

**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**

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

• D7 BRIDGE PAINTING 2011-2

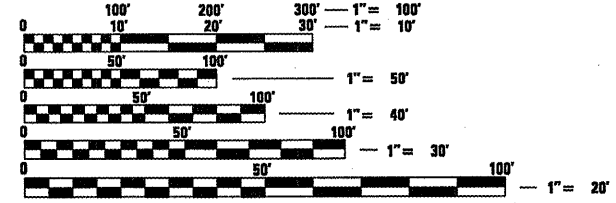
D-97-005-11



LOCATION OF SECTION INDICATED THUS: - [thick black line] -



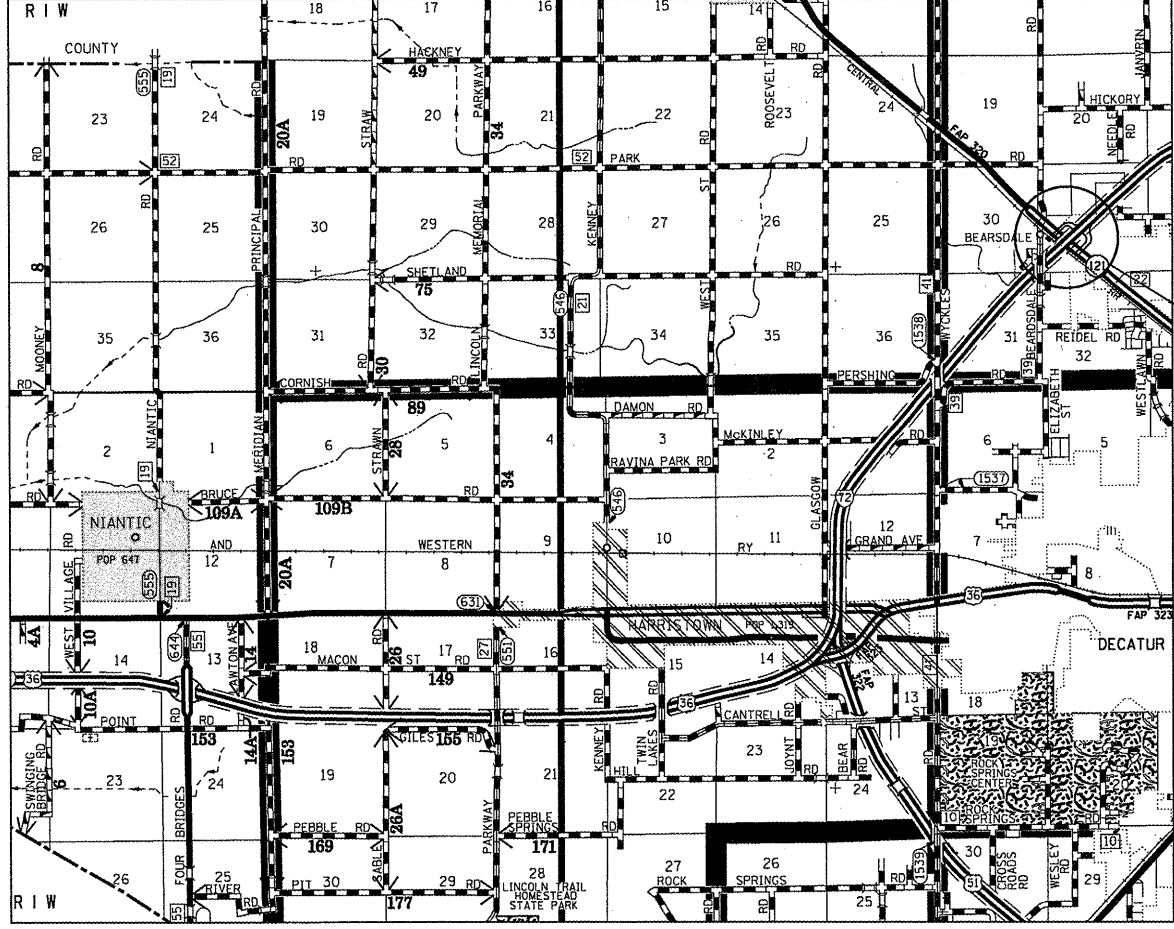
FOR INDEX OF SHEETS, SEE SHEET NO. 2



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**



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

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED Dec 13 2010  
[Signature]  
DEPUTY DIRECTOR OF HIGHWAYS, REGIONAL ENGINEER

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

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

**PRINTED BY THE AUTHORITY  
OF THE STATE OF ILLINOIS**

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

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	INDEX OF SHEETS, GENERAL NOTES, LOCATION DESCRIPTIONS
3	SUMMARY OF QUANTITIES
4-98	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 = c:\pw\work\p\idot\swartzw\d0239428\d77	USER NAME = swartzw	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.
	905-shr-index.dgn	DRAWN -	REVISED -				72	•	MACON	9	2
	PLOT SCALE = 48,0000' / IN.	CHECKED -	REVISED -				CONTRACT NO. 74505				
	PLOT DATE = 12/9/2010	DATE -	REVISED -				ILLINOIS FED. AID PROJECT				
				SCALE: NA	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.					

100% STATE

SUMMARY OF QUANTITIES			TOTAL	CONSTRUCTION
CODE NO	ITEM	UNIT	QUANTITIES	TYPE CODE
67100100	MOBILIZATION	L SUM	1	0014
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

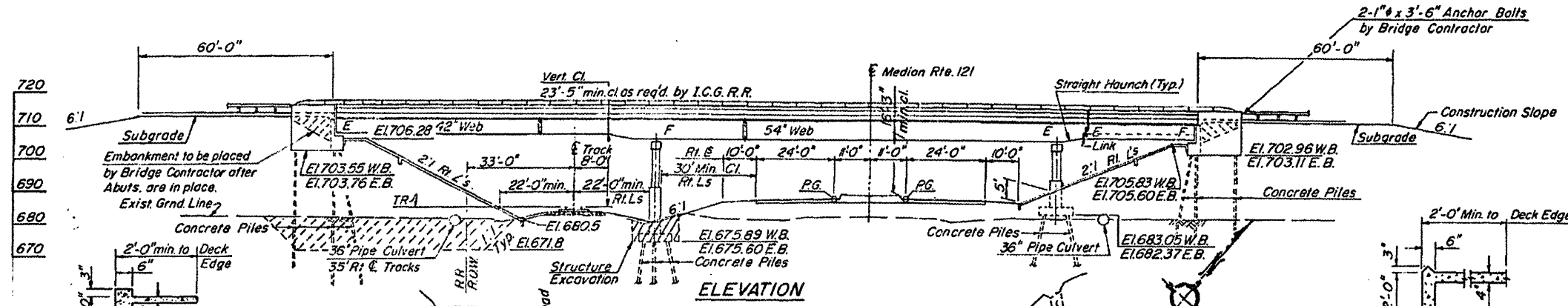
FILE NAME = ca:\pwork\pwork\swartzrw\d0239428\d77	USER NAME = swartzrw	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>			F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	585-shr-soq.dgn	DRAWN -	REVISED -		SCALE: NA	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	72	•	MACON	9	3
	PLOT SCALE = 40.0000' / IN.	CHECKED -	REVISED -					CONTRACT NO. 74505					
	PLOT DATE = 12/9/2010	DATE -	REVISED -					ILLINOIS FED. AID PROJECT					

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

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I.-72	58-63HVB	MACON	27	40
FED. ROAD DIST. NO. 1		ILLINOIS	FED. AID PROJECT	

SHEET NO. 1  
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", open holes 1 1/8" unless otherwise noted.

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

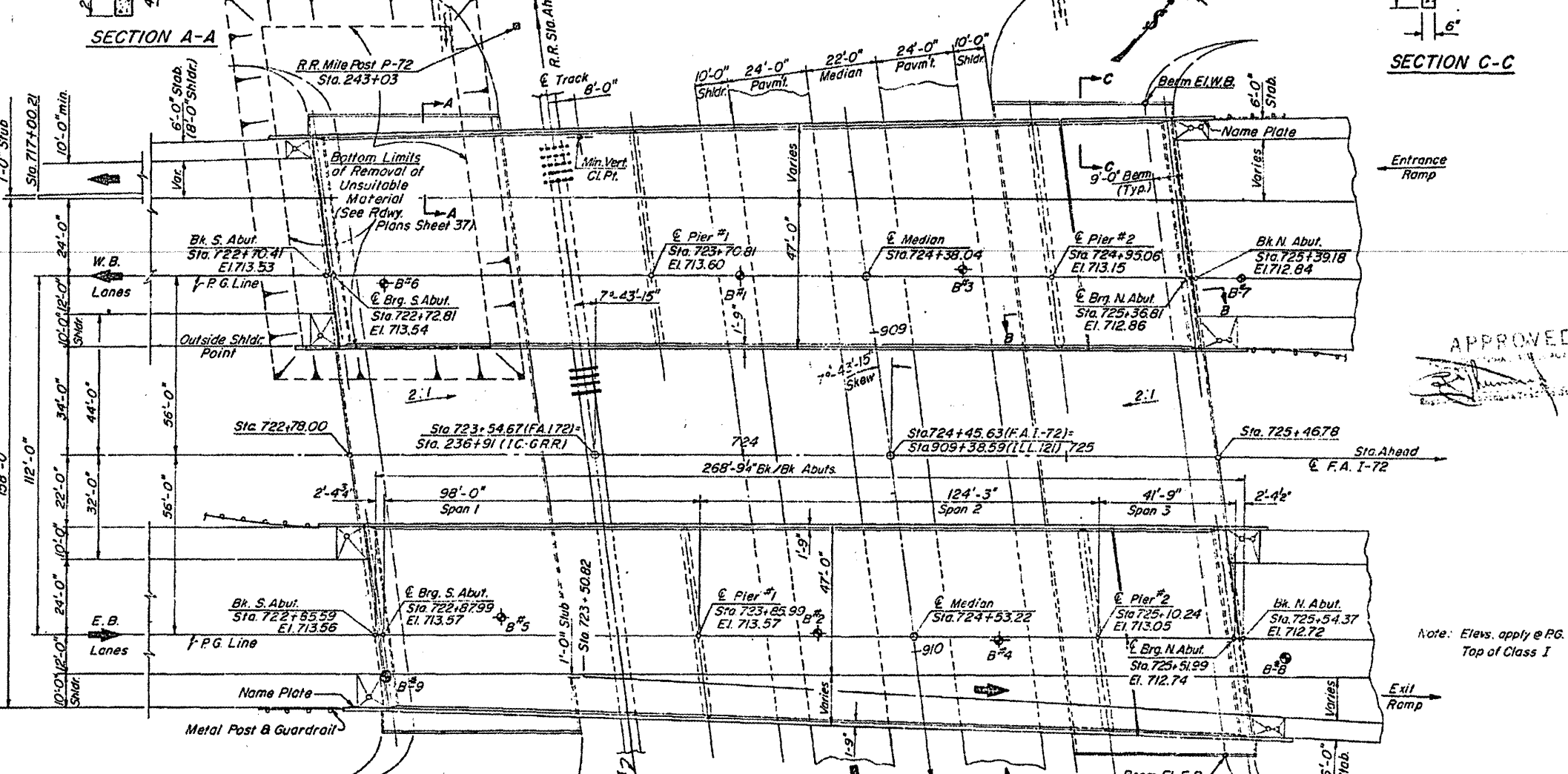
The concrete rail section above the mandatory construction joint at the top of the slab shall be constructed of Class X Concrete, except the aggregates shall conform to the requirements of Handrail Concrete.

Protective Coat shall not be applied to surfaces to which Waterproofing Membrane System is applied.

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

Calculated weight of Structural Steel = 1,028,530 Lbs.

Concrete Piles of 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 Order Elevation View along with Webs, Splice Plates, Link Plates and Pin Plates of the Steel Girders.

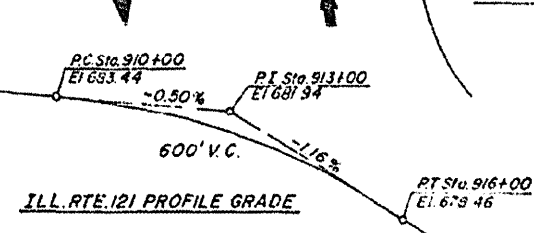
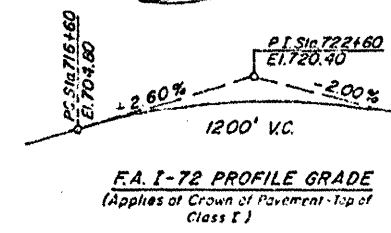
The Contractor shall drive 4 test piles in permanent locations as directed by the Engineer before ordering the remainder of piles. Test piles shall be driven at the following locations: One test pile at the South Abut. West Bound Lanes, One test pile at Pier #1 East Bound Lanes, One test pile at Pier #2 West Bound Lanes, and One test pile at the North Abut. East Bound Lanes. See special provisions for Boring Data.

APPROVED  
 [Signature]

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 Railing	Lin. Ft.	1164		1164
Reinforcement Bars	Lbs.	268,290	89,350	357,640
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

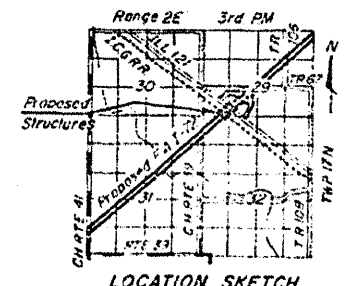
DESIGNED	D.V.Y.
CHECKED	G.E.P.
DRAWN	R.H.H.
CHECKED	G.E.P. 5/8.75



TOP OF RAIL ELEVS.  
 ILL. CENT. GULF RR

STA.	N. RAIL	S. RAIL
2367+91	685.38	685.42
2377+91	684.87	684.59
2387+91	684.42	684.41
2397+91	683.85	683.84
2407+91	683.26	683.12

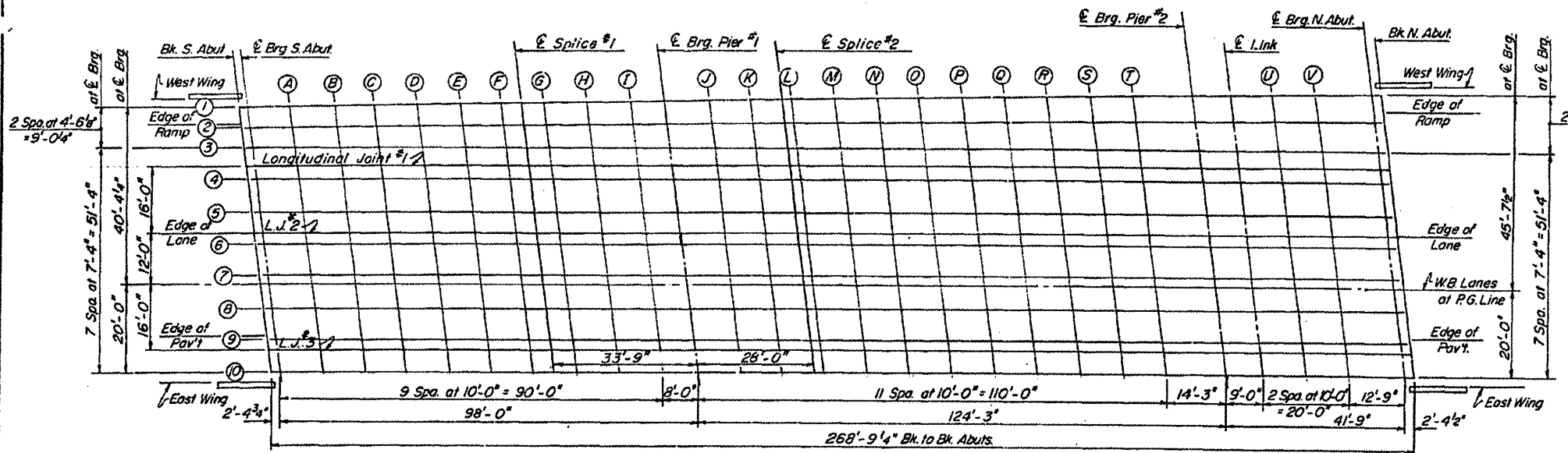
Mile Post P-72 & RR Survey  
 Sta. 243+03, 10.5' S & Track



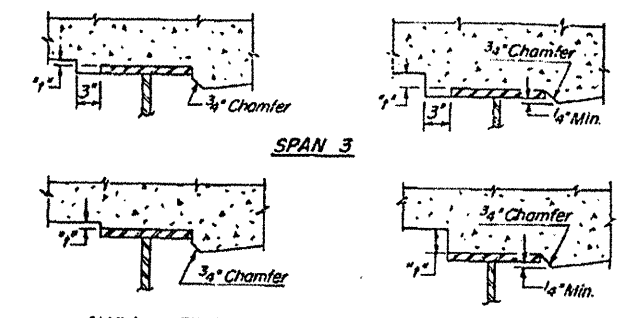
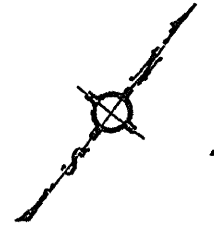
GENERAL PLAN & ELEV.  
 F.A. I-72 over ILL. RTE 121  
 & ILL. CENT. GULF RR  
 MACON COUNTY  
 SEC. 58-63HVB  
 STA 724+45.63

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 26 SHEETS
S. & L. I. 72	58-63HVB	MACON	37	42	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		



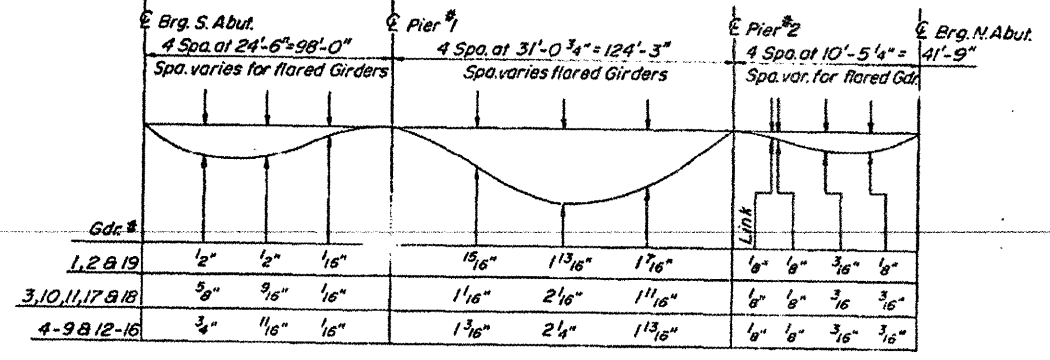
PLAN



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.	U. Wing	72264.677	42.307	712.697	712.697	C	GDR. 1	72297.298	40.953	712.670	712.717
	E. Ramp	72265.491	36.929	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	712.919
	P.C.	72270.413	0.001	713.529	713.529		GDR. 4	72299.556	24.000	713.026	713.094
	E. Pmnt.	72272.040	-12.000	713.346	713.346		GDR. 5	72300.550	16.667	713.189	713.245
	E. Wing	72273.396	-22.000	713.142	713.142		GDR. 6	72301.545	9.333	713.320	713.388
							GDR. 7	72302.539	2.000	713.436	713.504
							P.G.	72302.810	0.001	713.593	713.661
							GDR. 8	72303.533	-5.333	713.360	713.435
							GDR. 9	72304.527	-12.667	713.269	713.337
							GDR. 10	72305.522	-20.000	713.117	713.176
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	72267.991	35.044	712.714	712.714		GDR. 2	72307.976	36.243	712.732	712.779
	GDR. 3	72268.562	31.333	712.809	712.809		GDR. 3	72308.562	31.333	712.835	712.882
	GDR. 4	72269.556	24.000	712.964	712.964		GDR. 4	72309.556	24.000	713.039	713.107
	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	72311.545	9.333	713.332	713.401
	GDR. 7	72272.539	2.000	713.378	713.378		GDR. 7	72312.539	2.000	713.448	713.516
	P.G.	72272.810	0.001	713.535	713.535		P.G.	72312.810	0.001	713.605	713.673
	GDR. 8	72273.533	-5.333	713.328	713.328		GDR. 8	72313.533	-5.333	713.397	713.465
	GDR. 9	72274.527	-12.667	713.213	713.213		GDR. 9	72314.527	-12.667	713.230	713.348
	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	712.724
	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	72279.556	24.000	712.939	712.970		GDR. 4	72319.556	24.000	713.048	713.104
	GDR. 5	72280.550	16.667	713.143	713.174		GDR. 5	72320.550	16.667	713.201	713.258
	GDR. 6	72281.545	9.333	713.284	713.315		GDR. 6	72321.545	9.333	713.341	713.397
	GDR. 7	72282.539	2.000	713.401	713.432		GDR. 7	72322.539	2.000	713.456	713.512
	P.G.	72282.810	0.001	713.558	713.589		P.G.	72322.810	0.001	713.613	713.659
	GDR. 8	72283.533	-5.333	713.351	713.382		GDR. 8	72323.533	-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	712.687	712.712
	GDR. 2	72287.923	36.043	712.756	712.794		GDR. 2	72327.669	36.463	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	72289.556	24.000	713.009	713.064		GDR. 4	72329.556	24.000	713.053	713.099
	GDR. 5	72290.550	16.667	713.164	713.219		GDR. 5	72330.550	16.667	713.206	713.242
	GDR. 6	72291.545	9.333	713.304	713.359		GDR. 6	72331.545	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.	72292.810	0.001	713.578	713.633		P.G.	72332.810	0.001	713.617	713.653
	GDR. 8	72293.533	-5.333	713.370	713.425		GDR. 8	72333.533	-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

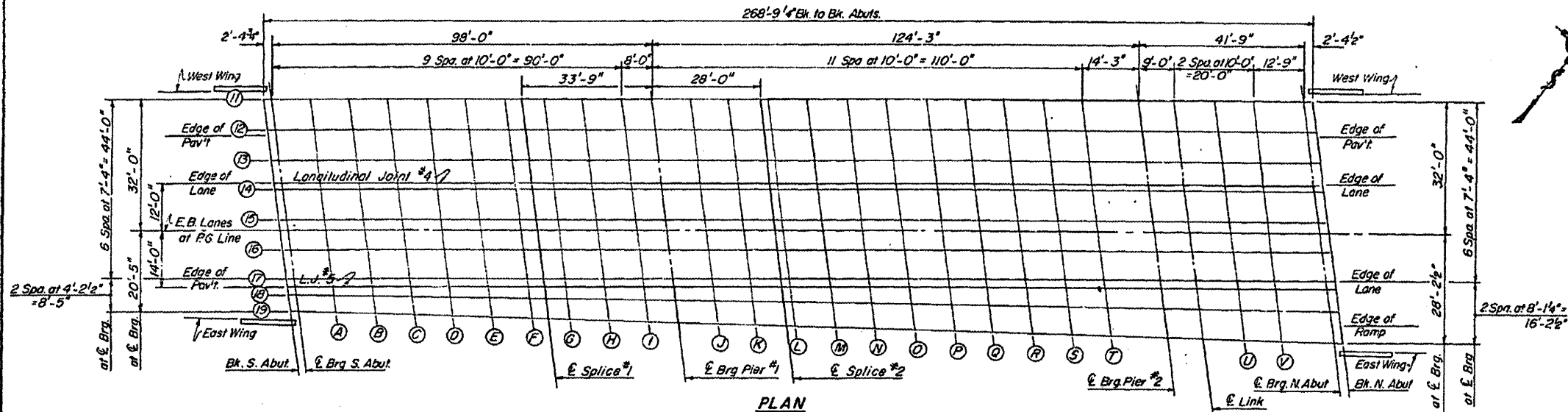
(P.G. Elev. applies at top of Class I Surfacing)

DESIGNED	QVK
CHECKED	G.E.P.
DRAWN	J.T.
CHECKED	G.E.P. 3/75

WESTBOUND 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.	SHEET NO. 5
F.A.I. 72	58-63HVB	MACON	37	44	26 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			



PLAN

LINE	BEAM OR GIRDER	STATION	OFFSET	THEORETICAL GRADE ELEVATION	ELEVATION ADJUSTED FOR DEAD LOAD DEFLECTION
Bk. of S. Abut.	W. Wing	72280.584	34.000	712.509	712.509
	E. Pvcst.	72282.339	24.000	713.121	713.121
	Lane	72283.566	12.000	713.374	713.374
	P. G.	72285.593	0.001	713.564	713.564
	E. Pvcst.	72287.200	-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	72290.612	-16.298	713.173	713.173
	GDR.19	72290.798	-20.617	713.086	713.086
A	GDR.11	72293.652	32.000	712.850	712.876
	GDR.12	72294.646	24.667	713.004	713.038
	GDR.13	72295.640	17.333	713.159	713.189
	GDR.14	72296.634	10.000	713.302	713.333
	GDR.15	72297.629	2.667	713.419	713.449
	P.G.	72297.990	0.001	713.586	713.617
	GDR.16	72298.623	-4.667	713.389	713.420
	GDR.17	72299.617	-12.000	713.276	713.303
	GDR.18	72300.612	-16.298	713.186	713.207
	GDR.19	72300.798	-20.617	713.096	713.117
B	GDR.11	72303.652	32.000	712.869	712.912
	GDR.12	72304.646	24.667	713.019	713.074
	GDR.13	72305.640	17.333	713.173	713.228
	GDR.14	72306.634	10.000	713.316	713.371
	GDR.15	72307.629	2.667	713.432	713.487
	P.G.	72307.990	0.001	713.600	713.655
	GDR.16	72308.623	-4.667	713.402	713.457
	GDR.17	72309.617	-12.000	713.289	713.335
	GDR.18	72310.612	-16.298	713.196	713.233
	GDR.19	72310.838	-21.007	713.103	713.141
C	GDR.11	72313.652	32.000	712.877	712.936
	GDR.12	72314.646	24.667	713.030	713.098
	GDR.13	72315.640	17.333	713.184	713.252
	GDR.14	72316.634	10.000	713.327	713.395
	GDR.15	72317.629	2.667	713.442	713.510
	P.G.	72317.990	0.001	713.610	713.677
	GDR.16	72318.623	-4.667	713.412	713.450
	GDR.17	72319.617	-12.000	713.298	713.351
	GDR.18	72320.612	-16.298	713.201	713.257
	GDR.19	72320.870	-21.302	713.105	713.151
D	GDR.11	72323.652	32.000	712.884	712.942
	GDR.12	72324.646	24.667	713.037	713.106
	GDR.13	72325.640	17.333	713.190	713.259
	GDR.14	72326.634	10.000	713.333	713.402
	GDR.15	72327.629	2.667	713.448	713.516
	P.G.	72327.990	0.001	713.615	713.684
	GDR.16	72328.623	-4.667	713.417	713.486
	GDR.17	72329.617	-12.000	713.303	713.360
	GDR.18	72330.612	-16.298	713.203	713.249
	GDR.19	72330.918	-21.597	713.104	713.151
E	GDR.11	72333.652	32.000	712.888	712.936
	GDR.12	72334.646	24.667	713.041	713.097
	GDR.13	72335.640	17.333	713.193	713.250
	GDR.14	72336.634	10.000	713.336	713.392
	GDR.15	72337.629	2.667	713.450	713.507
	P.G.	72337.990	0.001	713.617	713.674
	GDR.16	72338.623	-4.667	713.419	713.472
	GDR.17	72339.617	-12.000	713.304	713.351
	GDR.18	72340.612	-16.298	713.201	713.239
	GDR.19	72340.958	-21.892	713.098	713.136
F	GDR.11	72343.652	32.000	712.888	712.918
	GDR.12	72344.646	24.667	713.040	713.076
	GDR.13	72345.640	17.333	713.192	713.228
	GDR.14	72346.634	10.000	713.334	713.370
	GDR.15	72347.629	2.667	713.449	713.484
	P.G.	72347.990	0.001	713.616	713.651
	GDR.16	72348.623	-4.667	713.417	713.453
	GDR.17	72349.617	-12.000	713.302	713.337
	GDR.18	72350.612	-16.298	713.196	713.216
	GDR.19	72350.998	-22.187	713.089	713.113

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

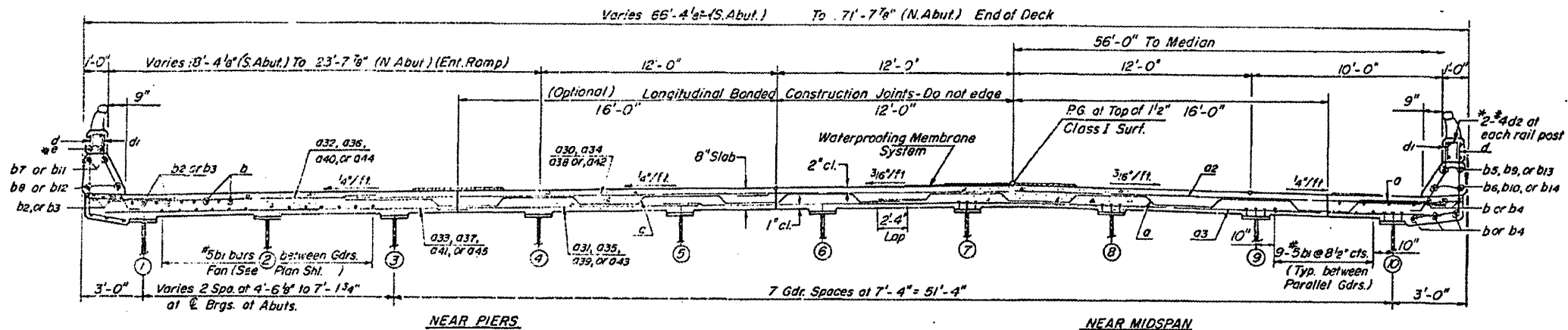
DESIGNED	D.V.K.
CHECKED	G.E.P.
DRAWN	J.T.
CHECKED	

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

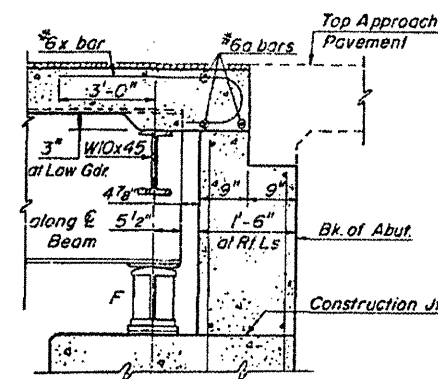
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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

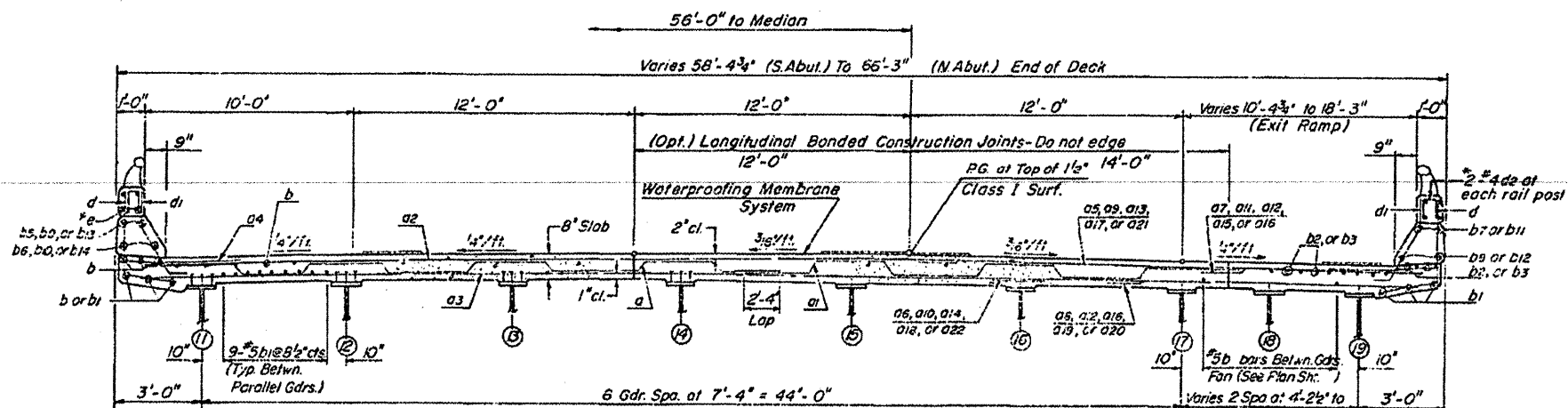
SHEET NO. 10  
26 SHEETS



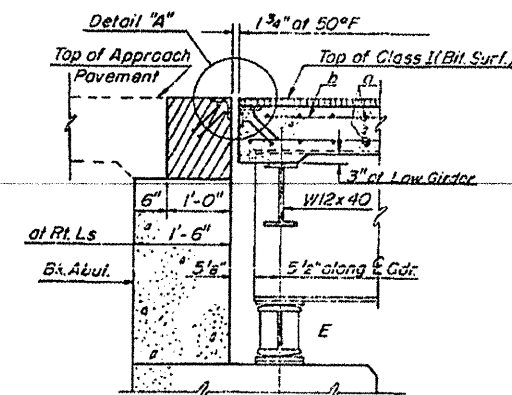
CROSS SECTION (WEST BND. LANES)  
(Looking upstation)



SECTION B-B  
(N. Abuts.)

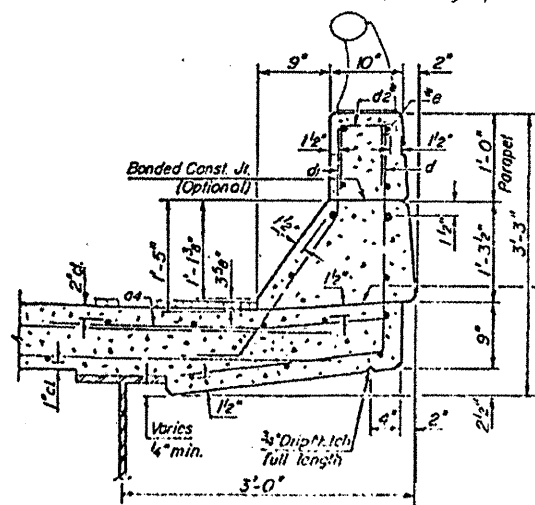
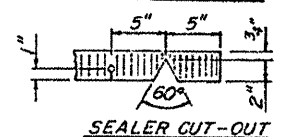


CROSS SECTION (EAST BND. LANES)  
(Looking upstation)



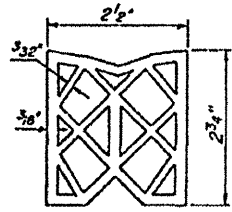
SECTION A-A  
(S. Abuts.)

PREFORMED JT SEALER END TREATMENT

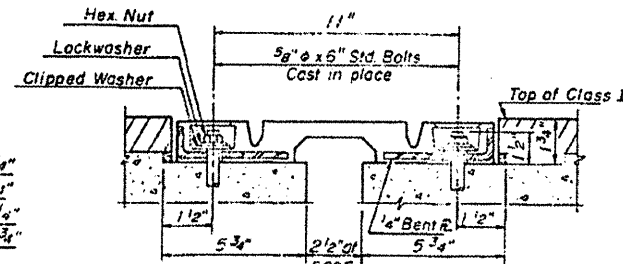
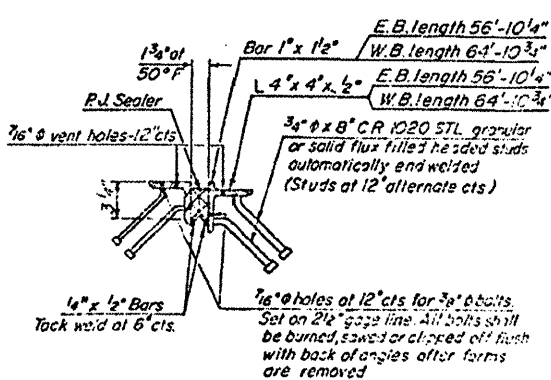


TYPICAL CURB SECTION

\*Parapet reinforcement and Class X Concrete are billed on Sheet 11.



PREFORMED JOINT SEALER 2 1/2"



DETAIL NEOPRENE EXP. JT. (2 1/2") at LINK  
(See Sheet 25 for alternate types)

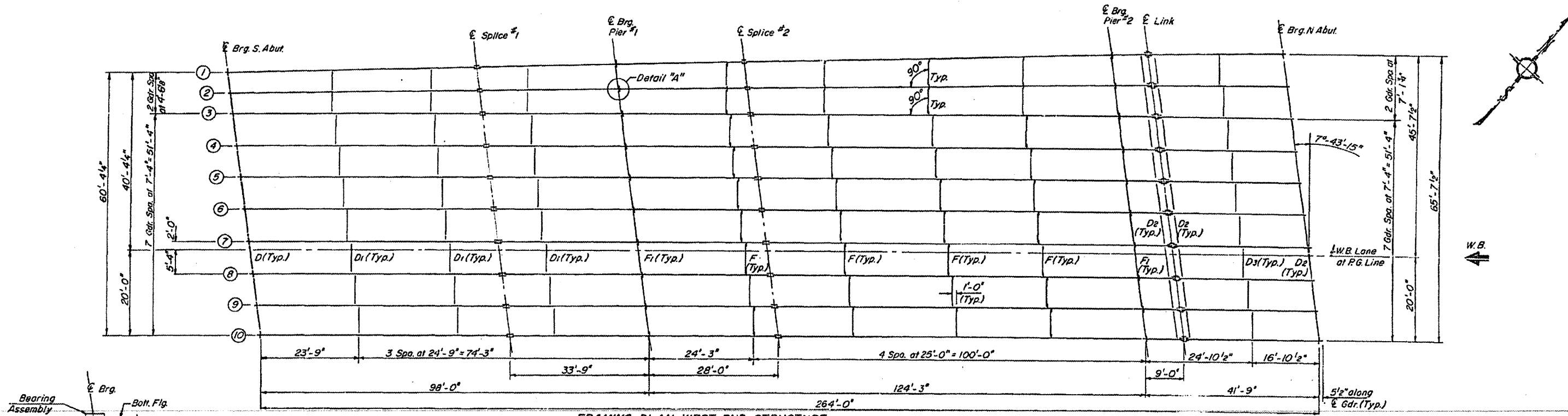
SUPERSTRUCTURE DETAILS  
F.A.I-72 over ILL. RTE. 121  
& ILL. CENT. GULF R.R.  
MACON COUNTY  
SEC. 58-63HVB  
STA 724+45.63

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

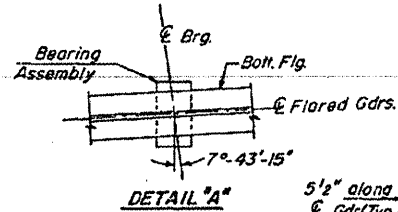
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
P.A. 1-72	58-63+VB	MACON	27	52
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

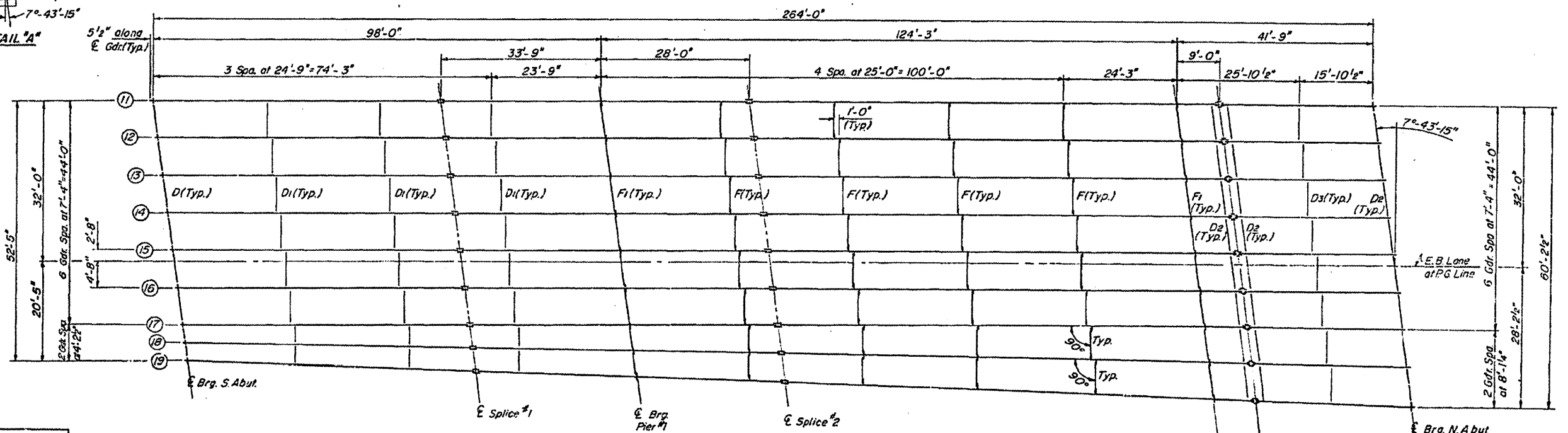
SHEET NO. 13  
26 SHEETS



FRAMING PLAN WEST BND. STRUCTURE



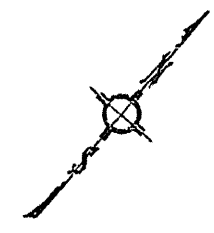
DETAIL A



FRAMING PLAN EAST BND. STRUCTURE

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

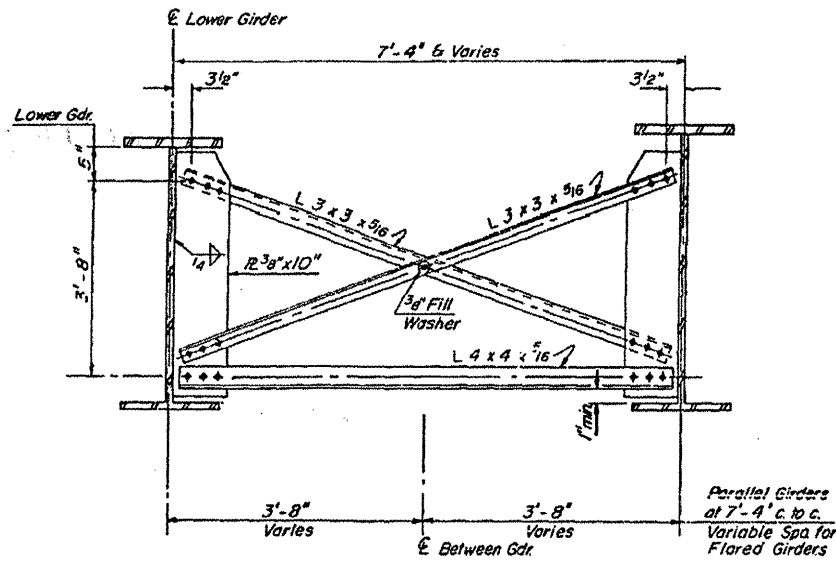
FRAMING PLAN  
FAI 72 OVER ILL. RTE. 121  
8 ILL. CENT. GULF RR.  
MACON COUNTY  
SEC. 58-63 HVB  
STA. 724+45.63





STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

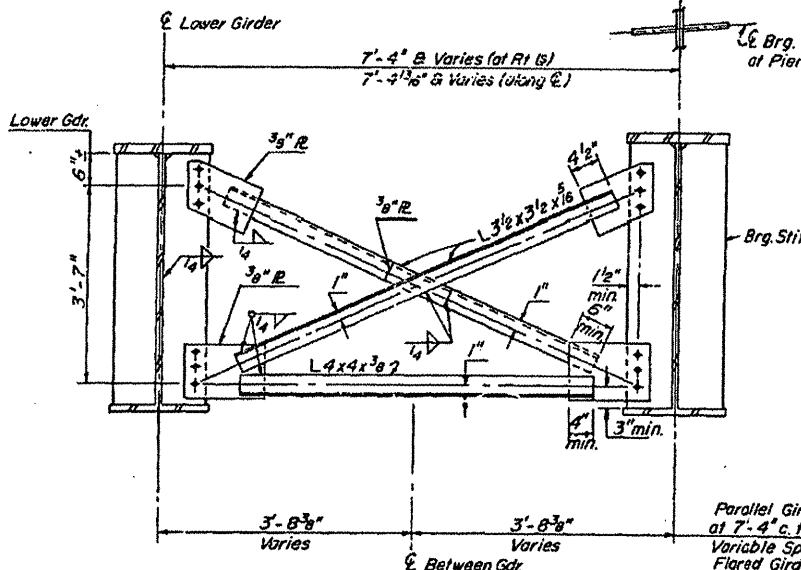
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 15
72	58-63HVB	MACON	27	54	26 SHEETS
FED. ROAD DIST. NO. 7		KMNOBE	FED. AID PROJECT		



**CROSS FRAME F**

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

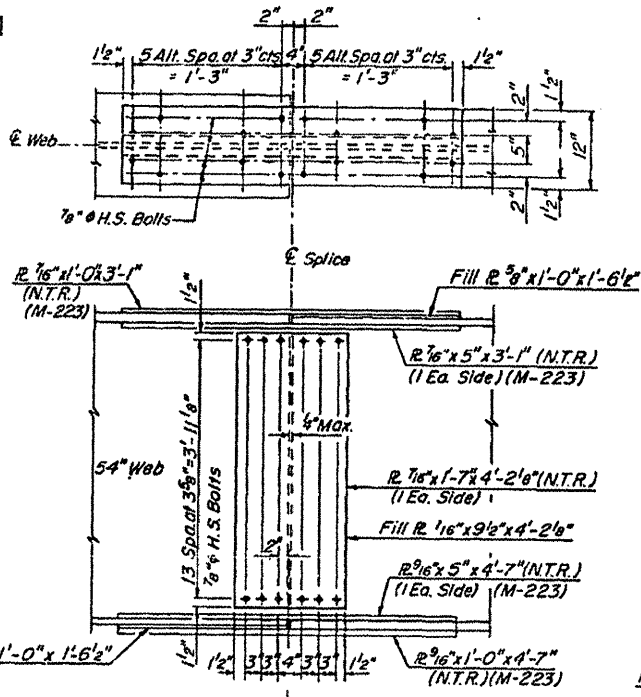
Bolts 3/4" φ  
Open Holes 1 1/16" φ  
1 1/16" φ holes in gusset R.s for 3/4" φ bolts  
Hardened washers shall be required  
over holes in angles.



**CROSS FRAME F (Piers)**

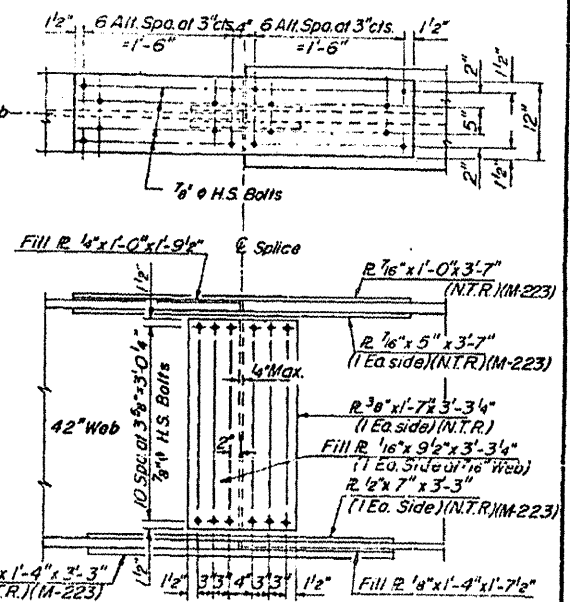
No. Required = 26 ea. for 7'-4" Gdr Spa  
8 ea. for Flared Gdrs.

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.

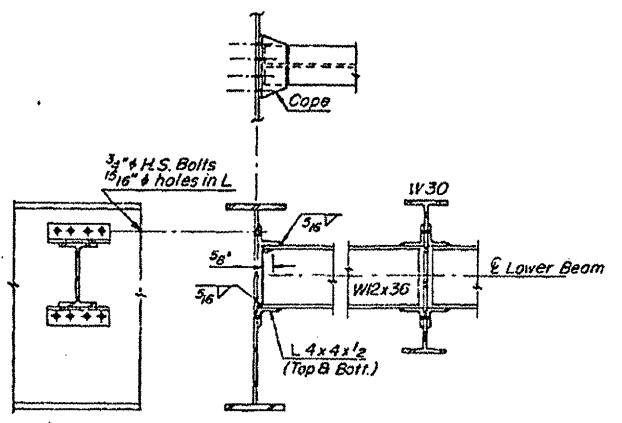


**FIELD SPLICE NO. 2**

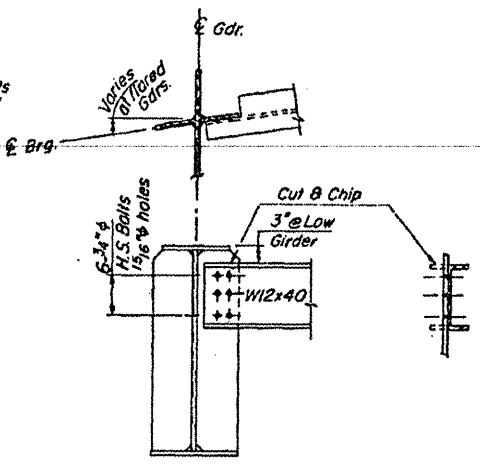
Note: All bolts to be 7/8" φ H.S. Bolts



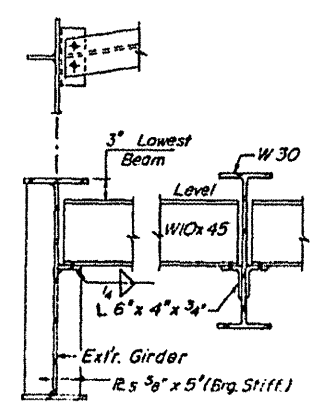
**FIELD SPLICE NO. 1**



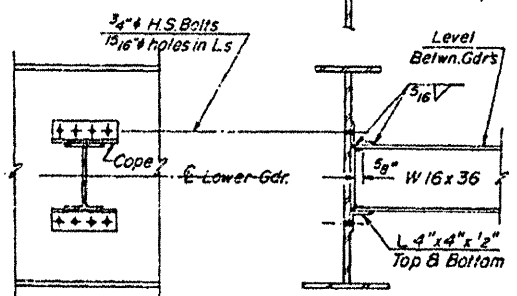
**DIAPHRAGM D3**  
(17 Req'd.)



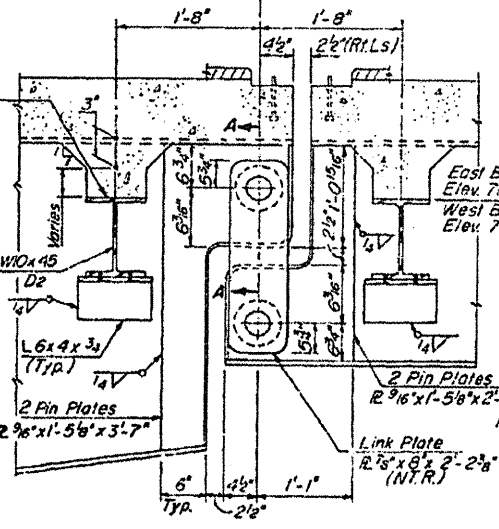
**DIAPHRAGM D**  
(17 Req'd.)



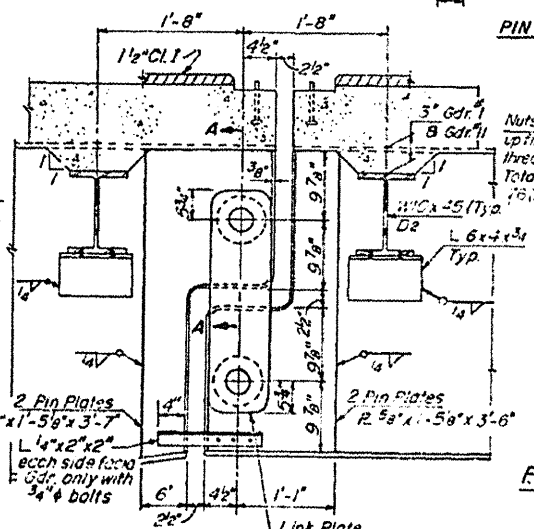
**DIAPHRAGM D2 (N. Abuts. & Link Loc.)**  
(51 Req'd.)



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



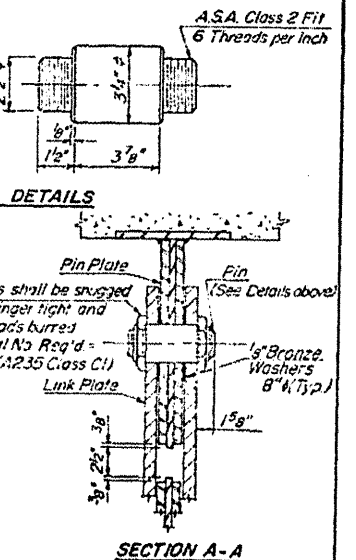
**INTERIOR GIRDERS**



**EXTERIOR GIRDERS**



**LINK CONNECTION**



**SECTION A-A**

**STRUCTURAL STEEL**  
FA.I 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.
S. R. I. F. A. I. - 72	58-63HVB	MACON	27	53
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 14  
26 SHEETS

**INTERIOR GIRDER REACTION TABLE**

	S. Abut.	Pier 1	Pier 2	*N. Abut. Int.	N. Abut. Ext.
R <sup>l</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**

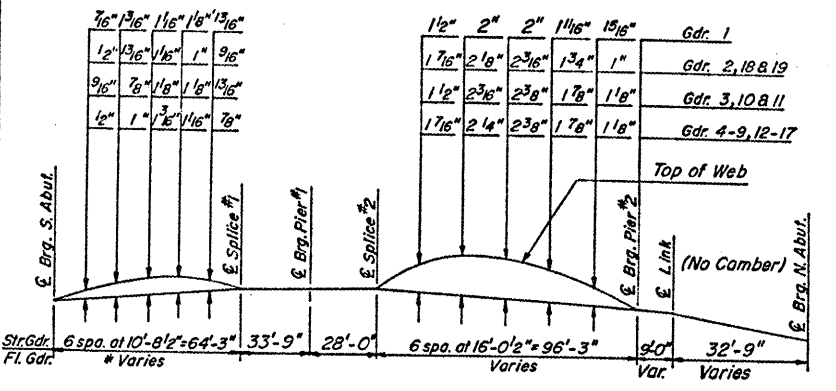
Gdr.	Loc	¢ Brg. S. Abut.	¢ Splice No. 1	¢ Brg. Pier No. 1	¢ Splice No. 2	¢ Brg. Pier No. 2	¢ Link	¢ Brg. N. Abut.
1	711.83	711.92	711.88	711.85	711.39	711.35	711.12	
2	711.92	711.96	711.94	711.92	711.52	711.48	711.31	
3	712.02	712.08	712.06	712.04	711.66	711.62	711.45	
4	712.17	712.23	712.21	712.20	711.80	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	712.09	712.04	711.87	
7	712.59	712.64	712.62	712.60	712.19	712.15	711.98	
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

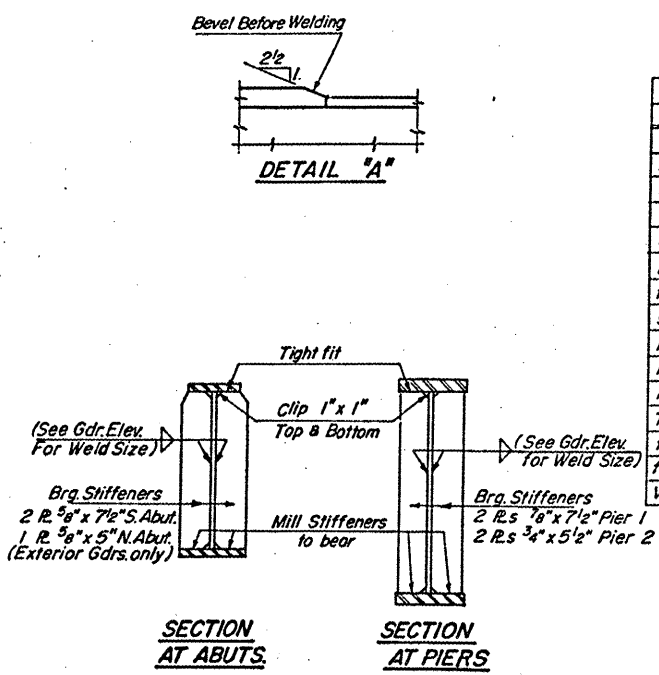
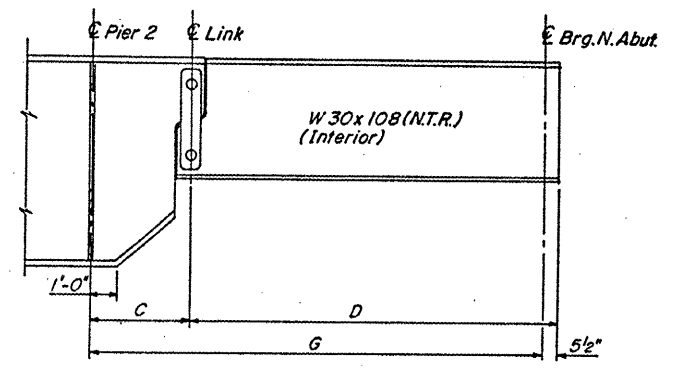
**INTERIOR GIRDER MOMENT TABLE**

	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	4115	25984	20051	4470	7066
I <sub>c</sub> (in. <sup>4</sup> )	39654		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			
e (K/I)	0.927	1.442	0.960	1.330	1.312	1.253
M <sup>l</sup> (K)	406.5	2221.2	1014.1	240.8	175.9	169.5
f <sub>s</sub> <sup>l</sup> (ksi)	6.06	18.39	11.15	4.00	7.04	6.20
s <sup>l</sup> (K/I)	0.404		0.421			
M <sub>s</sub> <sup>l</sup> (K)	250.6		508.6			
M <sup>t</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>l</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			

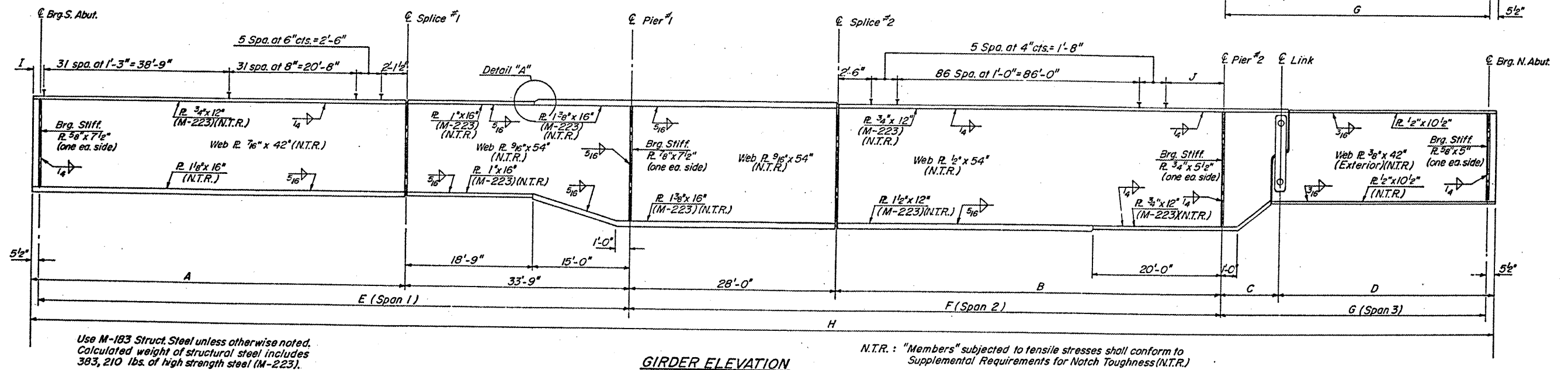
I<sub>s</sub> and S<sub>s</sub> are the moment of inertia and section modulus of the steel section.  
I<sub>c</sub> and S<sub>c</sub> are the moment of inertia and section modulus of the composite section used in computing f<sub>s</sub>.  
VR is the maximum  $\frac{1}{4}$  Impact shear range in span used to determine shear connector spacing.



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



**SECTION AT ABUTS.**  
**SECTION AT PIERS**



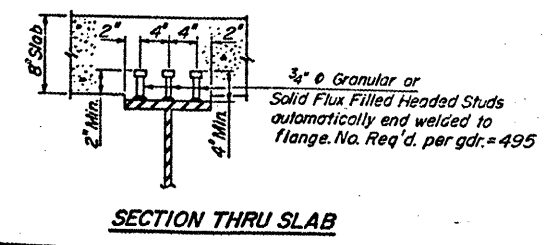
Use M-183 Struct. Steel unless otherwise noted.  
Calculated weight of structural steel includes 383, 210 lbs. of high strength steel (M-223).

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

**GIRDER ELEVATION**

**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'-1 3/4"	264'-3 1/8"	5'16"	4'-11 1/4"
Gdr. 2	64'-6 1/8"	96'-1 1/8"	8'-11 7/8"	33'-2"	97'-10 7/16"	124'-1 1/8"	41'-8 3/8"	264'-6 1/8"	6'16"	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 1/4"	9'-0 1/4"	33'-3 3/8"	98'-2 1/2"	124'-6 1/8"	41'-10 1/8"	265'-5 1/8"	10'1/2"	4'-8 1/8"
Gdr. 19	65'-1 1/8"	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"



**SECTION THRU SLAB**

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

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

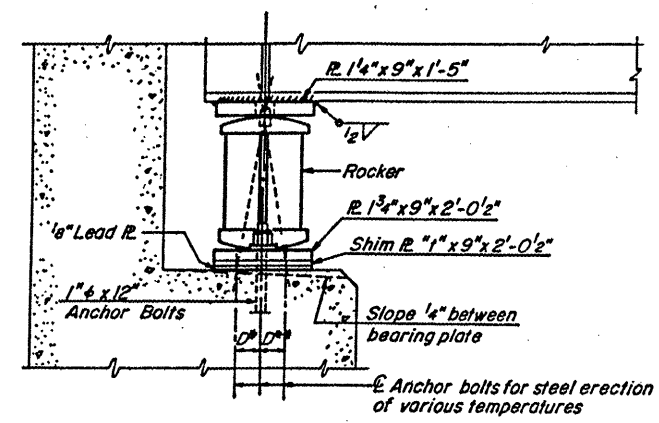
9A

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

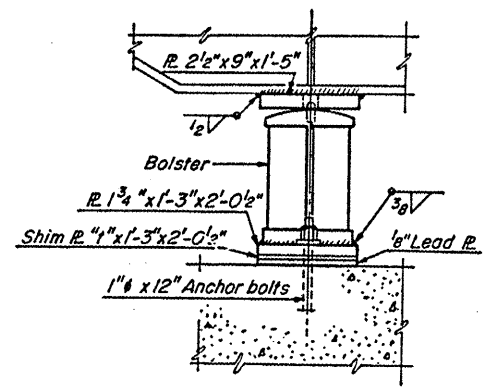
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.I-72	58-63HVB	MACON	57	55
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 16  
26 SHEETS

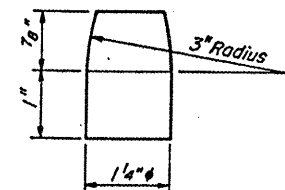
9B



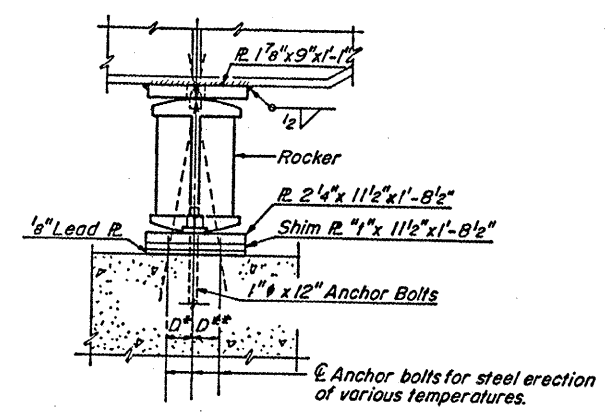
ELEVATION SOUTH ABUT.



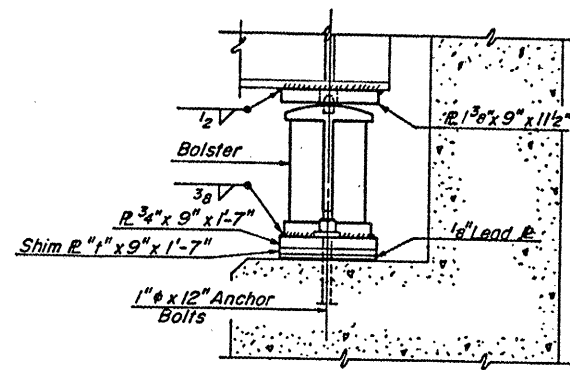
ELEVATION PIER #1



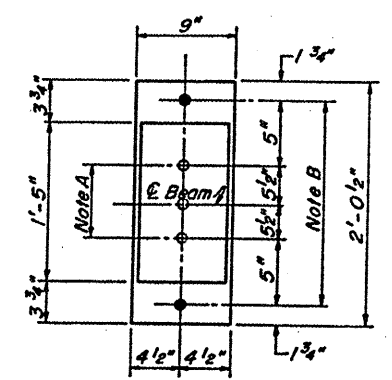
PINTLE



ELEVATION PIER #2

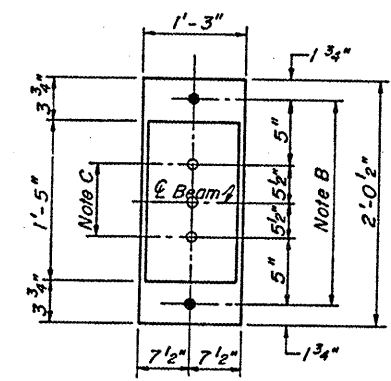


ELEVATION NORTH ABUT.



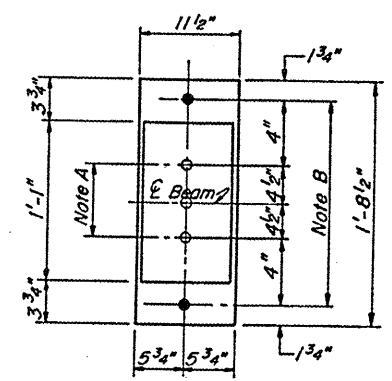
PLAN

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



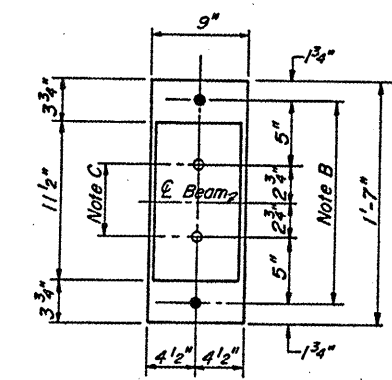
PLAN

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.

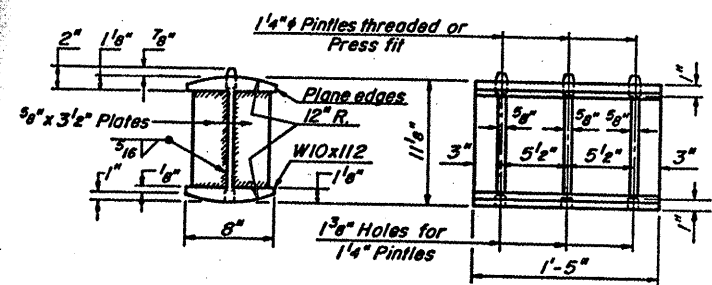


PLAN

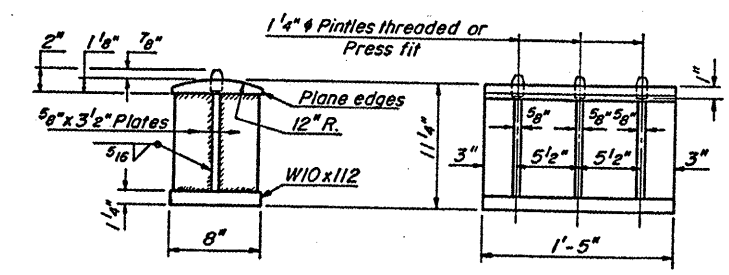
NOTE C  
1 3/8"  $\phi$  Holes 1" deep in top R only for 1 1/4"  $\phi$  pintles.



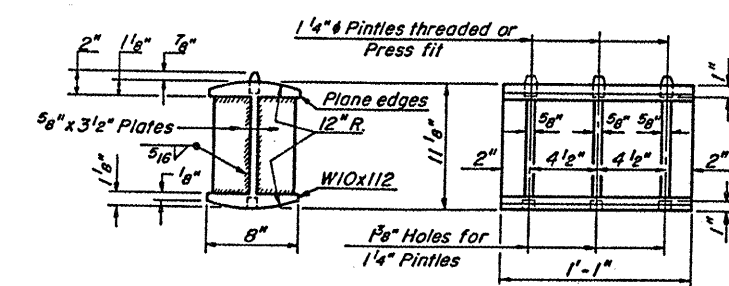
PLAN



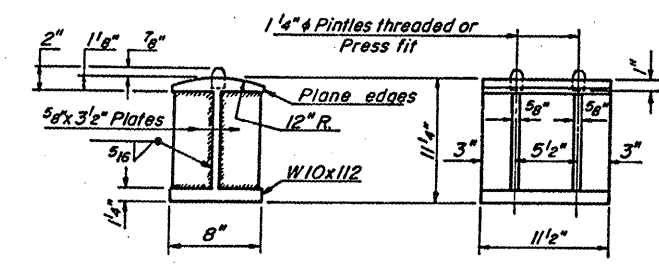
ROCKER SOUTH ABUT.



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 1/8" 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.

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

Location Gdr.	Su. Abut.	Pier 1	Pier 2	No. Abut.
2		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.I-72 over ILL. RTE. 121  
& ILL. CENT-GULF R.R.  
MACON COUNTY  
SEC. 58-63HVB  
STA. 724+45.63