

FED. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
E	ARK.	F-027-1(3)			
STATE JOB NO. 5441					17

STATE OF ARKANSAS
STATE HIGHWAY COMMISSION

INDEX OF SHEETS

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4	8948	Details of Remodeling End Bents No. 1 & 2
5	8949	Details of Widening Arch Abutments No. 1 & 2
6	8950	Details of Widening Piers No. 1 & 2
7	8951	Details of Widening 25'-0" R.C.D. Girder Spans
8	8952	Details of Widening 50'-0" R.C. Arch Spans
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10	8954	Details of Widening R.C. Arch Spans
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14	* 1891	Basis for Computing Excavation for Structures
15 & 16	1896 & 1897	Standard Barricade, Warning and Signs
17	* GR-6	Steel Plate Guard Fence

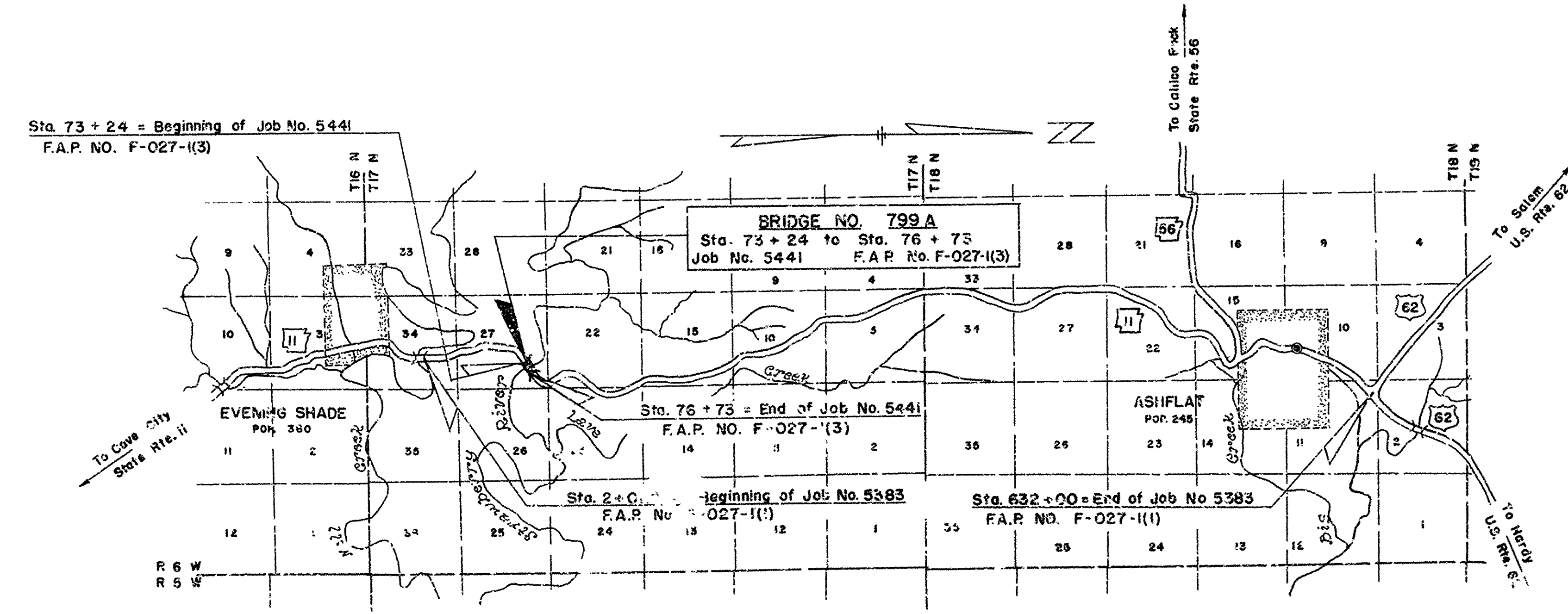
SPECIFICATIONS: ARKANSAS STATE HIGHWAY COMMISSION
STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
ADOPTED MARCH 1, 1940 WITH THE SPECIAL PROVISIONS LISTED BELOW

PAMPHLETS	
DIVISION	PART
I	
II	I, 8A, 8B, 9
IV	

No.	SPECIAL PROVISIONS TITLE	No. PAGES
7-9	Required Contract Provisions for Federal Aid Projects	4
2-1	Competency of Bidders	2
2-2	Equipment List Required	1
2-4	State License for Contractors	1
3-9	Award of Contract	1
4-1	Final Clearing of Right of Way	1
7-10	Public Convenience	1
8-2	Employment of Labor	1
9-5	Partial Payments	1
9-9	Common Carrier Rates	1
9-9	Federal Excise Tax on Freight Shipments	1
803-3	Revision of Article 803.21 - Bar Reinforcement (20,000 p.s.i. Design)	1
805-3	Steel Plate Guard Rail (Rev. 12-28-49)	1
850-1	Engineers Field Office	1
853-1	Machine Mixing	1
925-2	Guard Fence Moved and Reconstructed	1
925-7	Revision of Article 925.20(a)	1
Job 5441	Remodeling Existing Bridge Structures	2

PLAN OF PROPOSED BRIDGE
STRAWBERRY RIVER BRIDGE WIDENING
EVENING SHADE - ASH FLAT
SHARP COUNTY
ROUTE 11 SEC. 16
JOB NO 5441
FEDERAL AID PROJECT NO. F-027-1(3)

* This Standard not normally included in plans sold to Prospective Bidders but may be had on request.



LAYOUT
Scale: 1 in. = 1 Mile

	FINAL LENGTH
LENGTH OF PROJECT=	349'-0" or 0.066 Miles
LENGTH OF BRIDGES=	349'-0" or 0.066 Miles
LENGTH OF EMBANKMENT=	
LENGTH OF JOB=	349'-0" or 0.066 Miles

ARKANSAS STATE HIGHWAY DEPARTMENT

RECOMMENDED FOR APPROVAL

BRIDGE DESIGN ENGINEER

RECOMMENDED FOR APPROVAL

ROADWAY DESIGN ENGINEER

RECOMMENDED FOR APPROVAL

DISTRICT ENGINEER

APPROVED

CHIEF ENGINEER

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED

DISTRICT ENGINEER DATE

SCHEDULE OF BRIDGE QUANTITIES

ITEM NO.	ITEM	102	103	103	S.P. & 802	S.P. & 802	S.P. & 803	S.P.-805-3		929	S.P.
		DRY EXCAVATION FOR STRUCTURES	WET EXCAVATION FOR STRUCTURES	SOLID ROCK EXCAVATION FOR STRUCTURES	CLASS 'A' CONCRETE FOR BRIDGES	CLASS 'S' CONCRETE FOR BRIDGES	REINFORCING STEEL	STEEL PLATE GUARD RAIL (10 GA.)		BRIDGE NAME PLATES - TYPE 'C'	REMODELING EXISTING BRIDGE STRUCTURES
UNIT SA BRIDGE	UNIT	CU. YD.	CU. YD.	CU. YD.	CU. YD.	CU. YD.	LB.	LIN. FT.		EACH	COMPLETE ITEM
END BENT NO. 1		47	—	1	7.10	—	830	—			
ARCH ABUTMENT NO. 1		114	14	50	51.43	5.02	3,760	8.0			
PILE		—	28	22	51.79	4.20	5,710	8.0			
PILE		45	41	22	51.79	4.20	5,710	8.0			
ARCH ABUTMENT NO. 2		46	—	52	33.19	5.02	3,310	8.0			
END BENT NO. 2		44	—	2	7.10	—	830	—			
10' 25' C. R.C. & SHIELD SPANS						20.64	3,200	105.5		1	
TRC 20' 3' C.C. ARCH SPANS						115.04	22,030	364.0			
14' 10' 0' R.C.C. ARCH SPAN						65.28	12,090	222.0			
TOTAL FOR JOB NO. 5441		236	83	149	202.40	219.40	57,470	703.5		1	100%

GUARD FENCE MOVED AND RECONSTRUCTED

STATION	STATION	LOCATION	LIN. FT.
72+97.25	73+22.75	Right	28.5
76+74.25	77+02.75	Right	28.5
TOTAL FOR JOB NO. 5441			57.0

SUMMARY OF QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
S.P. 925-2	Guard Fence Posts	1	Each
S.P. 925-2	Guard Fence Moved and Reconstructed	57	Lin. Ft.
STRUCTURES OVER 20' SPAN			
102	Dry Excavation for Structures	236	CU. YD.
103	Wet Excavation for Structures	83	CU. YD.
103	Solid Rock Excavation for Structures	149	CU. YD.
902	Class 'A' Concrete for Bridges	202.4	CU. YD.
S.P. & 802	Class 'S' Concrete for Bridges	219.4	CU. YD.
S.P. & 803	Reinforcing Steel	57,470	Lb.
S.P. 805-3	Steel Plate Guard Rail (10ga)	703.5	Lin. Ft.
929	Bridge Name Plates - Type 'C'	1	Each
S.P.	Remodeling Existing Bridge Structures	100%	Complete Item

SCHEDULE OF QUANTITIES
 BRIDGE OVER STRAWBERRY RIVER
 EVENING SHADE - ASH FLAT
 SHARP COUNTY
 ROUTE 11 SEC. 16
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: _____ DATE: _____
 TRACED BY: W.C.H. DATE: 3-23-65 SCALE: _____
 CHECKED BY: J.H.H. DATE: 10-5-55
 BRIDGE NO. 799-A DRAWING NO. 8946

L.P. Carlson
 BRIDGE DESIGN ENGINEER

BAR LIST FOR WIDENING SUPERSTRUCTURE OF R.C. DECK GIRDER SPANS

Table with columns: LOCATION, MARK, SIZE, NO. REQ'D PER ARCH SPAN, LENGTH, A, B, BENDING DIAGRAMS. Includes diagrams for girder spans and various reinforcement details.

BAR LIST FOR WIDENING SUPERSTRUCTURE OVER ABUTS. & PIERS.

Table with columns: LOCATION, MARK, SIZE, NO. REQ'D PER ABUT. OR PIER, LENGTH, A, B, BENDING DIAGRAMS. Includes diagrams for abutments and piers.

BAR LIST FOR WIDENING PIERS NO. 1 & 2.

Table with columns: MARK, SIZE, NO. REQ'D PER PIER, LENGTH, A, B, C, BENDING DIAGRAMS. Includes diagrams for pier reinforcement.

BAR LIST FOR WIDENING ARCH ABUTMENTS NO. 1 & 2.

Table with columns: MARK, SIZE, NO. REQ'D PER ARCH ABUT., LENGTH, A, B, BENDING DIAGRAMS. Includes diagrams for arch abutment reinforcement.

BAR LIST FOR WIDENING SUPERSTRUCTURE OF R.C. DECK ARCH SPANS

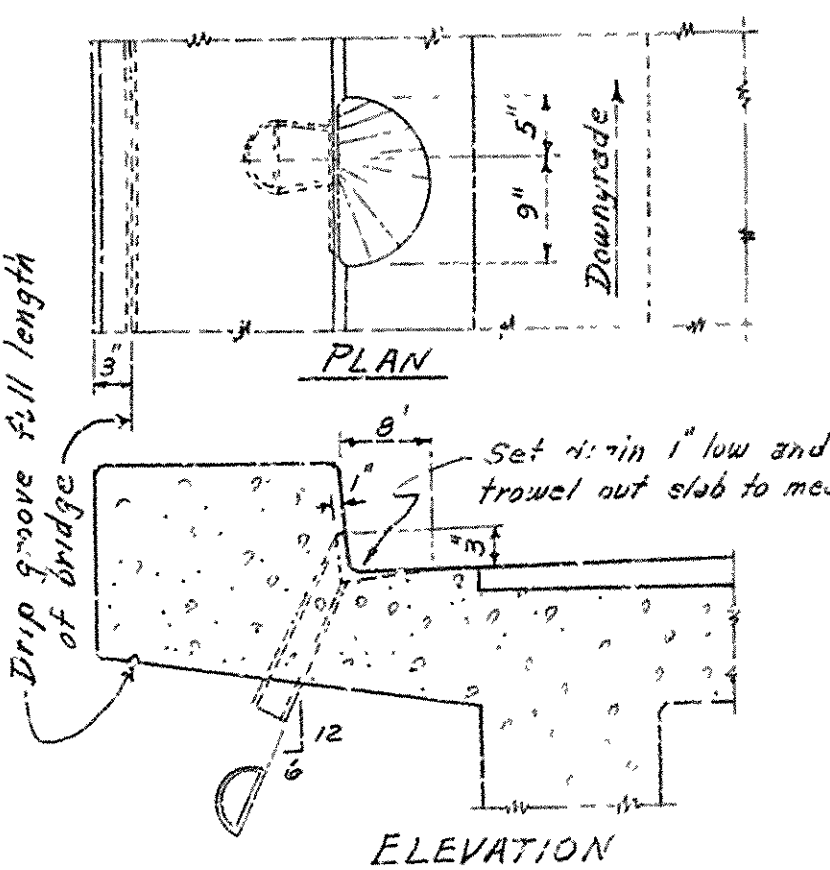
Table with columns: LOCATION, MARK, SIZE, NO. REQ'D PER ARCH SPAN, LENGTH, BENDING DIAGRAMS. Includes diagrams for arch spans.

BAR LIST FOR WIDENING SUPERSTRUCTURE OVER ABUTS. & PIERS.

Table with columns: LOCATION, MARK, SIZE, NO. REQ'D PER ARCH SPAN, LENGTH, A, B, BENDING DIAGRAMS. Includes diagrams for abutments and piers.

GENERAL NOTES FOR R.C.D. GIRDER AND ARCH SPANS, ARCH ABUTMENTS & PIERS, AND PILASTER COLS.

Dimensions and elevations relating to existing bents, abutments, piers, arch and girder spans are general only and shall be verified in the field before construction is begun and before approval of the bar lists of reinforcing steel is given.



BAR LISTS AND GENERAL NOTES FOR R.C.D. GIRDER AND ARCH SPANS BRIDGE OVER STRAWBERRY RIVER EVENING SHADE - ASH FLAT SHARP COUNTY ROUTE 11 SEC. 16 ARKANSAS STATE HIGHWAY COMMISSION LITTLE ROCK, ARK.

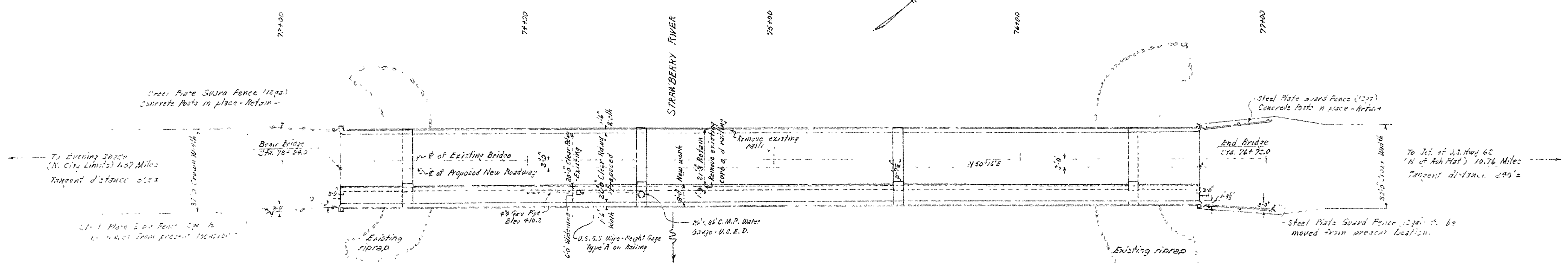
CRAWN BY: M.C.M. DATE: 3-1-55
TRACED BY: M.C.M. DATE: 3-15-55
CHECKED BY: W.E.W. DATE: 3-30-55
BRIDGE NO. 799-A DRAWING NO. 3955

RIGHT OF WAY DATA (From Existing Roadway)

STA. TO	STA.	LT. OF E	RT. OF E	TOTAL WIDTH
65+00	85+00	60'	60'	120'

F-027-18)

5471 3 17



GENERAL NOTES

All concrete to be placed in the str. Exposed surfaces to be finished unless otherwise noted.

Formwork to be made to meet lines of concrete. Care to be taken to avoid shattering of concrete by excessive blasting. Concrete in footings shall be poured against excavated surfaces of rock. Backfill or other materials to be placed against both rock and concrete.

Vertical joints in piers shall be horizontal and shall be provided with keys not less than 3" high covering the middle third of full dimensions.

Director shall remodel the existing bridge and maintain traffic throughout the construction period. See Special Provisions.

For Details of Remodeling End Bent No. 1 and 2, see Drawing No. 8948.

For Details of Widening Arch Abutments No. 1 and 2, see Drawing No. 8949.

For Details of Widening Piers No. 1 and 2, see Drawing No. 8950.

For Details of Widening 28'0" A.C.L. Girder Spans, see Drawing No. 8951.

For Details of Widening 30'0" and 100'0" A.C. Arch Spans, see Drawings Nos. 8952, 8953 and 8954.

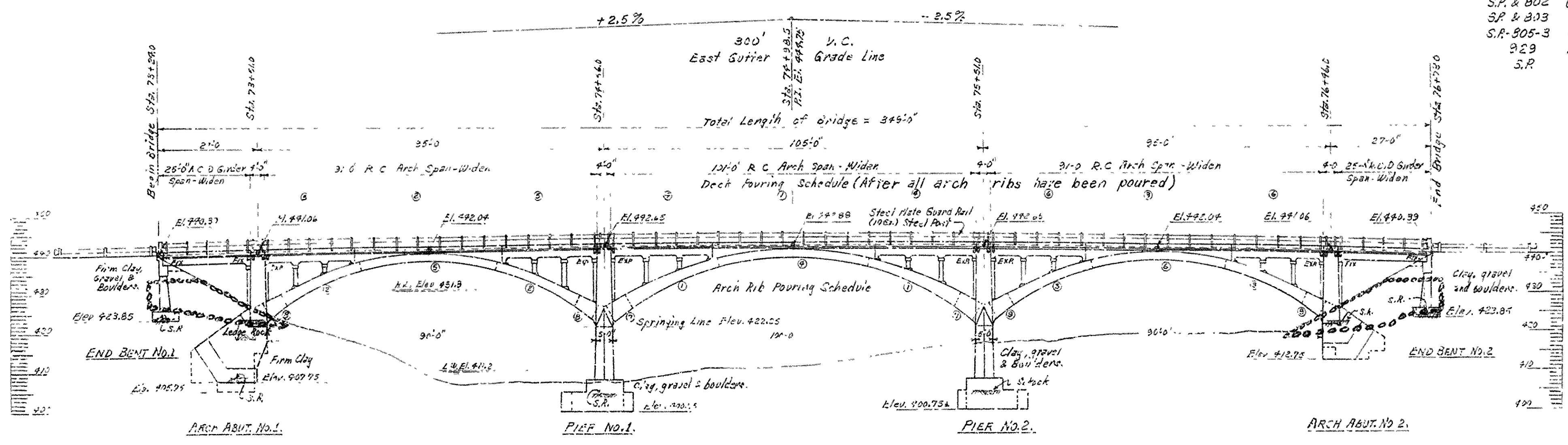
For Bar List and General Notes see Drawing No. 8955.

Piers of the existing structure will be furnished to the Contractor upon request.

Specifications for Arkansas State Highway Commission Standard Specifications for Road and Bridge Construction adopted March 4, 1945.

QUANTITIES

ITEM NO.	ITEM	QUANTITY	UNIT
103	Dry Excavation for Structures	294	Cu.Yd.
103	Wet Excavation for Structures	83	Cu.Yd.
103	Solid Rock Excavation for Structures	149	Cu.Yd.
S.R. & B02	Class "A" Concrete for Bridges	202.4	Cu.Yd.
S.R. & B02	Class "B" Concrete for Bridges	219.4	Cu.Yd.
S.R. & B03	Reinforcing Steel	57,475	Lb.
S.R. & B05-3	Steel Plate Guard Rail (1060)	703.5	Lin. Ft.
S.R. & B09	Bridge Name Plates - Type "C"	1	Each
S.R.	Remodeling Existing Bridge Structures	100%	Complete Item



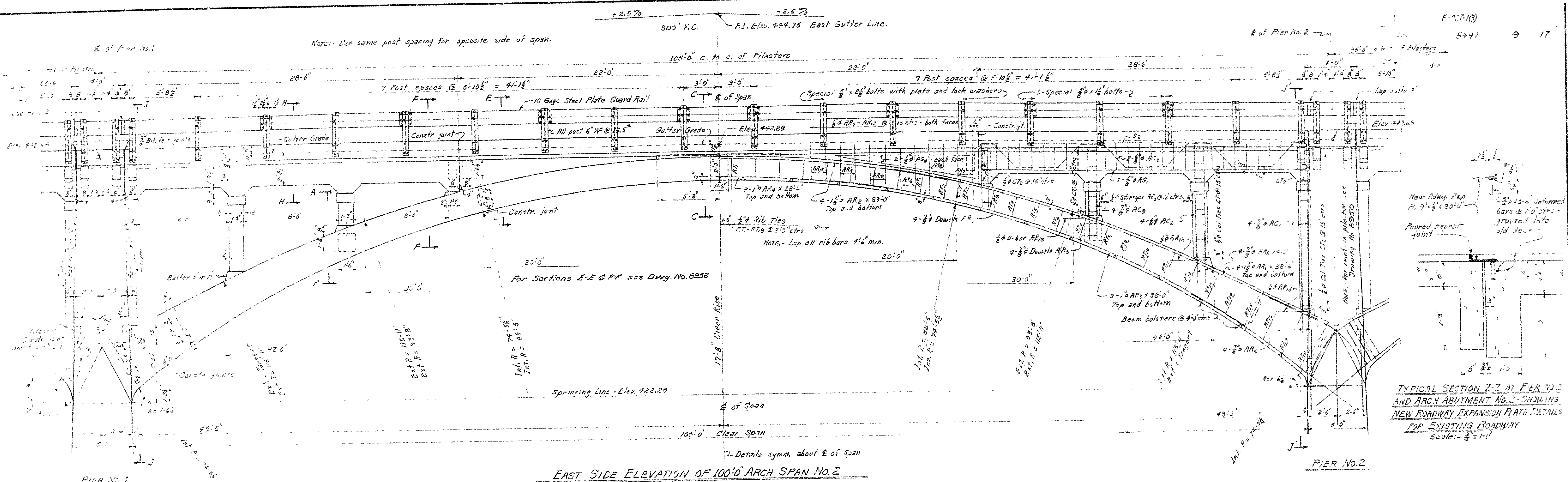
SPECIAL NOTE

Asphalt surfacing on bridge deck to be placed by State

LAYOUT OF
BRIDGE OVER STRAWBERRY RIVER
EVENING SHADE - ASH FLAT
SHARP COUNTY
ROUTE 11 SEC. 16
ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

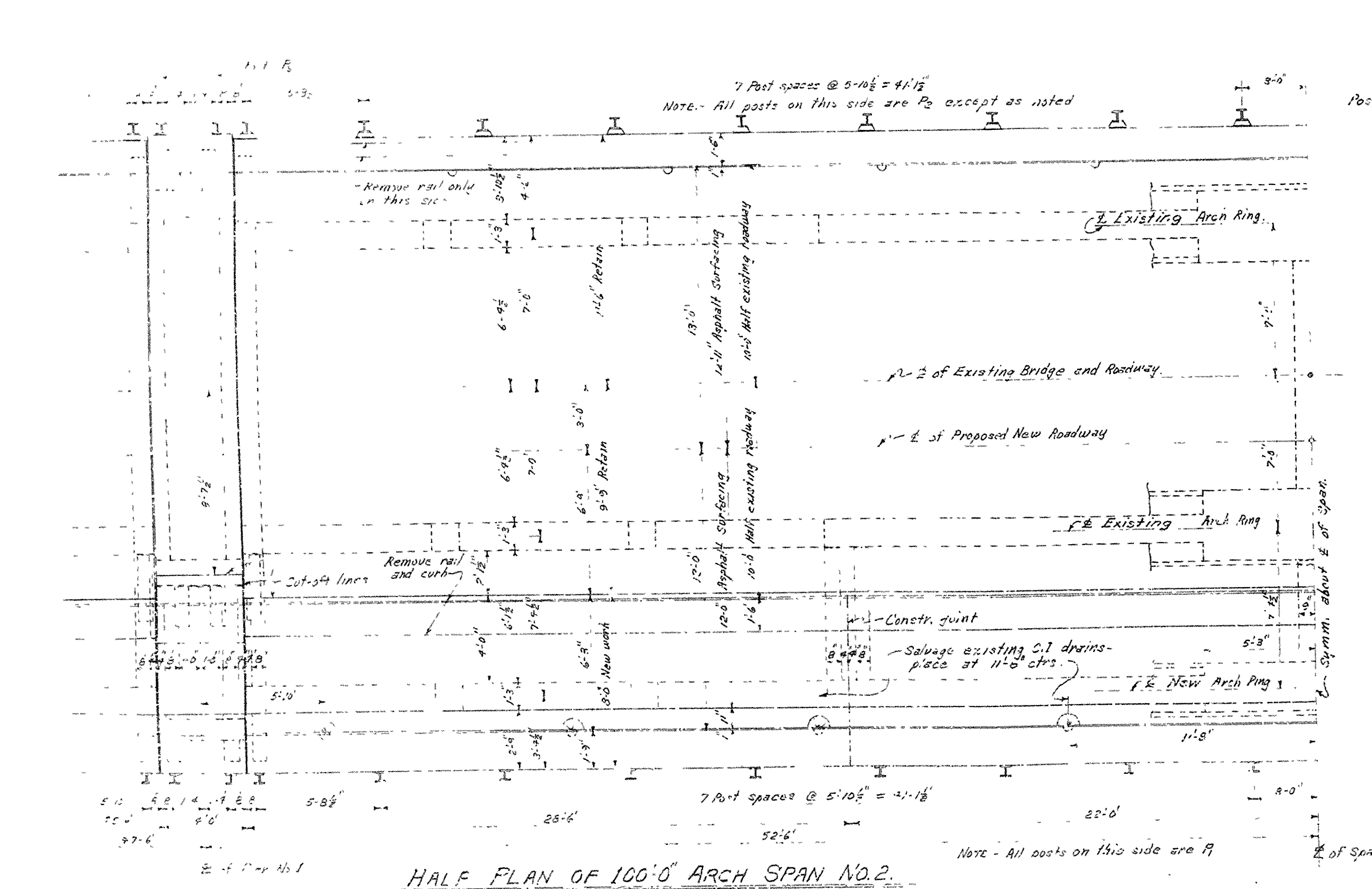
DESIGN SPECIFICATIONS: A.A.S.H.O. 1953
DESIGN LIVE LOAD: H-20 LOADING
MATERIALS: Class A Concrete 840 #/cu ft
Non-Construction Class B Concrete 1200 #/cu ft
Reinforcing Steel (Int'l Grade) 20000 #/cu ft

DRAWN BY: [Signature] DATE: 8-15-58
TRACED BY: [Signature] DATE: 8-12-58
CHECKED BY: [Signature] DATE: 8-23-58
SCALE: 1" = 20'-0"
BRIDGE NO. 799-A DRAWING NO. 8947



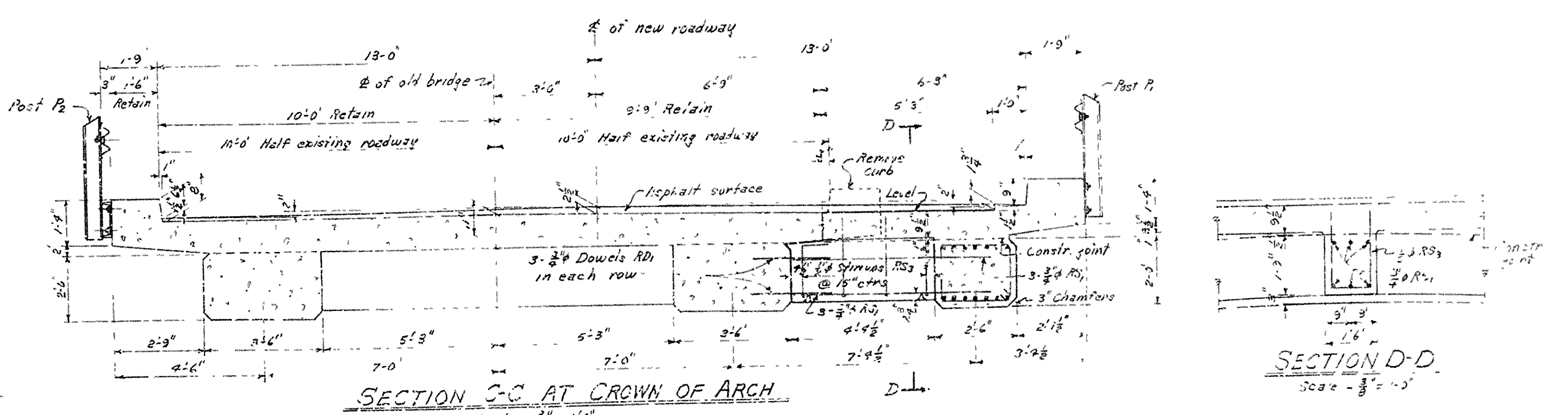
EAST SIDE ELEVATION OF 100' R.C. ARCH SPAN No. 2

TYPICAL SECTION Z-Z AT PIER NO. 2 AND ARCH ABUTMENT No. 2, SHOWING NEW ROADWAY EXPANSION PLATE DETAILS FOR EXISTING ROADWAY
Scale: 1/8" = 1'-0"

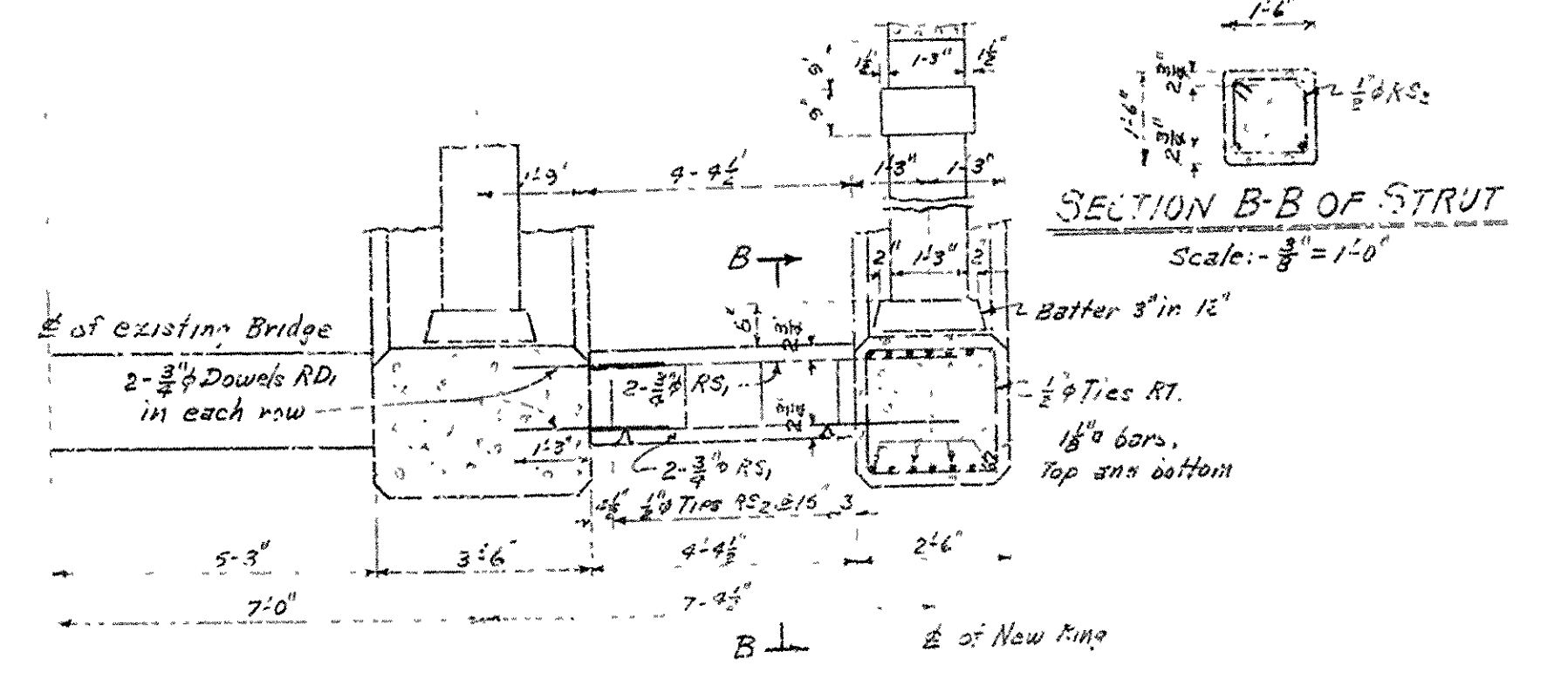


HALF PLAN OF 100' R.C. ARCH SPAN No. 2

Note - Rail members are not shown, see Elevation above.



SECTION C-C AT CROWN OF ARCH



SECTION B-B OF STRUT

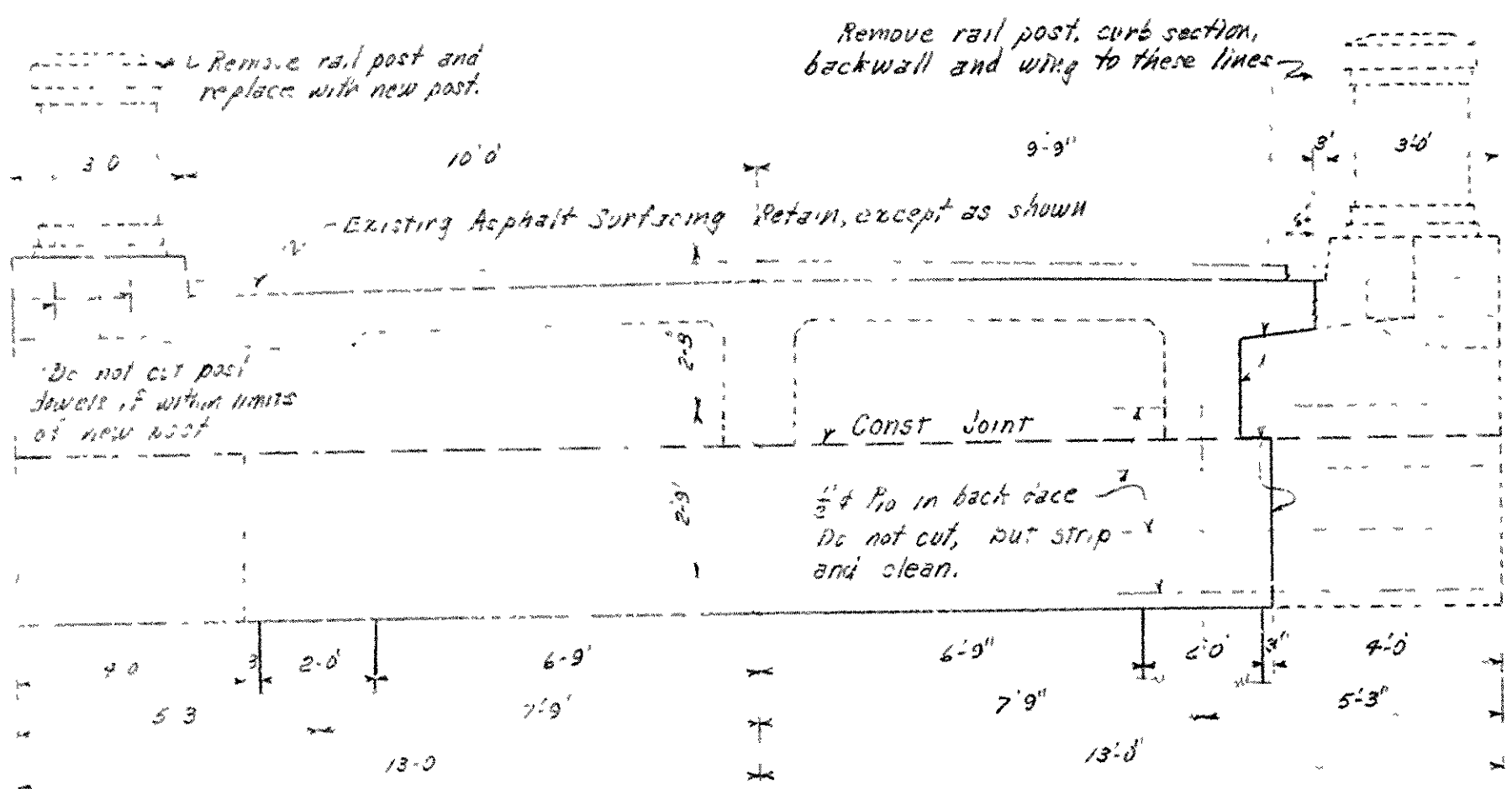
SECTION A-A
Section A-A for 50' Arch Span is similar, except for rib ties.
Scale: 1/8" = 1'-0"

DETAILS OF WIDENING
100'-0" R.C. ARCH SPAN
BRIDGE OVER STRAWBERRY RIVER
EVENING SHADE - ASH FLAT
SHARP COUNTY
ROUTE 11 SEC. 16

ARKANSAS STATE HIGHWAY COMMISSION
LITTLE ROCK, ARK.

DRAWN BY: W.G.H. DATE: 8-5-53
TRACED BY: M.G.H. DATE: 9-11-55
CHECKED BY: M.G.H. DATE: 9-28-55
BRIDGE NO. 793-A DRAWING NO. 8953

L.P. Carlson
BRIDGE DESIGN ENGINEER

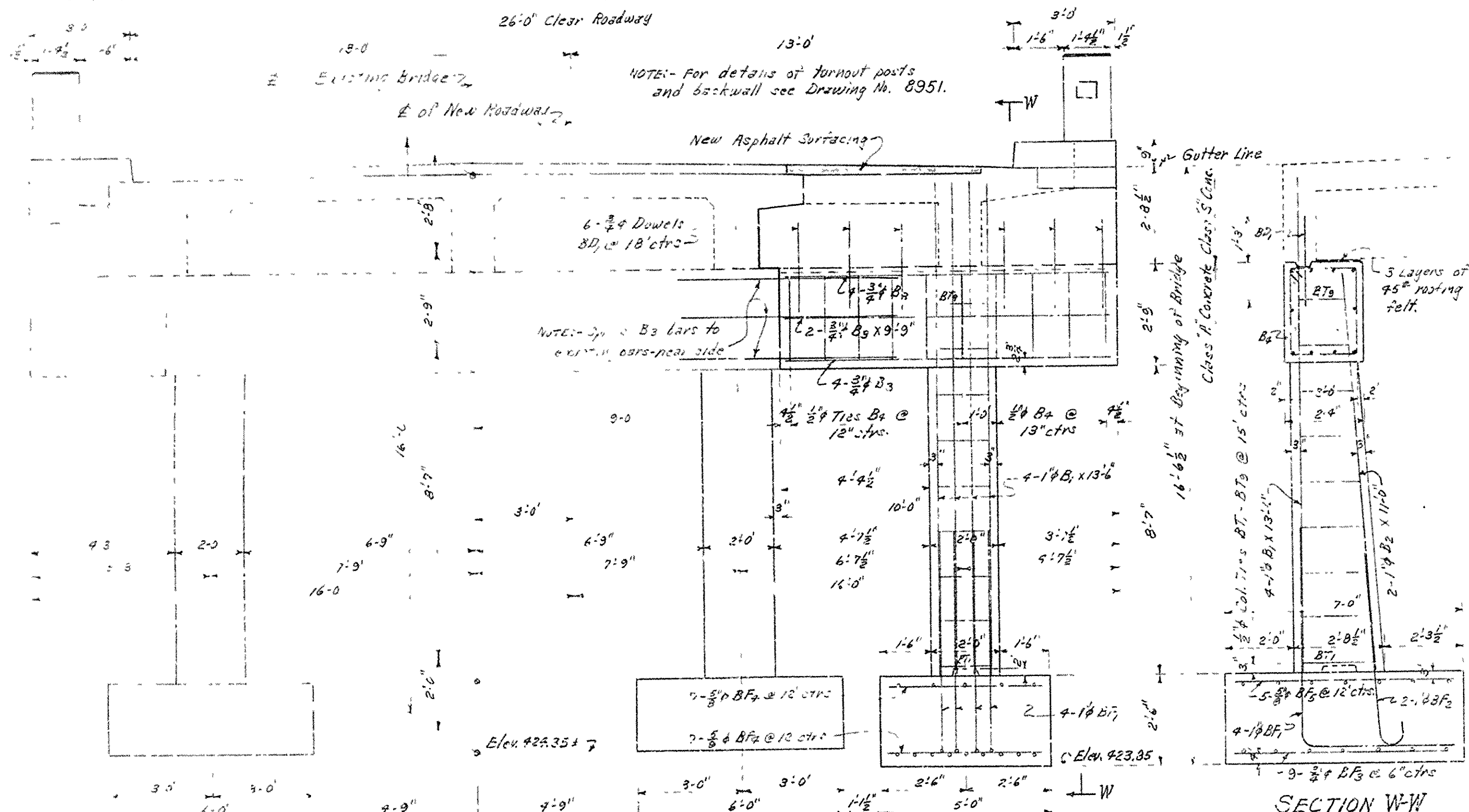


PART REAR ELEVATION OF END BENT NO. 1 - SHOWING PORTIONS TO BE REMOVED
 PART REAR ELEVATION OF END BENT NO. 2 is similar but opposite hand.

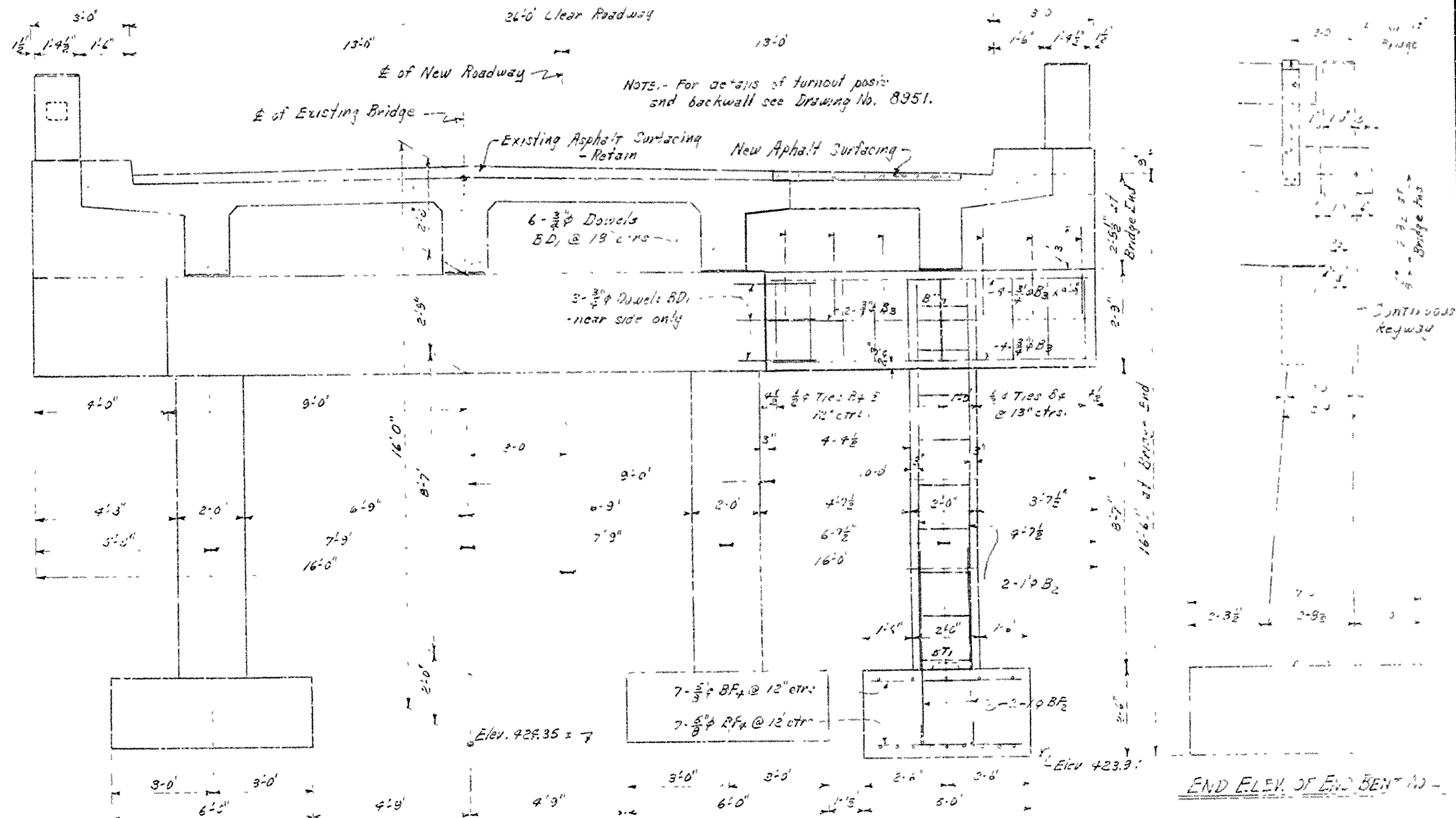
BAR LIST FOR WIDENING END BENTS

MARK	SIZE	NO. REQD		LENGTH	A	B	BENDING DIAGRAM
		BENT NO. 1	BENT NO. 2				
BF ₁	1"Ø	4	4	10'-6"			[Bending Diagram for BF1, BF2]
BF ₂	1"Ø	2	2	6'-6"			
B ₁	1"Ø	7	7	13'-6"			[Bending Diagram for B1, B2]
B ₂	1"Ø	2	2	11'-0"			
B ₃	3/4"Ø	10	10	9'-9"			[Bending Diagram for B3, B4]
B ₄	3/4"Ø	9	9	2'-6"			
B ₅	3/4"Ø	9	9	6'-6"			[Bending Diagram for B5, B6]
BF ₃	5/8"Ø	14	14	4'-6"			
BF ₄	5/8"Ø	5	5	6'-6"			[Bending Diagram for BF3, BF4]
BF ₅	5/8"Ø	10	10	9'-9"	2'-5"	2'-5"	
B ₇	1"Ø	One Each	One Each	Varies 8'-8" to 7'-5"	Varies 2'-4" to 1'-6"	1'-7 1/2"	[Bending Diagram for B7, B8]

NOTE: Dimensions relating to reinforcing steel are to bar centers.
 B₇, B₈ vary by 1/4" from 2'-4" to 1'-6"

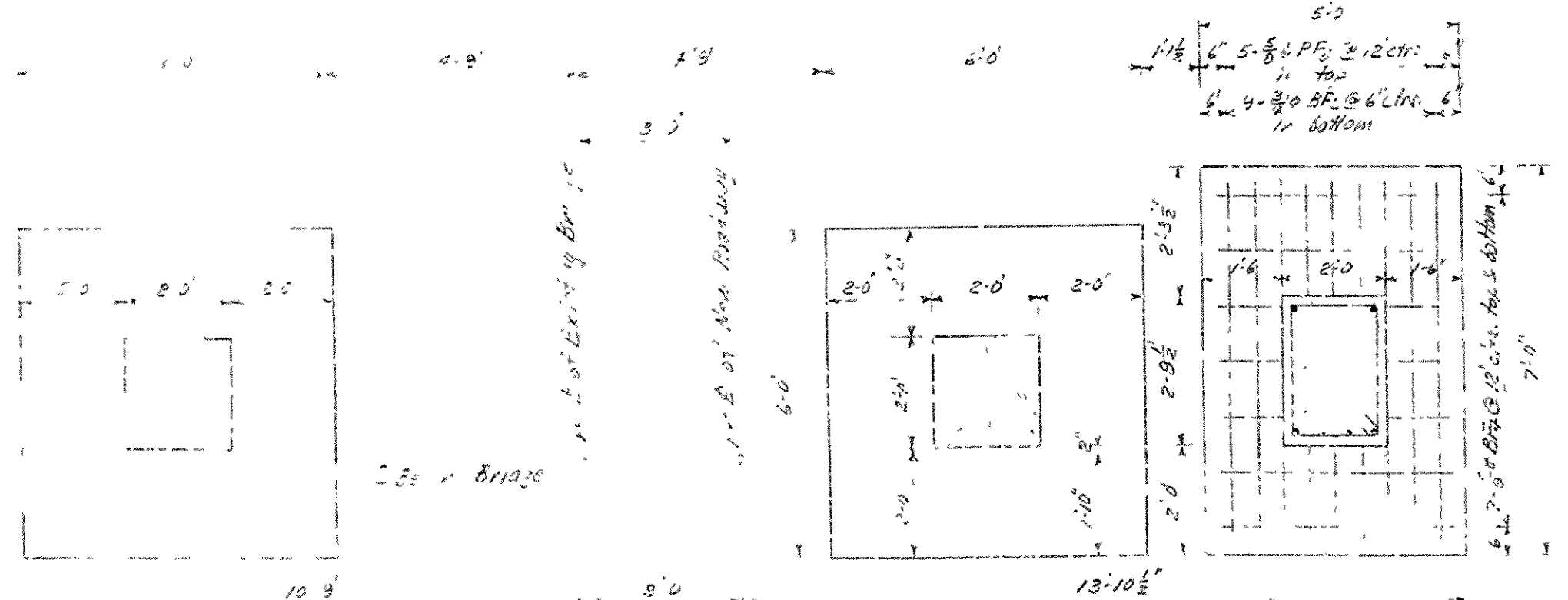
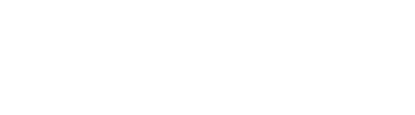


REAR ELEVATION OF END BENT NO. 1 WITH NEW COLUMN AND BACKWALL
 REAR ELEVATION OF END BENT NO. 2 is similar but opposite hand



FRONT ELEVATION OF END BENT NO. 2 WITH NEW COLUMN AND BACKWALL
 FRONT ELEVATION OF END BENT NO. 1 is similar but opposite hand

SECTION W-W



FOOTING PLAN OF END BENT NO. 1

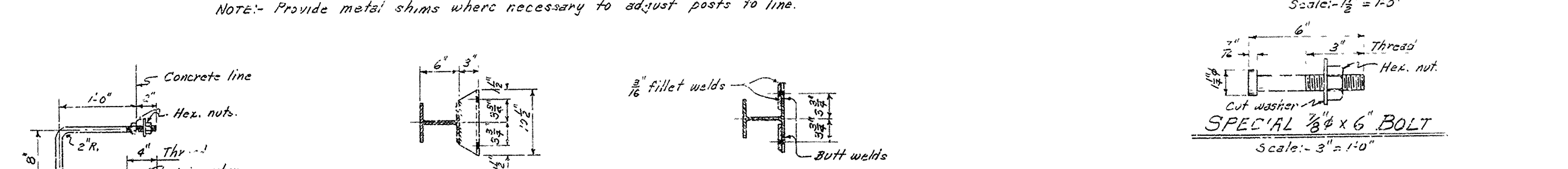
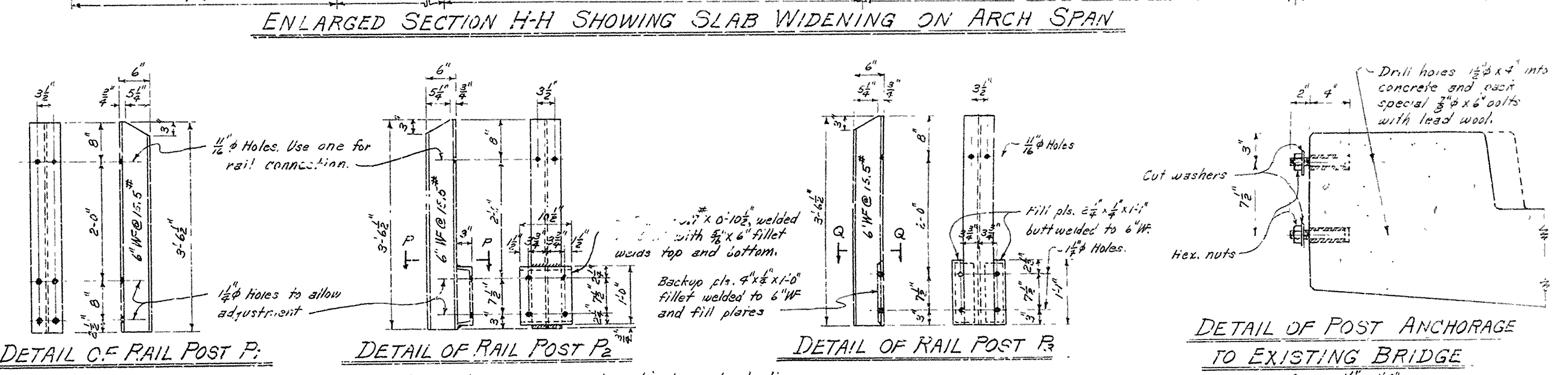
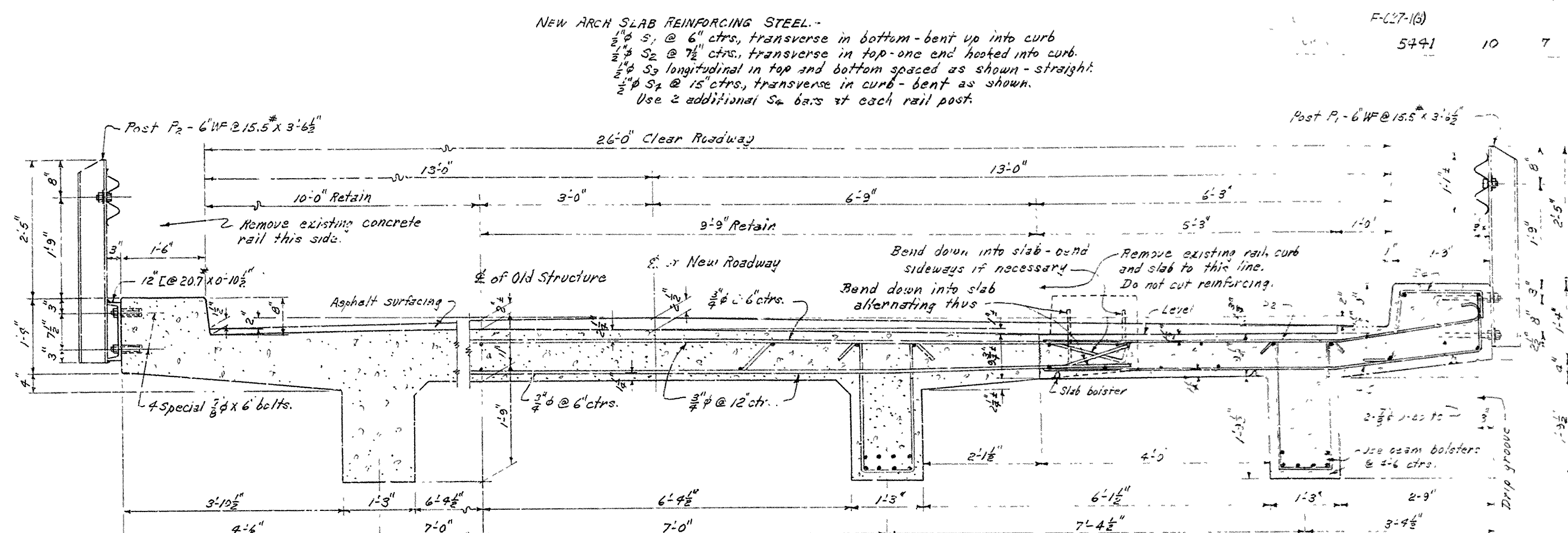
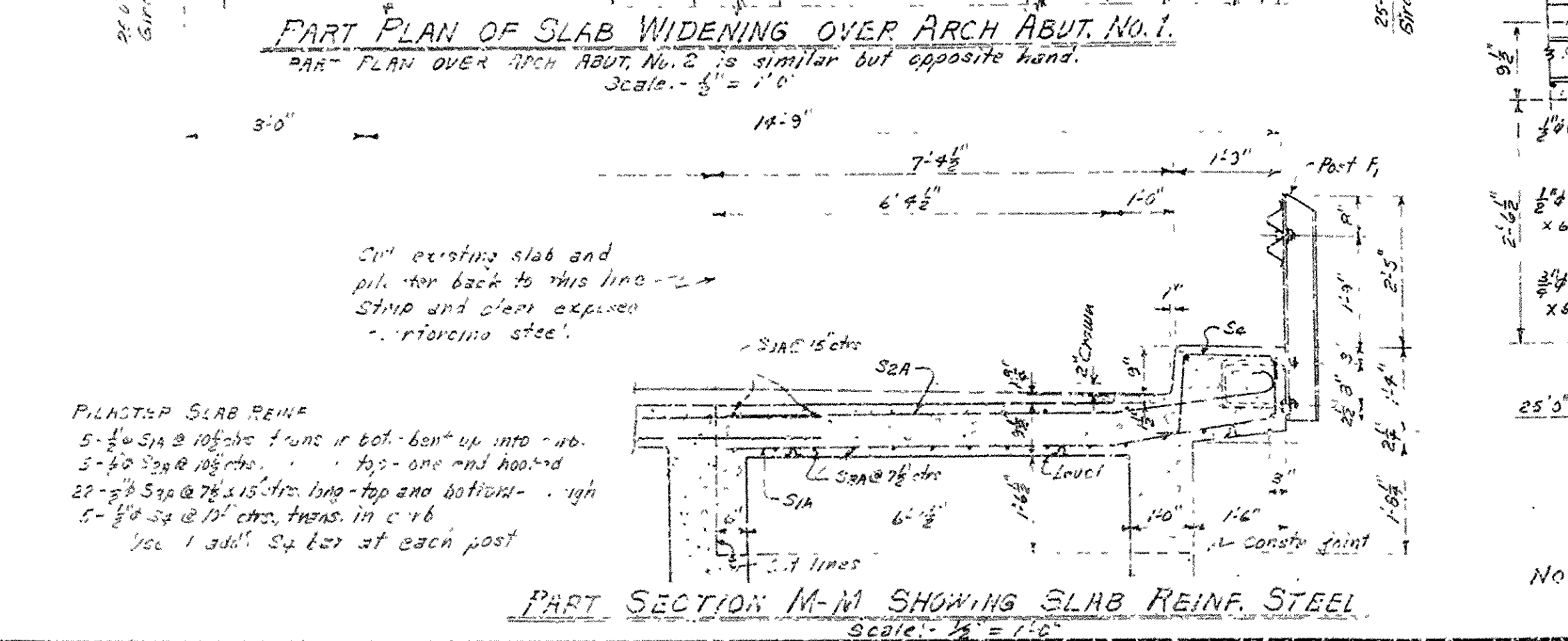
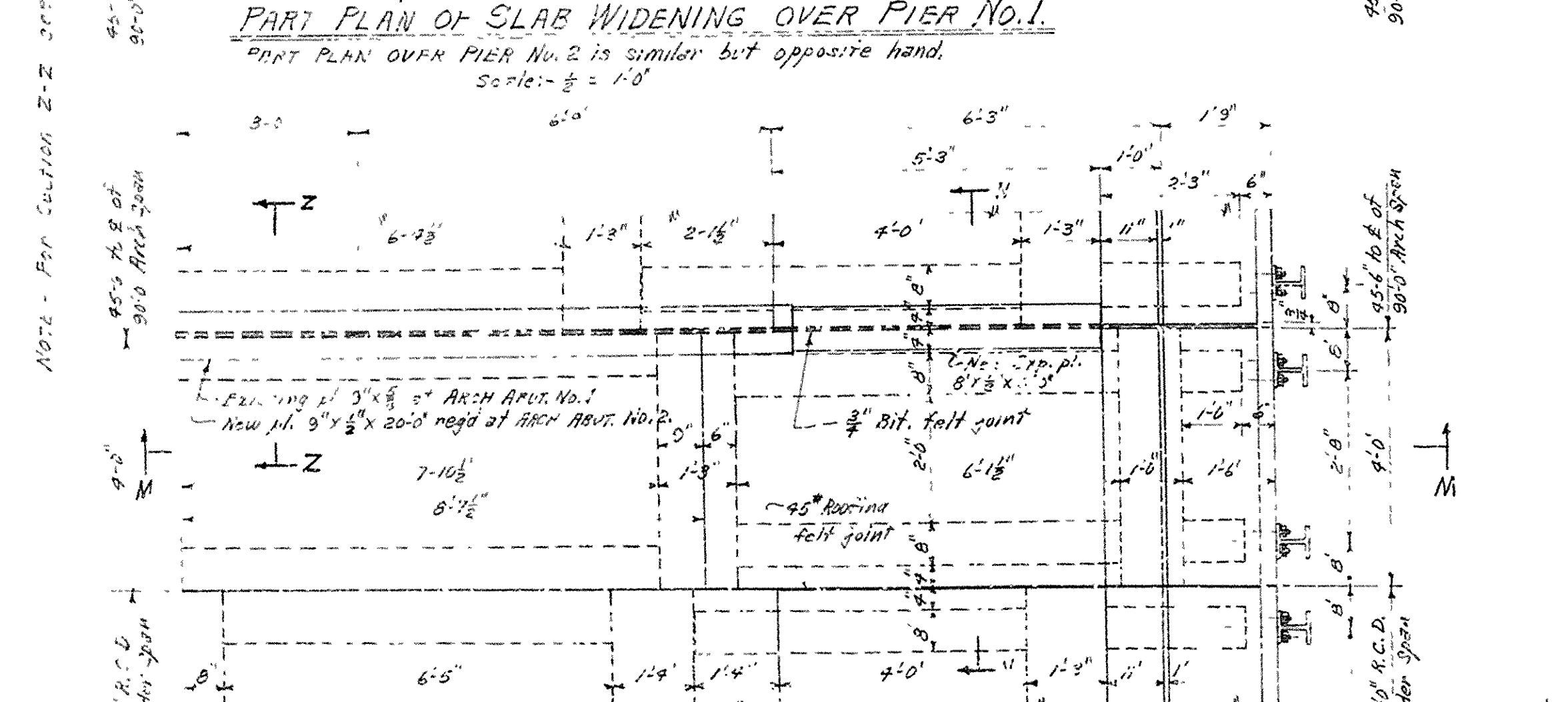
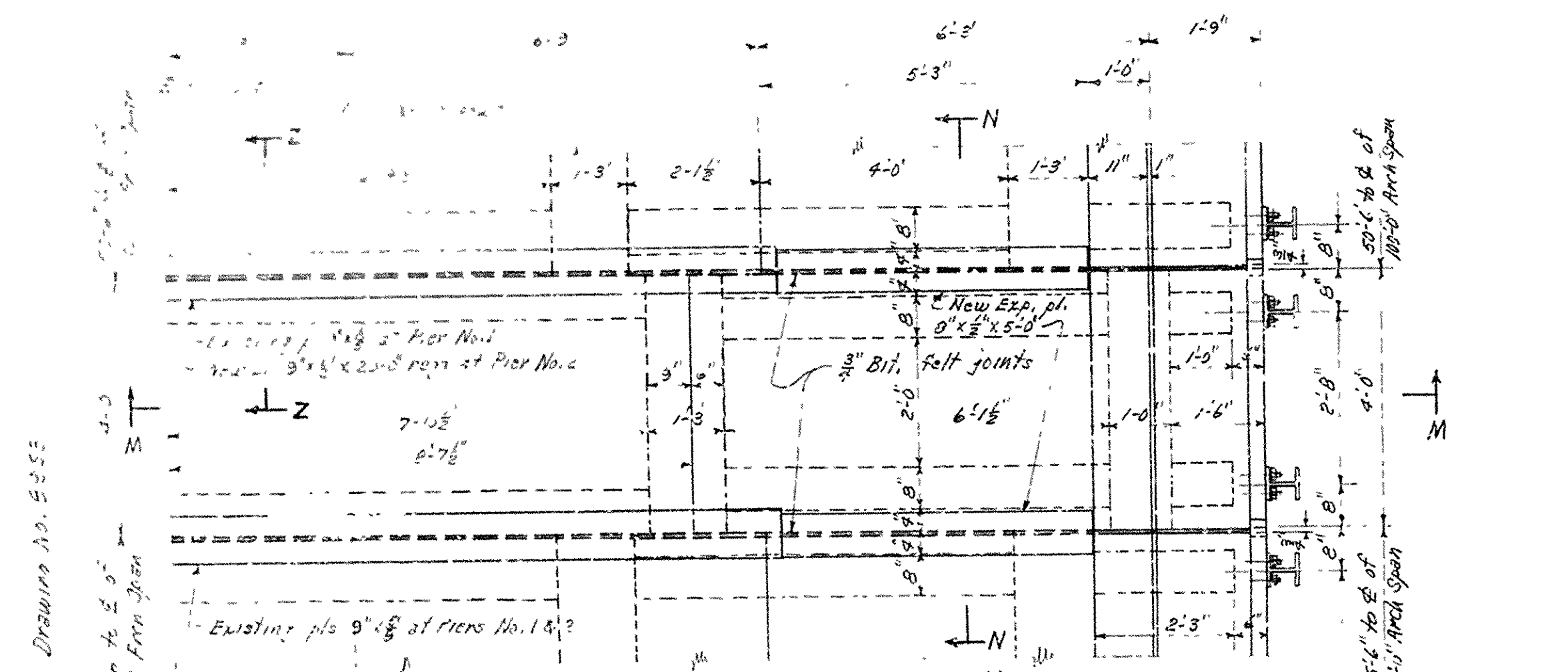
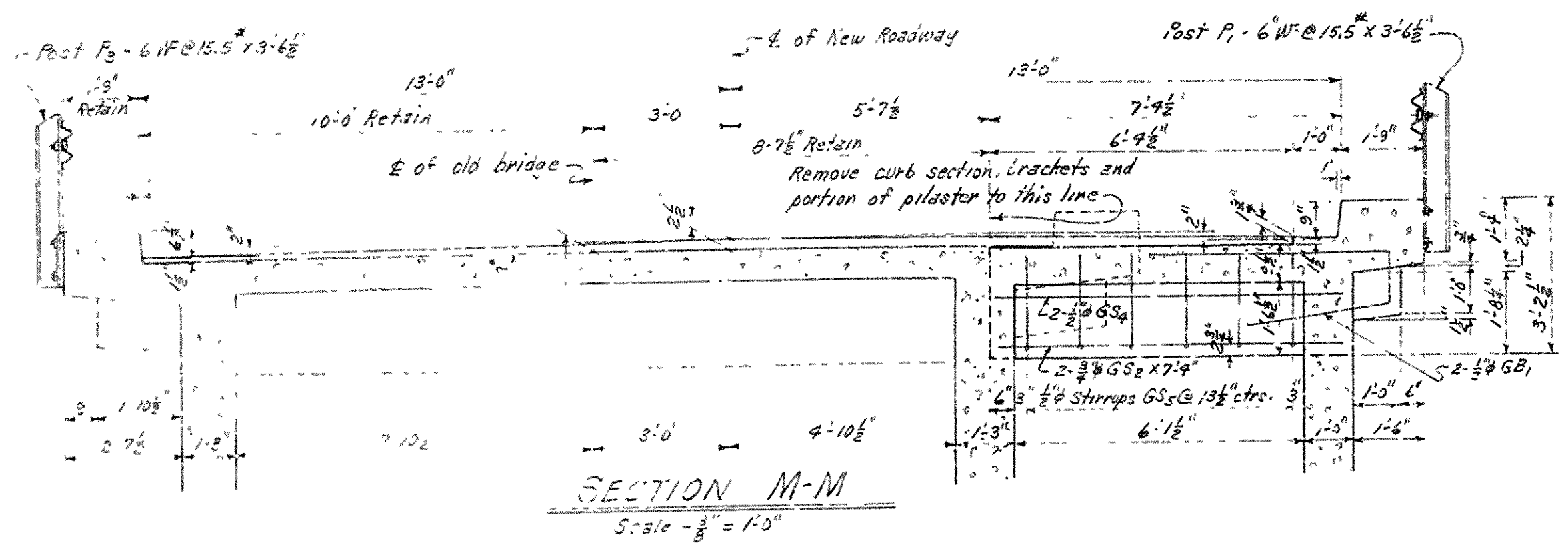
GENERAL NOTES FOR END BENTS NO. 1 AND 2.

Dimensions and elevations, relating to the existing End Bents No. 1 and 2 are general only and shall be verified in the field before construction is begun and before approval of reinforcing bar lists will be given.
 All concrete in End Bents No. 1 and 2, below top of caps to be Class 'A' all above top of caps to be Class 'S' and shall be poured in the dry. All exposed corners to be chamfered 3/8" unless otherwise noted.
 Payment for work of removing existing turnouts, cutting off parts of back wall and wingwalls of existing abutment, scarifying contact surfaces of old concrete before placing new concrete, and drilling holes and grouting new reinforcing Jowel bars into old concrete, shall be paid for at the lump sum price bid for 'Remodeling Existing Bridge Structures'.
 Existing reinforcing above or outside cut-off line shall be retained to extend into new concrete.
 For Layout of Bridge over Strawberry River, see Drawing No. 8347.
 For Details of 25'-0" R.C.D. Girder Spans, see Drawing No. 8351.

DETAILS OF REMODELING
 END BENTS NO. 1 AND 2
 BRIDGE OVER STRAWBERRY RIVER
 EVENING SHADE - ASH FLAT
 SHARP COUNTY
 ROUTE 11 SEC. 16
 ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

BRIDGE DESIGN ENGINEER
 L. L. Carlson

DRAWN BY: DATE: 2-3-55
 TRACED BY: J.F.N. DATE: 4-27-55
 CHECKED BY: J.E.M. DATE: 4-27-55
 BRIDGE NO. 799-7 DRAWING NO. 8948

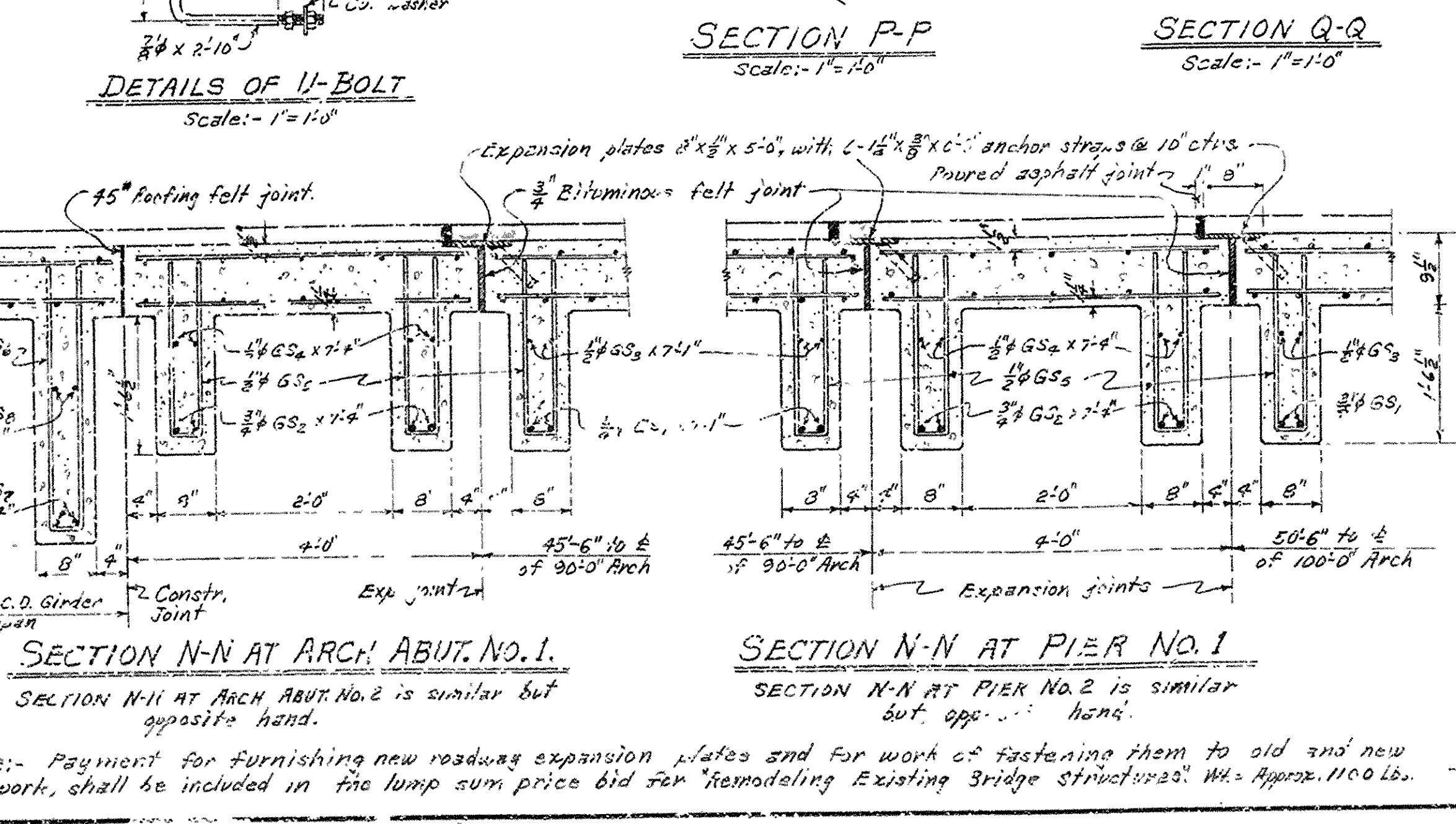


DESIGN SPECIFICATION: - A.A.S.H.O 1953 H-20 LOADING

LOAD DISTRIBUTION TO GIRDERS:	WEST OLD OUTSIDE GIRDER	EAST OLD OUTSIDE GIRDER	NEW OUTSIDE GIRDER
Dead Load =	2442' / Lin. Ft.	1930' / Lin. Ft.	1620' / Lin. Ft.
Live Load =	1.86 Wheels	2.0 Wheels	1.0 Wheel
Live Load Imp. =	30 %	30 %	30 %

DESIGN UNIT STRESSES:

	800 #/sq in	800 #/sq in	1000 #/sq in
Class 3 Concrete (n=10)	16000 #/sq in	16000 #/sq in	20000 #/sq in
Reinf. Steel (Int. Grade)			



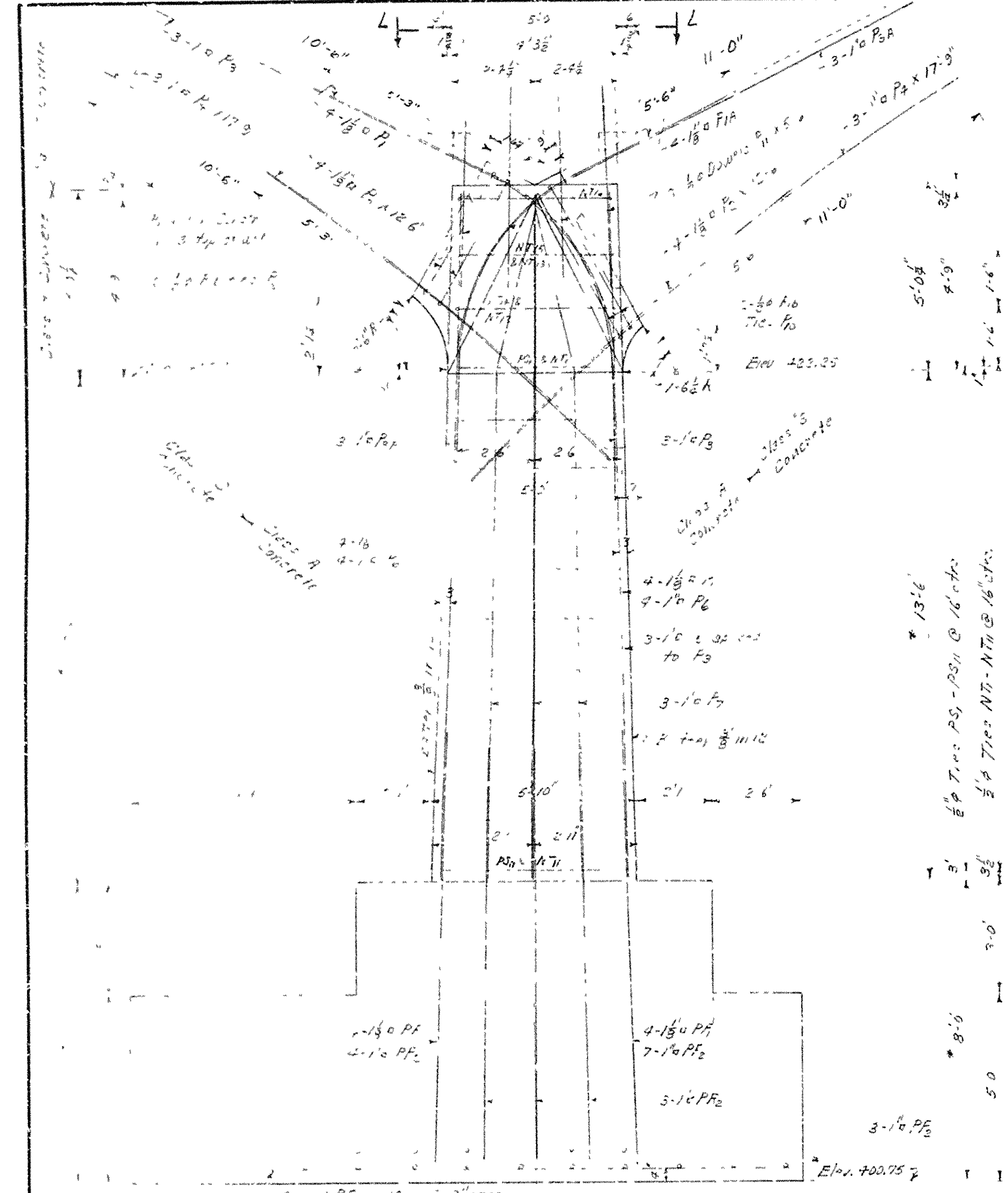
DETAILS OF WIDENING R.C. ARCH SPANS BRIDGE OVER STRAWBERRY RIVER EVENING SHADE - ASH FLAT SHARP COUNTY ROUTE 11 SEC. 13 ARKANSAS STATE HIGHWAY COMMISSION LITTLE ROCK, ARK.

DRAWN BY: W.C.H. DATE: 7-23-55
TRACED BY: W.C.H. DATE: 8-16-55
CHECKED BY: W.E.W. DATE: 9-30-55

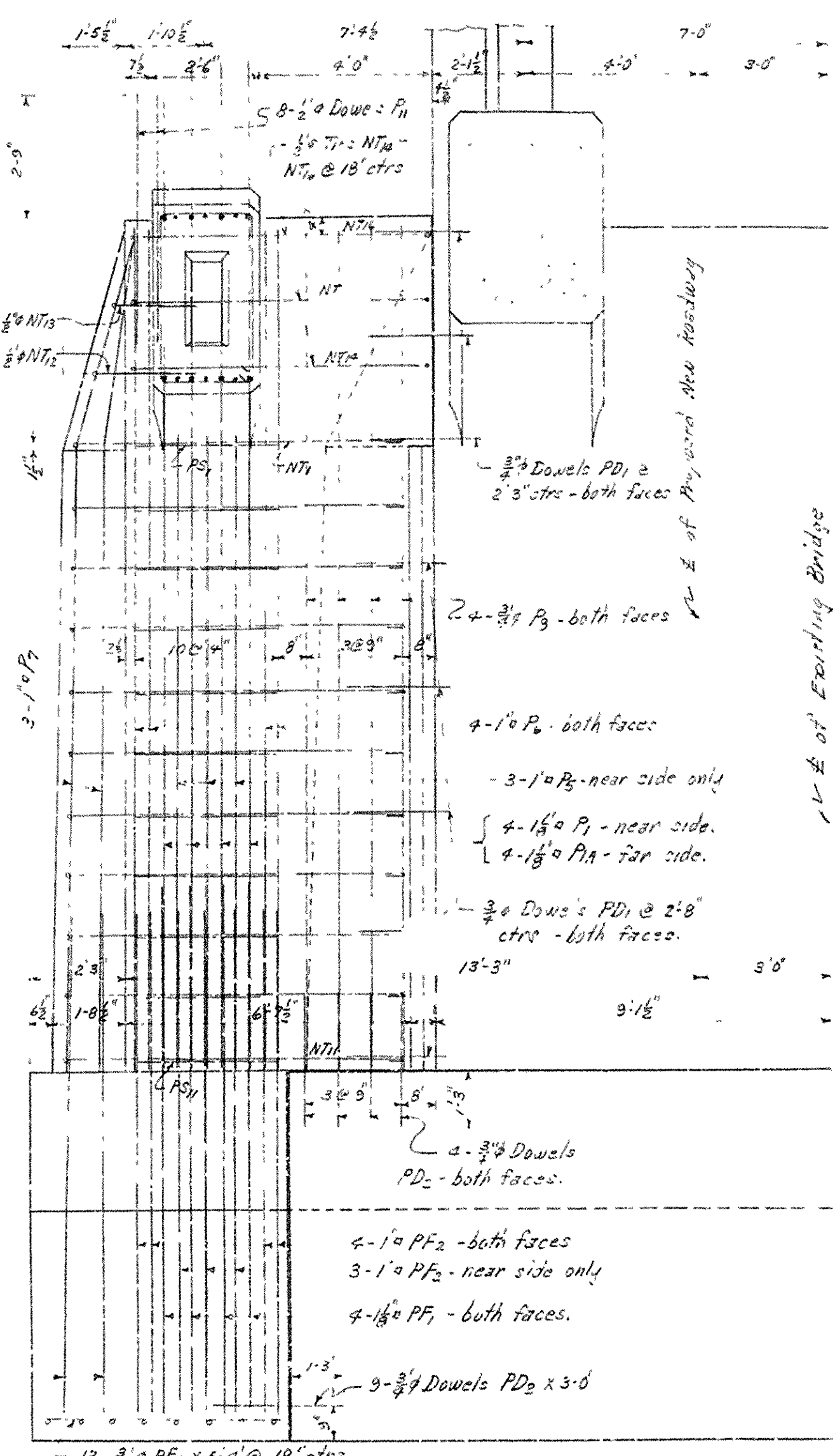
SCALE: 3/4" = 1'-0"
EXCEPT AS NOTED

BRIDGE NO. 799 A DRAWING NO. 8954

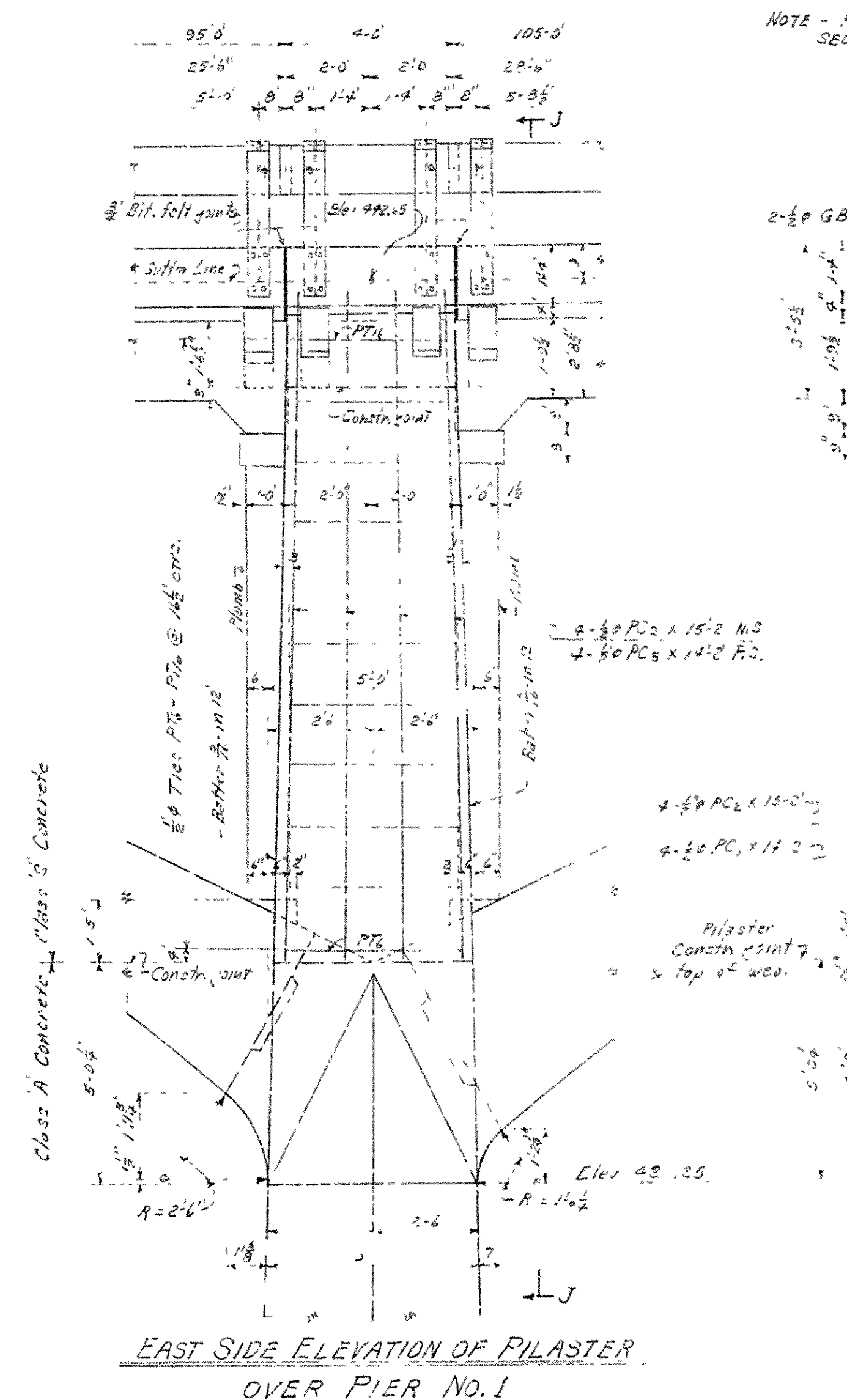
NOTE: - Payment for furnishing new roadway expansion plates and for work of fastening them to old and new work, shall be included in the lump sum price bid for remodeling existing bridge structures. W.A. Approx. 1100 lbs.



EAST SIDE ELEVATION OF PIER NO. 1.
 EAST SIDE ELEV. OF PIER NO. 2 IS SIMILAR, BUT OPPOSITE HAND

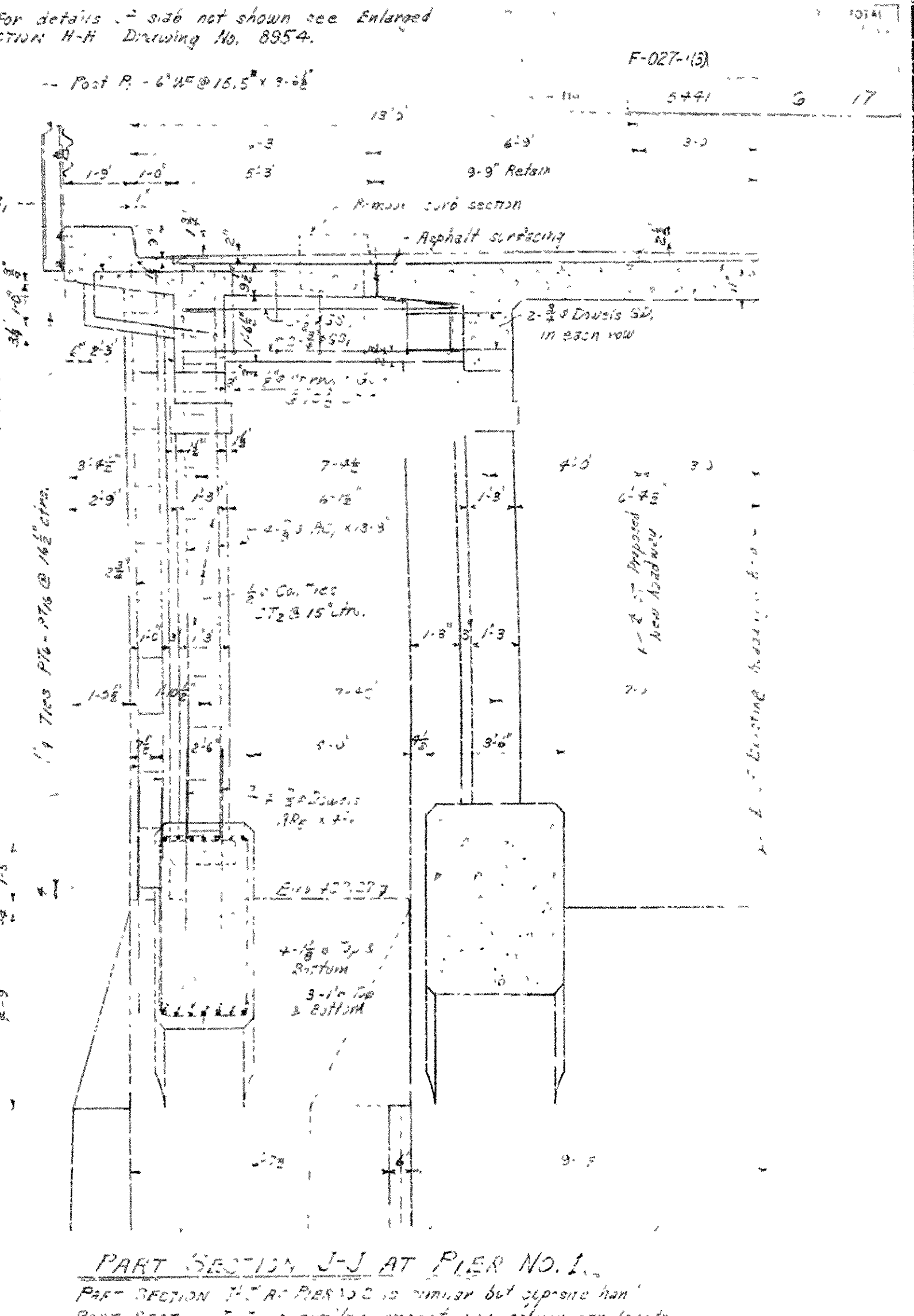


NORTH ELEVATION OF PIER NO. 1.
 SOUTH ELEVATION OF PIER NO. 2 IS SIMILAR BUT OPPOSITE HAND



EAST SIDE ELEVATION OF PILASTER OVER PIER NO. 1.

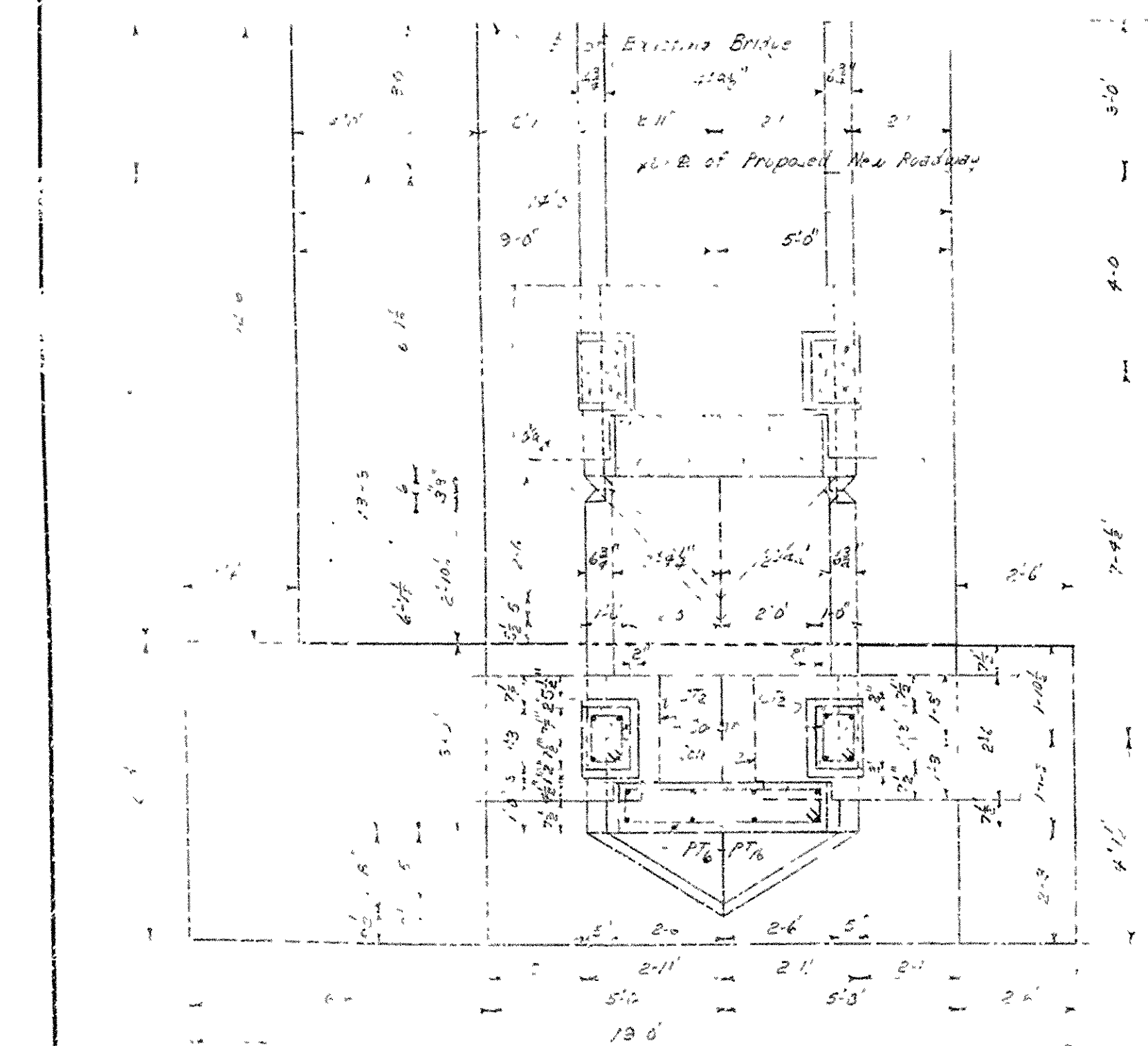
EAST SIDE ELEV. OF PILASTER OVER PIER NO. 2 IS SIMILAR BUT OPPOSITE HAND



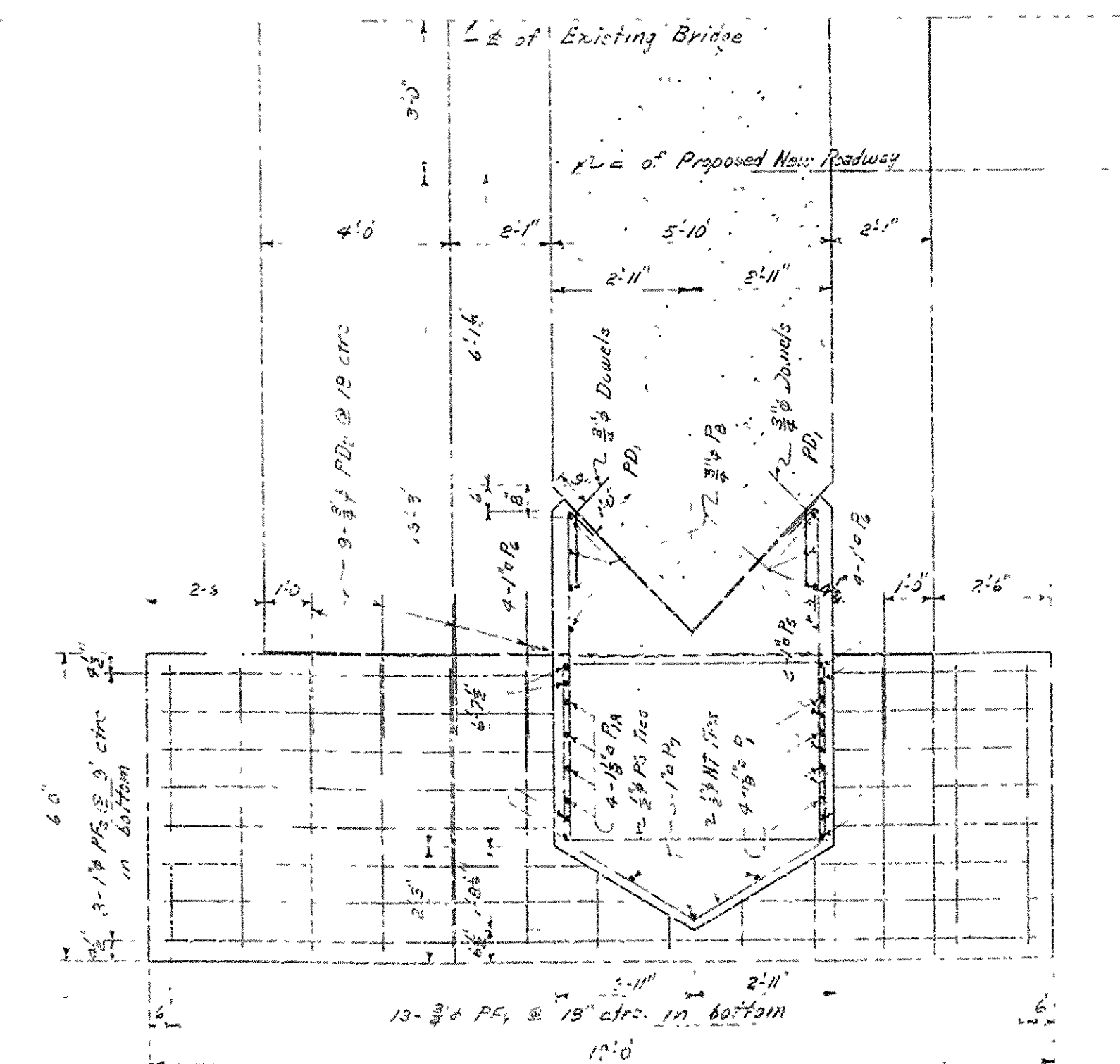
PART SECTION J-J AT PIER NO. 1.

PART SECTION J-J AT PIER NO. 2 IS SIMILAR BUT OPPOSITE HAND
 PART SECTION J-J IS SIMILAR EXCEPT FOR COLUMN BAR LENGTHS

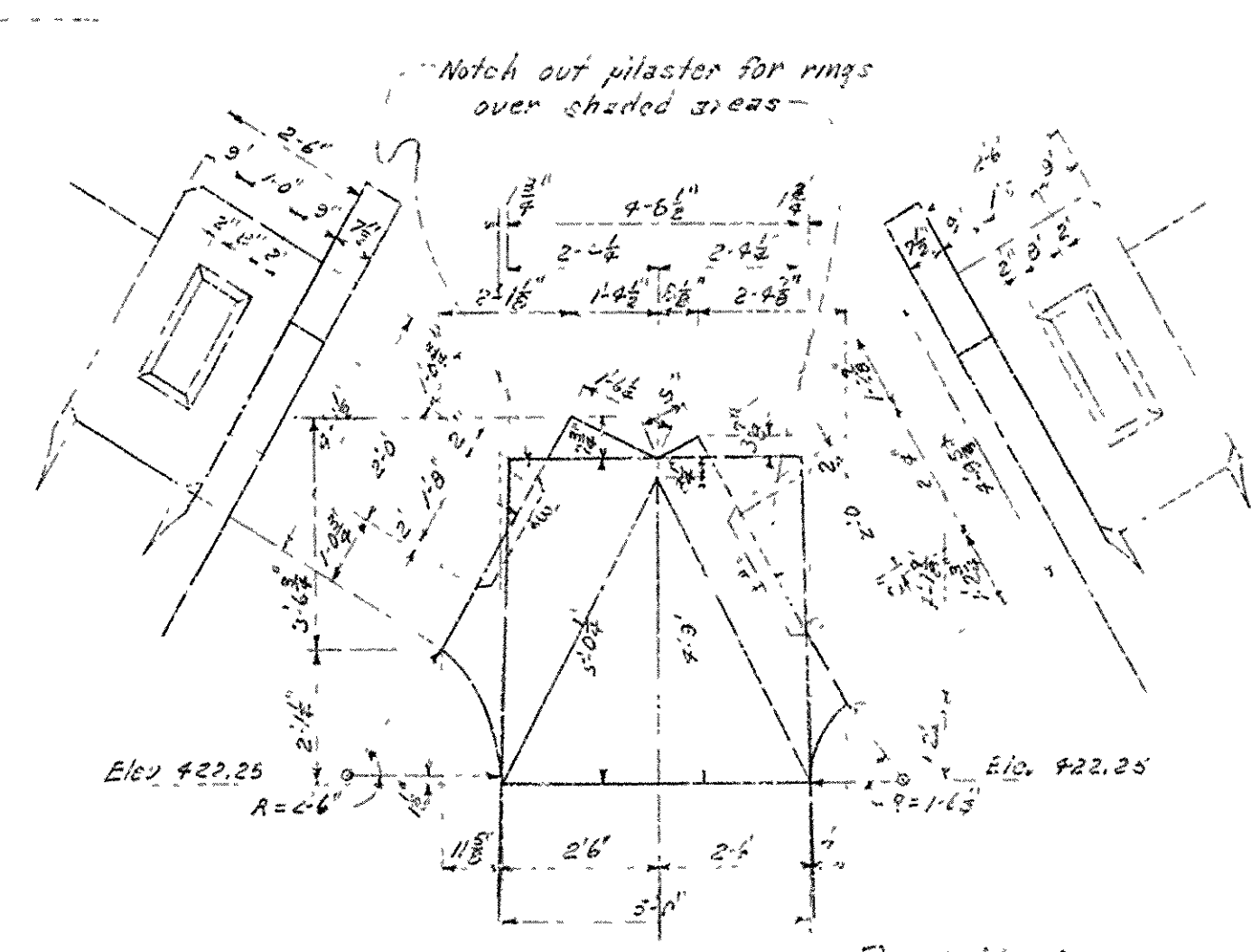
NOTE:-
 For General Notes and Bar Lists see Drawing No. 8955
 For Details of Area Spans see Drawing No. 8952, 8953 and 8954



ELEVATION PLAN OF PIER NO. 1 - SECTION L-L.
 PLANS OF PIER NO. 2 ARE SIMILAR BUT OPPOSITE HAND



FOOTINGS PLAN OF PIER NO. 1 SHOWING REINF. STEEL



DETAIL OF SKEWBACK AT PIER NO. 1.
 DETAIL OF SKEWBACK AT PIER NO. 2 IS OPPOSITE HAND

* SPECIAL NOTE:-
 Piers No. 1 and 2 are detailed the same height.
 The top and bottom of the new footings shall match the existing footings. Heights of the shafts and the reinforcing bars are to be adjusted in the field to obtain proper height of springing line.

BRIDGE DESIGN ENGINEER

DETAILS OF WIDENING
 PIERS NO. 1 & 2
 BRIDGE OVER STRAWBERRY RIVER
 EVENING SHADE - ASH F. AT
 SHARP JUNCTY
 ROUTE 11 SEC. 10

ARKANSAS STATE HIGHWAY COMMISSION
 LITTLE ROCK, ARK.

DRAWN BY: DATE: 3-24-23
 CHECKED BY: DATE: 3-29-23
 BRIDGE NO. 799-A DRAWING NO. 8950