor bolt installation.
All dimensions are in millimeters (mm) except as noted.
Contractor is responsible for adjusting dimensions as required in the field for the actual floating bearings used (including seat elevations). Dimensions to be adjusted shall be submitted to the Engineer for approval prior to fabrication of bearings.
Anchor bolts at fixed bearings may be built into the masonry.

BILL OF MATERIAL

Item	Unit	Total
Floating Bearings, Guided Expansion (1250 kN)	Each	6

FLOATING BEARING CAPACITY

Vertical Load	Horizontal Load	Longitudinal Movement
1250 kN	355 kN	26 mm

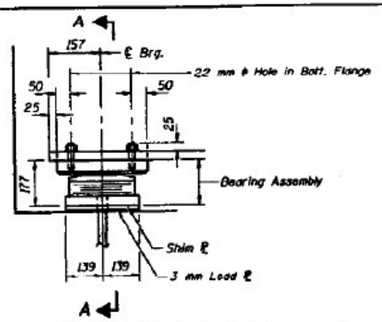
DESIGNED Ted Montag
CHECKED
DRAWN AMC E. VERN TAYLOR
CHECKED
February 25 1998
EXAMINED
PASSED

FOR INFORMATION ONLY
SN 091-0031

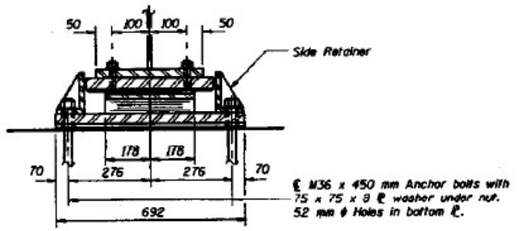
BEARING DETAILS - PIERS
F.A.P. ROUTE 312 - SECTION 131 B-2
UNION COUNTY
STATION 27+439.370

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

					SHEET NO. 14
F.A.P. 312	0318-00R	UNION	54	33	35 SHEETS



ELEVATION AT SOUTH ABUT.

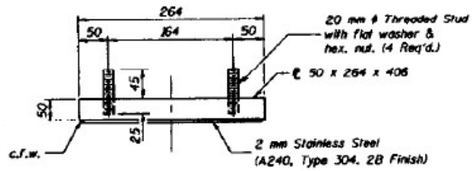


SECTION A-A

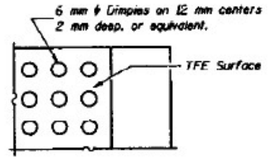
℄ M36 x 450 mm Anchor bolts with 75 x 75 x 8 ℄ washer under nut. 52 mm ϕ Holes in bottom ℄.

Notes: See sheet #23 of 35 for Anchor Bolt Installation.
All dimensions are in millimeters (mm) except as noted.

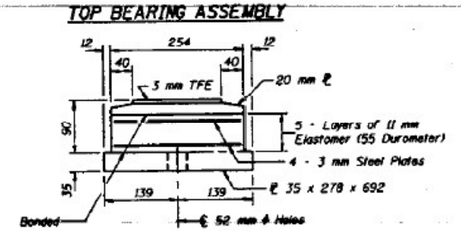
TYPE II ELASTOMERIC EXP. BRG.

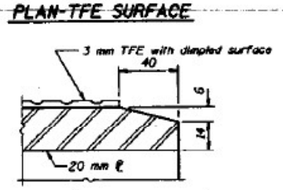


TOP BEARING ASSEMBLY



PLAN-TFE SURFACE



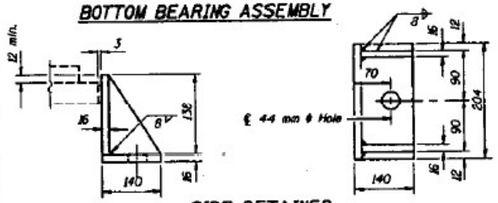


SECTION THRU TFE

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.

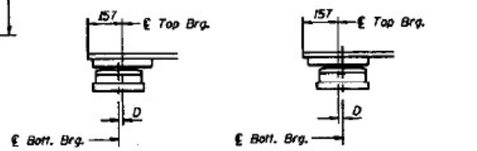
Bonding of 3 mm TFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.

BOTTOM BEARING ASSEMBLY



SIDE RETAINER

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



BELOW 10 °C (Move bott. brg. away from fixed brg.)

ABOVE 10 °C (Move bott. brg. toward fixed brg.)

SETTING ANCHOR BOLTS AT EXP. BRG.

D= 1 mm per each 10 m of expansion for every 8 °C temp. change from the normal temp. of 10 °C.

DESIGNED	Ted Mobley	February 25	19 98
CHECKED		EXAMINED	Engineer of Bridge Design
CHECKED	AMC	PASSED	Bureau of Bridges and Structures
DRAWN	K. VERN TAYLOR		
CHECKED	Thom DS		

I-2-E2 (M) 4-30-97

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly Type II	Each	6

FOR INFORMATION ONLY
SN 091-0031

BEARING DETAILS - SOUTH ABUTMENT
F.A.P. ROUTE 312 - SECTION 131 B-2
UNION COUNTY
STATION 27+439.370

MODEL: SN 091-0031_sf [Sheet]
FILE NAME: pw://bridgew.bentley.com:PWIDOT/Documents/IDOT Offices/District 9/ORD Projects/78A04/CADData/CADSheets/0978A04-Structure_Information_sht.dgn

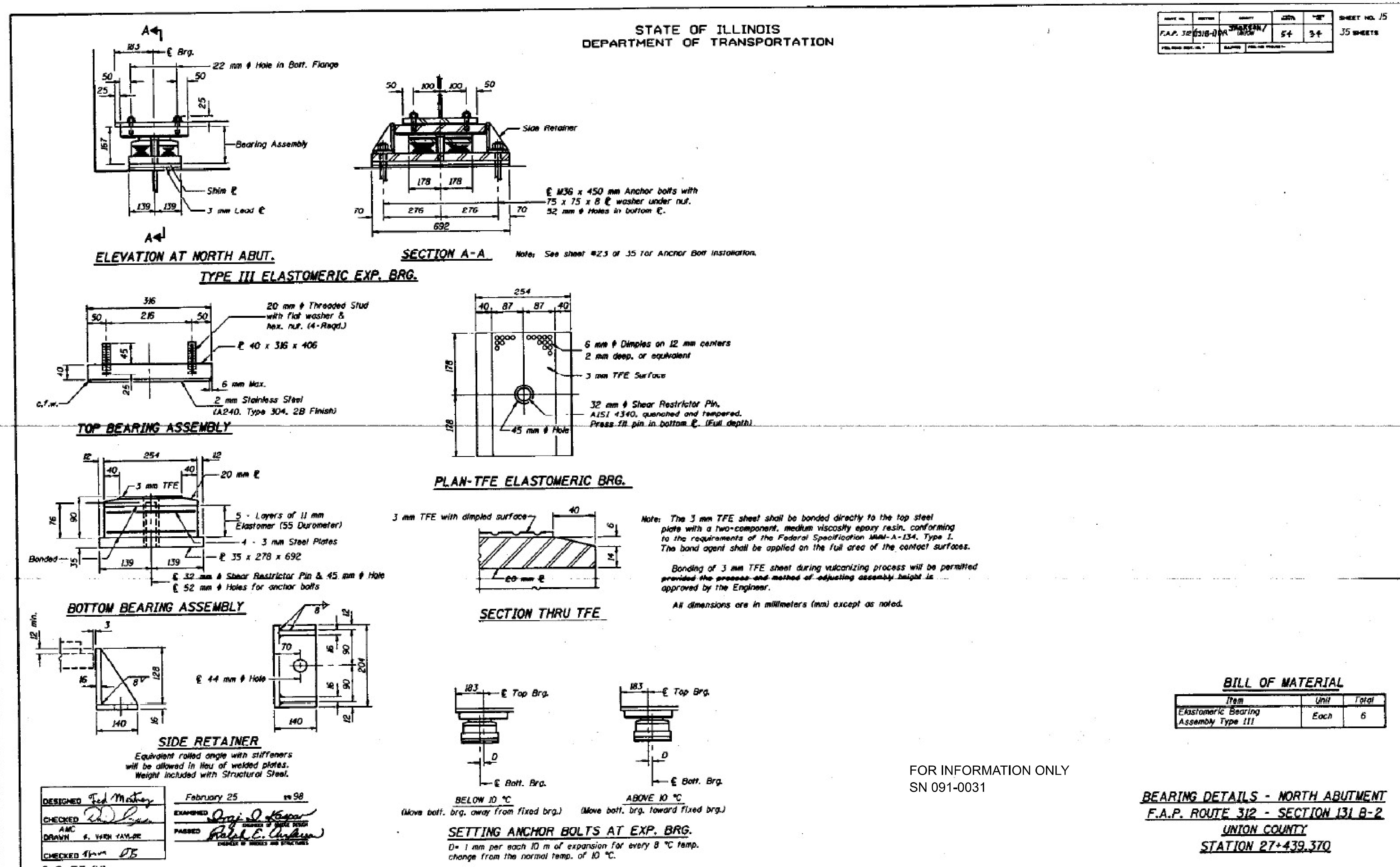
USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 091-0031
STRUCTURE INFORMATION

SCALE: | SHEET 55 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	55
		CONTRACT NO. 78A04		
		ILLINOIS	FED. AID PROJECT	



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
F.A.P. 312 | 131B-2 | UNION | 54 | 34
SHEET NO. 15
35 SHEETS
22 mm ϕ Hole in Bott. Flange
Bearing Assembly
Shim ℙ
3 mm Lead ℙ
ELEVATION AT NORTH ABUT.
Side Retainer
℄ M36 x 450 mm Anchor bolts with 75 x 75 x 8 ℙ washer under nut. 52 mm ϕ Holes in bottom ℙ.
SECTION A-A
Note: See sheet #23 of 35 for Anchor Bolt installation.
TYPE III ELASTOMERIC EXP. BRG.
20 mm ϕ Threaded Stud with flat washer & hex. nut. (4-Reqd.)
ℙ 40 x 316 x 406
6 mm Max.
2 mm Stainless Steel (A240, Type 304, 2B Finish)
TOP BEARING ASSEMBLY
6 mm ϕ Dimples on 12 mm centers 2 mm deep, or equivalent
3 mm TFE Surface
32 mm ϕ Shear Restrictor Pin. AISI 4340, quenched and tempered. Press fit pin in bottom ℙ. (Full depth)
45 mm ϕ Hole
PLAN-TFE ELASTOMERIC BRG.
20 mm ℙ
3 mm TFE
5 - Layers of 11 mm Elastomer (55 Durometer)
4 - 3 mm Steel Plates
ℙ 35 x 278 x 692
Bonded
℄ 32 mm ϕ Shear Restrictor Pin & 45 mm ϕ Hole
℄ 52 mm ϕ Holes for anchor bolts
BOTTOM BEARING ASSEMBLY
3 mm TFE with dimpled surface
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.
All dimensions are in millimeters (mm) except as noted.
℄ 44 mm ϕ Hole
SIDE RETAINER
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates. Weight included with Structural Steel.
℄ Top Brg.
℄ Bott. Brg.
BELOW 10 °C (Move bott. brg. away from fixed brg.)
ABOVE 10 °C (Move bott. brg. toward fixed brg.)
SETTING ANCHOR BOLTS AT EXP. BRG.
D= 1 mm per each 10 m of expansion for every 8 °C temp. change from the normal temp. of 10 °C.
BILL OF MATERIAL
Item | Unit | Total
Elastomeric Bearing Assembly Type III | Each | 6
BEARING DETAILS - NORTH ABUTMENT
F.A.P. ROUTE 312 - SECTION 131 B-2
UNION COUNTY
STATION 27+439.370
DESIGNED Ted Mathey
CHECKED
DRAWN AMC G. VERN TAYLOR
CHECKED
February 25 1998
EXAMINED
PASSED
I-2-E3 (M) 4-30-97

FOR INFORMATION ONLY
SN 091-0031

USER NAME = david.a.wilson	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SN 091-0031 STRUCTURE INFORMATION
	DRAWN -	REVISED -		
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -		
PLOT DATE = 10/18/2023	DATE -	REVISED -		SCALE: SHEET 56 OF 65 SHEETS STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	56
		CONTRACT NO. 78A04		
		ILLINOIS FED. AID PROJECT		

MODEL: SN 091-0031_7 [Sheet]
FILE NAME: pw://illdot-pw.bentley.com:PWIDOT/Documents/IDOT Offices/District 9/ORD Projects/78A04/CADData/CADsheets/D978A04-Structure Information_4-10.dgn

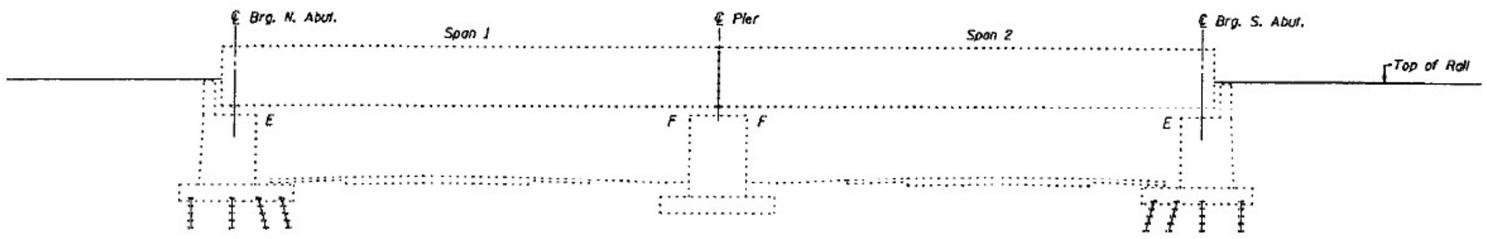
Existing Structure: SN 002-0025 Built in 1973 as Illinois Central Railroad over FAI 57 Sec. 02-15B. Existing Structure consists of two single spans of 2 thru-plate girders. Holes will be drilled at selected stiffener locations to reduce possibility of brittle fracture. Vehicular and rail traffic will be maintained using appropriate traffic control.

No Salvage.

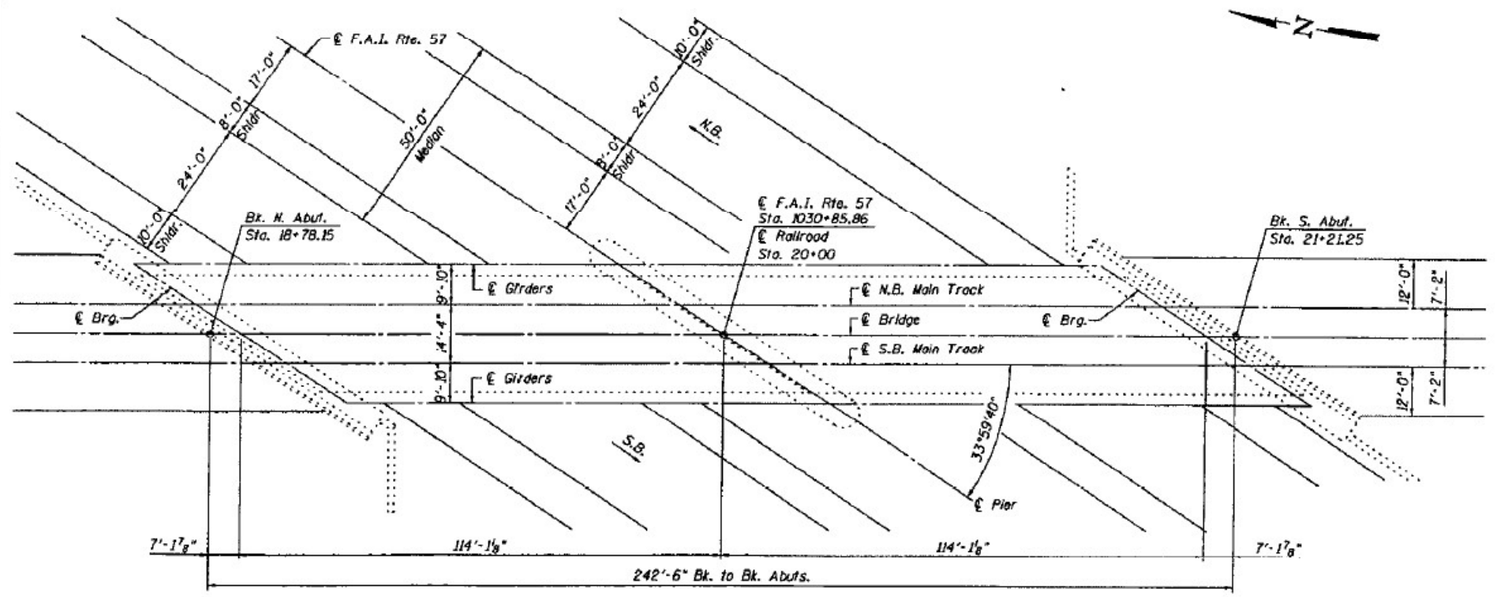
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI Rt. 57	*	Alexander	6	4	SHEET NO. 1 OF 4 SHEETS

Contract 78002



ELEVATION



PLAN

DESIGNED	C.W.C.
CHECKED	S.D.S.
DRAWN	D.L.H.
CHECKED	C.W.C.

WHKS & CO.
ENGINEERS — PLANNERS — LAND SURVEYORS
MASON CITY, IOWA DUBUQUE, IOWA AMES, IOWA
E. DUBUQUE, ILLINOIS SPRINGFIELD, ILLINOIS ROCHESTER, MINNESOTA

GENERAL NOTES

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

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

No field welding is permitted except as specified in the contract documents.

Existing plans will be available for viewing at the IDOT District 9 Headquarters.

INDEX OF SHEETS

FOR INFORMATION ONLY
SN 002-0025

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Stiffener Intersection Modification	Each	96		96
Bridge Monitoring	L.S.	1		1
Railroad Protective Liability Insurance	L.S.			1

LICENSED STRUCTURAL ENGINEER
CORY W. CHAMBERLAIN
081-005882
STATE OF ILLINOIS
Cory W. Chamberlain
05/09/07
Exp 11/30/08

LOADING COOPER E-80

Cooper E80 with Steam Impact

DESIGN SPECIFICATIONS

1970 AREA Specifications for Steel Bridges (Original)
2006 AREMA Specifications for Railway Engineering

DESIGN STRESSES

EXISTING FIELD UNITS

f_b = 3,500 psi
f_s = 20,000 psi (A36 structural steel)

GENERAL PLAN & ELEVATION
CNIC RAILROAD OVER INTERSATE 57
ALEXANDER COUNTY
S.N. 002-0025

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 002-0025
STRUCTURE INFORMATION

SCALE: | SHEET 57 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	57
		CONTRACT NO. 78A04		
		ILLINOIS FED. AID PROJECT		

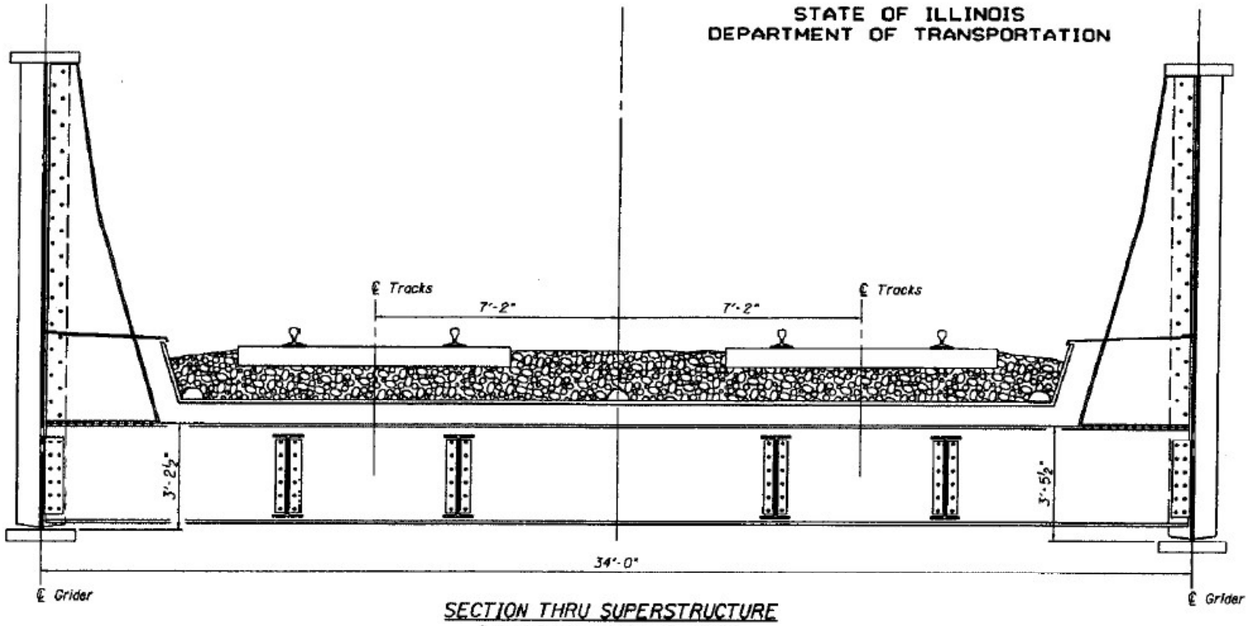
MODEL: SN 002-0025_1 [Sheet]
FILE NAME: pw:\\ilaspw.bentley.com:PWIDOT\Documents\IDOT Offices\District 9\ORD Projects\78A04\CADData\CADSheets\D78A04-Structure_Information_1of10.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

FAI Rt. 57	4	Alexander		6

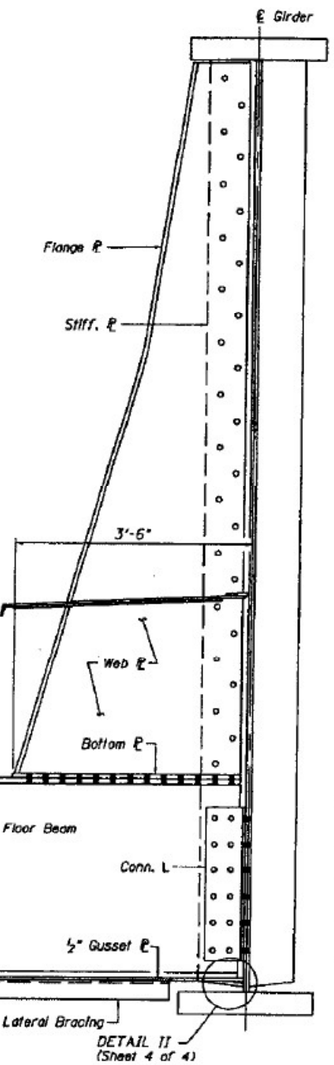
SHEET NO. 3 OF 4 SHEETS

Contract 78002

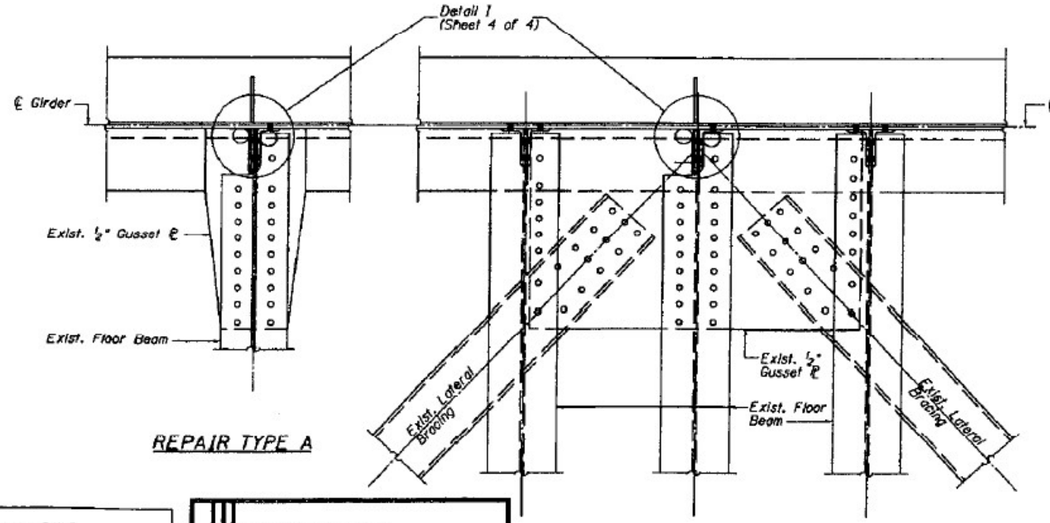


SECTION THRU SUPERSTRUCTURE
(Lateral Bracing not shown for clarity)

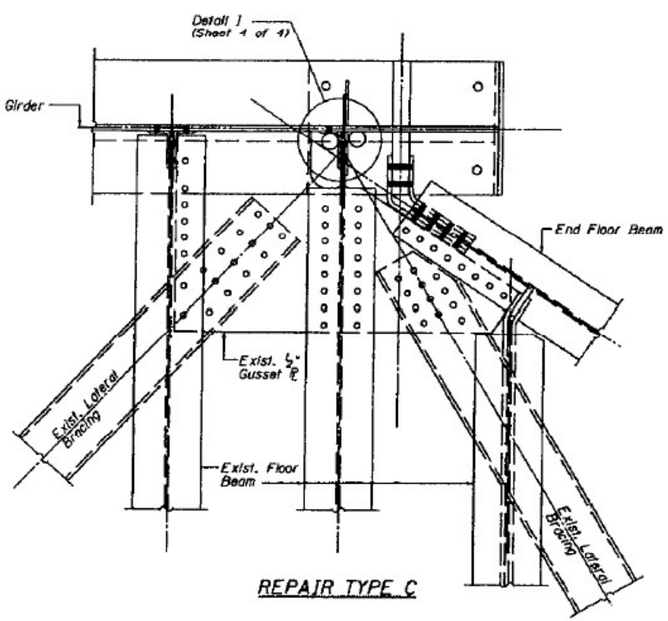
FOR INFORMATION ONLY
SN 002-0025



SECTION THRU GIRDER



REPAIR TYPE A



REPAIR TYPE C

REPAIR TYPE B

DESIGNED	C.W.C.
CHECKED	S.D.S.
DRAWN	D.L.H.
CHECKED	C.W.C.

WHKS & CO.
ENGINEERS PLANNERS LAND SURVEYORS
MASON CITY, IOWA DUBUQUE, IOWA AMES, IOWA
E. DUBUQUE, ILLINOIS SPRINGFIELD, ILLINOIS ROCHESTER, MINNESOTA

MODIFICATION DETAILS
CNIC RAILROAD OVER INTERSATE 57
ALEXANDER COUNTY
S.N. 002-0025

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 002-0025
STRUCTURE INFORMATION

SCALE: SHEET 58 OF 65 SHEETS STA. TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	58
		CONTRACT NO. 78A04		
	ILLINOIS	FED. AID PROJECT		

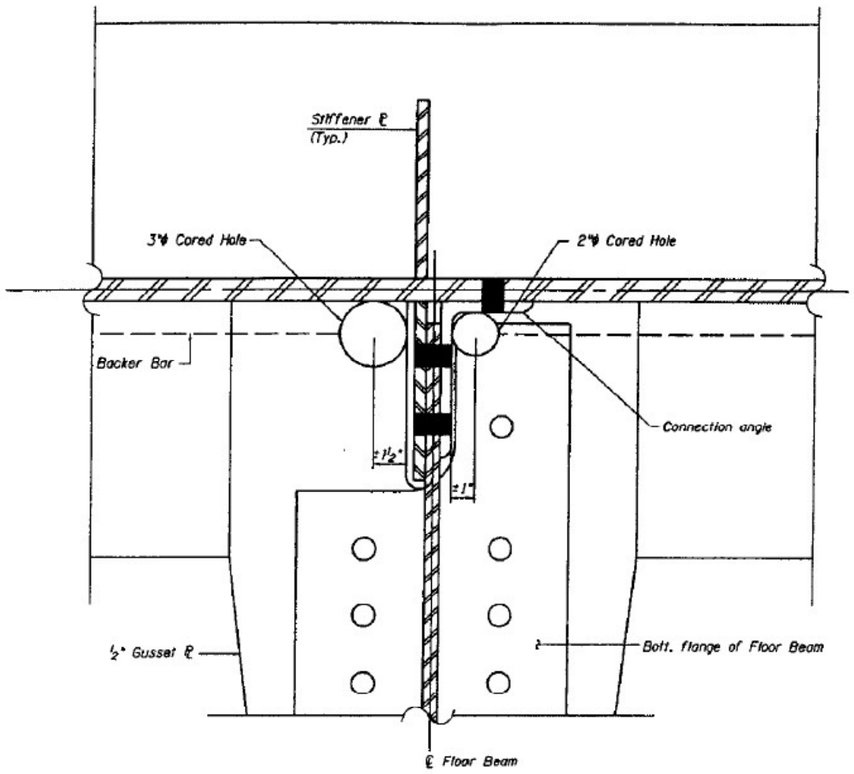
MODEL: SN 002-0025_2 [Sheet]
FILE NAME: pw://illoo-pw.bentley.com:PWDOT/Documents/IDOT Offices/District 9/GRD Projects/78A04/CADData/CADSheets/D978A04eStructure_Information_4-10.dgn

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

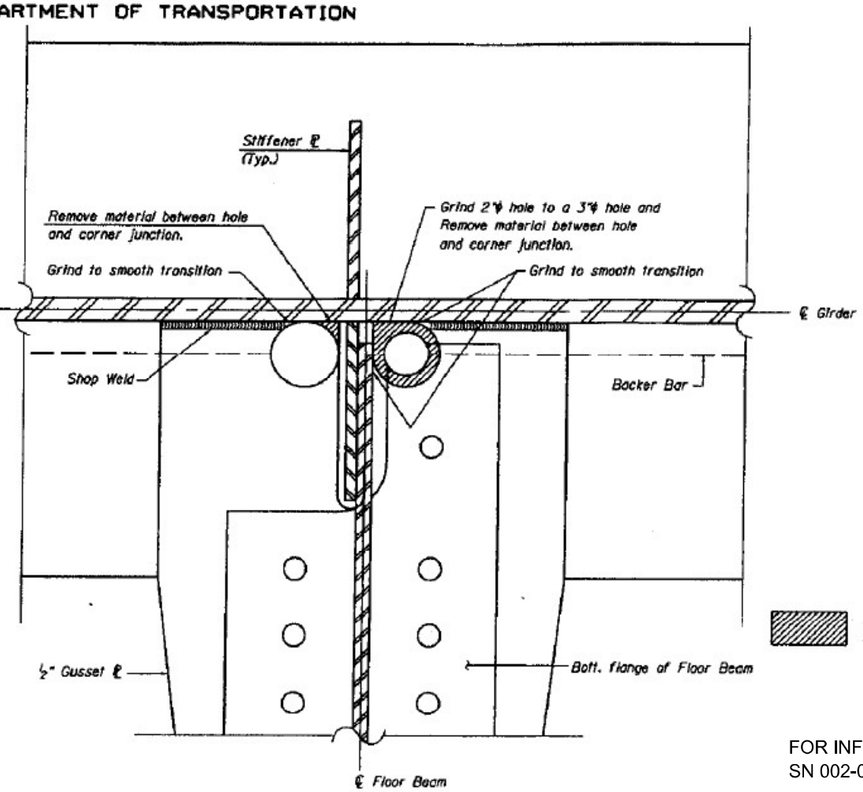
F.A.RTE.	SECTION	COUNTY	"B"	"E"
FAI Rt. 57	*	Alexander	6	6A

SHEET NO. 4 OF 4 SHEETS

Contract 78002



DETAIL IA



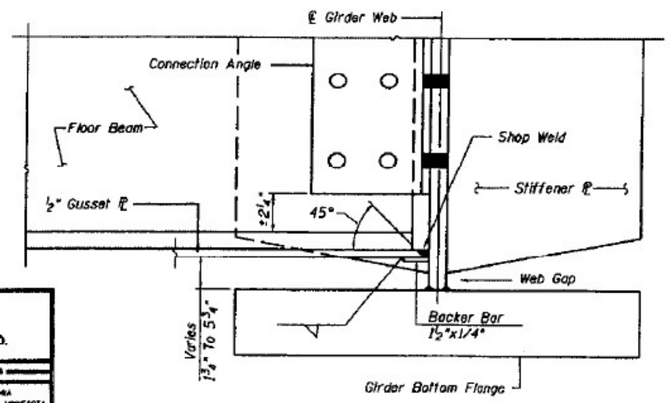
DETAIL IB

Connection angle not shown for clarity.

Indicates hand grinding of structural steel.

FOR INFORMATION ONLY
SN 002-0025

DETAIL I STIFFENER INTERSECTION MODIFICATION



DETAIL II

Procedure:

1. Core 2"ϕ or 3"ϕ holes, positioned close to corner junction as shown in Detail IA. Core 2"ϕ hole thru Bott. Flange, Gusset ℄, and Backer Bar. Core 3"ϕ hole thru Gusset ℄, and Backer Bar.
2. Enlarge diameter of 2" hole to 3" by symmetrically grinding around hole as shown in Detail IB.
3. Remove material between core and intersection junction by grinding with carbide tools and die grinder. Remove all burrs from cut edge and check for irregularities as shown in Detail IB.
4. Web plate surface shall have a roughness average (Ra) of 250μ-in. or less. Cored surfaces shall have an Ra to 250μ-in. or less. Check for symmetry on each side of stiffener. Repeat step 2 and 3 if necessary for symmetry.
5. After burr removal, the web area shall be inspected for cracks using magnetic particle (MT) or Dye Penetrant methods. Any cracks found shall be identified and reported to the Bureau of Bridges and Structures for further disposition.
6. The exposed steel surfaces shall be cleaned and painted using an aluminum epoxy mastic primer.

Note:

See Special Provisions for further details and payment information.

Cleaning & Painting shall be according to Cleaning and Painting Contact Surface Areas of Existing Steel Structures and shall be included in the cost of "Stiffener Intersection Modification".

DESIGNED	C.W.C.
CHECKED	S.D.S.
DRAWN	D.L.H.
CHECKED	C.W.C.

WHKS & CO.
ENGINEERS PLANNERS LAND SURVEYORS
MASON CITY, IOWA DUBUQUE, IOWA AMES, IOWA
E. DUBUQUE, ILLINOIS SPRINGFIELD, ILLINOIS ROCHESTER, MINNESOTA

MODIFICATION DETAILS
CNIC RAILROAD OVER INTERSATE 57
ALEXANDER COUNTY
S.N. 002-0025

MODEL: SN 002-0025_3 [Sheet]
FILE NAME: pw:\\Bridge.bentley.com:PWIDOT\Documents\IDOT Offices\District 8\ORD Projects\78A04\CADData\CADSheets\D78A04-Structure_Information_4-10.dgn

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 002-0025
STRUCTURE INFORMATION

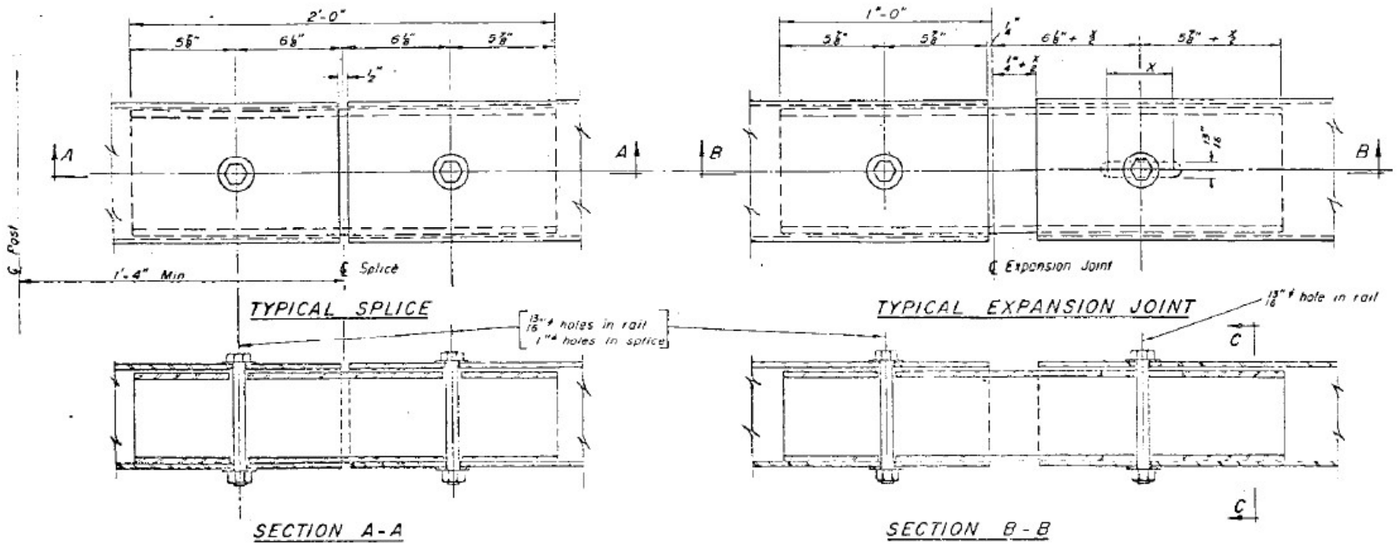
SCALE: | SHEET 59 OF 65 SHEETS | STA. | TO STA.

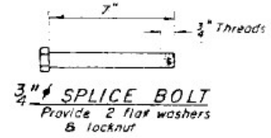
F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	59
		CONTRACT NO. 78A04		
	ILLINOIS FED. AID PROJECT			

STATE OF ILLINOIS

F.A.I. 57 S.B.I. 150	*	ALEXANDER	287	65

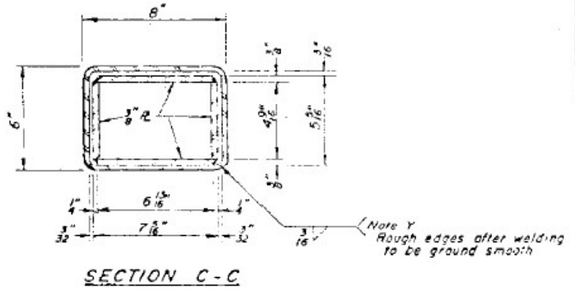
F.A.I. RTE. 57 SEC. 02-(1,1SB,1-1,1-2)
SEC. [02-(1 1-1)] SG
S.B.I. RTE. 150 RELOC. SEC. 137-1





¾" ϕ SPLICE BOLT
Provide 2 flat washers & locknut

NEAR STATION ℄ MEDIAN	X
1130+81	3"
1133+51	3"
1136+21	3"
1138+91	3"



SECTION C-C

Notes.

Hollow structural tubing shall conform to the requirements of ASTM designation A501 "Hot Formed Welded and Seamless Carbon Steel Structural Tubing".

All other material excepting splice bolts shall conform to the requirements of ASTM designation A 36.

Splice bolts and nuts shall conform to the requirements of ASTM designation A 307.

All fabrication shall be complete and ready for assembly before galvanizing. No punching, drilling, cutting nor welding shall be permitted after galvanizing.

All posts, railings, and splices shall be galvanized after fabrication in accordance with ASTM designations A-123 and A-385.

All bolts, nuts, and washers shall be galvanized in accordance with ASTM designation A-153.

FOR INFORMATION ONLY
SN 002-0025

DESIGNED	
CHECKED	
DRAWN Wm. M. Best	
CHECKED	

19
EXAMINED
PASSED
APPROVED

BOX BEAM MEDIAN BARRIER

SPLICE AND EXPANSION JOINT DETAILS

F.A.I. RTE. 57 SEC. 02-(1,1SB,1-1,1-2) ALEXANDER CO.

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 002-0025
STRUCTURE INFORMATION

SCALE: | SHEET 60 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	60
		CONTRACT NO. 78A04		
	ILLINOIS FED. AID PROJECT			

MODEL: SN 002-0025_4 [Sheet]
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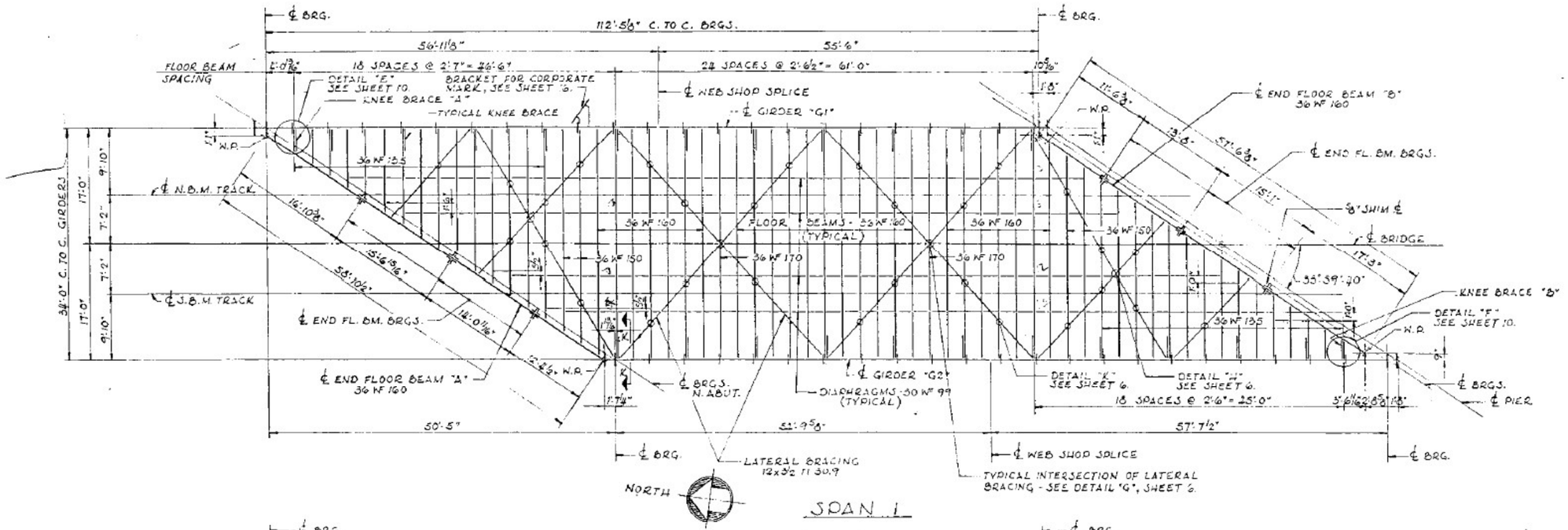
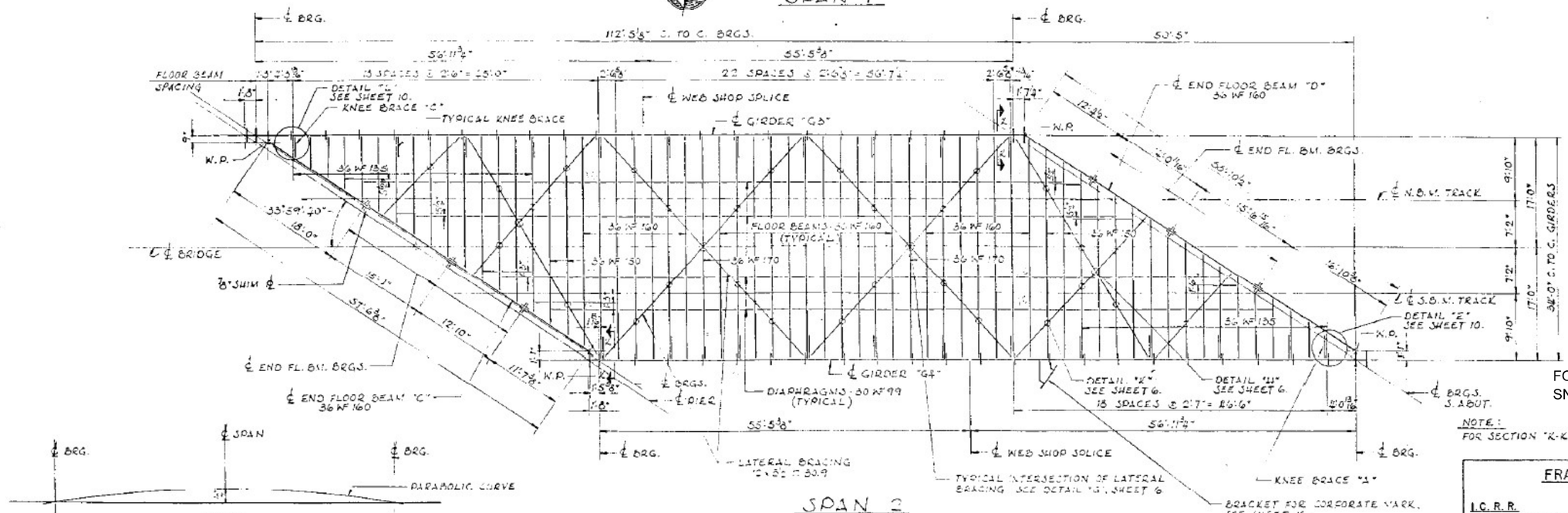
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	02-1SB	ALEXANDER	287	102
STA.	TO STA.			
B.P.R. REQ. NO. 4	NUMBER	F.A. PROJ.		

SHEET 5 OF 36



SPAN 1



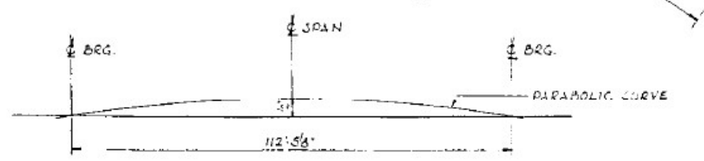
NOTE:
FOR SECTION "K-K" SEE SHEET 10.

FOR INFORMATION ONLY
SN 002-0025

SPAN 2

FRAMING PLAN

SCALE: ⅛" = 1'-0"



CAMBER DIAGRAM FOR GIRDERS

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
JOB # 1575
105 WABASH AVE. CHICAGO, ILLINOIS

FRAMING PLAN
UNDERPASS
I.C.R.R. BRIDGE NO. 360-2
NORTH OF CAIRO ILLINOIS
F.A. PROJECT
F.A.I. ROUTE 57 SECTION 02-1SB
ALEXANDER COUNTY
STATION 1030 + 85.66

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

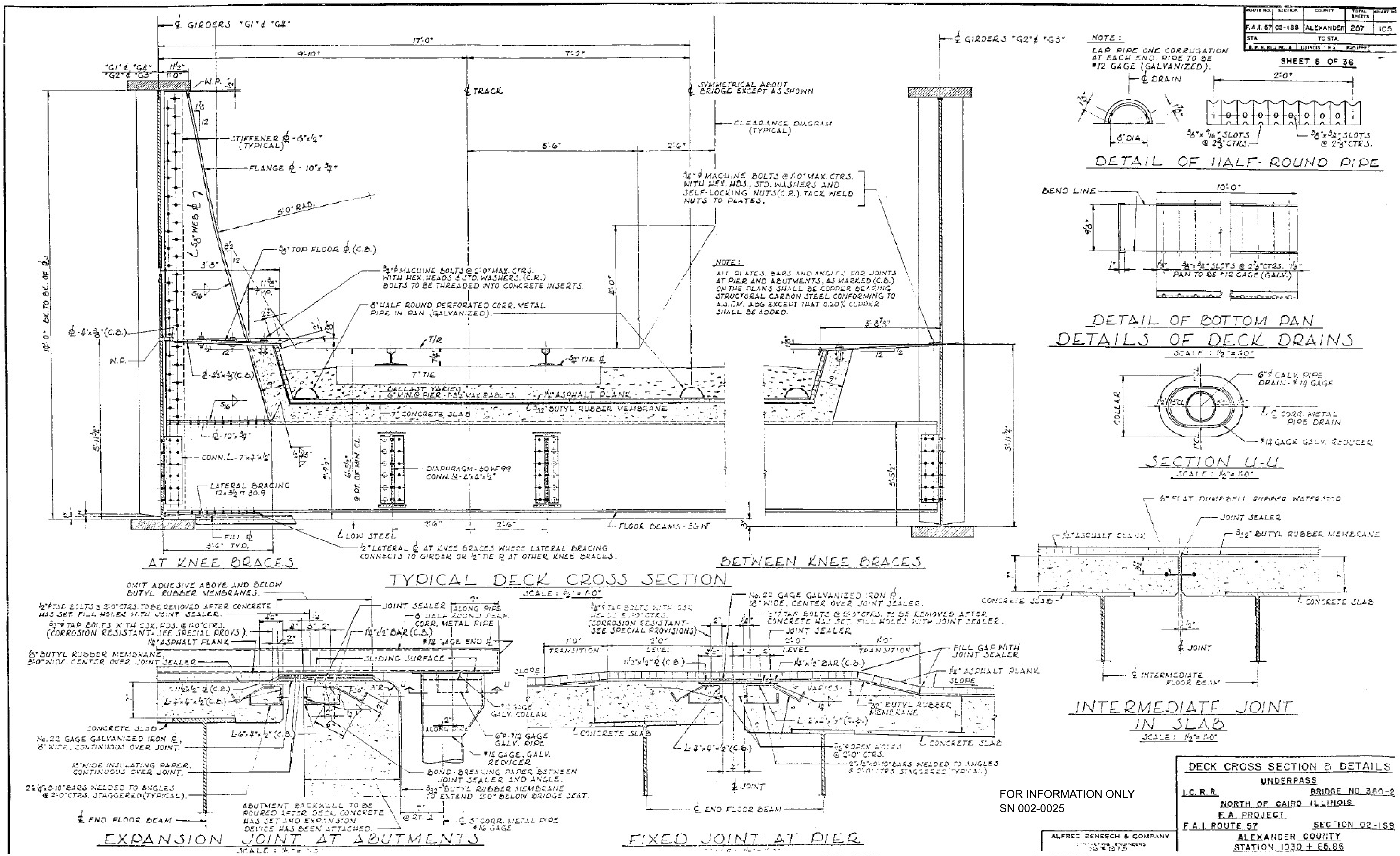
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 002-0025
STRUCTURE INFORMATION

SCALE: | SHEET 61 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	61
		CONTRACT NO. 78A04		
		ILLINOIS	FED. AID PROJECT	

MODEL: SN 002-0025_5 [Sheet]
FILE NAME: pw://illios-pw.bentley.com:PWDOT/Documents/IDOT Offices/District 9/ORD Projects/78A04/CADData/CADSheets/D78A04Structure_Information_4-10.dgn



F.A.I. 57 | 02-1SB | ALEXANDER | 287 | 105
SHEET 8 OF 36
TYPICAL DECK CROSS SECTION
SCALE: 3/4" = 1'-0"
AT KNEE BRACES
BETWEEN KNEE BRACES
SYMMETRICAL ABOUT BRIDGE EXCEPT AS SHOWN
CLEARANCE DIAGRAM (TYPICAL)
NOTE: ALL PLATES, BARS AND ANGLES FOR JOINTS AT PIER AND ABUTMENTS, AS MARKED (C.B.) ON THE PLANS SHALL BE COPPER BEARING STRUCTURAL CARBON STEEL CONFORMING TO A.S.T.M. A36 EXCEPT THAT 0.20% COPPER SHALL BE ADDED.
NOTE: LAP PIPE ONE CORRUGATION AT EACH END. PIPE TO BE #12 GAGE (GALVANIZED).
DETAIL OF HALF-ROUND PIPE
DETAIL OF BOTTOM PAN
DETAILS OF DECK DRAINS
SCALE: 1/2" = 1'-0"
SECTION U-U
SCALE: 1/2" = 1'-0"
INTERMEDIATE JOINT IN SLAB
SCALE: 1/2" = 1'-0"
EXPANSION JOINT AT ABUTMENTS
FIXED JOINT AT PIER
DECK CROSS SECTION & DETAILS
UNDERPASS
I.C.R.R. BRIDGE NO. 360-2
NORTH OF CAIRO ILLINOIS
F.A. PROJECT
F.A.I. ROUTE 57 SECTION 02-1SB
ALEXANDER COUNTY
STATION 1030 + 85.86
ALFRED BENESCH & COMPANY

FOR INFORMATION ONLY
SN 002-0025

USER NAME = david.a.wilson	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
	DRAWN	REVISED -	
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

SN 002-0025
STRUCTURE INFORMATION

SCALE: | SHEET 62 OF 65 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	62
		CONTRACT NO. 78A04		
		ILLINOIS FED. AID PROJECT		

MODEL: SN 002-0025_6 [Sheet]
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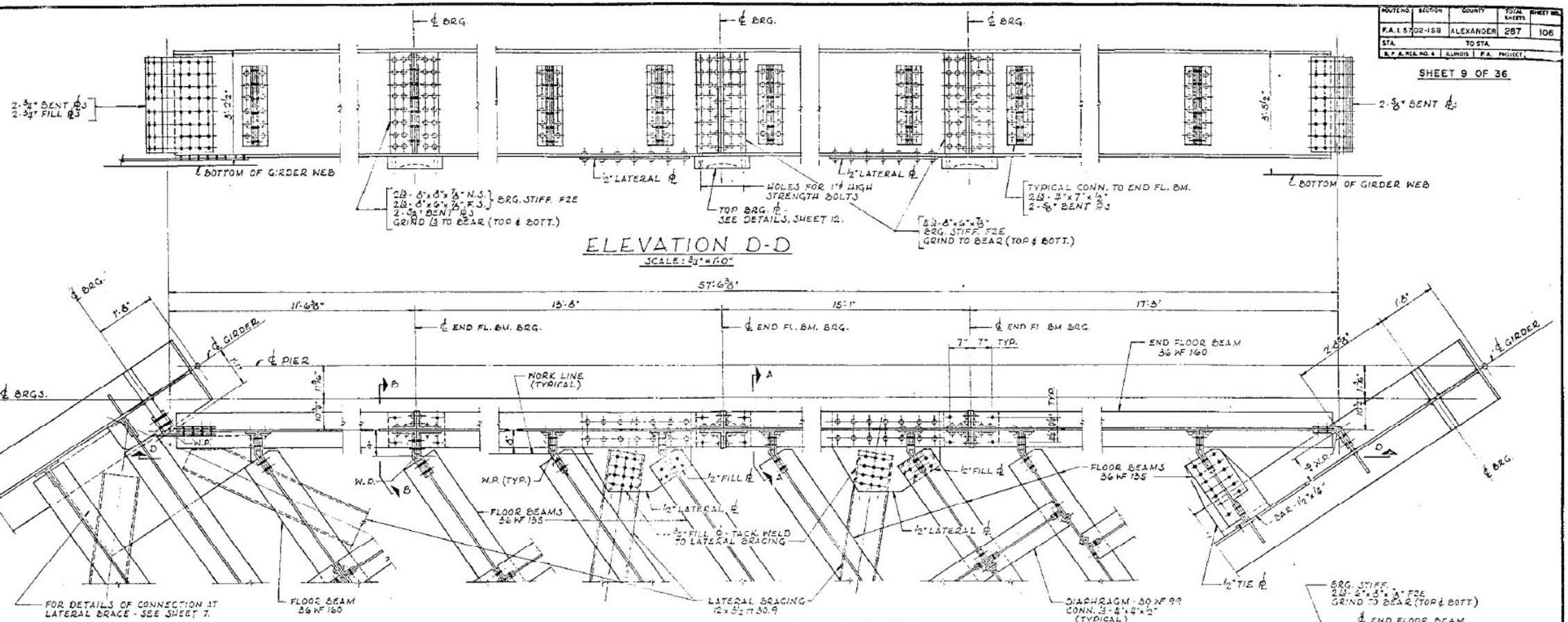
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	02-1SB	ALEXANDER	287	106
STA.		TO STA.		
S. P. A. REG. NO. 4	ILLINOIS	F.A. PROJECT		

SHEET 9 OF 36

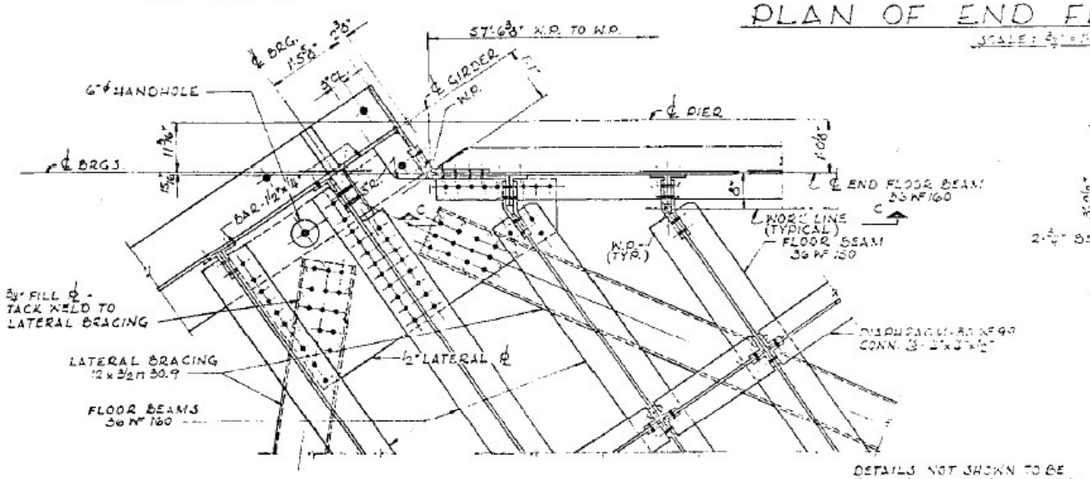


ELEVATION D-D

SCALE: ⅜" = 1'-0"

PLAN OF END FLOOR BEAM "B"

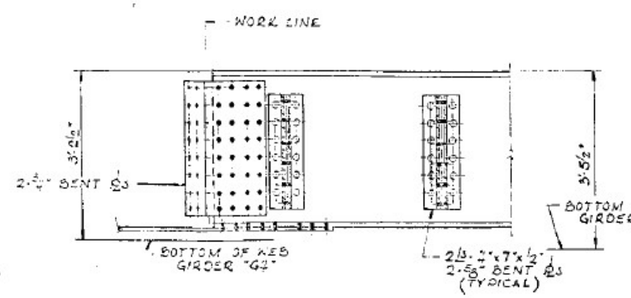
SCALE: ¾" = 1'-0"



PART PLAN END FLOOR BEAM "C"

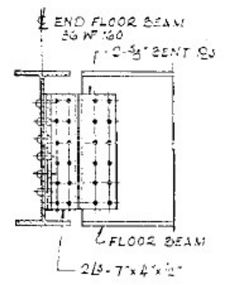
SCALE: ¾" = 1'-0"

DETAILS NOT SHOWN TO BE SIMILAR TO THOSE INDICATED FOR END FLOOR BEAM "B".



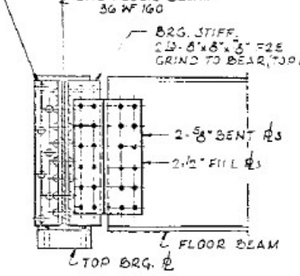
ELEVATION C-C

SCALE: ¾" = 1'-0"



SECTION A-A

SCALE: ¾" = 1'-0"



SECTION B-B

SCALE: ¾" = 1'-0"

FOR INFORMATION ONLY
SN 002-0025

END FLOOR BEAMS
UNDERPASS
I.C.R.R. BRIDGE NO. 360-2
NORTH OF CAIRO ILLINOIS
F.A. PROJECT
F.A.I. ROUTE 57 SECTION 02-1SB
ALEXANDER COUNTY
STATION 1030 + 85.86

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH ILLINOIS

USER NAME = david.a.wilson	DESIGNED -	REVISED -	
	DRAWN -	REVISED -	
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -	
PLOT DATE = 10/18/2023	DATE -	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 002-0025
STRUCTURE INFORMATION

SCALE: | SHEET 63 OF 65 SHEETS | STA. | TO STA.

F.A.* RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	63
		CONTRACT NO. 78A04		
	ILLINOIS FED. AID PROJECT			

MODEL: SN 002-0025_7 [Sheet]
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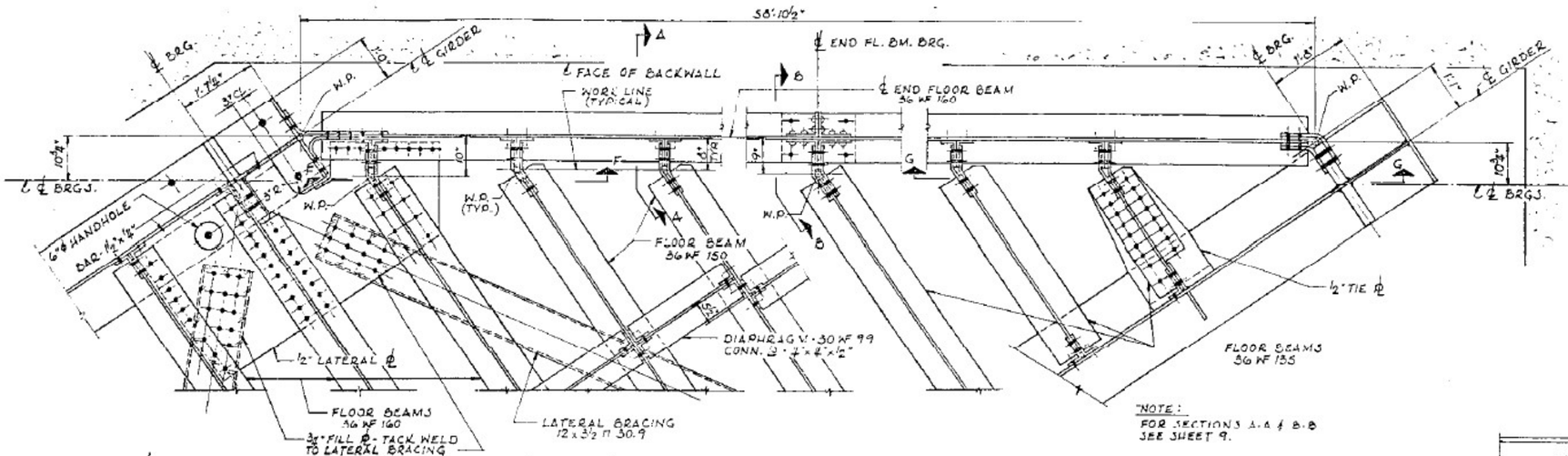
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	02-1SB	ALEXANDER	287	107
STA.	TO STA.			
B.P.R. REG. NO. 4	ILLINOIS	U.S.A.	PROJECT	

SHEET 10 OF 36



PART PLAN OF END FLOOR BEAMS "A" & "D"

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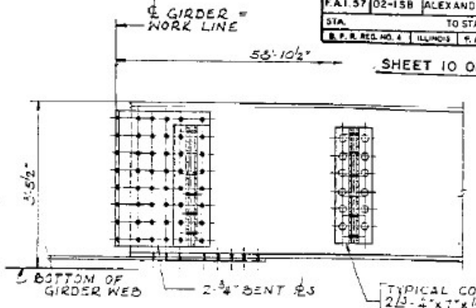
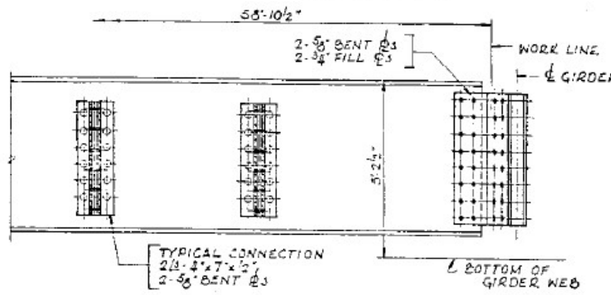


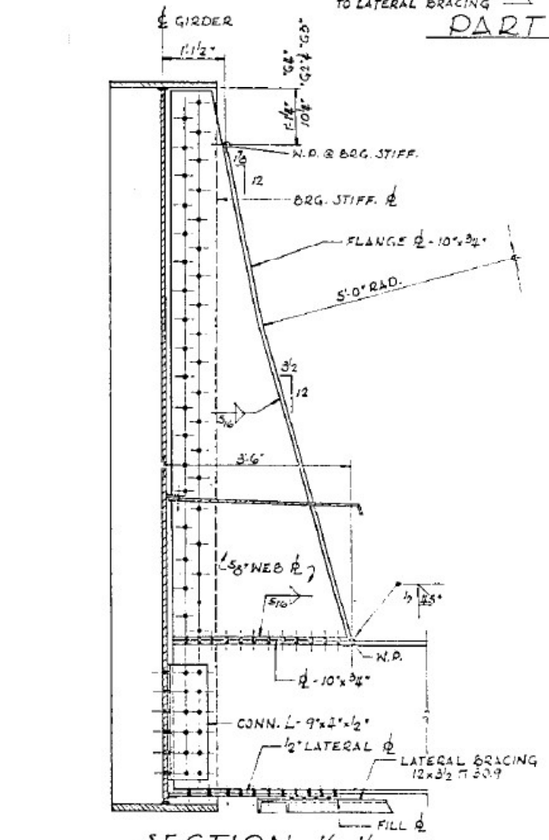
ELEVATION F-F

SCALE: ⅜"=1'-0"



ELEVATION G-G

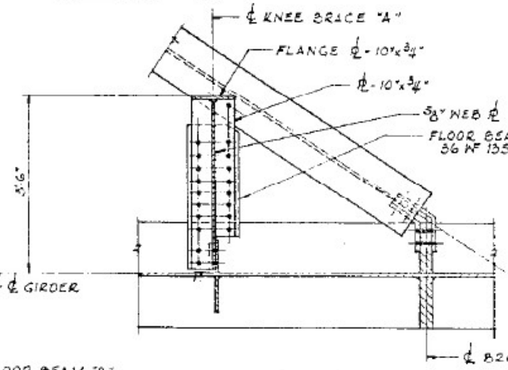
SCALE: ⅜"=1'-0"



SECTION K-K

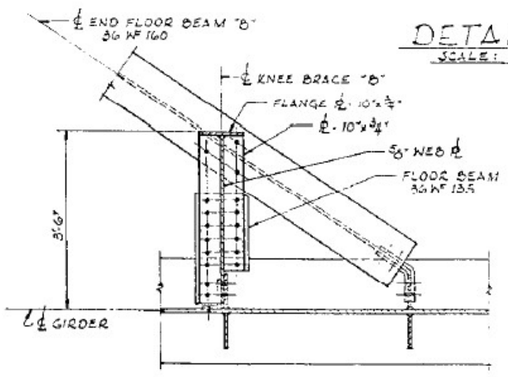
GIRDER "G1" SHOWN - GIRDERS "G2" & "G3" SIMILAR

SCALE: ¾"=1'-0"



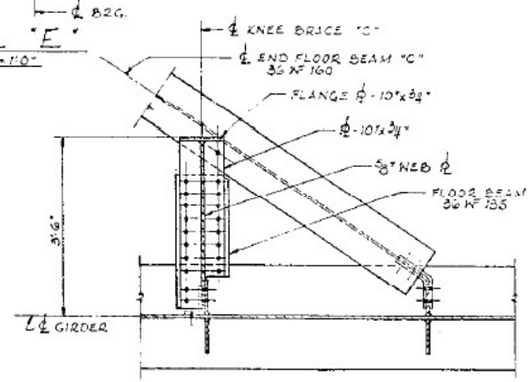
DETAIL "E"

SCALE: ¾"=1'-0"



DETAIL "F"

SCALE: ¾"=1'-0"



DETAIL "L"

SCALE: ¾"=1'-0"

NOTE:
FOR LOCATION OF SECTION K-K AND DETAILS "E", "F" & "L" SEE FRAMING PLAN, SHEET 5.

FOR INFORMATION ONLY
SN 002-0025

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS
JOB # 10175

END FLOOR BEAMS & MISC. DETAILS

UNDERPASS
I.C.R.R. BRIDGE NO. 360-2
NORTH OF CAIRO ILLINOIS
F.A. PROJECT.
F.A.I. ROUTE 57 SECTION 02-1SB
ALEXANDER COUNTY
STATION 1030 + 85.86

USER NAME = david.a.wilson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666633 ' / in.	CHECKED -	REVISED -
PLOT DATE = 10/18/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 002-0025
STRUCTURE INFORMATION

SCALE: | SHEET 64 OF 65 SHEETS | STA. | TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	64
		CONTRACT NO. 78A04		
	ILLINOIS	FED. AID PROJECT		

MODEL: SN 002-0025_8 [Sheet]
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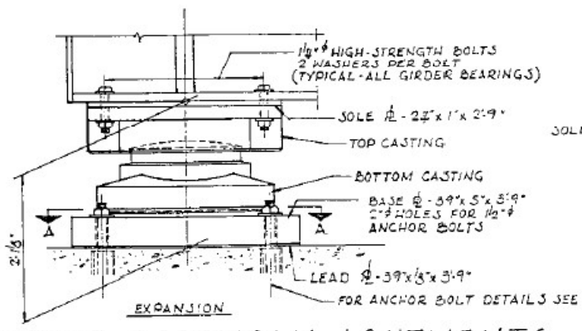
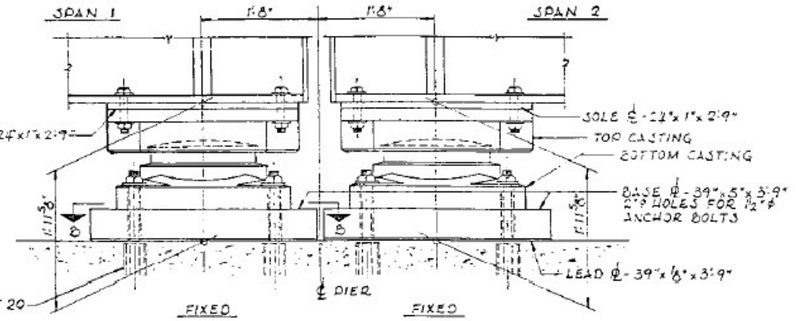
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 57	02-15B	ALEXANDER	287	109
STA.		TO STA.		
B.P.R. REG. NO. 4	ILLINOIS	F.A. PROJECT		

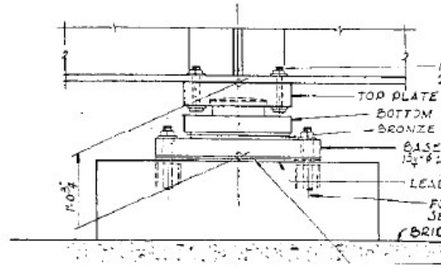
SHEET 12 OF 36



BEARING ASSEMBLY - ABUTMENTS



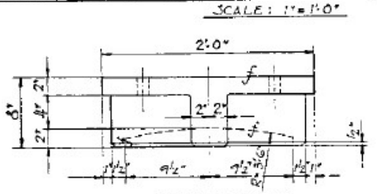
BEARING ASSEMBLY - PIER

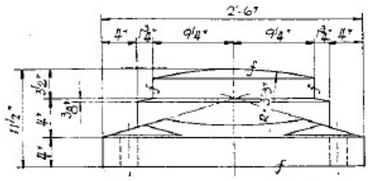


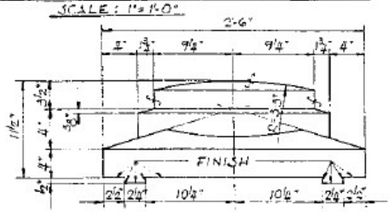
BEARING ASSEMBLY END FLOOR BEAMS

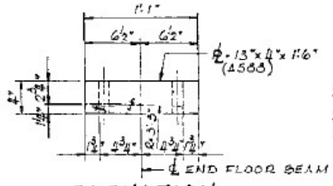
SCALE: 1"=1'-0"

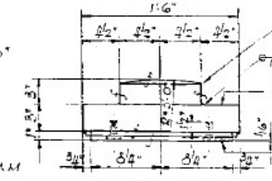
SCALE: 1"=1'-0"

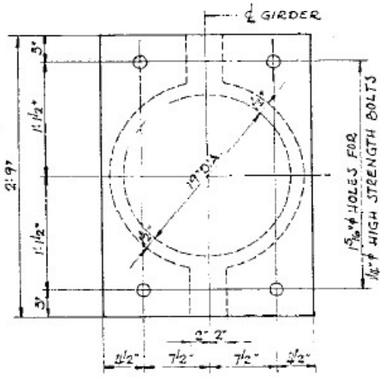


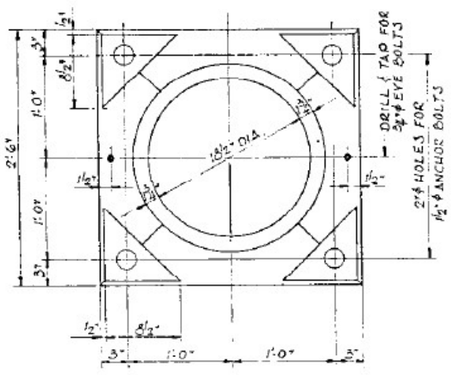


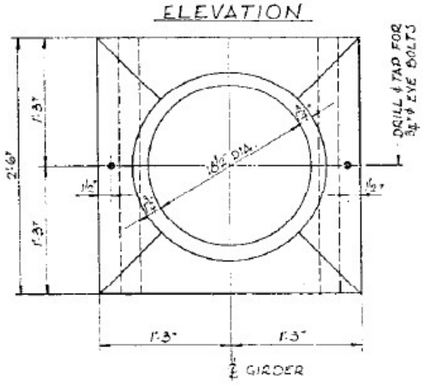


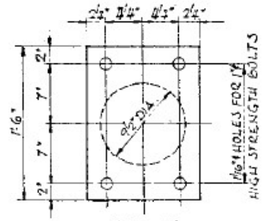


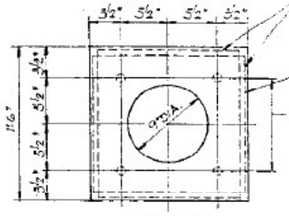








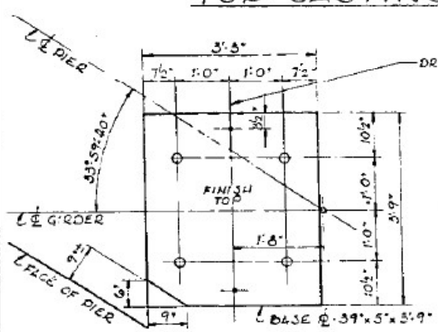


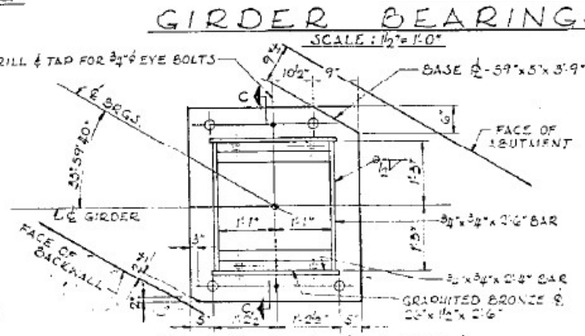


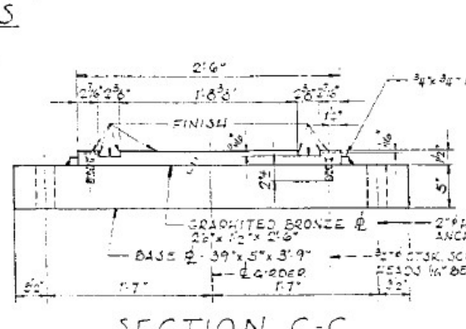
BOTTOM CASTINGS

GIRDER BEARINGS

SCALE: 1½"=1'-0"

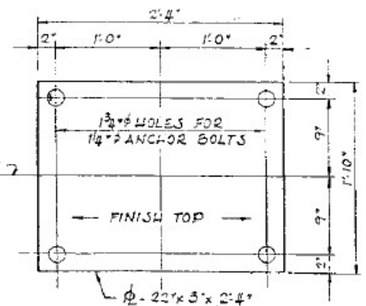






END FLOOR BEAM BEARINGS

SCALE: 1½"=1'-0"



NOTES:

ALL CASTINGS SHALL CONFORM TO A.S.T.M. A148, GRADE 90-60 AND SHALL BE FULL ANNEALED.

GRAPHITED BRONZE EXPANSION BEARING PLATES SHALL BE MADE FROM CAST BRONZE ALLOY PLATES CONFORMING TO A.S.T.M. SPECIFICATION B22, ALLOY E, AND SHALL CONTAIN GRAPHITE FILLED RECESSES. SEE SPECIAL PROVISIONS.

TOP ℄ & BOTTOM ℄ FOR END FLOOR BEAM BEARINGS SHALL BE HIGH-STRENGTH LOW-ALLOY STRUCTURAL STEEL CONFORMING TO A.S.T.M. SPECIFICATION A588.

ALL OTHER MATERIAL SHALL BE STRUCTURAL STEEL UNLESS OTHERWISE NOTED.

FOUR ¾"ø EYE BOLTS SHALL BE FURNISHED FOR ERECTING THE BEARINGS. COST SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR STRUCTURAL STEEL.

BEARING DETAILS

UNDERPASS

I.C.R.R. BRIDGE NO. 360-2

NORTH OF CAIRO ILLINOIS

F.A. PROJECT

F.A.I. ROUTE 57 SECTION 02-15B

ALEXANDER COUNTY

STATION 1030 + 65.83

FOR INFORMATION ONLY
SN 002-0025

ALFRED BENESCH & COMPANY
CONSULTING ENGINEERS
105 WABASH AVE. CHICAGO, ILLINOIS

USER NAME = david.a.wilson	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 0.16666633 ' / In.	CHECKED -	REVISED -
PLOT DATE = 10/18/2023	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SN 002-0025
STRUCTURE INFORMATION

SCALE: SHEET 65 OF 65 SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
VAR	D9 BRIDGE PAINT 2023-2	VARIOUS	65	65
		CONTRACT NO. 78A04		
ILLINOIS	FED. AID PROJECT			

MODEL: SN 002-0025_9 [Sheet]
FILE NAME: pw:\\bbsow.bentley.com:PWDOTDocuments\IDOT Offices\District 9\ORD Projects\78A04\CADData\CADdata\CADsheets\D978A04-Structure_Information_4-10.dgn