

ESTIMATED BRIDGE QUANTITIES

ITEM NUMBER		801	801	SP&802	SP&802	803	804	SP 805-7	SP&806	812	SP	SP		
UNIT OF BRIDGE	ITEM	COMMON EXCAVATION FOR STRUCTURES	ROCK EXCAVATION FOR STRUCTURES	CLASS A CONCRETE	CLASS S CONCRETE	REINFORCING STEEL	STEEL BEARING PILING (12 BP 53)	STEEL OR ALUM. PLATE GUARD BRIDGE RAILING	STRUCTURAL STEEL IN BEAM SPANS	BRIDGE NAME PLATES (TYPE C)	REMOVAL OF EXISTING BRIDGE STRUCTURE (ILLINOIS BAYOU) (ILL. BAY. RELIEF)	REMOVAL OF EXISTING BRIDGE STRUCTURE (MILL CREEK)		
		UNIT	CU.YD.	CU.YD.	CU.YD.	CU.YD.	LB.	LIN.FT.	LIN.FT.	LB.	PLATE	COMPL. ITEM	COMPL. ITEM	
ILLINOIS BAYOU BRIDGE NO. 3643	WEST ABUTMENT		100	-	31.90	19.53	7765	468	-	639	1			
	PIER NO. 1		93	-	57.29	12.31	9710	336	-	-	-			
	PIER NO. 2		69	-	57.29	12.31	9710	348	-	-	-			
	PIER NO. 3		142	43	133.44	18.94	17192	-	-	-	-			
	PIER NO. 4		165	45	133.44	18.94	11514	-	-	-	-			
	PIER NO. 5		58	-	61.70	12.31	11684	300	-	-	-			
	PIER NO. 6		88	-	60.85	12.31	11628	252	-	-	-			
	PIER NO. 7		72	-	57.29	12.31	9710	288	-	-	-			
	EAST ABUTMENT		80	-	39.90	19.52	7765	336	-	639	-			
	ONE 61'-10", 77'-0", 77'-0", 61'-10" CONTINUOUS I-BEAM SPAN		-	-	-	209.31	50011	-	576.8	240531	-			
	ONE 61'-10", 77'-0", 77'-0", 61'-10" CONTINUOUS I-BEAM SPAN		-	-	-	209.31	50011	-	576.8	240531	-			
TOTALS BRIDGE NO. 3643		867	88	641.1	557.1	196700	23,328	1153.6	482340	1	100%			
MILL CREEK BRIDGE NO. 3644	WEST ABUTMENT		122	14	22.39	18.05	6037	-	-	639	1			
	PIER NO. 1		217	16	44.91	15.49	8833	-	-	-	-			
	PIER NO. 2		151	12	35.51	15.19	7002	-	-	-	-			
	EAST ABUTMENT		46	6	11.99	18.05	3877	-	-	639	-			
	TWO 40'-8" COMPOSITE I-BEAM SPAN		-	-	-	60.05	14435	-	168.5	61328	-			
	ONE 98'-7" COMPOSITE I-BEAM SPAN		-	-	-	78.07	17316	-	198.7	150414	-			
TOTALS BRIDGE NO. 3644		539	48	115.3	204.9	57500	-	367.2	213020	1		100%		
TOTALS, BRIDGES NO. 3643, 3644			1406	136	756.4	762.0	254,200	2,328	1520.8	695,360	2	100%	100%	

BRIDGES NO. 3643, 3644 DRAWING NO. 11914

NO.	MADE	DATE	REVISIONS

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARKANSAS

JOB 8516

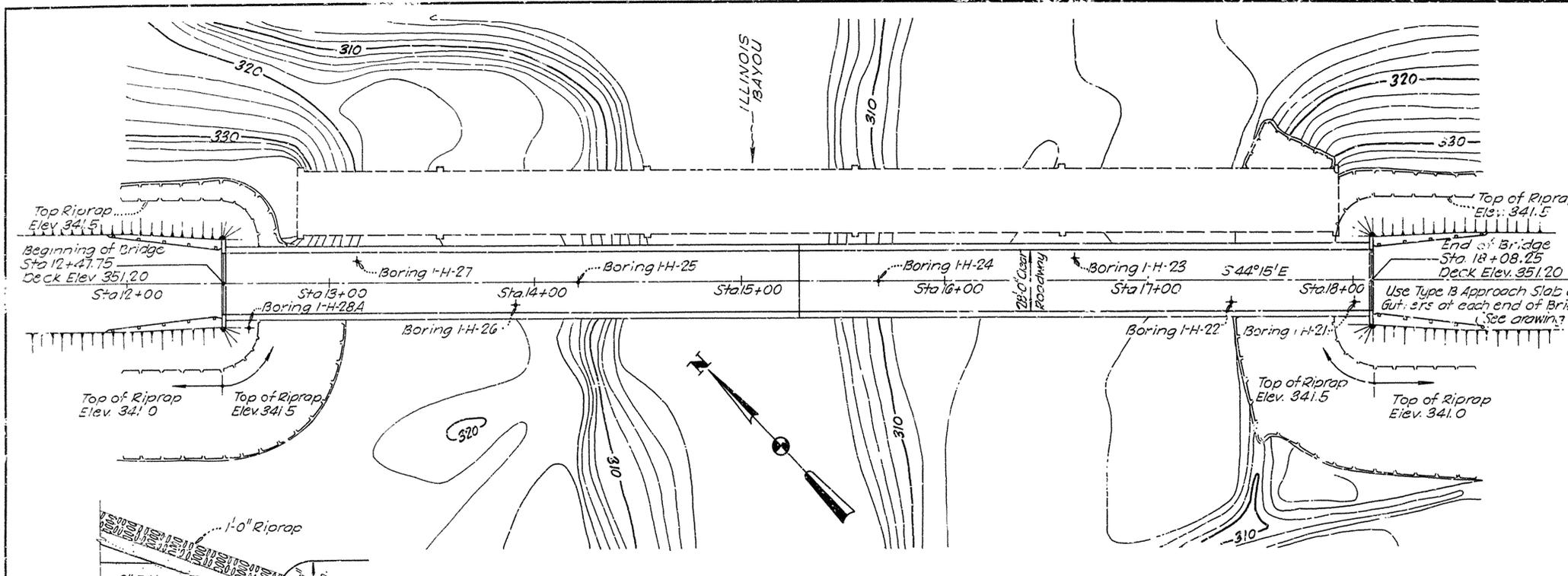
ILLINOIS BAYOU BRIDGE
MILL CREEK BRIDGE

ESTIMATED BRIDGE QUANTITIES

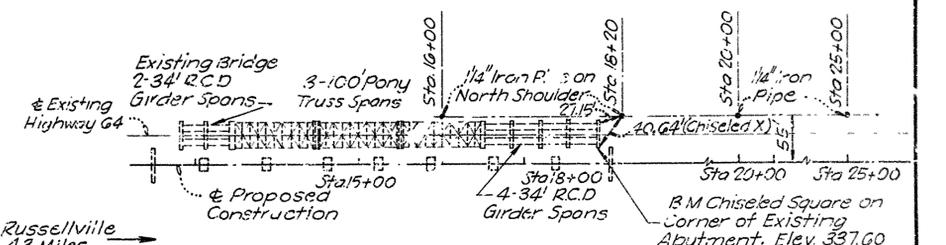
DRAWN BY GWB	GARVER & GARVER, Inc. ENGINEERS LITTLE ROCK, ARKANSAS	SCALE None
CHECKED BY JRB		SHEET No 58 OF 60
DATE Aug 1962		

GENERAL NOTES:

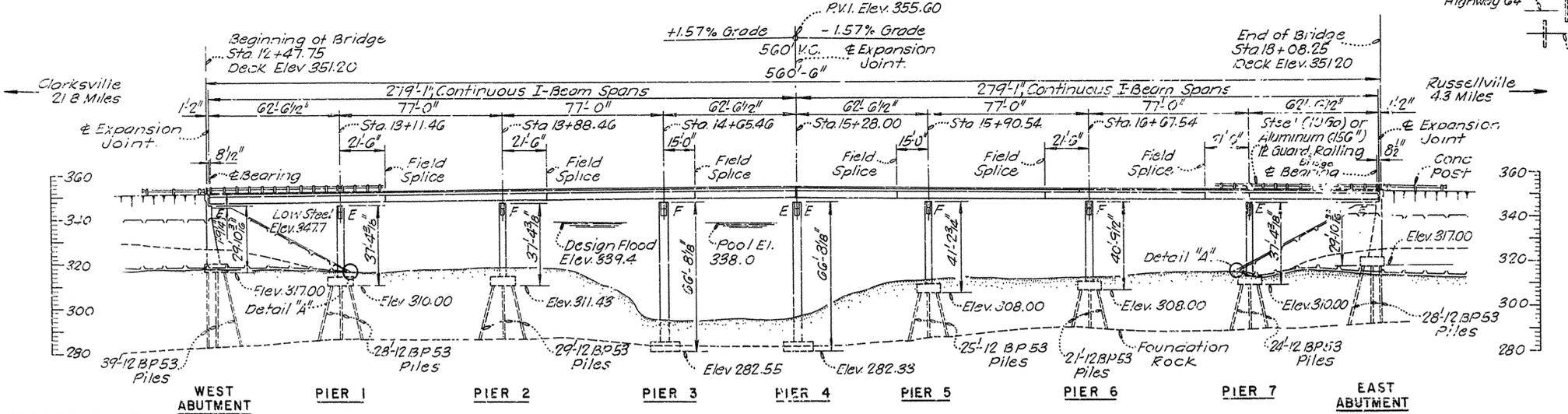
1. Design Specifications: Arkansas State Highway Commission Standard Specifications for Highway Construction (1959), With designated Special Provisions, and A.A.S.H.O Standard Specifications for Highway Bridges (1961), With Revisions of 1962.
2. Design Loading: H 20-S16 (Dead Load includes an Allowance of 15 lbs per square foot of Roadway for future wearing surface)
3. All Elevations shown on the drawings refer to Mean Sea Level Elevations.
4. Unless otherwise shown, all dimensions are measured at 90° F.
5. Roadway, Sidewalks and Bridge Railing Posts shall be Constructed of Class S Concrete. Abutments and Piers shall be Constructed of Class A and Class S Concrete as shown on the drawings.
6. All Structural Steel shall be A.S.T.M. Designation A36. Reinforcing Steel shall be deformed bars of intermediate or hard grade.
7. All Rivets are 7/8" unless otherwise noted. High Strength Bolts of the same size may be substituted for Rivets in the Field.
8. Reinforcing Steel shall be Spliced as shown or as Approved by the Engineer. All Splices shall be Lapped 30 dia. minimum and Bends shall conform to Arkansas Highway Department Standards. On the drawings Bar sizes are designated by number. The First Digit or the First Two, as the case may be, indicating the size of the Bar. Dimensions are Center to Center of Bars.
9. Welding shall conform to the American Welding Society Specifications for Welded Highway and Railroad Bridges. (Latest Edition)
10. Boring Data were obtained by the U.S. Army Engineer District, Little Rock, in February, 1960 and are shown on the drawings in the form of Logs. These Logs indicate Material Encountered in the Particular Hole Bored, and must be considered as approximate only. The Contractor shall satisfy himself as to the Foundation conditions to be Encountered. For which the State of Arkansas will assume no Responsibility.



PLAN Scale: 1/4" = 30'



GROUND PLAN Scale: 1/2" = 100'



ELEVATION Scale: 1/2" = 30'

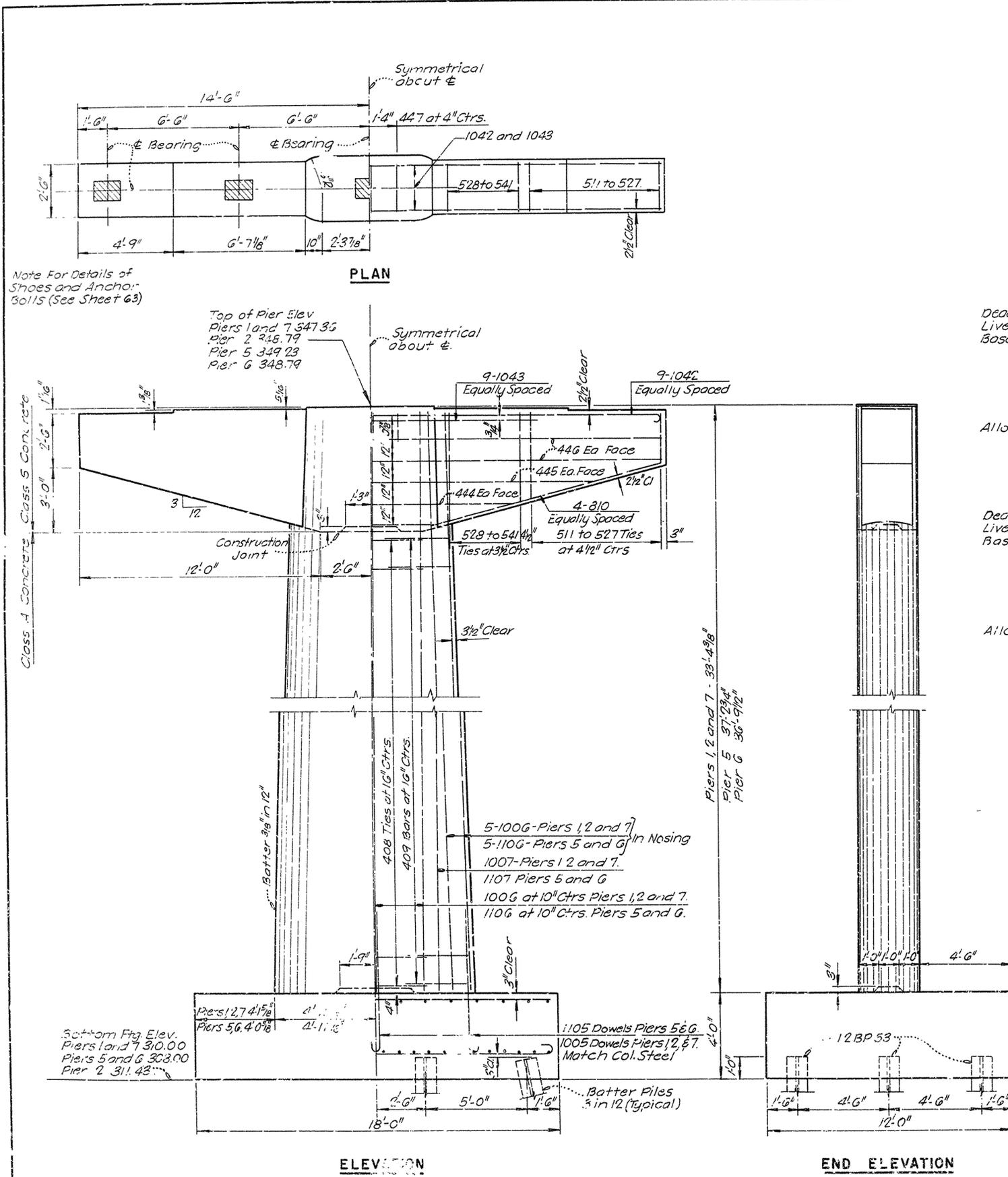
11. The Existing Highway G4 Bridge described generally on the Ground Plan above shall be removed in the manner and to the extent set forth in the Special Provision included in the Specifications.
12. Lengths of 12 BP53 Piles shown shall be ordered and driven to refusal, or to a minimum depth of 2 feet into the material designated as rock on the borings. The minimum bearing capacity per pile shall be 47 Tons. Cutoff and/or buildup shall be measured and paid for as provided in the specifications.

TOP OF RIPRAP ELEV.
Reservoir Side 341.0
Land Side 341.5

Note: Footings for Piers 3 & 4 to be carried at least 2'-0" into Rock.

BORING NO.	STA.	OFFSET	SOIL LOG DESCRIPTION
BORING NO. IH-28A	Sta 12+60	Offset 20' Rt. &	El. 318.0 Clay (CL) Firm El. 302.5 Silty Clay (CL) Very Soft El. 294.2 Clay (CL) & Sand Boulders El. 285.9 S.S. Lenses Shale, Black, Hard El. 282.1 Soft Shale Lenses El. 278.7 Sandy Shale, Mod. Hard El. 276.7 Shale, Black, Hard Sandy
BORING NO. IH-27	Sta 13+13	Offset 10' Lt. &	El. 317.5 Sandy Clay (CL) Firm El. 301.8 Silty Clay (CL) Soft El. 299.2 Silty Clay (CL) Soft El. 287.5 Gravel (GP) w/ Silty Clay Boulders El. 287.0 Silty Clayey Weathered Shale, Black, Hard El. 283.1 SS Laminations El. 281.3 Shale, Black, Hard w/ SS Laminations
BORING NO. IH-26	Sta 13+90	Offset 10' Rt. &	El. 317.3 Sandy Clay (CL) Firm El. 293.0 Sandy Silt and Silty Sand (SM & ML) El. 288.9 Sandy Gravel (GM) El. 286.7 Shale, Gray, Soft Weathered El. 275.3 Shale, Black, Hard w/ SS Laminations
BORING NO. IH-25	Sta 14+20	On &	El. 317.0 Sandy Silt (ML) El. 315.5 Clay (CL) Firm El. 308.5 Clayey Silty Sand (SC) El. 305.0 Silty Sand (SM) Very Soft El. 288.0 Silty Gravel (GM) Boulders El. 288.0 S.S. Shaly w/ Soft Shale Lenses El. 286.0 Shale, Hard, Black w/ SS Laminations El. 277.5 Shale, Sandy, Hard Few SS Lenses
BORING NO. IH-24	Sta 15+67	On &	El. 310.0 Sandy Silt (ML) Firm El. 305.5 Silty Clay (CL) Firm El. 300.0 Silty Clay (CL) Soft El. 289.0 Boulders El. 286.0 S.S. Shaly w/ Soft Shale Lenses El. 278.5 Shale, Hard, Black w/ SS Laminations
BORING NO. IH-23	Sta 16+63	Offset 10' Lt. &	El. 315.0 Sandy Clay (CL) Firm El. 305.7 Silty Clay (CL) Soft El. 300.3 Silty Sand (SM) Boulders El. 292.0 Silty Sand (SM) Boulders El. 285.5 SS Gray, Hard w/ Few Shale Laminations
BORING NO. IH-22	Sta 17+40	Offset 10' Rt. &	El. 315.0 Sandy Clay (CL) Firm El. 310.0 Silty Sand (SM) Soft El. 291.0 Boulders El. 280.0 SS Gray, Hard Fine to Med. Grained
BORING NO. IH-21	Sta 18+00	Offset 10' Lt. &	El. 322.0 Clay (CL) Med Firm El. 317.0 Clay (CL) Med Firm El. 311.7 Clay (CL) Soft El. 304.9 Clay (CL) Firm Small Boulders El. 300.5 Silty Sand (SM) Soft El. 294.6 Sandy Silt (ML) Weathered El. 293.0 SS Shale El. 289.3 SS Hard Fine to Medium Grained

BRIDGE NO. 3643		DRAWING NO. 11915	
NO.	MADE	DATE	REVISIONS
ARKANSAS STATE HIGHWAY COMMISSION LITTLE ROCK, ARKANSAS			
JOB 8516			
ILLINOIS BAYOU BRIDGE			
GENERAL PLAN AND ELEVATIONS			
DRAWN BY	G.W.B.	CHECKED BY	W.U.D.
DATE	Aug. 1962	SCALE	AS NOTED
GARVER & GARVER, Inc. ENGINEERS		LITTLE ROCK, ARKANSAS	
		57 OF 69	



Note For Details of Shoes and Anchor Bolts (See Sheet 63)

Class A Concrete Class B Concrete

REINFORCEMENT SCHEDULE STRAIGHT BARS						
PIERS 1, 2 AND 7			PIER 5			PIER 6
MARK	NO. EA. PIER	LENGTH	MARK	NO.	LENGTH	NO. LENGTH
503	10	17'-6"	503	10	17'-6"	10 17'-6"
504	5	11'-6"	504	15	11'-6"	15 11'-6"
1006	24	33'-1"	1106	24	36'-1 1/8"	24 36'-6 1/8"
1007	4	18'-8"	1107	4	20'-0"	4 20'-0"
1043	9	16'-0"	1043	9	16'-0"	9 16'-0"
444	2	14'-0"	444	2	14'-0"	2 14'-0"
445	2	22'-0"	445	2	22'-0"	2 22'-0"
446	4	28'-6"	446	4	28'-6"	4 28'-6"

REINFORCEMENT SCHEDULE BENT BARS							BENDING DIAGRAM
PIERS 1, 2 AND 7			PIER 5			PIER 6	
MARK	NO. EA. PIER	LENGTH	MARK	NO.	LENGTH	NO. LENGTH	
701	17	19'-2"	701	17	19'-2"	17 19'-2"	
702	24	13'-2"	702	24	13'-2"	24 13'-2"	
1005	28	8'-3"	1105	28	8'-9"	28 8'-9"	
408	21	15'-9 3/4"	408	24	15'-9 3/4"	24 15'-9 3/4"	
409	42	7'-5 5/8"	409	48	7'-5 5/8"	48 7'-5 5/8"	
810	4	29'-4 1/2"	810	4	29'-4 1/2"	4 29'-4 1/2"	
511 To 527	2 Ea.	Varies 9'-5 1/2" To 12'-5 1/2"	511 To 527	2 Ea.	Varies 9'-5 1/2" To 12'-5 1/2"	2 Ea. 9'-5 1/2" To 12'-5 1/2"	
528 To 541	2 Ea.	Varies 12'-7 1/4" To 14'-6"	528 To 541	2 Ea.	Varies 12'-7 1/4" To 14'-6"	2 Ea. 12'-7 1/4" To 14'-6"	
1042	9	31'-3"	1042	9	31'-3"	9 31'-3"	
447	9	4'-4 1/2"	447	9	4'-4 1/2"	9 4'-4 1/2"	

PIER LOADS PIERS 1, 2 AND 7

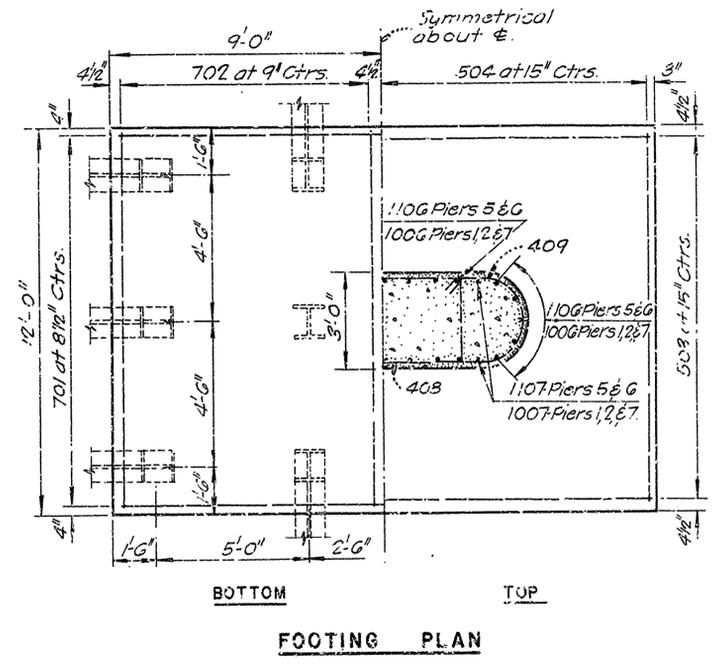
Dead Load From Superstructure 353.0K
 Live Load 81.6K/Lane
 Base Pressures
 GROUP I Max. 81.7K/pile Min. 38.9K/pile
 GROUP II Max. 88.6K/pile Min. 10.7K/pile
 GROUP III Max. 114.8K/pile Min. 4.1K/pile

Allowable Base Pressures
 GROUP I 93.5K/pile
 GROUPS II and III 116.8K/pile

PIERS 5 AND 6

Dead Load From Superstructure 353.0K
 Live Load 81.6K/Lane
 Base Pressures
 GROUP I Max. 81.0K/pile Min. 38.8K/pile
 GROUP II Max. 93.7K/pile Min. 7.6K/pile
 GROUP III Max. 116.7K/pile Min. 4.5K/pile

Allowable Base Pressures
 GROUP I 93.5K/pile
 GROUP II and III 116.8K/pile



BRIDGE NO. 3643 DRAWING NO. 11917

NO.	MADE	DATE	REVISIONS

ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARKANSAS

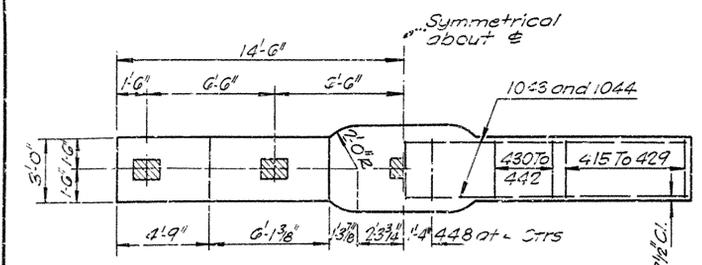
JOB 8516

ILLINOIS BAYOU BRIDGE
 PIERS 1, 2, 5, 6 AND 7

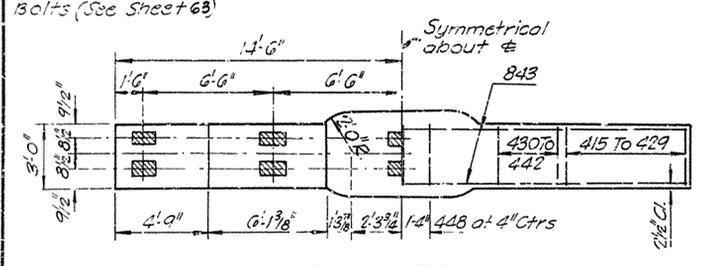
DRAWN BY J.R.B.
 CHECKED BY W.U.D.
 DATE Aug. 1962

GARVER & GARVER, Inc.
 ENGINEERS
 LITTLE ROCK, ARKANSAS

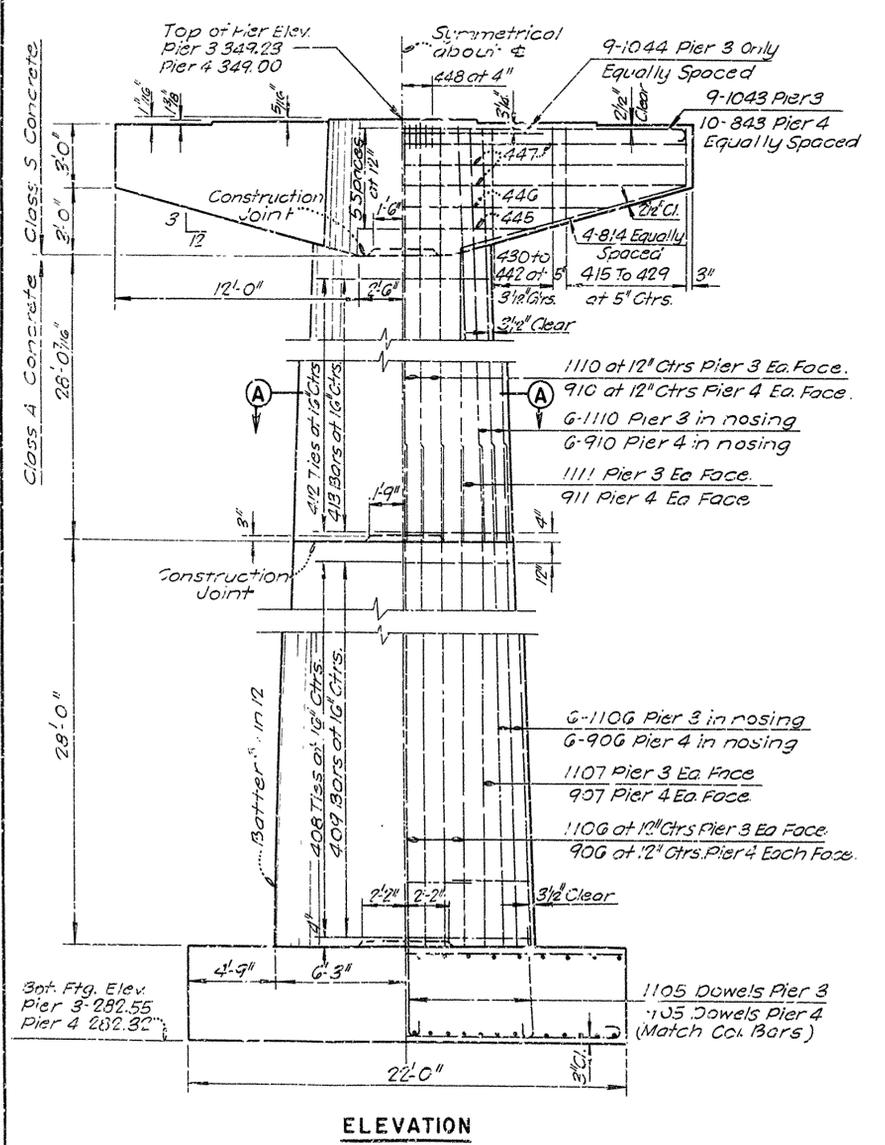
SCALE 3/8" = 1'-0"
 SHEET NO. 50 OF 69



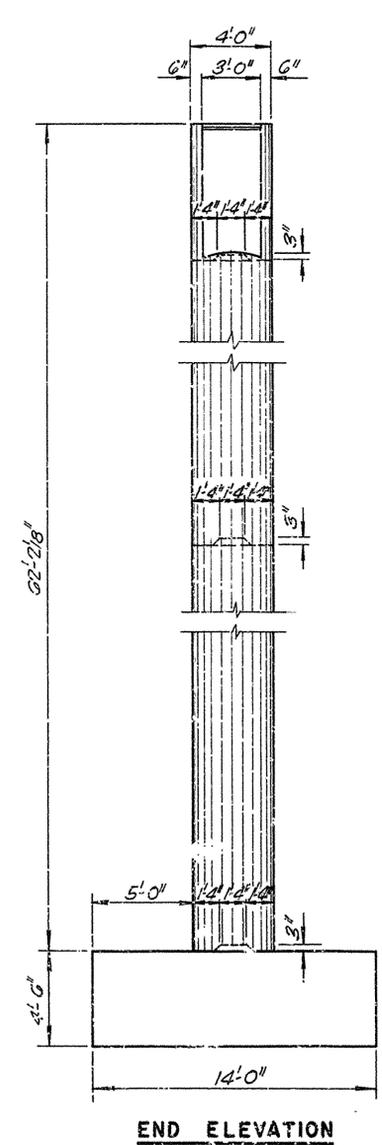
PLAN PIER 3



PLAN PIER 4



ELEVATION



END ELEVATION

PIER LOADS

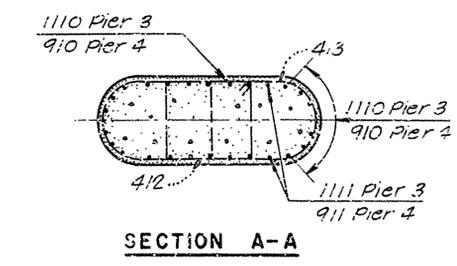
	PIER 3	PIER 4
Dead Load From Superstructure	353.0 ^k	241.2 ^k
Live Load	19.6 ^k /Lane	58.7 ^k /Lane
Base Pressures		
GROUP I Max.	5.2 KSF	4.5 KSF
Min.	2.5 KSF	2.2 KSF
GROUP II Max.	7.2 KSF	6.6 KSF
Min.	0.6 KSF	0.0 KSF
GROUP III Max.	7.8 KSF	6.6 KSF
Min.	0.0 KSF	0.1 KSF
Allowable Base Pressures		
GROUP I	20.0 KSF	20.0 KSF
GROUP II and III	25.0 KSF	25.0 KSF

REINFORCEMENT SCHEDULE
STRAIGHT BARS

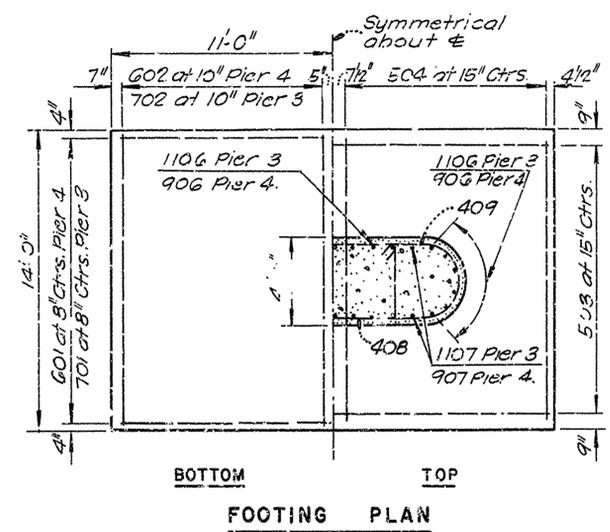
PIER 3			PIER 4		
MARK	NO.	LENGTH	MARK	NO.	LENGTH
503	11	21'-6"	503	11	21'-6"
504	18	13'-6"	504	18	13'-6"
1106	26	32'-7"	906	26	31'-9"
1107	4	24'-0"	907	4	22'-6"
1110	22	33'-10"	910	22	33'-10"
1111	4	22'-0"	911	4	22'-0"
1044	9	16'-0"	Not Used		
445	2	14'-2"	445	2	14'-2"
446	2	22'-4"	446	2	22'-4"
447	6	28'-6"	447	6	28'-6"

REINFORCEMENT SCHEDULE
BENT BARS

PIER 3			PIER 4			BENDING DIAGRAM
MARK	NO.	LENGTH	MARK	NO.	LENGTH	
701	21	23'-2"	601	21	22'-11"	
702	26	15'-2"	602	26	14'-11"	
1105	30	10'-3 7/8"	905	30	9'-2 7/8"	
408	21	19'-11 1/4"	408	21	19'-11 1/4"	
409	42	8'-9 1/4"	409	42	8'-9 1/4"	
412	21	15'-11 3/4"			15'-11 1/4"	
413	42	7'-7 3/4"	413	42	7'-7 3/4"	
814	4	29'-4 1/2"	814	4	29'-4 1/2"	
415 To 429	2 Ea.	Varies 11'-0 1/2" To 13'-1 1/2"	415 To 429	2 Ea.	Varies 11'-0 1/2" To 13'-1 1/2"	
430 To 442	2 Ea.	Varies 14'-2" To 16'-1"	430 To 442	2 Ea.	Varies 14'-2" To 16'-1"	
1043	9	31'-3"	843	10	30'-9"	
448	9	4'-9 1/2"	448	9	4'-9 1/2"	



SECTION A-A



FOOTING PLAN

BRIDGE NO. 3643 DRAWING NO. 11918

NO.	DATE	REVISIONS

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARKANSAS

JOB 8516

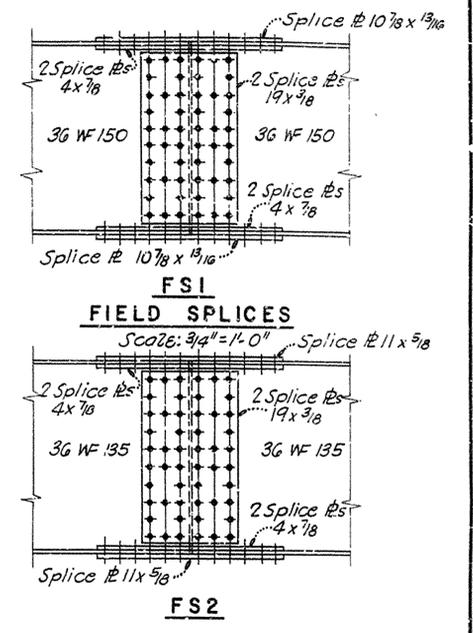
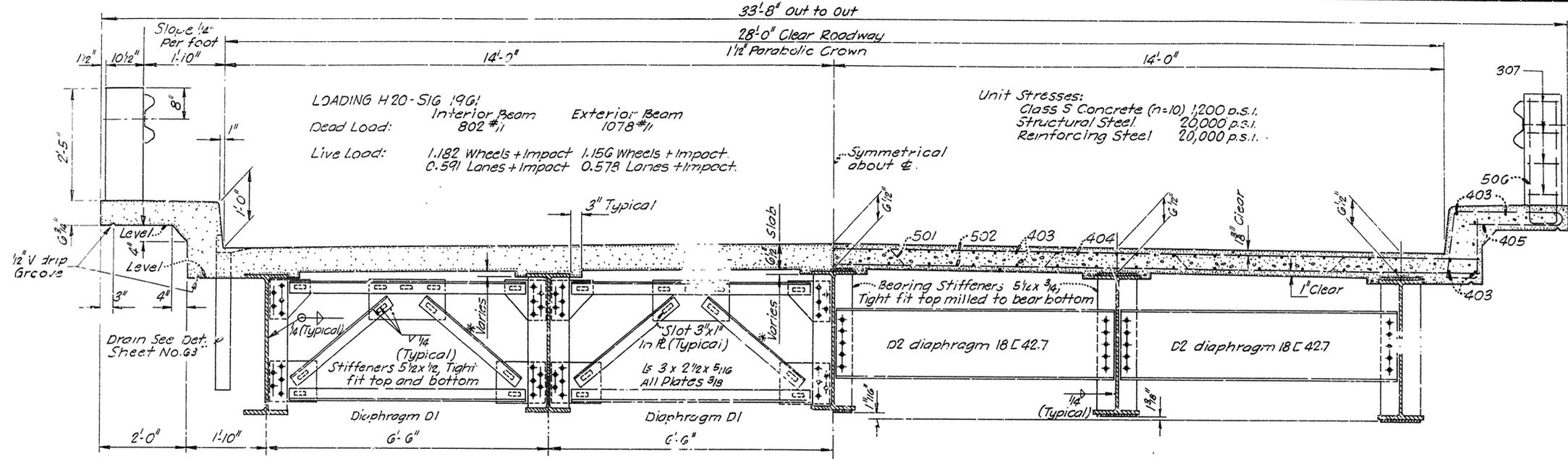
ILLINOIS BAYOU BRIDGE

PIERS 3 AND 4

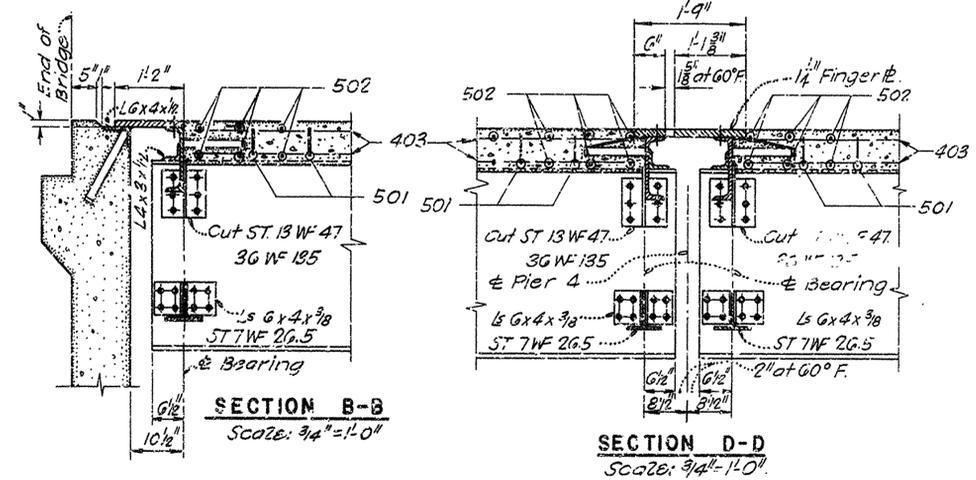
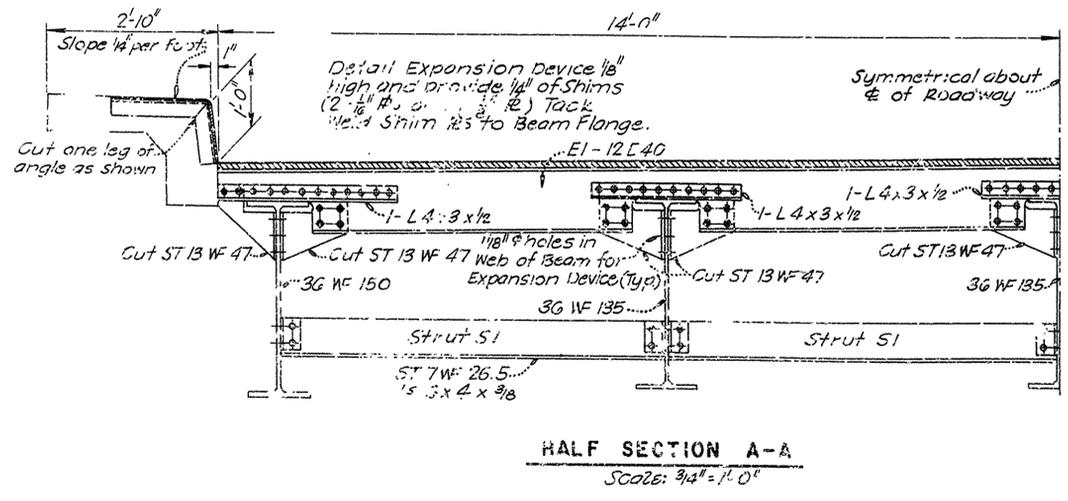
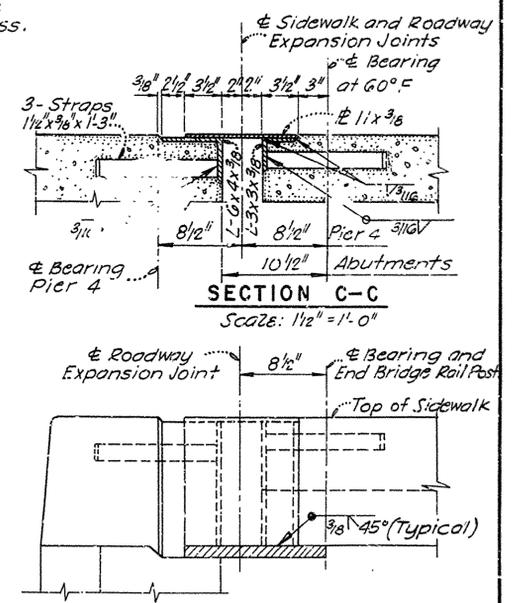
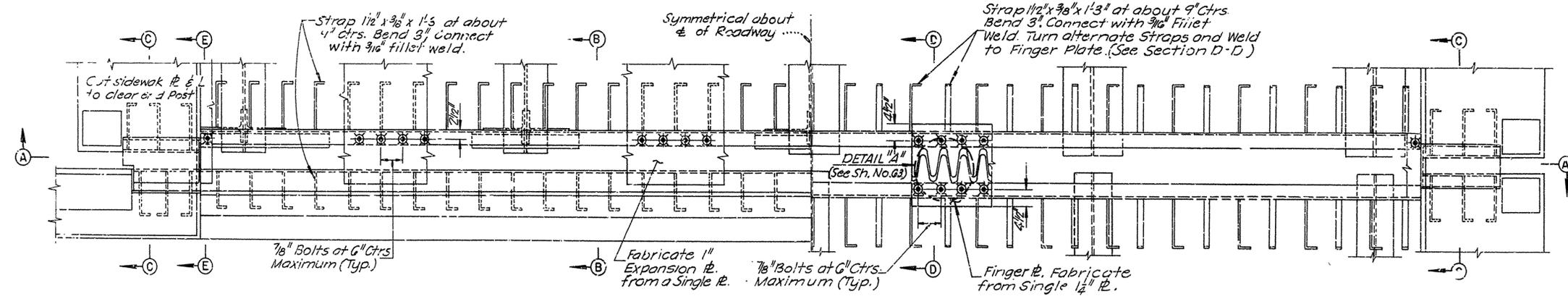
DRAWN BY: J.R.B.
CHECKED BY: W.U.D.
DATE: Aug. 1962

GARVER & GARVER, Inc.
ENGINEERS
LITTLE ROCK, ARKANSAS

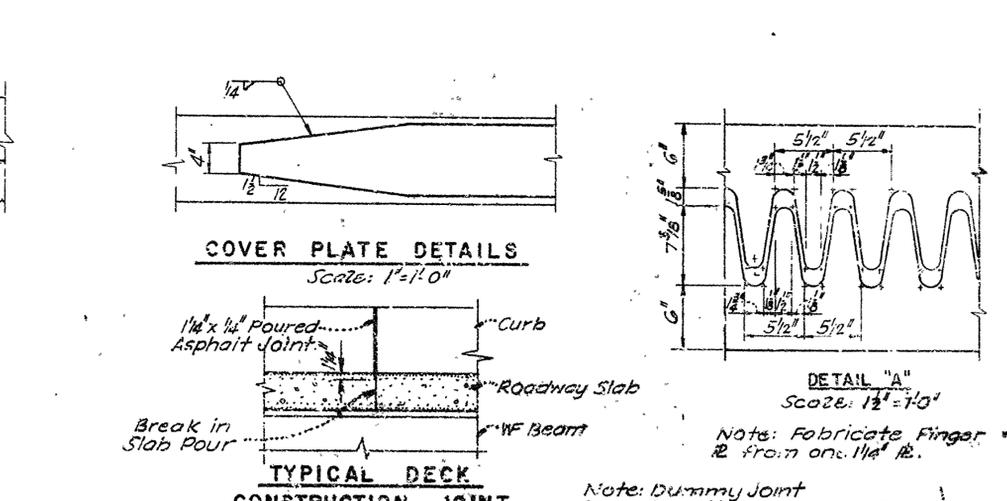
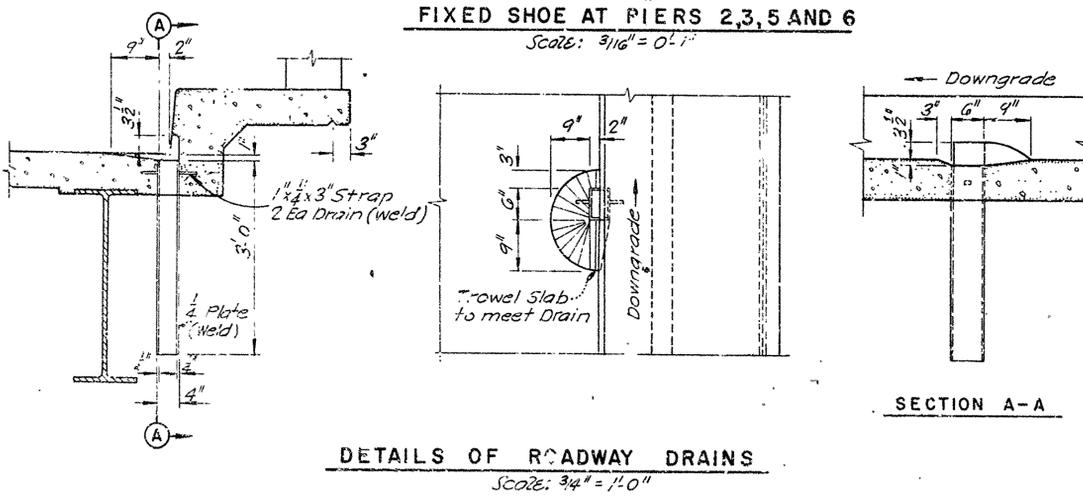
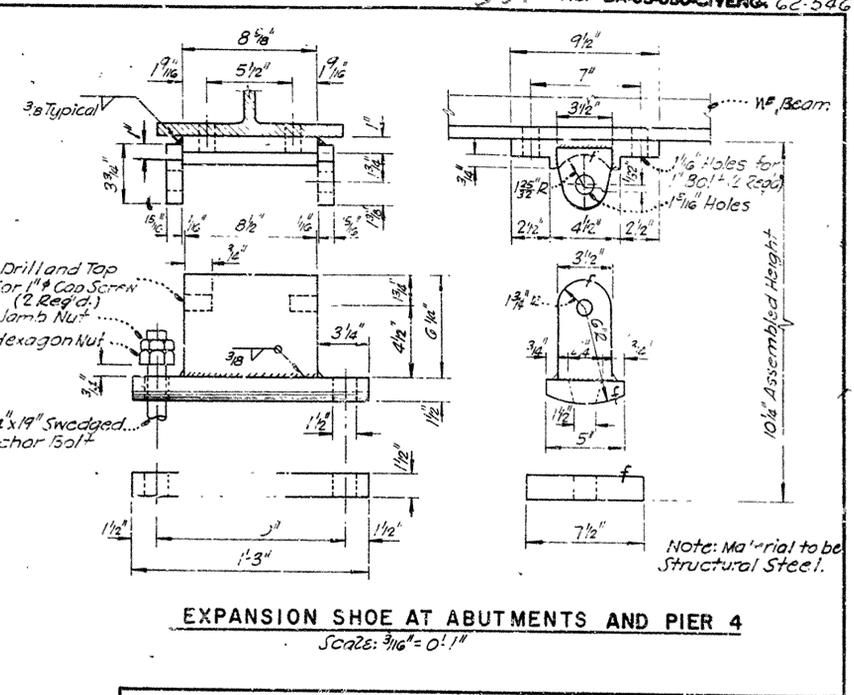
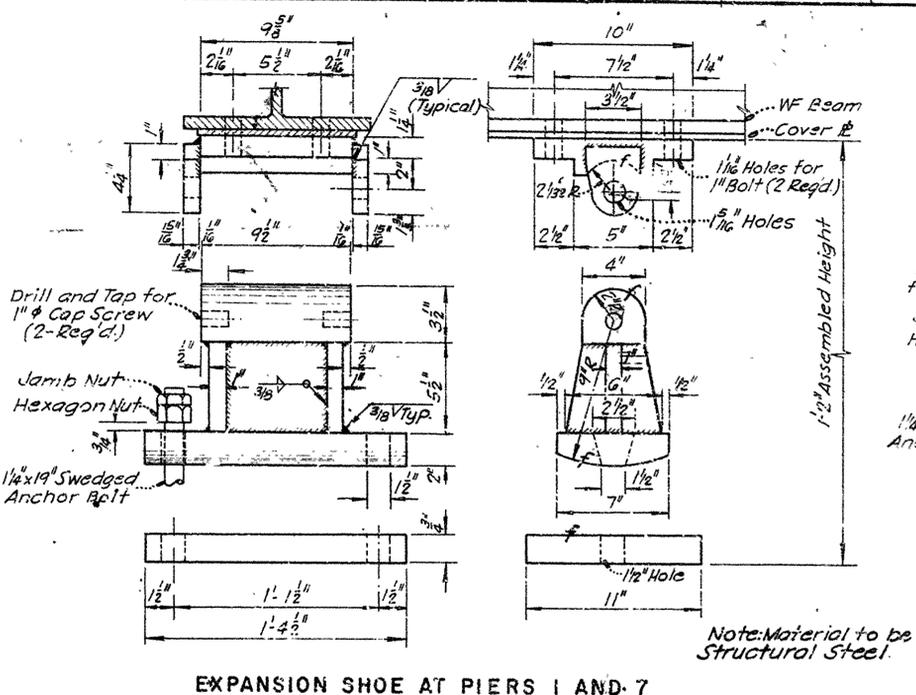
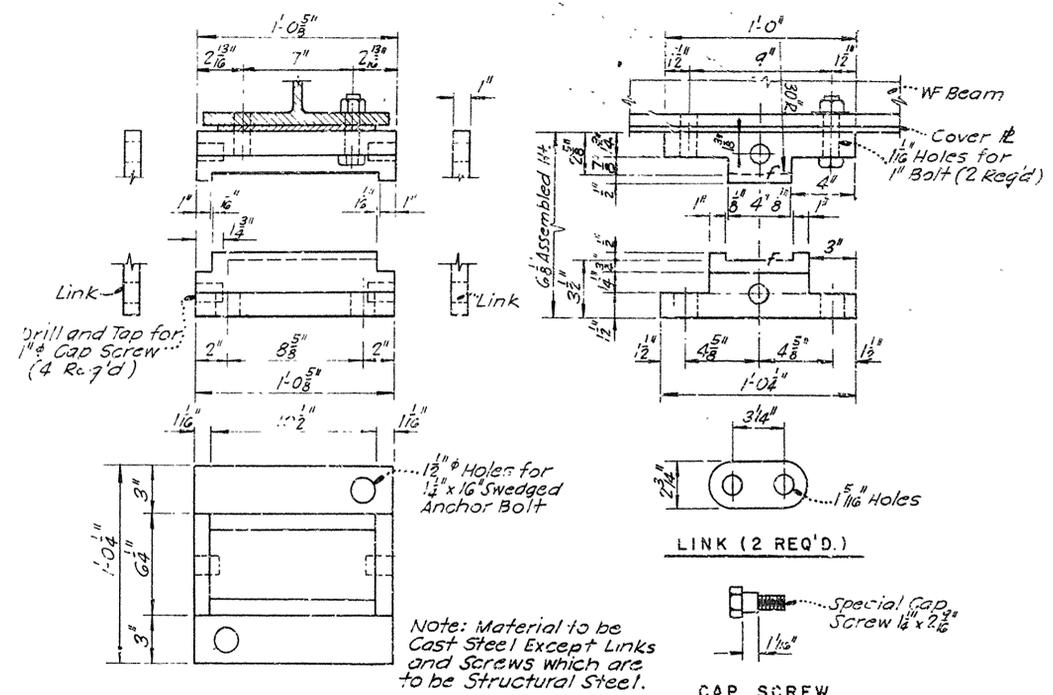
SCALE: 3/8" = 1'-0"
SHEET NO. 60 OF 60



* Varies from the final position of the cambered beam in order to maintain the planned grade and the constant slab thickness.

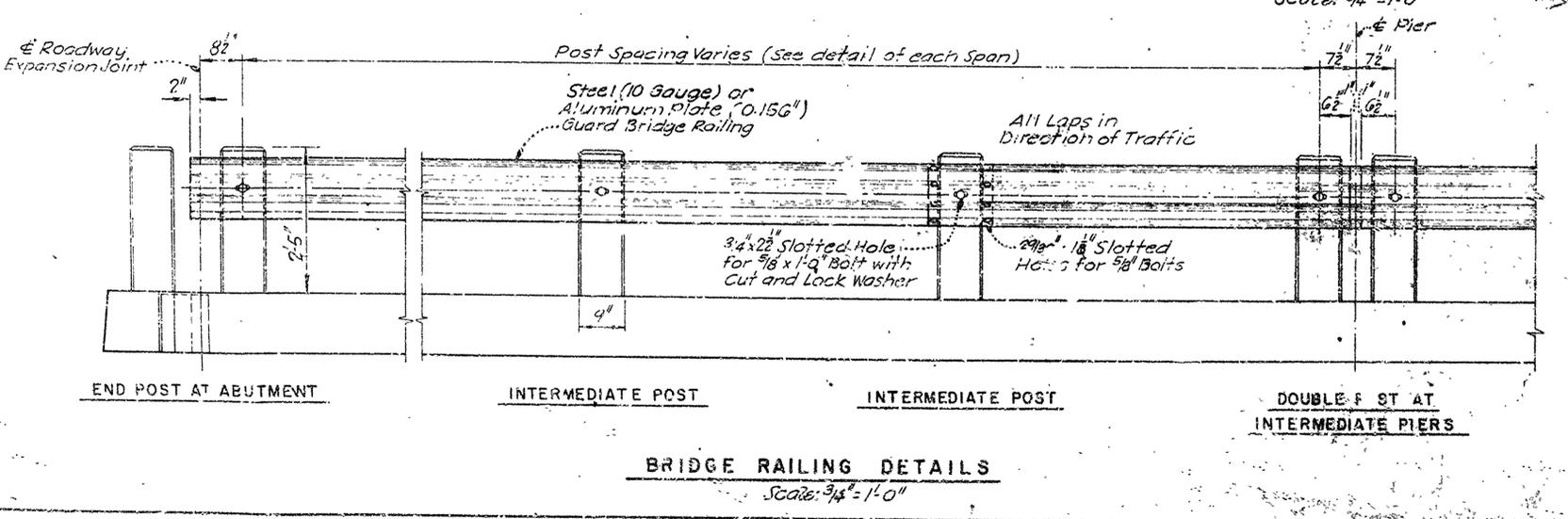


BRIDGE NO. 3643		DRAWING NO. 11920	
NO.	MADE	DATE	REVISION
ARKANSAS STATE HIGHWAY COMMISSION LITTLE ROCK, ARKANSAS JOB 8516 ILLINOIS BAYOU BRIDGE CROSS SECTIONS EXPANSION DAMS DIAPHRAGMS			
DRAWN BY M.G.G.	CHECKED BY J.B.	DATE 3.1962	SCALE As Noted. SHEET NO. 62 OF 69
GARVER & GARVER, Inc. ENGINEERS LITTLE ROCK, ARKANSAS			



REINFORCEMENT SCHEDULE			
MARK	NUMBER	LENGTH	BENDING DIAGRAM
501	301	30'-5"	
502	608	25'-4"	Straight
403	810	32'-4"	Straight
404	81	23'-0"	Straight
405	606	7'-8 1/2"	
506	192	5'-9"	
307	384	2'-8"	

* This Number exists in each 279' 1" Continuous Unit



NOTES:
Fixed and Expansion Bearing Shoes placed and accepted shall be measured and paid for as Structural Steel in Beam Spans.
Place three layers of Red Lead and Canvas or an approved preformed Fabric Pad, beneath each base plate.
In Case Aluminum Plate Guard is used, all surfaces in contact with Concrete Bridge Rail Posts, shall be coated with Alumilastic Compound or equal.
For location of Drains (See Sheet No. 61)
Anchor Bolts shall be galvanized in accordance with A.S.T.M. Specification Designation A 153.

BRIDGE NO. 3643 DRAWING NO. 11921

NO.	MADE	DATE	REVISIONS

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARKANSAS

JOB 8516
ILLINOIS BAYOU BRIDGE
BRIDGE RAILING
SHOES
DRAINS
COVER PLATES

DRAWN BY: G.H.B.
CHECKED BY: W.J.D.
DATE: Aug. 1962

GARVER & GARVER, Inc.
ENGINEERS
LITTLE ROCK, ARKANSAS

SCALE: As Noted
SHEET NO. 4
63 OF 68