

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

**PROPOSED**  
**HIGHWAY PLANS**

**F.A.I. ROUTE 72 (INTERSTATE 72)**  
**SECTION D7 BRIDGE PAINTING 2011-2**

**BRIDGE PAINTING**  
**MACON COUNTY**  
**C-97-016-11**

FOR INDEX OF SHEETS, SEE SHEET NO. 2

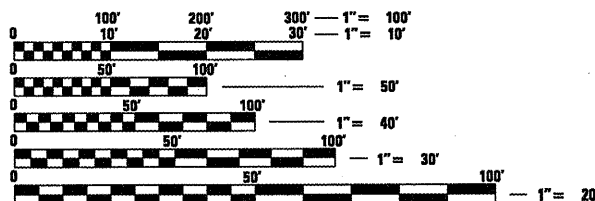
F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
72		MACON	9	1
		ILLINOIS	CONTRACT NO. 74505	

• D7 BRIDGE PAINTING 2011-2  
**\*\* 9+2=11**  
**D-97-005-11**



LOCATION OF SECTION INDICATED THUS: - -

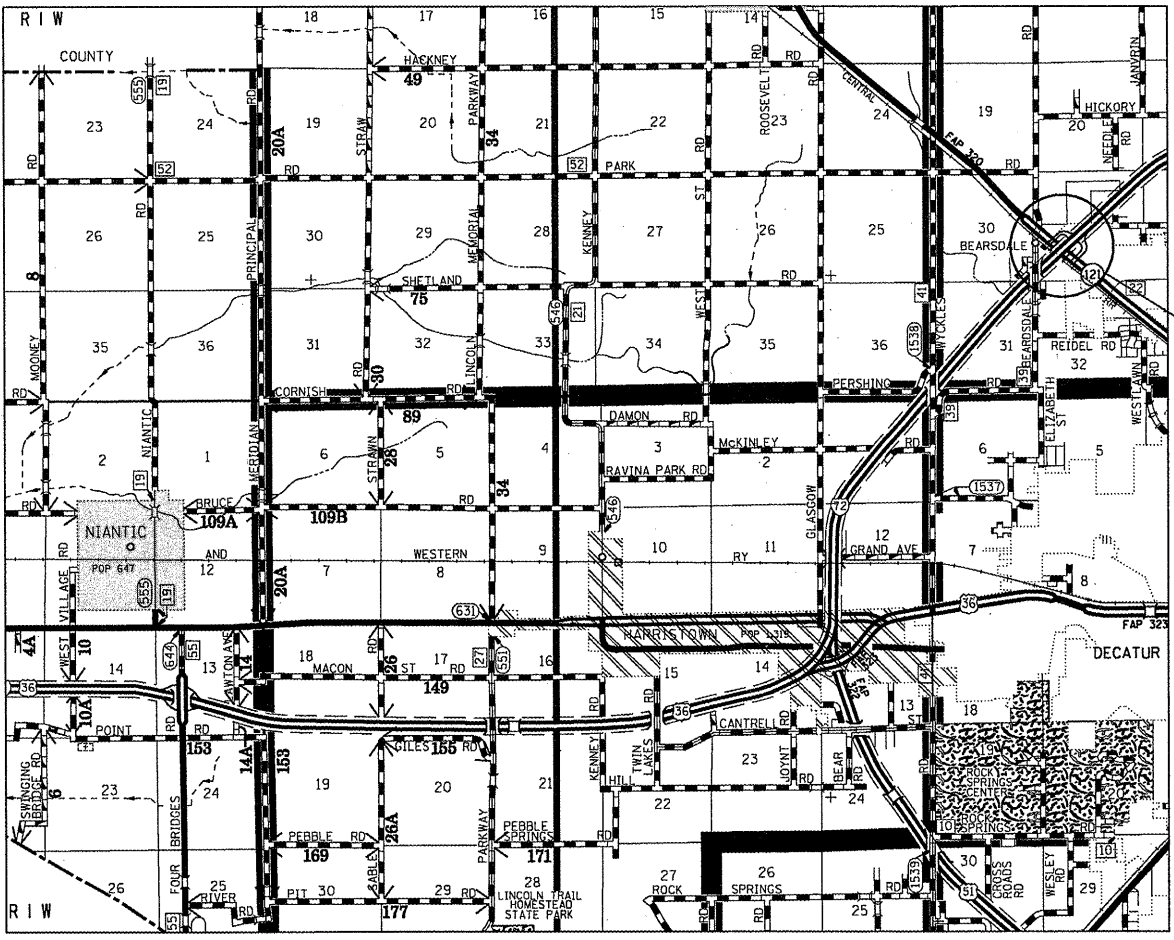
**LOCATION #1:**  
**SN 058-0074 (EB);**  
**SN 058-0075 (WB)**



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

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

**PROJECT ENGINEER: TOM RONAN**  
**PROJECT MANAGER: TOM RONAN**  
**PHONE: (217)-342-8320**  
**CONTRACT NO. 74505**



**GROSS LENGTH = x.xx FT. = x.xxx MILE**  
**NET LENGTH = x.xx FT. = x.xxx MILE**

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

SUBMITTED Dec 13 2010  
Scott E. Still, P.E.  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Feb 4 2011  
Scott E. Still, P.E.  
 acting ENGINEER OF DESIGN AND ENVIRONMENT

Feb 4 2011  
Christine M. Reader  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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**OF THE STATE OF ILLINOIS**

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	INDEX OF SHEETS, GENERAL NOTES, LOCATION DESCRIPTIONS
3	SUMMARY OF QUANTITIES
4-9 <del>8</del>	EXISTING STRUCTURE PLANS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 9:

STANDARD 701101-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701106-02	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701400-05	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701402-08	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701411-07	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701601-07	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
STANDARD 701901-01	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES

GENERAL NOTES

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" ADOPTED JANUARY 1, 2007; THE SUPPLEMENTAL SPECIFICATIONS, THE RECURRING SPECIAL PROVISIONS, AND THE SPECIAL PROVISIONS INCLUDED IN THE PROPOSAL.

THE PROPOSED PROJECT IS LOCATED AT 1 LOCATION ON I-72 IN MACON COUNTY.

THE WORK INCLUDED IN THIS SECTION CONSISTS OF CLEANING AND PAINTING 2 BRIDGES AT 1 LOCATION AS SPECIFIED IN THE PLANS AND SPECIAL PROVISIONS.

THE STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED AS SPECIFIED IN THE SPECIAL PROVISIONS.

ALL DECK DRAINS SHALL BE PAINTED ACCORDING TO THE REQUIREMENTS OF PAINT SYSTEM 1 - OZ/E/U. ANY DAMAGE CAUSED BY THE CONTRACTOR SHALL BE REPAIRED AT THEIR OWN EXPENSE AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.

ONLY STRUCTURAL STEEL IS TO BE PAINTED. ALL OTHER SURFACES WILL BE PROTECTED FROM BEING PAINTED. ALL PAINT AND OVERSPRAY WILL BE REMOVED AT THE CONTRACTOR'S EXPENSE.

THE SSPC OP1 AND OP2 PAINTING CONTRACTOR CERTIFICATION WILL BE REQUIRED FOR THIS PROJECT.

LOCATION DESCRIPTIONS

LOCATION #1 & #2

ROUTE: FAI 72  
 MARKED: I-72  
 SECTION: 58-63HVB  
 STATION: 724+45.63  
 STRUCTURE NUMBERS: 058-0074 & 058-0075

TYPE OF BRIDGE: Wide Flange I Beams-3 Spans Each Bridge (19 Beams Total, Both Structures)  
 LOCATION: 1.5 Miles Northwest of Decatur  
 FEATURE CARRIED/SPANNED: FAI 72 over ILL 121 & ILL Central Gulf RR

COLOR OF THE FINISH COAT SHALL BE GRAY, MUNSELL 5B 7/1.

Cleaning and painting of the existing structural steel shall be as specified in the special provision for "Cleaning and Painting Existing Steel Structures". All structural steel, including beams, bearings and diaphragms, shall be cleaned by SSPC-SP10 - Near White Metal Blast Cleaning.

The designated areas cleaned per Near White Metal Blast Cleaning - SSPC-SP10 shall be painted according to the requirements of Paint System 1 - OZ/E/U.

Two air monitors will be required at this location.

• D7 BRIDGE PAINTING 2011-2

FILE NAME =	USER NAME = swartz	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX OF SHEETS GENERAL NOTES &amp; LOCATIONS</b>				F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
ci:\pw_work\pwidot\swartz\0239428\d77	505-shr-index.dgn	DRAWN -	REVISED -		72		MACON	9	2				
	PLOT SCALE = 1/8" = 1' / IN.	CHECKED -	REVISED -						CONTRACT NO. 74505				
	PLOT DATE = 12/9/2010	DATE -	REVISED -		SCALE: NA	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT				

100% STATE

SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE
CODE NO	ITEM	UNIT		0014
67100100	MOBILIZATION	L SUM	1	1
70100207	TRAFFIC CONTROL AND PROTECTION, STANDARD 701402	EACH	2	2
70100420	TRAFFIC CONTROL AND PROTECTION, STANDARD 701411	EACH	2	2
70102630	TRAFFIC CONTROL AND PROTECTION, STANDARD 701601	L SUM	1	1
Z0007112	CONTAINMENT AND DISPOSAL OF LEAD PAINT CLEANING RESIDUES	L SUM	1	1
Z0010501	CLEANING AND PAINTING STEEL BRIDGE NO. 1	L SUM	1	1
Z0010502	CLEANING AND PAINTING STEEL BRIDGE NO. 2	L SUM	1	1
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1

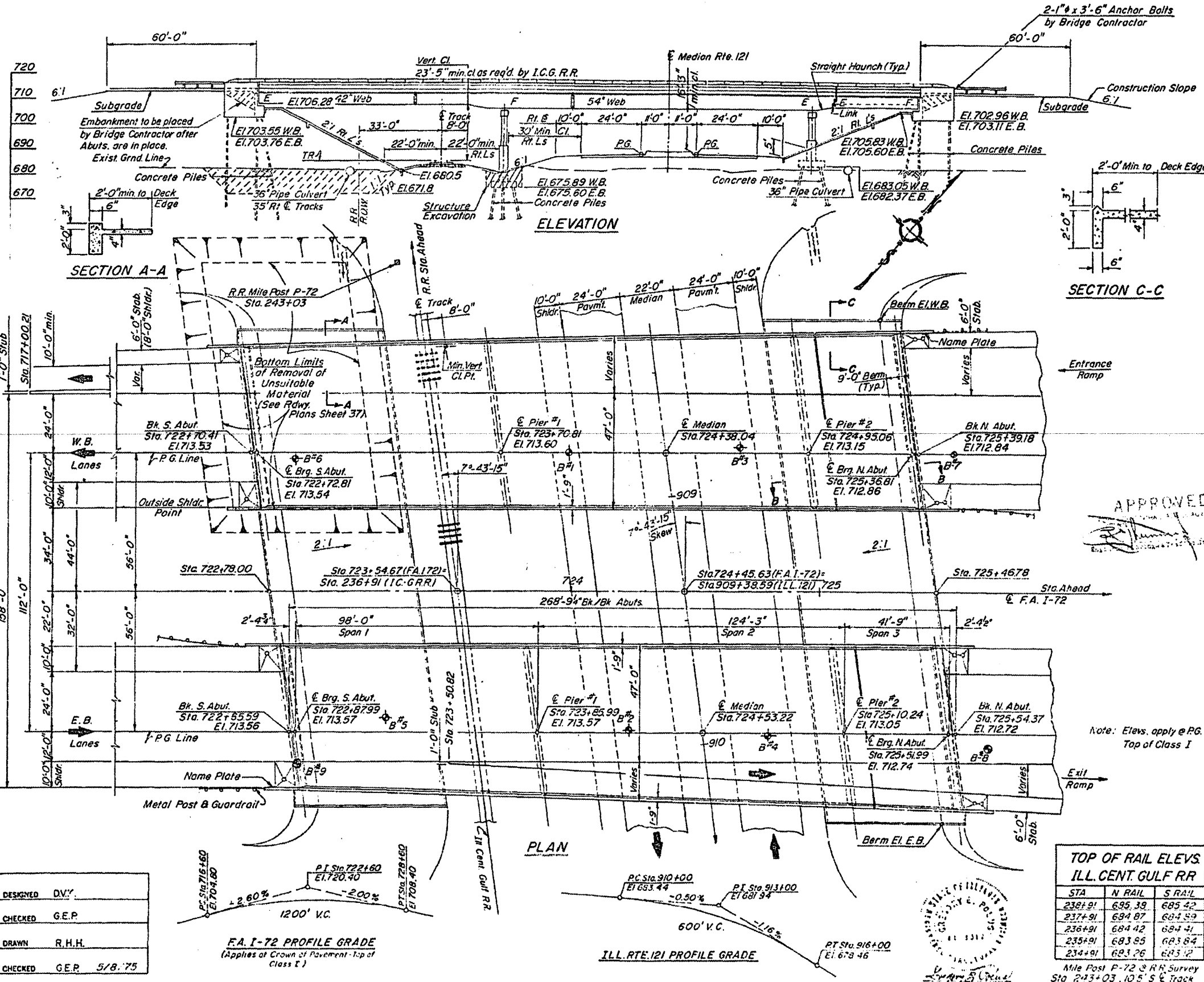
• D7 BRIDGE PAINTING 2011-2

FILE NAME =	USER NAME = swartzrw	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
c:\pwork\pwork\swartzrw\d0235428\d77	505-sht-soq.dgn	DRAWN -	REVISED -		72	•	MACON	9	3			
PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED -	SCALE: NA		SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	CONTRACT NO. 74505				
PLOT DATE = 12/9/2010	DATE -	REVISED -	ILLINOIS FED. AID PROJECT									

B.M. # 102 - 6" Boat Spike in 15" Hackberry  
 698' R.L. Sta. 727+00 (Along State Rte. 121)  
 Elev 674.950

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 1
F.A. I-72	58-63HVB	MACON	27	40	26 SHEETS



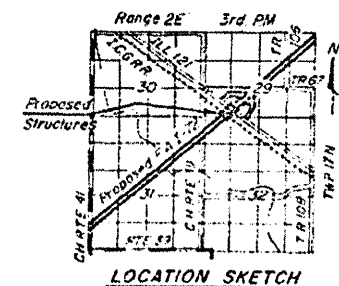
**GENERAL NOTES**

All reinforcement bars shall be lapped 24 diameters unless otherwise shown.  
 The Basic Lead Silico Chromate paint system shall be used for shop and field painting of structural steel.  
 Field welding of construction accessories will not be permitted to the bottom flange of beams or girders, nor to the top flange for a distance equal to one-fourth the span length each way from the pier supports. Field welding in other areas will be permitted only when approved by the Engineer.  
 Anchor bolts shall be set before bolting cross frames over supports. Fasteners shall be high strength bolts. Bolts 3/4" or open holes 1/2" unless otherwise noted.  
 The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.  
 The concrete wall 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 surfaces to which Waterproofing Membrane System is applied.  
 Slope wall shall be reinforced with welded wire fabric 6" x 6" mesh, weighing 58#/100 sq ft.  
 Calculated weight of Structural Steel = 1,028,530 lbs.  
 Concrete Piles at Abutments shall be driven in holes precored through the embankment in accordance with Article 513.09 (c) of the Standard Specifications.

The main load carrying member components subject to the Supplemental Requirements for Notch Toughness are the flanges, as designated on the Grid Elevation View along with Webs, Splice Plates, Link Plates and Pin Plates of the Steel Girders.  
 The Contractor shall drive 4 test piles in permanent locations as directed by the Engineer before ordering the remainder of piles. Test piles shall be driven at the following locations: One test pile at the South Abut. West Bound Lanes, One test pile at Pier #1 East Bound Lanes, One test pile at Pier #2 West Bound Lanes, and One test pile at the North Abut. East Bound Lanes.  
 See special provisions for Boring Data.

**BILL OF MATERIALS**

ITEM	UNIT	SUPER	SUB	TOTAL
Bit. Conc. Surface Course, Class I	Tons	300		300
Waterproofing Membrane System	Sq. Yds.	3686		3686
Structure Excavation	Cu. Yds.		225	225
Protective Coat	Sq. Yds.	429		429
Class X Concrete	Cu. Yds.	1023.0	780.5	1803.5
Structural Steel	L.S.	1		1
Aluminum Roofing	Lin. Ft.	1164		1164
Reinforcement Bars	Lbs.	268,290	89,390	357,680
Name Plate	Each	2		2
Sloped wall (4")	Sq. Yds.		2980	2980
Preformed Joint Sealer (2 1/2")	Lin. Ft.	126		126
Stud Shear Connectors	Each	9405		9405
Concrete Piles	Lin. Ft.		8978	8978
Test Piles (Concrete)	Each		4	4
Neoprene Expansion Joint (2 1/2")	Lin. Ft.	136		136



**GENERAL PLAN & ELEV.**  
 F.A. I-72 OVER ILL. RTE. 121  
 & ILL. CENT. GULF R.R.  
 MACON COUNTY  
 SEC. 58-63HVB  
 STA 724+45.63

DESIGNED	D.V.Y.
CHECKED	G.E.P.
DRAWN	R.H.H.
CHECKED	G.E.P. 5/8.75

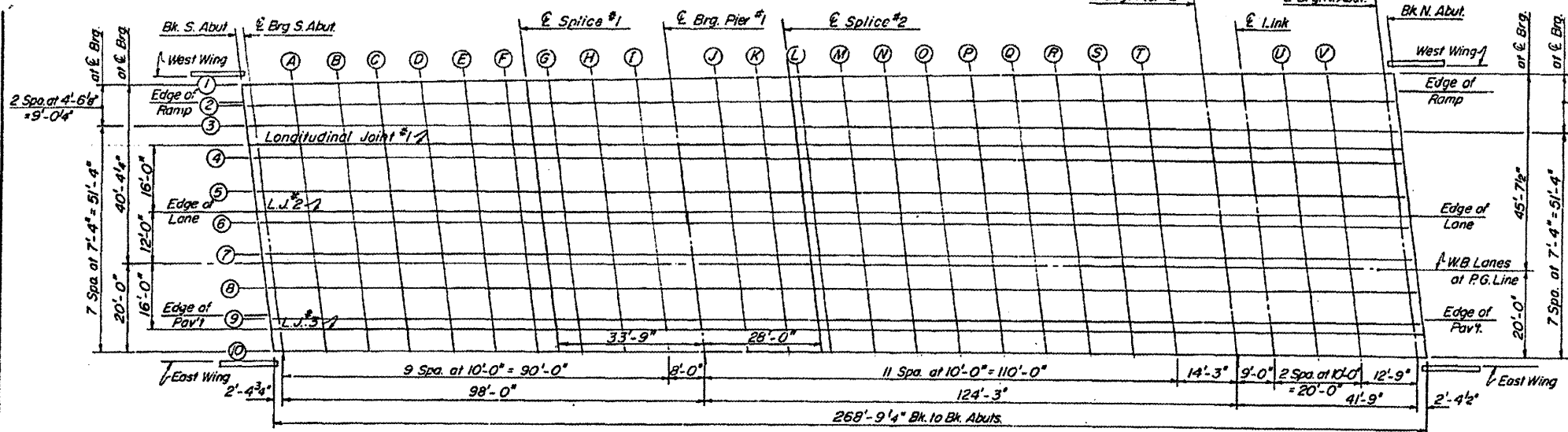
**TOP OF RAIL ELEVS. ILL. CENT. GULF R.R.**

STA	N. RAIL	S. RAIL
2387+91	685.38	685.42
2377+91	684.87	684.59
2367+91	684.42	684.41
2357+91	683.85	683.84
2347+91	683.26	683.12

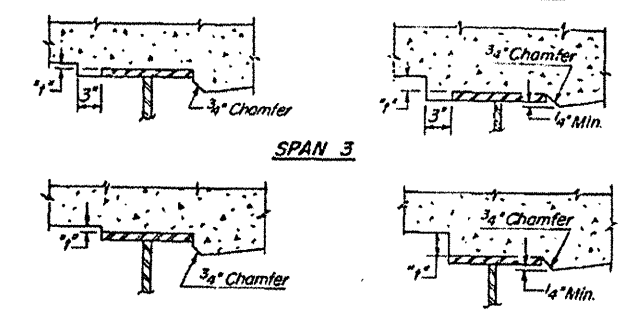
Mile Post P-72 & R.R. Survey  
 Sta. 243+03, 10.5' S of Track

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
U.S. 72	58-63HVB	MACON	42	26
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

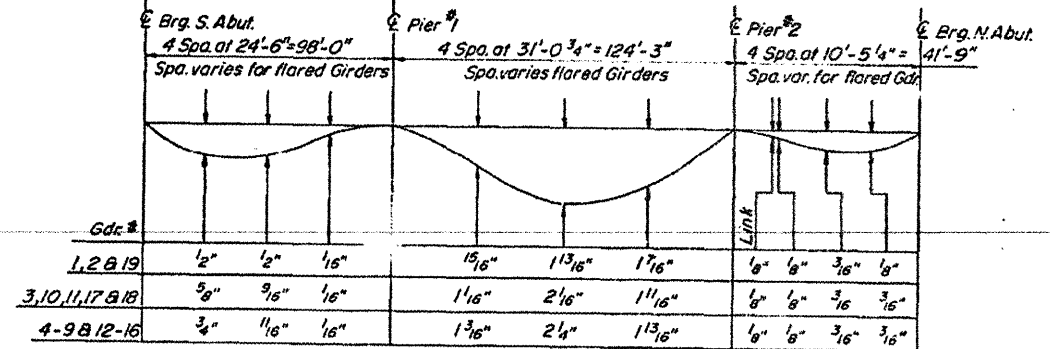


PLAN



At Minimum Fillet **SPAN 1 & 2** At Maximum Fillet  
To determine 'f': After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown. These elevations subtracted from the 'Theoretical Grade Elevations Adjusted for Dead Load Deflection' shown below, minus slab thickness, equals the fillet heights 'f' above top flange of girders.

FILLET HEIGHTS



DEAD LOAD DEFLECTION DIAGRAM

(Includes weights of concrete only)  
Note: The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown.

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION	LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. of S. Abut.	W. Wing	72264.677	42.307	712.697	712.697	C	GDR. 1	72297.258	40.953	712.670	712.717
	E. Ramp	72265.491	36.323	712.823	712.823		GDR. 2	72297.910	36.143	712.771	712.817
	Lane	72268.786	12.000	713.338	713.338		GDR. 3	72298.562	31.333	712.872	712.929
	P.G.	72270.413	0.001	713.529	713.529		GDR. 4	72299.214	24.000	713.026	713.094
	E. Pmnt.	72272.040	-12.000	713.346	713.346		GDR. 5	72300.550	16.667	713.180	713.265
	E. Wing	72273.396	-22.000	713.142	713.142		GDR. 6	72301.885	9.333	713.326	713.388
							GDR. 7	72302.539	2.000	713.436	713.504
							P.G.	72302.810	0.001	713.593	713.661
							GDR. 8	72303.553	-5.333	713.386	713.493
							GDR. 9	72304.927	-12.667	713.269	713.337
							GDR. 10	72305.522	-20.000	713.117	713.116
S. BRG.	GDR. 1	72267.339	40.354	712.618	712.618	D	GDR. 1	72307.231	41.153	712.680	712.727
	GDR. 2	72267.951	35.044	712.714	712.714		GDR. 2	72307.896	36.243	712.732	712.819
	GDR. 3	72268.562	31.333	712.809	712.809		GDR. 3	72308.562	31.333	712.825	712.942
	GDR. 4	72269.174	24.000	712.904	712.904		GDR. 4	72309.214	24.000	713.039	713.157
	GDR. 5	72270.550	16.667	713.119	713.119		GDR. 5	72310.550	16.667	713.193	713.261
	GDR. 6	72271.545	9.333	713.261	713.261		GDR. 6	72311.845	9.333	713.332	713.401
	GDR. 7	72272.339	2.000	713.378	713.378		GDR. 7	72312.539	2.000	713.448	713.516
	P.G.	72272.410	0.001	713.535	713.535		P.G.	72312.610	0.001	713.605	713.673
	GDR. 8	72273.533	-5.333	713.328	713.328		GDR. 8	72313.835	-5.333	713.397	713.485
	GDR. 9	72274.527	-12.667	713.213	713.213		GDR. 9	72314.527	-12.667	713.230	713.343
	GDR. 10	72275.522	-20.000	713.063	713.063		GDR. 10	72315.522	-20.000	713.128	713.186
A	GDR. 1	72277.312	40.354	712.639	712.660	E	GDR. 1	72317.204	41.352	712.685	712.726
	GDR. 2	72277.937	35.944	712.737	712.758		GDR. 2	72317.883	36.343	712.790	712.828
	GDR. 3	72278.562	31.333	712.834	712.860		GDR. 3	72318.562	31.333	712.895	712.942
	GDR. 4	72279.174	24.000	712.939	713.020		GDR. 4	72319.214	24.000	713.048	713.104
	GDR. 5	72280.550	16.667	713.163	713.174		GDR. 5	72320.550	16.667	713.201	713.258
	GDR. 6	72281.545	9.333	713.284	713.315		GDR. 6	72321.845	9.333	713.341	713.397
	GDR. 7	72282.339	2.000	713.401	713.432		GDR. 7	72322.539	2.000	713.456	713.512
	P.G.	72282.410	0.001	713.558	713.559		P.G.	72322.610	0.001	713.613	713.659
	GDR. 8	72283.533	-5.333	713.351	713.352		GDR. 8	72323.835	-5.333	713.404	713.461
	GDR. 9	72284.527	-12.667	713.235	713.266		GDR. 9	72324.527	-12.667	713.287	713.343
	GDR. 10	72285.522	-20.000	713.085	713.111		GDR. 10	72325.522	-20.000	713.135	713.183
B	GDR. 1	72287.285	40.753	712.657	712.693	F	GDR. 1	72327.177	41.552	712.667	712.712
	GDR. 2	72287.923	36.043	712.756	712.794		GDR. 2	72327.869	36.443	712.794	712.818
	GDR. 3	72288.562	31.333	712.855	712.901		GDR. 3	72328.562	31.333	712.900	712.930
	GDR. 4	72289.174	24.000	713.009	713.084		GDR. 4	72329.214	24.000	713.053	713.029
	GDR. 5	72290.550	16.667	713.184	713.219		GDR. 5	72330.550	16.667	713.206	713.242
	GDR. 6	72291.545	9.333	713.304	713.359		GDR. 6	72331.845	9.333	713.345	713.381
	GDR. 7	72292.539	2.000	713.421	713.476		GDR. 7	72332.539	2.000	713.460	713.496
	P.G.	72292.610	0.001	713.578	713.573		P.G.	72332.610	0.001	713.617	713.653
	GDR. 8	72293.533	-5.333	713.370	713.425		GDR. 8	72333.835	-5.333	713.460	713.444
	GDR. 9	72294.527	-12.667	713.254	713.309		GDR. 9	72334.527	-12.667	713.290	713.326
	GDR. 10	72295.522	-20.000	713.103	713.150		GDR. 10	72335.522	-20.000	713.138	713.168

(P.G. Elev. applies at top of Class I Surfacing)

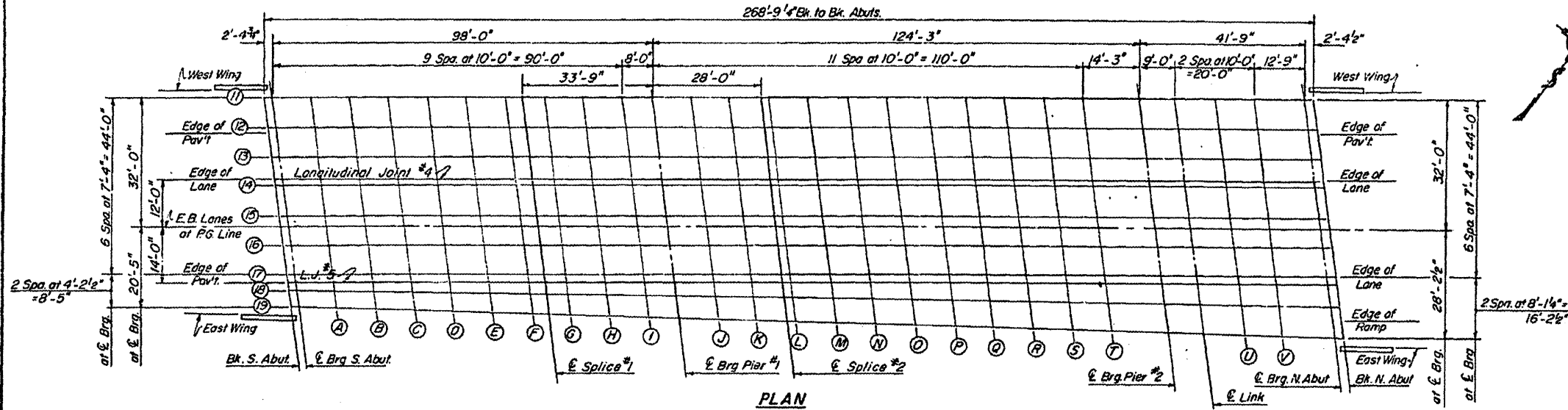
DESIGNED	DVK
CHECKED	GEP
DRAWN	JT
CHECKED	GEP 3/75

WESTBOUND LANES  
TOP OF CONCRETE SLAB ELEVATIONS  
FAI. 72 OVER ILL. RTE. 121  
& ILL. CENT. GULF RR.  
MACON COUNTY  
SEC. 58-63HVB  
STA. 724+45.63

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I. 72	58-63HVB	MACON	57	44
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 5  
26 SHEETS



LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. of S. Abut.	W. Wing	72280.984	34.000	712.509	712.509
	E. Fvmt.	72281.339	24.000	713.121	713.121
	Lane	72283.946	12.000	713.374	713.374
	P. C.	72283.593	0.001	713.364	713.364
	E. Fvmt.	72287.220	-12.000	713.381	713.381
	E. Wing	72288.623	-22.344	713.168	713.168
S. BRG.	GDR-11	72283.652	32.000	712.831	712.831
	GDR-12	72284.646	24.667	712.986	712.986
	GDR-13	72285.640	17.333	713.140	713.140
	GDR-14	72286.634	10.000	713.285	713.285
	GDR-15	72287.629	2.667	713.401	713.401
	P.G.	72287.990	0.001	713.569	713.569
	GDR-16	72288.623	-4.667	713.372	713.372
	GDR-17	72289.617	-12.000	713.259	713.259
	GDR-18	72290.187	-16.208	713.173	713.173
A	GDR-11	72293.652	32.000	712.850	712.850
	GDR-12	72294.646	24.667	713.004	713.004
	GDR-13	72295.640	17.333	713.159	713.159
	GDR-14	72296.634	10.000	713.302	713.302
	GDR-15	72297.629	2.667	713.419	713.419
	P.G.	72297.990	0.001	713.586	713.586
	GDR-16	72298.623	-4.667	713.389	713.389
	GDR-17	72299.617	-12.000	713.276	713.276
	GDR-18	72300.207	-16.208	713.156	713.156
B	GDR-11	72303.652	32.000	712.865	712.865
	GDR-12	72304.646	24.667	713.019	713.019
	GDR-13	72305.640	17.333	713.173	713.173
	GDR-14	72306.634	10.000	713.316	713.316
	GDR-15	72307.629	2.667	713.432	713.432
	P.G.	72307.990	0.001	713.600	713.600
	GDR-16	72308.623	-4.667	713.402	713.402
	GDR-17	72309.617	-12.000	713.289	713.289
	GDR-18	72310.227	-16.208	713.199	713.199
C	GDR-11	72313.652	32.000	712.877	712.877
	GDR-12	72314.646	24.667	713.030	713.030
	GDR-13	72315.640	17.333	713.184	713.184
	GDR-14	72316.634	10.000	713.327	713.327
	GDR-15	72317.629	2.667	713.442	713.442
	P.G.	72317.990	0.001	713.610	713.610
	GDR-16	72318.623	-4.667	713.412	713.412
	GDR-17	72319.617	-12.000	713.298	713.298
	GDR-18	72320.247	-16.651	713.261	713.261
D	GDR-11	72323.652	32.000	712.824	712.824
	GDR-12	72324.646	24.667	713.037	713.037
	GDR-13	72325.640	17.333	713.190	713.190
	GDR-14	72326.634	10.000	713.333	713.333
	GDR-15	72327.629	2.667	713.446	713.446
	P.G.	72327.990	0.001	713.615	713.615
	GDR-16	72328.623	-4.667	713.417	713.417
	GDR-17	72329.617	-12.000	713.303	713.303
	GDR-18	72330.268	-16.799	713.203	713.203
E	GDR-11	72333.652	32.000	712.888	712.888
	GDR-12	72334.646	24.667	713.041	713.041
	GDR-13	72335.640	17.333	713.193	713.193
	GDR-14	72336.634	10.000	713.336	713.336
	GDR-15	72337.629	2.667	713.450	713.450
	P.G.	72337.990	0.001	713.617	713.617
	GDR-16	72338.623	-4.667	713.419	713.419
	GDR-17	72339.617	-12.000	713.304	713.304
	GDR-18	72340.268	-16.799	713.203	713.203
F	GDR-11	72343.652	32.000	712.888	712.888
	GDR-12	72344.646	24.667	713.040	713.040
	GDR-13	72345.640	17.333	713.192	713.192
	GDR-14	72346.634	10.000	713.334	713.334
	GDR-15	72347.629	2.667	713.449	713.449
	P.G.	72347.990	0.001	713.614	713.614
	GDR-16	72348.623	-4.667	713.417	713.417
	GDR-17	72349.617	-12.000	713.302	713.302
	GDR-18	72350.307	-17.094	713.194	713.194

(R.G. Elev. applies at top of Class I Surfacing)

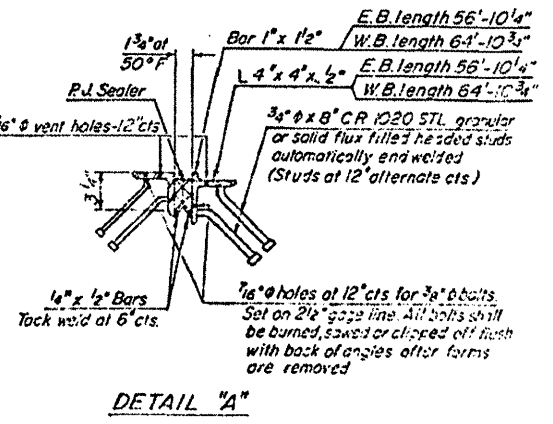
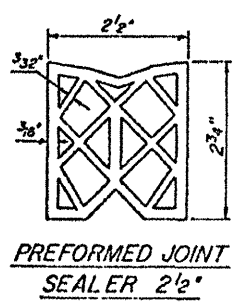
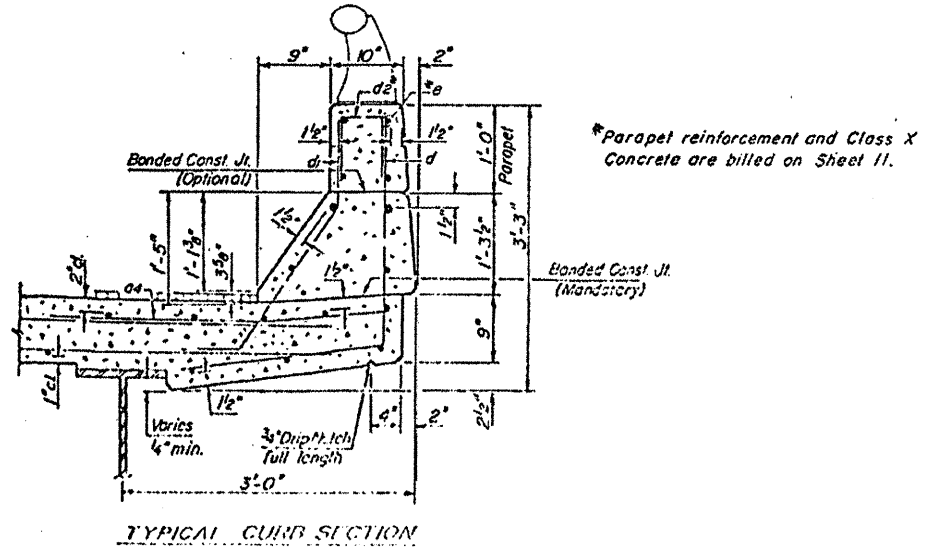
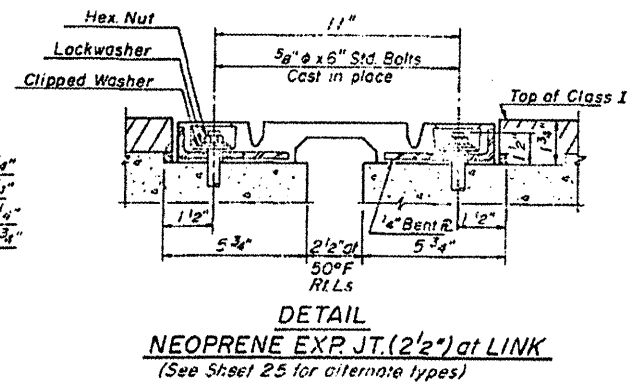
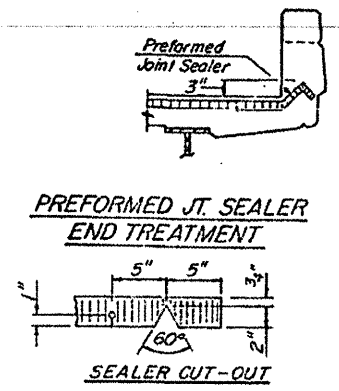
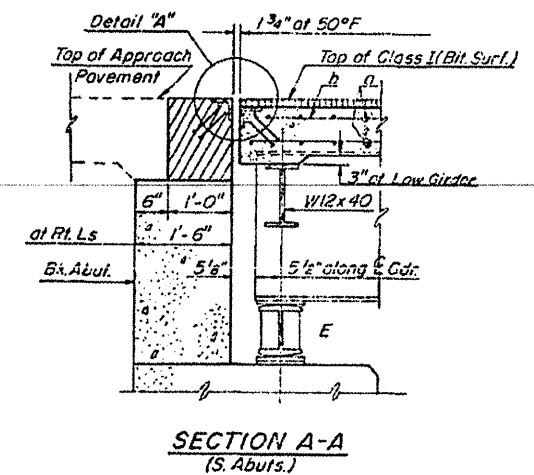
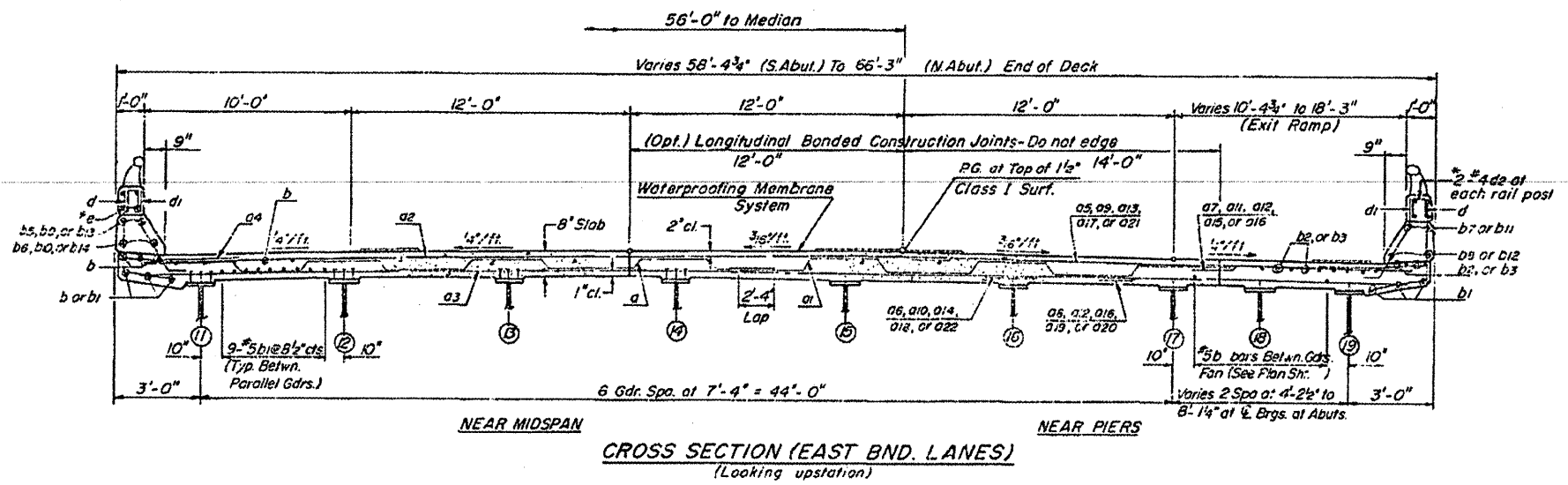
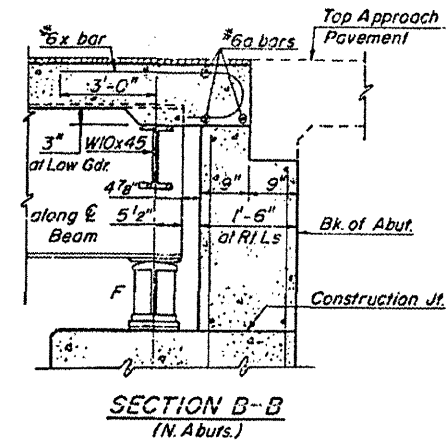
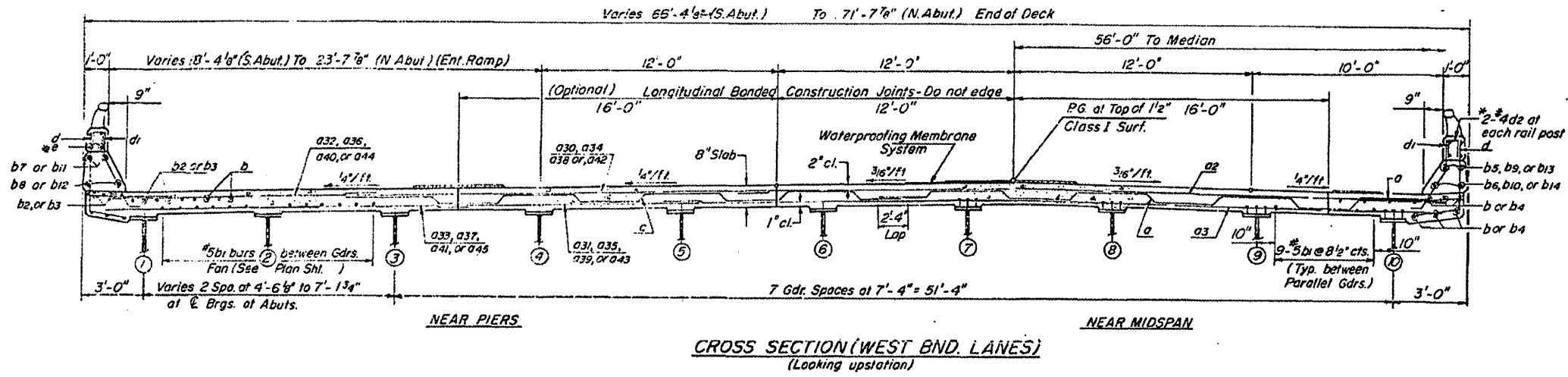
DESIGNED	D.V.K.
CHECKED	G.E.P.
DRAWN	J.T.
CHECKED	

EASTBOUND LANES  
TOP OF CONCRETE SLAB ELEVATIONS  
F.A.I. 72 OVER ILL. RTE. 121  
& ILL. CENT. GULF RR.  
MACON COUNTY  
SEC. 58-63HVB  
STA. 724+45.63

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FA.I-72	58-63HVB	MACON	49	49
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 10  
26 SHEETS



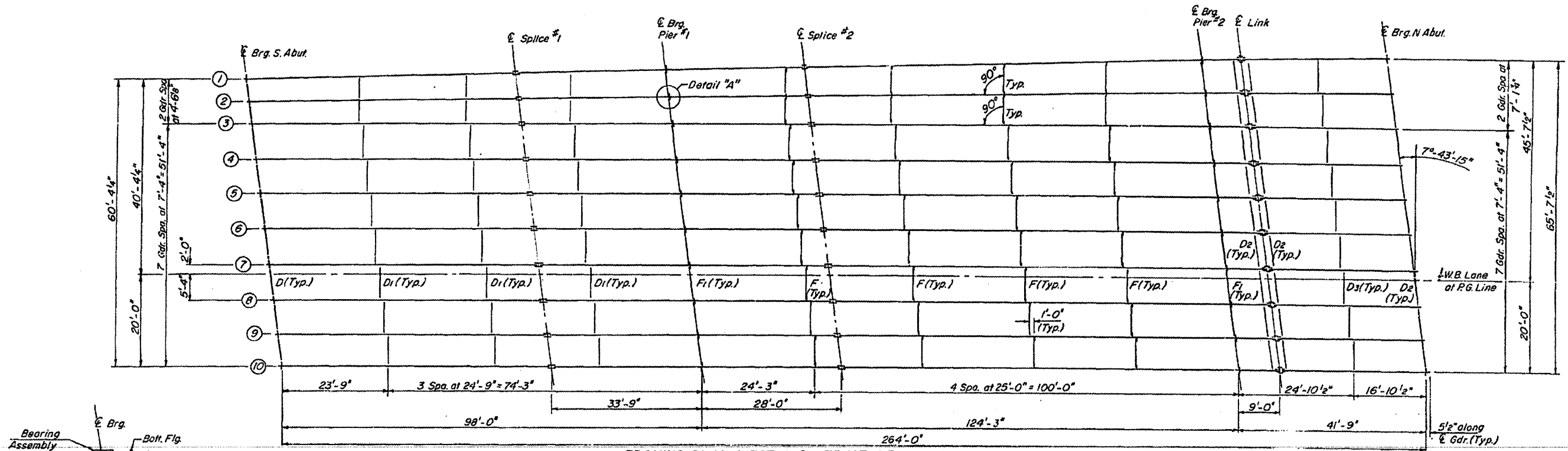
**SUPERSTRUCTURE DETAILS**  
FA.I-72 over ILL. RTE. 121  
& ILL. CENT. GULF R.R.  
MACON COUNTY  
SEC. 58-63HVB  
STA 724+45.63

DESIGNED	D.V.A.
CHECKED	S.E.P.
DRAWN	R.H.H.
CHECKED	S.E.P.

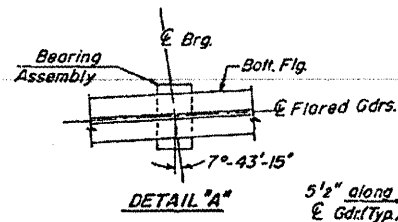
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P.A. I-72	58-63HVB	MACON	27	52
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

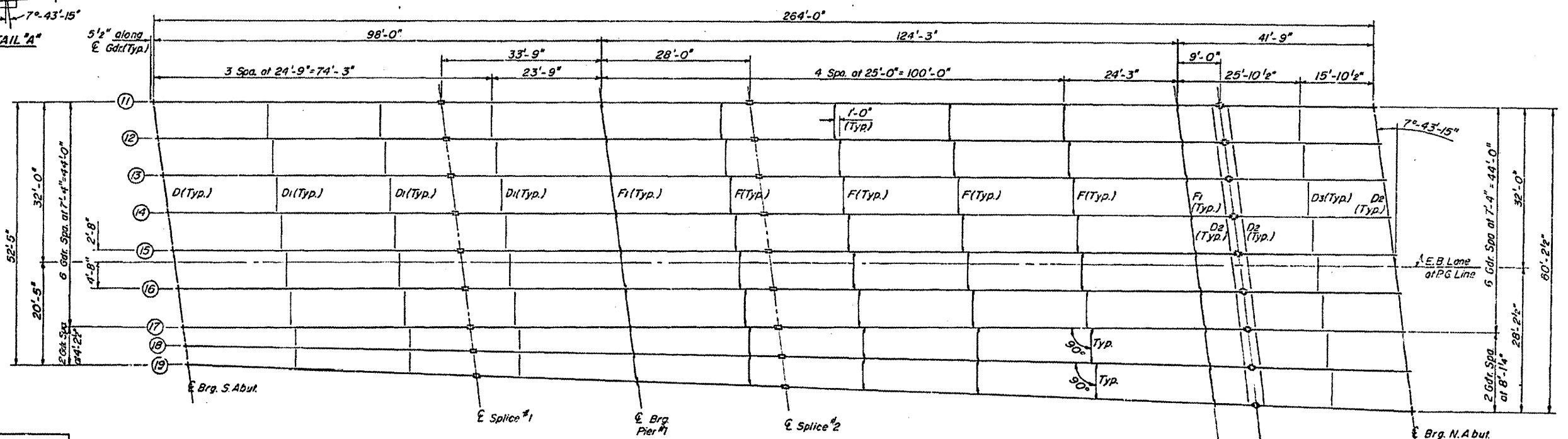
SHEET NO. 13  
26 SHEETS



FRAMING PLAN WEST BND. STRUCTURE



DETAIL "A"



FRAMING PLAN EAST BND. STRUCTURE

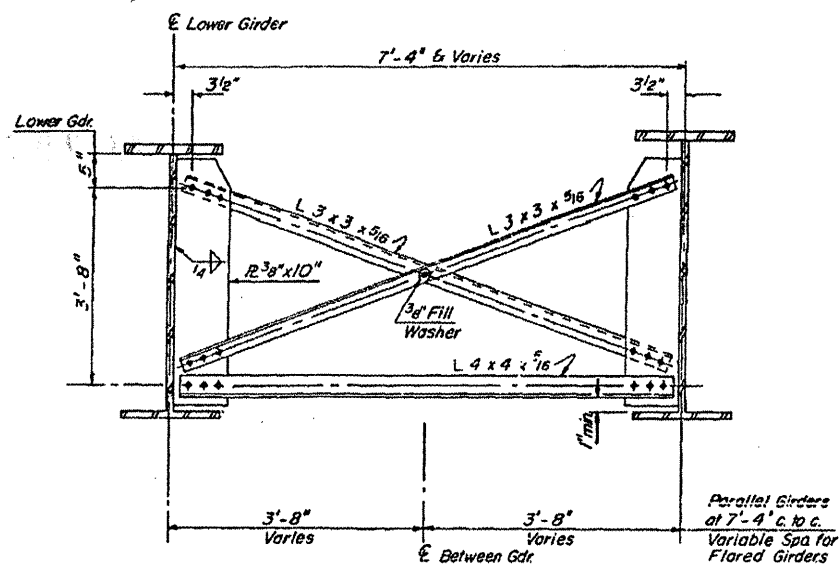
DESIGNED	D.V.K.
CHECKED	G.E.K.
DRAWN	J.T.
CHECKED	G.E.P.

FRAMING PLAN  
FAI 72 OVER ILL. RTE. 121  
& ILL. CENT. GULF RR.  
MACON COUNTY  
SEC. 58-63HVB  
STA. 724+45.63



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

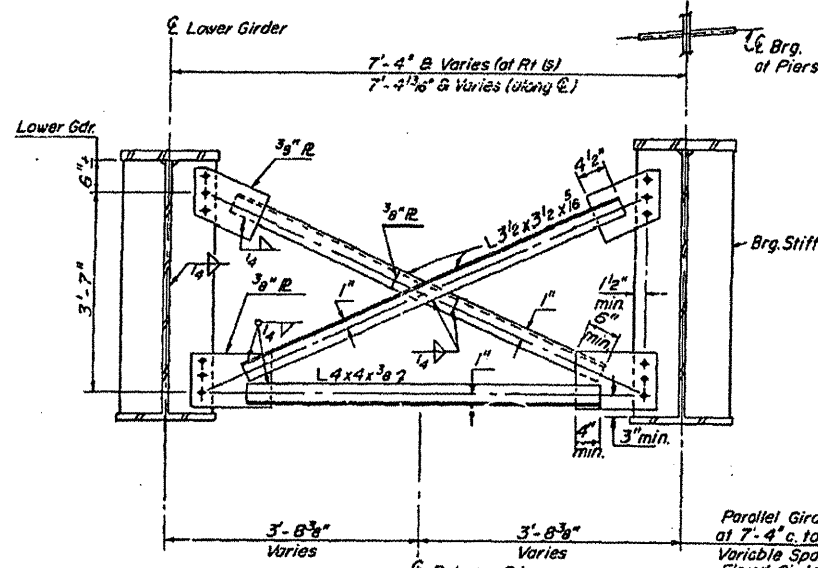
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 15
FAI-72	58-63HVB	MACON	27	54	26 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		



**CROSS FRAME F**

No. Required = 52 ea. for 7'-4" Gdr. Spa.  
16 ea. for Flared Gdrs.

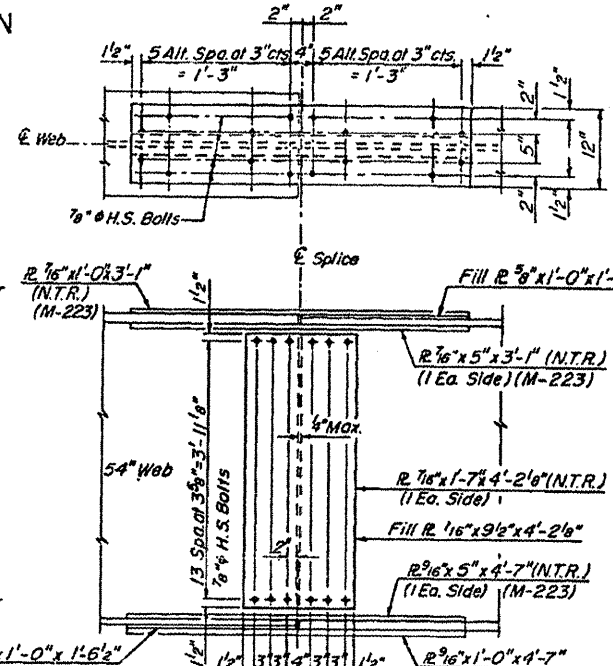
Bolts 3/4" φ  
Open Holes 1 1/16" φ  
1 1/16" φ holes in gusset R.s for 3/4" φ bolts  
Hardened washers shall be required over holes in angles.



**CROSS FRAME F (Piers)**

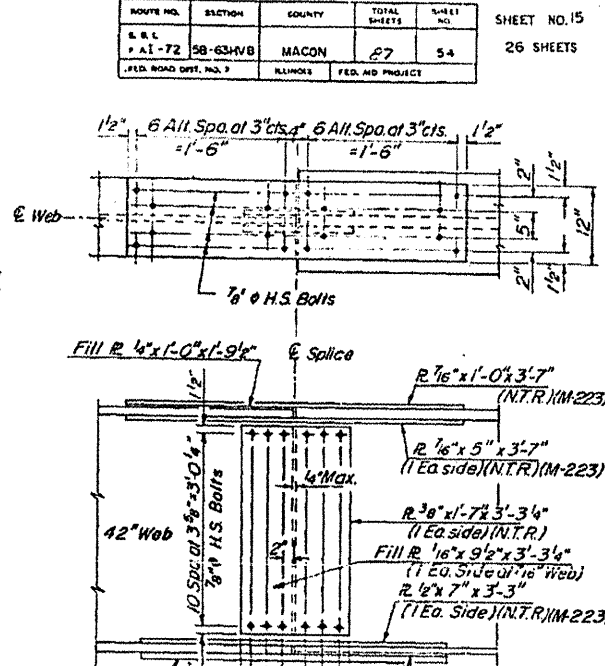
No. Required = 26 ea. for 7'-4" Gdr. Spa.  
8 ea. for Flared Gdrs.

Bolts 3/4" φ  
Open Holes 1 1/16" φ  
1 1/16" φ holes in gusset R.s for 3/4" φ bolts  
Hardened washers shall be required over holes in gusset R.s.

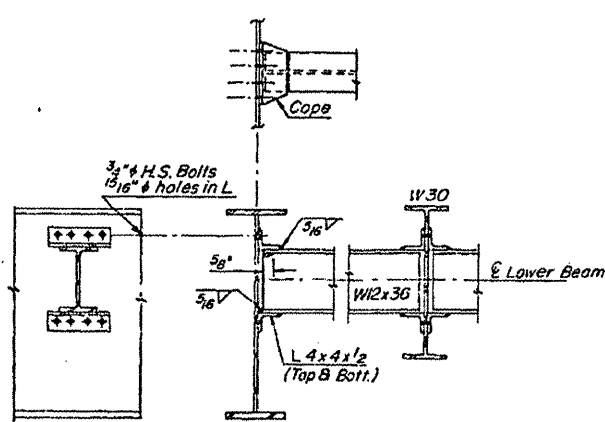


**FIELD SPLICE NO. 2**

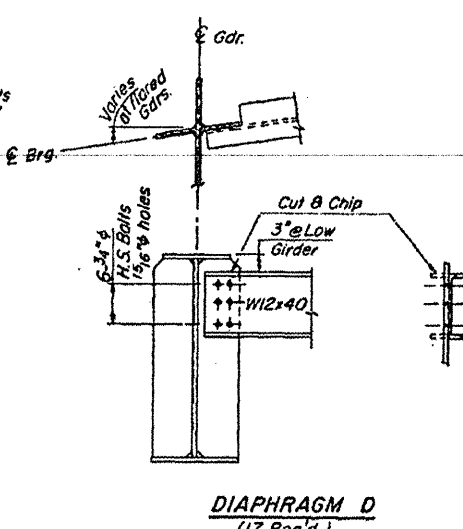
Note: All bolts to be 7/8" H.S. Bolts



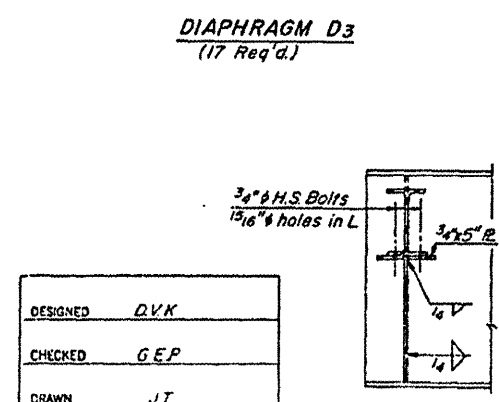
**FIELD SPLICE NO. 1**



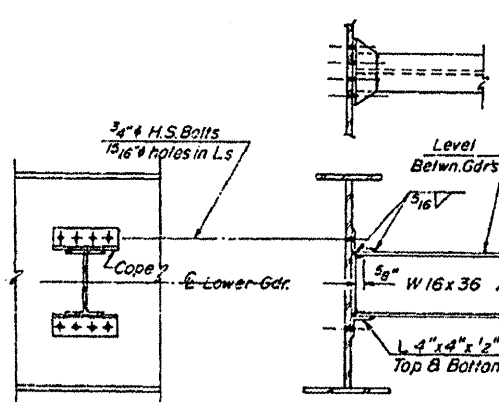
**DIAPHRAGM D3**  
(17 Req'd.)



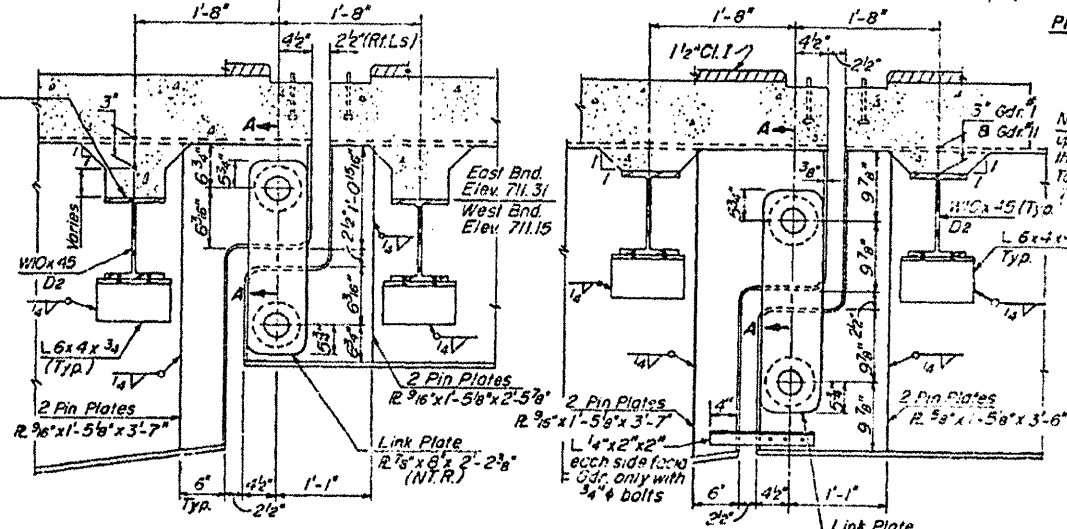
**DIAPHRAGM D**  
(17 Req'd.)



**DIAPHRAGM D2 (N. Abuts. & Link Loc.)**  
(51 Req'd.)

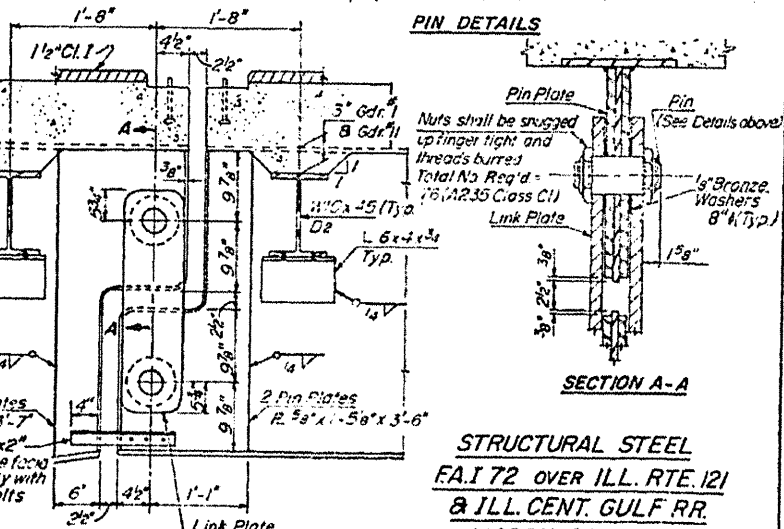


**DIAPHRAGM D1**  
(51 Req'd.)

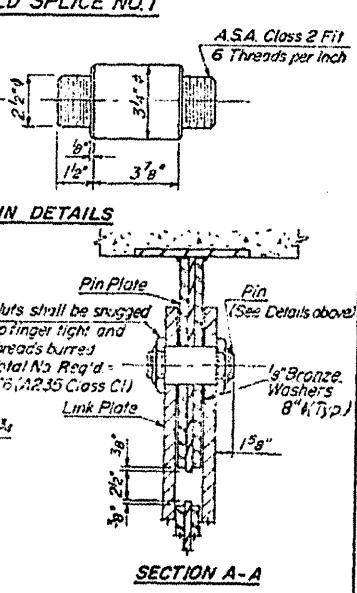


**INTERIOR GIRDERS**

**LINK CONNECTION**



**EXTERIOR GIRDERS**



**SECTION A-A**

**STRUCTURAL STEEL**  
FAI 72 OVER ILL. RTE. 121  
& ILL. CENT. GULF RR.  
MACON COUNTY  
SEC. 58-63HVB  
STA. 724+45.63

DESIGNED	D.V.K.
CHECKED	G.E.P.
DRAWN	J.T.
CHECKED	G.E.P. 3/75

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I-72	58-63HVB	MACON	27	53
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	SHEET NO. 14
				26 SHEETS

9A

**INTERIOR GIRDER REACTION TABLE**

	S. Abut.	Pier 1	Pier 2	*N. Abut. Int.	N. Abut. Exter.
R <sup>e</sup> (K)	42.9	192.4	101.1	21.5	20.6
R <sup>t</sup> (K)	42.3	75.3	53.0	34.3	29.7
Imp (K)	9.5	15.9	15.9	10.3	8.9
R total (K)	94.7	283.6	170.0	66.1	59.2

\*Reaction at link same as N. Abut.

**TOP OF WEB ELEVATIONS**

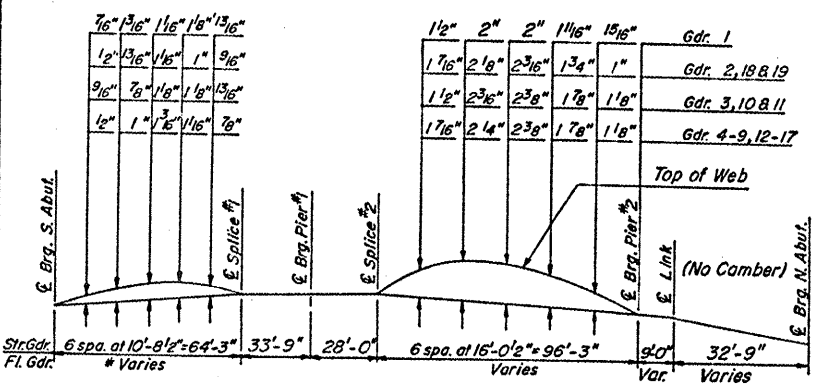
Loc Gdr.	€ Brg. S. Abut.	€ Splice No. 1	€ Brg. Pier No. 1	€ Splice No. 2	€ Brg. Pier No. 2	€ Link	€ Brg. N. Abut.
1	711.83	711.92	711.88	711.85	711.39	711.35	711.12
2	711.92	711.96	711.94	711.92	711.52	711.48	711.31
3	712.02	712.08	712.06	712.04	711.66	711.62	711.45
4	712.17	712.23	712.21	712.20	711.80	711.77	711.59
5	712.33	712.38	712.37	712.35	711.95	711.91	711.74
6	712.47	712.52	712.50	712.49	712.08	712.04	711.87
7	712.59	712.64	712.62	712.60	712.19	712.15	711.99
8	712.54	712.59	712.56	712.54	712.13	712.09	711.92
9	712.42	712.47	712.44	712.42	712.01	711.97	711.79
10	712.27	712.31	712.28	712.25	711.85	711.81	711.59
11	712.04	712.06	712.02	711.98	711.55	711.51	711.28
12	712.19	712.22	712.18	712.15	711.70	711.65	711.46
13	712.35	712.37	712.33	712.30	711.84	711.80	711.61
14	712.49	712.51	712.47	712.44	711.98	711.93	711.74
15	712.61	712.62	712.58	712.55	712.09	712.04	711.85
16	712.58	712.59	712.55	712.51	712.05	712.00	711.81
17	712.47	712.47	712.43	712.39	711.93	711.88	711.69
18	712.38	712.36	712.31	712.26	711.76	711.72	711.51
19	712.29	712.25	712.18	712.12	711.60	711.55	711.29

\* Top of W30 Beam

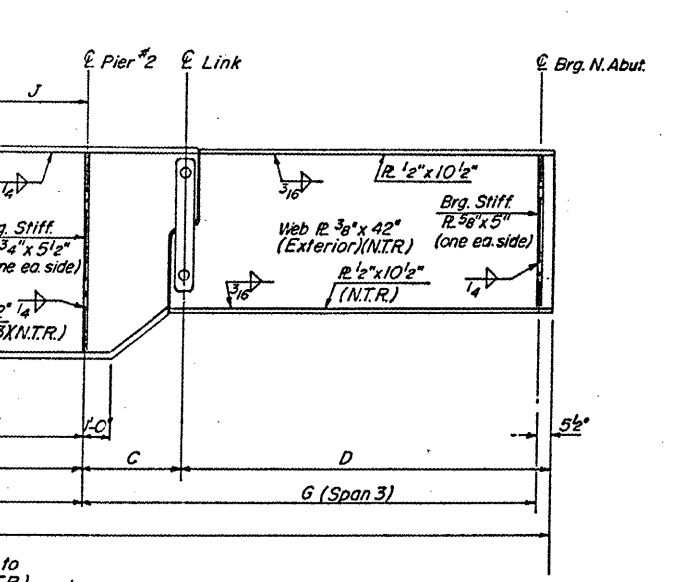
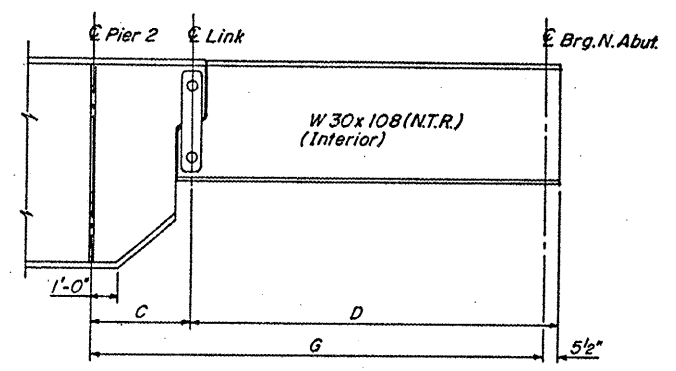
**INTERIOR GIRDER MOMENT TABLE**

	0.4 Span 1	Pier 1	0.6 Span 2	Pier 2	0.6 Span 3	0.6 Span 3
I <sub>s</sub> (in. <sup>4</sup> )	14340	41115	25984	20051	4470	7066
I <sub>c</sub> (in. <sup>4</sup> )	39654	66933	66933	66933	66933	66933
S <sub>s</sub> (in. <sup>3</sup> )	805	1449	1091	723	300	328
S <sub>c</sub> (in. <sup>3</sup> )	1099	1506	1506	1506	1506	1506
R (K/ft)	0.927	1.442	0.960	1.330	1.312	1.253
M <sub>R</sub> (K)	406.5	2221.2	1014.1	240.8	175.9	169.5
f <sub>s</sub> <sup>R</sup> (ksi)	6.06	18.39	11.15	4.00	7.04	6.20
s <sup>R</sup> (K/ft)	0.404	0.421	0.421	0.421	0.421	0.421
M <sub>s</sub> <sup>R</sup> (K)	250.6	508.6	508.6	508.6	508.6	508.6
M <sub>t</sub> <sup>R</sup> (K)	789.1	811.9	1123.8	271.2	231.0	229.5
M <sub>imp</sub> (K)	176.9	171.9	225.5	81.3	69.3	68.8
Total (K)	1216.6	983.8	1857.9	352.5	300.3	298.3
f <sub>s</sub> (s <sup>R</sup> +t) (ksi)	13.29	8.14	14.8	5.85	12.01	10.90
f <sub>s</sub> Total (ksi)	19.35	26.53	25.95	9.85	19.05	17.10
VR (K)	55.5	54.0	54.0	54.0	54.0	54.0

I<sub>s</sub> and S<sub>s</sub> are the moment of inertia and section modulus of the steel section.  
I<sub>c</sub> and S<sub>c</sub> are the moment of inertia and section modulus of the composite section used in computing I<sub>s</sub>.  
VR is the maximum  $\pm$  impact shear range in span used to determine shear connector spacing.



**CAMBER DIAGRAM**  
\*See Girder Dimension Table



Use M-183 Struct. Steel unless otherwise noted.  
Calculated weight of structural steel includes 383, 210 lbs. of high strength steel (M-223).

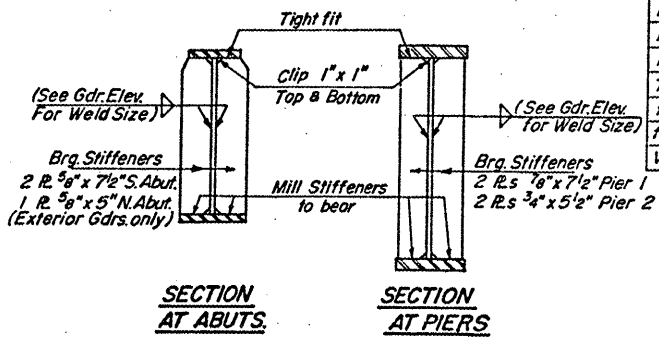
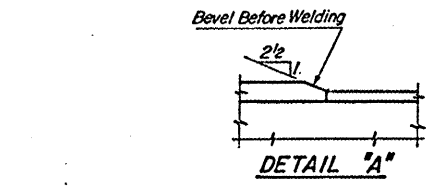
**GIRDER ELEVATION**

N.T.R. : "Members" subjected to tensile stresses shall conform to Supplemental Requirements for Notch Toughness (N.T.R.)

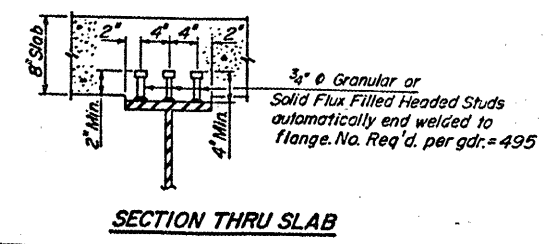
**GIRDER DIMENSIONS**

Gdr.	Dim	A	B	C	D	E	F	G	H	I	J
Gdr. 1		64'-5 1/2"	95'-11 1/4"	8'-11 3/4"	33'-1 1/2"	97'-9 1/8"	123'-11 1/4"	41'-7 3/4"	264'-3 1/2"	5 1/8"	4'-1 1/4"
Gdr. 2		64'-6 5/16"	96'-1 1/16"	8'-11 7/8"	33'-2"	97'-10 7/16"	124'-1 1/8"	41'-8 3/8"	264'-6 7/8"	6 7/8"	4'-3 1/8"
Gdr. 3-17		64'-8 1/2"	96'-3"	9'-0"	33'-2 1/2"	98'-0"	124'-3"	41'-9"	264'-11"	8"	4'-5"
Gdr. 18		64'-11"	96'-6 1/8"	9'-0 1/4"	33'-3 3/8"	98'-2 1/2"	124'-6 1/8"	41'-10 1/4"	265'-5 1/8"	10 1/2"	4'-8 1/8"
Gdr. 19		65'-1 1/16"	96'-9 5/8"	9'-0 1/2"	33'-4 1/4"	98'-5 3/8"	124'-9 5/8"	41'-11 1/4"	265'-1 1/8"	1'-13 1/8"	4'-11 5/8"

**STRUCTURAL STEEL**  
FAI 72 OVER ILL. RTE. 121  
& ILL. CENT. GULF RR.  
MACON COUNTY  
SEC. 58-63HVB  
STA. 724+45.63



DESIGNED	D.V.K.
CHECKED	G.E.P.
DRAWN	J.T.
CHECKED	G.E.P. 3/75

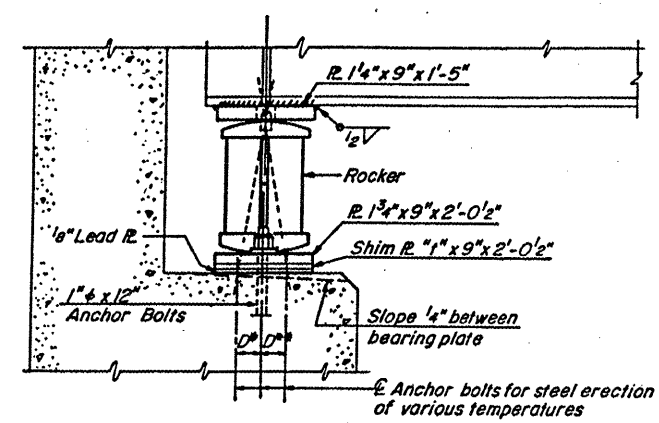


**SECTION THRU SLAB**

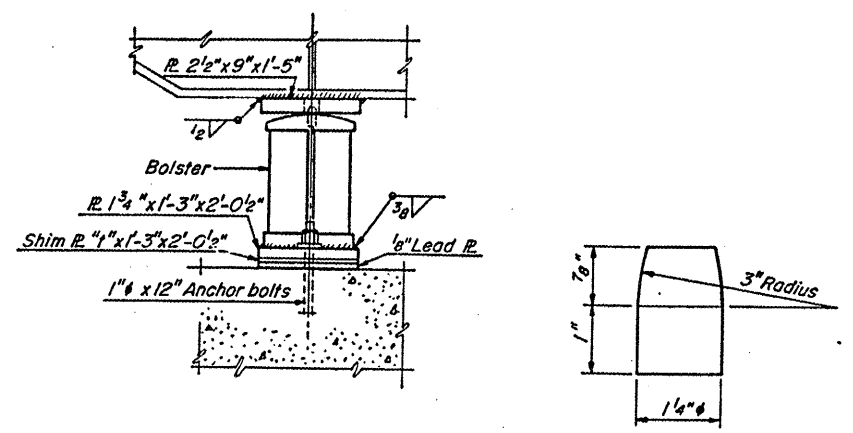
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 16 26 SHEETS
F.A.1-72	58-63HVB	MACON	57	55	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

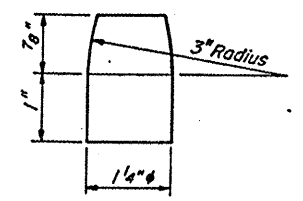
9B



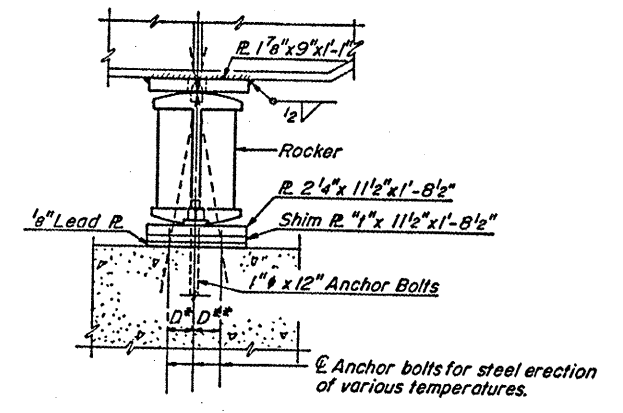
ELEVATION SOUTH ABUT.



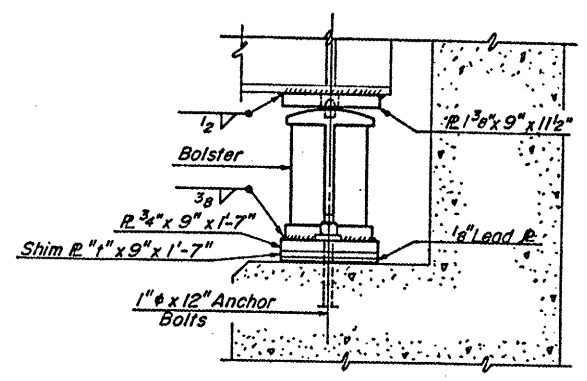
ELEVATION PIER #1



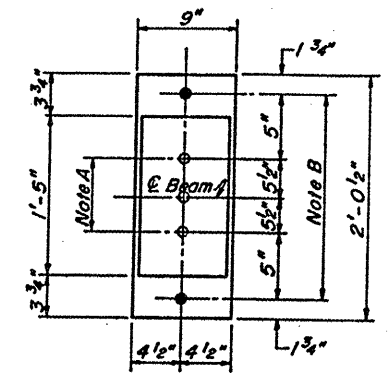
PINTLE



ELEVATION PIER #2

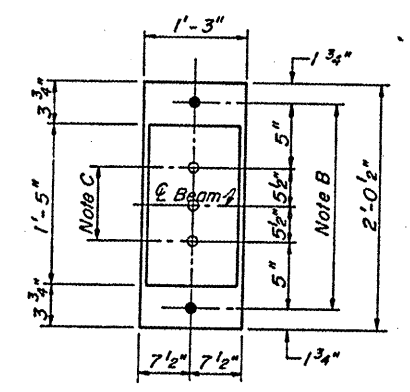


ELEVATION NORTH ABUT.



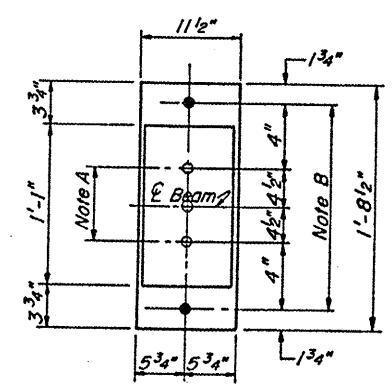
PLAN

NOTE A  
1 3/8"  $\phi$  Holes - 1" deep in top R for pintles. Thread or press fit pintles into bottom R.



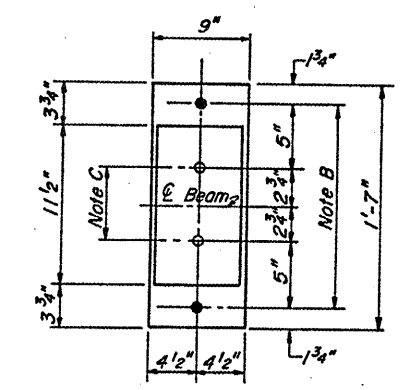
PLAN

NOTE B  
1 1/2"  $\phi$  Holes for 1"  $\phi$  anchor bolts. 5/16" x 2 1/2" x 2 1/2" R Washers under nut.

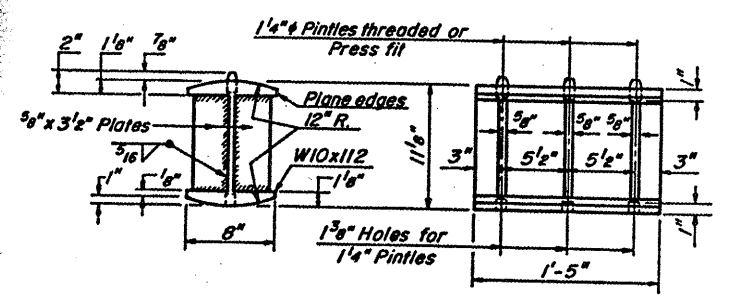


PLAN

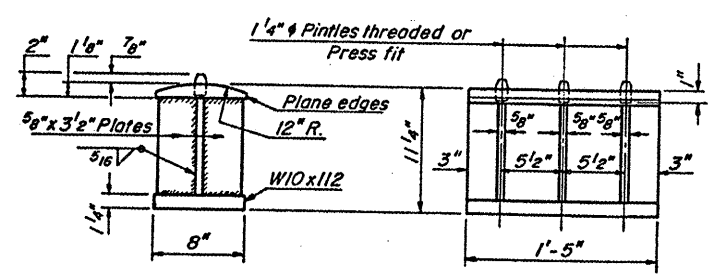
NOTE C  
1 3/8"  $\phi$  Holes 1" deep in top R only for 1 1/4"  $\phi$  pintles.



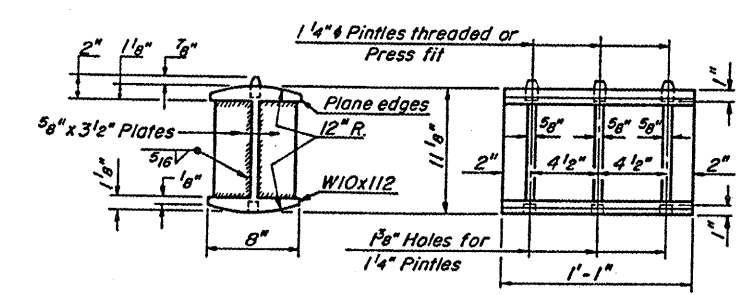
PLAN



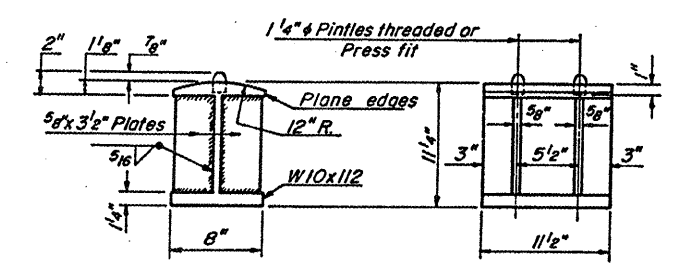
ROCKER SOUTH ABUT.



BOLSTER PIER #1



ROCKER PIER #2



BOLSTER NORTH ABUT.

DESIGNED	D.V.K.
CHECKED	G.E.P.
DRAWN	R.H.H.
CHECKED	G.E.P.

NOTE: Bearing seat surfaces shall be constructed or adjusted to the designed elevations within a tolerance of  $\pm 1/8$ ". Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/2" adjust shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

NOTES ON SETTING OF ANCHOR BOLTS AT EXP. BRGS.

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

Location Gdr.	Su. Abut.	Pier 1	Pier 2	No. Abut.
2	5/8"	5/8"		
7	5/8"	5/8"		
15	3/8"	1/2"	1/2"	3/8"
19			5/8"	

Provide Shim Plates of the same dimensions of the bottom bearing plate and thickness shown. See Shim Table.

BEARING DETAILS  
F.A.1-72 over ILL. RTE. 121  
& ILL. CENT. GULF R.R.  
MACON COUNTY  
SEC. 58-63HVB  
STA. 724+45.63