FED ROAD NO	STATE	FED AID PROJECT	FISCAL YEAR	SHEET NO	TOTAL SHEETS
6	[illegible] 3-223(6))				
JOB No	9445			3	26

SCHEDULE OF BRIDGE QUANTITIES — JOB 9445

Name Plate Title	Bridge No.	Code No.	Unit of Structure	Item No.	801	801	SP&802	SP&802	803	SP&804	SP-805-T	SP&806	812	817	1006
				Item	Common Excavation for Structures	Rock Excavation for Structures	Class A Concrete	Class S Concrete	Reinforcing Steel	Steel Bearing Piling (12 BP53)	Steel or Aluminum Plate Guard Bridge Railing	Structural Steel in Beam Spans	Bridge Name Plate Type C	Riprap	Removal of Existing Bridge Structures
				Unit	Cu. Yd	Cu. Yd	Cu. Yd	Cu Yd	Pound	Lin. Ft.	Lin. Ft.	Pound	Plate	Cu Yd	Comp Item
Big Creek	3627	X03'	End Bents 1&4		50.0			31.15	3,414	42.0		1,382	1	650	
			Int. Bents 2&3		196.0	28.0	72.30	21.35	7,262						
			Pier 1		47.0	18.0	50.15	10.67	4,101						
			Pier 2		70.0	13.0	51.65	10.67	4,244						
			Spans 1&2					95.26	17,950		3.04	120,050			
			Spans 3-5					91.50	19,049		3.18	86,646			
			Totals		363.0	59.0	174.10	260.60	56,020	42.0	6.22	208,080	1	650	100%

SCHEDULE OF BRIDGE QUANTITIES
BIG CREEK BRIDGE & APPROACHES
SEARCY COUNTY
ROUTE 14 SEC. 4
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

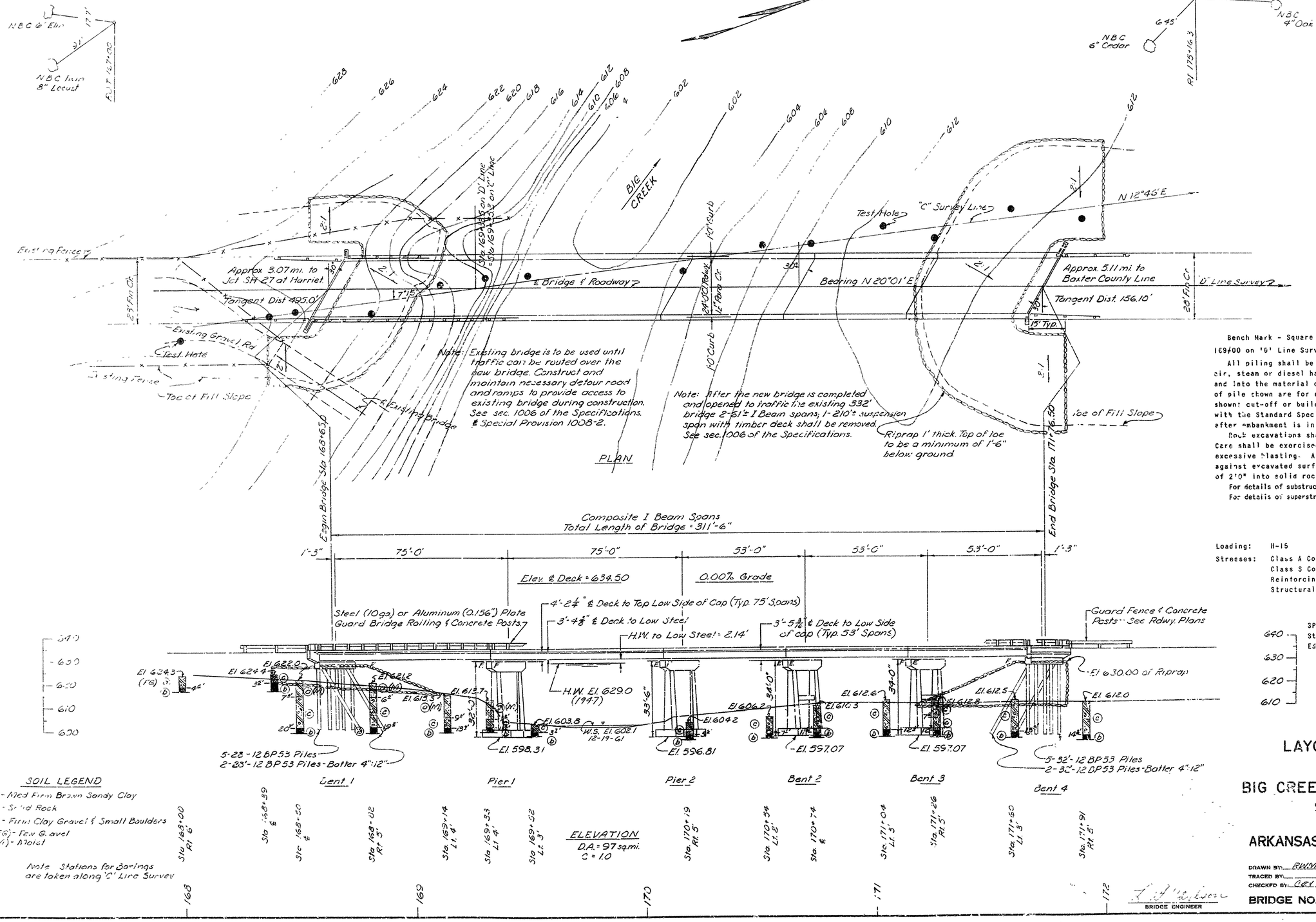
DRAWN BY: LDB DATE: 2-14-62
TRACED BY: DATE:
CHECKED BY: CEV DATE: 2-21-62
SCALE:

L. P. Clarkson
BRIDGE ENGINEER

BRIDGE NO. 3627 DRAWING NO. 11821

S-223(13)
3445 4 26

For R/W Data - See Rdwy. Plans



SOIL LEGEND

(a) - Med Firm Brown Sandy Clay
(b) - Solid Rock
(c) - Firm Clay Gravel & Small Boulders
(FG) - Finished Ground
(M) - Moist

Note Stations for Borings are taken along 'C' Line Survey

GENERAL NOTES

Bench Mark - Square cut in North End West Pier 53' Rt Sta. 169+00 on 'D' Line Survey, Elevation 624.50.

All piling shall be 12-BP-53 and shall be driven with an approved air, steam or diesel hammer to a minimum capacity of 36 tons per pile and into the material designated as rock on the boring logs. Lengths of pile shown are for estimating quantities only. Order lengths shown: cut-off or build-up, if necessary, to be paid for in accordance with the Standard Specifications. Piles in End Bents shall be driven after embankment is in place.

Rock excavations shall be made to neat lines of concrete footings. Care shall be exercised to avoid shattering of rock faces by excessive blasting. All concrete to be poured in the dry directly against excavated surfaces of rock. All footings shall be a minimum of 2'0" into solid rock.

For details of substructure see Dwgr. 11823 and 5460J.
For details of superstructure see Dwg. 5462, 5460, and 5460-I

Loading:	H-15	AASHO	1957
Stresses:	Class A Concrete (n=15)	840 psi	
	Class S Concrete (n=10)	1,200 psi	
	Reinforcing Steel	20,000 psi	
	Structural Steel	18,000 psi	

SPECIFICATIONS: Arkansas State Highway Commission Standard Specifications for Highway Construction, Edition of 1959.

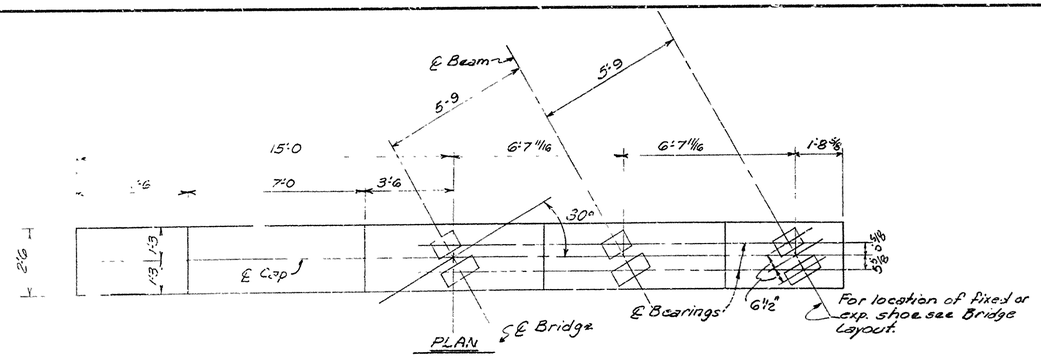
LAYOUT OF BRIDGE OVER BIG CREEK
BIG CREEK BRIDGE & APPROACHES
SEARCY COUNTY
ROUTE 14 SEC. 4
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

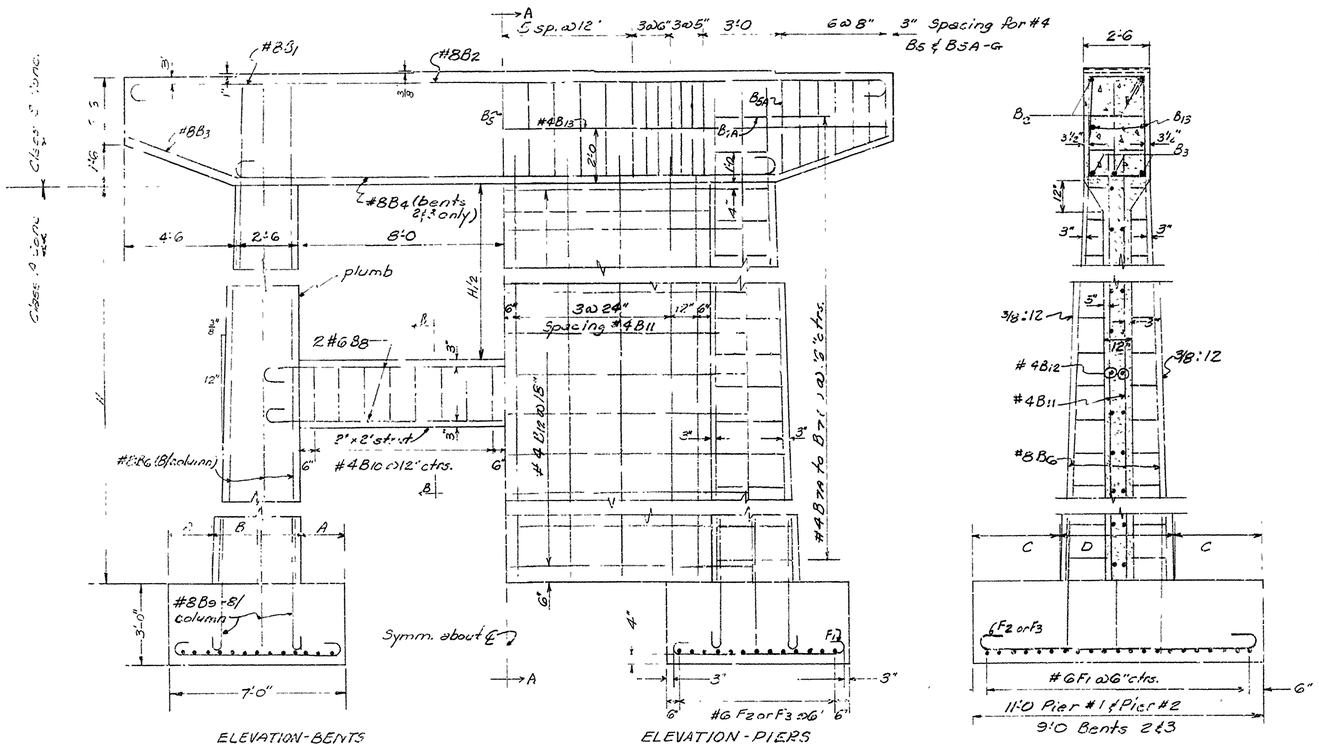
DRAWN BY: RWM DATE: 1-25-62
TRACED BY: DATE:
CHECKED BY: GEK DATE: 1-31-62
SCALE: 1" = 20'

BRIDGE ENGINEER

BRIDGE NO. 3627 DRAWING NO. 11822

FED. ROAD NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
6	ARK	S-223(13)			
JOB NO.	9445			5	26





BAR LIST

Mark	Size	Number Required Pier 1	Pier 2	Bt. 2 & 3	Length	A	B	Pin Dia.	Bending Diagram
B1	8	10	8	6	11'-10	10'-9	9"	8"	
B2	8	2	3	2	29'-6	–	–	Str.	
B3	8	3	3	2	30'-0	–	–	8"	
B4	8	–	–	4	23'-3	21'-0	9"	8"	
B5	4	–	23	23	11'-7	3'-7	1'-11	1 1/2"	
B5A-G	4	–	2 ea	2 ea.	10'-1 Av.	3'-6 to 2'-2	1'-11	1 1/2"	
B6	8	–	16	16	H+(3'-8)	—	—	Str.	
B7A-7(-)	4	2 ea	2 ea	2 ea.	Varies	2'-7 varies by 1/2"	2'-0 typ.	1 1/2"	
B8	6	—	–	4	21'-5	20'-0	6"	4 1/2"	
B9	8	16	16	16	7'-0	5'-11	9"	8"	
B10	4	–	–	16	7'-1	1'-7 1/2	1'-7 1/2	1 1/2"	
B11	4	20	20	–	H+(0'-9")	–	–	Str.	
B12	4	34	36	–	18'-0	–	–	Str.	
F1	6	21	21	17	7'-11	6'-6	6"	4 1/2"	
F2	6	13	13	–	11'-11	10'-6	6"	4 1/2"	
F3	6	–	–	13	9'-11	8'-6	6"	4 1/2"	
B13	4	2	2	2	29'-8	–	–	Str.	

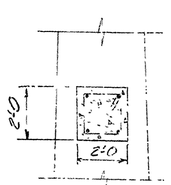
Dimensions are C to C. of bars.

NOTE: The cap shall be Class S concrete; the remaining portion shall be Class A. All exposed corners shall be chamfered 3/4".

ELEVATIONS

VARIABLE DIMENSIONS

Bent or Pier	A	B	C	D	H
Pier 1	1'-10 9/16	3'-3 3/8	3'-5 5/8	4'-0 3/4	25'-0
Pier 2	1'-10	3'-4	3'-5 11/16	4'-1 1/8	26'-6
Bent 2&3	1'-9 15/16	3'-4 1/8	2'-4 7/8	4'-2 1/4	27'-0



SEC. D-D

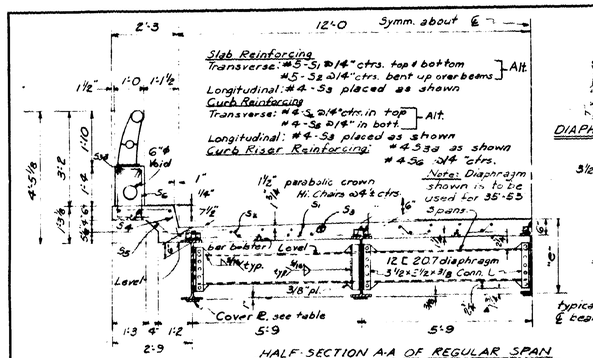
DETAILS OF SUBSTRUCTURE
BRIDGE OVER BIG CREEK
BIG CREEK BRIDGE & APPROACHES
SEARCY COUNTY
ROUTE 14 SEC. 4

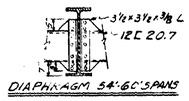
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

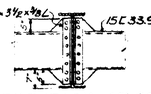
DRAWN BY: E.R.B. DATE: 2-2-62
TRACED BY: DATE:
CHECKED BY: C.E.V. DATE: 2-2-62
SCALE: 3/8" = 1'

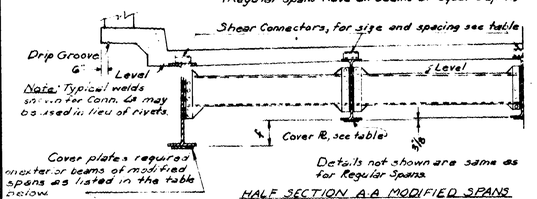
BRIDGE ENGINEER

BRIDGE NO. 3627 DRAWING NO. 11823







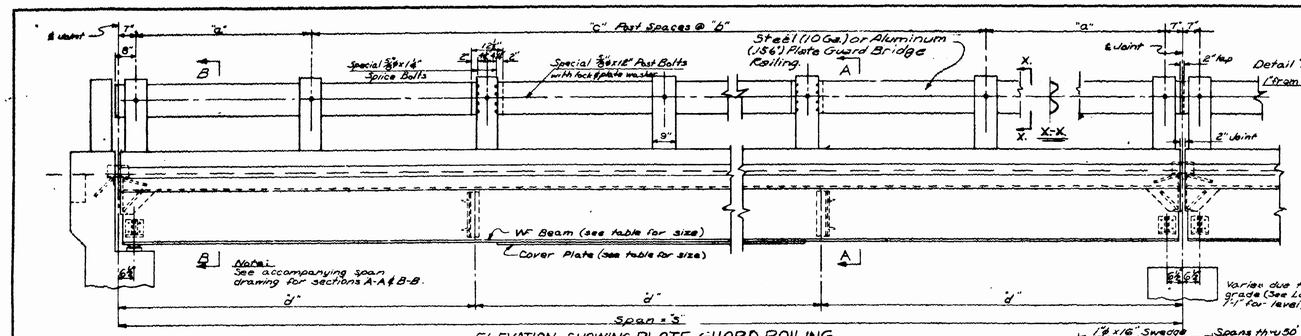


Note: For location of section A-A, B-B and variables e, & f, see Dwg. No. 5462

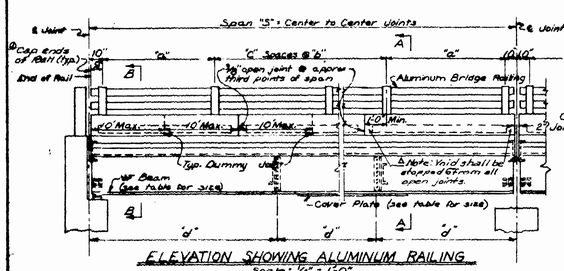
BAR LIST - ONE SPAN

| Mk. | SIZE | LENGTH | P/N | DIA. | Number Required Each Span | | |

FED. ROAD No.	STATE	FED. AID PROJ.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
6	Ark.				
JOB No.					



ELEVATION SHOWING PLATE GUARD RAILING
Scale: ½" = 1'-0"



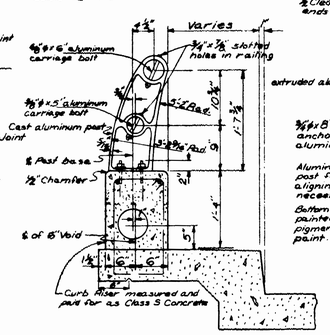
ELEVATION SHOWING ALUMINUM RAILING
Scale: ¼" = 1'-0"

½" Chamfer

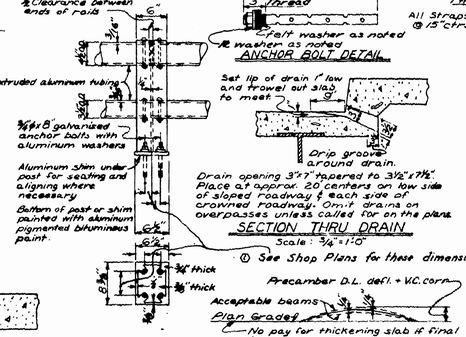
PLAN OF DUMMY JOINT

½" Chamfer
⅜" open joint

PLAN OF OPEN JOINT



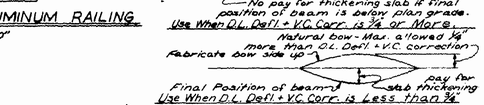
DETAILS OF ALUMINUM RAILING
Scale: 1"=1'-0"



ANCHOR BOLT DETAIL

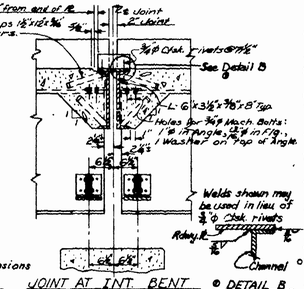
SECTION THRU DRAIN
Scale: ¾"=1'-0"

No pay for thickening slab if final position of beam is below plan grade.
Use When D.L. Defl. + V.C. Corr. is ¾" or More.



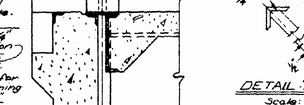
CAMBER DIAGRAMS

JOINT AT END BENT
Scale: ¾"=1'-0"

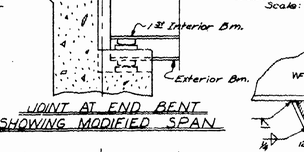


JOINT AT INT. BENT
Scale: ¾"=1'-0"

ⓒ DETAIL B
Scale: 1½"=1'-0"



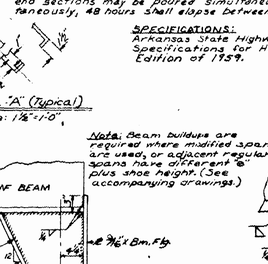
JOINT AT END BENT SHOWING MODIFIED SPAN



JOINT AT INT. BENT SHOWING MODIFIED AND REGULAR SPAN

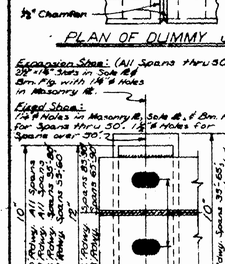
DETAIL "A" (Typical)
Scale: 1½"=1'-0"

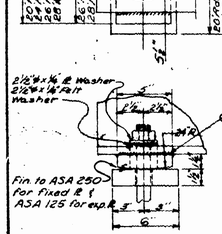
Use When Difference in "e" Plus Shoe Height) is 5" or More.



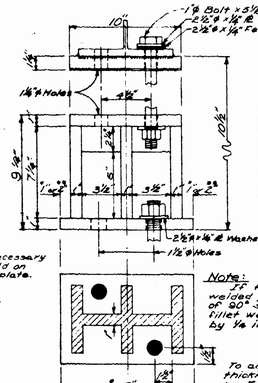
Use When Difference in ("e" Plus Shoe Height) is Less Than 5"

DETAILS OF BEAM BUILDUP



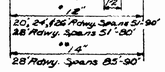


TYPE "B" FIXED or EXPANSION SHOE
* Use for end bents - all spans.
** Use for int. bents - 85'-90' spans.

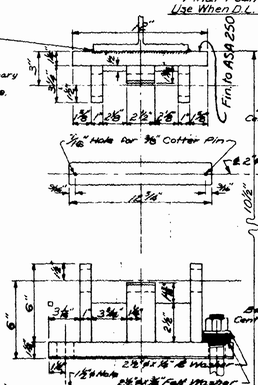


Note: If Fixed shoe is made from welded plates all intersecting surfaces of 90° shall be joined by ¼ inch fillet welds, all others shall be joined by ⅛ inch bead welds.

To adjust for grade, increase the thickness of Fixed Bearing sole plate or Expansion Bearing masonry plate, which ever is on the upgrade side of the Intermediate Bent. See table of Plate Thickness on Layout or Intermediate Bent Drawing.



TYPE "A" FIXED SHOE



TYPE "A" EXPANSION SHOE

ⓐ Rock Clip Note Added - 6-23-60 C.E.K.

ⓑ Added optional weld of channel to roadway plate 2-9-62 F.M.W.
ⓒ Revised Dimensions for base of Al. Posts 7-17-61 F.E.B.

GENERAL NOTES

All concrete to be Class S. All exposed corners to be chamfered ¾" unless otherwise noted.

Field connections to be riveted or bolted with high strength bolts. Rivets: ⅞" ø, Given holes ⅞" ø except where noted otherwise.

Structural shapes of equal or greater strength may be substituted for shapes shown, but payment will be made on the basis of shapes shown or those actually used, whichever is less.

All welded connections to be ⅜" ø fillet shop welds except as noted.

All welding shall conform to the American Welding Society Standard Specifications for Welded Highway and Railway Bridges, 5th Edition.

Shop Paint: All structural steel except surfaces in contact with concrete shall be given one coat of red lead and raw linseed oil before shipment.

Field Paint: First coat - red lead tinted with lamp black. Second coat - aluminum paint.

All bearing plates and roadway expansion devices to be paid for as "Structural Steel in Beam Spans." Bearings shall be finally seated in a manner set forth in the Specifications. This work and materials are to be considered as subsidiary to the item "Structural Steel in Beam Spans" and will not be paid for directly.

This drawing shows general features of design only. Shop drawings shall be made in accordance with the Specifications, submitted and approval secured before fabrication is begun.

Anchor bolts shall be galvanized to conform to ASTM Specification, Designation A 153.

Reinforcing steel to be deformed bars of intermediate or hard grade. The reinforcing steel is to be accurately located in the forms and firmly held in place by steel wire supports sufficient in number and size to prevent displacement during the course of construction. The wire supports will not be paid for directly, but will be considered subsidiary to the item of "Reinforcing Steel."

Shop lists and bending diagrams of reinforcing steel, including wire supports, shall be submitted and approval secured before fabrication is begun.

All chamfers on concrete riser for rail are to be ½".

Shop drawings showing details of railing shall be submitted and approval secured before fabrication is begun.

The aluminum bridge railing, including posts and fasteners, at "b" be paid for at the unit price bid per linear foot for "Aluminum Bridge Railing."

A rail connection utilizing set screws is an acceptable alternate and may be supplied at the Contractor's option.

Outside surfaces of flanges of cast aluminum posts shall be given a No. 220 grit belt finish after which all exposed surfaces of posts shall receive one coat of clear lacquer.

If Steel or Aluminum Plate Guard Bridge Railing is used it shall be the same shown or an equivalent rigid type as approved by the Engineer. The rail including posts and fastenings shall be paid for at the unit price bid per linear foot for "Steel Plate Guard Bridge Railing."

Slab Pouring Note:

Floor slabs may be poured in one continuous operation with a strike-off extending over the whole span length, or may be poured in increments with the center one-third to one-half of span length poured first. After the center section is poured not less than 72 hours shall elapse before pouring the end sections. The end sections may be poured simultaneously. If not poured simultaneously, 48 hours shall elapse between end section pours.

SPECIFICATIONS:
Arkansas State Highway Commission Standard Specifications for Highway Construction Edition of 1959.

Note: Beam buildups are required where modified spans are used, or adjacent regular spans have different ℄ plus shoe height. (See accompanying drawings.)

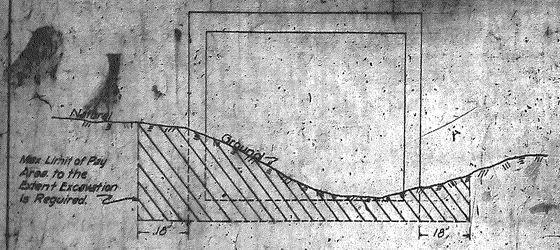
DETAILS COMMON TO STANDARD 35'-90' COMPOSITE I-BEAM SPANS 20', 24', 26', AND 28' ROADWAYS

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

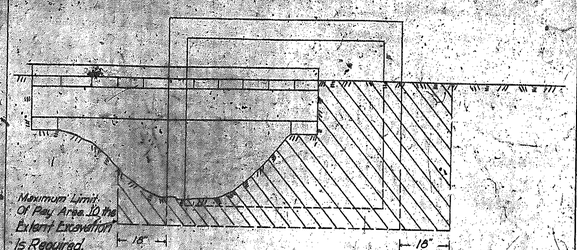
DRAWN BY: B.J.P. DATE: 6-15-59
TRACED BY: DATE:
CHECKED BY: E.R.B. DATE: 5-19-59
SCALE: As Shown

BRIDGE NO.

DRAWING NO. 5462

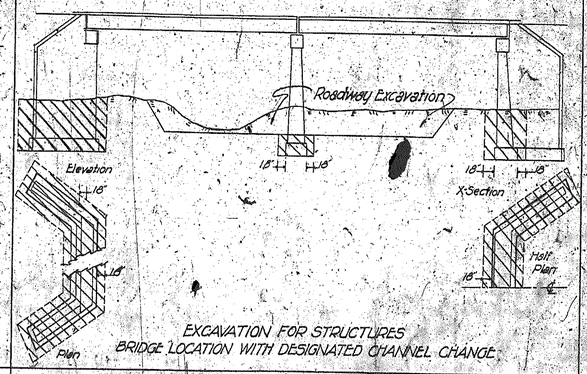


EXCAVATION FOR STRUCTURES



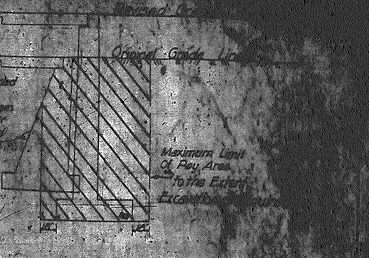
Cost of Removing the Existing Structure to be Included in the Contract Unit Price Bid Per Cubic Yard For The Several Classes of Excavation For Structures.

EXCAVATION FOR STRUCTURES AT LOCATION OF EXISTING PLANK BRIDGE

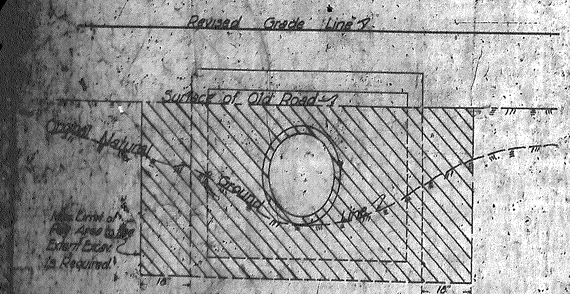


EXCAVATION FOR STRUCTURES BRIDGE LOCATION WITH DESIGNATED CHANNEL CHANGE

Volume of Pier or Abutment to be Included As Excavation For Structures Unless Removal Paid For as Separate Bid Item. Cost of Removing Structure or Pier or Abutment Thereof Shall Be Included In The Contract Unit Price Bid Per Cubic Yard For The Several Classes of Excavation for Structures.

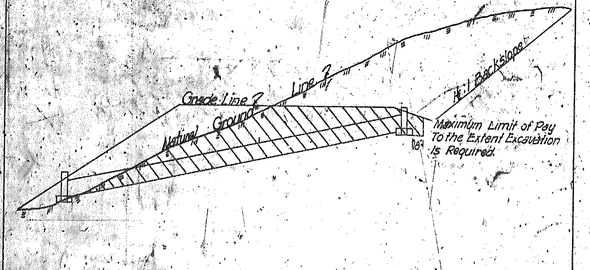


EXCAVATION FOR STRUCTURES INVOLVING THE REMOVAL OF EXISTING SUBSTRUCTURES

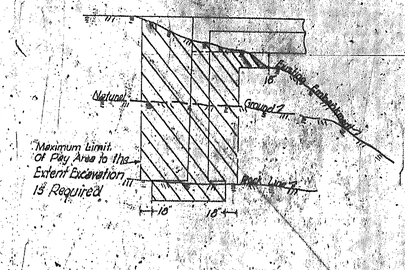


Cost of Removing the Existing Structure to be Included in the Contract Unit Price Bid Per Cubic Yard For the Several Classes of Excavation For Structures

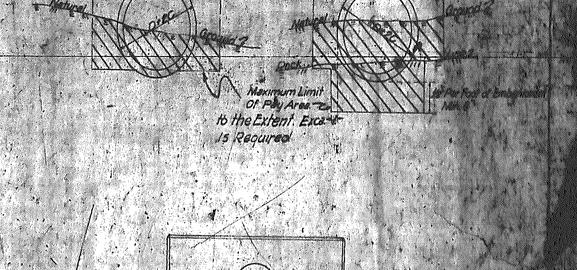
EXCAVATION FOR STRUCTURES AT LOCATION OF EXISTING PIPE CULVERT



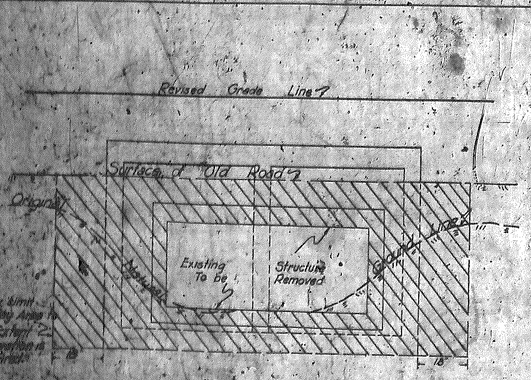
EXCAVATION FOR STRUCTURES ROADWAY SECTION IN EXCAVATION



EXCAVATION FOR STRUCTURES SECTION THROUGH BRIDGE ABUTMENT

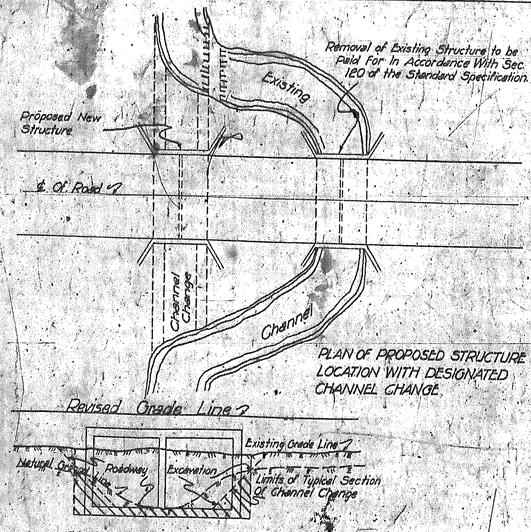


EXCAVATION FOR STRUCTURES PIPE CULVERTS AND HEADWALLS



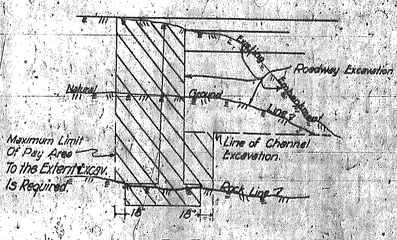
Cost of Removing the Existing Structure to be Included in the Contract Unit Price Bid Per Cubic Yard For the Several Classes Of Excavation For Structures.

EXCAVATION FOR STRUCTURES AT LOCATION OF EXISTING BOX CULVERT



PLAN OF PROPOSED STRUCTURE LOCATION WITH DESIGNATED CHANNEL CHANGE.

SECTION THROUGH PROPOSED STRUCTURE ALONG CENTER LINE OF ROAD. (Enlarged Scale)



EXCAVATION FOR STRUCTURES SECTION THROUGH BRIDGE ABUTMENT WHERE CHANNEL CHANGE IS DESIGNATED

NOTE: AREA OF MATERIAL TO BE CLASSIFIED AS EXCAVATION FOR STRUCTURES SHOWN IN HATCHED LINES

DRAWN 10-1-30
REV.

ARKANSAS HIGHWAY COMMISSION
STANDARD
BASIS FOR COMPUTING EXCAVATION FOR STRUCTURES
Standard Drwg. "1941

D C B A 0 A B C D

TAMERAN