

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

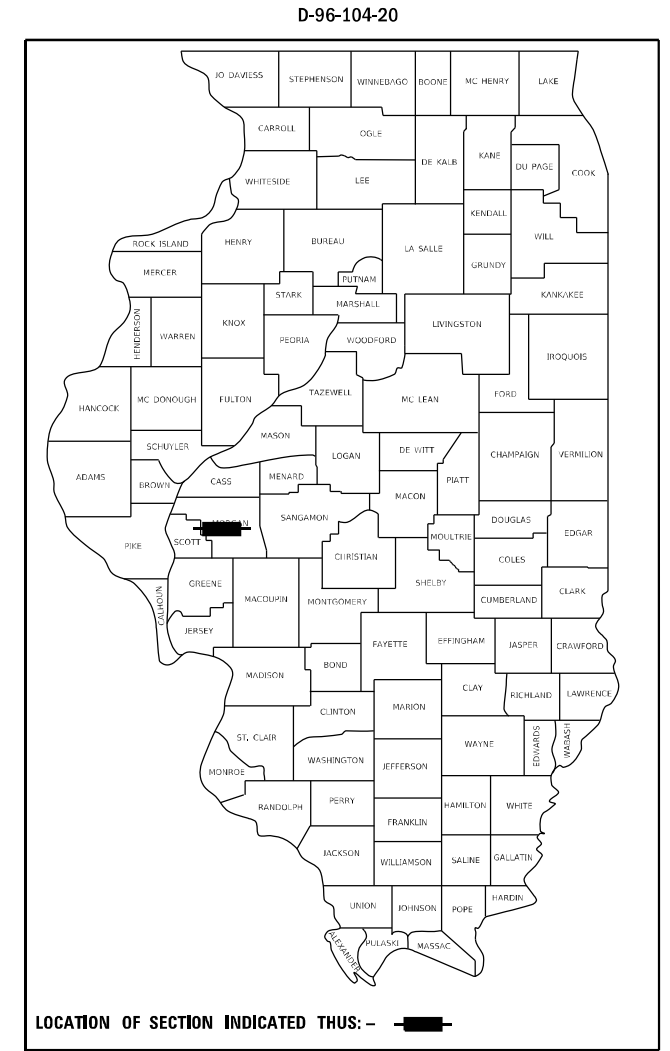
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	1
		ILLINOIS	CONTRACT NO. 72M34	

FOR INDEX OF SHEETS, SEE SHEET NO. 2

# PROPOSED HIGHWAY PLANS

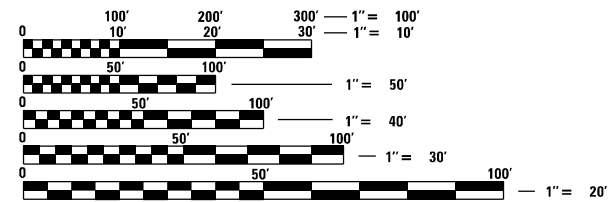
FAI ROUTE 72 (I-72)  
SECTION D6 BRIDGE PAINTING 2024  
PROJECT NHPP-9JJW(572)  
BRIDGE PAINTING  
MORGAN COUNTY

C-96-134-20



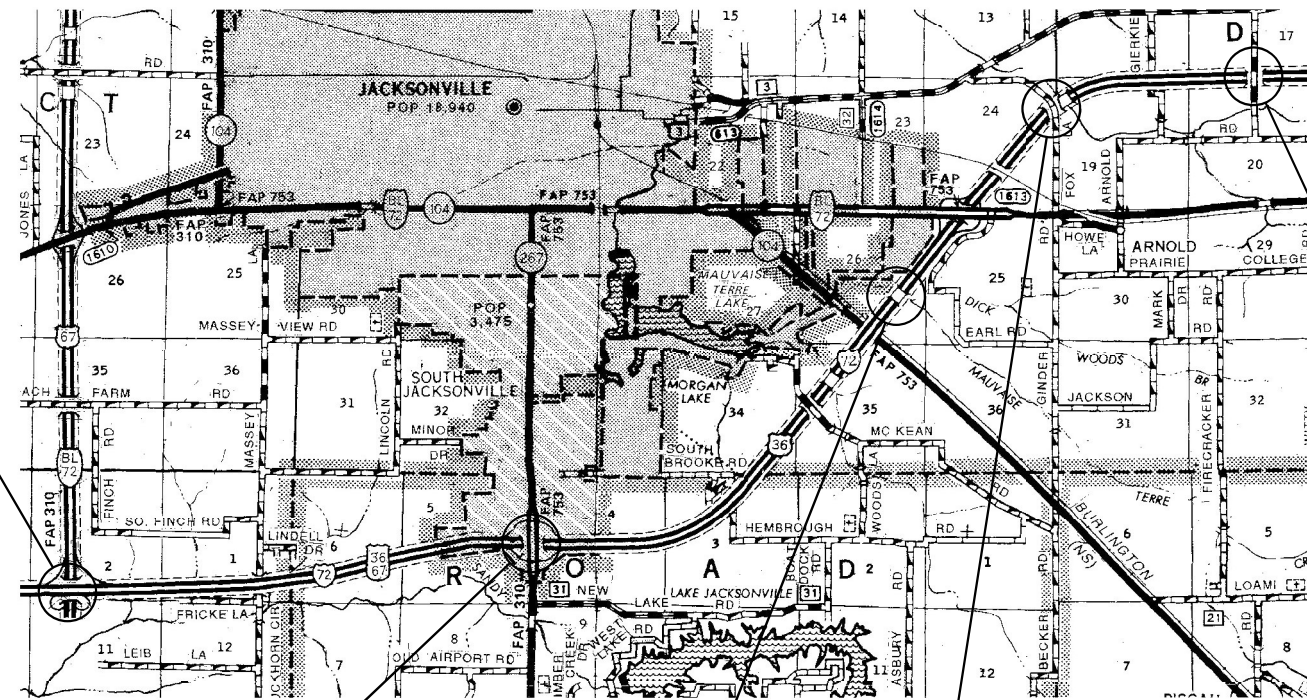
LOCATION #1  
SN 069-0055  
I-72 WB OVER US 67  
© I-72/US 67 INT.

LOCATION #2  
SN 069-0056  
I-72 EB OVER US 67  
© I-72/US 67 INT.



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

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



LOCATION #3  
SN 069-0034  
IL 267 OVER I-72  
© I-72/IL 267 INT.

LOCATION #4  
SN 069-0042  
I-72 EB OVER MAUVAISE TERRE CR.  
0.8 MI SW MORTON AVE.

LOCATION #5  
SN 069-0043  
I-72 WB OVER MAUVAISE TERRE CR.  
0.8 MI SW MORTON AVE.

LOCATION #6  
SN 069-0047  
TR 232 OVER I-72  
1 MI E MORTON AVE.

LOCATION #7  
SN 069-0050  
TR 284 OVER I-72  
2.5 MI E MORTON AVE.

BRIDGE MAINTENANCE ENGINEER: BRANDON DUDLEY - (217) 785-9290

GROSS LENGTH = 10.75 MILE  
NET LENGTH = X,XX FT. = X,XX MILE

CONTRACT NO. 72M34

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUBMITTED August 14, 2023

*Greg P. Meyer*  
REGIONAL ENGINEER

October 13, 2023  
*Scott A. Etkin*  
ENGINEER OF DESIGN AND ENVIRONMENT

October 13, 2023  
*Stephen M. Smith*  
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS

INDEX OF SHEETS

1	COVER SHEET
2	INDEX, STANDARDS, GENERAL NOTES, & SIGNATURES
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10-13	EXISTING BRIDGE PLANS, SN 069-0034
14-18	EXISTING BRIDGE PLANS, SN 069-0042 & 0043
19-22	EXISTING BRIDGE PLANS, SN 069-0047
23-26	EXISTING BRIDGE PLANS, SN 069-0050

HIGHWAY STANDARDS


000001-08
001006
701101-05
701106-02
701400-11
701402-12
701411-09
701901-08
704001-08
782006-01

GENERAL NOTES:


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

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
DISTRICT 6**


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EXAMINED August, 4 20 23  
  
 ENGINEER OF OPERATIONS

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EXAMINED August, 7 20 23  
  
 ENGINEER OF PROJECT IMPLEMENTATION

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EXAMINED August, 1 20 23  
  
 ENGINEER OF PROGRAM DEVELOPMENT

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	DRAWN -	REVISED -
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PLOT DATE = 8/14/2023	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>INDEX OF SHEETS, STANDARDS, GENERAL NOTES, &amp; SIGNATURES</b>	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	2
			CONTRACT NO. 72M34	
		ILLINOIS FED. AID PROJECT		

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0-01377-6002	0-01377-6002	0-01377-6002	0-01377-6002	0-01377-6002
				NHPP 90/10	NHPP 90/10	NHPP 90/10	NHPP 90/10	NHPP 90/10
				SN 069-0055 & 0056 0047-RURAL	SN 069-0034 0047-URBAN	SN 069-0042 & 0043 0047-URBAN	SN 069-0047 0047-RURAL	SN 069-0050 0047-RURAL
				MORGAN	MORGAN	MORGAN	MORGAN	MORGAN
67100100	MOBILIZATION	L SUM	1	0.2	0.2	0.2	0.2	0.2
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	8	0	2	2	2	2
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	2	0	2	0	0	0
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	14	0	7	0	0	7
70400100	TEMPORARY CONCRETE BARRIER	FOOT	2700	0	600	900	600	600
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1800	0	600	0	600	600
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	8	0	2	2	2	2
70600332	IMPACT ATTENUATORS, RELOCATE (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	6	0	2	0	2	2

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PLOT DATE = 8/14/2023	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>SUMMARY OF QUANTITIES</b>			
SCALE:	SHEET	OF	SHEETS
	STA.		TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	3
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72M34	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	0-01377-6002	0-01377-6002	0-01377-6002	0-01377-6002	0-01377-6002
				NHPP 90/10	NHPP 90/10	NHPP 90/10	NHPP 90/10	NHPP 90/10
				SN 069-0055 & 0056 0047-RURAL MORGAN	SN 069-0034 0047-URBAN MORGAN	SN 069-0042 & 0043 0047-URBAN MORGAN	SN 069-0047 0047-RURAL MORGAN	SN 069-0050 0047-RURAL MORGAN
Z0007101	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 1	L SUM	1	1	0	0	0	0
Z0007102	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 2	L SUM	1	1	0	0	0	0
Z0007103	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 3	L SUM	1	0	1	0	0	0
Z0007104	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 4	L SUM	1	0	0	1	0	0
Z0007105	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 5	L SUM	1	0	0	1	0	0
Z0007106	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 6	L SUM	1	0	0	0	1	0
Z0007107	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES NO. 7	L SUM	1	0	0	0	0	1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1	0	0	0	0
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1	1	0	0	0	0
Z0010503	CLEANING AND PAINTING STEEL BRIDGE NO. 3	L SUM	1	0	1	0	0	0
Z0010504	CLEANING AND PAINTING STEEL BRIDGE NO. 4	L SUM	1	0	0	1	0	0
Z0010505	CLEANING AND PAINTING STEEL BRIDGE NO. 5	L SUM	1	0	0	1	0	0
Z0010506	CLEANING AND PAINTING STEEL BRIDGE NO. 6	L SUM	1	0	0	0	1	0
Ø Z0076600	TRAINEES	HOUR	500	500				
Z0010507	CLEANING AND PAINTING STEEL BRIDGE NO. 7	L SUM	1	0	0	0	0	1
Ø Z0076604	TRAINEES TRAINING PROGRAM GRADUATE	HOUR	500	500				

Ø 0042

REV. - MS

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PLOT DATE = 8/14/2023	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	4
CONTRACT NO. 72M34			ILLINOIS FED. AID PROJECT	

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 408	45-78B	MORGAN	418	108
FED. ROAD DIST. NO.	ILLINOIS	PROJ. I.E.F. 05-1 (1)		

GENERAL NOTES -

PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH WATERPROOFING MEMBRANE SYSTEM IS APPLIED.  
 ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE SHOWN.  
 FIELD CONNECTIONS SHALL BE BOLTED USING HIGH STRENGTH BOLTS. BOLTS 3/4" OPEN HOLES 13/16". UNLESS OTHERWISE NOTED.  
 ALL STRUCTURAL STEEL SHALL BE AASHI M 222 UNPAINTED.  
 FIELD WELDING OF CONSTRUCTION ACCESSORIES WILL NOT BE PERMITTED TO THE BOTTOM FLANGE OF BEAMS OR GIRDERS NOR TO THE TOP OF FLANGE WITHIN 23'-0" LEFT OF W. PIER SUPPORT TO 23'-0" RIGHT OF E. PIER SUPPORT. 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# PER 100 SQ. FT.

THE CONCRETE RAIL SECTION ABOVE THE MANDATORY CONSTRUCTION JOINT AT THE TOP OF THE SLAB SHALL BE CONSTRUCTED OF CLASS X CONCRETE. EXCEPT THE AGGREGATE SHALL CONFORM TO THE REQUIREMENT OF HANDRAIL CONCRETE.

THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM. EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF ABUTMENTS & PIERS.

THE CONTRACTOR SHALL DRIVE FIVE (5) CONC. TEST PILES IN PERMANENT LOCATIONS FOR EACH BRIDGE AS FOLLOWS:  
 NORTH BRIDGE: ONE AT WEST APPROACH BENT, ONE AT EAST APPROACH BENT, ONE AT WEST ABUTMENT, ONE AT EAST ABUTMENT, AND ONE AT PIER.  
 SOUTH BRIDGE: ONE AT WEST APPROACH BENT, ONE AT EAST APPROACH BENT, ONE AT WEST ABUTMENT, ONE AT EAST ABUTMENT, AND ONE AT PIER.

THE LOCATION OF TEST PILES AS DIRECTED BY THE ENGINEER SHALL BE DRIVEN BEFORE ORDERING THE REMAINDER OF PILES.  
 CALCULATED WEIGHT OF STRUCTURAL STEEL = 871,531 LBS.

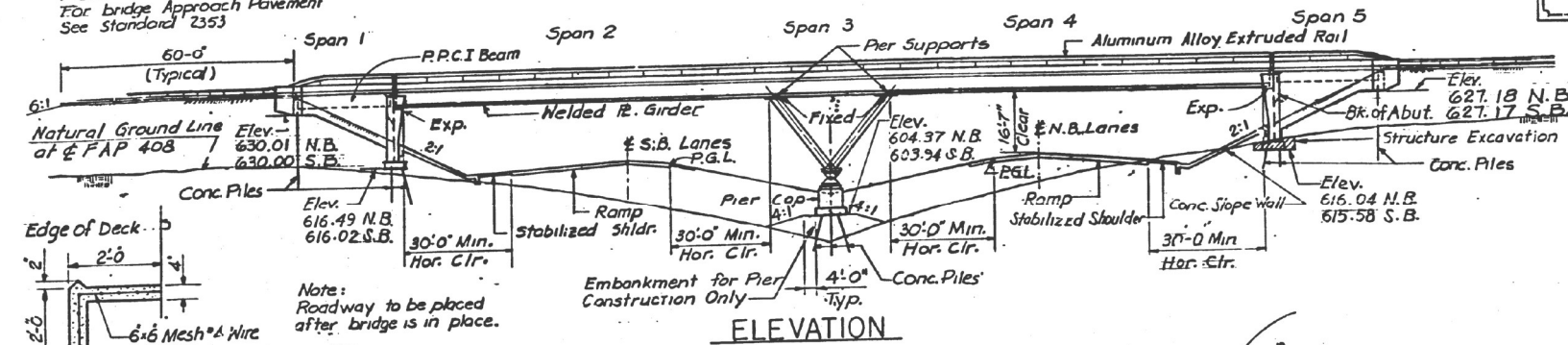
TOTAL BILL OF MATERIALS

ITEM	UNIT	SUPER	SUB	TOTAL
STRUCTURE EXCAVATION	CU. YDS.	—	231	231
REINFORCEMENT BARS	LBS.	25990	56860	316850
CLASS X CONCRETE	CU. YDS.	9247	6364	15611
BITUMINOUS CONCRETE SURFACE COURSE MIXTURE D CLASS I	TONS	278	—	278
TEST PILES - CONCRETE	E.A.	—	10	10
CONCRETE PILES	L.F.	—	6852	6852
FURNISHING & ERECTING STRUCTURAL STEEL	L.S.	—	—	1
STUD SHEAR CONNECTORS	E.A.	6272	—	6272
NEOPRENE EXPANSION JOINT (4")	L.F.	220	—	220
NAME PLATE	E.A.	2	—	2
ALUMINUM RAILING	L.F.	1187	—	1187
FURNISHING & ERECTING P.P. CONCRETE I-BMS. (36")	L.F.	455	—	455
WATERPROOFING MEMBRANE SYSTEM	SQ. YDS.	3293	—	3293
SLOPE WALL (4")	SQ. YDS.	—	1137.8	1137.8
PROTECTIVE COAT	SQ. YDS.	460	—	460

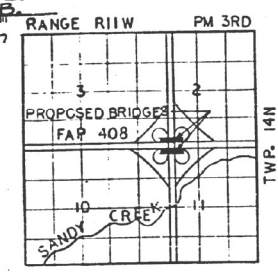
• THESE ITEMS TO BE CONSTRUCTED UNDER SECTION 69-7.

B.M. #54 SPIKE & BRACE IN 10' PERSIMMON TREE 133' RT. STA. 43+97.00 ELEV. 630.30  
 Note: For bridge Approach Pavement See Standard 2353

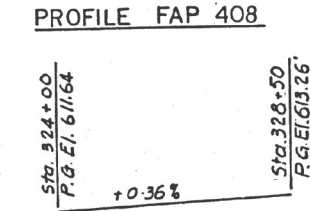
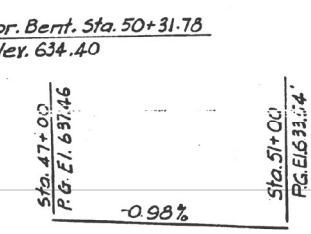
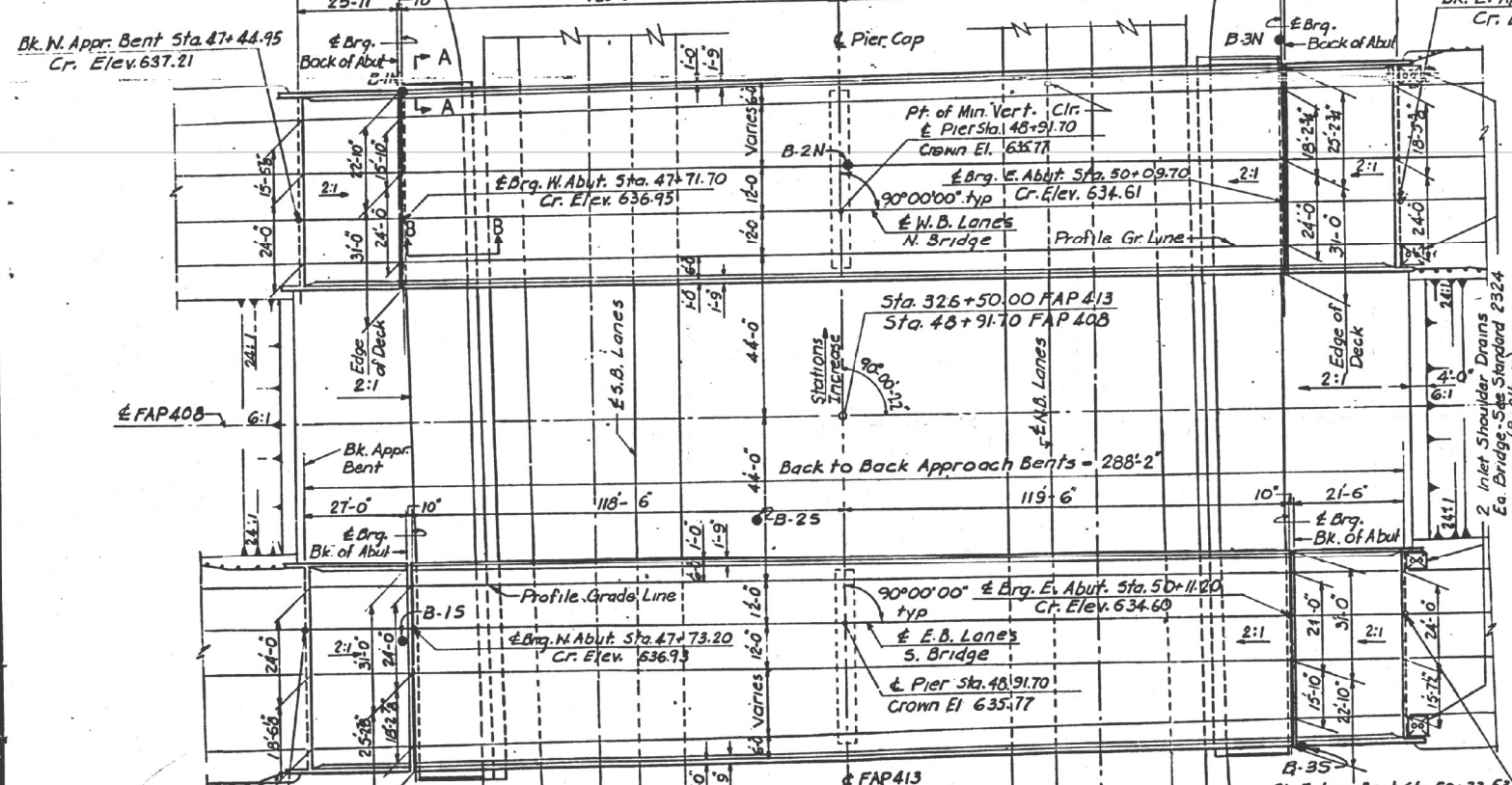
STATION 48+91.70 BUILT BY STATE OF ILLINOIS FA ROUTE 408 FA PROJ EBRF 408(1) (2) LOADING HS20



NAME PLATE See Standard 2113



SECTION 'A-A'



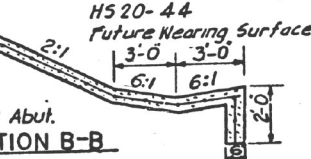
DESIGN STRESSES

Structural Steel  
 f<sub>s</sub> = 27000 PSI M222

Precast Prestressed Units  
 f<sub>c</sub> = 5000 PSI  
 f<sub>ci</sub> = 4000 PSI  
 f<sub>s</sub> = 270000 PSI (7/16" φ strands)  
 f<sub>si</sub> = 188,700 PSI (7/16" φ Strands)

Field Units  
 f<sub>c</sub> = 1200 PSI Deck Slab  
 f<sub>c</sub> = 1400 PSI Vaulted Abutment, Curb, Parapet & Substr.  
 f<sub>c</sub> = 75 PSI Footing  
 f<sub>s</sub> = 20000 PSI Reinforcement  
 n = 10

Allowable E+I Δ = 1/250 Composite Loading



DESIGNED AS	
CHECKED EMM	
DRAWN ARB	
CHECKED E.D.	

APPROVED FOR STRUCTURAL ADEQUACY ONLY  
 [Signature]

PLAN



GENERAL PLAN & ELEVATION INTERCHANGE STRUCTURE

FA 408 OVER FA 413  
 SECTION 69-78B  
 MORGAN COUNTY  
 STATION 48+91.70

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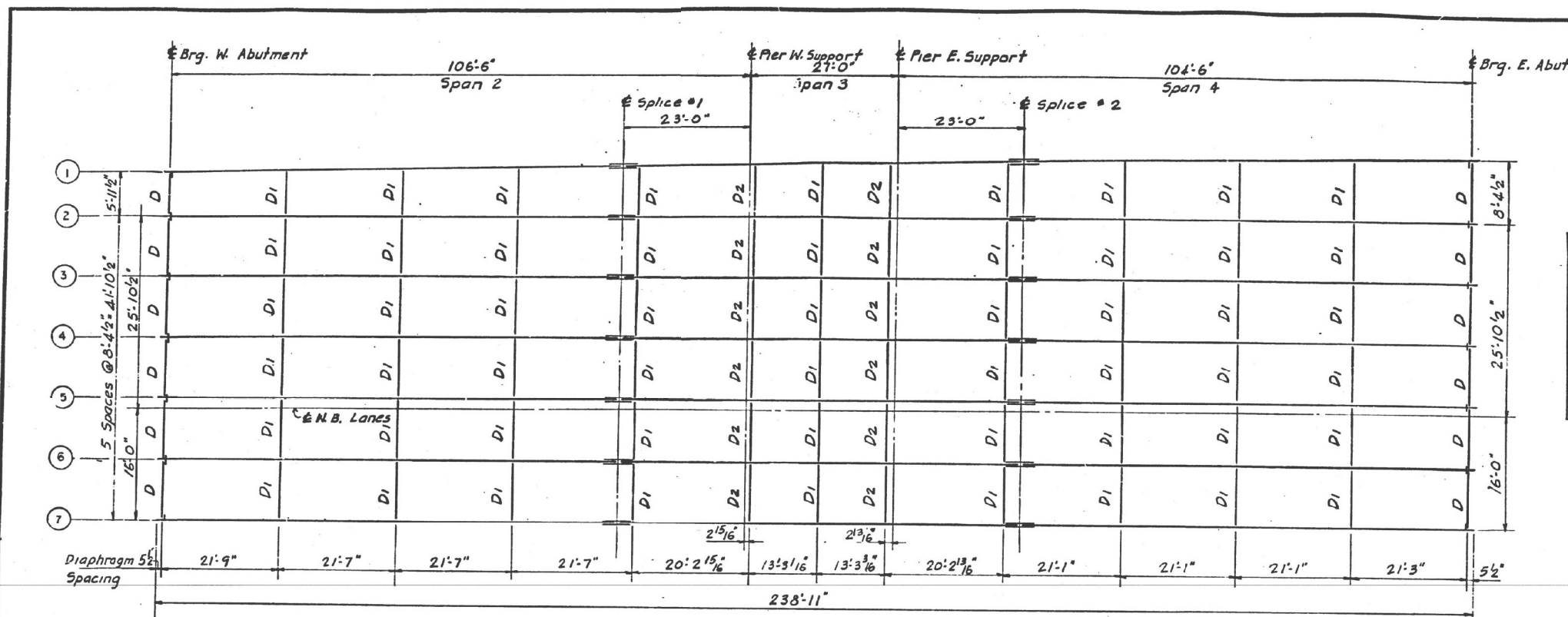
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	DATE -	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 069-0055 & 0056 (FOR INFORMATION ONLY)

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	5
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72M34	



**TOP OF WEB ELEVATION\***

Beam No.	W. Abut.	Splice 1	Pier W. Supp.	Pier E. Supp.	Splice 2	E. Abut.
1	635.356	634.515	634.144	633.874	633.794	632.714
2	635.480	634.662	634.290	634.020	633.946	633.148
3	635.634	634.836	634.465	634.202	634.121	633.382
4	635.813	634.995	634.624	634.359	634.280	633.481
5	635.944	635.126	634.754	634.490	634.410	633.612
6	635.857	635.018	634.647	634.382	634.303	633.504
7	635.685	635.867	634.495	634.231	634.151	633.553

\* For Fabrication only, includes Camber from Sheet 13.

**FOR NORTH & SOUTH BRIDGES**

**INTERIOR GIRDER MOMENT TABLE**

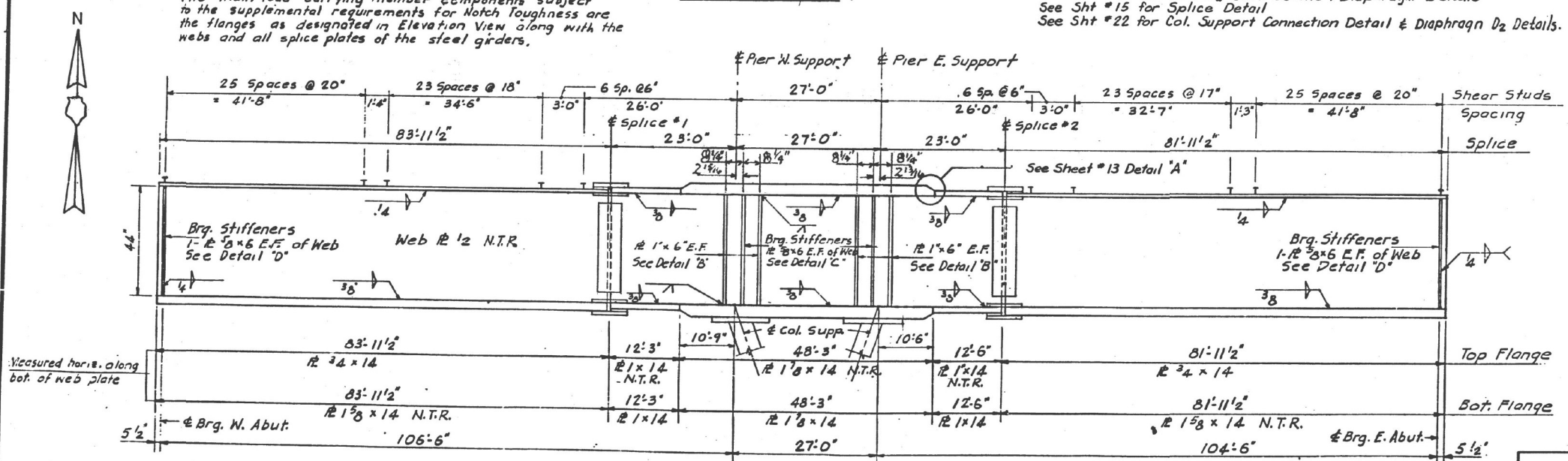
	0.45p. 2 or 4	Lt. W. Pier Supp.
I <sub>s</sub> (in <sup>4</sup> )	1918.5	3118.6
I <sub>c</sub> (in <sup>4</sup> )	5250.5	
S <sub>s</sub> (in <sup>3</sup> )	1038.0	1306.2
S <sub>c</sub> (in <sup>3</sup> )	1412.0	
Q (K/1)	1.073	1.628
MR (K)	920.0	1677.0
fs <sub>Q</sub> (KSI)	10.635	15.406
S <sub>Q</sub> (K/1)	0.49	
Ms <sub>Q</sub> (K)	485.0	
M <sub>Imp</sub> (K)	1139.7	560.0
Total (K)	2790.9	2359.0
fs <sub>Q+Ms<sub>Q</sub></sub> (KSI)	15.90	6.265
fs TOTAL (KSI)	26.535	21.671
VR (K)	59.0	

**INTERIOR GIRDER REACTION TABLE**

	Abutment	Pier Supp.
R <sub>Q</sub> (K)	66.6	221
R <sub>Imp</sub> (K)	53.2	211
Imp (K)	11.2	211
R <sub>TOTAL</sub> (K)	131.0	211

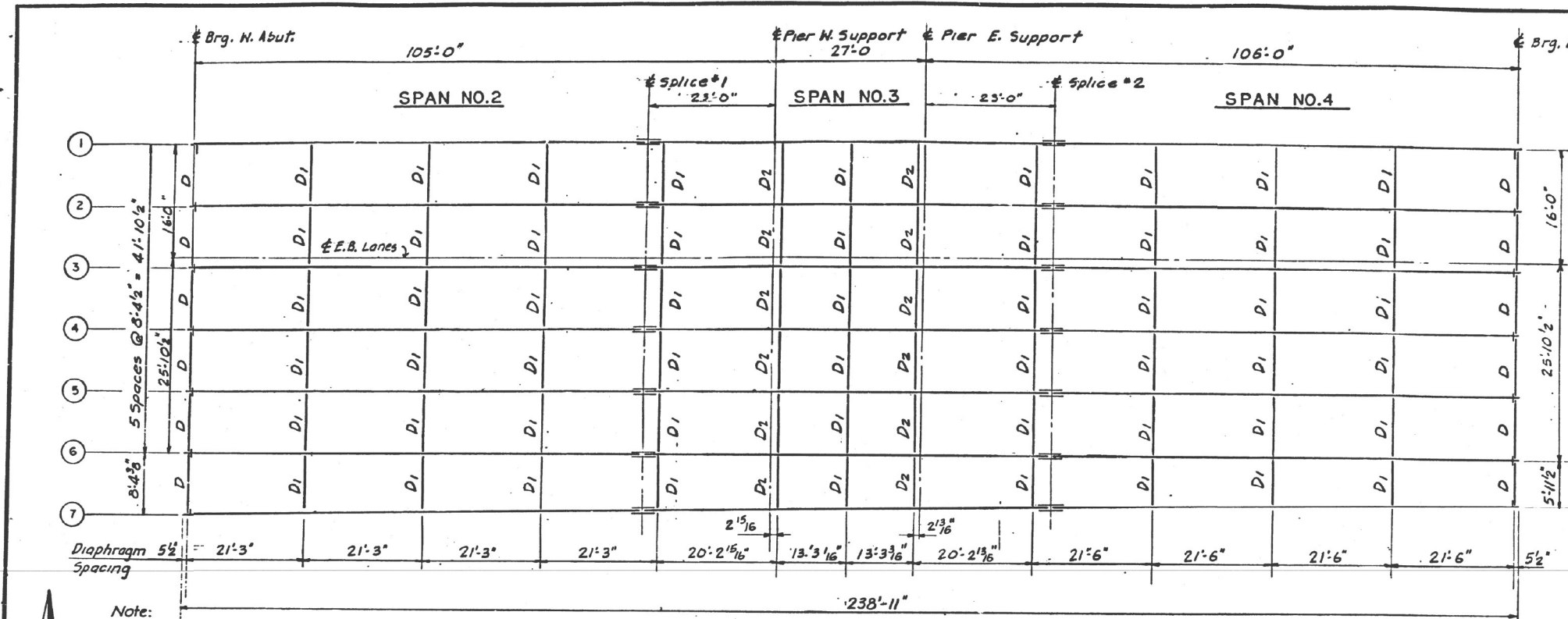
**Notes:**  
 The main load carrying member components subject to the supplemental requirements for Notch Toughness are the flanges as designated in Elevation View along with the webs and all splice plates of the steel girders.

**Note:**  
 See Sht # 16 for Bearing Stiff. Details & Diaphragm Details  
 See Sht # 15 for Splice Detail  
 See Sht # 22 for Col. Support Connection Detail & Diaphragm D<sub>2</sub> Details.



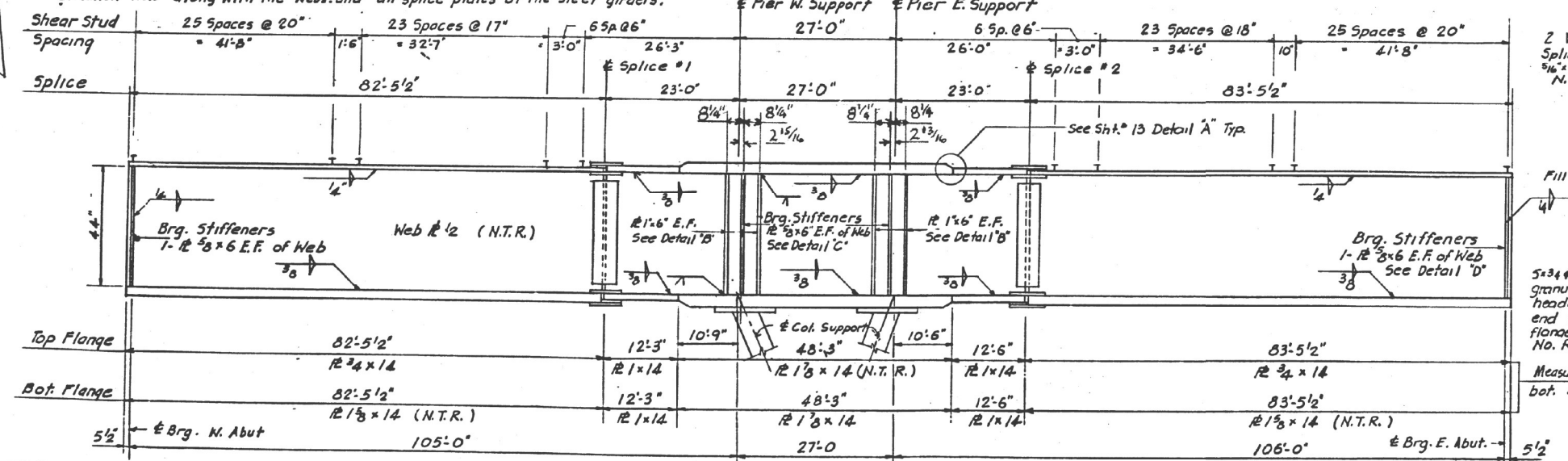
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DRAWN	EMM
CHECKED	ED

**STRUCTURAL STEEL**  
**NORTH BRIDGE**  
 FA 408 OVER FA 413  
 SECTION 69-7B  
 MORGAN COUNTY  
 STATION 48+91.70



**Note:**

- See Sht. 18 for bearing stiffener details
- See Sht. 16 for diaphragm details
- See Sht. 22 for col. Support Connection details & Diaphragm D<sub>2</sub> Details.
- The main load carrying member components subject to the supplemental requirements for Notch Toughness are the flanges as designated in Elevation View along with the webs and all splice plates of the steel girders.



DESIGNED	E M M
CHECKED	E D
DRAWN	E M M
CHECKED	E D

**TOP OF WEB ELEVATION\***

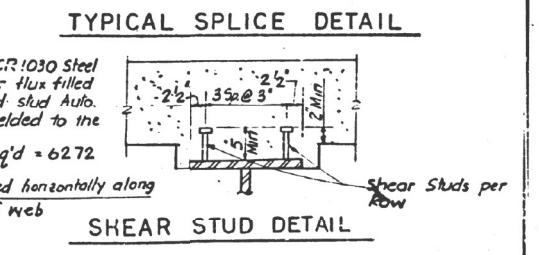
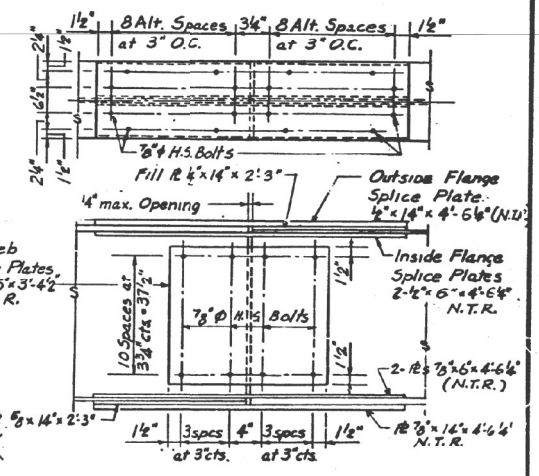
Beam No.	W. Abut.	Splice 1	Pier W. Supp.	Pier E. Supp.	Splice 2	E. Abut.
1	635.670	634.867	634.495	634.231	634.151	633.338
2	635.822	635.018	634.646	634.382	634.303	633.489
3	635.929	635.126	634.794	634.490	634.410	633.591
4	635.799	634.995	634.624	634.359	634.280	633.466
5	635.639	634.836	634.464	634.200	634.120	633.307
6	635.465	634.662	634.290	634.026	633.946	633.133
7	635.291	635.510	634.150	633.879	633.800	633.009

\* For fabrication only. Includes Camber from Sheet 13.

**BILL OF MATERIAL**

Item	Unit	Total
North Bridge Structural Steel	Lbs	390,880
South Bridge Structural Steel	Lbs	390,880

\* Weight of bearing assemblies with lead plates and anchor bolts are included as Structural Steel. Est. Wt. = 11,250 Lbs / Bridge



**STRUCTURAL STEEL SOUTH BRIDGE**

FA 408 OVER FA 413

SECTION 69-7HB

MORGAN COUNTY

STATION 48+91.70

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DRAWN	-	REVISION	-	REVISION	-
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PLOT DATE	= 8/14/2023	DATE	-	REVISION	-

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

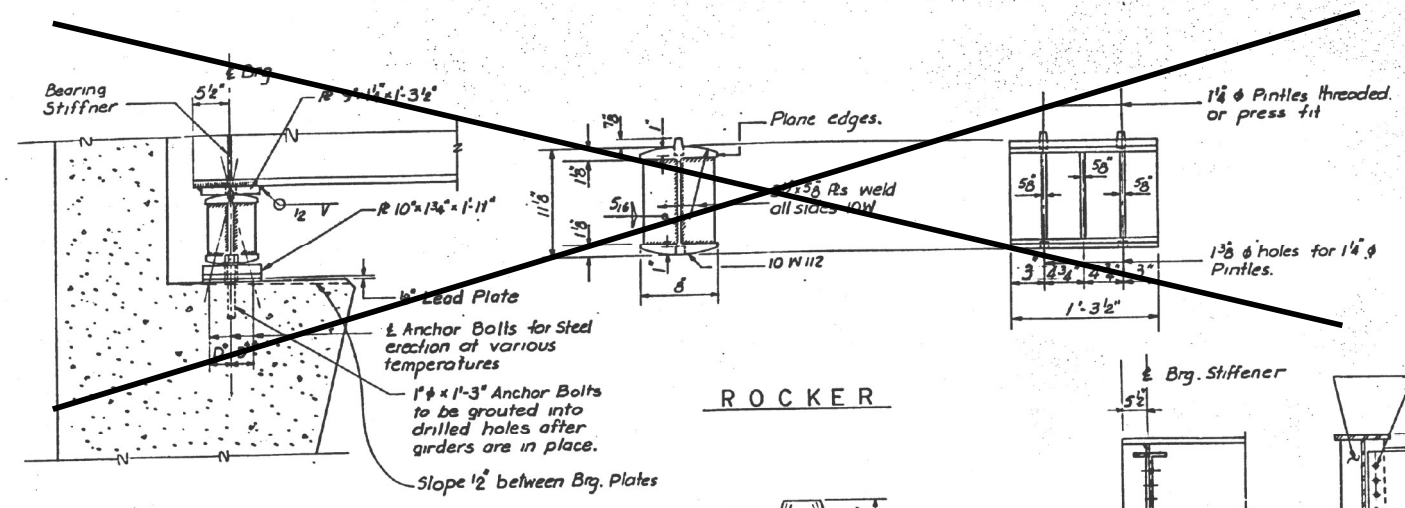
EXISTING BRIDGE PLANS, SN 069-0055 & 0056  
(FOR INFORMATION ONLY)

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F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	7
ILLINOIS FED. AID PROJECT			CONTRACT NO. 72M34	

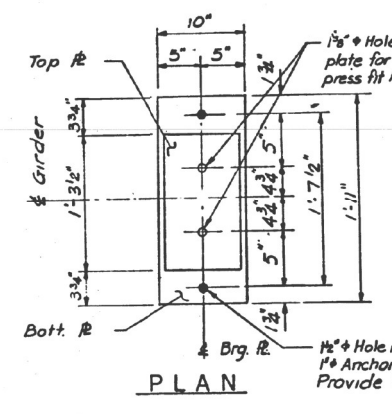
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F.A. 408	69-7 HB	MORGAN	418	123
ILLINOIS		PAV. P.Z. 48-11		

SHEET NO. 16  
OF 33 SHEETS



ELEVATION

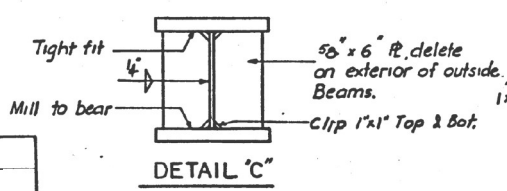
ROCKER



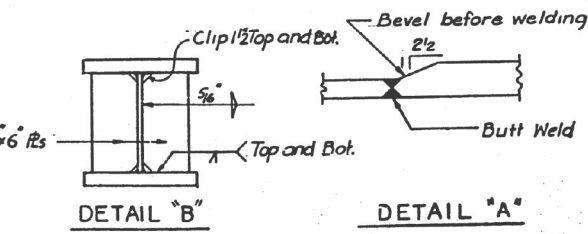
BEARING AT ABUTMENT

**NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BEARING**

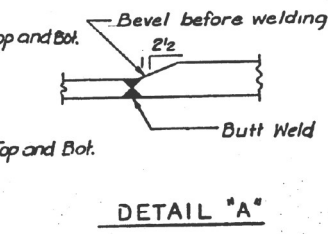
- Side of brg. away from fixed brg.  $D = \frac{1}{8}$  per each 100 of expansion for every 15° fall below the normal temperature of 50°F.
  - Side of brg. toward fixed brg.  $D = \frac{1}{8}$  per each 100 of expansion for every 15° rise above the normal temperature of 50°F.
- b) After beams have been erected and dimensions  $D$  or  $\bar{D}$  determined, holes shall be drilled and anchor bolts shall be grouted in place.



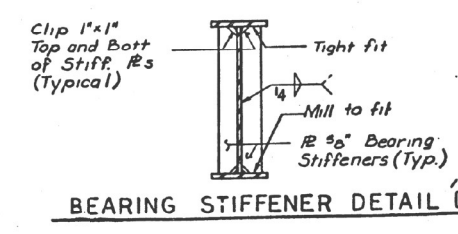
DETAIL 'C'



DETAIL 'B'



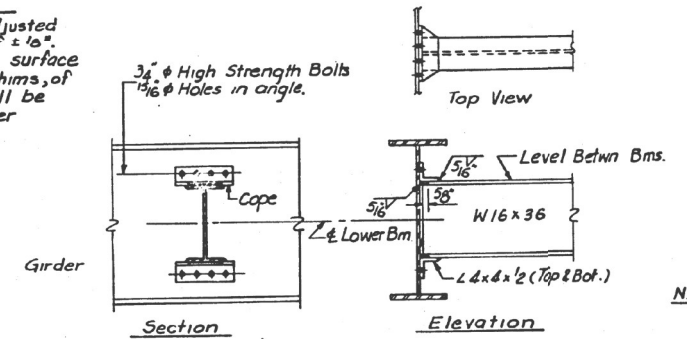
DETAIL 'A'



BEARING STIFFENER DETAIL 'D'

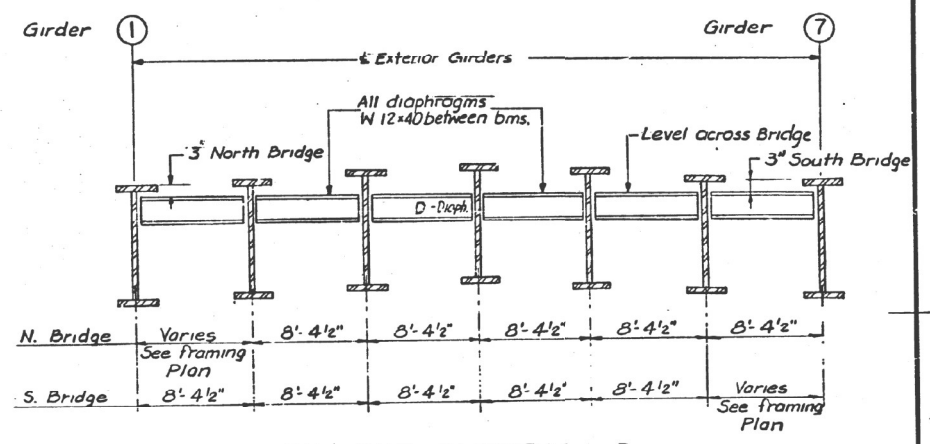
DESIGNED	EMM
CHECKED	ED
DRAWN	A.R.B.
CHECKED	ED

**NOTE: BEARING SEAT ADJUSTMENT**  
Bearing Seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of ±.10". Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

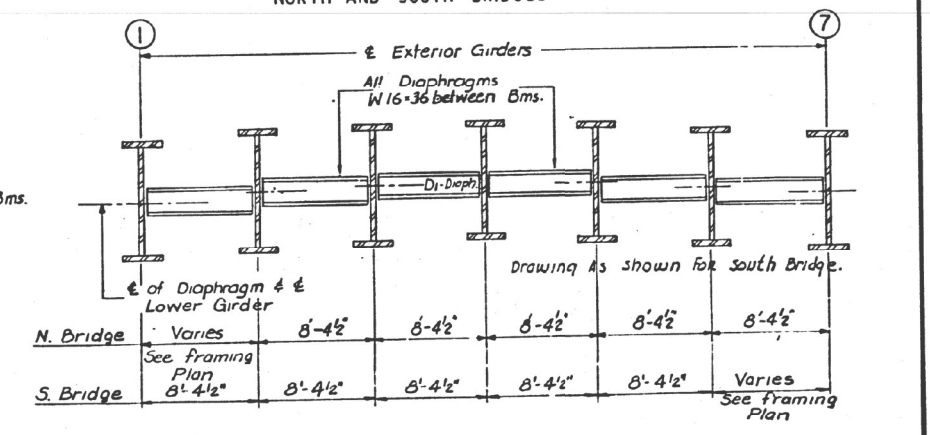


INTERIOR DIAPHRAGM D<sub>1</sub>

Note: Hardened washers shall be required over 1 1/8" holes for all D<sub>1</sub> Diaphragms.



ELEV. END DIAPHRAGM D  
NORTH AND SOUTH BRIDGES



ELEV. INTERIOR DIAPHRAGM D<sub>1</sub>  
(NORTH AND SOUTH BRIDGES)

Note: For details of D<sub>2</sub> diaphragm, See Sht. # 22

**BEARING DETAILS  
NORTH & SOUTH BRIDGE**

FA 408 OVER FA 413  
SECTION 69-7 HB  
MORGAN COUNTY  
STATION 48+91.70

MODEL Path: S:\Address\Bridges\FA\_408\172.dwg; FILE NAME: S:\Address\Bridges\FA\_408\172.dwg; USER: Brandon, Dudley

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PLOT DATE = 8/14/2023	CHECKED -	REVISED -
	DATE -	REVISED -

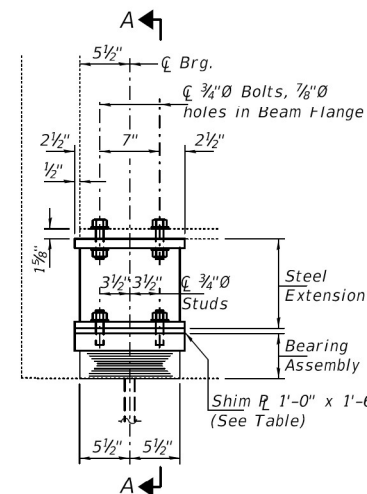
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 069-0055 & 0056  
(FOR INFORMATION ONLY)

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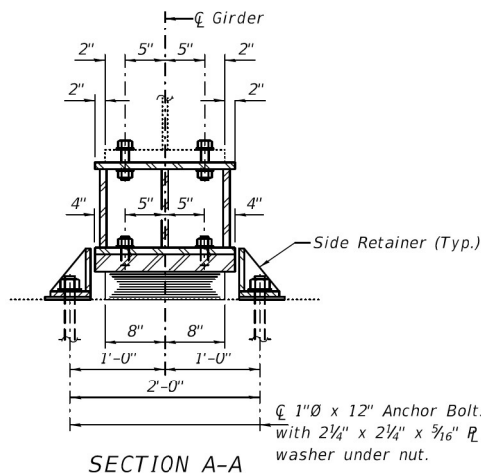
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	8
				CONTRACT NO. 72M34
ILLINOIS FED. AID PROJECT				





ELEVATION AT ABUTMENT

TYPE I ELASTOMERIC EXP. BRG.

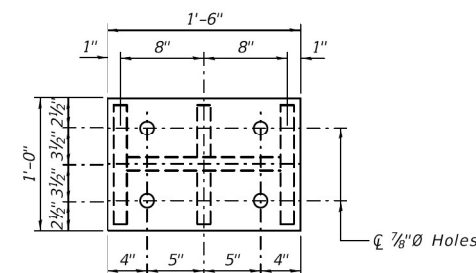


SECTION A-A

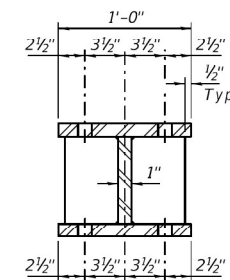
BEAM REACTIONS

R <sub>P</sub>	(K)	66.6
R <sub>L</sub>	(K)	53.2
Imp.	(K)	11.6
R (Total)	(K)	131.4

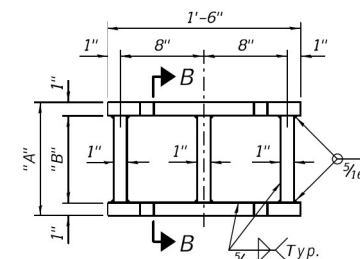
Notes:  
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).  
 Min. jack capacity = 75 Tons.  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F<sub>y</sub>=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



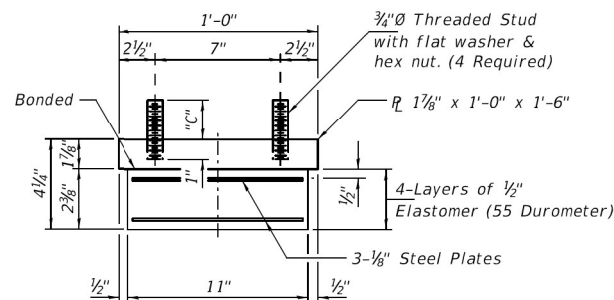
PLAN TOP AND BOTTOM PLATE



SECTION B-B



STEEL EXTENSION DETAIL  
 (See Table for Dimensions "A" & "B")



BEARING ASSEMBLY

(See Table for Dimension "C")

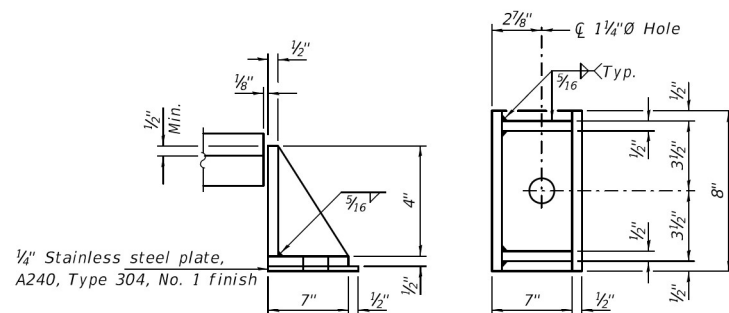
Note:  
 Shim plates shall not be placed under Bearing Assembly.

TABLE OF DIMENSIONS - SN 069-0055 (W.B.)

Girder	EAST ABUTMENT				WEST ABUTMENT				
	"A"	"B"	"C"	"t"	"A"	"B"	"C"	"t"	
1	9 1/8"	7 1/8"	3 3/8"	5/8"	1	9 1/8"	7 1/8"	3"	1/4"
2	9 1/8"	7 1/8"	2 3/4"	0"	2	9 1/8"	7 1/8"	3"	1/4"
3	9 1/8"	7 1/8"	3 1/8"	3/8"	3	9 1/8"	7 1/8"	3"	1/4"
4	9 1/8"	7 1/8"	2 3/4"	0"	4	9 1/8"	7 1/8"	3 3/8"	5/8"
5	9 1/8"	7 1/8"	2 1/8"	1/8"	5	9 1/8"	7 1/8"	2 3/4"	0"
6	9 1/8"	7 1/8"	2 1/8"	1/8"	6	9 1/8"	7 1/8"	2 3/4"	0"
7	9 1/8"	7 1/8"	3 1/8"	3/8"	7	9 1/8"	7 1/8"	2 3/4"	0"

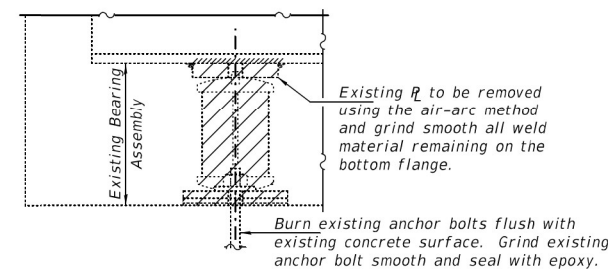
TABLE OF DIMENSIONS - SN 069-0056 (E.B.)

Girder	EAST ABUTMENT				WEST ABUTMENT				
	"A"	"B"	"C"	"t"	"A"	"B"	"C"	"t"	
1	9 1/8"	7 1/8"	2 7/8"	1/8"	1	9 1/8"	7 1/8"	2 3/4"	0"
2	9 1/8"	7 1/8"	3 1/4"	1/2"	2	9 1/8"	7 1/8"	3 1/4"	1/2"
3	9 1/8"	7 1/8"	2 7/8"	1/8"	3	9 1/8"	7 1/8"	3"	1/4"
4	9 1/8"	7 1/8"	3 1/8"	3/8"	4	9 1/8"	7 1/8"	3 1/4"	1/4"
5	9 1/8"	7 1/8"	2 1/8"	1/8"	5	9 1/8"	7 1/8"	3 1/8"	3/8"
6	9 1/8"	7 1/8"	3 1/8"	3/8"	6	9 1/8"	7 1/8"	3 1/8"	3/8"
7	9 1/8"	7 1/8"	3 1/4"	1/2"	7	9 1/8"	7 1/8"	2 7/8"	1/8"



SIDE RETAINER

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



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	28
Jack and Remove Existing Bearings	Each	28
Furnishing and Erecting Structural Steel	Pound	6700
Anchor Bolts, 1"Ø	Each	56

Expires: November 30, 2020  
 Seal applies to this sheet only.

DESIGNED - JEFFREY S. BURKE	EXAMINED	DATE - SEPTEMBER 22, 2020
CHECKED - CHI-CHEUNG CHAU	ENGINEER OF STRUCTURAL SERVICES	
DRAWN - STEFFEN	PASSED	REVISED -
CHECKED - JSB CCC	ENGINEER OF BRIDGES AND STRUCTURES	REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS  
 SN 069-0055 (W.B.) & -0056 (E.B.)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(09-6&7)BRR(09-3)BRR&BJR-1,SLP	MORGAN	19	19
			CONTRACT NO. 72M47	
			ILLINOIS FED. AID PROJECT	

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 069-0055 & 0056  
 (FOR INFORMATION ONLY)

USER NAME = Brandon.Dudley	DESIGNED -	REVISED -
	DRAWN -	REVISED -
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PLOT DATE = 8/14/2023	DATE -	REVISED -

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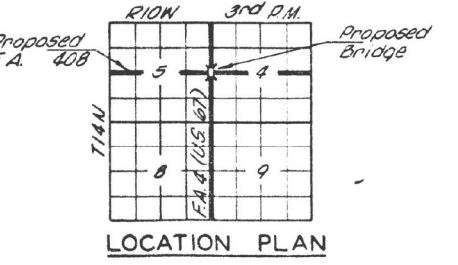
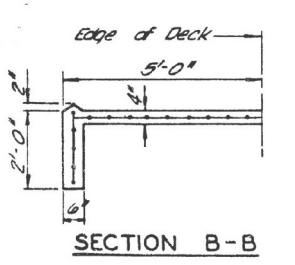
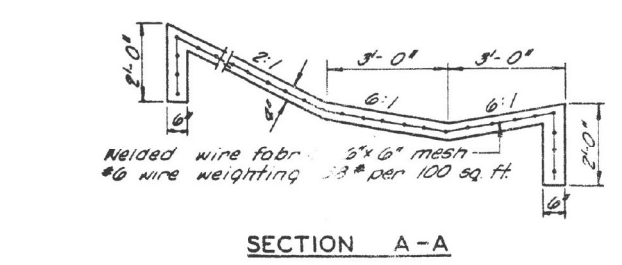
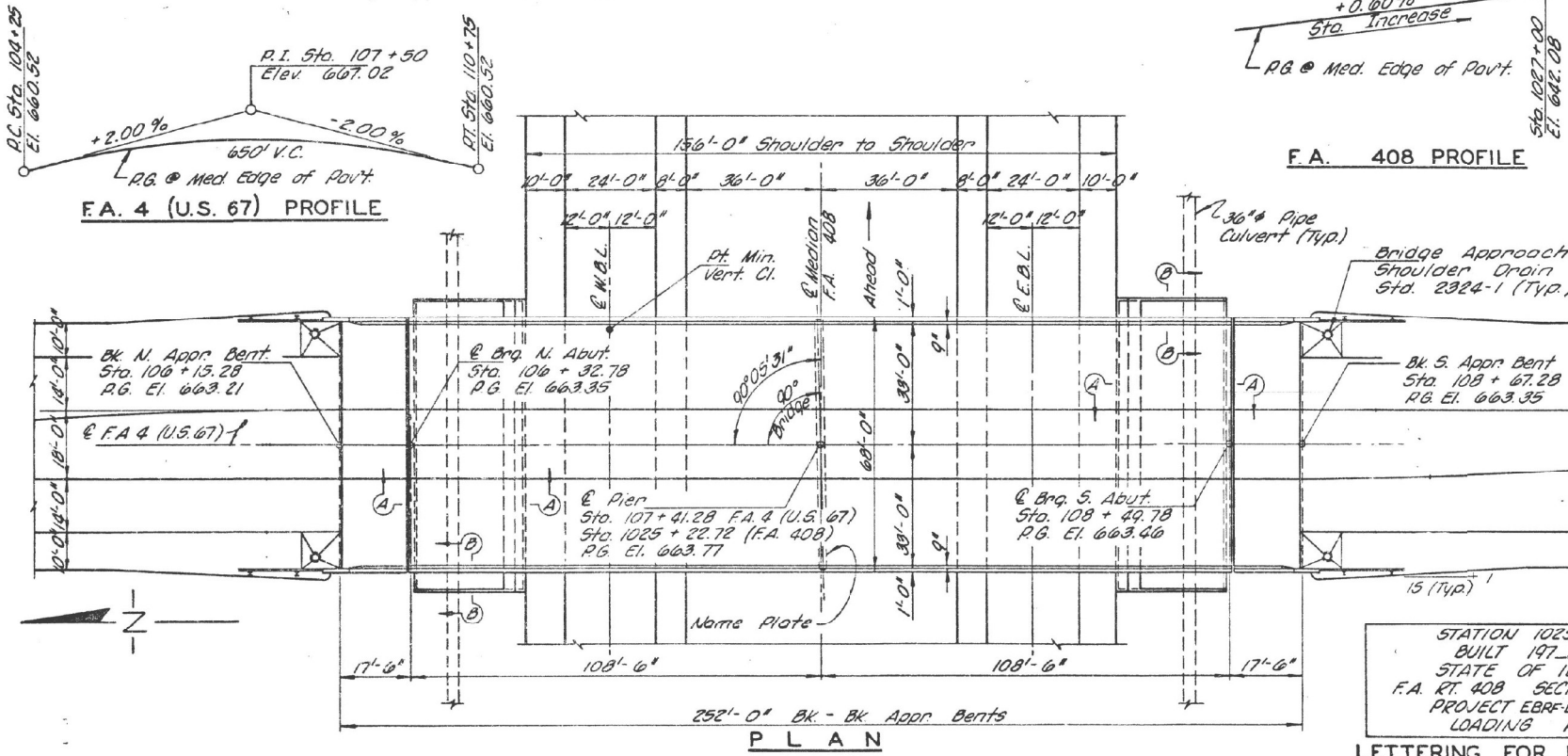
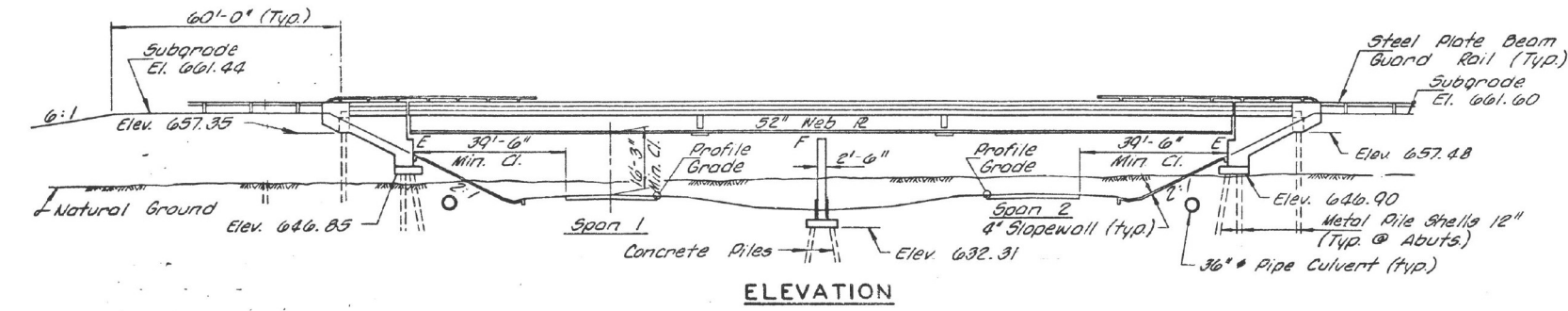
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	9
			CONTRACT NO. 72M34	
			ILLINOIS FED. AID PROJECT	

B.M. #1 - RR Spike in T.P. 150' Lt  
Sta. 1025+00 (F.A. 408) Elev. 644.19

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

FA	ROUTE NO.	SEC.	COUNTY	STATION	SHEET NO.
	408	6984B	MORGAN	10	15
	FED. ROAD DIST. NO. 7	ILLINOIS	PROJ. DIST.		

SHEET 1 OF 15



STATION 1025+22.72  
BUILT 197 BY  
STATE OF ILLINOIS  
F.A. RT. 408 SECTION 69-84B  
PROJECT EBRF-EBRF-408-2(25)  
LOADING H5 20  
LETTERING FOR NAME PLATE  
See Std 2113

**DESIGN STRESSES**

$f_c = 1,200$  p.s.i. (Deck Slab)  
 $f_c = 1,400$  p.s.i. (Curb, Parapet, Sub & Appr. Slab)  
 $f_s$  (Reinf.) = 20,000 p.s.i.  
 $f_s$  (Struct.) = 20,000 p.s.i.  
 $v_c = 75$  p.s.i. (Fros.)  
 $n = 10$   
LOADING H5 20-44  
Design Specifications: AASHTO 1069 as applicable. Allow 25# / Sq. Ft. for future wearing surface.  
Fred L. Stone Jr.  
Illinois Structural No. 2932

**GENERAL NOTES**

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.  
Fasteners shall be high strength bolts. Bolts 7/8"  $\phi$  open holes 15/16"  $\phi$ , unless otherwise noted.  
Calculated weight of Structural Steel = 629,440 Lb.  
The basic lead silica chromate point 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 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 cross frames over supports.  
Concrete piles at abutments shall be driven in holes precored through the embankment in accordance with Article 513.03(c) of the Standard Specifications.  
The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Conc. except the aggregates shall conform to the requirements of Handrail Concrete.  
The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.  
The contractor shall drive two test piles in permanent locations as directed by the Engineer before ordering the remainder of piles. One metal shell test pile in the North abutment and one concrete test pile in the pier.  
Protective Coat shall not be applied to surfaces to which waterproofing membrane system is applied.

**INDEX OF SHEETS**

- General Plan & Elevation
- Borings & Footing Layout
- 4- Slab Elevations
- Deck Slab Spans 1 & 2
- Deck Details
- Approach Slabs
- Handrail Details
- Framing Plan
- Girder Details
- Bearings
- 12-13 Abutments
- Pier
- Pile Details

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Sand Backfill	Cu Yd		350	350
Bituminous Concrete Surface Course, Class I	Ton	107		107
Protective Coat	Sq Yd	669	11	680
Class X Concrete	Cu Yd	571.0	373.6	944.6
Structural Steel	Lump Sum	1		1
Aluminum Rolling	Lin Ft	518		518
Reinforcement Bars	Lb	126,850	42,880	169,730
Concrete Piles	Lin Ft		629	629
Test Piles Concrete	Each		1	1
Name Plates	Each		1	1
Slope Wall 4 Inch	Sq Yd		660	660
Preformed Joint Sealer (4")	Lin Ft	138		138
Waterproofing Membrane System	Sq Yd	1,330		1,330
Structure Excavation	Cu Yd		133	133
Metal Pile Shells 12"	Lin Ft		2,257	2,257
Test Piles Metal Shells	Each		1	1

• See Special Provisions

**GENERAL PLAN & ELEVATION**  
PROJECT EBRF-EBRF-408-2(2)  
FA. RT. 4 OVER FA. RT. 408  
FA. RT. 403 SEC  
MORGAN COU  
STATION 10  
CO' LIN

DESIGNED FS  
DRAWN A.D.

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STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

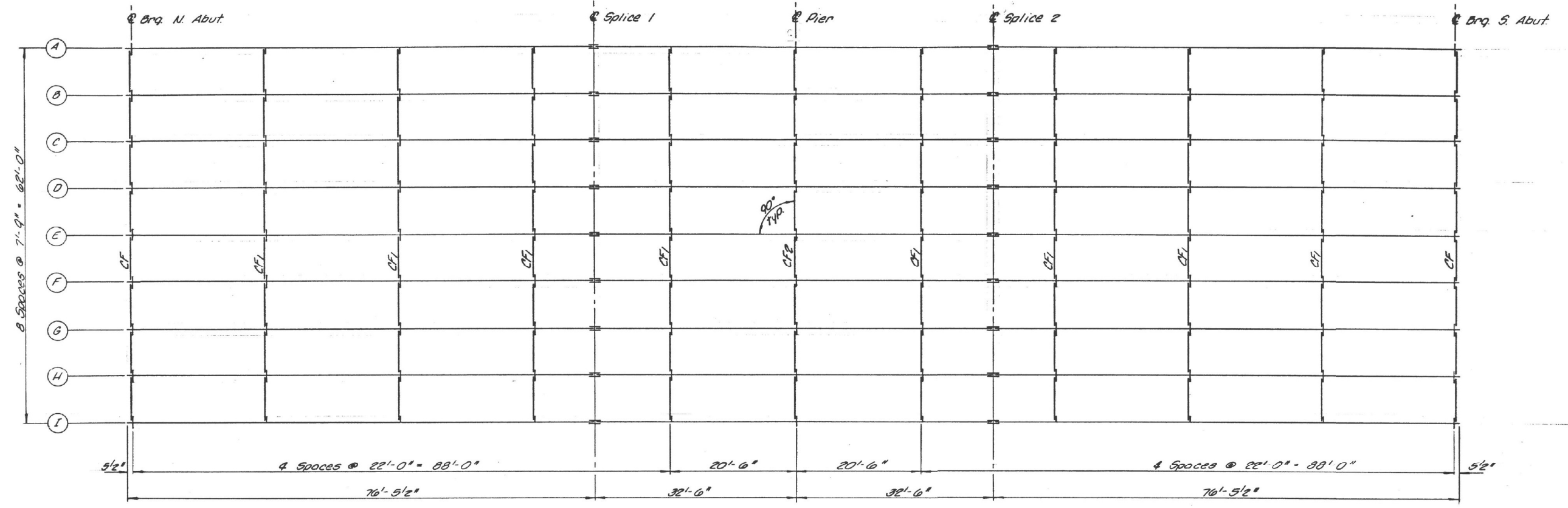
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(FOR INFORMATION ONLY)

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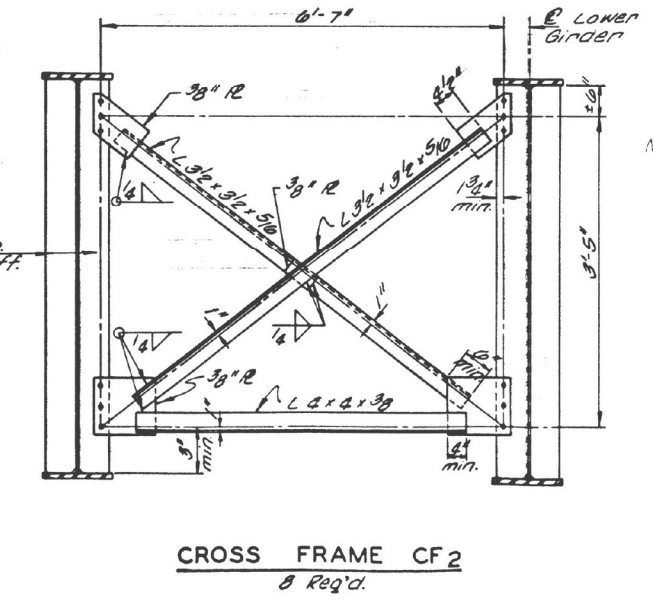
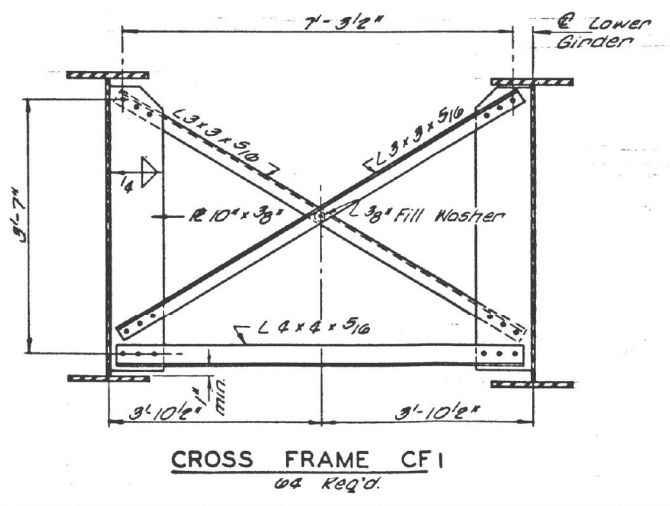
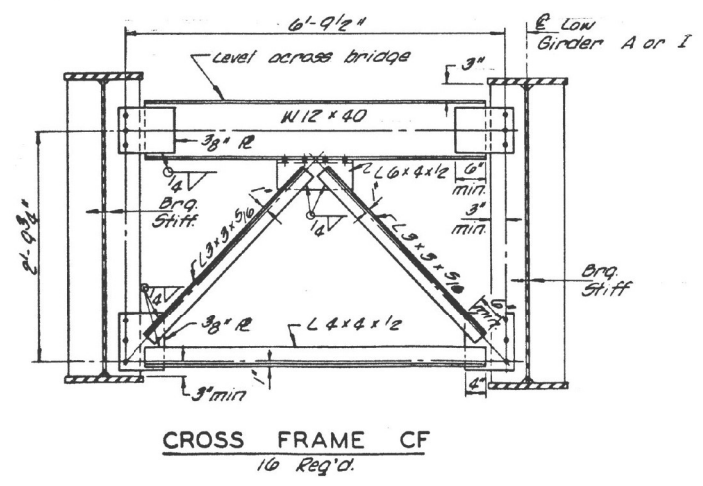
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	10
CONTRACT NO. 72M34				
ILLINOIS FED. AID PROJECT				

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

F.A.	ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
	408	69-8HB	MORGAN	184	55
	FED. ROAD DIST. NO. 1	CLASSIFICATION	PROJECT	SHEET 9 OF 15	



FRAMING PLAN



Note: Holes for cross frame connections shall be 1/16" Ø. Hardened washers shall be required over holes in angles and gusset plates.

FRAMING PLAN	
F.A. RT. 408	SEC. 69-8HB
MORGAN COUNTY	
STATION 1025+22.72	
COLLINS AND RICE CONSULTING ENGINEERS	
DRAWN F.S.	CHECKED M.D.
DATE A.D.	DATE 9-22-72

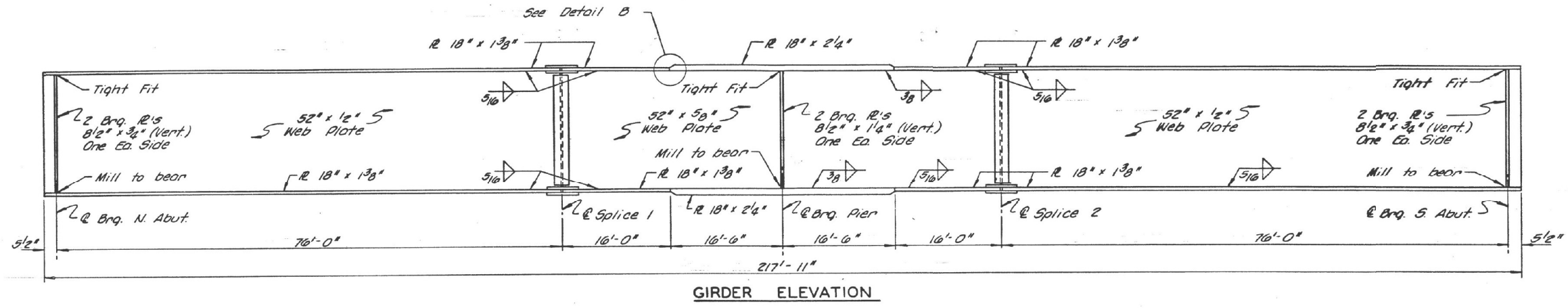
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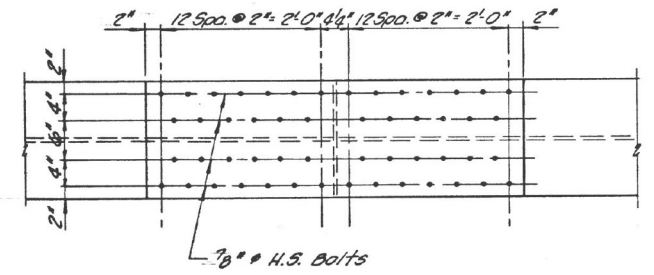
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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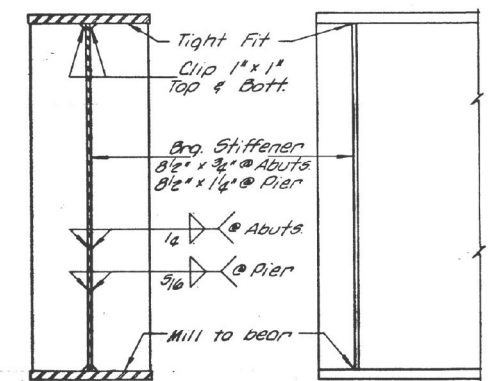
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72	D6 BRIDGE PAINTING 2024	MORGAN	26	11
				CONTRACT NO. 72M34
ILLINOIS FED. AID PROJECT				



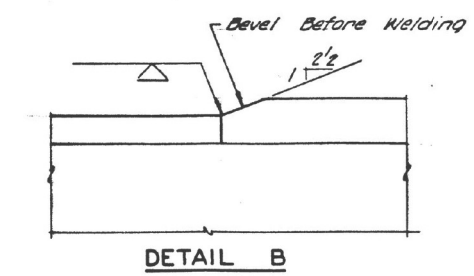
GIRDER ELEVATION



FIELD SPLICE DETAIL



BRG. STIFFENER DETAIL



DETAIL B

ELEVATIONS AT TOP OF GIRDER WEB (For Fabrication Only)

LOCATION	Girder A & I	Girder B & H	Girder C & G	Girder D & F	Girder E
@ Brq. N. Abut.	662.005	662.165	662.290	662.410	662.530
@ Splice 1	662.300	662.520	662.625	662.765	662.885
@ Brq. Pier	662.300	662.520	662.625	662.765	662.885
@ Splice 2	662.300	662.520	662.625	662.765	662.885
@ Brq. S. Abut.	662.125	662.295	662.410	662.530	662.650

**GIRDER DETAILS**  
 F.A. RT. 408 SEC. 89-BHB  
 MORGAN COUNTY  
 STATION 1025+22.72  
**COLLINS AND RICE**  
 CONSULTING ENGINEERS  
 CHECKED: F.S. DATE: 9-22-72  
 DRAWN: A.D. DATE: 9-22-72

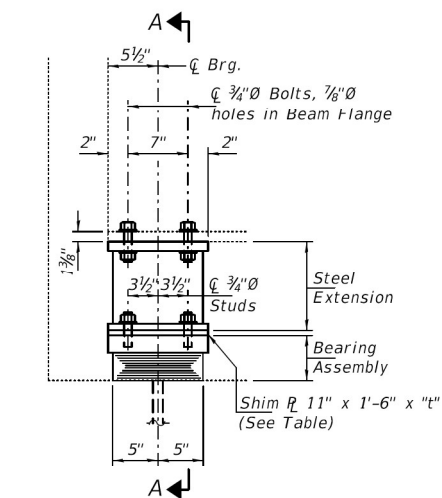
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	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

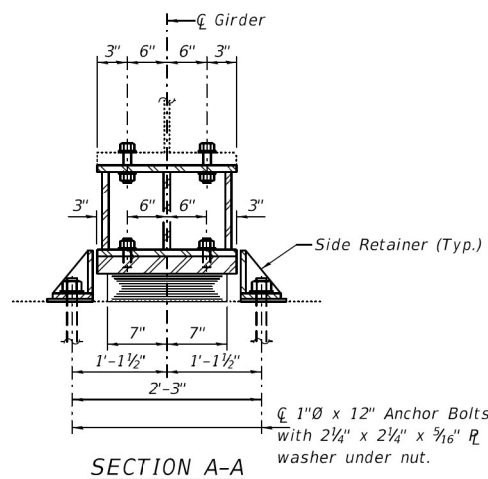
EXISTING BRIDGE PLANS, SN 069-0034  
(FOR INFORMATION ONLY)  
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	12
			CONTRACT NO. 72M34	
		ILLINOIS	FED. AID PROJECT	



ELEVATION AT ABUTMENT

TYPE I ELASTOMERIC EXP. BRG.



SECTION A-A

BEAM REACTIONS

R <sub>p</sub>	(K)	64.4
R <sub>t</sub>	(K)	45.2
Imp.	(K)	9.7
R (Total)	(K)	119.3

Notes:

Cross Frame removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.

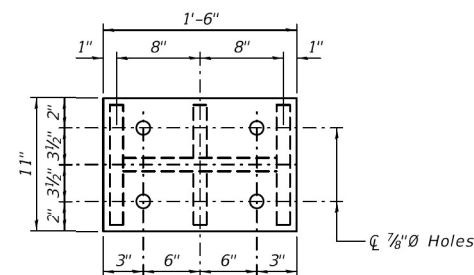
New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel. Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).

Min. jack capacity = 69 Tons.

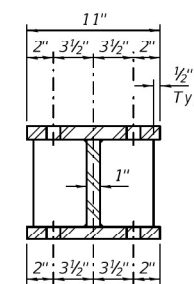
Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F<sub>y</sub>=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

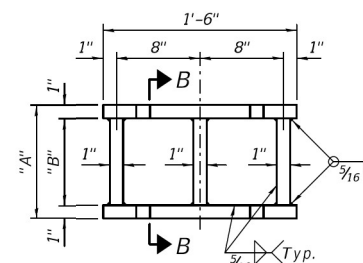
Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



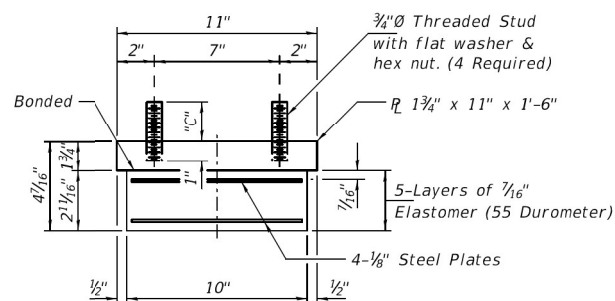
PLAN TOP AND BOTTOM PLATE



SECTION B-B



STEEL EXTENSION DETAIL  
(See Table for Dimensions "A" & "B")



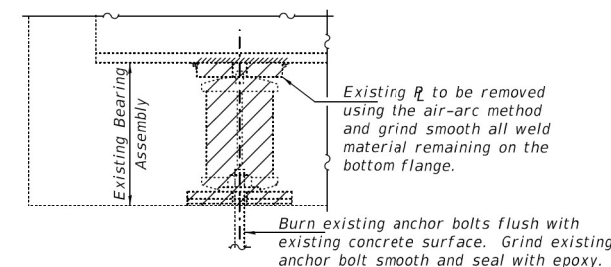
BEARING ASSEMBLY

(See Table for Dimension "C")

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

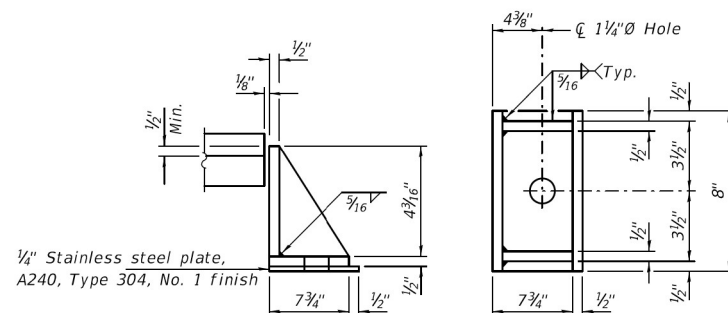
TABULARY OF DIMENSIONS

Girder	NORTH ABUTMENT				SOUTH ABUTMENT				
	"A"	"B"	"C"	"t"	"A"	"B"	"C"	"t"	
1	10 <sup>1</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>16</sub> "	3 <sup>1</sup> / <sub>4</sub> "	1/2"	1	10 <sup>1</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>16</sub> "	3"	1/4"
2	11 <sup>9</sup> / <sub>16</sub> "	9 <sup>9</sup> / <sub>16</sub> "	2 <sup>7</sup> / <sub>8</sub> "	1/8"	2	11 <sup>9</sup> / <sub>16</sub> "	9 <sup>9</sup> / <sub>16</sub> "	2 <sup>3</sup> / <sub>4</sub> "	0"
3	11 <sup>9</sup> / <sub>16</sub> "	9 <sup>9</sup> / <sub>16</sub> "	3"	1/4"	3	10 <sup>1</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>16</sub> "	3 <sup>1</sup> / <sub>4</sub> "	1/2"
4	11 <sup>9</sup> / <sub>16</sub> "	9 <sup>9</sup> / <sub>16</sub> "	2 <sup>7</sup> / <sub>8</sub> "	1/8"	4	10 <sup>1</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>16</sub> "	3"	1/4"
5	11 <sup>9</sup> / <sub>16</sub> "	9 <sup>9</sup> / <sub>16</sub> "	2 <sup>3</sup> / <sub>4</sub> "	0"	5	11 <sup>9</sup> / <sub>16</sub> "	9 <sup>9</sup> / <sub>16</sub> "	2 <sup>3</sup> / <sub>4</sub> "	0"
6	11 <sup>9</sup> / <sub>16</sub> "	9 <sup>9</sup> / <sub>16</sub> "	2 <sup>7</sup> / <sub>8</sub> "	1/8"	6	10 <sup>1</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>16</sub> "	3 <sup>3</sup> / <sub>8</sub> "	3/8"
7	11 <sup>9</sup> / <sub>16</sub> "	9 <sup>9</sup> / <sub>16</sub> "	2 <sup>7</sup> / <sub>8</sub> "	1/8"	7	10 <sup>1</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>16</sub> "	3 <sup>1</sup> / <sub>8</sub> "	3/8"
8	11 <sup>9</sup> / <sub>16</sub> "	9 <sup>9</sup> / <sub>16</sub> "	3"	1/4"	8	10 <sup>1</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>16</sub> "	3 <sup>3</sup> / <sub>8</sub> "	5/8"
9	10 <sup>1</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>16</sub> "	3 <sup>3</sup> / <sub>8</sub> "	3/8"	9	10 <sup>1</sup> / <sub>16</sub> "	8 <sup>1</sup> / <sub>16</sub> "	2 <sup>3</sup> / <sub>4</sub> "	0"



EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.



SIDE RETAINER

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

Expires: November 30, 2020  
Seal applies to this sheet only.

DESIGNED - JEFFREY S. BURKE	EXAMINED	DATE - SEPTEMBER 17, 2020
CHECKED - CHI-CHEUNG CHAU	PASSED	ENGINEER OF STRUCTURAL SERVICES
DRAWN - STEFFEN	REVISOR	REVISOR
CHECKED - JSB CCC	REVISOR	REVISOR

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BEARING REPLACEMENT DETAILS  
SN 069-0034

SHEET NO. 4 OF 4 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(69-67)BRR(69-8)BRR&JR-1.SLP	MORGAN	19	8
			CONTRACT NO. 72M47	
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	18
Jack and Remove Existing Bearings	Each	18
Furnishing and Erecting Structural Steel	Pound	4360
Anchor Bolts, 1"Ø	Each	36

MODEL Path: \\s:\bids\Bridges\069-0034 - 172.pain: Morgan Columnsheet.dgn

USER NAME = Brandon.Dudley	DESIGNED -	REVISOR -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISOR -
PLOT DATE = 8/14/2023	CHECKED -	REVISOR -
	DATE -	REVISOR -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 069-0034  
(FOR INFORMATION ONLY)

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	13
			CONTRACT NO. 72M34	
ILLINOIS FED. AID PROJECT				

B.M. #10 - R.R. Spike in Tree 105' Rt.  
Sta. 1216 + 35 Elev. 602.73

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

\*69-B (VHB; B-1)  
\*69-9(A; HB; SB) F.A.

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
408	#	MORGAN	309	106
FED. ROAD DIST. NO. 7	ILLINOIS PROJECT	EAF-808-2(1)		

SHEET 1 OF 17

GENERAL NOTES

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.  
Fasteners shall be high strength bolts. Bolts 7/8", open holes 15/16" unless otherwise noted.  
Field welding of construction accessories will not be permitted to the bottom flange of 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 cross frames over supports. Calculated weight of Structural Steel = 809,490 Lb.  
Layout of slope walls may be varied in the field to suit ground conditions as directed by the Engineer.  
The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.  
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.  
Protective Coat shall not be applied to surface to which Waterproofing Membrane is applied.  
Concrete piles at abutments shall be driven in holes precast through the embankment in accordance with Article 513.09(c) of the Standard Specifications.  
The Contractor shall drive three test piles in permanent locations as directed by the Engineer before opening the remainder of the piles. One concrete test pile in each abutment of West Bound bridge and in the pier of East Bound bridge.  
All Structural Steel shall conform to A.A.S.H.O. M222 and shall be used in the bare unpainted condition. Expansion joint angles & attached bars shall be M-183 steel and shop painted with two coats of basic lead silico chromate paint.

INDEX OF SHEETS

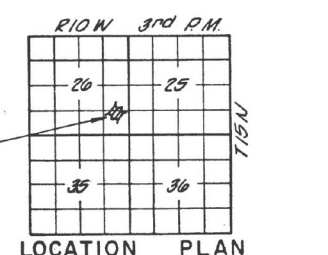
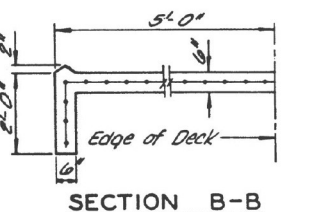
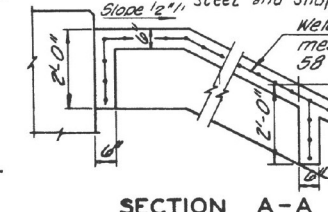
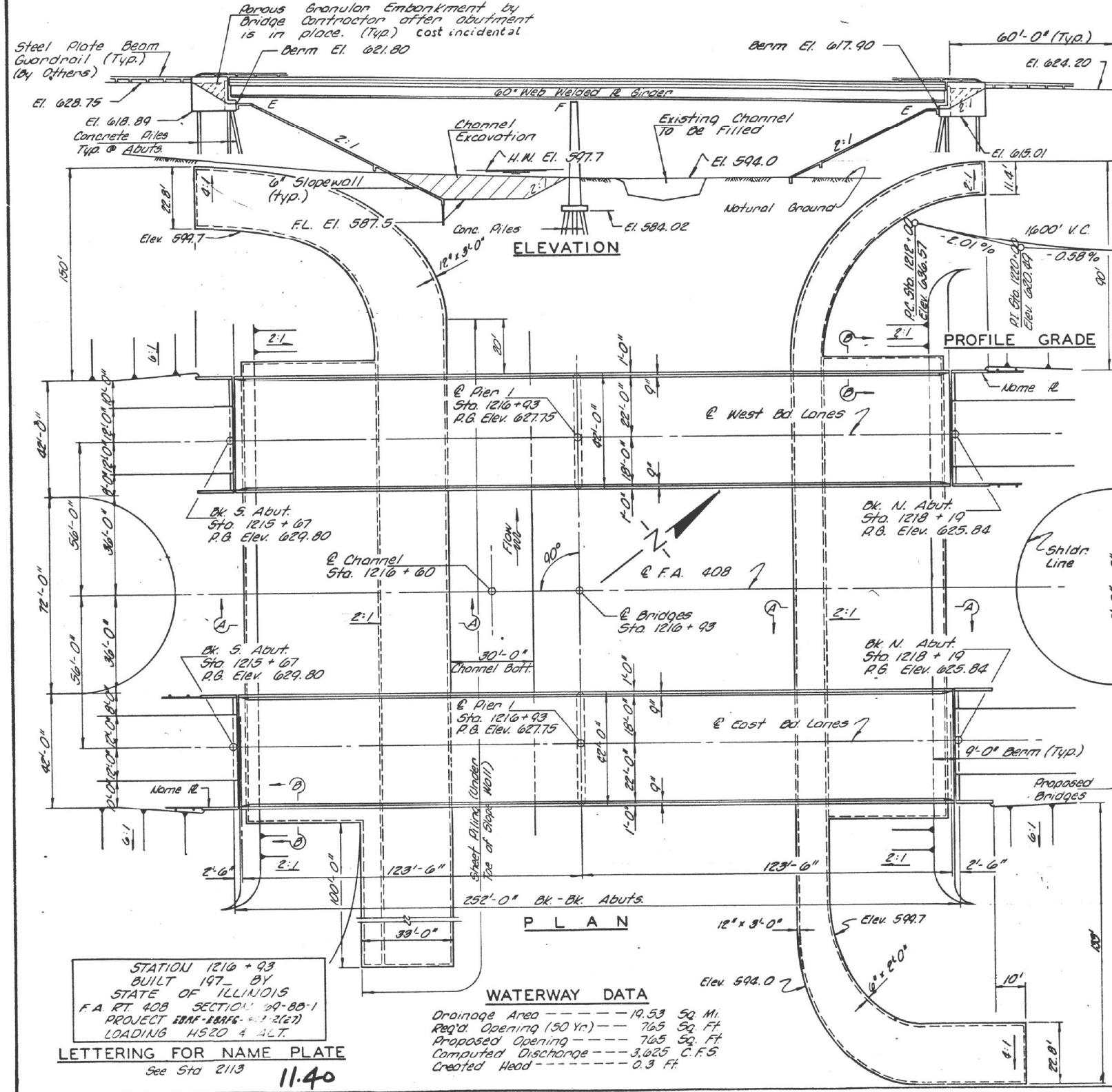
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|-----------------------------|--------------------|
| 1. General Plan & Elevation | 10. Framing Plan   |
| 2. Footing Layout           | 11. Girder Details |
| 3-4. Borings                | 12. Bearings       |
| 5-6. Deck Elevations        | 13-14. Abutments   |
| 7. Superstructure           | 15-16. Piers       |
| 8. Superstructure Details   | 17. Pile Details   |
| 9. Handrail Details         |                    |

The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, webs, and splice plates of the steel girders or wide flange beams.

Steel Sheet Piling @ south embankment only.  
7'-0" Est. Length.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Class X Concrete	Cu Yd	644.0	217.2	861.2
Class A Concrete	Cu Yd		396.2	396.2
Reinforcement Bars	Lb	131,710	48,180	179,890
Structural Steel	Lump Sum	1		1
Preformed Joint Sealer (4")	Lin. Ft.	168		168
Slope Wall to Trch	Sq. Yd		4,675	4,675
Aluminum Rolling	Lin. Ft.	1,115		1,115
Protective Coat	Sq. Yd	300	49	415
Structure Excavation	Cu. Yd		390	390
Name Plates	Each	2		2
Concrete Piles	Lin. Ft.		5,076	5,076
Test Piles Concrete	Each		3	3
Steel Sheet Piling	Sq. Ft.		2,240	2,240



DESIGN STRESSES  
 $f_c = 1,200$  p.s.i. (Deck Slab)  
 $f_c = 1,400$  p.s.i. (Curb, Parapet, Sub)  
 $f_s = 20,000$  p.s.i. (Reinf.)  
 $f_s = 27,000$  p.s.i. (Struct.) (M222)  
 $f_c = 75$  p.s.i. (Ftgs.)  
 $n = 10$   
 Allowable  $\delta$  Deflection =  $L/1000$   
 LOADING HS 20-44 & Alternate  
 Design Specifications: AASHTO 1969 05  
 applicable. Allow 25#150 Ft for  
 future wearing surface.  
 Front of Station 12  
 Illinois Structural No. 2934

APPROVED

MAUVAISE TERRE CREEK

GENERAL PLAN & ELEVATION  
 PROJECT EAF-EBRF6 - 408-2(27)  
 F.A. RT. 408 SEC. 69-8B-1  
 MORGAN COUNTY  
 STATION 1216 + 93  
 COLLINS AND RICE  
 CONSULTING ENGINEERS  
 6-95  
 CHECKED M.B.  
 DATE 5-14-73 = 800

STATION 1216 + 93  
 BUILT 1971 BY  
 STATE OF ILLINOIS  
 F.A. RT. 408 SECTION 69-8B-1  
 PROJECT EAF-EBRF6 - 408-2(27)  
 LOADING HS20 & A.C.T.  
 LETTERING FOR NAME PLATE  
 See Sta 2113  
 11.40

WATERWAY DATA  
 Drainage Area ----- 19.53 Sq. Mi.  
 Req'd. Opening (50 Yr.) --- 765 Sq. Ft.  
 Proposed Opening ----- 765 Sq. Ft.  
 Computed Discharge ----- 3,625 C.F.S.  
 Created Head ----- 0.3 Ft.

3 Existing Concrete Piles 201 to 38 Feet - 144 Lin. Ft. 1-28-74 L.W.

MODEL: D:\p\cadd\brdg\plan\cadd\72m34 - 1-27.pml; Morgan\_Collins\morgancadd

USER NAME = Brandon.Dudley	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2023	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 069-0042 & 0043  
(FOR INFORMATION ONLY)

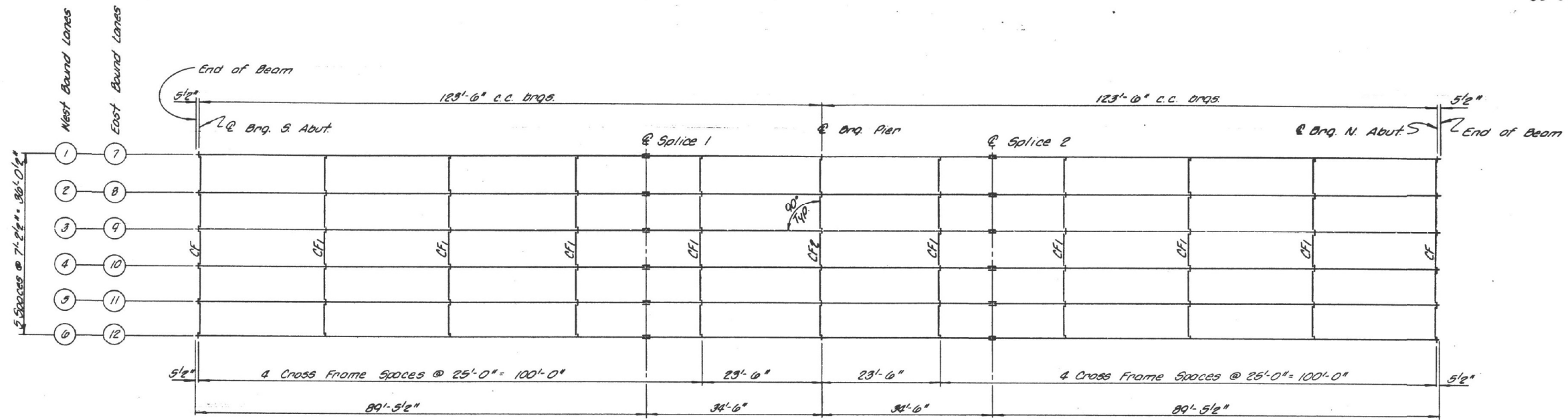
SCALE: SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	14
ILLINOIS			FED. AID PROJECT	

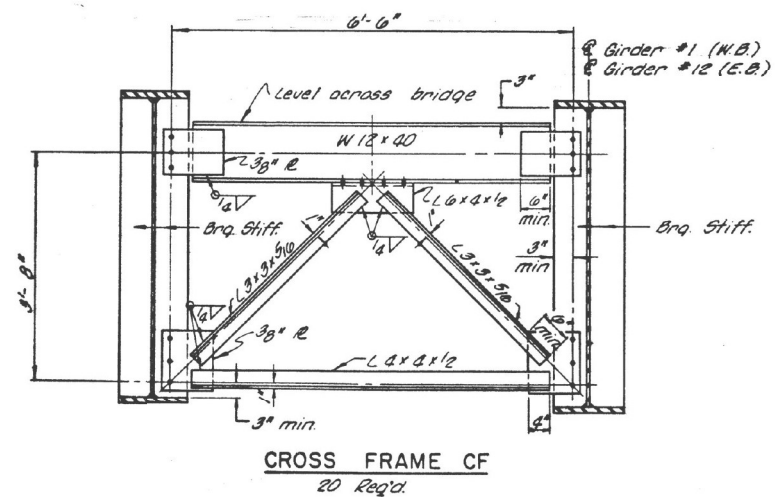
CONTRACT NO. 72M34

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

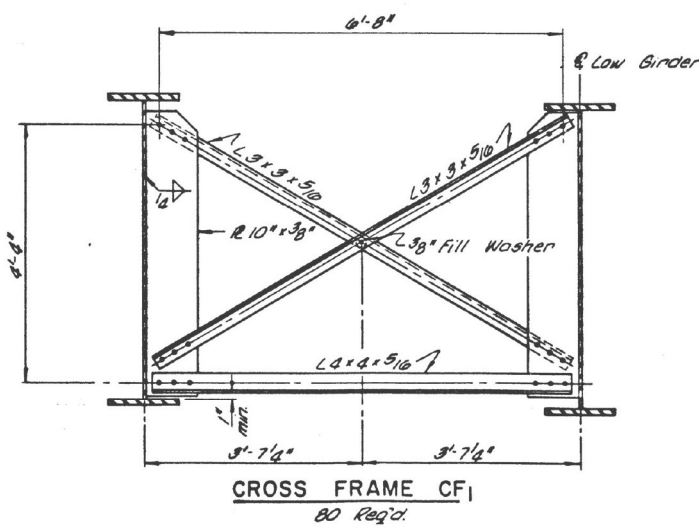
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408	*	MORGAN	309	115
PROJECT: EBF-408-217				
SHEET 10 OF 17				
* 69-8 (VHB, B-1)				
69-9 (A, HB, SB)				



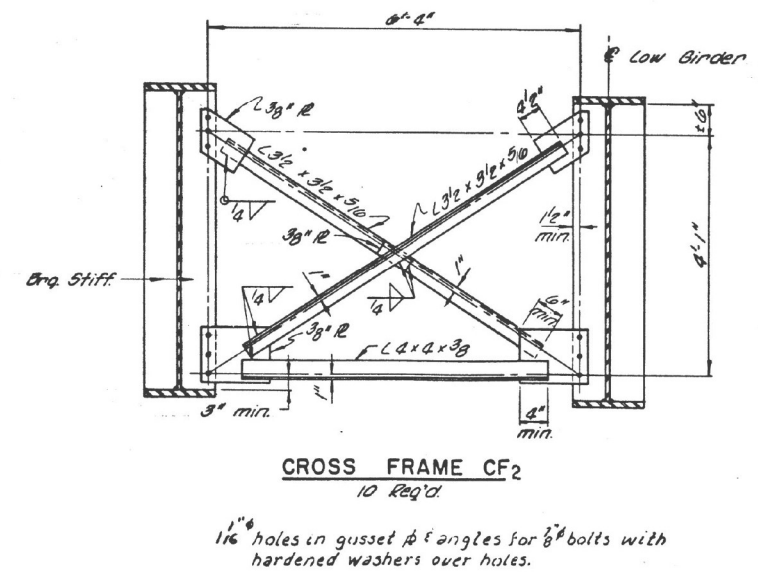
FRAMING PLAN



CROSS FRAME CF  
20 Req'd.



CROSS FRAME CF1  
80 Req'd.



CROSS FRAME CF2  
10 Req'd.

FRAMING PLAN	
F.A. RT. 408	SEC. 69 - 8B-1
MORGAN COUNTY	
STATION 1216 + 93	
COLLINS AND RICE CONSULTING ENGINEERS	
DESIGNED M.B.	CHECKED F.B.
DRAWN A.D.	DATE 5-14-73
	NO. 800

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CADD: 72M34 - 172.psd  
Author: Morgan Collins and Rice

USER NAME = Brandon.Dudley	DESIGNED -	REVISED -
PLOT SCALE = 100,000' / in.	DRAWN -	REVISED -
PLOT DATE = 8/14/2023	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 069-0042 & 0043  
(FOR INFORMATION ONLY)

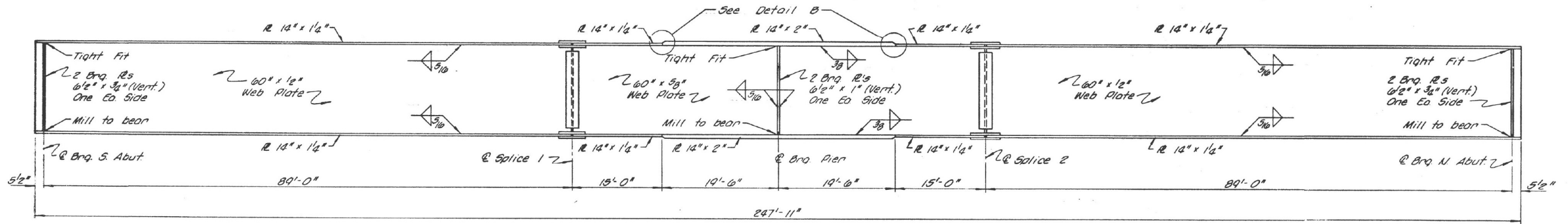
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 72M34				
ILLINOIS FED. AID PROJECT				

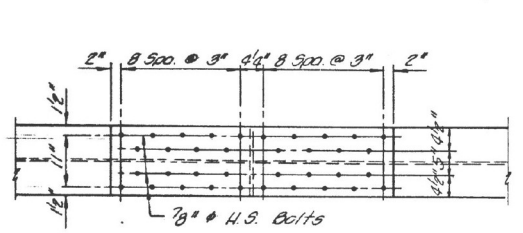
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
408	*	MORGAN	309	116
F.A. RT. 408		PROJECT: 069-002-2(1)		

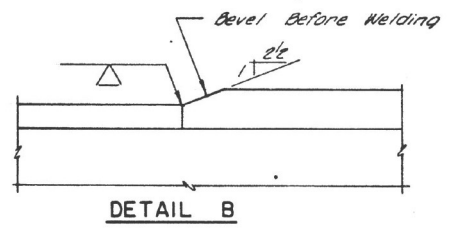
SHEET 11 OF 17  
\* 69-8 (VHB, B-1)  
69-9 (A, HB, SB)



GIRDER ELEVATION



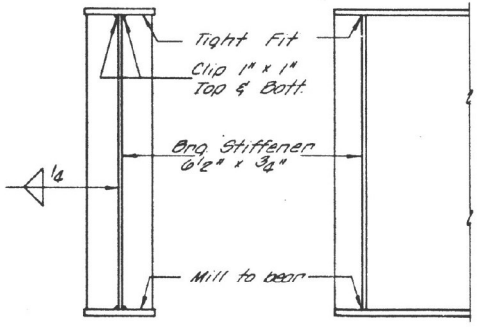
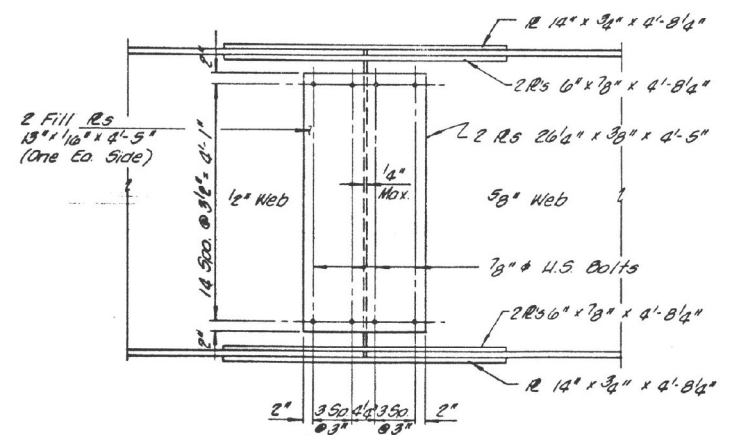
FIELD SPLICE DETAIL



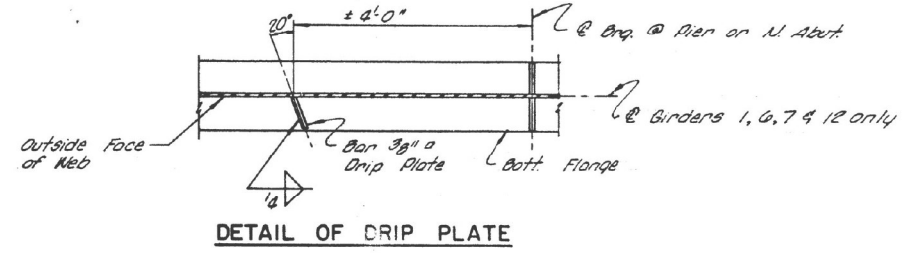
DETAIL B

ELEVATIONS AT TOP OF GIRDER WEB (For Fabrication Only)

Location	Girders 1 & 2	Girders 3 & 4	Girders 5 & 6	Girders 7 & 8	Girders 9 & 10	Girders 11 & 12
@ Brq. S. Abut.	628.690	628.800	628.955	629.080	628.405	628.775
@ Splice 1	627.180	627.310	627.425	627.490	627.375	627.245
@ Brq. Pier	626.620	626.770	626.885	626.950	626.835	626.705
@ Splice 2	626.080	626.230	626.345	626.410	626.295	626.165
@ Brq. N. Abut.	624.810	624.980	625.075	625.140	625.025	624.895



BRG. STIFFENER DETAIL



DETAIL OF DRIP PLATE

GIRDER DETAILS	
F.A. RT. 408	SEC. 69-8B-1
MORGAN COUNTY	
STATION 1216+93	
COLLINS AND RICE CONSULTING ENGINEERS	
DRAWN M.B.	CHECKED F.S.
DATE 5-14-73	NO. 820

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PLOT DATE: 8/14/2023

USER NAME = Brandon.Dudley	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2023	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

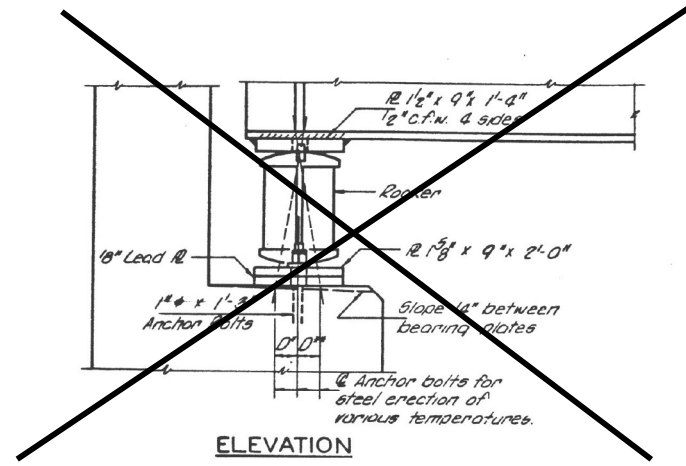
EXISTING BRIDGE PLANS, SN 069-0042 & 0043	
(FOR INFORMATION ONLY)	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	16
			CONTRACT NO. 72M34	
ILLINOIS FED. AID PROJECT				

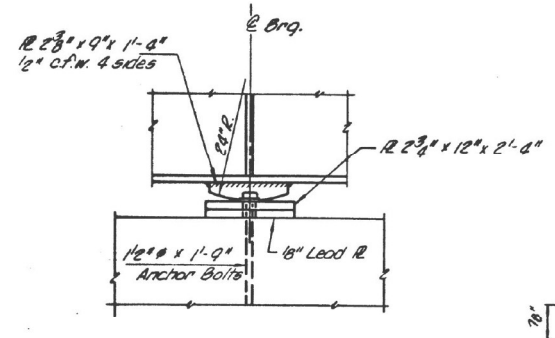


STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

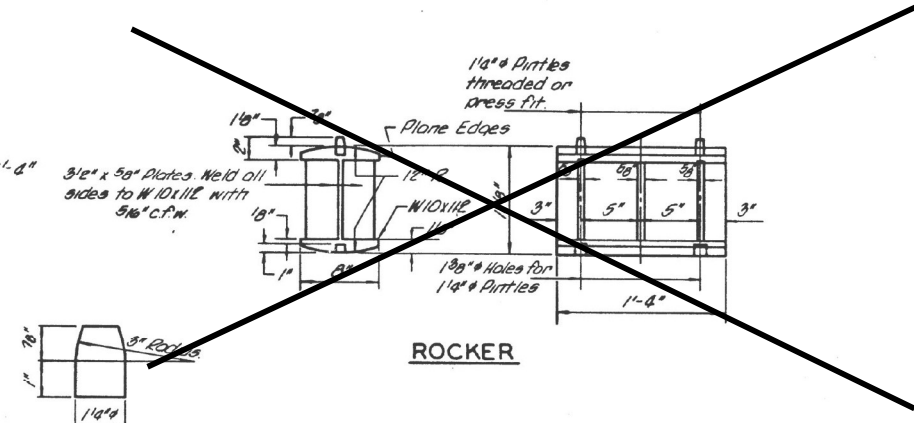
ROUTE NO.	SEC.	COUNTY	TOTAL SHEETS	SHEET NO.
F.A. 408	*	MORGAN	309	117
FED. ROAD DIST. NO. 7		ALIGNED PROJECT	EBF-008-2(1)	
SHEET 12 OF 17				
* 69-8 (VHB, B-1)				
69-9 (A, HB, SB)				



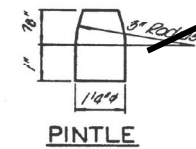
ELEVATION



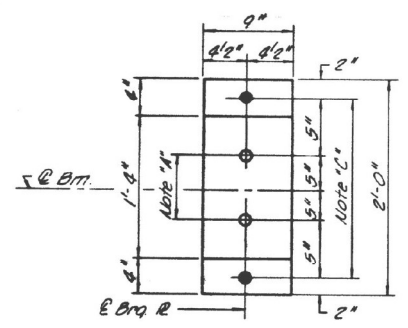
ELEVATION



ROCKER

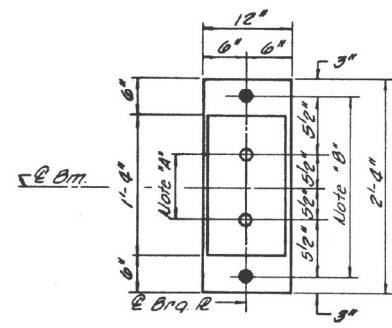


PINTLE



PLAN AT ABUTMENT

Note "A"  
1 3/8" Holes - 1" deep in top R for 1 1/4" Pintles Thread or press fit pntles in bottom R.



PLAN AT PIER

Note "B"  
2" Holes for 1 1/2" Anchor Bolts - 3" x 3" x 5/16" R Washers under nut.

Note "C"  
1 1/2" Holes for 1" Anchor Bolts - 2 1/2" x 2 1/2" x 5/16" R Washers under nut.

Note:  
Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

NOTES FOR SETTING OF ANCHOR BOLTS  
AT EXPANSION BEARINGS

- 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\* and D\*\* determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

	Od	Span 1	Pier
I (in <sup>4</sup> )	41,831	65,085	
S (in <sup>3</sup> )	1,339	2,032	
e (ft/ft)	1.470	1.470	
M <sub>e</sub> (ft.k)	1.442	3.120	
M <sub>e</sub> (ft.k)	1.012	1.202	
Imp (ft.k)	204	242	
M TOTAL (ft.k)	2,658	4,564	
P <sub>g</sub> (k.s)	23.8	26.9	

	Abut.	Pier
R <sub>e</sub> (k)	65.5	232.1
R <sub>e</sub> (k)	42.7	83.2
Imp (k)	8.6	16.7
R TOTAL (k)	116.8	332.0

**BEARINGS**  
F.A. RT. 408 SEC. 69-8B-1  
MORGAN COUNTY  
STATION 1216+93  
COLLINS AND RICE  
CONSULTING ENGINEERS  
DRAWN M.B. CHECKED F.S.  
DATE 5-14-73 NO. 800

MODEL: Default  
FILE NAME: S:\bridges\Bridges\plans\_CAD\72M34 - 172.pain Morgan Cou\Bearing.dwg

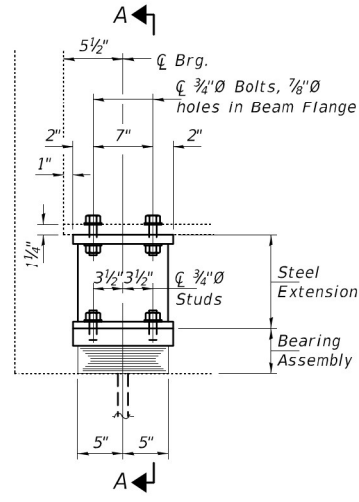
USER NAME = Brandon.Dudley	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2023	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 069-0042 & 0043  
(FOR INFORMATION ONLY)

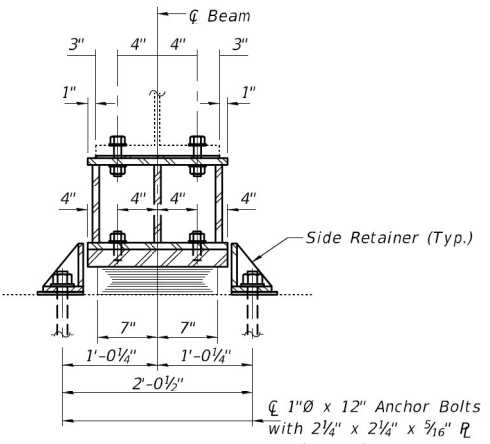
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	17
CONTRACT NO. 72M34				
ILLINOIS FED. AID PROJECT				



ELEVATION AT BOTH ABUTMENT'S

TYPE I ELASTOMERIC EXP. BRG.

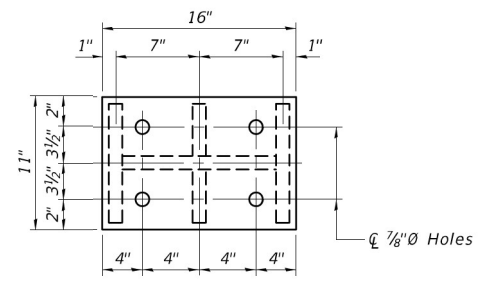


SECTION A-A

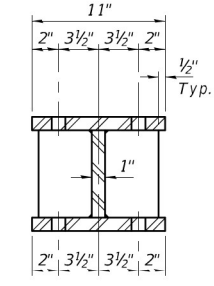
BEAM REACTIONS

R <sub>P</sub>	(K)	65.5
R <sub>L</sub>	(K)	42.7
Imp.	(K)	8.6
R (Total)	(K)	116.8

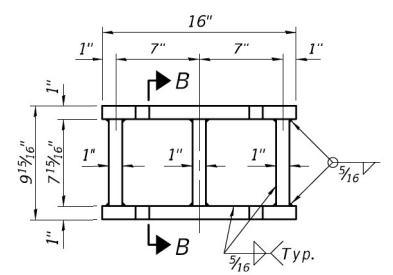
Notes:  
 Diaphragm removal and installation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel. Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).  
 Min. jack capacity = 70 Tons.  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F<sub>y</sub>=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



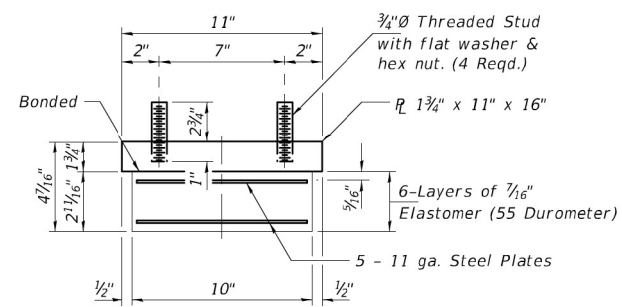
PLAN TOP AND BOTTOM PLATE



SECTION B-B

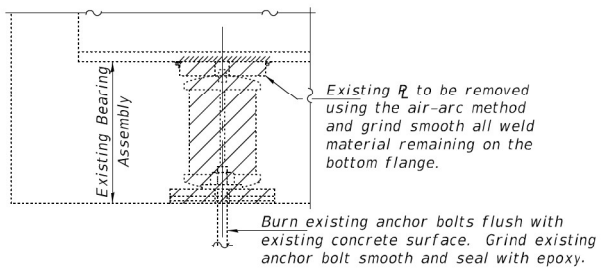


STEEL EXTENSION DETAIL



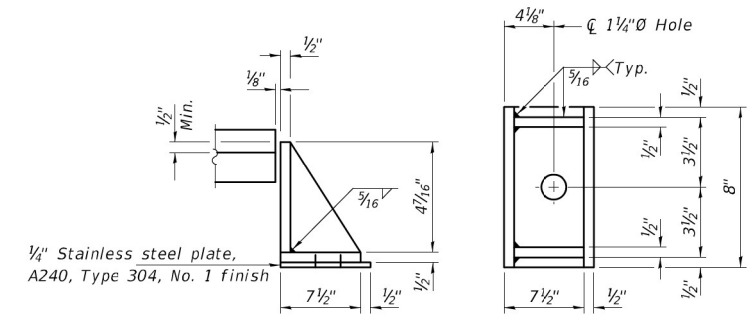
BEARING ASSEMBLY

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



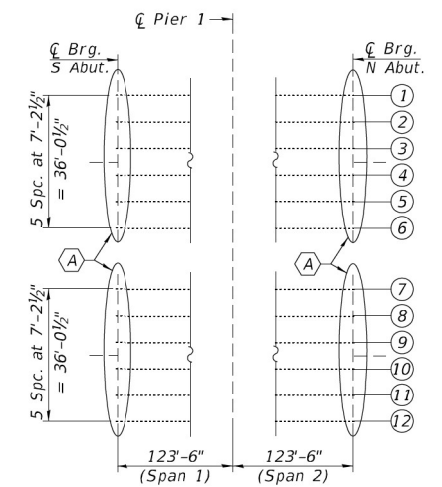
EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.



SIDE RETAINER

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



PARTIAL FRAMING PLAN

(A) - Bearing Removal and Replacement.

BILL OF MATERIAL - ALL ABUTS.

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	24
Jack and Remove Existing Bearings	Each	24
Furnishing and Erecting Structural Steel	Pound	4820
Anchor Bolts, 1"Ø	Each	48

DESIGNED - Adrian T. Halloway  
 CHECKED - Chi-Cheung Chau  
 DRAWN - Venkat Ramana Reddy  
 CHECKED - ATH CCC

PASSED

John F. [Signature]  
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - SEPTEMBER 26, 2022  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BEARING DETAILS - ALL ABUTMENTS  
 FAI 72 OVER MAUVAISE TERRE CREEK  
 SN 069-0042 (EB) & 0043 (WB)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(69-8B1DR, 69-9HB-1, 3)BRR	MORGAN	9	5
CONTRACT NO. 72027				

SHEET NO. 1 OF 1 SHEETS

ILLINOIS FED. AID PROJECT

MODEL Path: S:\Addresses\Bridges\Bridges\_CAD\72M34 - 1-72.pain: Morgan Coulbinstee.dgn

USER NAME = Brandon.Dudley	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	DRAWN -	REVISED -
PLOT DATE = 8/14/2023	CHECKED -	REVISED -
	DATE -	REVISED -

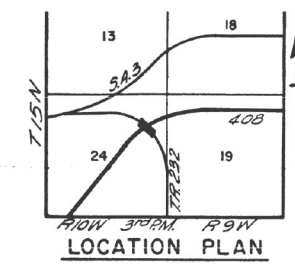
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 069-0042 & 0043  
 (FOR INFORMATION ONLY)

SCALE: SHEET OF SHEETS STA. TO STA.

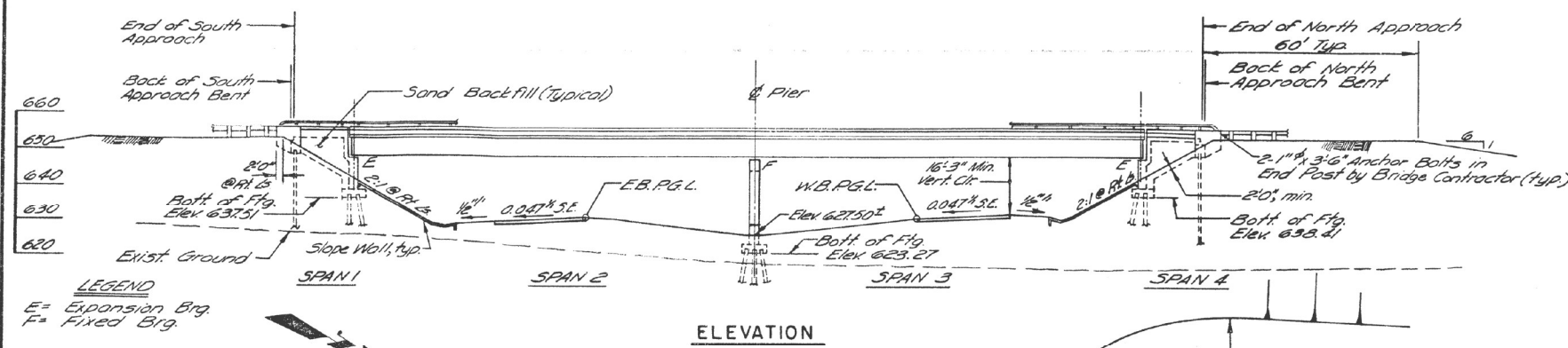
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	18
CONTRACT NO. 72M34				
ILLINOIS FED. AID PROJECT				

Bench Mark: T.B.M. #106 P.R. spike in telephone pole  
 by date north of 2nd curve in County Rd  
 3042' N Sta. 1024+19.5, Elev 632.30

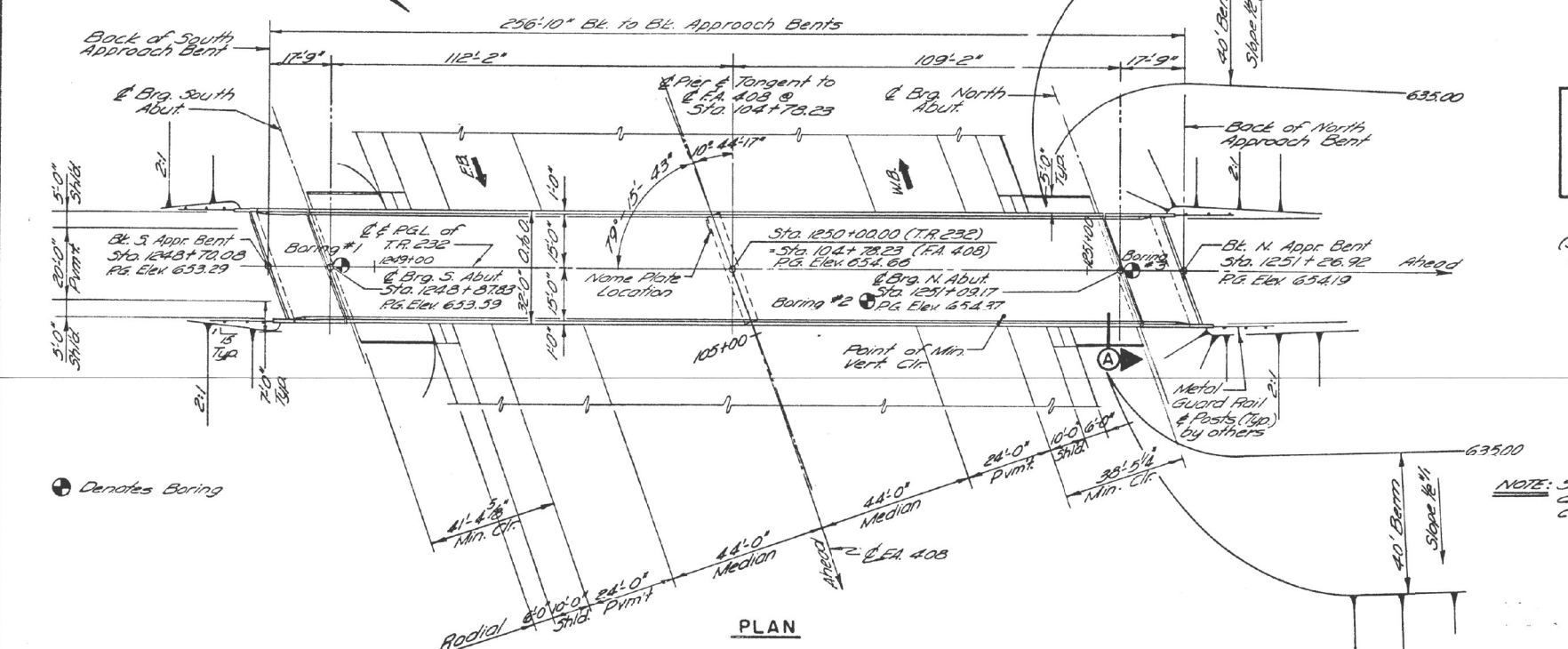


GENERAL NOTES

- SPECIFICATIONS: THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 2, 1971 SHALL APPLY.
- CONCRETE: CLASS X CONCRETE SHALL BE USED THROUGHOUT. THE CONCRETE RAIL SECTION ABOVE THE MANDATORY CONSTRUCTION JOINT AT THE TOP OF THE SLAB SHALL BE CONSTRUCTED OF CLASS X CONCRETE, EXCEPT THE AGGREGATES SHALL CONFORM TO THE REQUIREMENTS OF HANDRAIL CONCRETE.
- ALL REINFORCEMENT BARS SHALL BE LAPPED 2X DIAMETERS UNLESS OTHERWISE SHOWN.
- SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6"x6" MESH WEIGHING 58# PER 100 SQ. FT.
- CALCULATED WEIGHT OF STRUCTURAL STEEL: 236,970 LBS.
- FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 3/4" OPEN HOLES 13/16" UNLESS OTHERWISE NOTED.
- 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 CROSS FRAMES OVER SUPPORTS.
- THE BASIC LEAD SILICO CHROMATE PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF STRUCTURAL STEEL.
- PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH COAL TAR INTERLAYER PROTECTIVE COAT IS APPLIED.
- ONLY "CYLINDRICAL STEEL SHELL CAST IN PLACE CONCRETE PILES" ALTERNATE SHOWN ON SHEET 12 SHALL BE USED FOR NORTH ABUTMENTS AND NORTH APPROACH BENT PILES. THE UPPER PORTIONS OF THESE PILES SHALL BE COATED WITH A 5 MIL MINIMUM THICKNESS OF 85-100 PENETRATION ASPHALT BEFORE DRIVING. THE LENGTHS TO BE COATED ARE SHOWN ON SHEET 2. THE COATING SHALL BE APPLIED NOT LESS THAN 24 HOURS PRIOR TO DRIVING. THE COST OF COATING SHALL BE INCIDENTAL TO THE COST OF DRIVING AND FILLING SHELLS.
- CONCRETE PILES AT ABUTMENTS AND APPROACH BENTS SHALL BE DRIVEN IN HOLES PRECORDED THROUGH THE EMBANKMENT IN ACCORDANCE WITH ARTICLE 513.09(c) OF STANDARD SPECIFICATIONS.
- TEST PILES - THE CONTRACTOR SHALL DRIVE ONE TEST PILE IN EACH ABUTMENT AND PIER IN THE PERMANENT POSITION SHOWN ON THE PLANS IN ACCORDANCE WITH ARTICLE 513.15 OF THE STANDARD SPECIFICATIONS BEFORE ORDERING THE REMAINDER OF PILES.
- BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF ± 1/8" INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/8" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.
- THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.



LEGEND  
 E = Expansion Brg.  
 F = Fixed Brg.

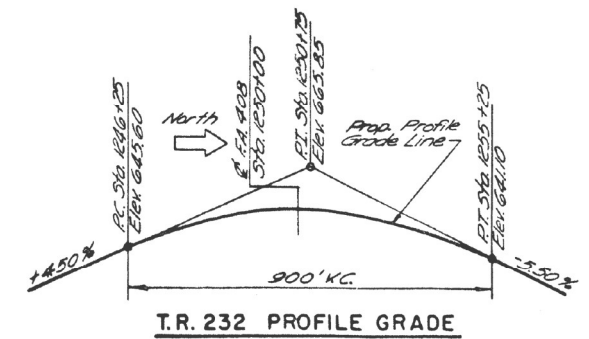
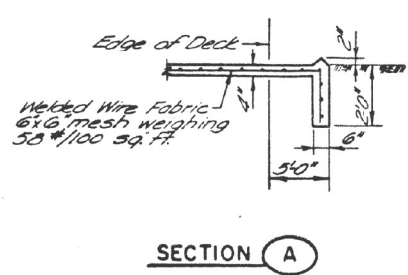
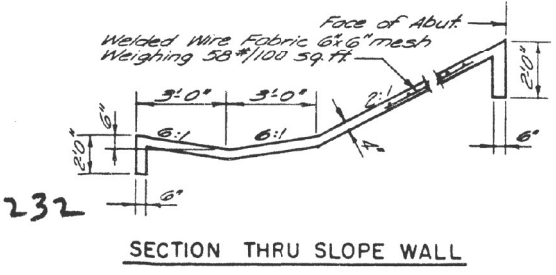


STATION 104+78.23  
 BUILT 197 BY  
 STATE OF ILLINOIS  
 F.A. RT. 408 SEC. 69-9HB3  
 F.A. PROJ. EBF-EBFG-408-222  
 LOADING HS 15

NAME PLATE DATA  
 (See Std. 213 and locate as shown on Pier)

HORIZONTAL CURVE DATA

PI.	Sta. 115 + 38.14
Δ	37° 06' 03"
D	1° 15' 00"
R	4583.66'
T	2191.26'
L	4088.07'
E	496.85'
SE	0.04714H



FA. 408 PROFILE GRADE

- DESIGN NOTES
- DESIGN LOADING: HS 15-44 AND ALLOWANCE FOR 25 P.S.F. FUTURE WEARING SURFACE.
  - DESIGN STRESSES:
    - fc = 1,400 P.S.I. EXCEPT AS FOLLOWS:
    - fc = 1,200 P.S.I. FOR DECK SLAB
    - fc = 1,000 P.S.I. FOR CONC. IN CONTACT WITH EARTH
    - fs = 20,000 P.S.I. - A572 STRUCTURAL STEEL
    - fs = 29,000 P.S.I. - REINFORCEMENT STEEL
    - v = 75 P.S.I. - ALLOWABLE SHEAR IN FOOTINGS
    - n = 10
  - ALLOWABLE LIVE LOAD DEFLECTION = L/1200 (COMPOSITE)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER STRUC.	SUB STRUC.	TOTAL
Class X Concrete	cu. yds.	2671	173.9	441.0
Structural Steel	lump sum	1		1
Stud Shear Connectors 3/4" Ø	each	1428		1428
Reinforcement Bars	lbs.	65,190	23,880	89,070
Name Plate	each		1	1
Aluminum Railing	lin. ft.	530		530
Slope Wall (4")	sq. yds.		383	383
Sand Backfill	cu. yds.		155	155
Protective Coat	sq. yds.	188	11	199
Coal Tar Interlayer Pr. Coat	sq. yds.	518		518
Bit. Concrete Surface Course Class I	tons	71		71
Preformed Joint Sealer, 4"	lin. ft.	66		66
Furnishing Concrete Piles	lin. ft.		1094	1094
Driving Concrete Piles	lin. ft.		1094	1094
Test Pile Concrete	each		3	3
Furnishing Metal Pile Shells	lin. ft.		1071	1071
Driving and Filling Shells	lin. ft.		1071	1071

APPROVED  
 FOR STRUCTURAL ADEQUACY ONLY  
 Alexis Dimitriou  
 1.19.73

GENERAL PLAN AND ELEVATION  
 T.R. 232 OVER FA. 408  
 F.A. 408 MORGAN CO.  
 SECTION 69-9HB3

USER NAME = Brandon.Dudley	DESIGNED -	REVISED -
DRAWN -	REVISOR -	
PLOT SCALE = 100,000' / in.	CHECKED -	REVISOR -
PLOT DATE = 8/14/2023	DATE -	REVISOR -

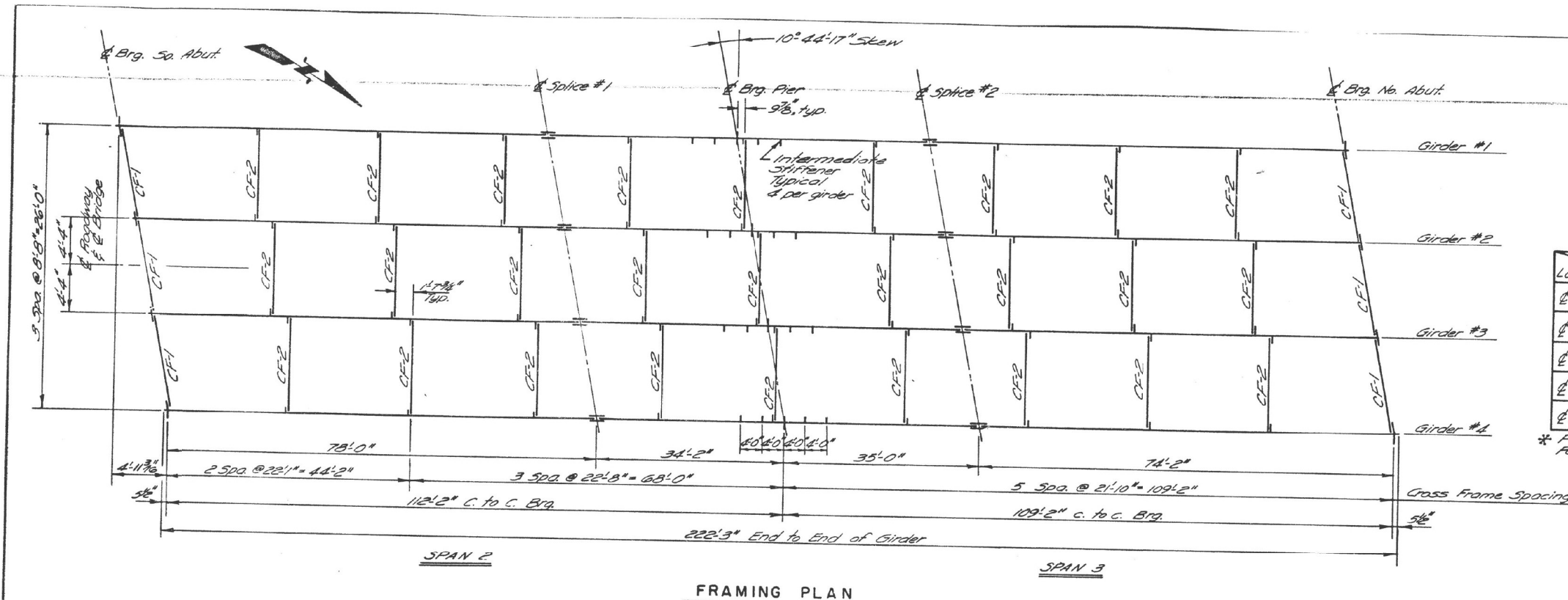
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 069-0047  
 (FOR INFORMATION ONLY)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	19
CONTRACT NO. 72M34				

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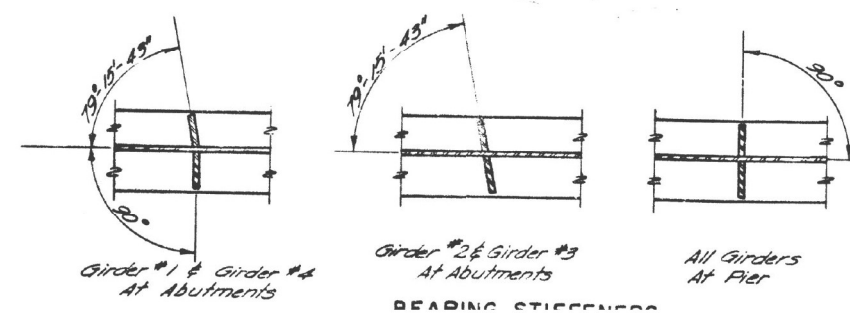
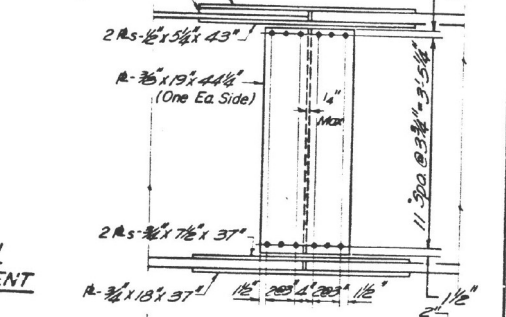
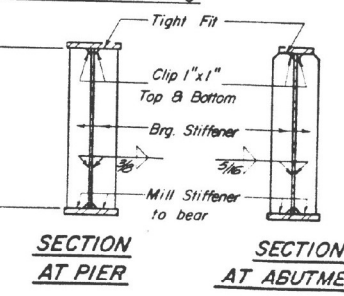
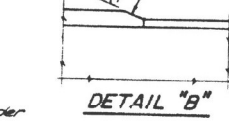
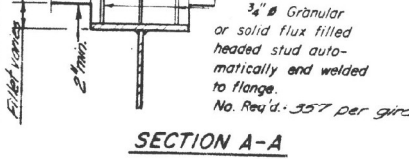
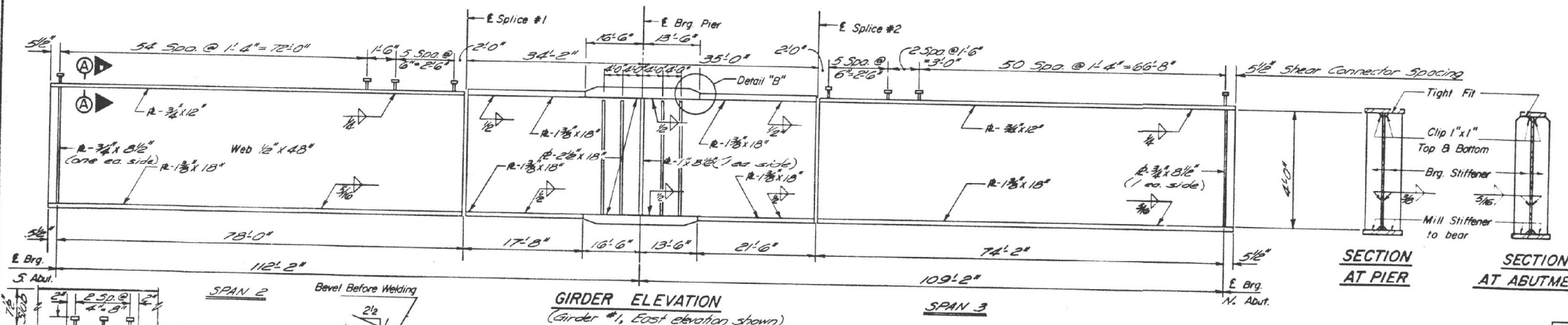
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
408	X	MORGAN	74	17
SHEETS				
X 69-9(A-1, B, HB-3)				



**TOP OF WEB ELEVATIONS\***

Location	Girder #1	#2	#3	#4
@ Brg. Sa. Abut.	652.478	652.635	652.681	652.556
@ Splice #1	653.383	653.544	653.596	653.419
@ Brg. Pier	653.420	653.575	653.579	653.437
@ Splice #2	653.605	653.754	653.751	653.603
@ Brg. No. Abut.	653.313	653.450	653.435	653.270

\* For fabrication only (Undeformed girder). For camber and blocking diagram, see Sht. 5



**STRUCTURAL STEEL**

T.R. 232 OVER F.A. 408  
F.A. 408 MORGAN CO.

CHECKED BY: JMM  
 DESIGNED BY: BRANDON DUDLEY  
 DRAWN BY: JMM  
 DATE: 8/14/2023

USER NAME = Brandon.Dudley	DESIGNED -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2023	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

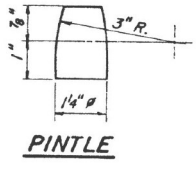
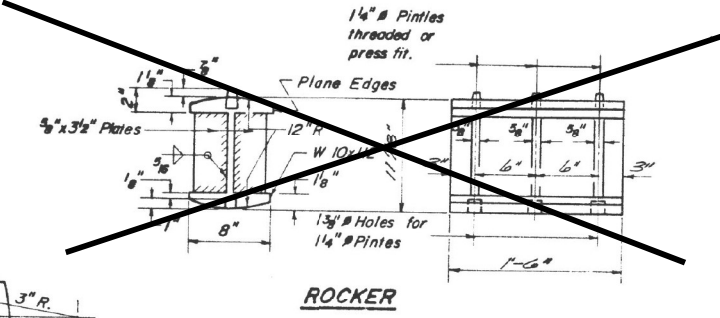
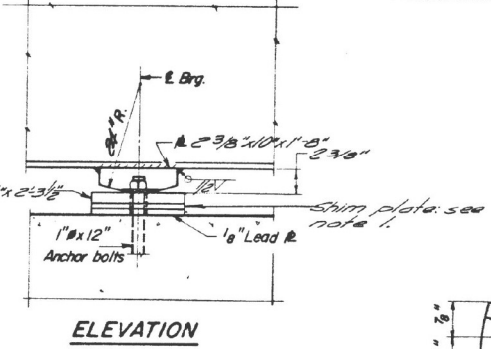
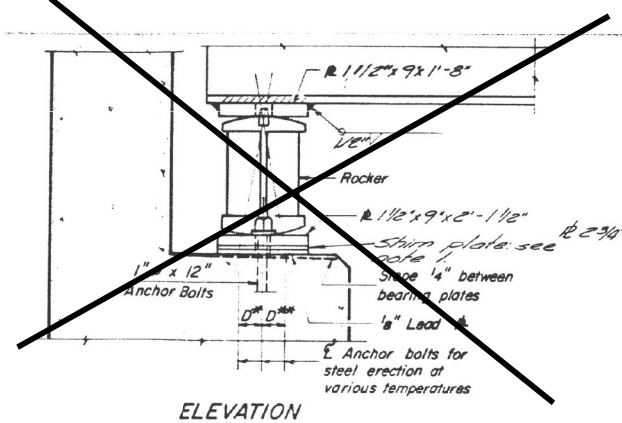
**EXISTING BRIDGE PLANS, SN 069-0047  
(FOR INFORMATION ONLY)**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	20
CONTRACT NO. 72M34				
ILLINOIS FED. AID PROJECT				

MODEL: D:\p\it\...  
 FILE NAME: S:\Addresses\Bridges\Plans\_CAD\72M34 - I-72\_paint\_Morgan\_Co\brssteel.dwg

NOTE ① Provide 5/16" x 9" x 2-1/2" shim plate at S. Abut. (girder 3 only)  
 Provide 3/16" x 9" x 2-1/2" shim plate at N. Abut. (girder 2 only)  
 Provide 1/4" x 14" x 2-3/4" shim plate at Pier (girder 4 only)  
 NOTE ② For additional shim plate requirements see note 14 on sheet 1.

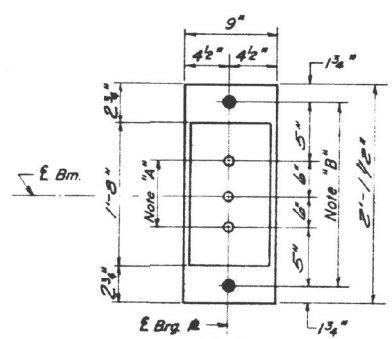


ELEVATION

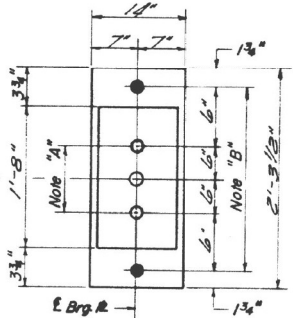
ELEVATION

ROCKER

PINTLE



Note "A"  
 1 3/8" # Holes - 1" deep in  
 top fl. for 1 1/4" # Pintles  
 Thread or press fit  
 pintles in bottom fl.



Note "B"  
 1 1/2" # Holes for 1" # Anchor  
 Bolts - 2 1/2" x 2 1/2" x 3/16" #  
 Washers under nut.

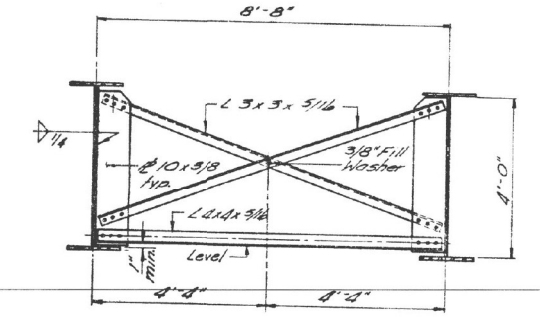
PLAN  
 AT ABUTMENT

PLAN  
 AT PIER

MOMENT TABLE

(COMPOSITE IN POSITIVE MOMENT AREAS ONLY)

INTERIOR GIRDER MOMENT TABLE			
	0.4 Sp. 2	Pier	0.4 SP3
Is (in <sup>4</sup> )	22388	61988	22388
Ic (in <sup>4</sup> )	61446		61446
Ss (in <sup>3</sup> )	1204	2339	1204
Sc (in <sup>3</sup> )	1634		1634
φ	1.05	1.24	1.05
M <sub>u</sub> (K)	811	2086	716
f <sub>s</sub> (ksi)	8.09	10.70	7.14
s <sub>u</sub> (K/A)	.530	.53	.530
M <sub>s</sub> (K)	489	773	446
M <sub>t</sub> (K)	850	769	821
M <sub>xmp</sub> (K)	178	162	173
Total (K)	1517	1704	1440
f <sub>s</sub> (ksi)	11.14	8.74	10.58
f <sub>s</sub> Total (ksi)	19.23	19.44	17.72
VR (K)	51		51

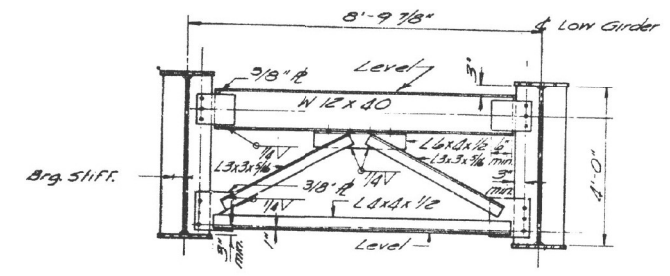


TYPICAL INTERIOR CROSS FRAME 2

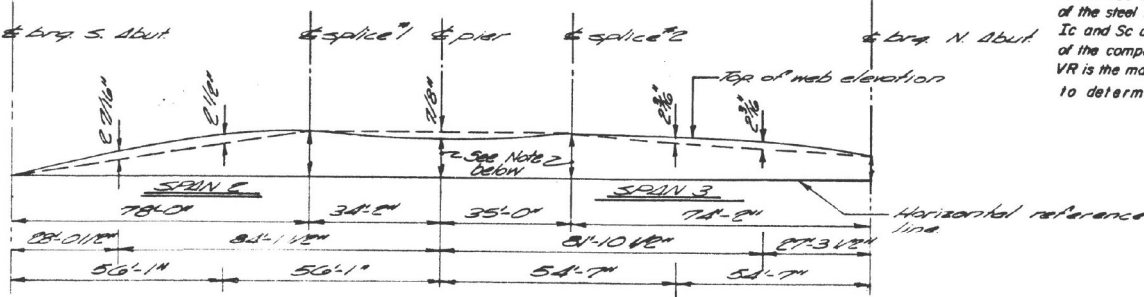
NOTES FOR SETTING OF ANCHOR BOLTS  
 AT EXPANSION BEARINGS  
 a.) D\* (Side of brg. away from fixed brg.)  
 D\*\* = 1/8" per each 100' of expansion for  
 every 15° fall below the normal temp.  
 of 50°F.  
 D\*\*\* (Side of brg. toward fixed brg.)  
 D\*\*\* = 1/8" per each 100' of expansion for  
 every 15° rise above the normal temp.  
 of 50°F.  
 b.) After beams have been erected and dimensions  
 D\* & D\*\*\* determined, holes shall be drilled and  
 anchor bolts shall be grouted in place. All fixed  
 anchor bolts may be built into the masonry.

REACTION TABLE			
INTERIOR GIRDER REACTION TABLE			
	Abut. (S)	Pier	Abut. (W)
R <sub>u</sub> (K)	64.5	227.9	61.1
R <sub>t</sub> (K)	38.3	67.2	38.1
Imp. (K)	8.0	14.1	8.0
R Total (K)	110.8	309.2	107.2

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<sub>s</sub>.  
 VR is the maximum 1/2 + Impact shear range in span. used  
 to determine shear connector spacing.



TYPICAL END CROSS FRAME 1



CAMBER AND BLOCKING DIAGRAM  
 (Camber includes deflection due to steel and  
 concrete and grade adjustment.)

CROSS FRAMES & BEARINGS  
 T.R. 232 OVER F.A. 408  
 F.A. 408 MORGAN CO  
 SECTION 69-9HB3  
 STATION 104+ 78.23

Note: For dimensions not shown  
 see table for top of web  
 elevations on sheet No. 4

USER NAME = Brandon.Dudley	DESIGNED -	REVISED -
PLOT SCALE = 100,000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2023	DATE -	REVISED -

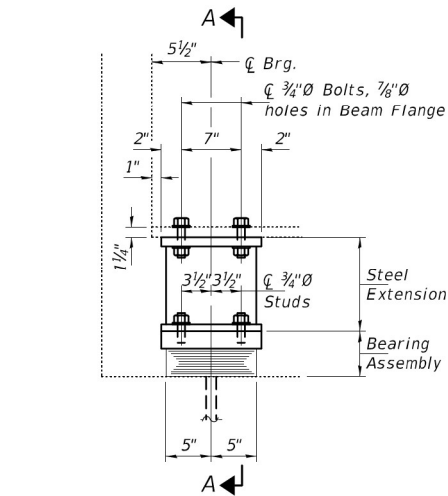
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 069-0047  
 (FOR INFORMATION ONLY)

SCALE: SHEET OF SHEETS STA. TO STA.

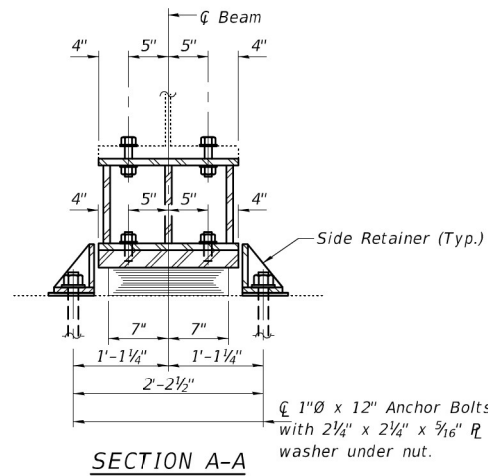
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	21
CONTRACT NO. 72M34				

ILLINOIS FED. AID PROJECT



ELEVATION AT BOTH ABUTMENT'S

TYPE I ELASTOMERIC EXP. BRG.



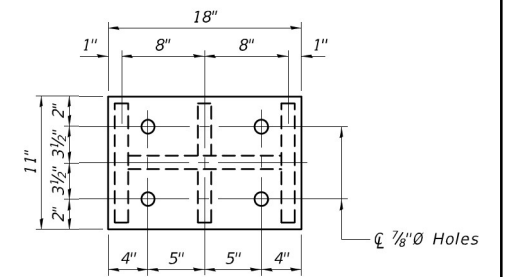
SECTION A-A

BEAM REACTIONS

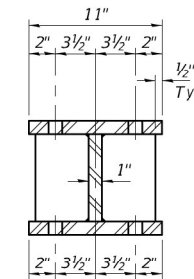
	S. Abut.	N. Abut.
R <sub>P</sub>	(K) 64.5	61.1
R <sub>T</sub>	(K) 38.3	38.1
Imp.	(K) 8.3	8.0
R (Total)	(K) 110.8	107.2

Notes:

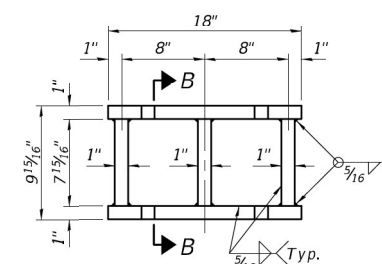
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).  
 Min. Jack capacity = 70 Tons.  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F<sub>y</sub>=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



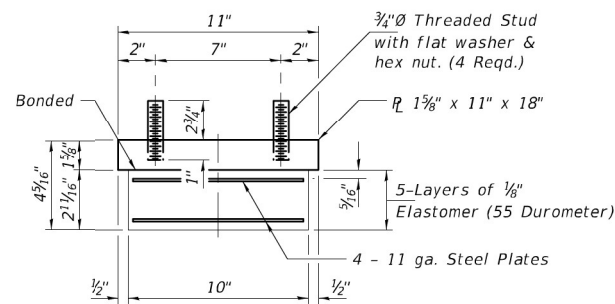
PLAN TOP AND BOTTOM PLATE



SECTION B-B

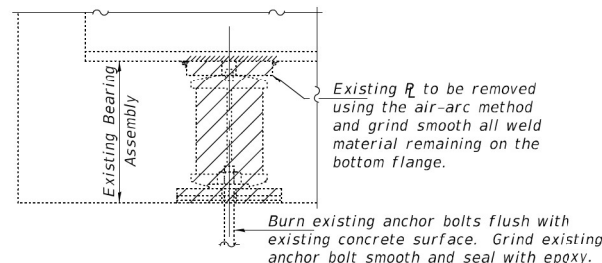


STEEL EXTENSION DETAIL



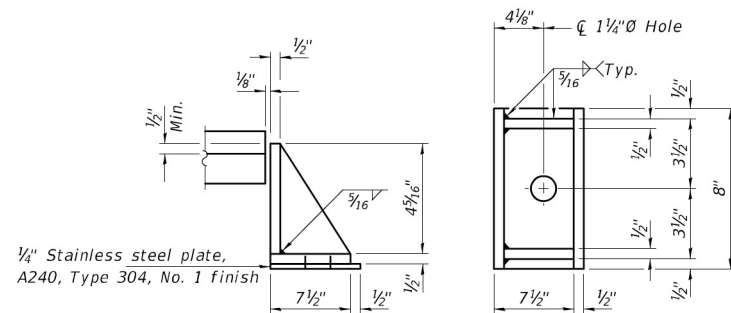
BEARING ASSEMBLY

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



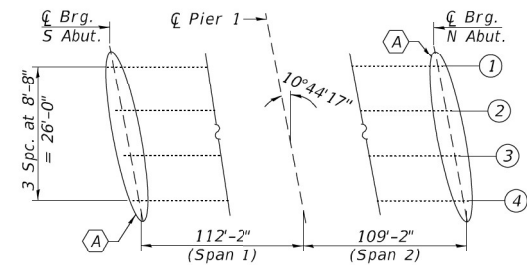
EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.



SIDE RETAINER

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



PARTIAL FRAMING PLAN

(A) - Bearing Removal and Replacement.

BILL OF MATERIAL - BOTH ABUTS.

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	8
Jack and Remove Existing Bearings	Each	8
Furnishing and Erecting Structural Steel	Pound	1750
Anchor Bolts, 1"Ø	Each	16

DESIGNED - Adrian T. Hallway  
 CHECKED - Chi-Cheung Chau  
 DRAWN - Venkat Ramana Reddy  
 CHECKED - ATH CCC

PASSED

James F. Hoff  
 ENGINEER - BRIDGES AND STRUCTURES

DATE - SEPTEMBER 26, 2022

REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BEARING DETAILS - BOTH ABUTMENTS  
 T.R. 232 OVER FAI 72  
 SN 069-0047

SHEET NO. 1 OF 1 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(69-8B1DR, 69-9HB-1, 3)BRR	MORGAN	9	7

CONTRACT NO. 72027

ILLINOIS FED. AID PROJECT

MODEL Path: \\s:\projects\Bridges\Bridges\CAD\72M34 - I-72.pain: Morgan\_Colubinstee.dgn

USER NAME = Brandon.Dudley  
 PLOT SCALE = 100,0000' / in.  
 PLOT DATE = 8/14/2023

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 069-0047  
 (FOR INFORMATION ONLY)

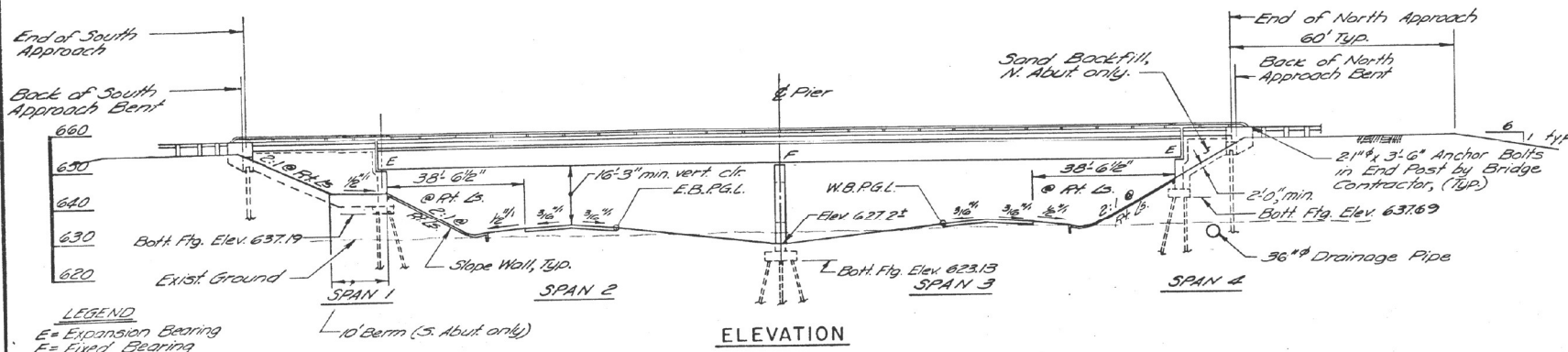
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	22

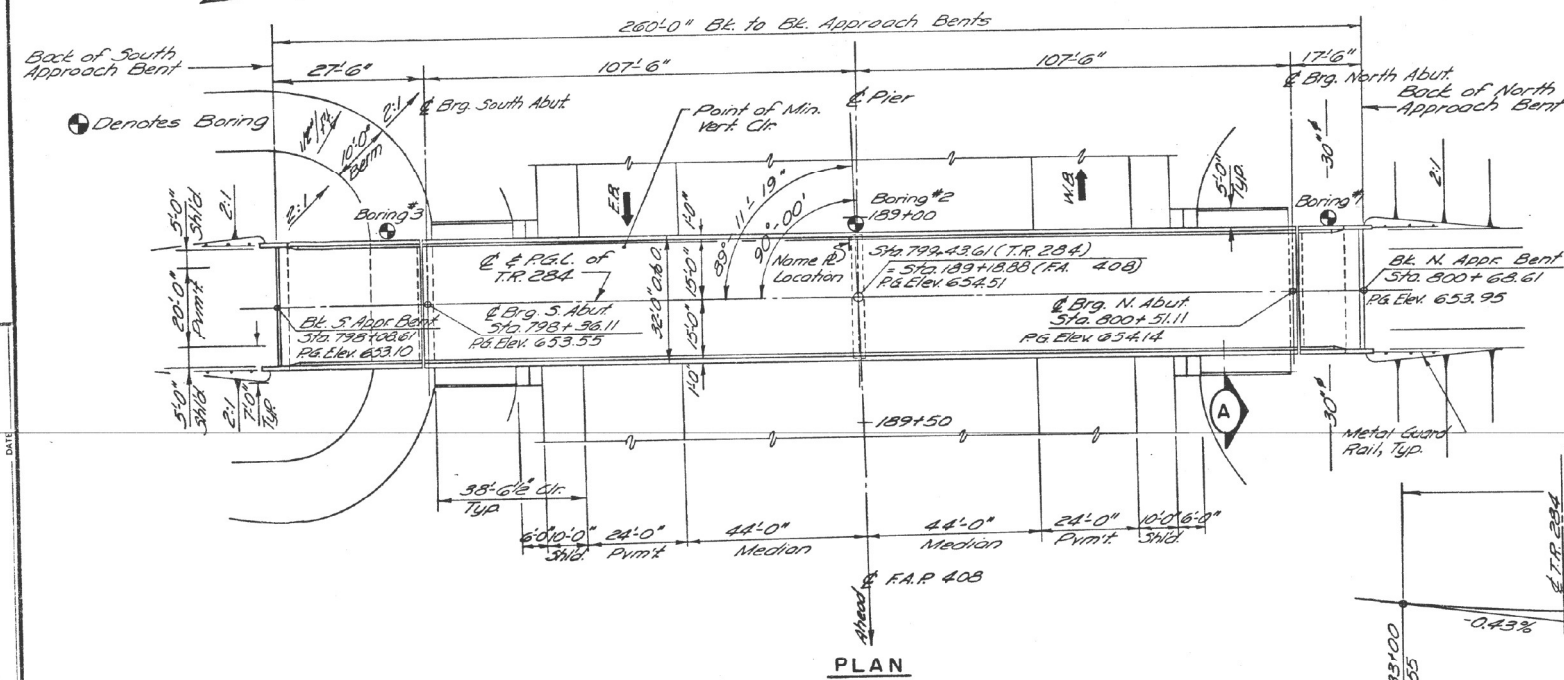
CONTRACT NO. 72M34

ILLINOIS FED. AID PROJECT

Bench Mark: T.B.M. #273, R.R. spike in power pole, 94.3' L. of Sta. 189+43.3, Elev. 631.44

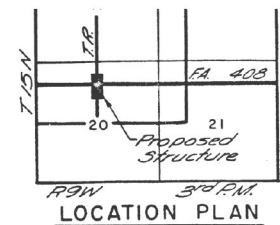


LEGEND  
E = Expansion Bearing  
F = Fixed Bearing



STATION 189+18.88  
BUILT 197 BY  
STATE OF ILLINOIS  
FA. RT.408 SEC. 69-9HB1  
FA. PROJ. EBF-408-2(2)  
LOADING HS 15

NAME PLATE DATA  
(See Std 2113 and locate as shown on Pier)



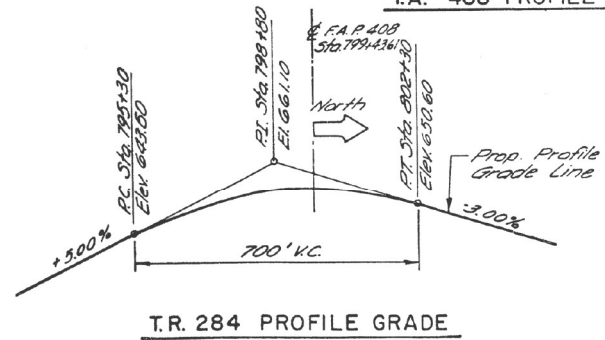
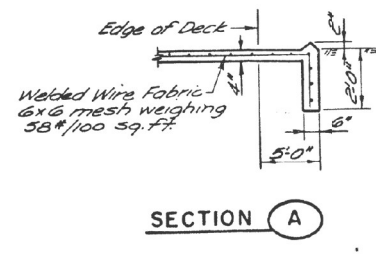
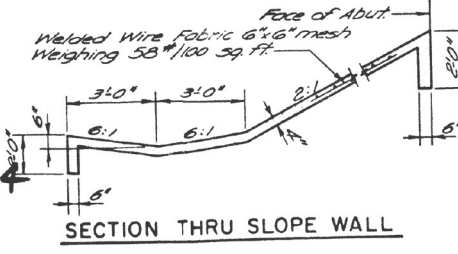
- GENERAL NOTES
1. SPECIFICATIONS: THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 2, 1971 SHALL APPLY.
2. CONCRETE: CLASS X CONCRETE SHALL BE USED THROUGHOUT. THE CONCRETE RAIL SECTION ABOVE THE MANDATORY CONSTRUCTION JOINT AT THE TOP OF THE SLAB SHALL BE CONSTRUCTED OF CLASS X CONCRETE, EXCEPT THE AGGREGATES SHALL CONFORM TO THE REQUIREMENTS OF HANDRAIL CONCRETE.
3. ALL REINFORCEMENT BARS SHALL BE LAPPED 24 DIAMETERS UNLESS OTHERWISE SHOWN.
4. SLOPE WALL SHALL BE REINFORCED WITH WELDED WIRE FABRIC 6"x6" MESH WEIGHING 58# PER 100 SQ. FT.
5. CALCULATED WEIGHT OF STRUCTURAL STEEL: 223,030 LBS.
6. FASTENERS SHALL BE HIGH STRENGTH BOLTS. BOLTS 3/4" OPEN HOLES 13/16" UNLESS OTHERWISE NOTED.
7. 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.
8. ANCHOR BOLTS SHALL BE SET BEFORE BOLTING CROSS FRAMES OVER SUPPORTS.
9. THE BASIC LEAD SILICO CHROMATE PAINT SYSTEM SHALL BE USED FOR SHOP AND FIELD PAINTING OF STRUCTURAL STEEL.
10. PROTECTIVE COAT SHALL NOT BE APPLIED TO SURFACES TO WHICH COAL TAR INTERLAYER PROTECTIVE COAT IS APPLIED.
11. ONLY "CYLINDRICAL STEEL SHELL CAST IN PLACE CONCRETE PILES" ALTERNATE SHOWN ON SHEET IN SHALL BE USED FOR SOUTH ABUTMENTS AND SOUTH APPROACH BENT PILES. THE UPPER PORTIONS OF THESE PILES SHALL BE COATED WITH A 5 MIL MINIMUM THICKNESS OF 85-100 PENETRATION ASPHALT BEFORE DRIVING. THE LENGTHS TO BE COATED ARE SHOWN ON SHEET 2. THE COATING SHALL BE APPLIED NOT LESS THAN 24 HOURS PRIOR TO DRIVING. THE COST OF COATING SHALL BE INCIDENTAL TO THE COST OF DRIVING AND FILLING SHELLS.
12. CONCRETE PILES AT ABUTMENTS AND APPROACH BENTS SHALL BE DRIVEN IN HOLES PRECURED THROUGH THE EMBANKMENT IN ACCORDANCE WITH ARTICLE 513.09(c) OF STANDARD SPECIFICATIONS.
13. TEST PILES - THE CONTRACTOR SHALL DRIVE ONE TEST PILE IN EACH ABUTMENT AND PIER IN THE PERMANENT POSITION SHOWN ON THE PLANS IN ACCORDANCE WITH ARTICLE 513.15 OF THE STANDARD SPECIFICATIONS BEFORE ORDERING THE REMAINDER OF PILES.
14. BEARING SEAT SURFACES SHALL BE CONSTRUCTED OR ADJUSTED TO THE DESIGNATED ELEVATIONS WITHIN A TOLERANCE OF +/- 1/8 INCH. ADJUSTMENT SHALL BE MADE EITHER BY GRINDING THE SURFACE OR BY SHIMMING THE BEARING. TWO 1/2" ADJUSTING SHIMS, OF THE DIMENSIONS OF THE BOTTOM BEARING PLATE, SHALL BE PROVIDED FOR EACH BEARING IN ADDITION TO ALL OTHER PLATES OR SHIMS.
15. THE EMBANKMENT CONFIGURATION SHOWN SHALL BE THE MINIMUM EMBANKMENT THAT MUST BE CONSTRUCTED PRIOR TO CONSTRUCTION OF THE ABUTMENTS.

TOTAL BILL OF MATERIAL

Table with columns: Item, Unit, Super Struc., Sub Struc., Total. Lists materials like Structure Excavation, Class X Concrete, Structural Steel, etc.

See General Note #11.

APPROVED
EDR STRUCTURAL ENGINEER ONLY
Olexis Dimitris
7.12.1972



DESIGN NOTES

- 1. DESIGN LOADING: NS 15-44 AND ALLOWANCE FOR 25 P.S.F. FUTUREWEARING SURFACE.
2. DESIGN STRESSES: fc = 1,400 P.S.I. EXCEPT AS FOLLOWS: fc = 1,200 P.S.I. FOR DECK SLAB; fc = 1,000 P.S.I. FOR CONC. IN CONTACT WITH EARTH; fb = 20,000 P.S.I. - A36 STRUCTURAL STEEL; fs = 20,000 P.S.I. - REINFORCEMENT STEEL; v = 75 P.S.I. - ALLOWABLE SHEAR IN FOOTINGS; n = 10
3. ALLOWABLE LIVE LOAD DEFLECTION: L/1200 (COMPOSITE)
4. DESIGN SPECIFICATIONS: AASHTO 1969 AS APPLICABLE.

GENERAL PLAN AND ELEVATION

T.R. 284 OVER FA. 408
MORGAN CO
SECTION 69-9HB-1
STATION 189+18.88

Revision table with columns: REVISION, DATE, IN CHARGE.

User information table with columns: USER NAME, DESIGNED, DRAWN, PLOT SCALE, PLOT DATE, etc.

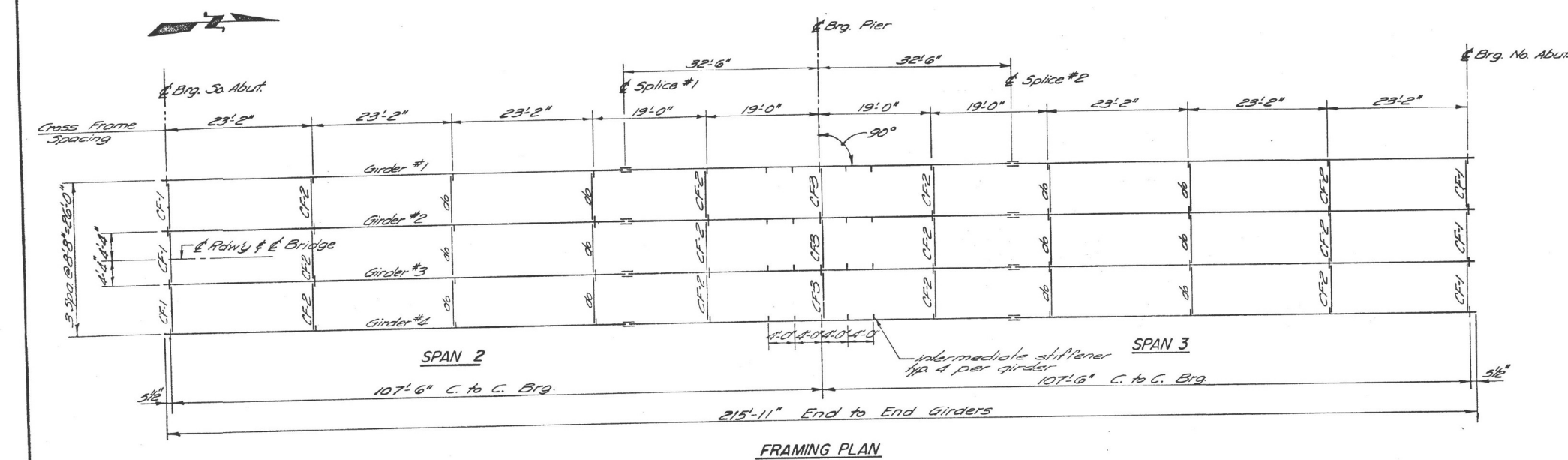
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 069-0050 (FOR INFORMATION ONLY)

Project information table with columns: F.A.I. R.T.E., SECTION, COUNTY, TOTAL SHEETS, SHEET NO., etc.

MODEL Path: ...
FILE NAME: ...

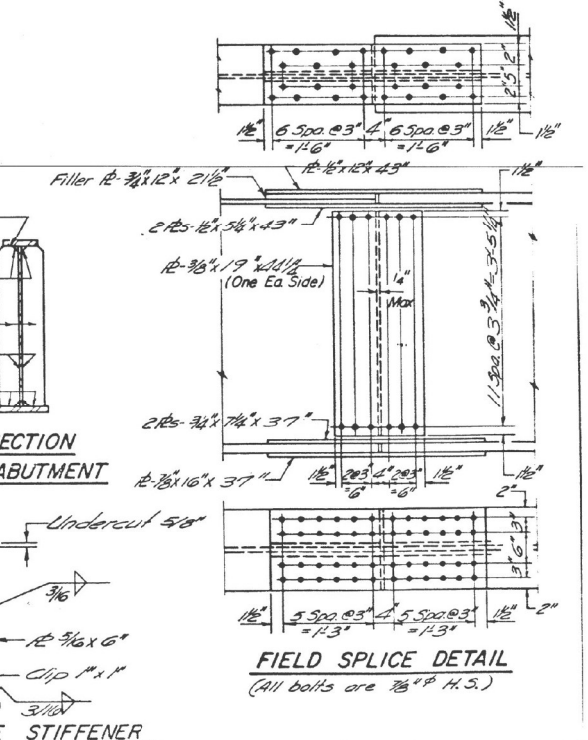
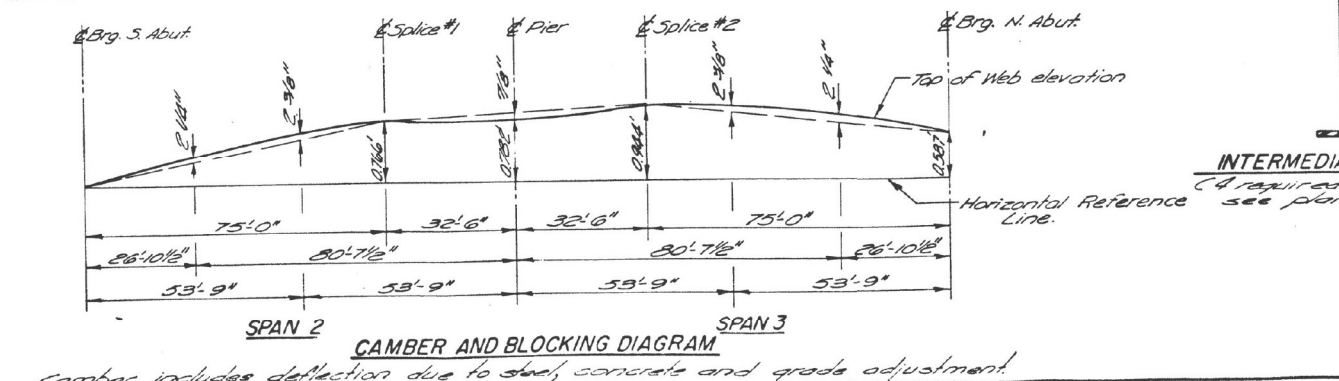
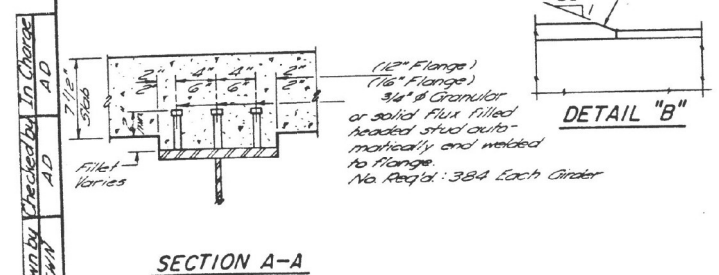
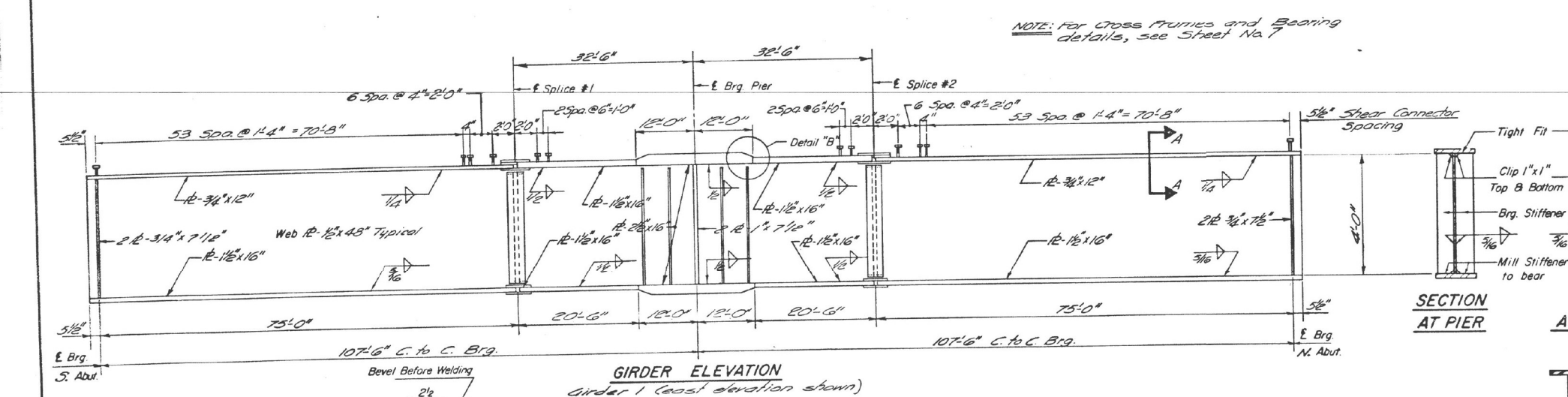
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
408	*	MORGAN	30	15
* 69-9HB-1				



**TOP OF WEB ELEVATIONS\***

Girder Location	#1	#2	#3	#4
Bridge S. Abut.	652.479	652.630	652.630	652.479
Splice #1	653.245	653.396	653.396	653.245
Bridge Pier	653.281	653.412	653.412	653.281
Splice #2	653.423	653.574	653.574	653.423
Bridge N. Abut.	653.066	653.217	653.217	653.066

\* For Fabrication Only (Undeformed Girder)



**STRUCTURAL STEEL**

T.R. 284 OVER F.A. 408  
 F.A. 408 MORGAN CO.  
 SECTION 69-9HB-1  
 STATION 189+18.88

CLARK, DIETZ AND ASSOCIATES Sheet No. 6 of 14 JOB NO. 1346

USER NAME = Brandon.Dudley	DESIGNED -	REVISED -
DRAWN -	REVISIONS -	
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2023	DATE -	REVISED -

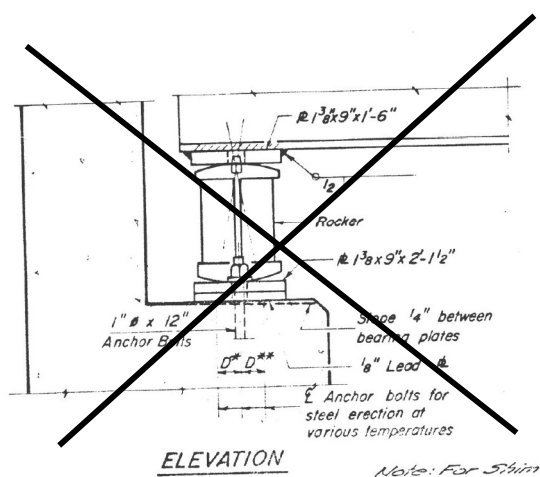
STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 069-0050  
 (FOR INFORMATION ONLY)

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	24
CONTRACT NO. 72M34				
ILLINOIS FED. AID PROJECT				

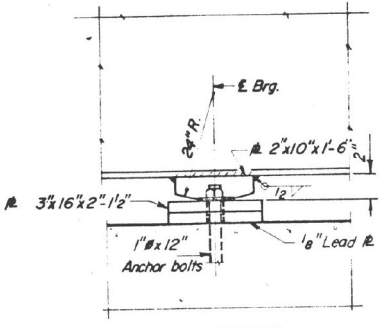
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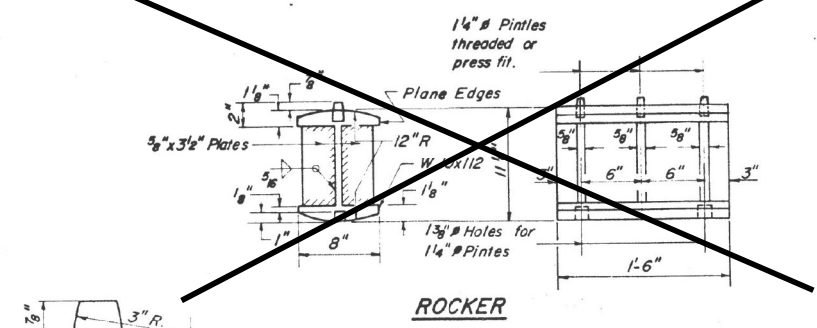


ELEVATION

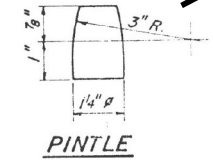
Note: For Shim Plates Requirement at each Bearing see note 1d on sh. 1



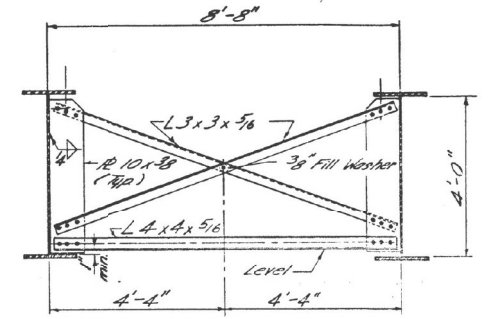
ELEVATION



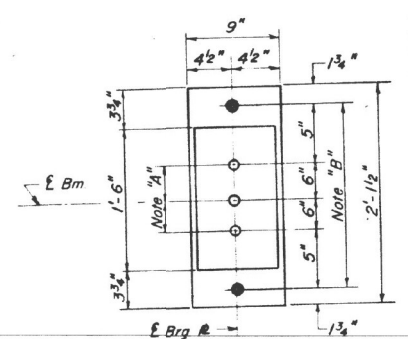
ROCKER



PINTLE

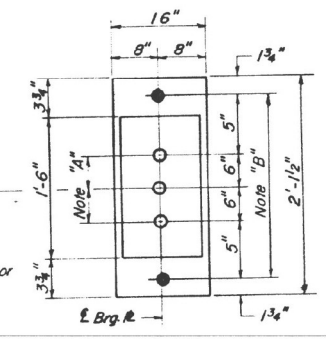


TYPICAL INTERIOR CROSS FRAME 2



PLAN AT ABUTMENT

Note "A"  
1 3/8 inch Holes - 1" deep in top R. for 1 1/4 inch Pintles Thread or press fit pntles in bottom R.



PLAN AT PIER

Note "B"  
1 1/2 inch Holes for 1 inch Anchor Bolts - 2 1/2 x 2 1/2 x 5/16 inch Washers under nut.

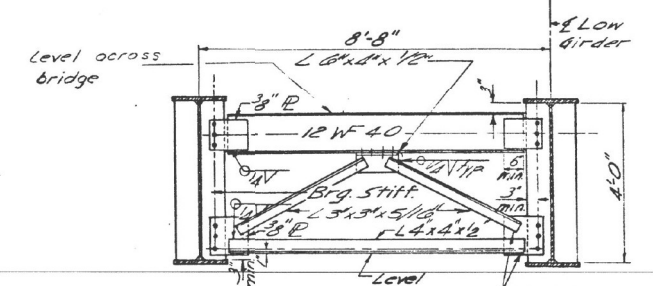
MOMENT TABLE  
(COMPOSITE IN POSITIVE MOMENT AREAS ONLY)

INTERIOR GIRDER MOMENT TABLE		
	0.4 Sp. 2 or 3	Pier
$I_s$ (in <sup>4</sup> )	22200	55655
$I_c$ (in <sup>4</sup> )	60530	
$S_s$ (in <sup>3</sup> )	1173	2100
$S_c$ (in <sup>3</sup> )	1595	
$R$ (K/1)	1.05	1.24
$M_R$ (K)	729	1914
$f_s R$ (ksi)	7.46	10.94
$s_e$ (K/1)	.53	.53
$M_{s_e}$ (K)	449	715
$M_{t_e}$ (K)	806	712
$M_{imp}$ (K)	178	157
Total (K)	1433	1584
$f_s t_e$ (ksi)	10.78	9.05
$f_s$ Total (ksi)	18.24	19.99
$VR$ (K)	51.0	

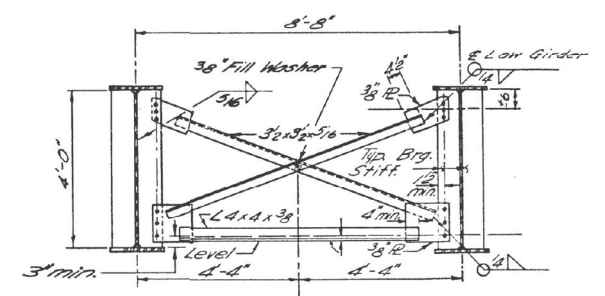
REACTION TABLE

INTERIOR GIRDER REACTION TABLE		
	Abut.	Pier
$R_R$ (K)	61.9	221.8
$R_L$ (K)	38.1	65.5
Imp. (K)	8.4	14.4
$R$ Total (K)	108.4	301.7

$I_s$  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  $f_s$ .  
 $VR$  is the maximum  $\bar{x}$  + Impact shear range in span used to determine shear connector spacing.



TYPICAL END CROSS FRAME 1



TYPICAL INTERIOR CROSS FRAME 3

NOTES FOR SETTING OF ANCHOR BOLTS AT EXPANSION BEARINGS

- $D^*$  (Side of brg away from fixed brg)  
 $D^* = \frac{1}{8}$  per each 100' of expansion for every 15° fall below the normal temp. of 50° F.
  - $D^{**}$  (Side of brg toward fixed brg)  
 $D^{**} = \frac{1}{8}$  per each 100' of expansion for every 15° rise above the normal temp. of 50° F.
- b.) After beams have been erected and dimensions  $D^*$  &  $D^{**}$  determined, holes shall be drilled and anchor bolts shall be grouted in place. All fixed anchor bolts may be built into the masonry.

Designed & Drawn by Checked by In Charge  
AD AD AD AD

CROSS FRAMES & BEARINGS  
T.R. 284 OVER FA 408  
FA. 408 MORGAN CO  
SECTION 69-9HB-1  
STATION 189+18.88

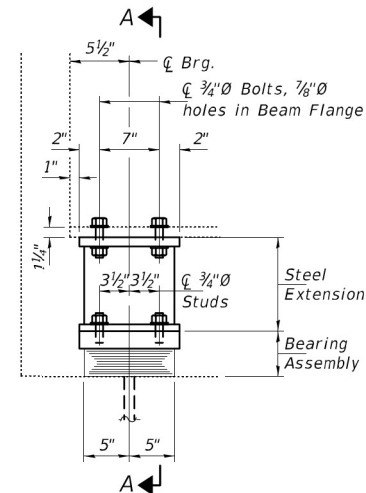
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USER NAME = Brandon.Dudley	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/14/2023	DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

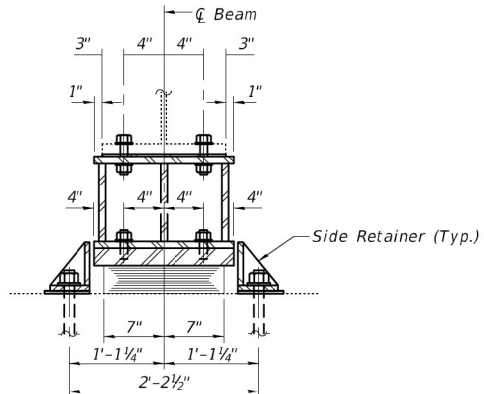
EXISTING BRIDGE PLANS, SN 069-0050  
(FOR INFORMATION ONLY)  
SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	25
ILLINOIS FED. AID PROJECT				
CONTRACT NO. 72M34				



ELEVATION AT BOTH ABUTMENT'S

TYPE I ELASTOMERIC EXP. BRG.



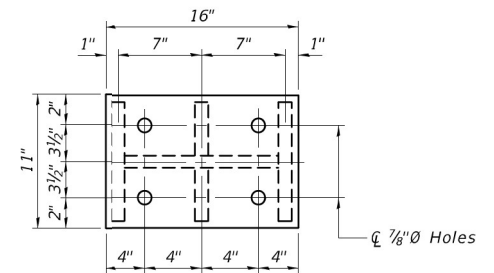
SECTION A-A

1" x 12" Anchor Bolts with 2 1/4" x 2 1/4" x 5/16" R washer under nut.

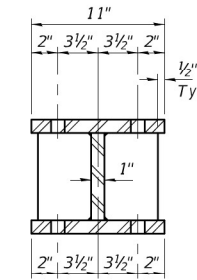
BEAM REACTIONS

R <sub>P</sub>	(K)	61.9
R <sub>L</sub>	(K)	38.1
Imp.	(K)	8.4
R (Total)	(K)	108.4

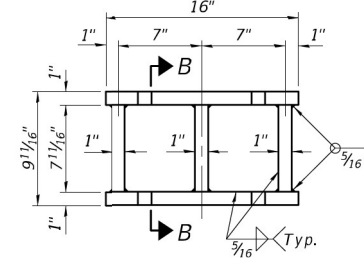
Notes:  
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Adjustment must account for deck heave due to pack rust (if present).  
 Min. jack capacity = 65 Tons.  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (F<sub>y</sub>=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 Cost of Side retainers and Stainless Steel plates shall be included in the cost of Elastomeric Bearing Assembly, Type I.



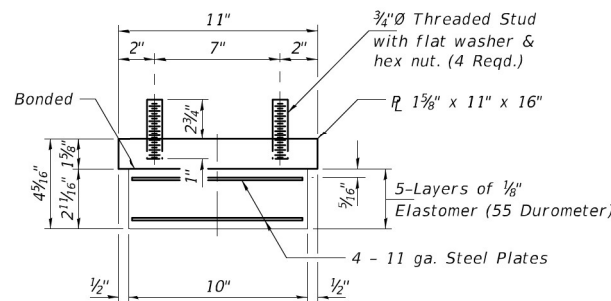
PLAN TOP AND BOTTOM PLATE



SECTION B-B

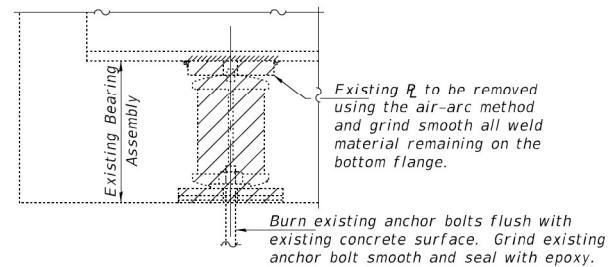


STEEL EXTENSION DETAIL



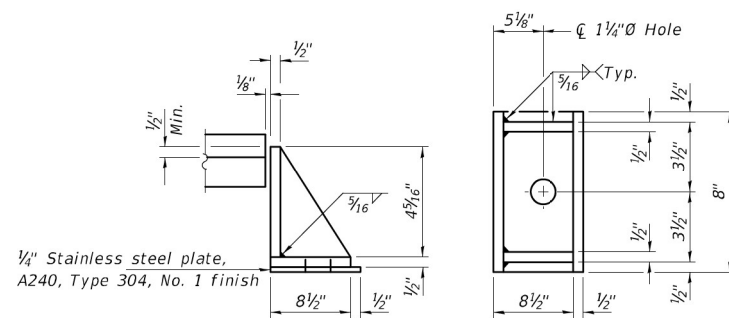
BEARING ASSEMBLY

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



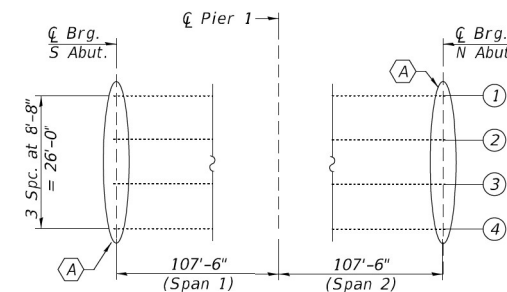
EXISTING BEARING REMOVAL DETAIL

Cost included with Jack and Remove Existing Bearings.



SIDE RETAINER

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



PARTIAL FRAMING PLAN

(A) - Bearing Removal and Replacement.

BILL OF MATERIAL - BOTH ABUTS.

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	8
Jack and Remove Existing Bearings	Each	8
Furnishing and Erecting Structural Steel	Pound	1580
Anchor Bolts, 1"Ø	Each	16

DESIGNED - Adrian T. Holloway  
 CHECKED - Chi-Cheung Chau  
 DRAWN - Venkat Ramana Reddy  
 CHECKED - ATH CCC

PASSED

James F. [Signature]  
 ENGINEER OF BRIDGES AND STRUCTURES

DATE - SEPTEMBER 26, 2022  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

BEARING DETAILS - BOTH ABUTMENTS  
 T.R. 284 OVER FAI 72  
 SN 069-0050

SHEET NO. 1 OF 1 SHEETS

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	(69-8B1DR, 69-9HB-1, 3)BRR	MORGAN	9	9
CONTRACT NO. 72027				
ILLINOIS FED. AID PROJECT				

MODEL Path: \\...  
 FILE Name: S:\Addresses\Bridges\Plans\_CAD\72M34 - I-72\_paint\_Morgan\_Coupons\sheet.dgn

USER NAME = Brandon.Dudley  
 PLOT SCALE = 100,0000' / in.  
 PLOT DATE = 8/14/2023

DESIGNED -  
 DRAWN -  
 CHECKED -  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

EXISTING BRIDGE PLANS, SN 069-0050  
 (FOR INFORMATION ONLY)

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72	D6 BRIDGE PAINTING 2024	MORGAN	26	26
CONTRACT NO. 72M34				
ILLINOIS FED. AID PROJECT				