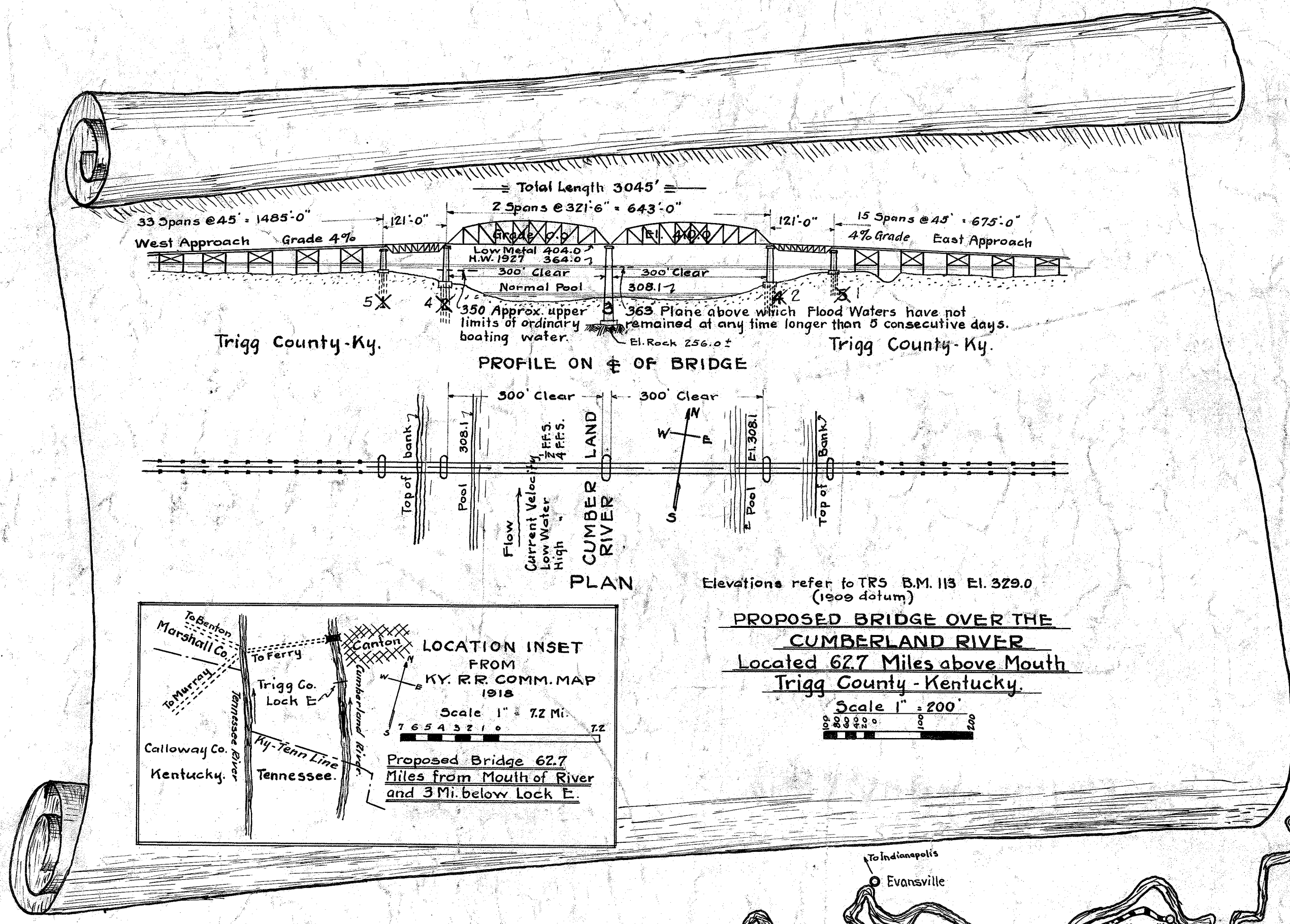


MICROFILMED-70

Revised - Numbering of Plans - 11-18-30



LEGEND

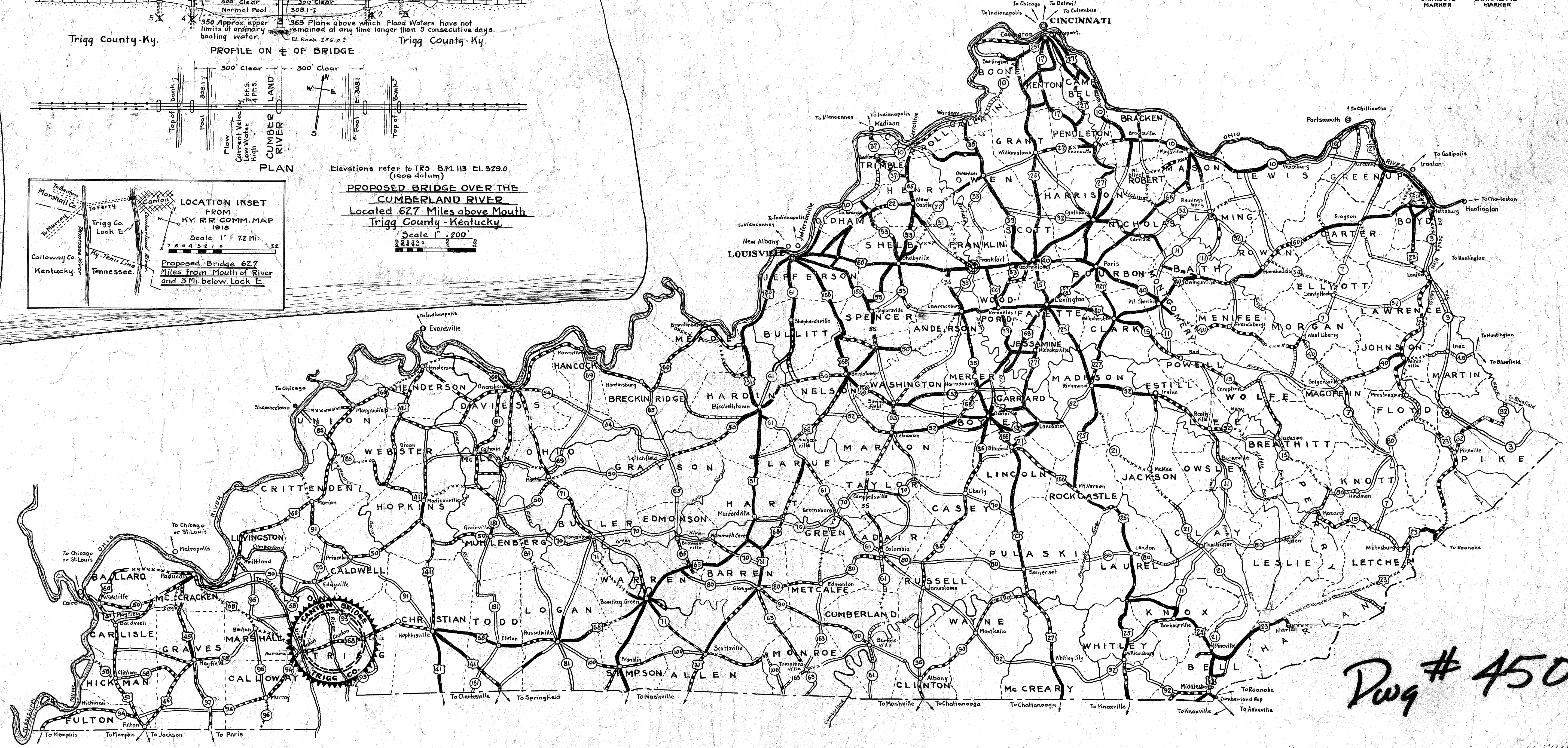
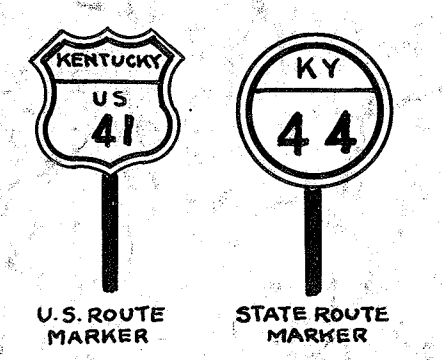
— HARD SURFACE

--- GRAVEL OR EQUIVALENT

----- GRADED EARTH ROADS

xxxxxxx ROADS UNDER CONSTRUCTION

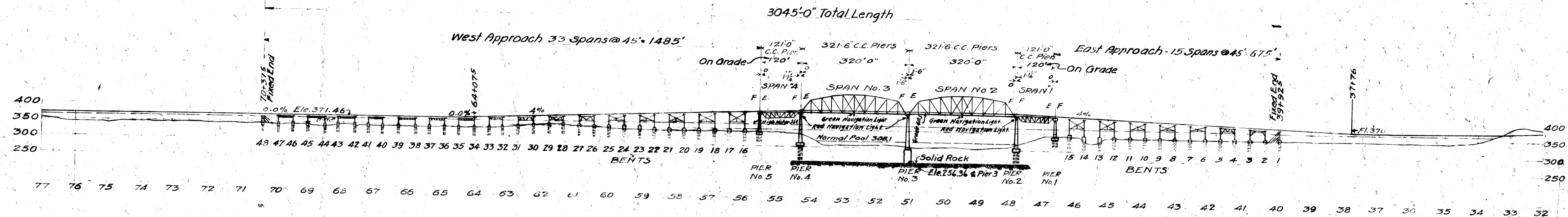
----- UNIMPROVED EARTH OR POOR SURFACING



Dwg # 4505

COMMONWEALTH OF KENTUCKY
 PROPOSED BRIDGE OVER
 THE
 CUMBERLAND RIVER
 AT
 CANTON - TRIGG CO. - KY.

Sh. 1



Dwg # 4505
 Sh 1" B" Dwg. No. 4505

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF STATE ROADS AND HIGHWAYS
 FRANKFORT

CUMBERLAND RIVER BRIDGE
 CANTON ~ TRIGG COUNTY
 LAYOUT OF BRIDGE

SUBMITTED BY *[Signature]*
 CONSULTING ENGINEER
 RECOMMENDED FOR APPROVAL *[Signature]*
 BRIDGE ENGINEER

RECOMMENDED FOR APPROVAL *[Signature]*
 PROFESSIONAL ENGINEER

APPROVED - KENTUCKY STATE HIGHWAY COMMISSION

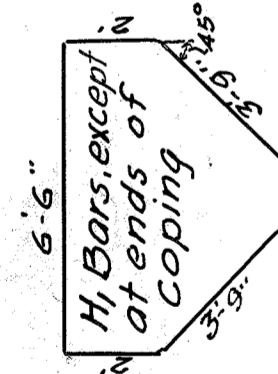
BY *[Signature]* CHAIRMAN
 DATE 6-25-30 BOOK NO. 7 PAGE 91

Bridge No. 111-254-5 SHEET 16 OF 16

Revised - Temperature Reinforcement in bottom of pier. 11-15-30

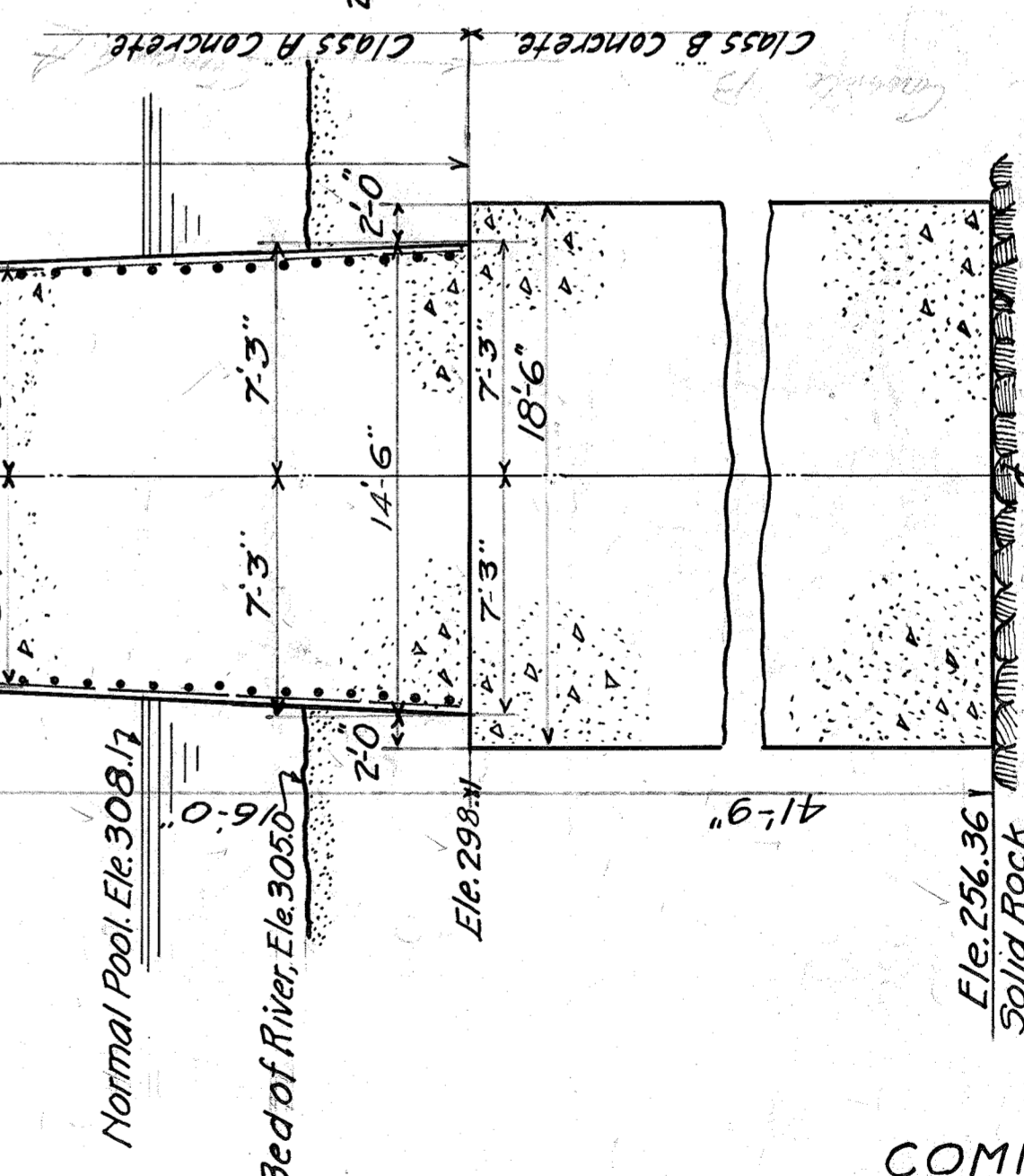
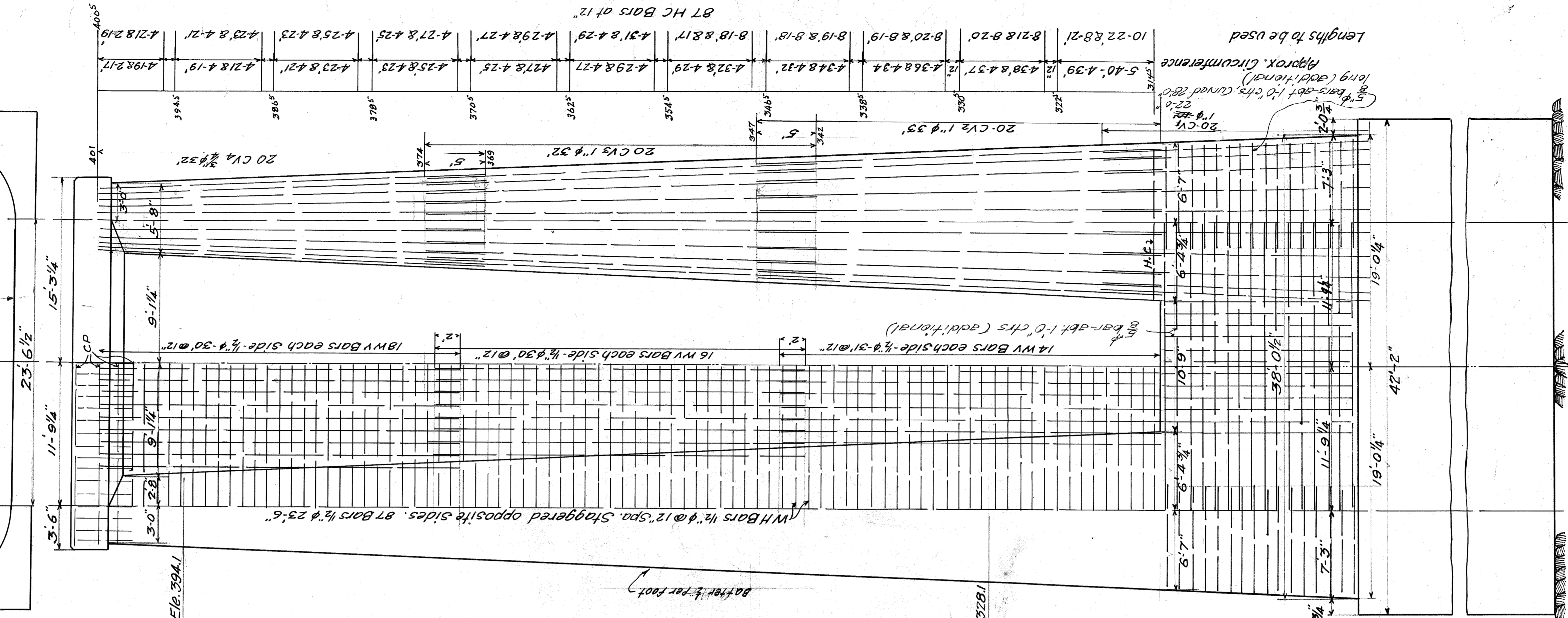
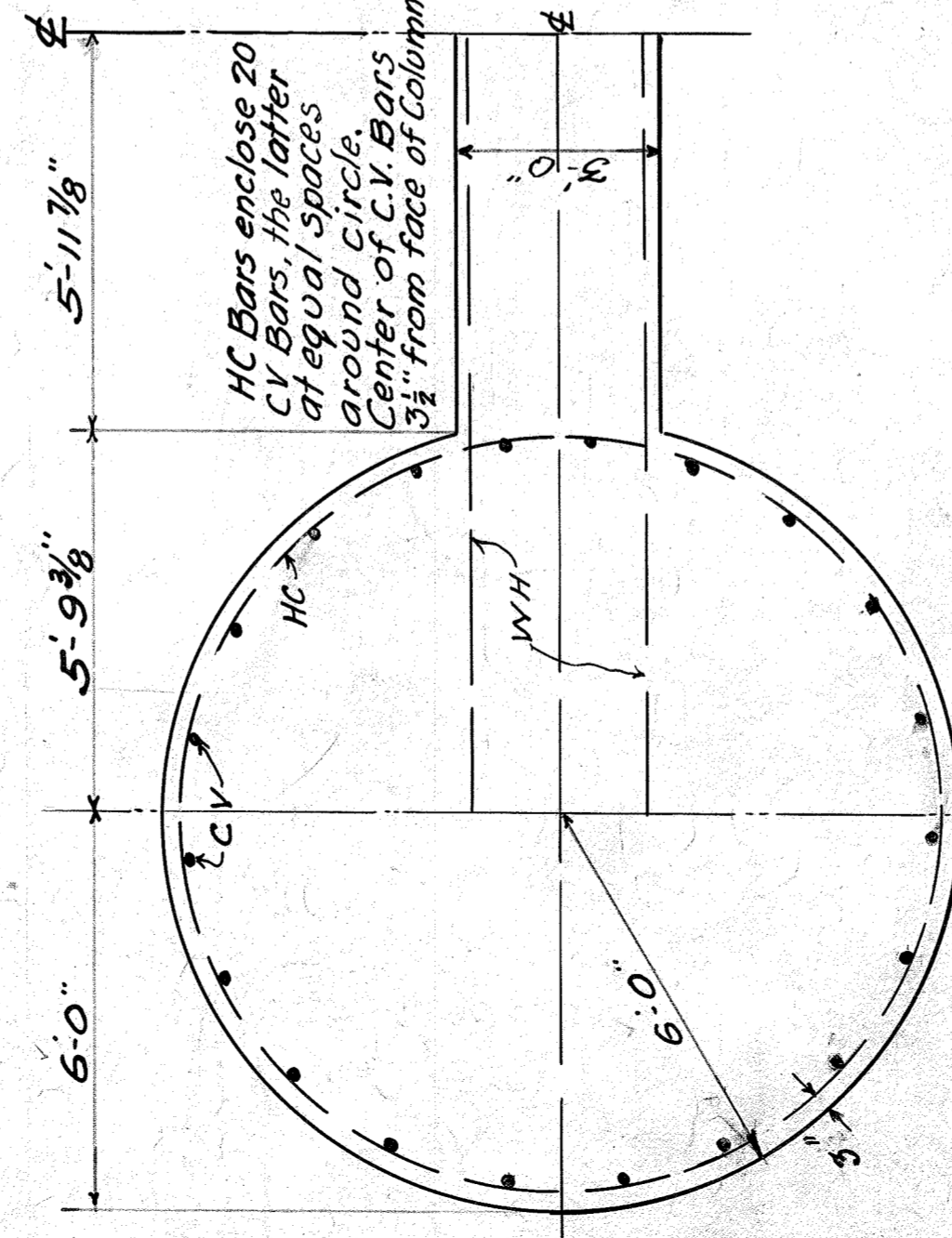
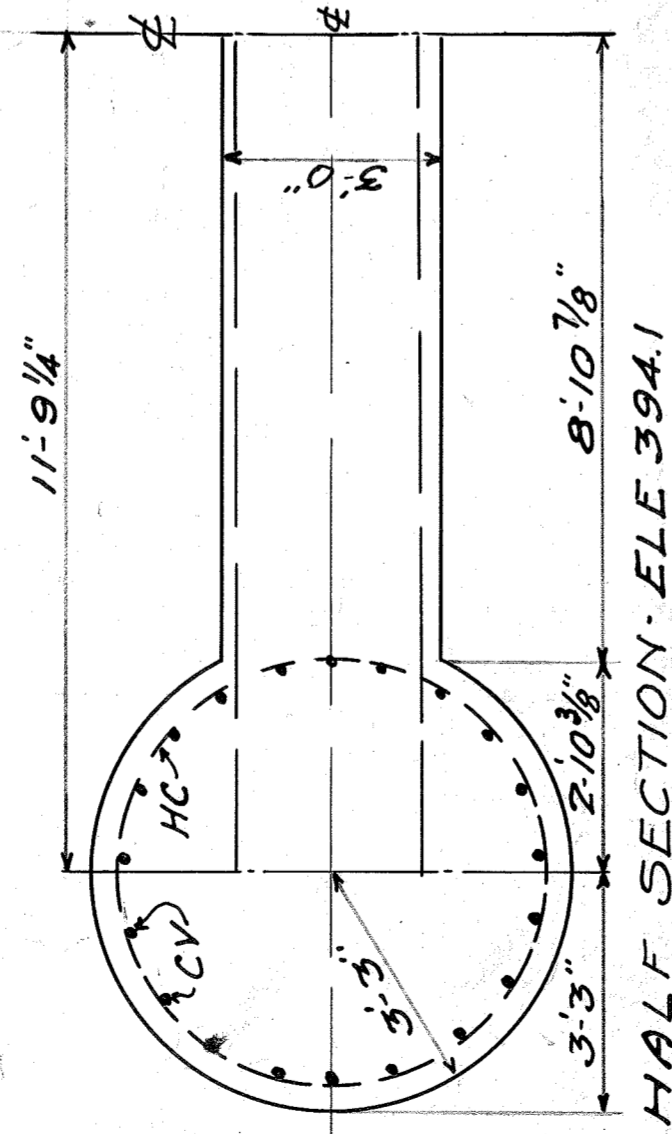
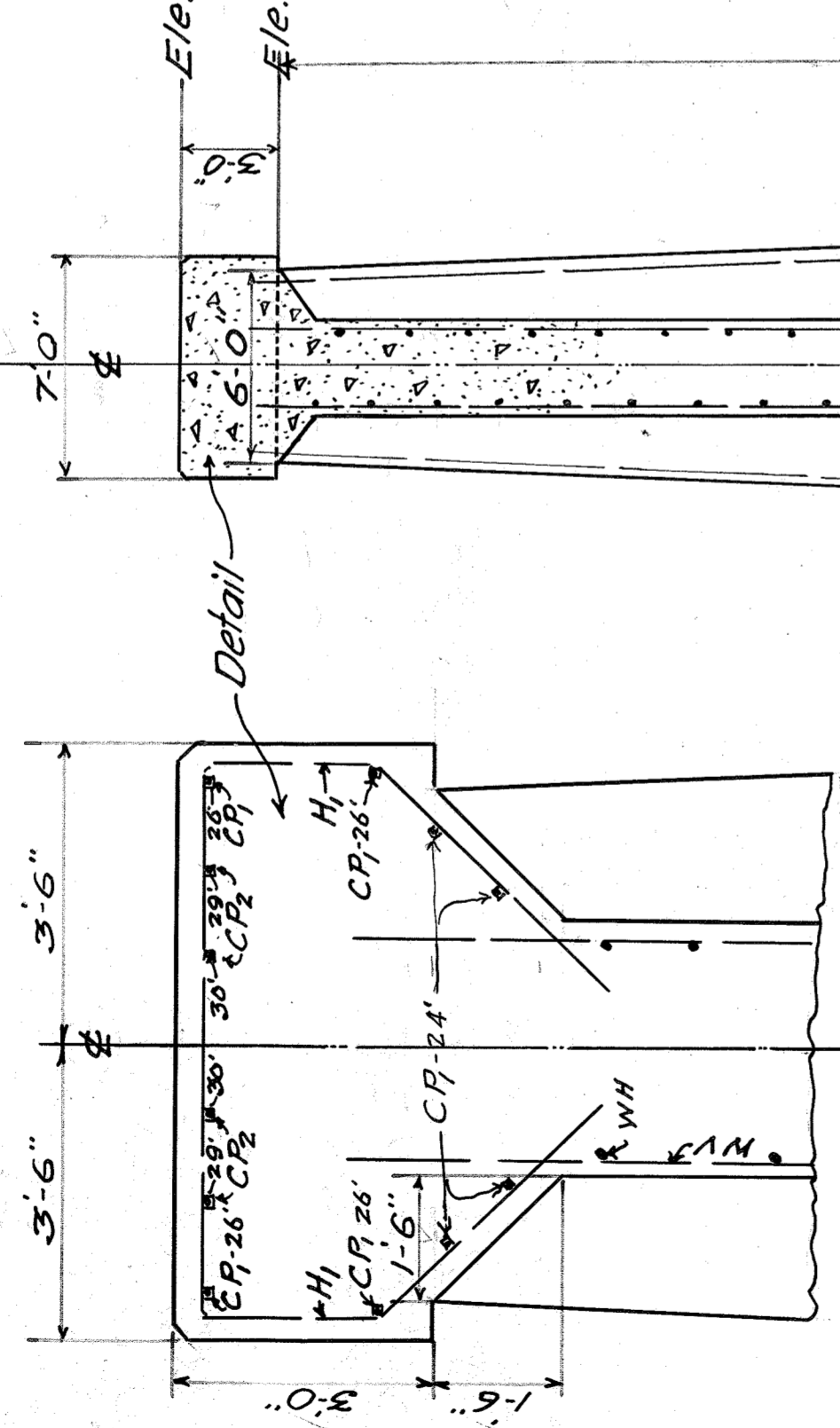
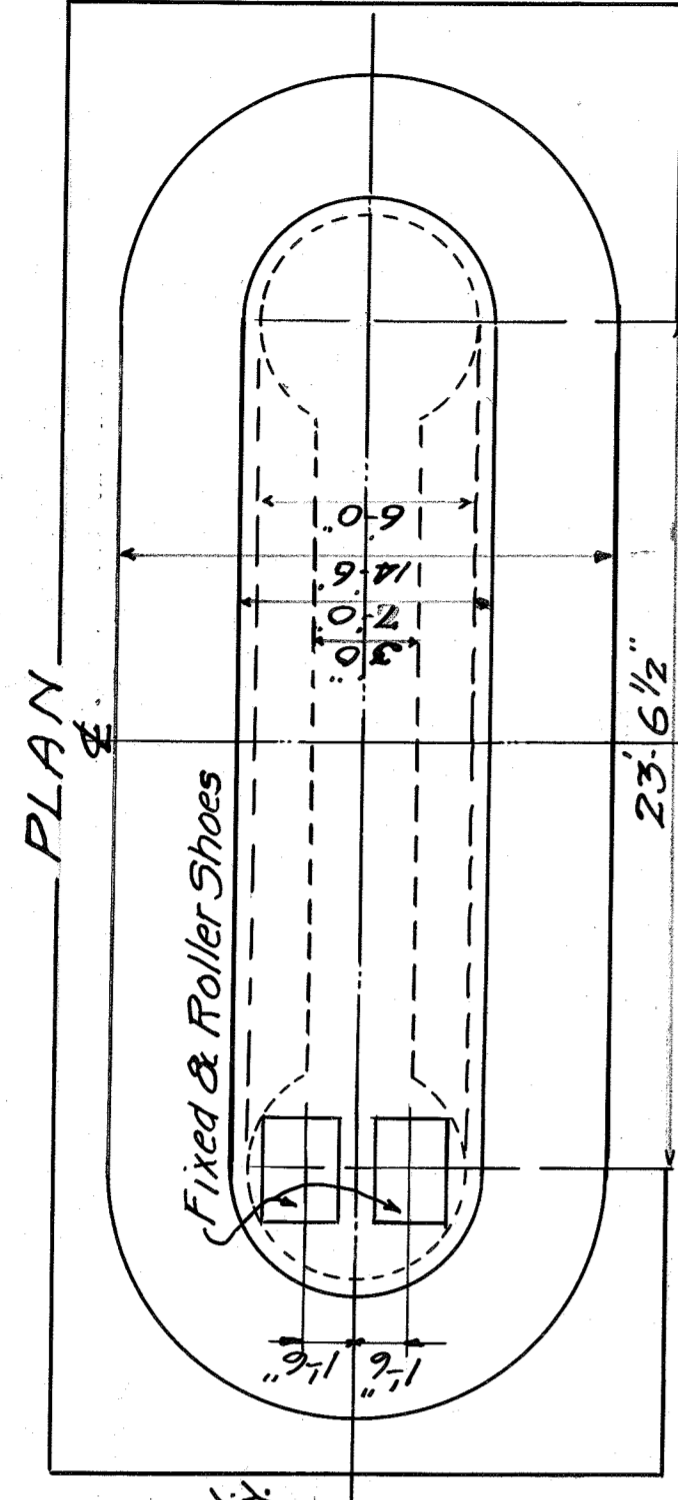
REINFORCING STEEL	Mark No.	Size	Length	Location
H ₁	30	1/2" x 18'-0"	Coping	
CP ₁	4	1" x 24'-0"	"	
CP ₂	4	1" x 24'-0"	"	
CP ₃	2	1" x 29'-0"	"	
CP ₄	2	1" x 30'-0"	"	
WH	87	1/2" x 23'-6"	Web	
WV	68	1/2" x 30'-0"	"	
WV	28	1/2" x 30'-0"	"	
CV	20	1" x 33'-0"	Column	
CV	40	1" x 32'-0"	"	
CV	40	5/16" x 32'-0"	"	

HC Bars 1/2" x 4" following numbers and lengths: 16-17', 32-18', 40-19', 32-20', 48-21', 20-22', 16-23', 16-25', 16-27', 16-29', 8-31',



HC Bars

ESTIMATED QUANTITIES
 Reinforcing Steel 20,500#
 Concrete - Class A 930 C.Y.
 " " Class B 1206.0 C.Y.



NOTE: Clean rock of all loose or soft rock and roughen surface if not already sufficiently rough.
 If the manner of sinking requires concrete to be deposited in water to seal the Caisson, the concrete so deposited, will be made richer or equivalent to a mix of 1-2-4.
 Concrete in the Base (below battered portion) deposited at or above atmospheric pressure to be 1-2 1/2-5 mix, except as modified above.

Dwg # 4505

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF STATE ROADS AND HIGHWAYS
 FRANKFORT
 CUMBERLAND RIVER BRIDGE
 CANTON - TRIGG COUNTY
 PIER - No 3
 1929-30
 SUBMITTED BY *W. M. Johnson*
 RECOMMENDED FOR APPROVAL CONSULTING ENGINEER
 RECOMMENDED FOR APPROVAL BRIDGE ENGINEER
 APPROVED - KENTUCKY STATE HIGHWAY COMMISSION
 BY CHAIRMAN
 DATE BOOK NO PAGE
 SHEET 2 OF 16

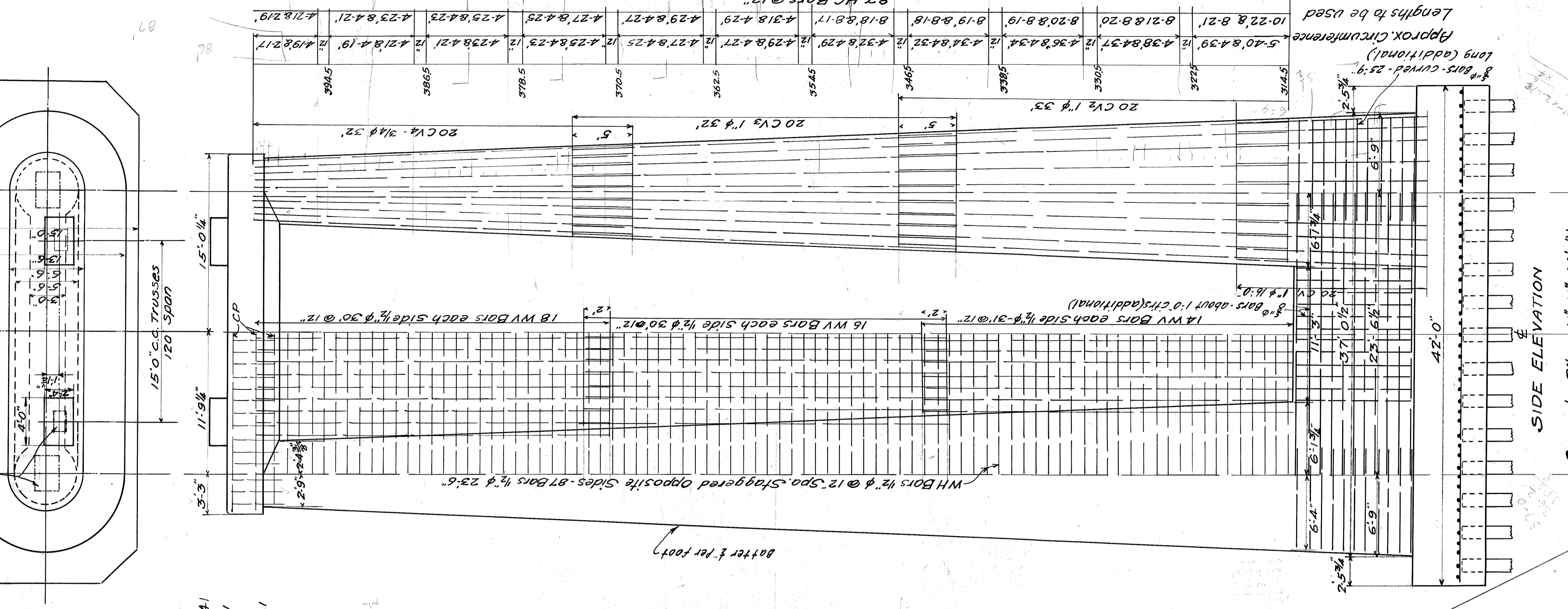
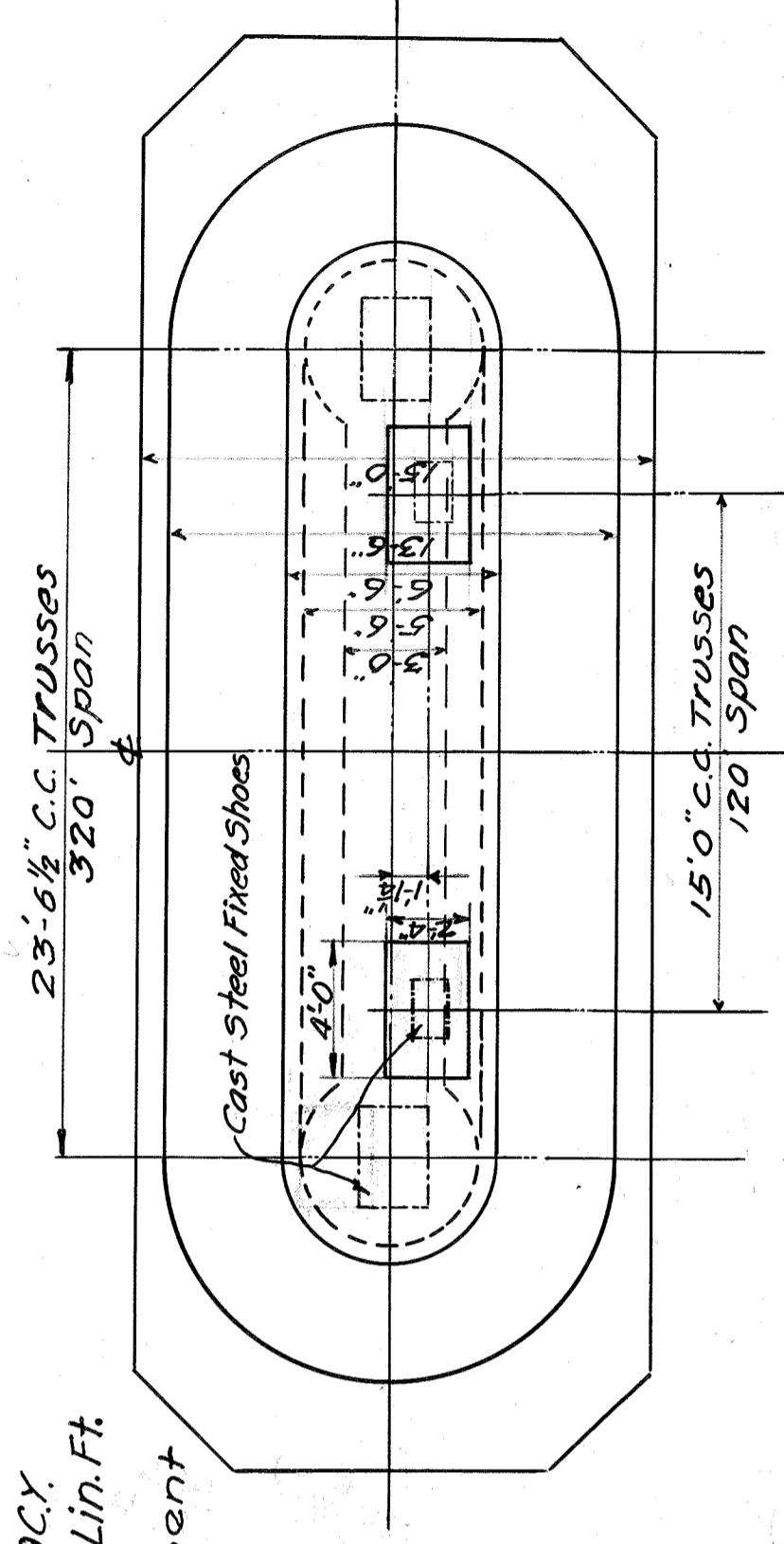
REINFORCING STEEL			
PH	18	1/8"	7-5
PV	20	1/8"	3-5
HI	30	1/4"	18-0
CP	4	1/4"	25-0
CP	4	1/4"	29-0
CP	2	1/4"	25-0
CP	2	1/4"	30-0
CP	2	1/4"	23-5
CP	1	1/4"	30-0
WH	168	1/8"	50-0
WH	28	1/8"	11-0
CV	20	1/8"	16-0
CV	40	1/8"	32-0
CV	40	3/8"	32-0
CV	40	3/8"	32-0

NOTE: HC Bars 1/2" following numbers and lengths - 16-17, 32-18, 40-19, 32-20, 48-21, 20-22, 16-23, 16-25, 16-27, 16-29, 8-31.

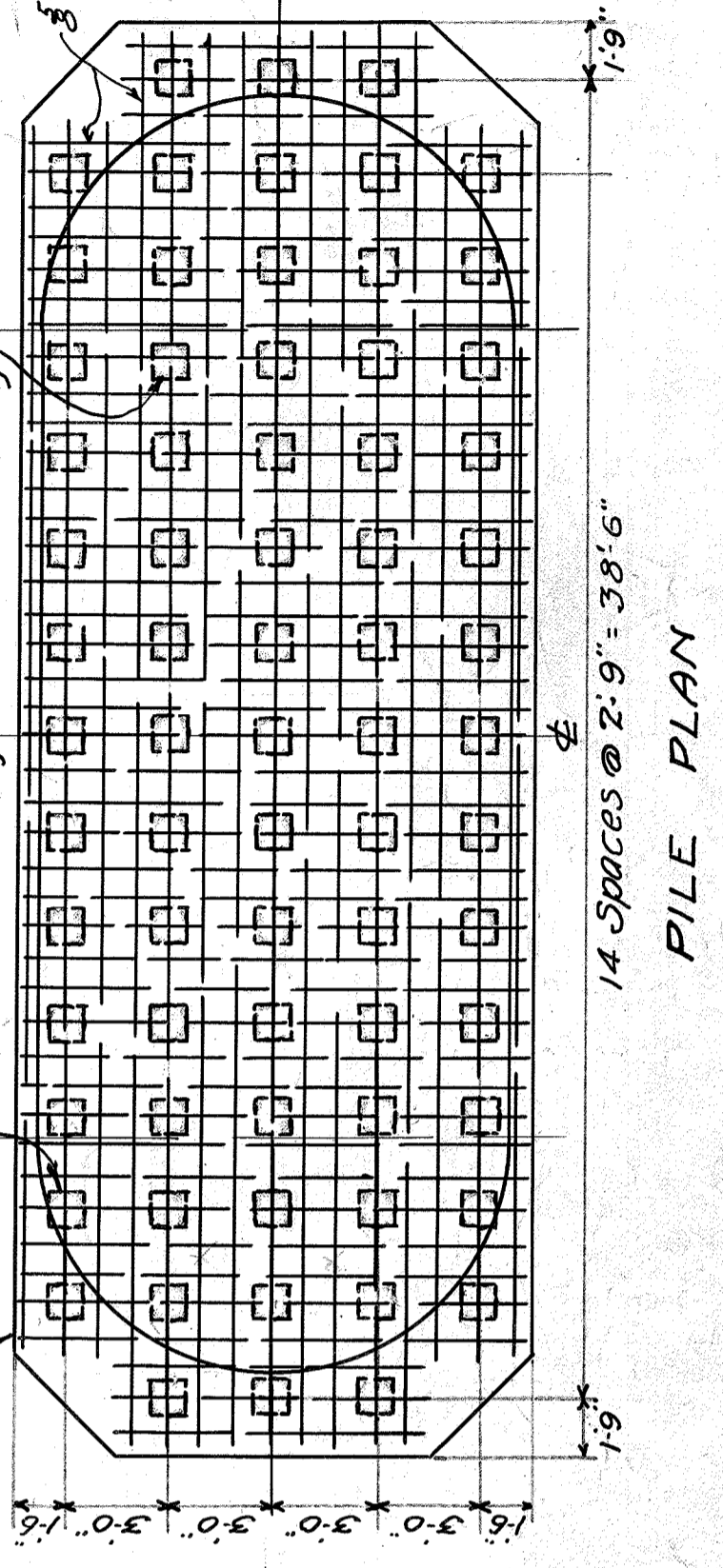
NOTE: Bars marked (Additional) not shown in list of reinforcing steel.

ESTIMATED QUANTITIES
Reinforcing Steel 18779 Lbs.
Concrete - Class A 909CY.
Concrete Piles 2840 Lin. Ft.
NOTE: For additional Quantities and additional Bill of Reinforcement see sheet 3A

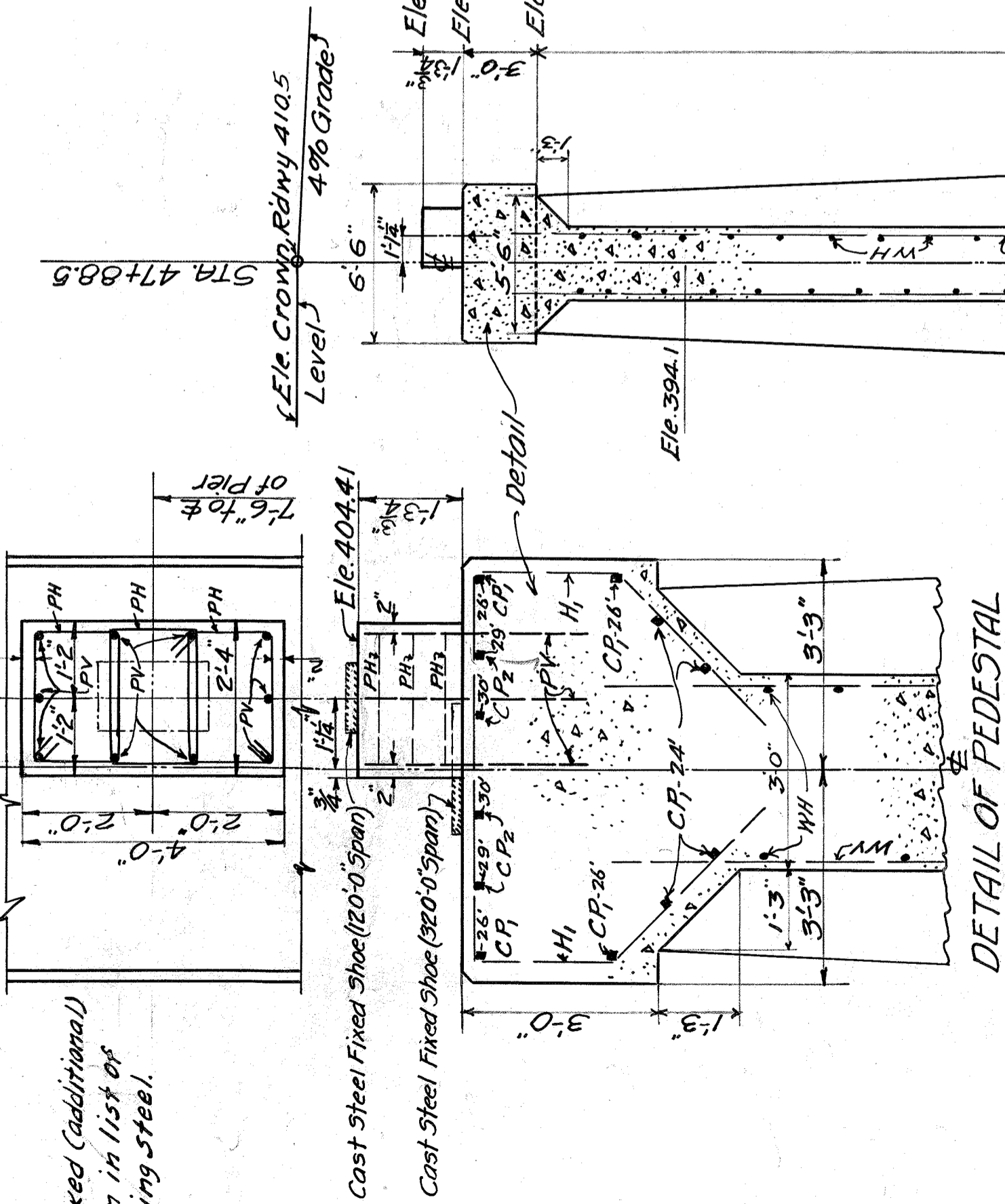
PLAN



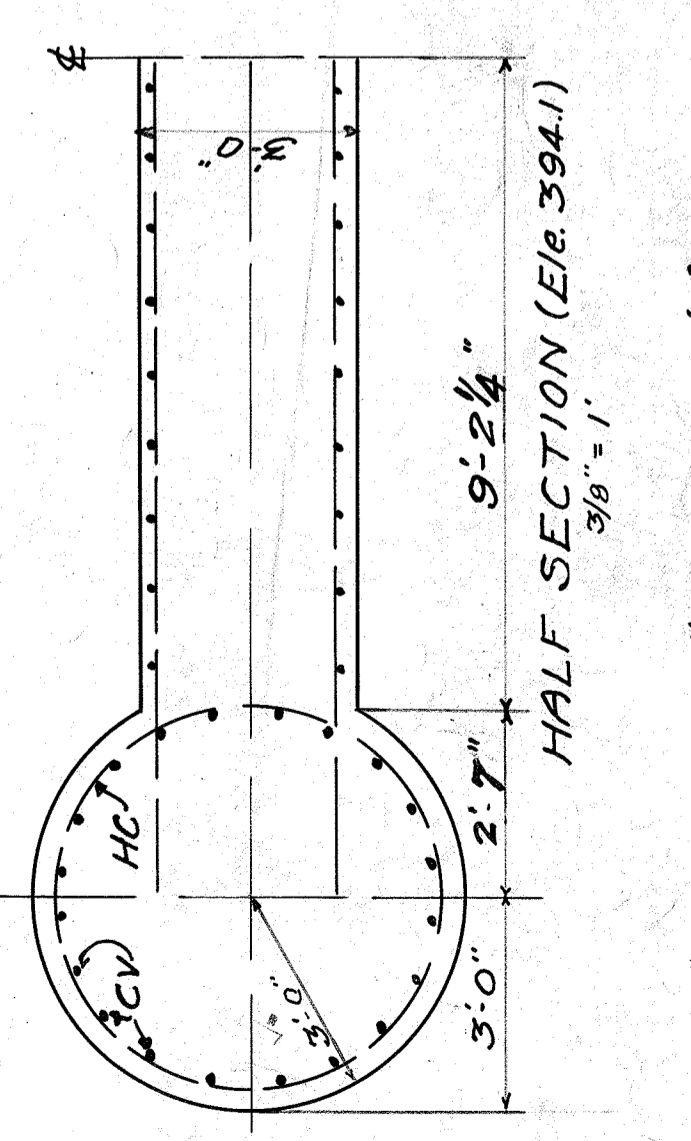
SIDE ELEVATION



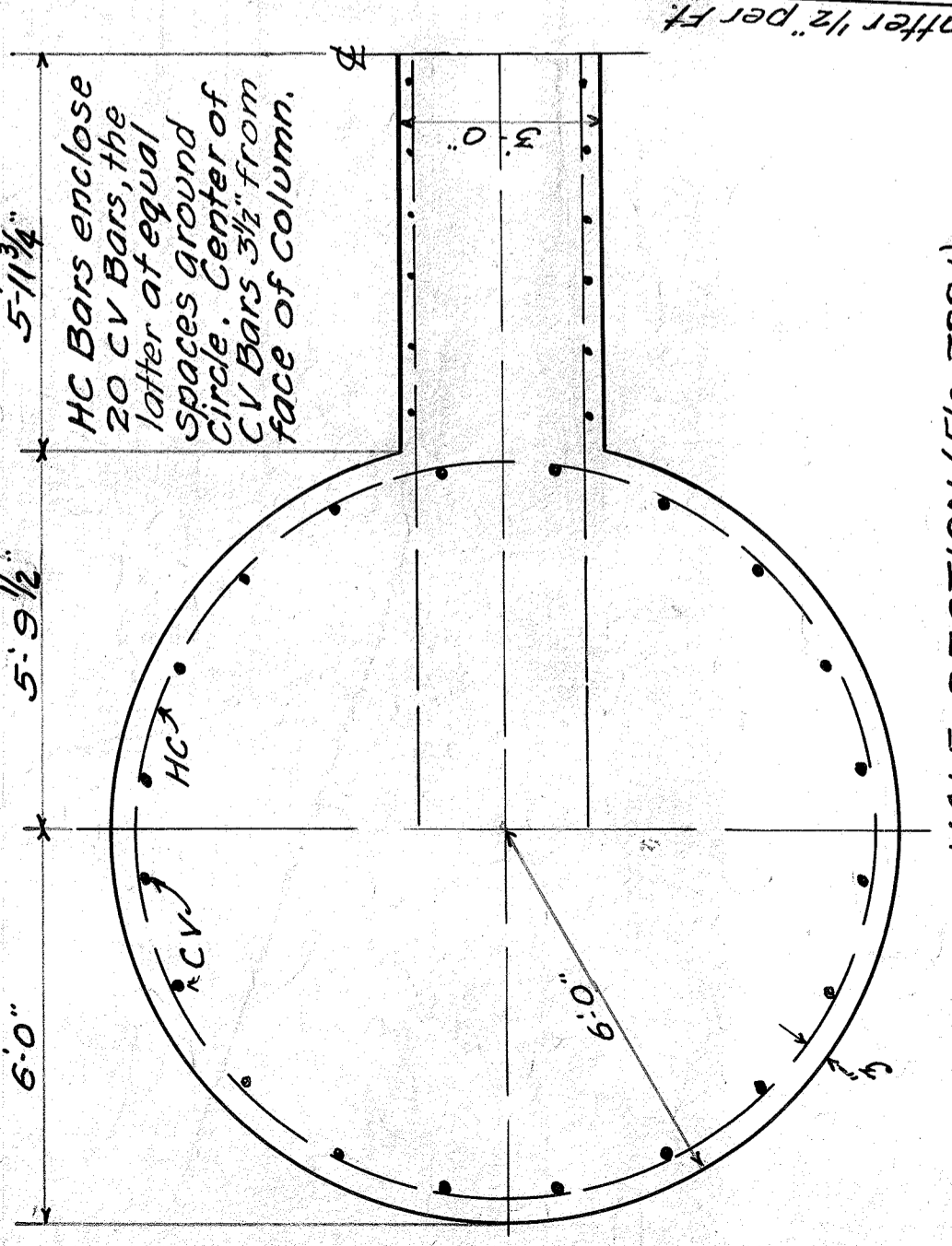
PILE PLAN



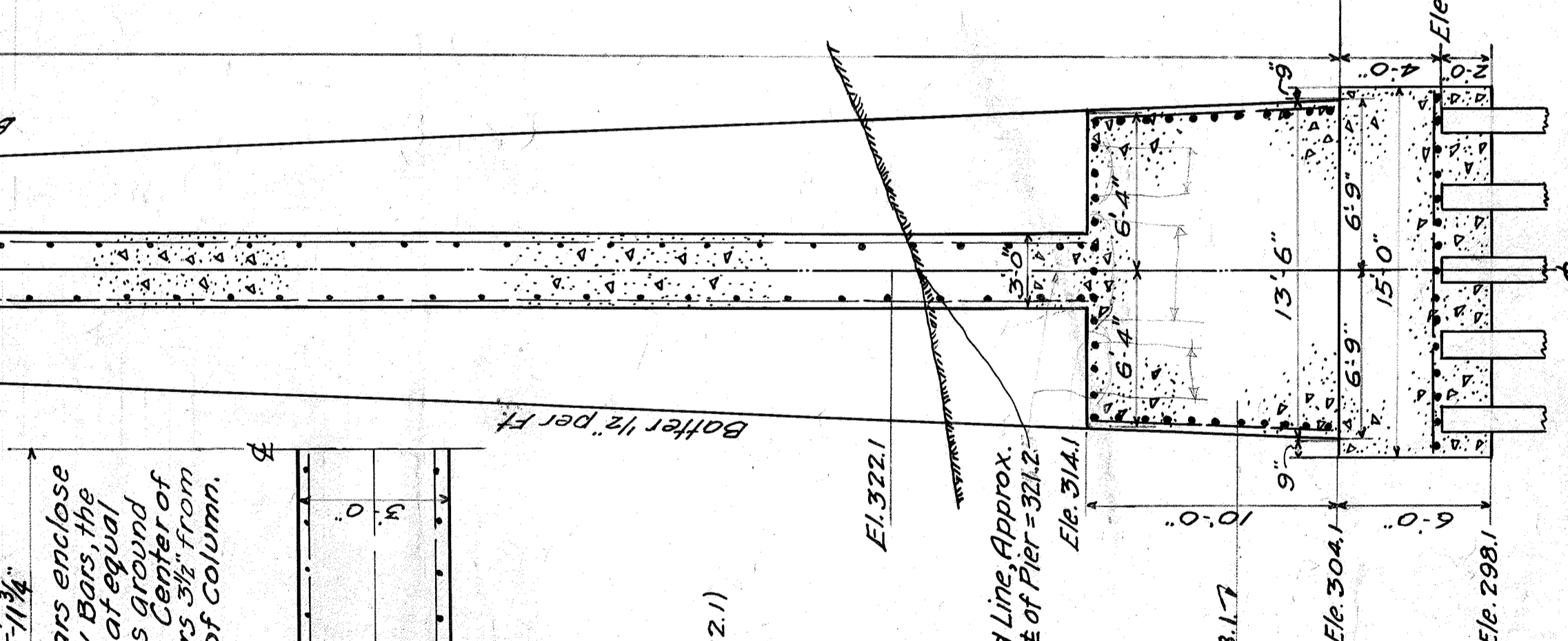
DETAIL OF PEDESTAL FOR FIXED SHOE (20'-0" SPAN)
1/2" = 1'-0"



HALF SECTION (Ele. 394.1)
3/8" = 1'



HALF SECTION (Ele. 322.1)
3/8" = 1'

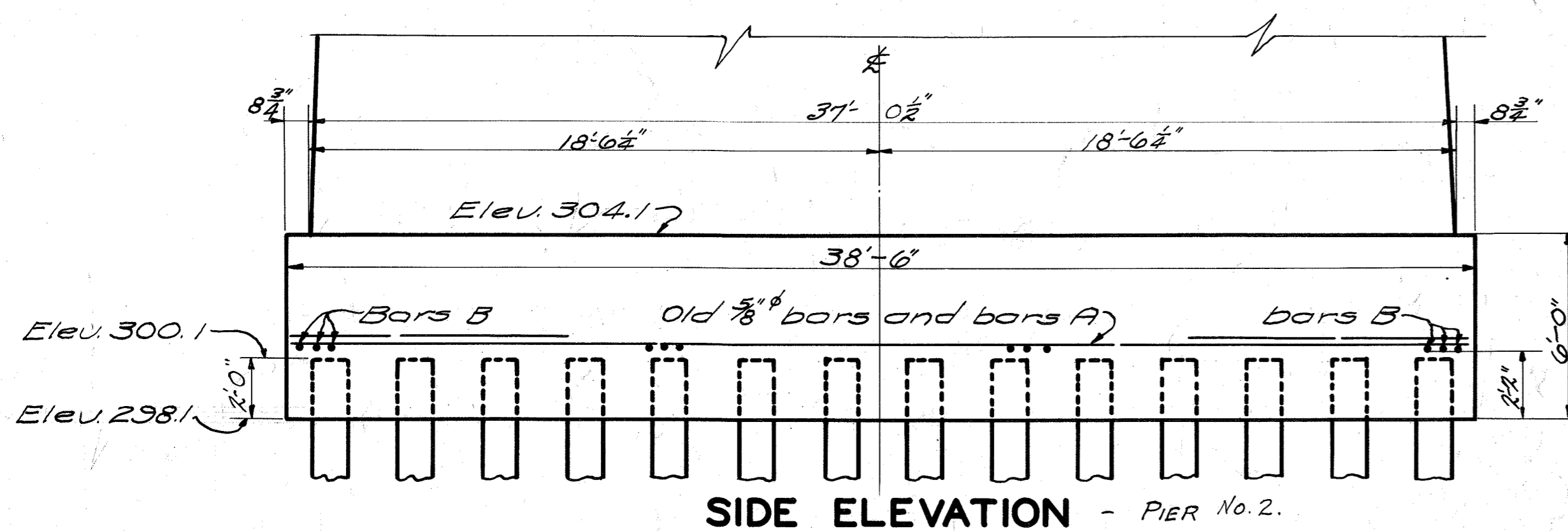


TRANSVERSE SECTION ON C of PIER

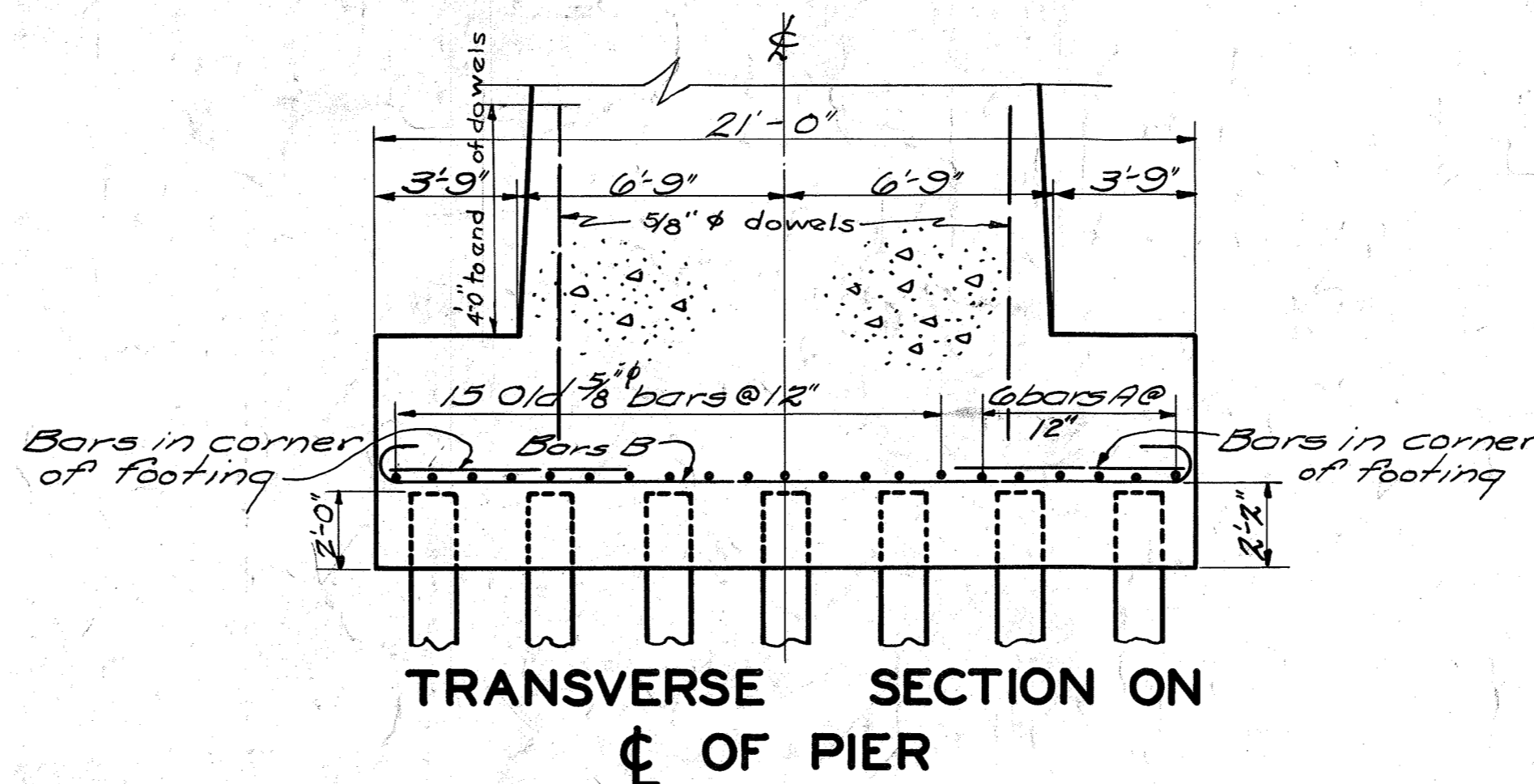
Dwg #4505

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT
CUMBERLAND RIVER BRIDGE
CANTON - TRIGG COUNTY
PIER-NO 2
1929-30

SUBMITTED BY *[Signature]*
RECOMMENDED FOR APPROVAL _____ BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL _____ CHIEF ENGINEER
APPROVED - KENTUCKY STATE HIGHWAY COMMISSION
BY _____ CHAIRMAN
DATE _____ BOOK NO. _____ PAGE _____
SHEET 3 OF 16



SIDE ELEVATION - PIER No. 2.



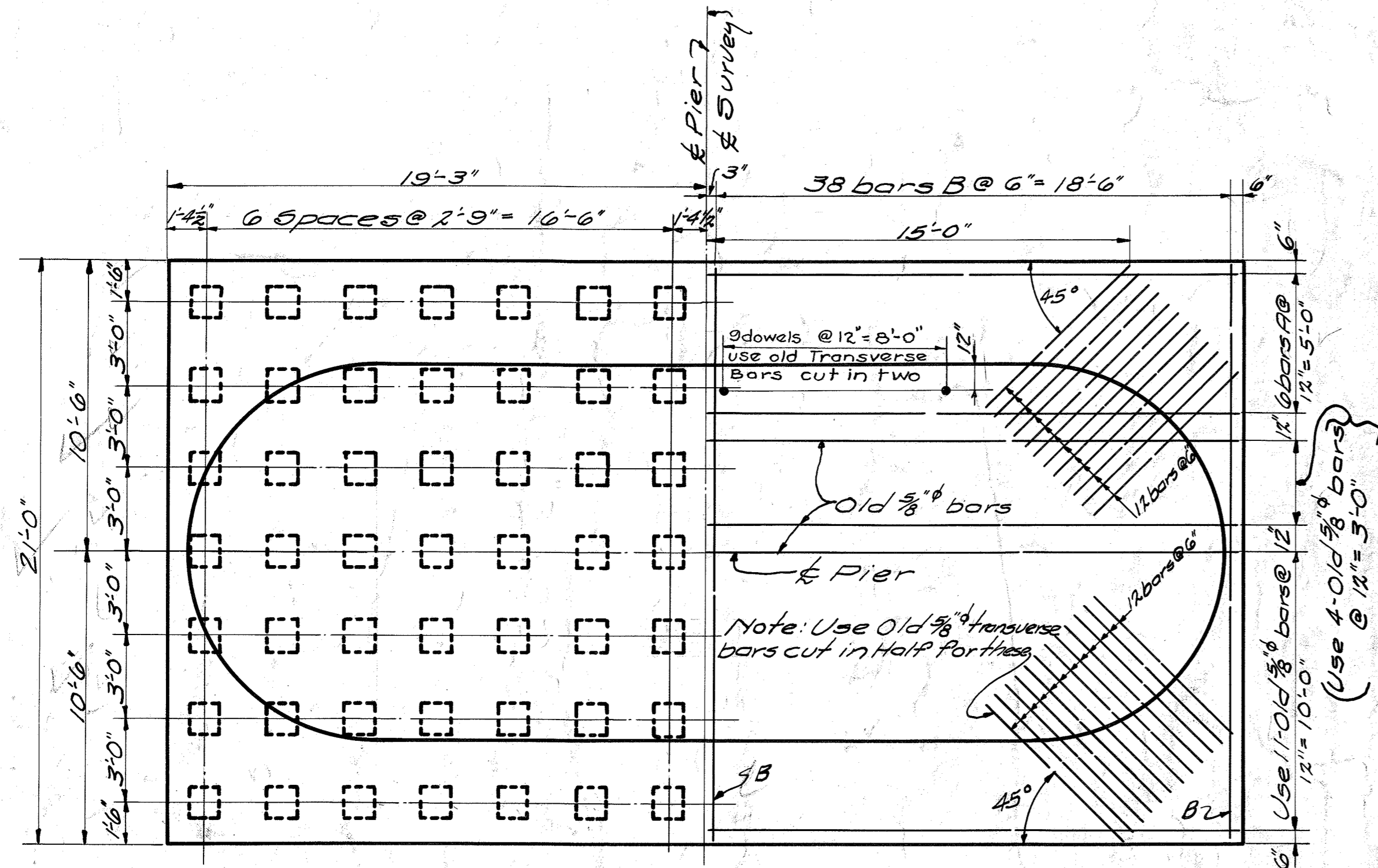
TRANSVERSE SECTION ON C OF PIER

BILL OF ADDITIONAL REINFORCEMENT PIER No. 2

MARK	TYPE	No.	SIZE		LENGTH		LOCATION
			FT.	IN.	FT.	IN.	
A	Str.	6	3/8"	38	3		Footing
B	Ø	70	1"	22	10		"

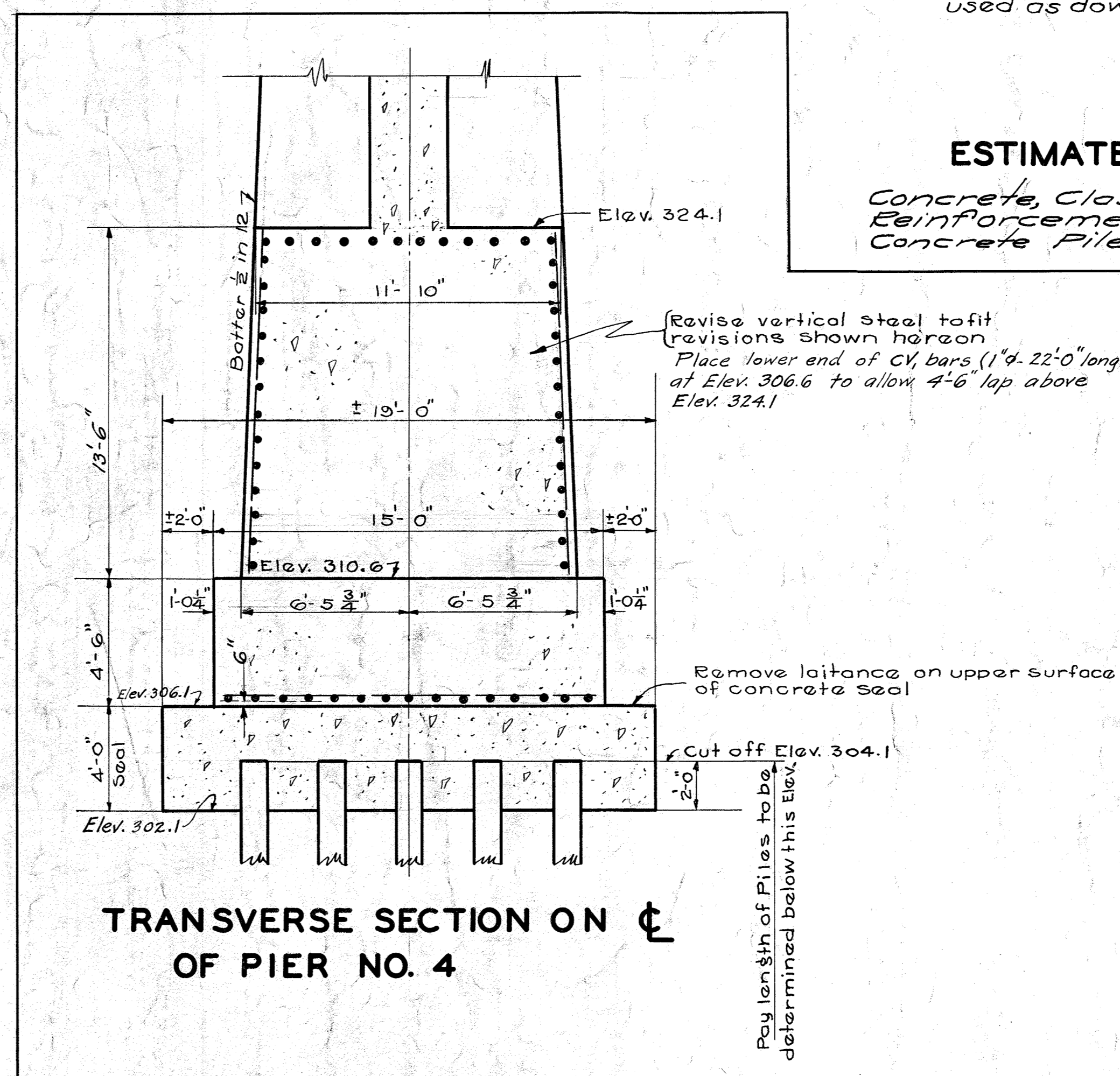
(All dimensions are out to out)

Note: All old longitudinal 5/8" bars in footing to be cut to 38'-3" length.
 24 old transverse 5/8" bars in footing to be cut in half and used for bars in corners of footing.
 Remainder of transverse 5/8" bars to be cut in two and used as dowels.



PLAN OF FOOTING - PIER No. 2.

(Showing Dimensions and Piles) (Piles to be concrete Piles 14" x 14" x 40'-0" Long)
 (Showing Reinforcement)



TRANSVERSE SECTION ON C OF PIER NO. 4

ESTIMATE OF ADDITIONAL QUANTITIES

Concrete, Class "A"
 Reinforcement
 Concrete Piles

40.9 Cu yds } Pier 2.
 4870 LBS }
 1080 Lin Ft }

Dwg #4505

DETAILS OF REVISION OF FOOTING BELOW ELEV. 304.1 PIER NO. 2
 " " " " " " " " " " " " " " " " 324.1 " " " " 4

SHEET 3A OF 10

COMMONWEALTH OF KENTUCKY
 STATE HIGHWAY DEPARTMENT
 FRANKFORT
 COUNTY OF
TRIGG
 CUMBERLAND RIVER BRIDGE AT
 CANTON
 ROAD PROJECT NO.

STATION

SUBMITTED BY _____ BRIDGE ENGR. _____ DRAWING INDEX
 APPROVED BY _____ CHIEF ENGR. _____ NO. _____

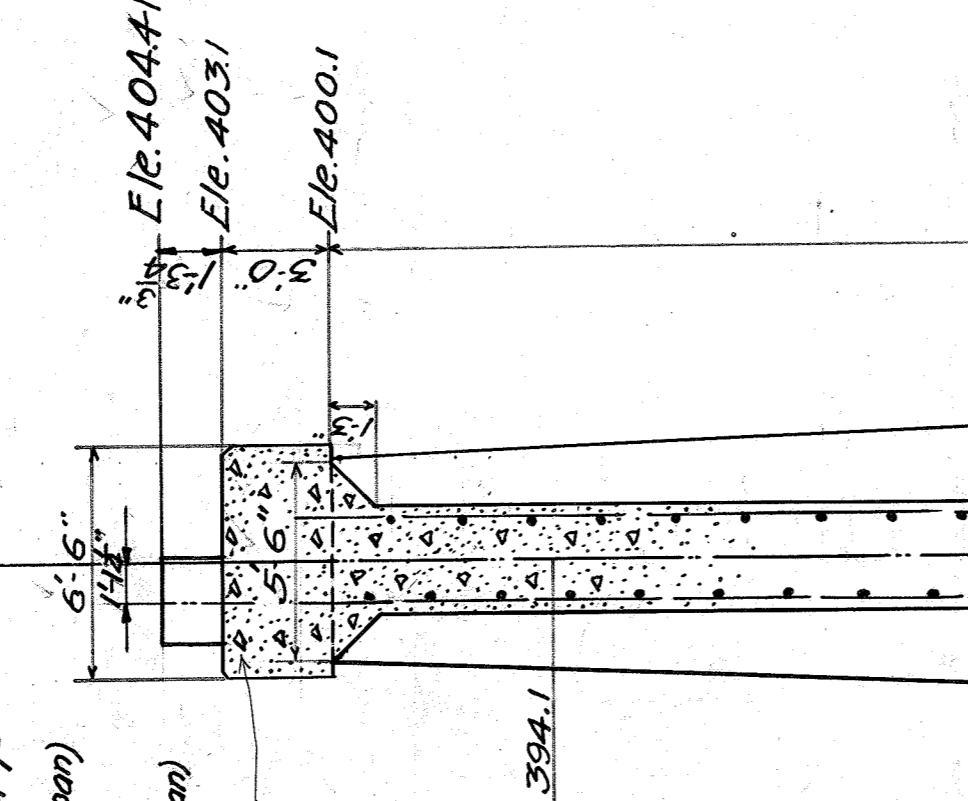
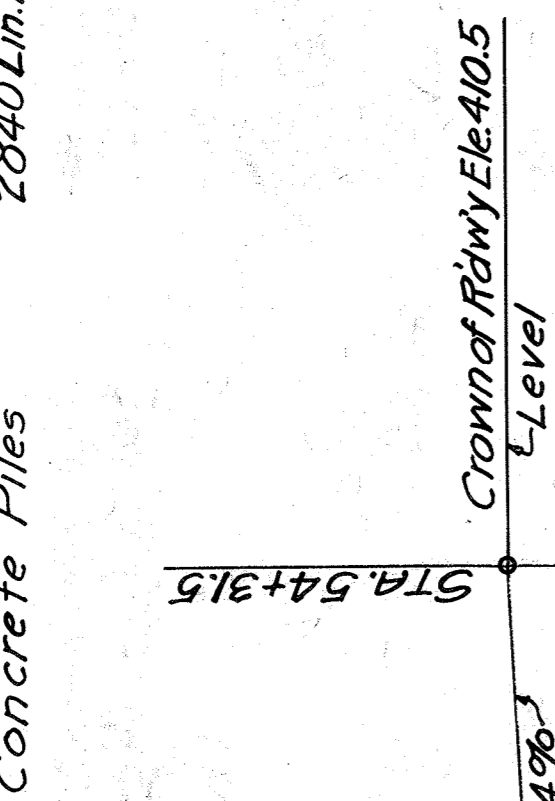
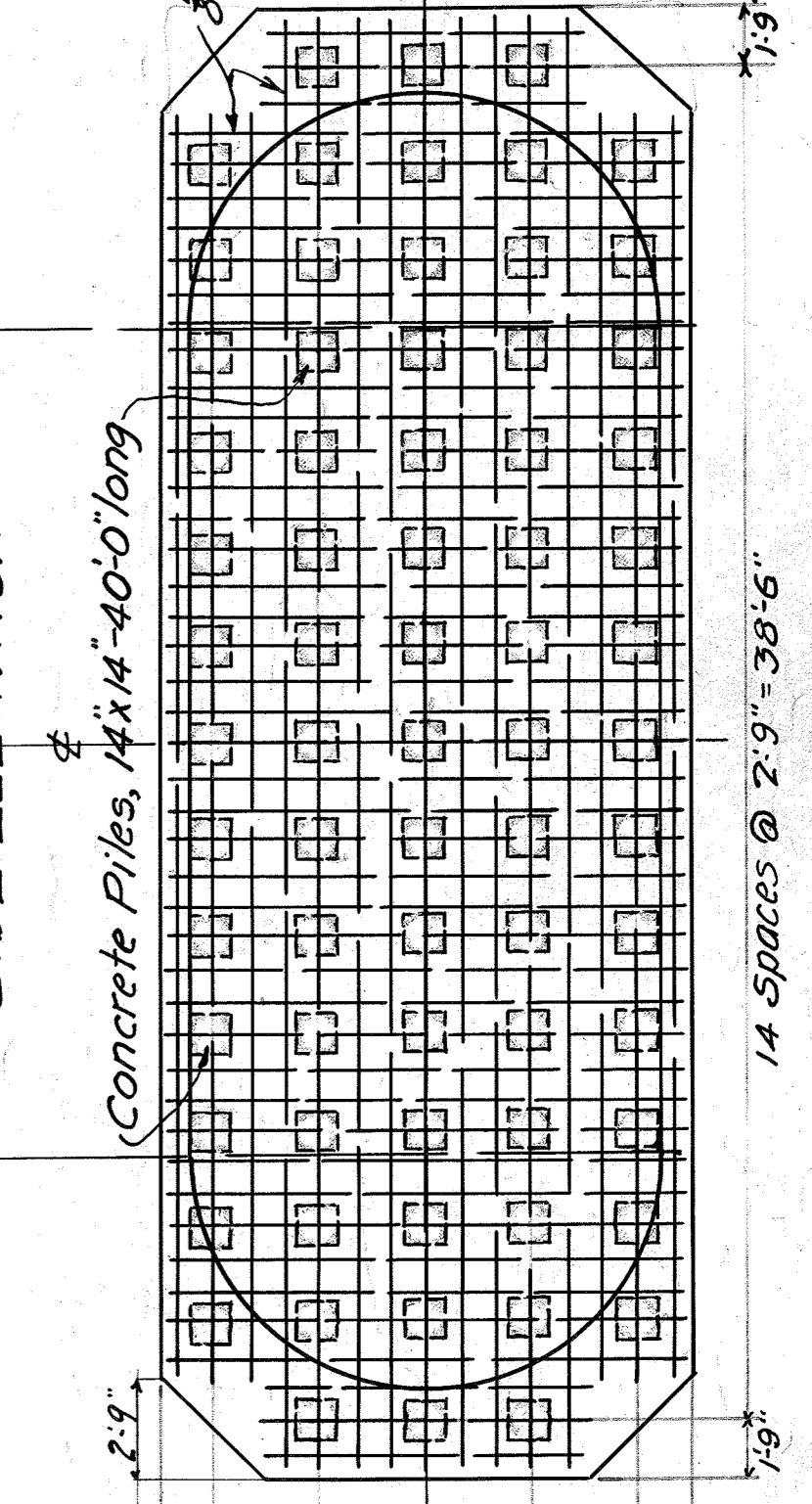
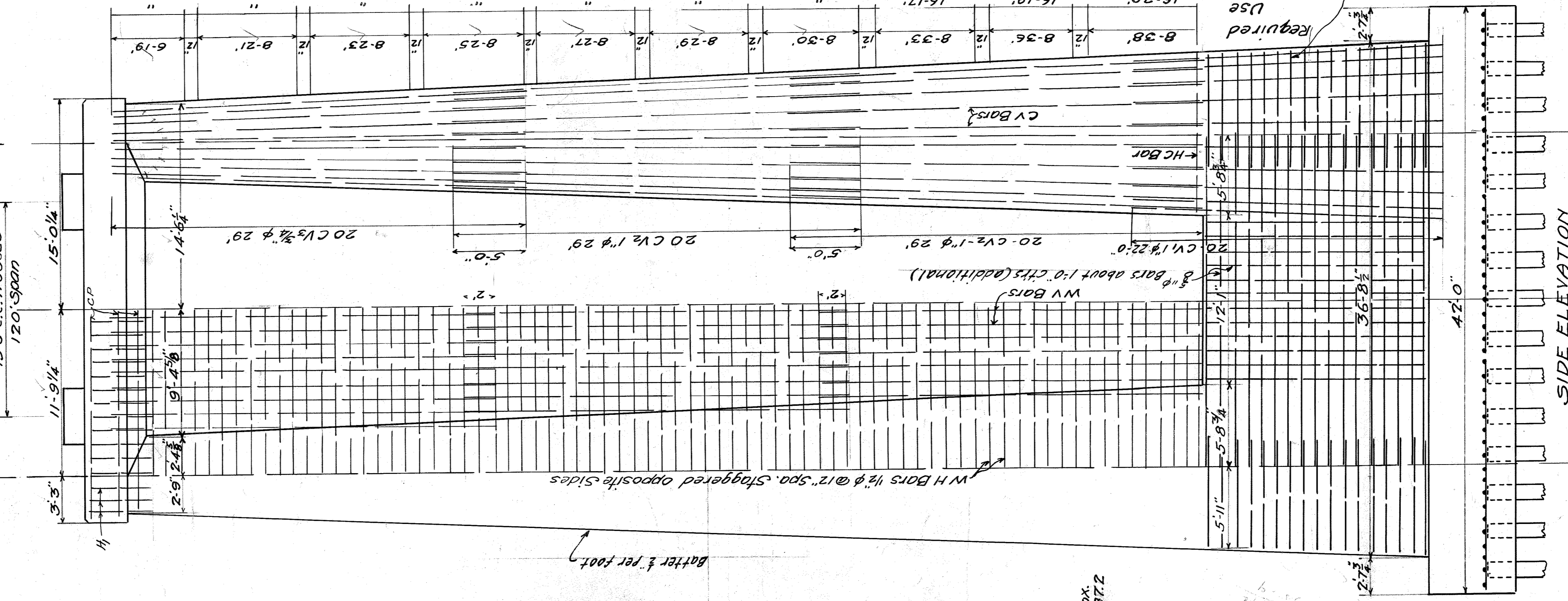
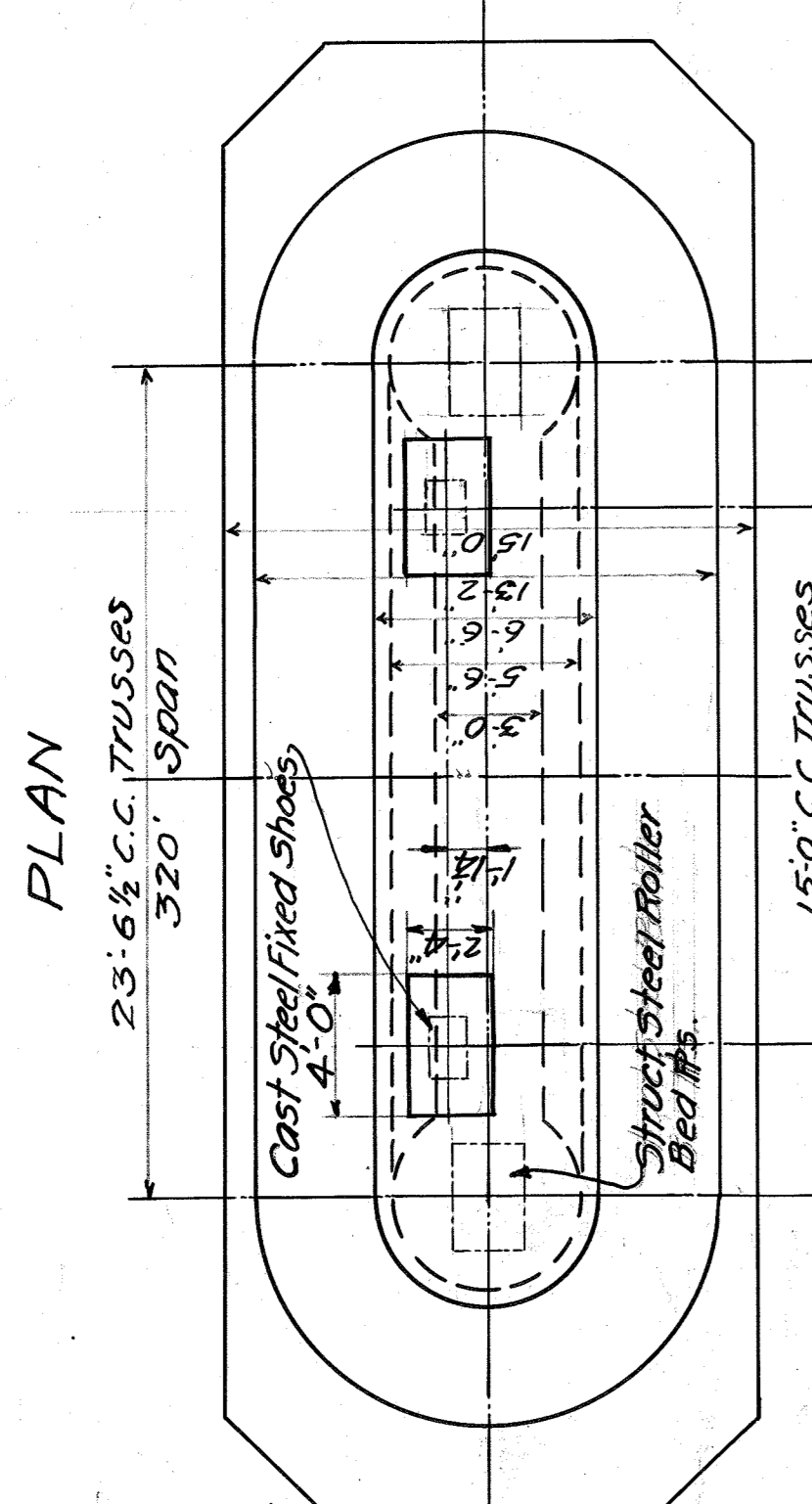
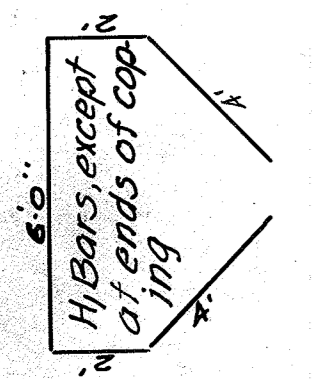
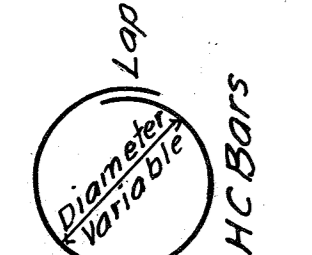
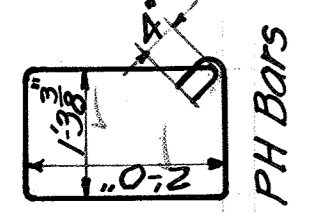
DESIGNED BY *H.P. Walker* DATE *1/20*
 CHECKED BY *J.J.P.* DATE *1/20*
 TRACED BY *C.C. Cook* DATE *1/20*
 REVISIONS

REINFORCING STEEL	
PH 1	18" 1/4" φ 71.5' Pedestals
PV	20" 1/4" φ 31.6' Pedestals
H	30" 1/4" φ 18'-0" Ceiling
CP	4" 1/4" 26'-0"
CP	4" 1/4" 24'-0"
CP	2" 1/4" 30'-0"
CP	2" 1/4" 29'-0"
WV	76" 1/4" 23'-5" Web
WV	96" 1/4" 27'-0"
CV	40" 1/4" 22'-0" Column
CV	80" 1/4" 29'-0"
CV	40" 3/4" 29'-0"

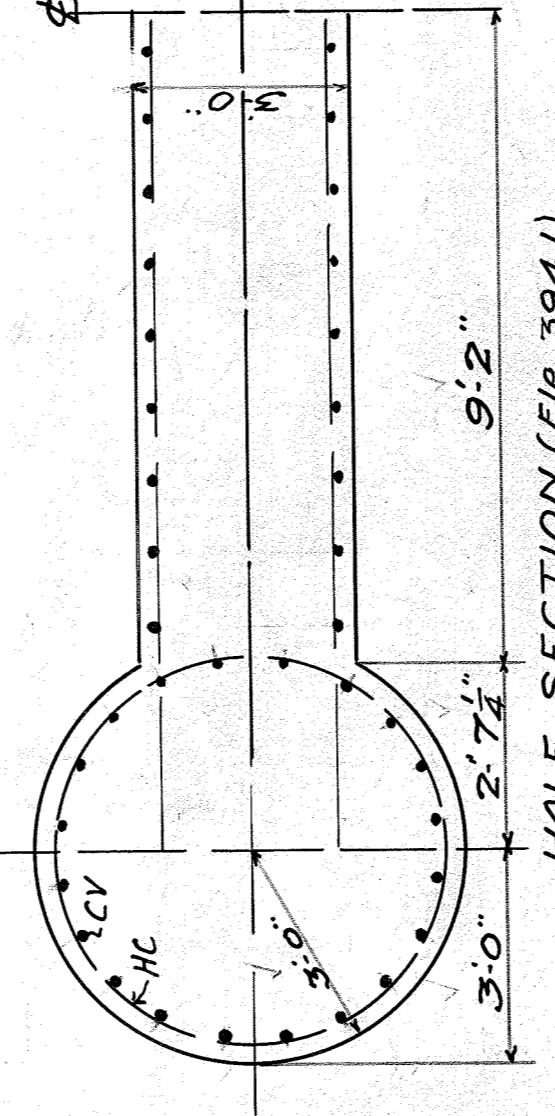
HC Bars 1/2" φ Following number and lengths: 32-17, 44-19, 32-20, 16-21, 16-23, 16-25, 16-27, 16-29, 16-30.

NOTE
Bars marked (Additional) not shown in list of reinforcing steel.

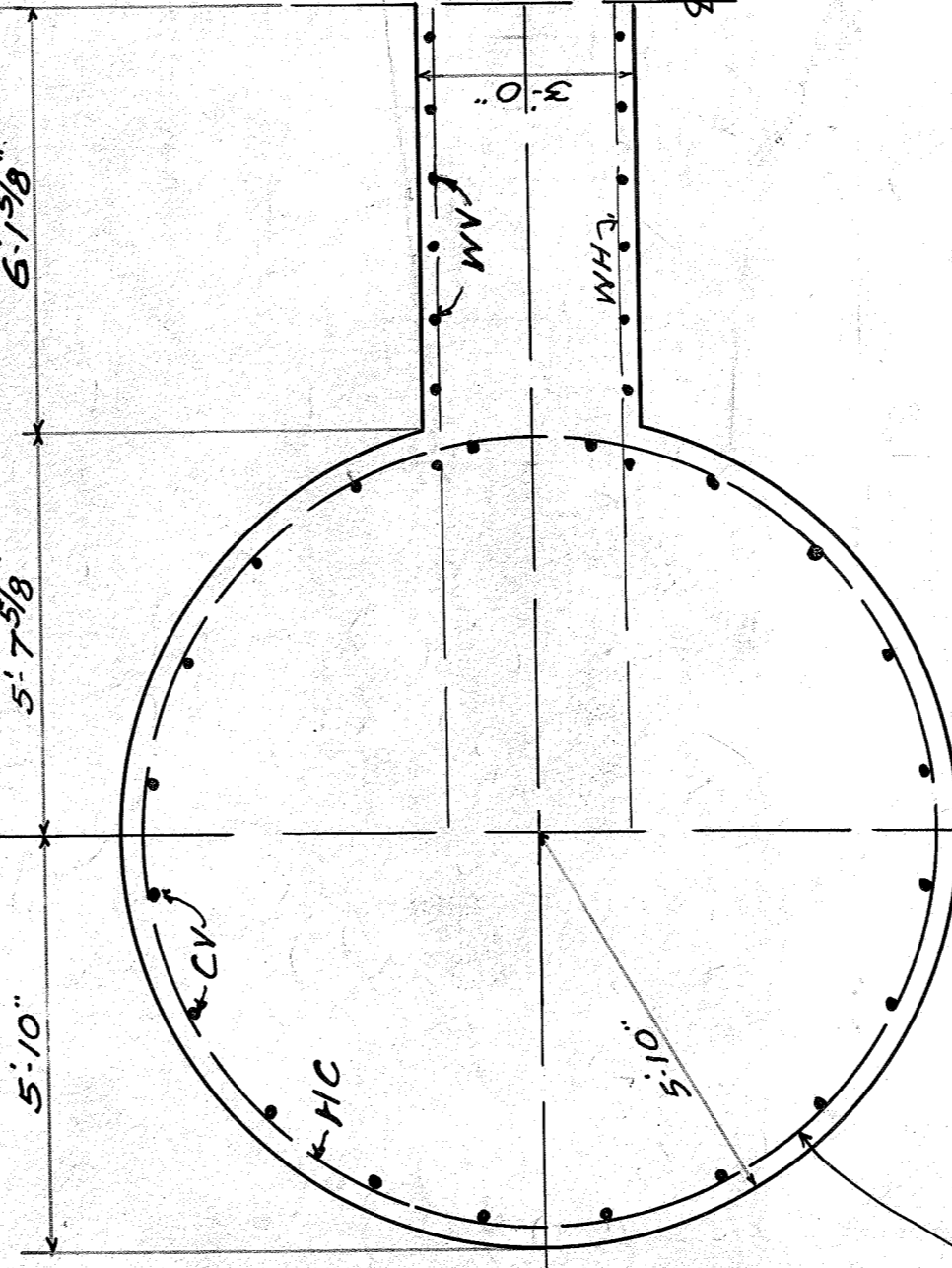
ESTIMATED QUANTITIES
Reinforcing Steel 166.79 Lbs.
Concrete - Class "A" 891 C.Y.
Concrete Piles 2840 Lin.Ft



DETAIL OF PEDESTAL FOR FIXED SHOE (20'0" SPAN) 1/2" = 1'-0"



HALF SECTION (Ele. 394.1) 3/8" = 1'



HALF SECTION (Ele. 326.1) 3/8" = 1'

HC Bars enclose 20 CV Bars, the latter at equal spaces around circle. Center of CV Bars 3 1/2" from face of column.

TRANSVERSE SECTION ON C of PIER

NOTE:
For details of Seal coat and revisions of Footings below elevation 324.1 See Sheet No. 3A of 16

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT
CUMBERLAND RIVER BRIDGE
CANTON - TRIGG COUNTY
PIER - No 4
1929-30

SUBMITTED BY *J. Johnson* CONSULTING ENGINEER
RECOMMENDED FOR APPROVAL _____ BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL _____ CHIEF ENGINEER
APPROVED - KENTUCKY STATE HIGHWAY COMMISSION
BY _____ CHAIRMAN
DATE _____ BOOK NO _____ PAGE _____
SHEET 4 OF 16

Dwg # 4505

Dwg No 4505

16 9584

16 9587

16 9588

16 9589

16 9590

16 9591

16 9592

16 9593

16 9594

16 9595

16 9596

16 9597

16 9598

16 9599

16 9600

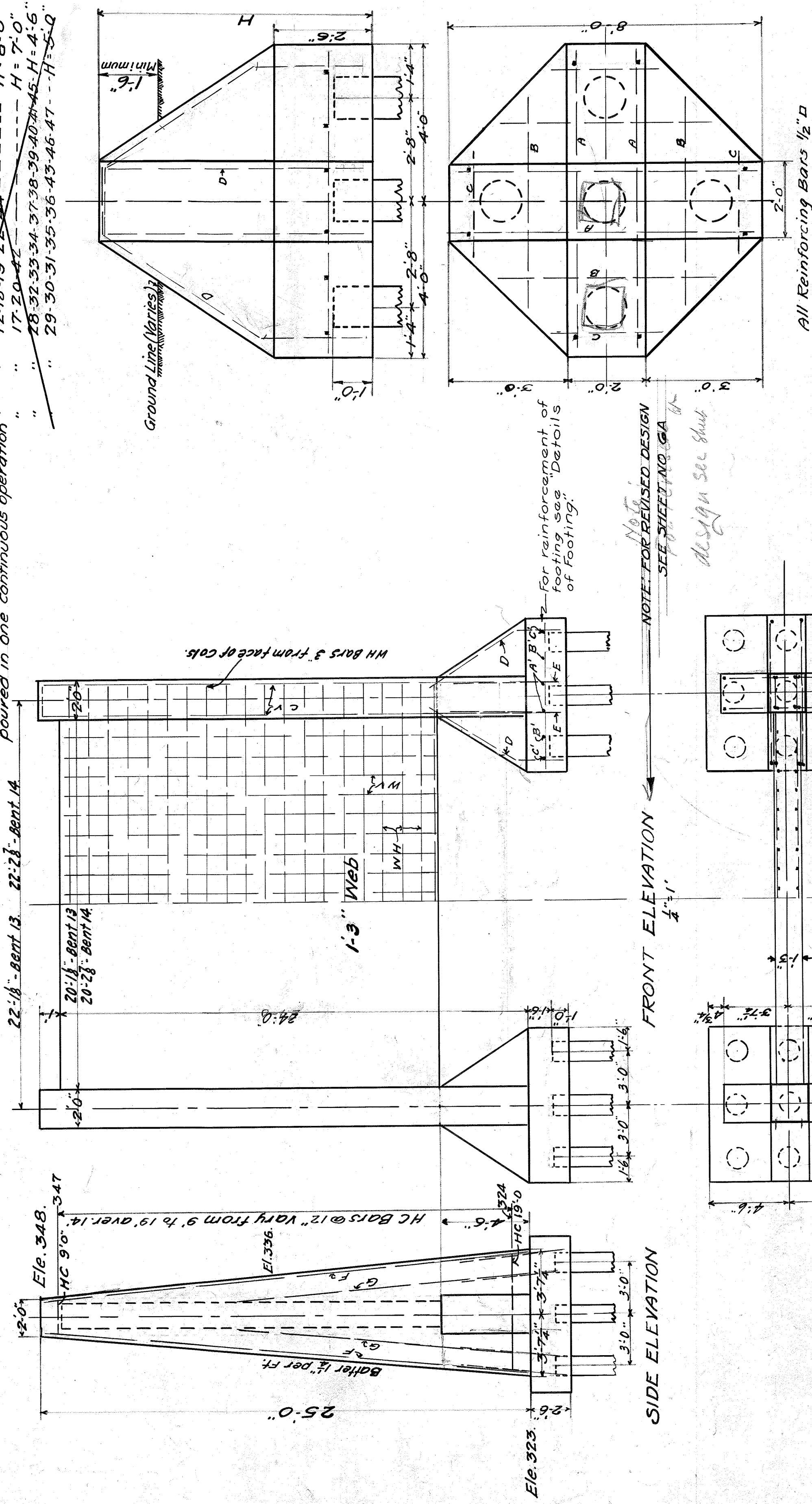
Revised - Concrete Files instead of Wood Files 11-18-30
 Revised - Design of Piers for Bents No. 13 & 14 - 5/22/31 - J. Cammack
 Corrected CKH, 2/13/31
 Checked by M.B. Abbott - Rechecked U.P.R. 2-19-31

For details of Concrete Files see Sheet 8A of 16

NUMBER OF BENTS	H
2-3-5-6-7-10-11-16	4'-6"
4-8-9-15-21-23-24-25-26-27	5'-0"
12-18-19-22-39-44	6'-0"
17-20-42	7'-0"
40-41-42	8'-0"
28-32-33-34-37-38	4'-6"
45	10'-0"
29-30-31-35-36	5'-0"
46	12'-0"
47	11'-0"

BENTS 13 & 14
 STA. 451+32.5 & 451+77.5

GENERAL PEDESTAL
 For Bents 2-3-5-6-7-10-11-16 - H=4'-6"
 " 4-8-9-15-21-23-24-25-26-27 - H=5'-0"
 " 12-18-19-22-39-44 - H=6'-0"
 " 17-20-42 - H=7'-0"
 " 40-41-42 - H=8'-0"
 " 28-32-33-34-37-38-39-40-41-42-45 - H=4'-6"
 " 29-30-31-35-36-43-46-47 - H=5'-0"



REINFORCING STEEL

MARK	SIZE	NO.	LENGTH
A	1/2" D	8	7'-5"
B	"	8	6'-8"
C	"	8	3'-0"
D	"	8	Variable

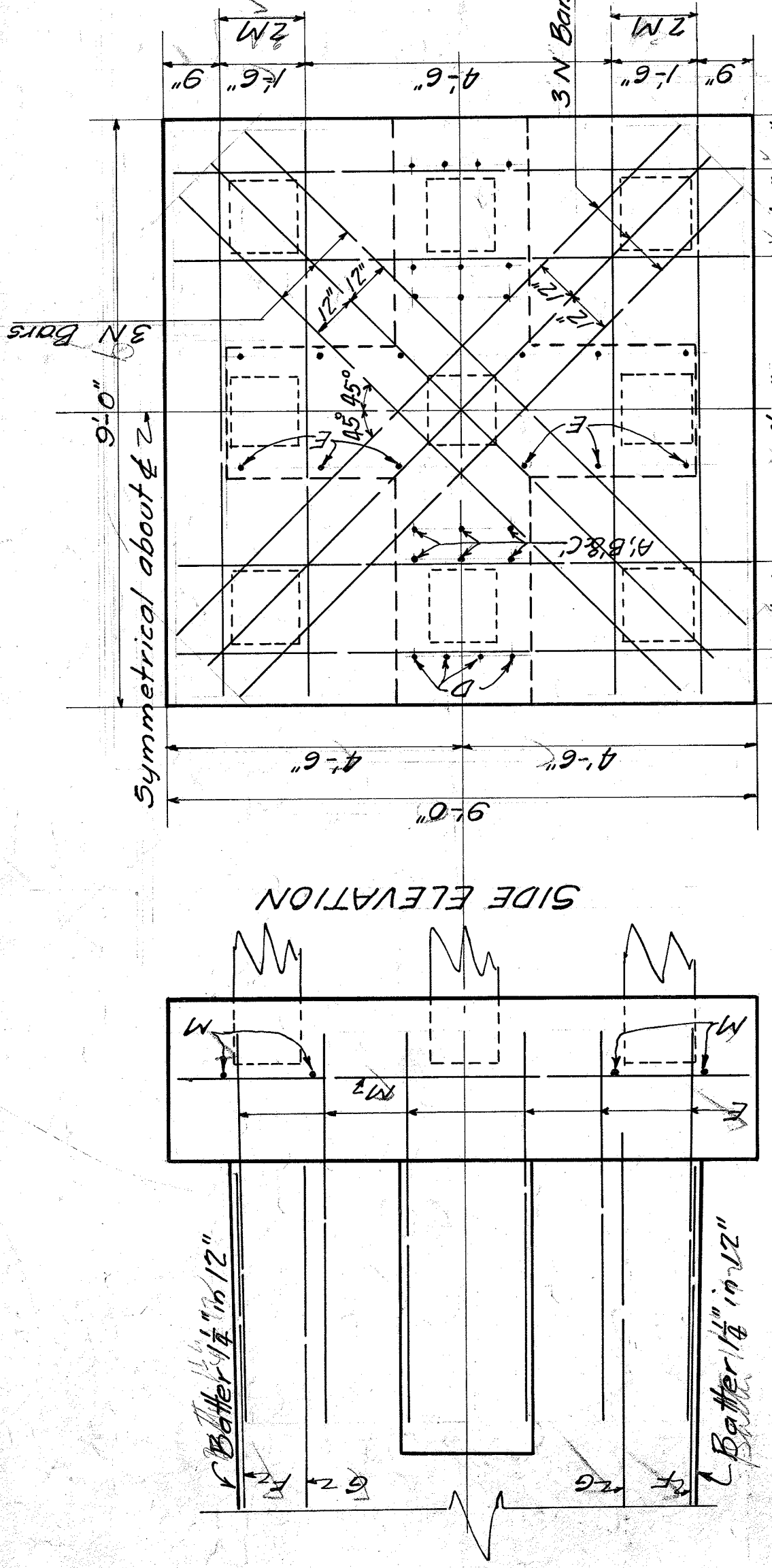
REINFORCING STEEL

MARK	SIZE	No	Length Location
WH	1/2" D	40	Web
CV	"	8	26-6 Column
HC	"	48	var.
A'	"	8	8'-6" Pedestal
B'	"	8	8'-6"
C'	"	8	8'-6"
D	"	16	9'-6"
E	"	24	6'-0" Column
F	"	8	24-9 Column
G	"	8	15'-0"

ESTIMATED QUANTITIES
 Reinforcing Steel 2760 #200's (each)
 Concrete - Class A' 51.9 CB CY "

LENGTH OF 'D' BARS
 Where H = 4'-6" Length = 7'-0"
 " " " " " = 8'-3"
 " " " " " = 9'-0"
 " " " " " = 9'-9"
 " " " " " = 11'-6"
 " " " " " = 13'-6"

Note: For Estimate of Quantities see Sheet No. 1. For Elevation of Top of Pedestals see Sheet No 15



Dwg # 4505

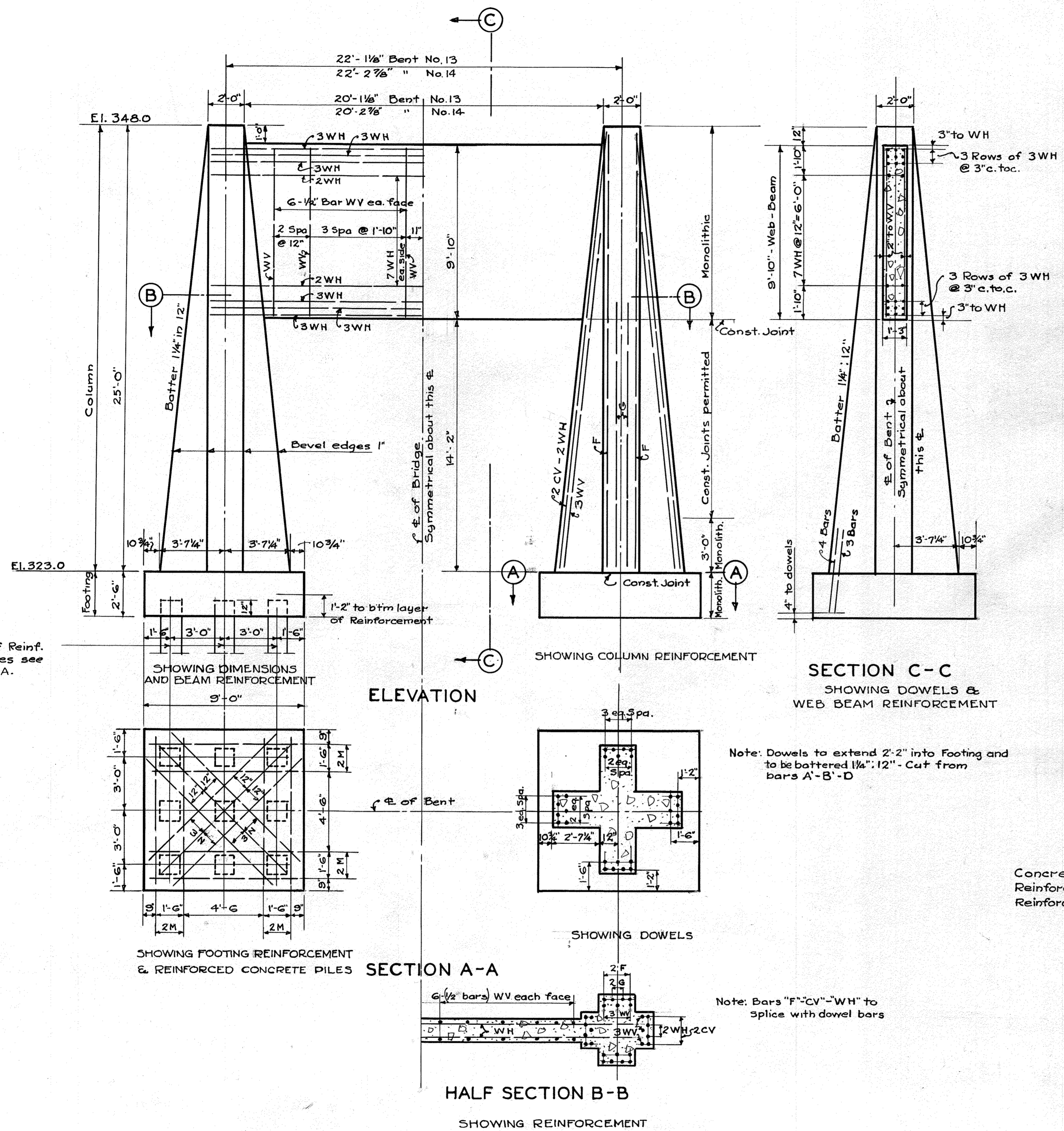
COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF STATE ROADS AND HIGHWAYS
 FRANKFORT
 CUMBERLAND RIVER BRIDGE
 CANTON - TRIGG COUNTY
 GENERAL PLAN

OF
 BENTS No 13, No 14 AND PEDESTALS
 1929-30.
 SUBMITTED BY J. Johnson CONSULTING ENGINEER
 RECOMMENDED FOR APPROVAL _____ BRIDGE ENGINEER
 RECOMMENDED FOR APPROVAL _____ CHIEF ENGINEER
 APPROVED - KENTUCKY STATE HIGHWAY COMMISSION
 BY _____ CHAIRMAN
 DATE _____ BOOK NO. _____ PAGE _____
 SHEET 6 OF 16

DETAILS OF FOOTING
 BENTS 13 & 14

ADDITIONAL BILL OF REINFORCEMENT (FOR ONE BENT)

MARK	No.	SIZE	LENGTH	LOCATION
M	16	3/8" D	8' 9"	Footings
N	12	"	10' 8"	"



MARK	NO	SIZE	LENGTH		LOCATION
			FT.	IN.	
M	16	3/8"	8	8	Footing
N	12	"	10	8	"
D	16	1/2"	9	6	Dowels - cut in two
A	8	"	8	6	"
B	4	"	8	6	"
F	8	"	24	9	Column
CV	8	"	26	6	" (cut to 24'9")
WH	8	"	24	-	"
WH	32	"	24	-	Web - Beam
WV	24	"	19	0	Column
WV	12	"	19	0	Web - Beam - cut in two
G	8	"	15	0	Column

Note: Mark, size, & length of bars specified above are same as given for original design. - No additional steel required.

	Bent No. 13	Bent No. 14
Concrete - Class 'A'	49.3 Cu. Yd.	49.4 Cu. Yd.
Reinforcement	2170 Lb.	2170 Lb.
Reinforced Concrete Piles	396 Lin. Ft.	396 Lin. Ft.

Dwg # 4505

Sh 6A

DESIGNED BY: *L. L. Cammack* DATE: *1/23/33*
 TRACED BY: *L. L. Cammack* DATE: *1/23/33*
 CHECKED BY: *L. L. Cammack* DATE: *1/23/33*

DETAILS OF REVISED PIERS FOR BENTS NO 13 & 14

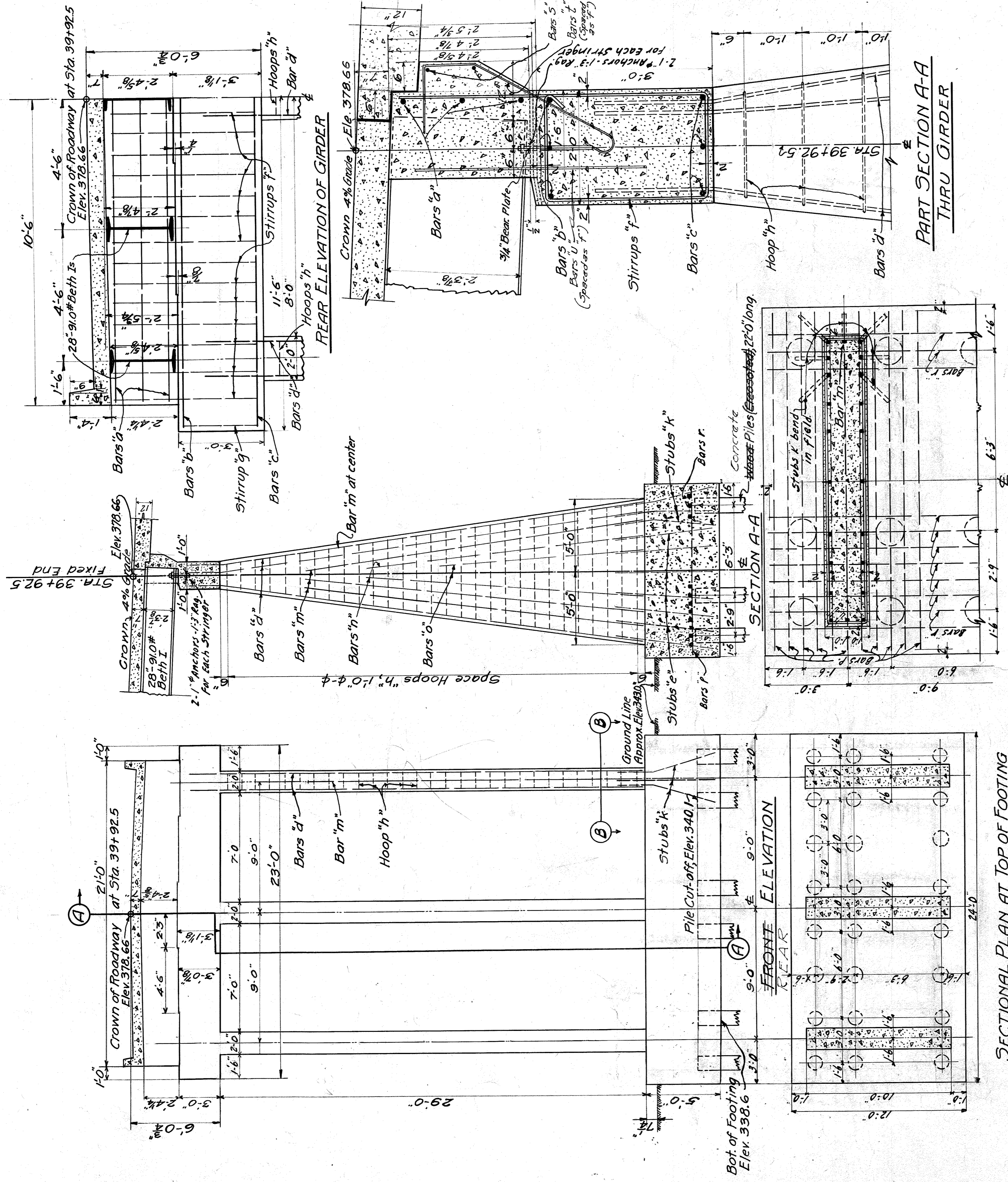
BRIDGE OVER CUMBERLAND RIVER AT CANTON-SHEET 6A OF 16

COMMONWEALTH OF KENTUCKY
 STATE HIGHWAY DEPARTMENT
 FRANKFORT
 COUNTY OF
TRIGG

STATION _____ ROAD PROJECT NO _____

SUBMITTED BY _____ BRIDGE ENGR. DRAWING INDEX
 APPROVED BY _____ STATE HIGHWAY ENGR. No. *4505*

Revised - Increasing thickness of floating slab to 12" and supporting it on Abutment 11-13-30
Concrete Piles instead of Wood Piles 11-18-30

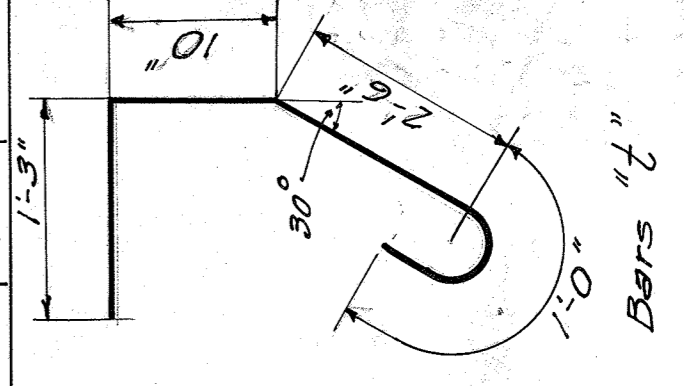


PART SECTION A-A
THRU GIRDER

SECTION B-B

SECTIONAL PLAN AT TOP OF FOOTING

SCHEDULE NO	MARK	SIZE	LENGTH	KIND	REMARKS
3	a	1/8 φ	20'-8"	Str.	
3	b	1/8 φ	22'-8"	Str.	
3	c	1/8 φ	22'-8"	Str.	
18	d	1/2 φ	31'-0"	Bent	Bent in field to stub into girder
42	e	1/2 φ	6'-8"	Str.	
28	f	1/2 φ	11'-6"	Stirrups	See Bend Diag.
2	g	1/2 φ	9'-6"	Stirrups	See Bend Diag.
87	h	1/2 φ	Varies	Hoops	See Bend Diag.
21	k	1/2 φ	7'-0"	Bent	See Section B-B
24	m	1/2 φ	23'-0"	Str.	
12	n	1/2 φ	19'-0"	Str.	
12	o	1/2 φ	14'-0"	Str.	
28	t	"	5'-6"	Bent	See Bend Diag.
28	u	"	4'-0"	Str.	
11	v	1/2 φ	23'-8"	Str.	



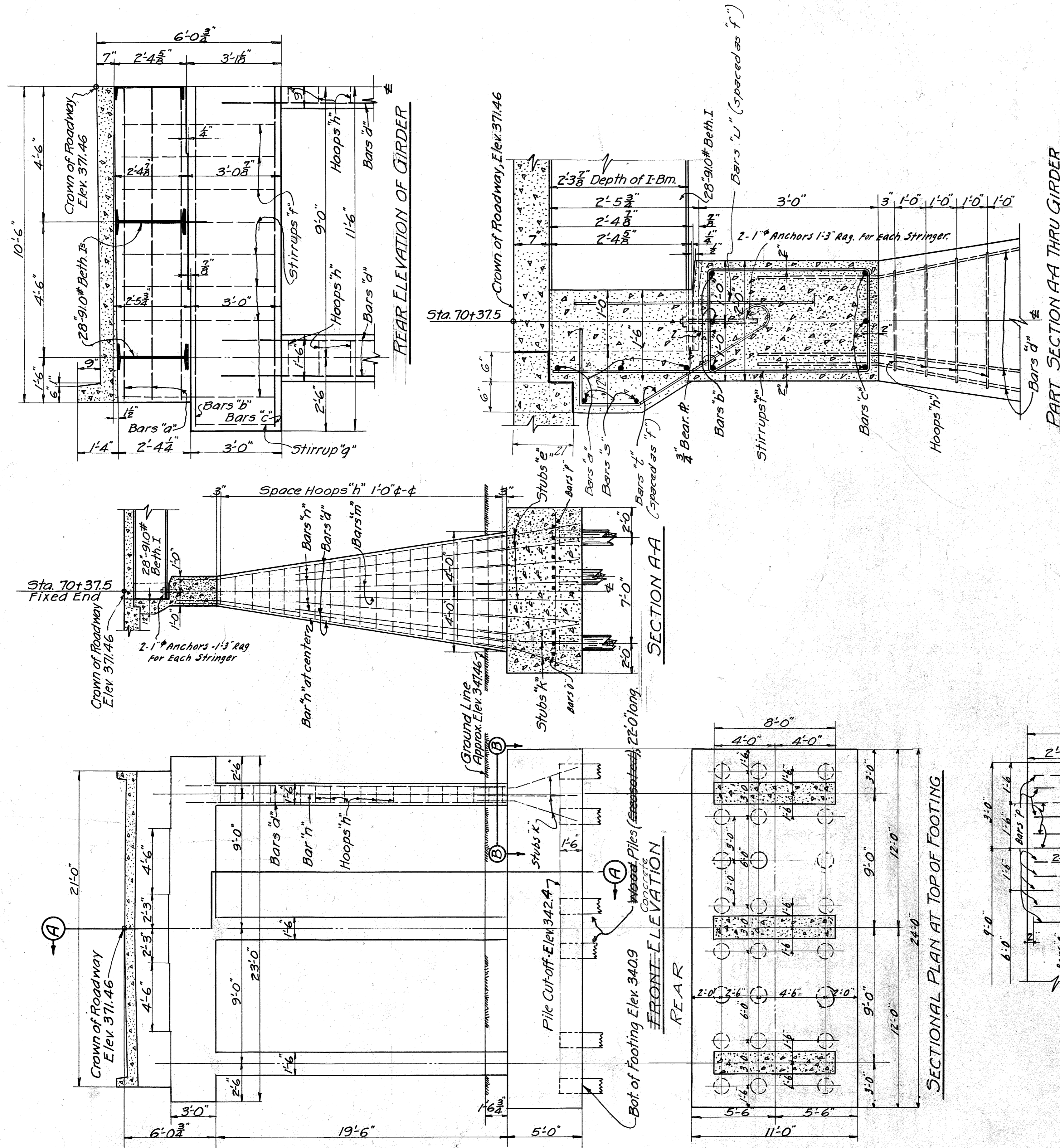
BENDING DIAGRAMS

Note: All dimensions taken inside to inside
ESTIMATE OF QUANTITIES
Concrete, Class A 1020 Cuyds
Reinforcement 5940 ~~5940~~ Lbs.
Wood Piles (Proposed) 528 Lin. Ft.
Concrete

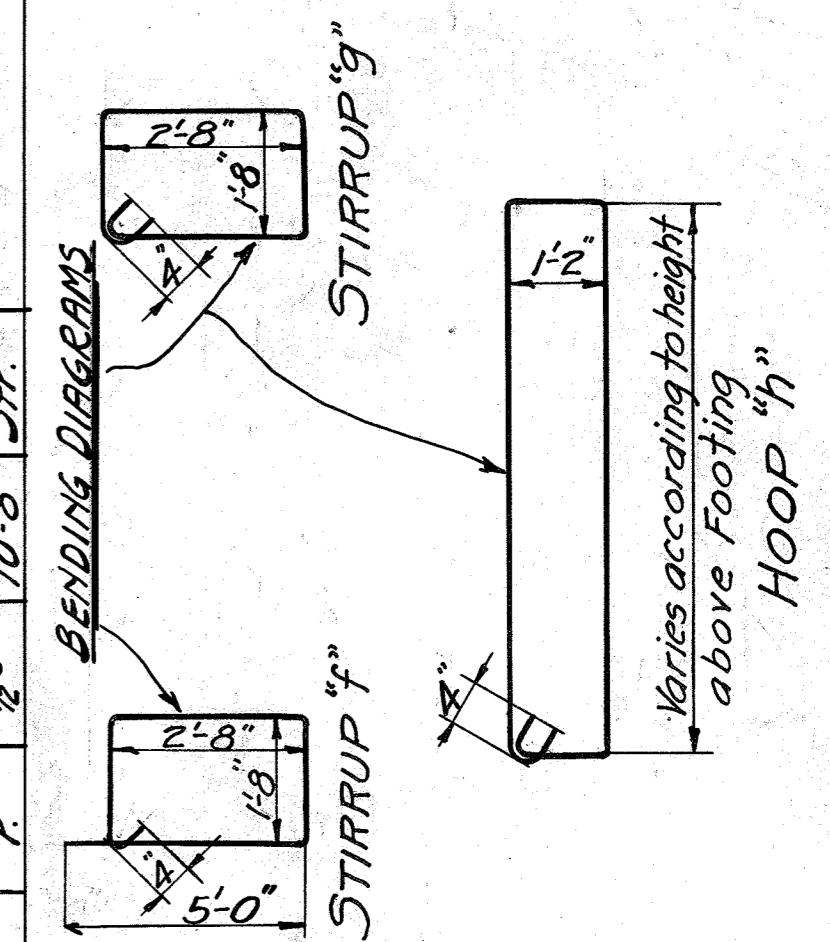
Dwg # 4505

Dwg No 4505
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT
CUMBERLAND RIVER BRIDGE
CANTON — TRIGG COUNTY
BENT No 1 (EAST END ABUTMENT)
1929-30
SUBMITTED BY *J. M. Johnson*
CONSULTING ENGINEER
RECOMMENDED FOR APPROVAL _____ BRIDGE ENGINEER
RECOMMENDED FOR APPROVAL _____ CHIEF ENGINEER
APPROVED - KENTUCKY STATE HIGHWAY COMMISSION
BY _____ CHAIRMAN
DATE _____ BOOK NO _____ PAGE _____
SHEET 7 OF 16

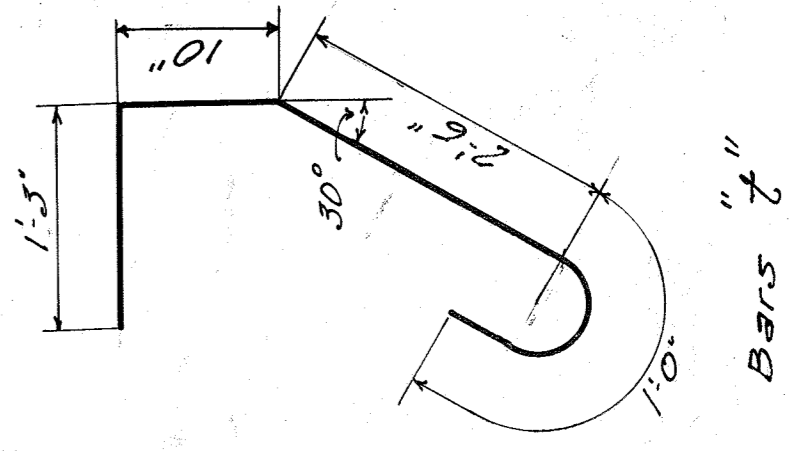
Revised - Increasing thickness of flashing slab to 12" and supporting it on Abutment. 11-13-30
 Revised - Increasing thickness of flashing slab to 12" and supporting it on Wood Piles. 11-18-30



No. Bars	MARK	SIZE	LENGTH	KIND	REMARKS
3	a	7/8 φ	20'-8"	Str.	
3	b	7/8 φ	22'-8"	Str.	
3	c	7/8 φ	22'-8"	Str.	
18	d	1/2 φ	21'-8"	Bent	Bent in field to stubs in girder.
36	e	1/2 φ	6'-8"	Str.	
16	f	1/2 φ	11'-6"	Stirrups	See Bend. Diag.
2	g	1/2 φ	9'-6"	Stirrups	See Bend. Diag.
60	h	1/2 φ	Varies	Hoops	See Bend. Diag.
21	k	1/2 φ	7'-0"	Bent	See Section BB
12	m	1/2 φ	10'-0"	Str.	
30	n	1/2 φ	14'-0"	Str.	
10	o	1/2 φ	23'-8"	Str.	
33	p	1/2 φ	10'-8"	Str.	



2	s	1/2 φ	20'-8"	Str.	
16	t	"	5'-6"	Bent	See Bend. Diag.
16	u	"	4'-0"		



Note: All dimensions taken inside to inside.
 ESTIMATE OF QUANTITIES
 Concrete, Class A 73 Cu Yds.
 Reinforcement 2684 #2-2 Lbs.
~~Wood~~ Piles (Crossed out) 528 Lin. Ft.
 Concrete

Dwg # 4505

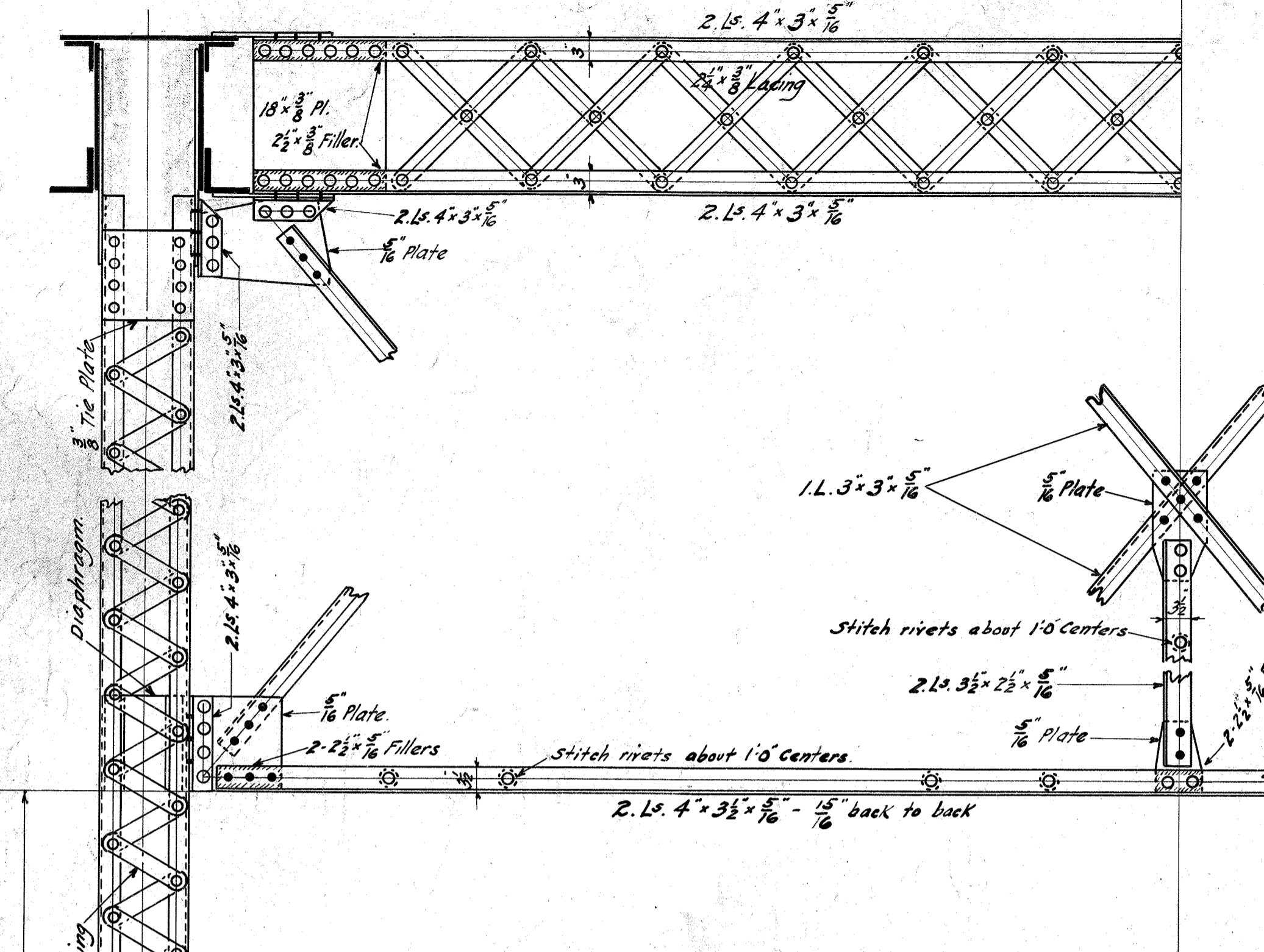
Dwg No 4505

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF STATE ROADS AND HIGHWAYS
 FRANKFORT
 CUMBERLAND RIVER BRIDGE
 CANTON - TRIGG COUNTY
 BENT No 48 (WEST END ABUTMENT)
 1929-30
 SUBMITTED BY *Am Johnson*
 RECOMMENDED FOR APPROVAL _____ CONSULTING ENGINEER
 RECOMMENDED FOR APPROVAL _____ BRIDGE ENGINEER
 RECOMMENDED FOR APPROVAL _____ CHIEF ENGINEER
 APPROVED - KENTUCKY STATE HIGHWAY COMMISSION
 BY _____ CHAIRMAN
 DATE _____ BOOK NO _____ PAGE _____
 SHEET 8 OF 16

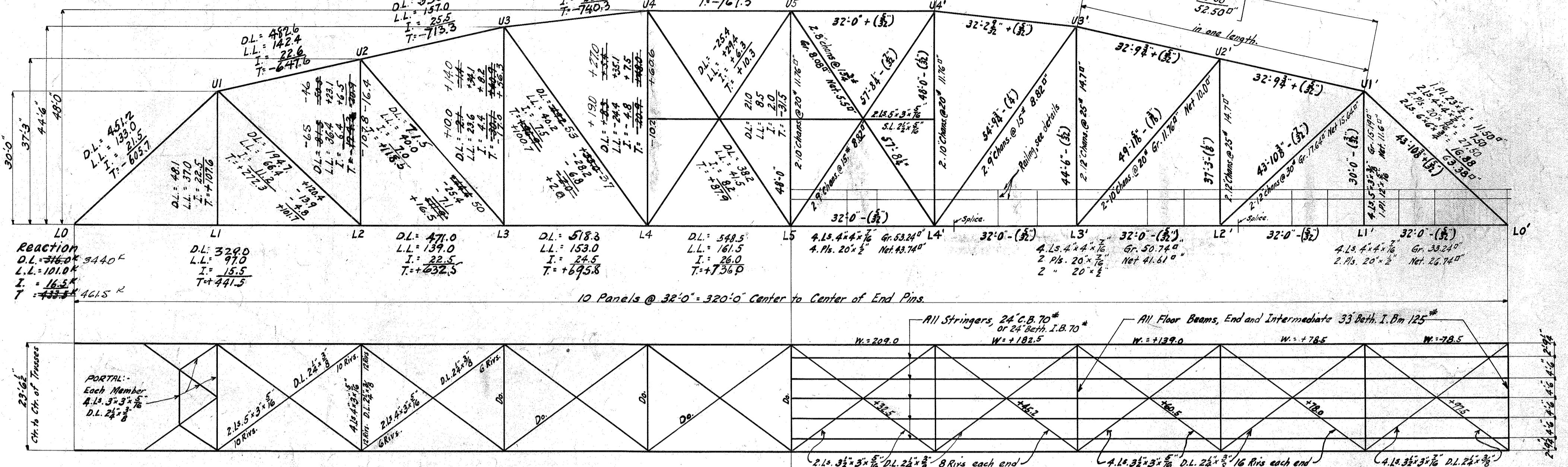
Impact $250 \pm L$ but not to exceed 30%, except
End Floor Beams & Hangers 60%
Connections all Floor Beams 60%

ESTIMATE OF QUANTITIES

Structural Steel	653,270 Lbs.
Cast Steel	4,590 Lbs.
Drain Pipe	1,000 Lbs.
Total Weight	658,860 Lbs.
Concrete Slab	1 61 CuYds.
Reinforcing Steel	31,800 Lbs.



+ denotes Tension.
- denotes Compression.



HALF PLAN OF TOP BRACING.

HALF PLAN OF FLOOR AND BOTTOM LATERAL SYSTEM.

ASSUMED LOADS:-

Dead Load = 4250 Lbs. per lin. ft. of Bridge.
Live Load = 50 Lbs. per sq. ft. plus 21000 Lbs.
concentrated load at any point,
or one 15' Ton Truck per lane;
preceded and followed by 1 1/2 Ton Trucks.

INTERMEDIATE FLOOR BEAM:-

SHEAR	MOMENT
Dead Load = 3355 ^k 468 ^c	2077 ^k 3050 ^c
Live Load = 312	2010
Impact = 53	603
Total = 3500^k 750^c	4690^k 5650^c

END FLOOR BEAM SAME AS INTERMEDIATE.
USE 33" BETH. I. BEAM @ 125#.

STRINGER:-

SHEAR	MOMENT
Dead Load = 93 ^k	74.3 ^k
Live Load = 13.7	100.0
Impact = 4.1	30.0
Total = 271^k	204.3^k

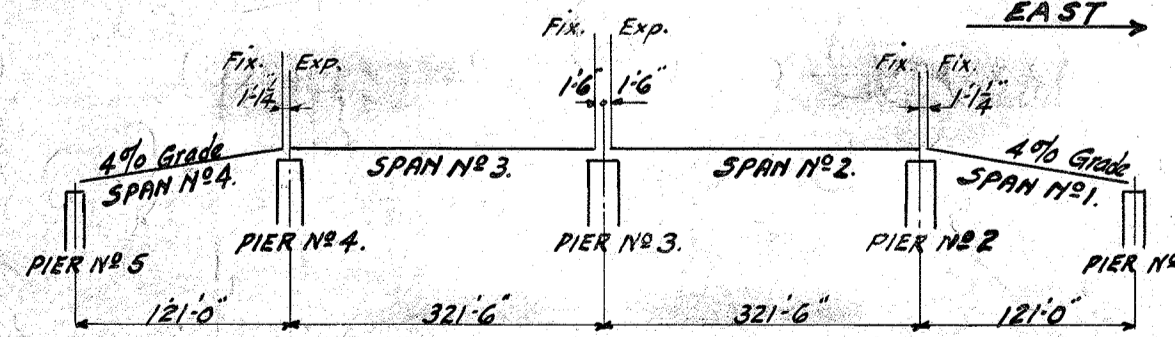
USE 24" C.B. @ 70# or 24" BETH. I. BEAM @ 70#.

GENERAL NOTES:-

- Specifications: Kentucky State Highway Department, Special Toll Bridges
- Rivets: Rivet steel as per Specifications
- Structural Steel: Medium Grade 62000 to 72000 Tensile.
- See INSET.
- Details: Rolled Channels used as TENSION members, shall be attached through WEBS only, No rivets permitted in flanges. In such members END rivets shall not be less than 2" from ends.
- Shop Drawings: Sheets to be 22" x 36" see specifications
- Reaming: General reaming will be required for Main Truss Members, see Specifications.
- Reaming of Field Connections: Preferably riveted Trusses shall be FULLY assembled in the shop, reamed and match-marked. If extra care be taken in placing the different members, about one half of each Truss may be assembled, reamed and match-marked. Should this plan be adopted, the continuous middle chord sections, are to be considered with each portion so assembled and reamed.
- Paint and Painting: See Specifications.
- Forms: See Specifications.
- Concrete in Floor Slab to be Class F.
- Reinforcing Steel - Deformed Bars to be A.H. Steel, Intermediate Grade.
- Approval of Shop Drawings: See Specifications.
- INSET - Referred to in General Notes above.
- CARBON O. H. STEEL:-
Phosphorus: Acid 0.06, Basic 0.04, Sulphur 0.05
Elongation in 8" = Tensile Strength
Minimum Area Reduction = 42%
Bend Test: Material 3/4" or less 180° D-1T, Material over 3/4" 180° D-1/2 T.
- Tensile per Sq. In. 62000-72000.
Minimum Yield Point - 37000 per D".
Mill and Shop Practices: See Specifications
State Highway Department, Special Toll Bridges.

Dwg #4505

NOTE:-
SECTION OF CONCRETE FLOOR SLAB BETWEEN PANELS L4 & L4' TO BE Poured FIRST, THEN ALTERNATE DOUBLE PANELS TO ENDS.



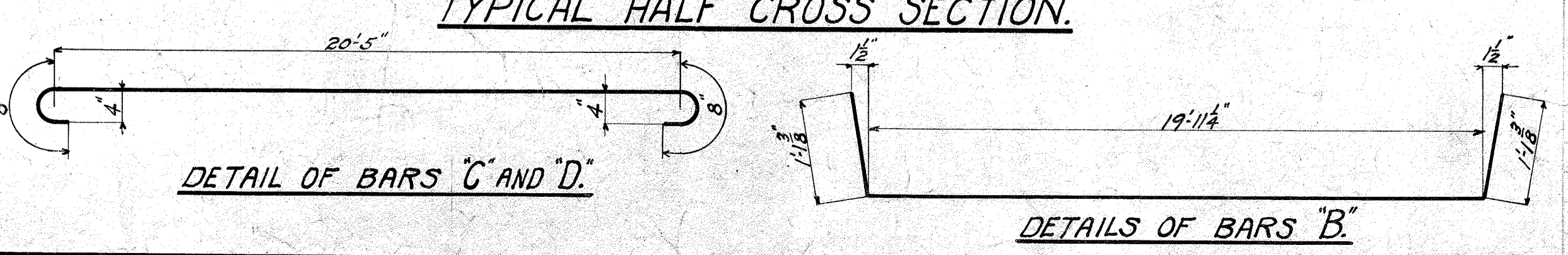
PROFILE SKETCH.
CUMBERLAND RIVER - CANTON, KY.

NOTE:-
BILL OF REINFORCING STEEL IN CONCRETE FLOOR SLAB FOR SPAN #2 - CUMBERLAND RIVER & SPANS #2-3 & 4 - TENNESSEE RIVER TO BE EXACTLY SAME AS THAT SHOWN FOR SPAN #3 - CUMBERLAND RIVER, EXCEPT FOR DIFFERENCES IN END PANELS L0-L1 & L1-L0 WHICH MUST BE MADE TO SUIT CONDITION AT PIERS.

BILL OF REINFORCING IN CONCRETE FLOOR SLAB FOR SPAN #3 - CUMBERLAND RIVER

PANEL	MARK	NUMBER OF PIECES	SIZE	LENGTH FT. INS.	REMARKS
L0-L1.	A	33	1/2" x 20	9	Straight
	B	33	Do.	22	Bent.
	C	33	Do.	21	"
	D	33	Do.	21	"
L1-L2.	E4	39	1/2" x 33	5 1/2	Straight
	A	32	Do.	20	"
	B	32	Do.	22	Bent.
	C	32	Do.	21	"
L2-L3.	D	32	Do.	21	"
	E5	39	1/2" x 32	10	Straight
	A	32	Do.	20	"
	B	32	Do.	22	Bent.
L3-L4.	C	32	Do.	21	"
	D	32	Do.	21	"
	E5	39	1/2" x 32	10	Straight
	A	32	Do.	20	"
L4-L5.	B	32	Do.	22	Bent.
	C	32	Do.	21	"
	D	32	Do.	21	"
	E5	39	1/2" x 32	10	Straight
L1'-L0'	A	33	Do.	20	"
	B	34	Do.	22	Bent.
	C	33	Do.	21	"
	D	34	Do.	21	"
L5-L4'	E6	39	1/2" x 34	2	Straight
	L4'-L3'	"	"	"	"
	L3'-L2'	"	"	"	"
L2'-L1'	"	"	"	"	"
	"	"	"	"	"

TYPICAL HALF CROSS SECTION.



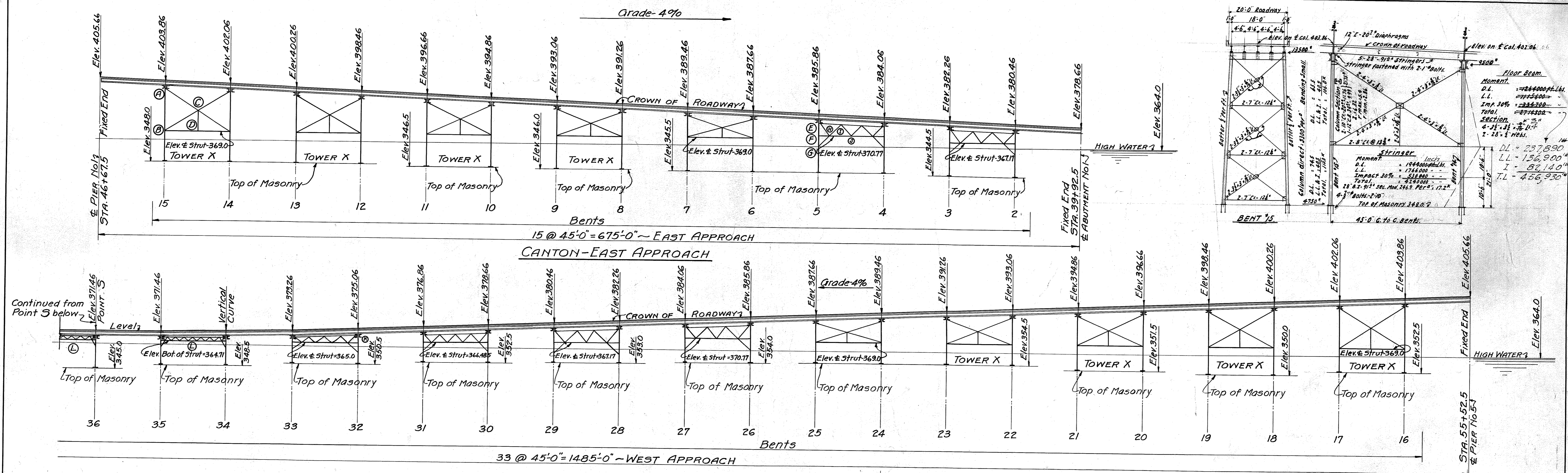
COMMONWEALTH OF KENTUCKY.
DEPARTMENT OF STATE ROADS AND HIGHWAYS.
FRANKFORT.
RIVETED THROUGH TRUSS BRIDGE.
CONCRETE SLAB FLOOR - 20' ROADWAY.
320'-0" SPAN.
MARSHALL AND TRIGG COUNTIES.
SUPERSTRUCTURE - STRESS SHEET AND DETAILS
1929-30

SUBMITTED BY: [Signature]
CONSULTING ENGINEER.
RECOMMENDED FOR APPROVAL, BRIDGE ENGINEER.
RECOMMENDED FOR APPROVAL, CHIEF ENGINEER.
APPROVED - KENTUCKY STATE HIGHWAY COMMISSION.
BY: [Signature]
DATE: [Blank] BOOK NO. [Blank]
PAGE: [Blank]

sh9 SHEET 9 OF 16 CUMB. RIV. 9 OF 13 TENN. RIV.

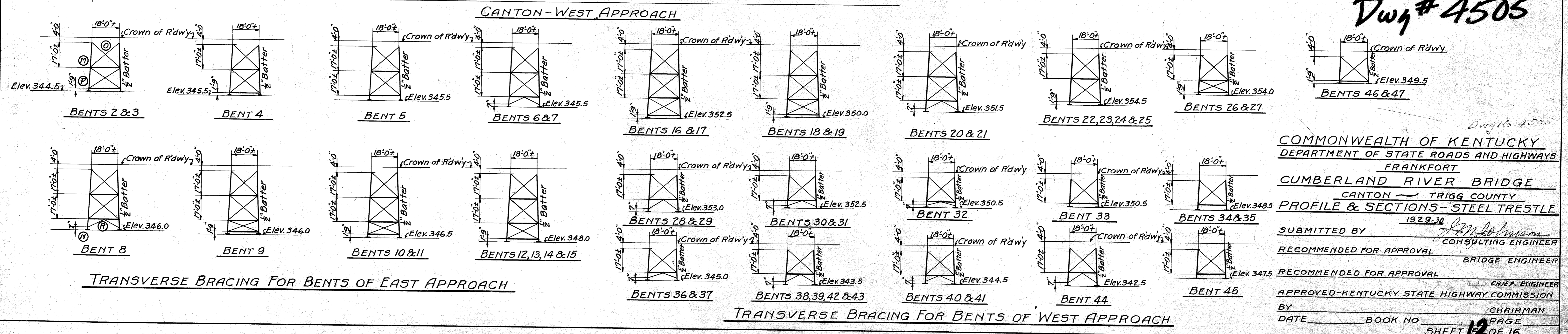
Revised: Stresses on 320'-0" Steel Spant. 11-15-30

Revised - Moment and Section of Floor beams. 11-15-30



NOTE:- Vary Panels of Transverse Bracing should interference occur from Longitudinal Struts. See Sheet No 1 for Estimated Quantities.

Dwg # 4505



Dwg No 4505

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF STATE ROADS AND HIGHWAYS
FRANKFORT
CUMBERLAND RIVER BRIDGE
CANTON - TRIGG COUNTY
PROFILE & SECTIONS - STEEL TRESTLE
1929-30

SUBMITTED BY *J. Johnson*
CONSULTING ENGINEER

RECOMMENDED FOR APPROVAL _____
BRIDGE ENGINEER

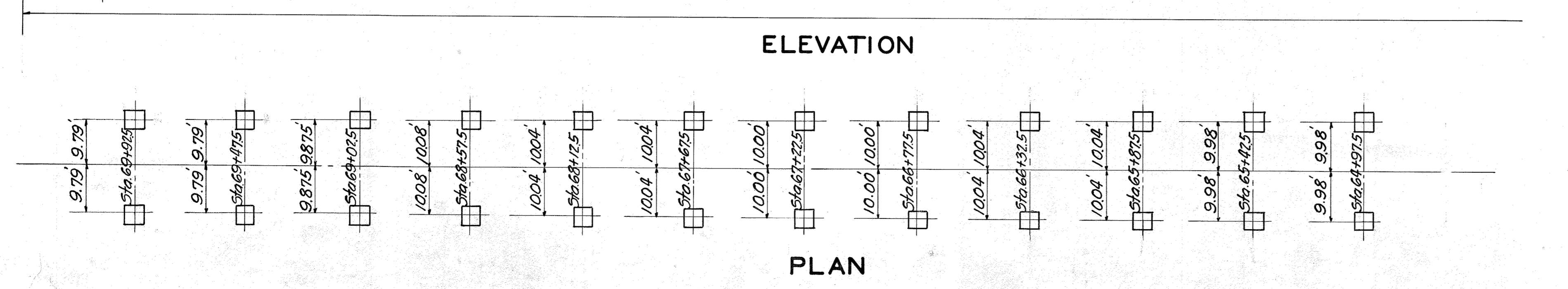
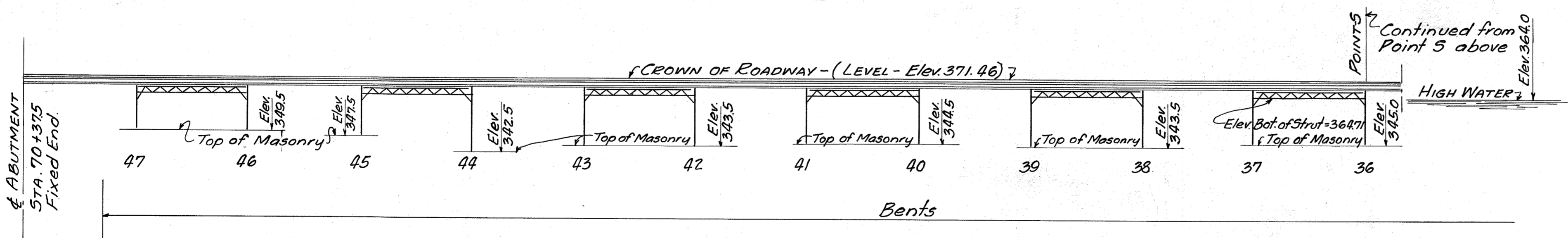
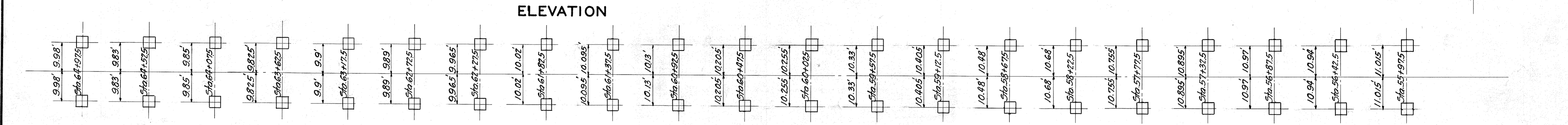
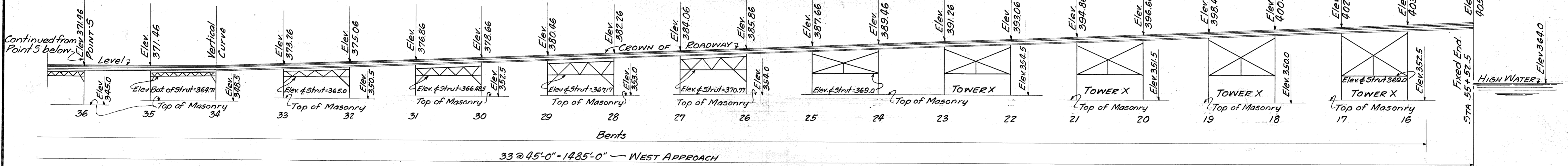
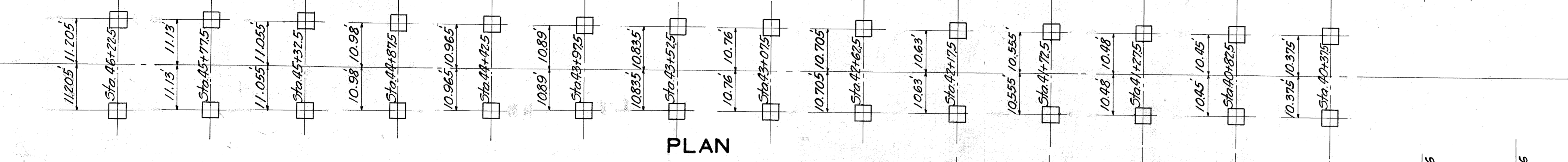
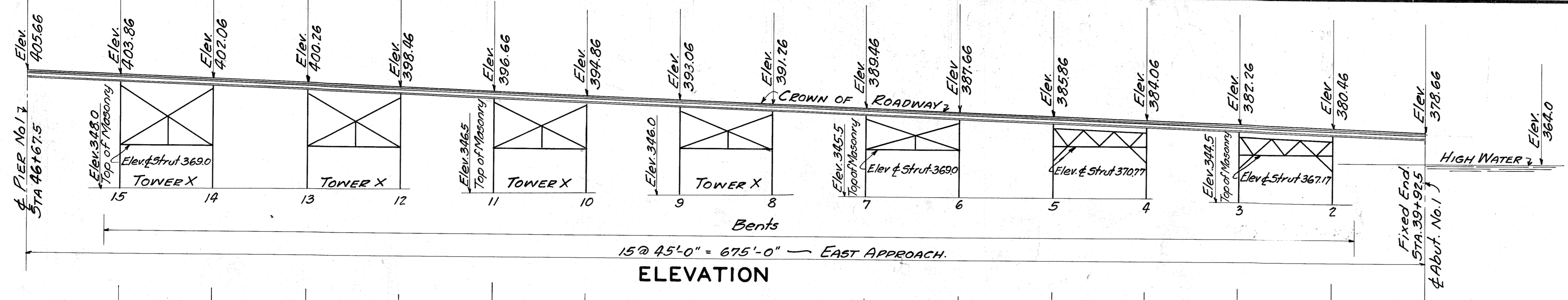
RECOMMENDED FOR APPROVAL _____
CHIEF ENGINEER

APPROVED - KENTUCKY STATE HIGHWAY COMMISSION
BY _____
CHAIRMAN

DATE _____ BOOK NO. _____ PAGE _____
SHEET 12 OF 16

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	Ky				

403.86
34.8



PEDESTAL LAYOUT - STEEL TRESTLE

Drawn by: *[Signature]*
 Checked by: *[Signature]*
 Date: *[Date]*

5h13

BRIDGE OVER CUMBERLAND RIVER SHEET 17A OF 16

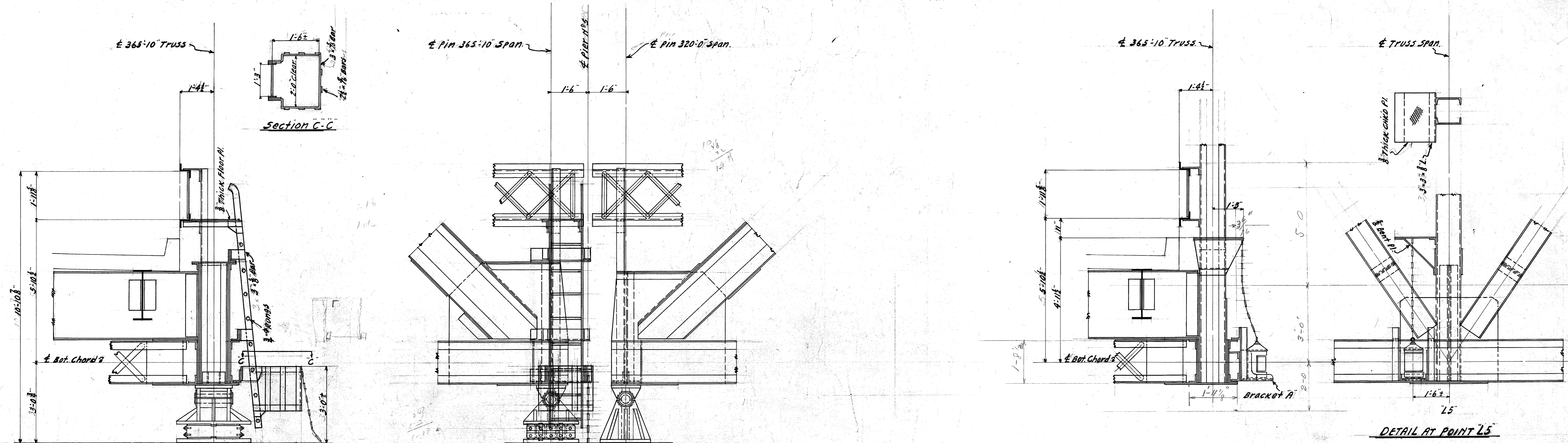
COMMONWEALTH OF KENTUCKY
 STATE HIGHWAY DEPARTMENT
 FRANKFORT
 COUNTY OF

TRIGG

CADIZ - MURRAY

STATION _____ ROAD PROJECT NO. _____

SUBMITTED BY _____ BRIDGE ENGR. _____ DRAWING INDEX _____
 APPROVED BY _____ CHIEF ENGR. _____ NO. 4505



PIER NO. 5-TENNESSEE RIVER.

DETAIL AT POINT L5

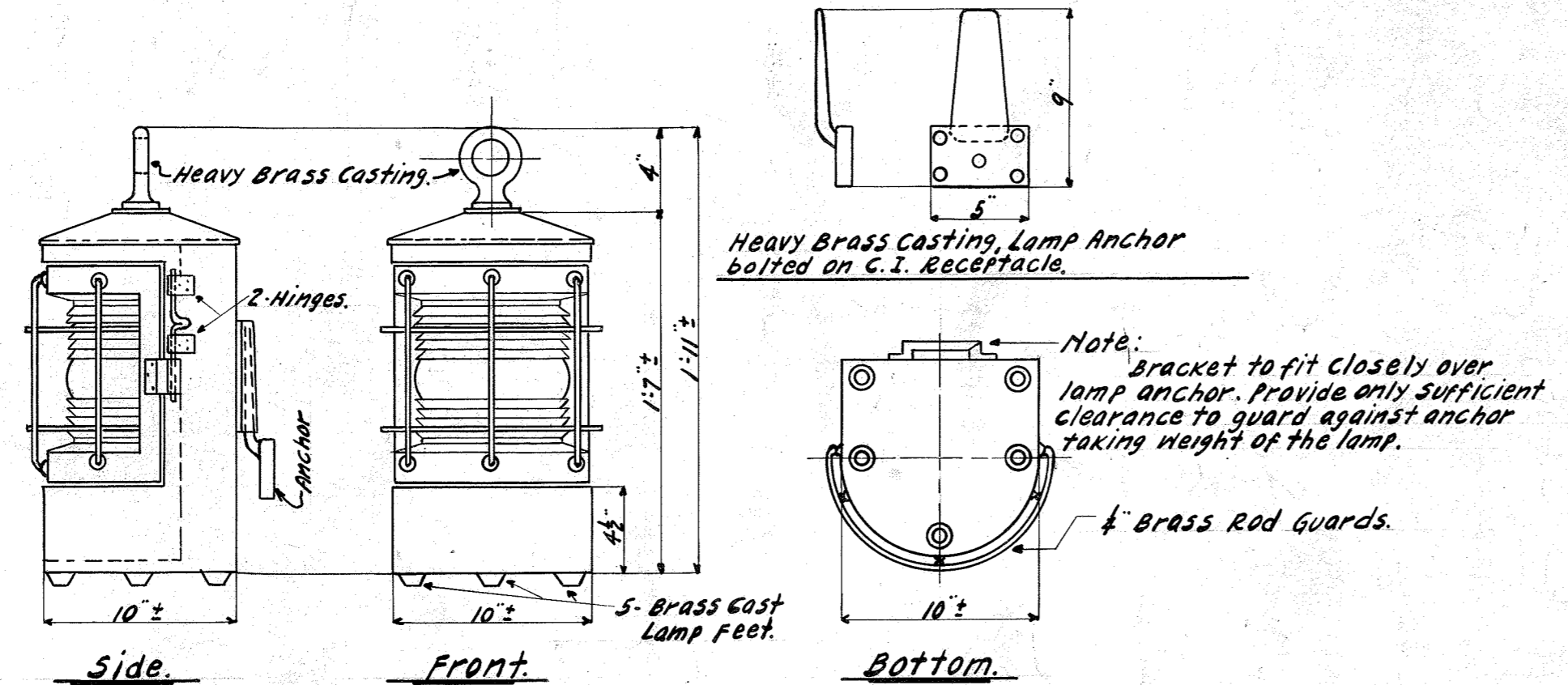
REQUIREMENTS FOR NAVIGATION LIGHT FIXTURE.
 The fixture shall be made of heavy copper not less than Number 88 M.G. with hinged front door securely latched and fastened. The fixtures are to be water tight and dust proof. Fixtures to be of a type suitable for oil burning.
 Eight inch half section fresnel type, or equal lenses are required to show 180° to the horizon. Lens to be green for channel lights and ruby for the pier lights.
 Reflectors are to be provided for all lamps.
 A strong galvanized metal chain shall be firmly fastened to a heavy cast brass ring at the top of fixture, as shown on the drawing, in order that fixture can be lifted from the holding bracket.
 Eight (8) fixtures are required for Green Lights - Tennessee River
 Four (4) " " " " " Red " - Cumberland River
 Ten (10) " " " " " " " - Tennessee River
 Six (6) " " " " " " " - Cumberland River.

STRUCTURAL STEEL
 Tennessee River - 6650 Lbs.
 Cumberland River - 3990 Lbs.

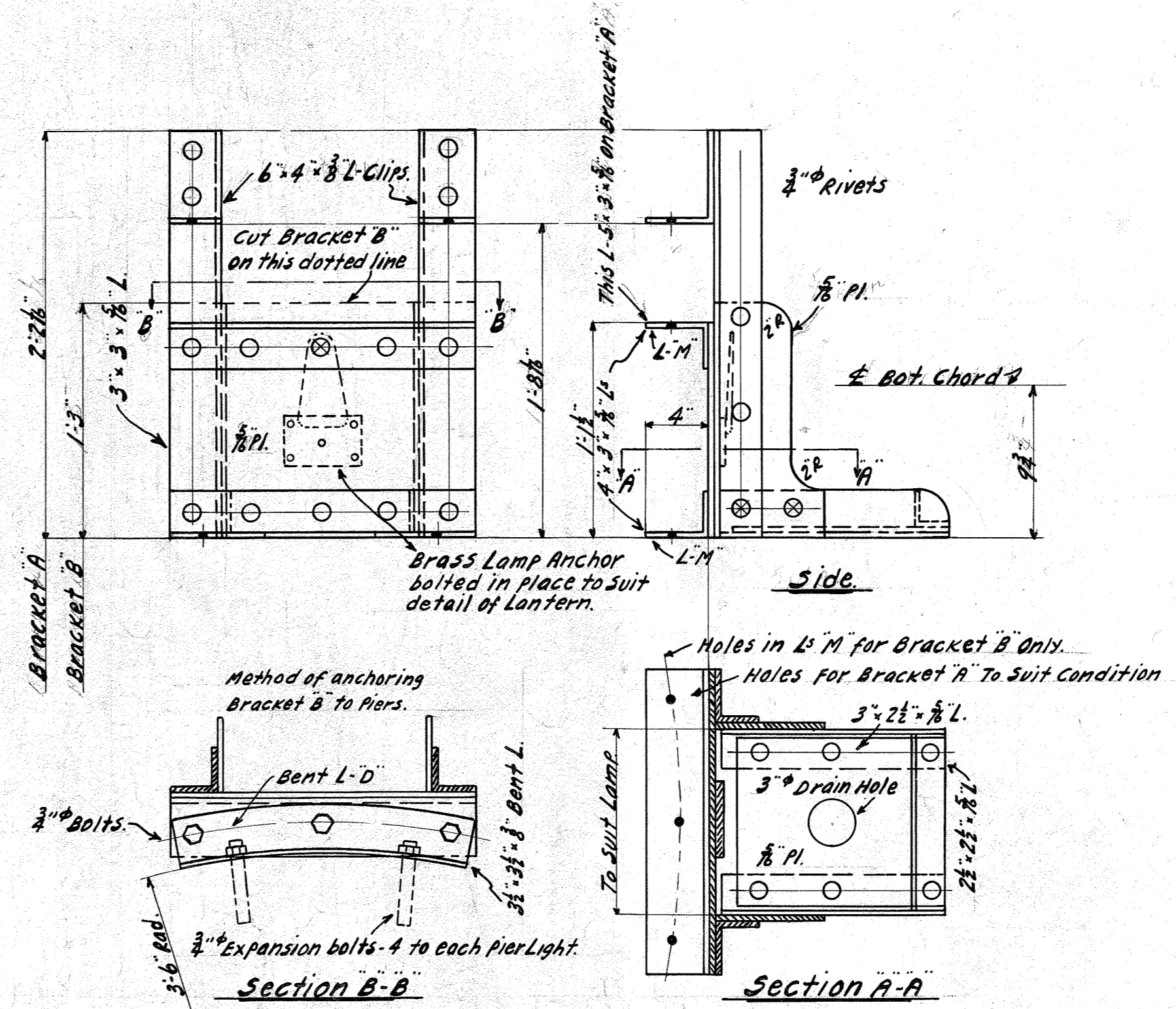
Dwg # 4505 Sh A
 Dwg 4505

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF STATE ROADS AND HIGHWAYS
 FRANKFORT.
 TENNESSEE & CUMBERLAND RIVER BRIDGES
 AT EGGERS FERRY & CANTON.
 NAVIGATION LIGHTS
 1929-30.

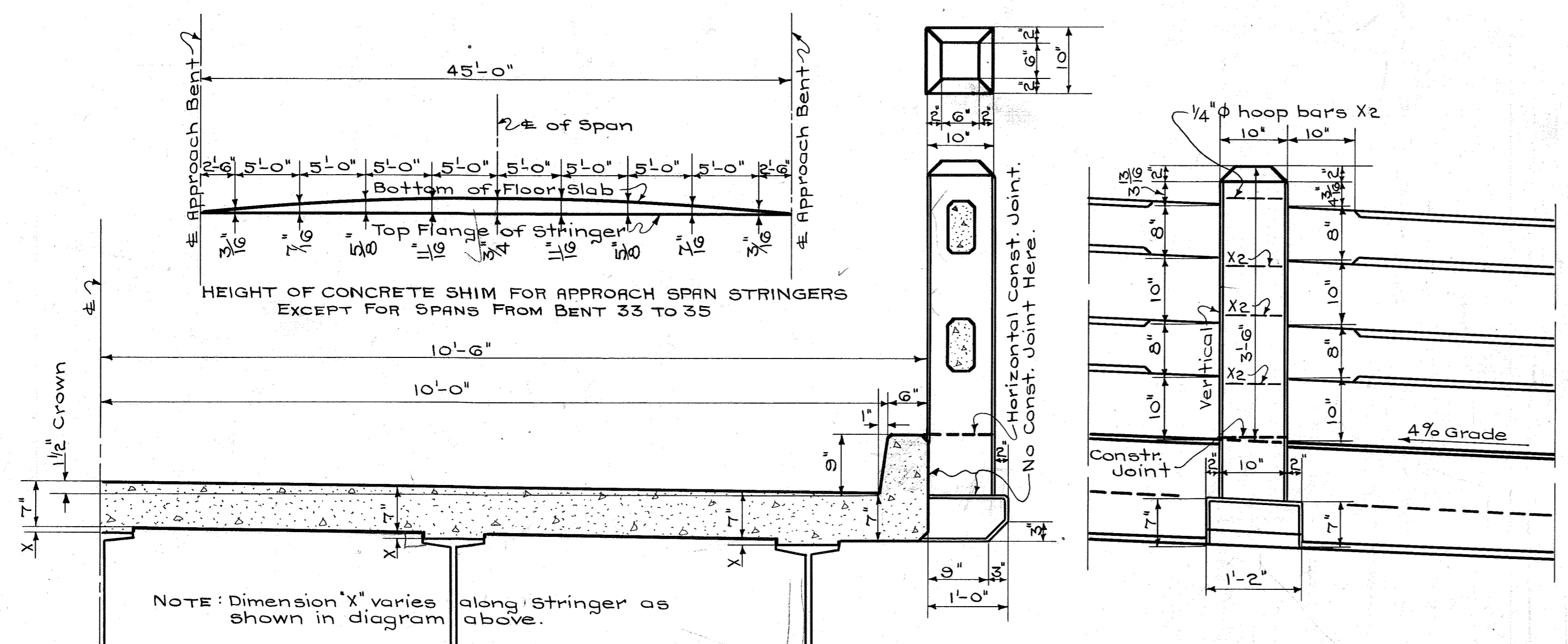
SUBMITTED BY J. M. Johnson
 CONSULTING ENGINEER.
 RECOMMENDED FOR APPROVAL _____ BRIDGE ENGINEER
 RECOMMENDED FOR APPROVAL _____ CHIEF ENGINEER
 APPROVED - KENTUCKY STATE HIGHWAY COMMISSION
 BY _____ CHAIRMAN
 DATE _____ BOOK NO. _____ PAGE _____



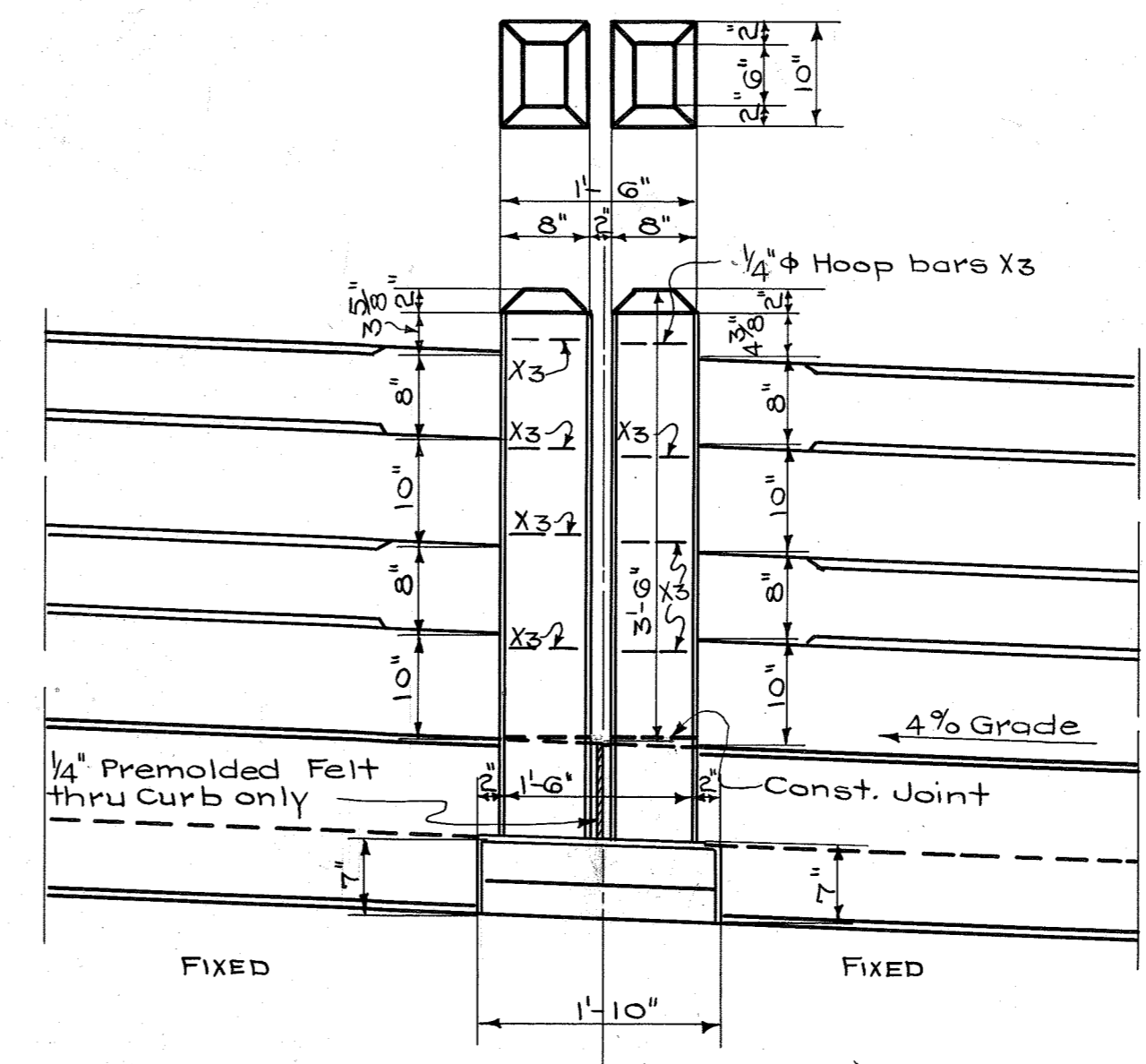
DETAIL OF NAVIGATION LIGHT.
 Scale 1/2" = 1'-0"



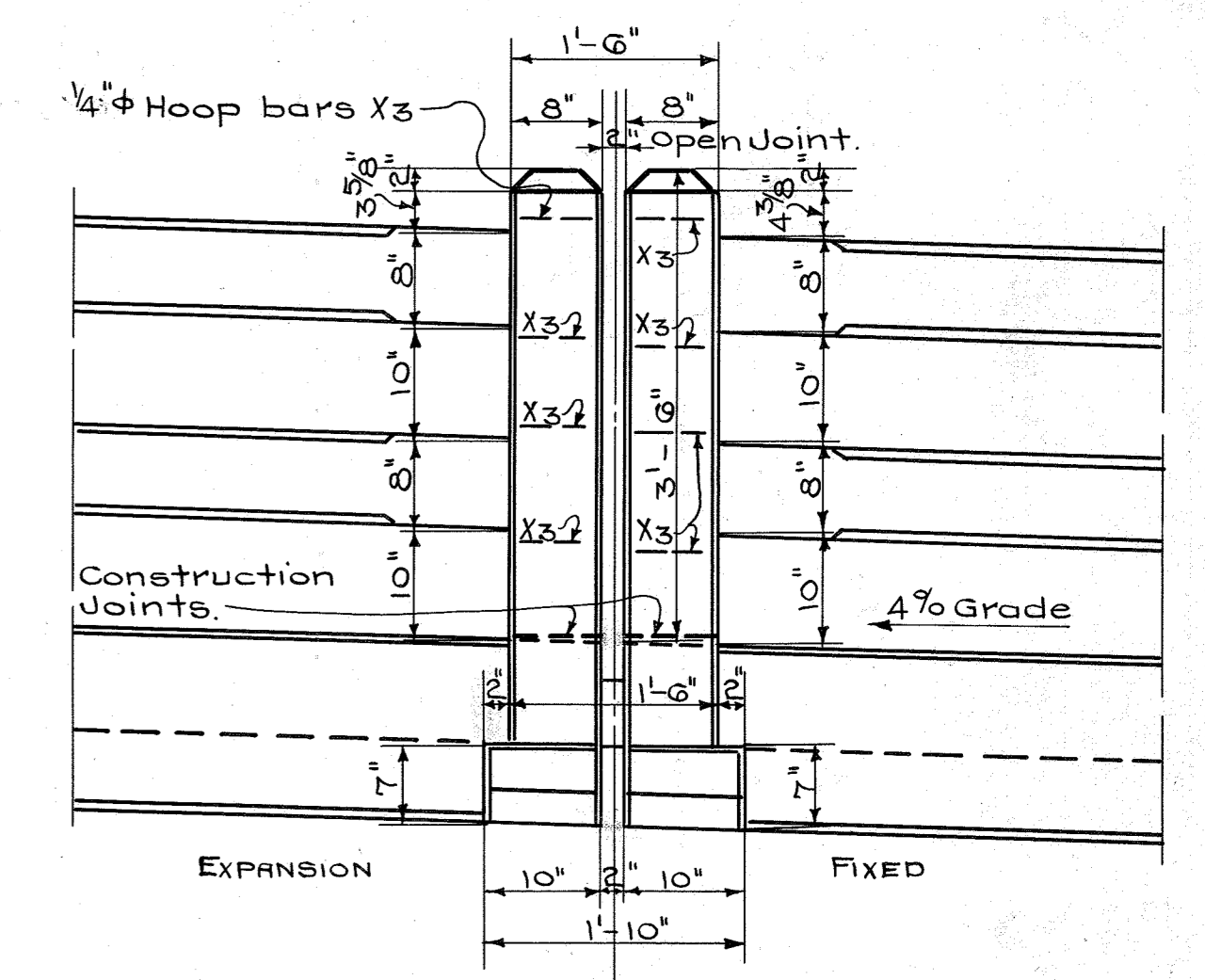
DETAIL OF BRACKETS A & B



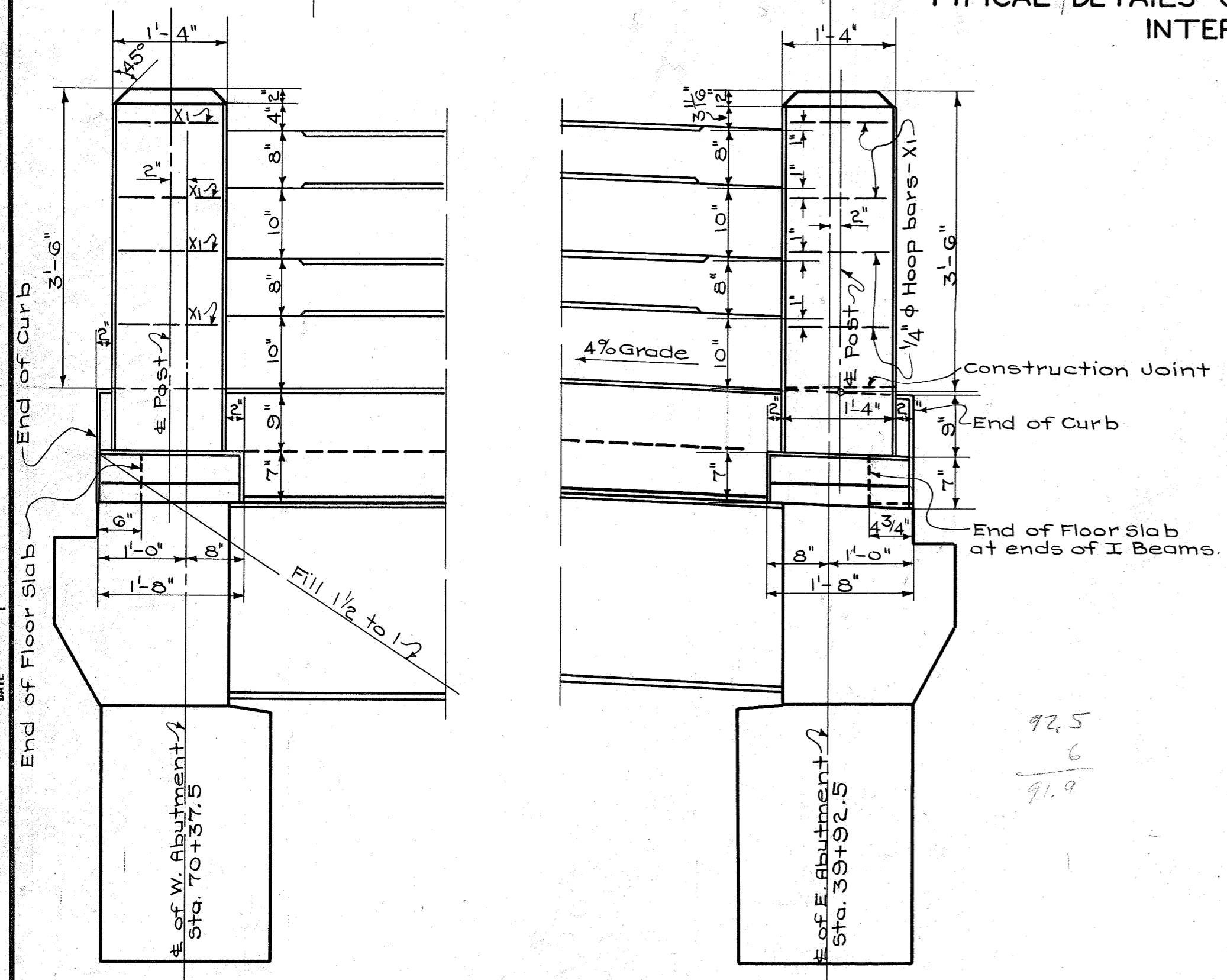
TYPICAL DETAILS OF CONCRETE HANDRAIL AT INTERMEDIATE POSTS



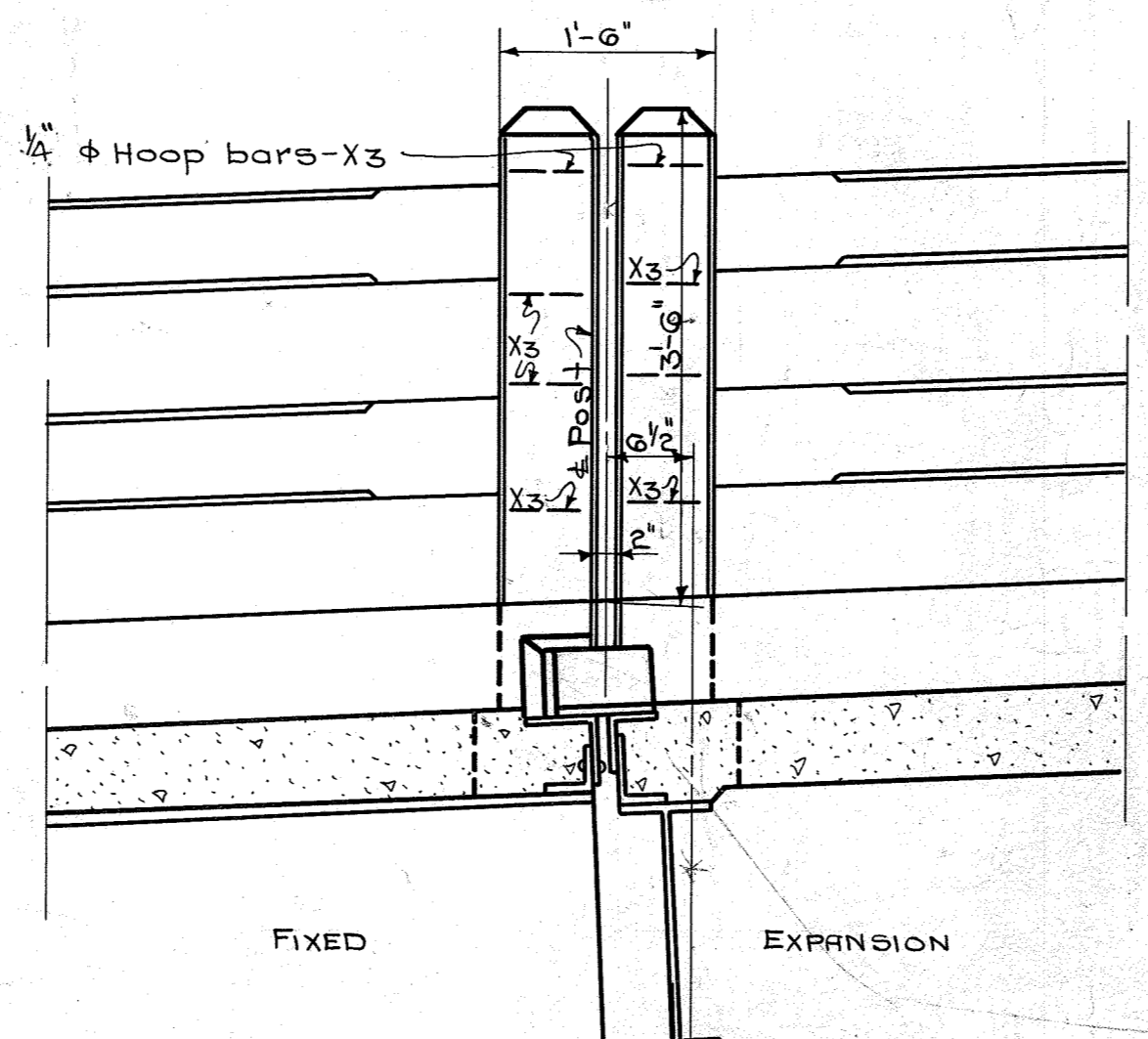
TYPICAL DETAILS OF CONCRETE HANDRAIL AT FIXED ENDS OF APPROACH SPANS



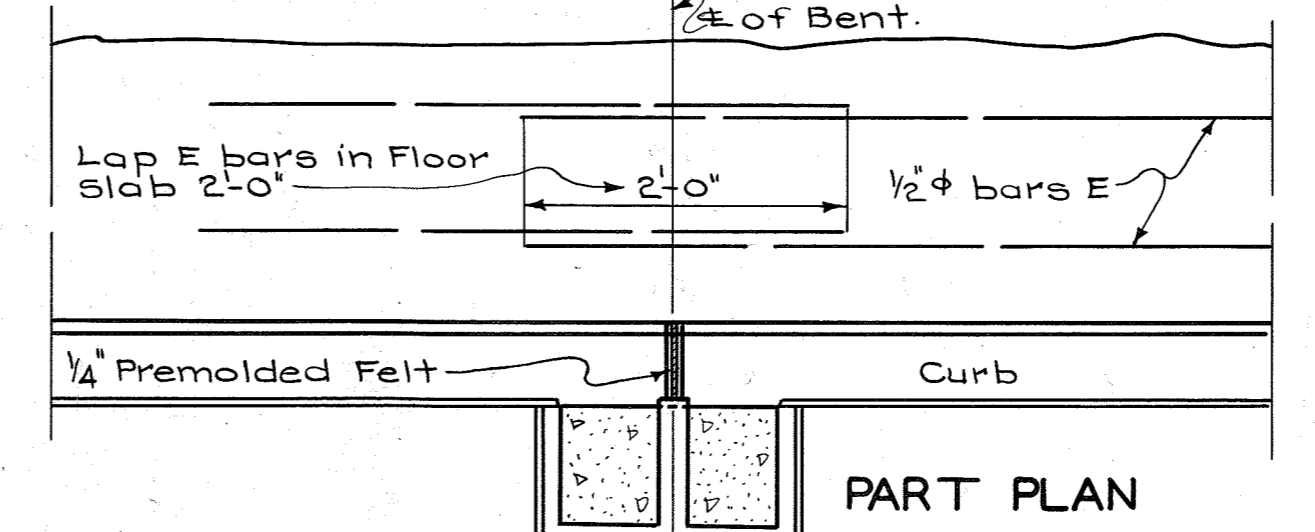
TYPICAL DETAILS OF CONCRETE HANDRAIL AT EXPANSION ENDS OF APPROACH SPANS



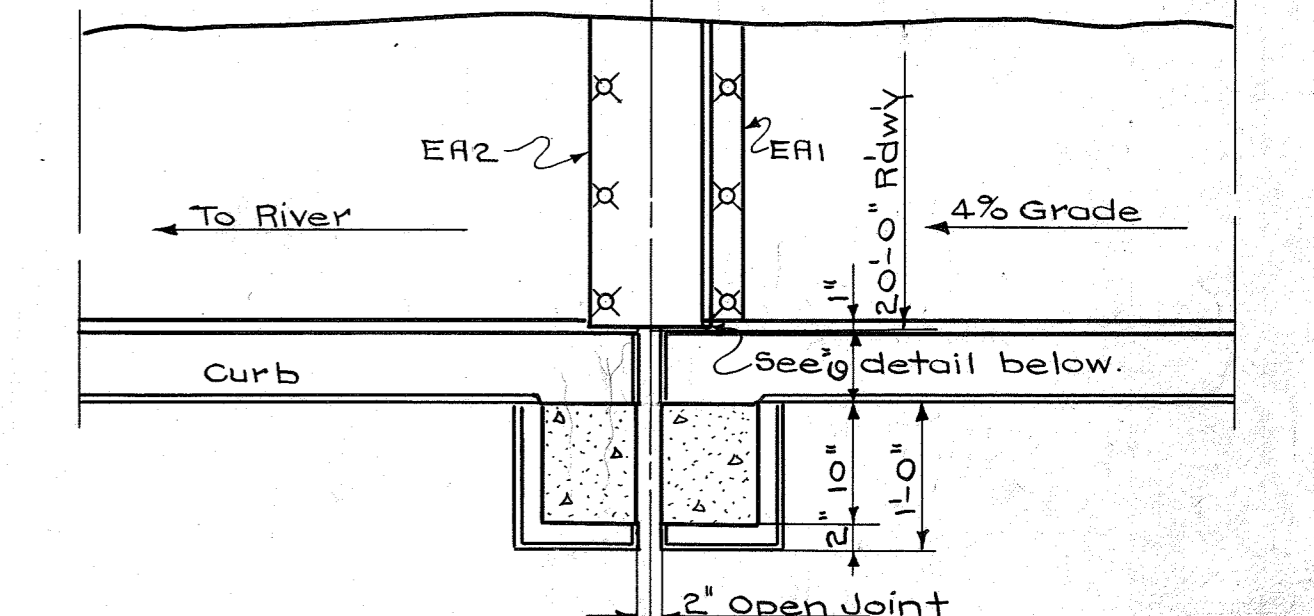
HANDRAIL DETAILS



TYPICAL DETAILS OF CONCRETE HANDRAIL AT PIERS 1 & 5

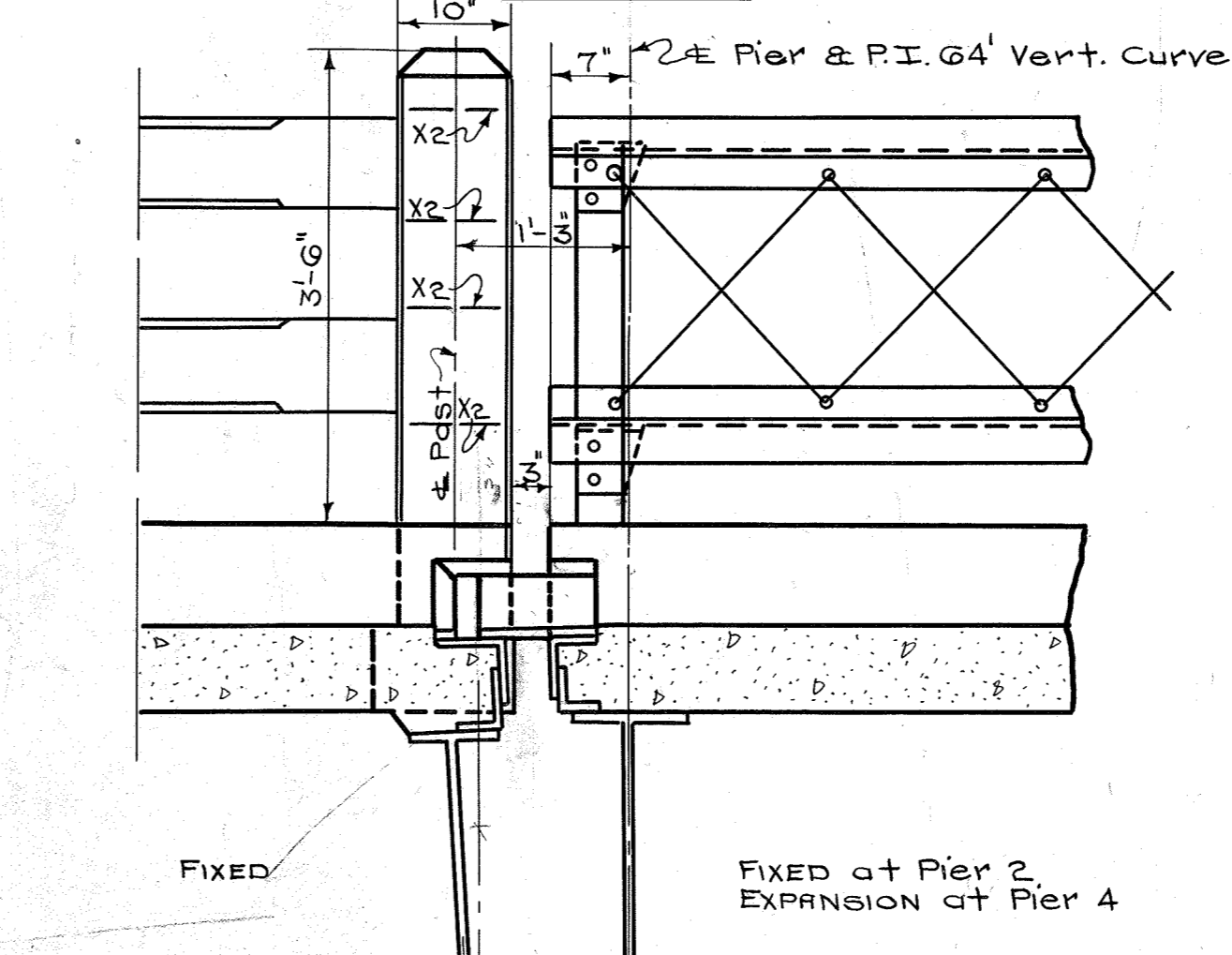


PART PLAN

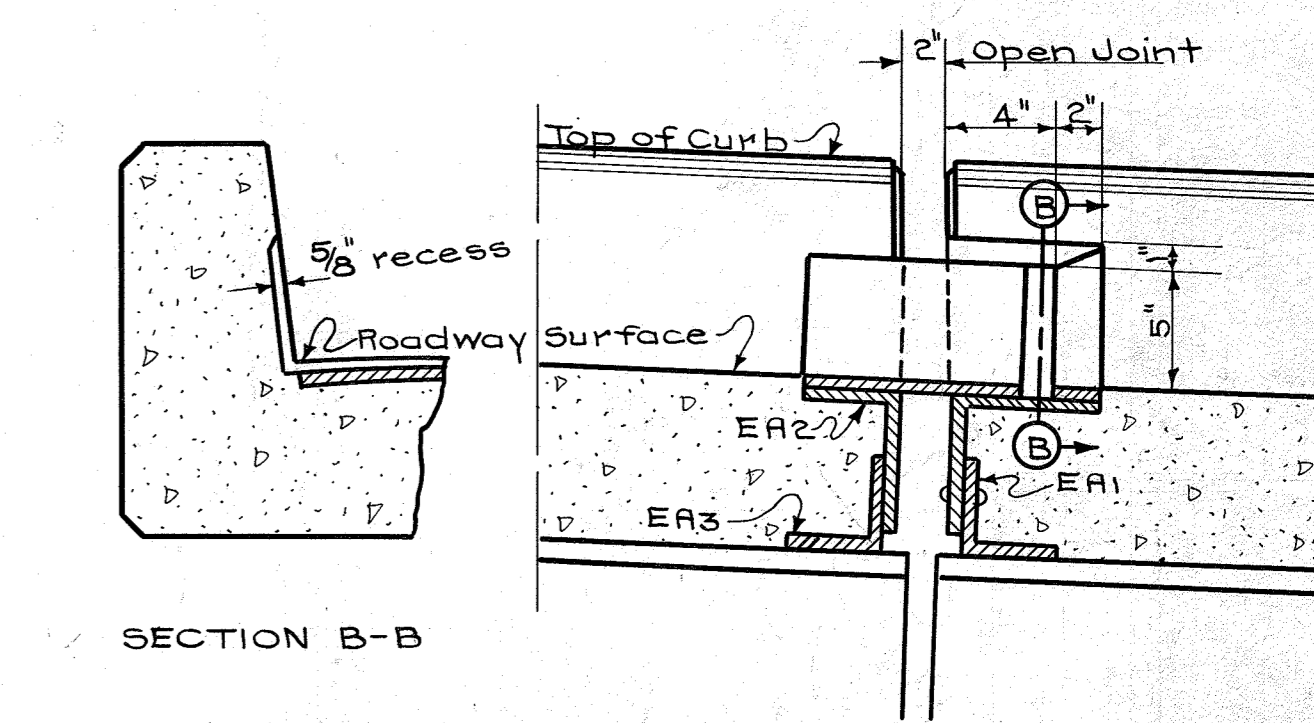


PART PLAN

For Location of Expansion Angles see Sheets E1 and E2 of Approved Shop Plans.



TYPICAL DETAILS OF CONCRETE HANDRAIL AT PIERS 2 & 4



DETAILS OF RECESS IN CURB FOR EXPANSION PLATE

WEST ABUTMENT - BENT #48 EAST ABUTMENT - BENT No. 1

For reinforcement in slab, curbs, rails and posts see sheets 13 & 16. Only additional bars X1, X2 and X3 shown on this sheet. Construct all concrete rail posts vertical.

STATION	CROWN ELEV.	D.L. DEF.	TOTAL
371.40	0	371.40	371.40
371.47	.003	371.47	371.47
371.48	.01	371.49	371.49
371.51	.03	371.54	371.54
371.55	.05	371.60	371.60
371.57	.0625	371.63	371.63
371.60	.05	371.65	371.65
371.66	.03	371.69	371.69
371.73	.01	371.74	371.74
371.82	.003	371.82	371.82
371.91	0	371.91	371.91
372.02	.003	372.02	372.02
372.13	.01	372.14	372.14
372.26	.03	372.29	372.29
372.40	.05	372.45	372.45
372.47	.0625	372.53	372.53
372.55	.05	372.60	372.60
372.71	.03	372.74	372.74
372.89	.01	372.89	372.89
373.07	.003	373.07	373.07
373.26	0	373.26	373.26

92.5
6
91.9

Dwg #4505 sh 15

CUMBERLAND RIVER TOLL BRIDGE AT CANTON

COMMONWEALTH OF KENTUCKY

STATE HIGHWAY DEPARTMENT
FRANKFORT
COUNTY OF

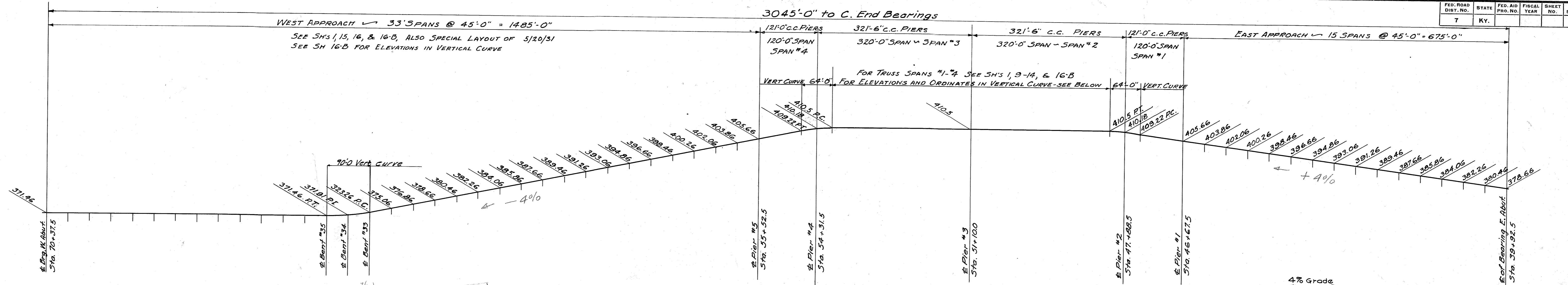
TRIGG

CUMBERLAND RIVER BRIDGE AT CANTON ROAD

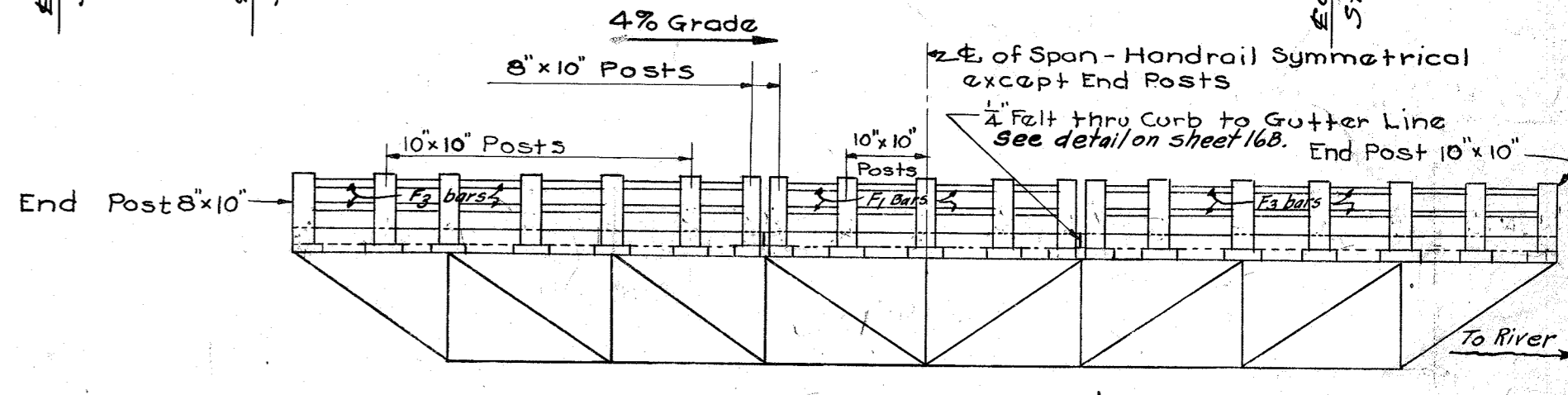
STATION PROJECT NO.

SUBMITTED BY: _____ BRIDGE ENGR. DRAWING INDEX

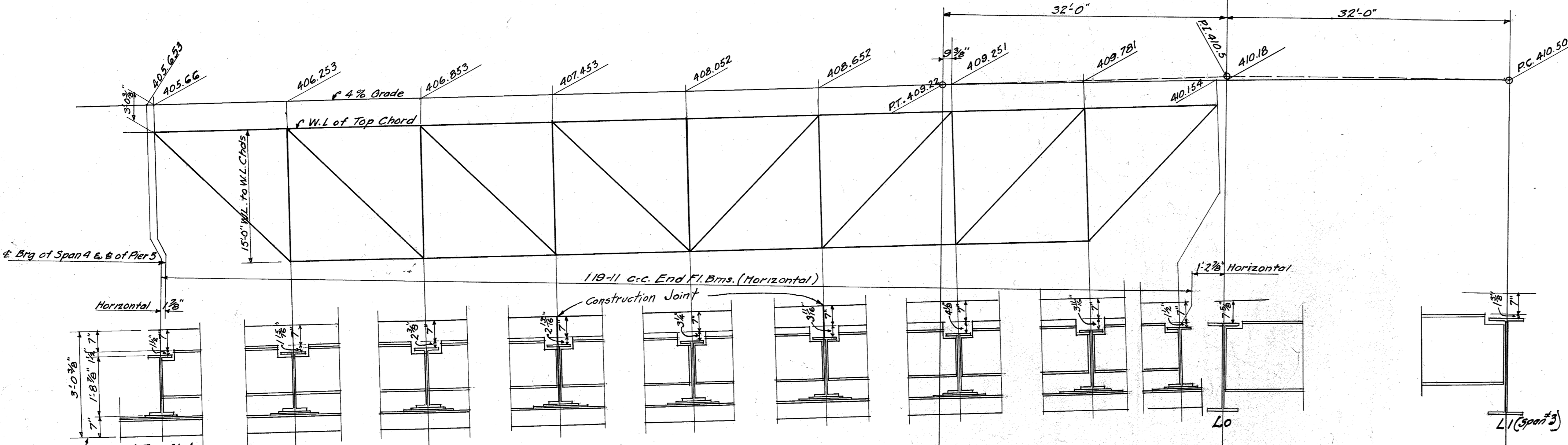
APPROVED BY: _____ CHIEF ENGR. NO. 4505



PROFILE OF ENTIRE BRIDGE ON $\&$ OF ROADWAY



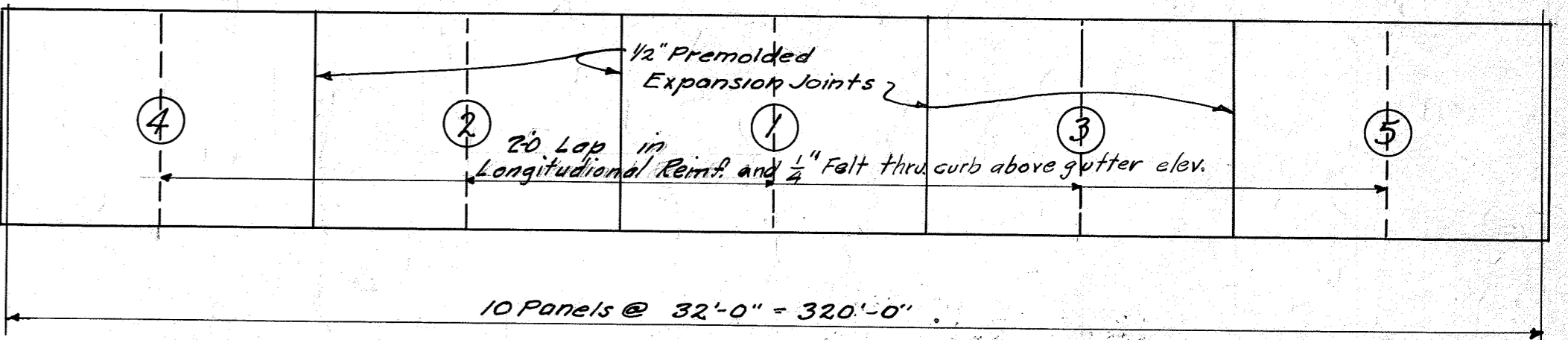
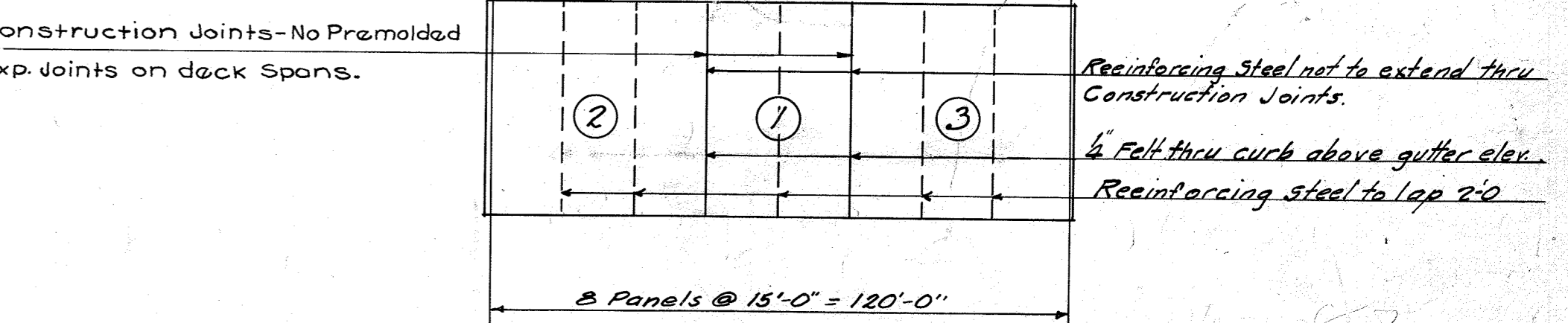
SIDE ELEVATION - 120' DECK SPANS



SLAB ELEVATIONS AND ORDINATES AT PANEL PTS, SPAN #4 AND END OF SPAN #3
SPAN #1 AND VERTICAL CURVE AT PIER #2 ARE OPPOSITE HAND

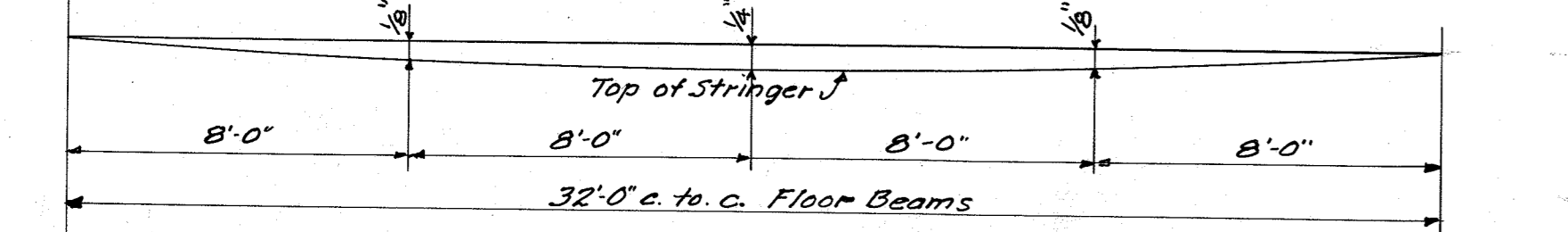
Note - All elevations and ordinates given are at $\&$ of Roadway. Slab elevations at gutter are 1/2" lower. At L.O. of 320'-0" Span the top flg. of Fl. Bm. will cut 3/8" into the T'slab, but stringers are dropped to keep tops flush with both of slab at end.

Total - Finished Elev. + D.L. Deflection of Strs. = Form El.	408.22	408.25	408.44	408.65	408.73	408.95	409.03	410.28	410.32	410.428	410.470	410.496	410.499	410.5
D.L. Deflection of Strs.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.009 (3/32)	0.013 (5/64)	0.08 (7/8)	0.05 (3/16)	0.01 (1/8)	0.0	0.0
Finished Crown Elev.	408.22	408.25	408.44	408.65	408.73	408.95	409.03	410.271	410.313	410.348	410.423	410.486	410.499	410.5



PLAN VIEWS OF FLOOR SLABS OF SPANS #1-#4, SHOWING LOCATION OF EXP. JOINTS AND ORDER OF POURING
Four sections of slab in order shown (1) to (3) or section (3) may be poured before section (2) and sect. (3) before sect. (2)
Premolded Expansion Joints to extend entirely through slab & curb on 320'-0" Span.
Cast Iron drains to be put in curb at $\&$ of all panels, both sides of Roadway.

GENERAL NOTE - All Elevations given are based on Construction Base Elevation, and no allowance has been made for camber in trusses. For setting slab form-work, if elevations are used, establish a base elevation on a floor-beam near curve, and run preliminary levels to correct for camber. Either ordinates or elevations given may be used for setting forms. SHEET 16-C of 16



ORDINATES AND ELEVATIONS ON $\&$ ROADWAY FOR VERT. CURVE AT PIER #4
VERT. CURVE AT PIER #2 IS EXACT OPPOSITE HAND
Note - D.L. Deflection ordinates not given for 120' span, because stringer deflection is negligible.

Dwg # 4505
sh 16

COMMONWEALTH OF KENTUCKY
STATE HIGHWAY DEPARTMENT
FRANKFORT
COUNTY OF
TRIGG
CUMBERLAND RIVER BRIDGE AT
CANTON
ROAD
STATION PROJECT NO

SUBMITTED BY BRIDGE ENGR. DRAWING INDEX
APPROVED BY STATE HIGHWAY ENGR. No. 4-505

DRAWN BY: E. J. Hatcher
 CHECKED BY: L. C. Cammack
 DATE: 6/19/31
 REVISIONS: 1
 DATE: 7-16-31
 SHEET NO. 16-C OF 16

BILL OF REINFORCEMENT — FLOOR SLAB & HANDRAIL

EAST APPROACH - 15 - 45'-0" Spans.

ITEM	MARK	TYPE	No.	SIZE	LENGTH		LOCATION	A	
					Ft.	In.		Ft.	In.
1	A	Str.	680	1/2" □	20	9	Bottom of Floor Slab	-	-
2	C	1	680	"	21	9	Top " " "	-	-
3	D	1	680	"	21	9	Bottom " " "	-	-
4	B	2	680	"	22	2	Slab Long. B1 to B2	-	-
5	E1	Str.	33	1/2" φ	4.5	3	Curb " " "	-	-
6	E2	"	4	"	4.5	8	Slab " " B2 " B3	-	-
7	E3	"	33	"	4.4	6	Slab " " B3 " B15	-	-
8	E4	"	396	"	4.4	10	Curbs " " B2 " B15	-	-
9	E5	"	52	"	4.4	7 1/2	Slab and Curb Long. B15 to P1	-	-
10	E6	"	37	"	4.4	0	Precast Rails B15 to P1	7	2
11	F1	3	4.8	3/4" φ	7	8	" " B1 to B15	7	3
12	F2	3	672	"	7	9	10'x10' Posts into Curb	0	7 1/2
13	U1	4	1.50	1/2" φ	3	4 1/2	10'x8' " " "	0	5 1/2
14	U2	4	58	"	3	2 1/2	10'x16' " " "	1	1 1/2
15	U3	4	2	"	3	10 1/2	All posts-vertical	4	2
16	L1	5	420	1/2" □	6	8	" " " "	4	4
17	L2	5	420	"	6	10	10'x16' Posts-Hoops	1	1 1/2
18	X1	6	8	1/4" φ	4	0	10'x10' " " "	0	7 1/2
19	X2	6	600	"	3	0	10'x8' " " "	0	5 1/2
20	X3	6	232	"	2	8			
Total Reinforcement-East Approach-80,880 lbs.									

WEST APPROACH - 33 - 45'-0" Spans.

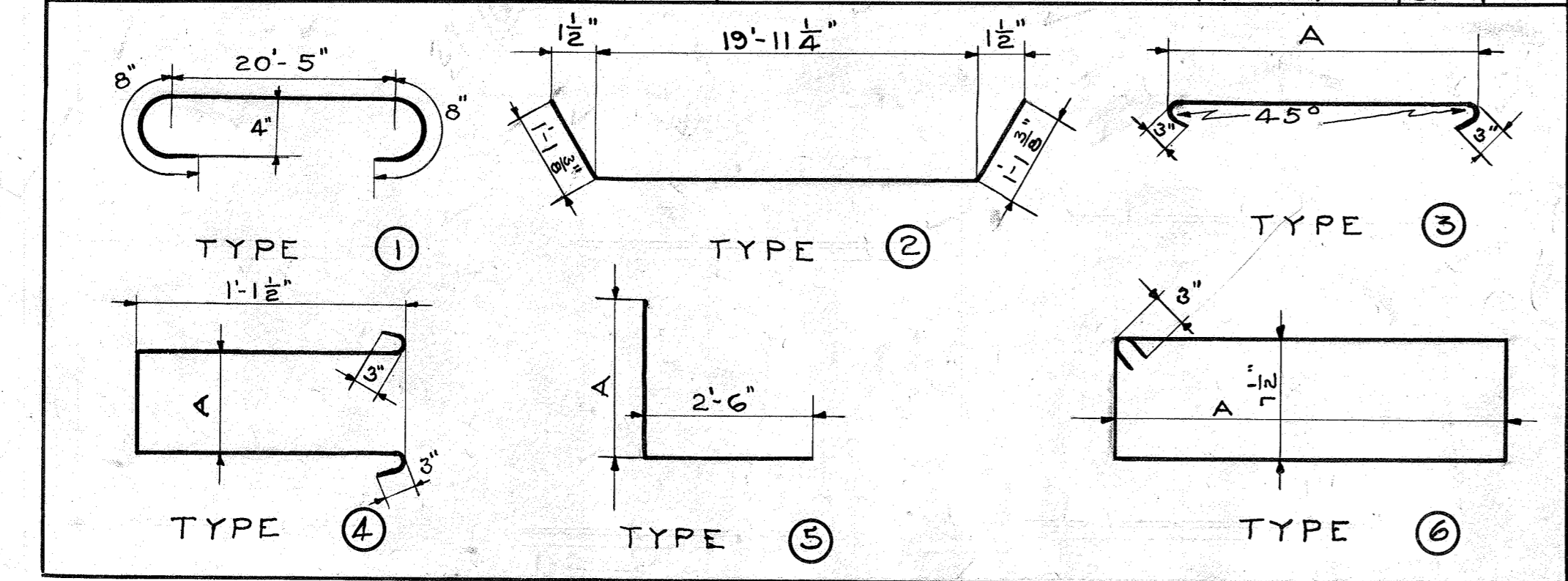
1	A	Str.	1495	1/2" □	20	9	Bottom of Floor Slab	-	-
2	C	1	1495	"	21	9	Top " " "	-	-
3	D	1	1495	"	21	9	Bottom " " "	-	-
4	B	2	1495	"	22	2	Slab and Curb Long. P5 to B16	-	-
5	E6	Str.	37	1/2" φ	4.4	0	Slab Long. B16 to B46	-	-
6	E4	"	990	"	4.5	10	Curb " " B16 to B47	-	-
7	E5	"	124	"	4.4	7 1/2	Slab " " B46 to B47	-	-
8	E3	"	33	"	4.4	6	Slab " " B47 to B48	-	-
9	E7	"	33	"	4.5	1	Curb " " B47 to B48	-	-
10	E2	"	4	"	4.5	8	Precast rails P5 to B16	7	2
11	F1	3	4.8	3/4" φ	7	8	" " B16 to B48	7	3
12	F2	3	1536	"	7	9	10'x10' Posts into Curbs	0	7 1/2
13	U1	4	330	1/2" φ	3	4 1/2	10'x8' " " "	0	5 1/2
14	U2	4	130	"	3	2 1/2	10'x16' " " "	1	1 1/2
15	U3	4	2	"	3	10 1/2	All Posts Vertical	4	2
16	L1	5	924	1/2" □	6	8	" " " "	4	4
17	L2	5	924	"	6	10	10'x16' Posts-Hoops	1	1 1/2
18	X1	6	8	1/4" φ	4	0	10'x10' " " "	0	7 1/2
19	X2	6	1320	"	3	0	10'x8' " " "	0	5 1/2
20	X3	6	520	"	2	8			
Total Reinforcement-West Approach-177,970 lbs.									

2 - 320'-0" STEEL SPANS

1	A	Str.	644	1/2" □	20	9	Bottom of Floor Slab	-	-
2	B	2	644	"	22	2	Top " " "	-	-
3	C	1	644	"	21	9	Bottom " " "	-	-
4	D	1	644	"	21	9	Slab-End Panels at P2 & P4	-	-
5	E8	Str.	66	1/2" φ	3.3	5	" " " P3	-	-
5A	E9	"	66	"	3.4	2	Intermediate Panels	-	-
6	E10	"	132	"	3.2	11	Curbs-End Panels at P2 & P4	-	-
7	E11	"	396	"	3.2	10	" " " P3	-	-
8	E12	"	12	"	3.2	5	Intermediate Panels	-	-
8A	E13	"	12	"	3.3	2		-	-
9	E14	"	96	"	3.1	10		-	-
Total Reinforcement Two 320' Spans-64,440 lbs.									

2 - 120'-0" STEEL SPANS

1	A	Str.	242	1/2" □	20	9	Bottom of Floor Slab	-	-
2	B	2	242	"	22	2	Top " " "	-	-
3	C	1	242	"	21	9	Bottom " " "	-	-
4	D	1	242	"	21	9	Slab Long. End Panels	-	-
5	E15	Str.	132	1/2" φ	4.5	2	" " Middle Panels	-	-
6	E16	"	66	"	2.9	10	Curb Long. End " "	-	-
7	E17	"	24	"	4.5	0	" " Middle " "	-	-
8	E18	"	12	"	2.9	10	4 center Panels - (See sheet 16C)	7	2
9	F3	3	192	"	7	9	6 handrail Panels each end of Span.	7	3
10	U1	4	56	1/2" φ	3	4 1/2	10'x10' Posts into curb	0	7 1/2
11	U2	4	20	"	3	2 1/2	10'x8' " " "	0	5 1/2
12	L1	5	152	1/2" □	6	8	All Posts vertical	4	2
13	L2	5	152	"	6	10	" " " "	4	4
14	X2	6	224	1/2" φ	3	0	10'x10' Post Hoops	0	7 1/2
15	X3	6	80	"	2	8	10'x8' " " "	0	5 1/2
Total Reinforcement-Two 120' Spans-29,140 lbs.									



See typewriter sheet from Res Engr. for bill of steel as delivered.
This bill governs on final Payment.

Dwg # 4505

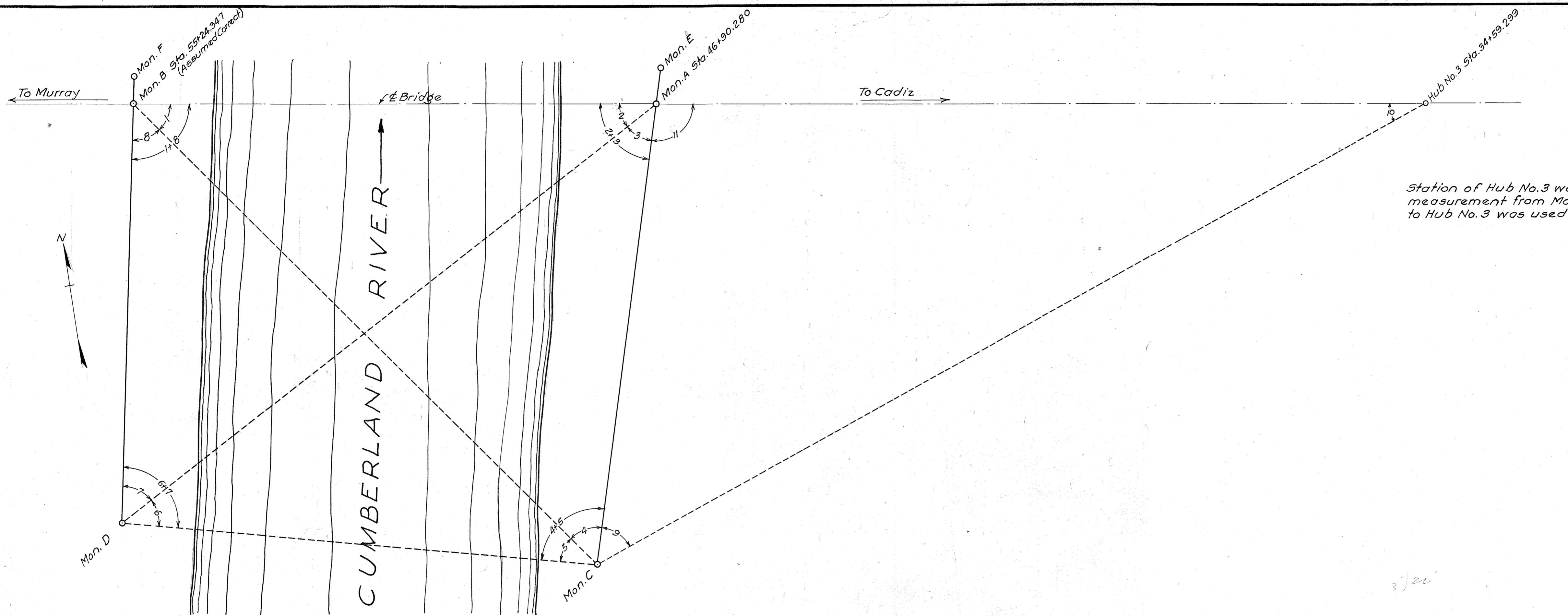
16A

SHEET 16 of 16

COMMONWEALTH OF KENTUCKY
 STATE HIGHWAY DEPARTMENT
 FRANKFORT
 COUNTY OF
TRIGG
 CUMBERLAND RIVER BRIDGE AT
 CANTON
 ROAD

STATION _____ PROJECT NO. _____
 SUBMITTED BY _____ BRIDGE ENGR. DRAWING INDEX
 APPROVED BY _____ CHIEF ENGR. No. 4505

DESIGNED BY W.S.T. DATE 7/13/11
 TRACED BY W.S.T. DATE 7/13/11
 CHECKED BY W.S.T. DATE 7/16/11



Station of Hub No.3 was obtained by direct measurement from Mon. A. Triangulation distance to Hub No.3 was used as a check

Note: Monuments ABCDE&F are 2"x4"x4" oak hubs encased in concrete blocks.

LEVELS ON BASE LINE AC			
Sta.	Rod	d	d ² /2L
C+0+00	7.65		
	2.42	0.029	
Stk-1+00	5.23		
	0.59	0.002	
" 2+00	4.64		
	1.89	0.018	
" 3+00	2.75		
	0.39	0.001	
" 4+00	2.36		
	0.13	0.000	
" 5+00	2.23		
	0.43	0.001	
" 6+00	1.80		
	2.15	0.023	
" 7+00	3.95		
	2.05	0.049	
A+7+43±	6.00		
Total Slope Correction		0.123	

LEVELS ON BASE LINE BD			
Sta.	Rod	d	d ² /2L
B+0+00	0.41		
	3.78	0.071	
Stk-1+00	4.10		
	0.51	0.001	
" 2+00	4.70		
	0.30	0.000	
" 3+00	5.00		
	0.10	0.000	
" 4+00	4.90		
	0.42	0.001	
" 5+00	4.48		
	0.72	0.003	
" 6+00	5.20		
	1.15	0.009	
D+6+70.5±	6.35		
Total Slope Correction		0.085	

ADJUSTMENT OF BASE LINE AC					
Measurement	Temp.	Temp. Correction	Tape Correction	Slope Correction	Corrected Distance
743.118	59°F	-0.043	+0.015	-0.123	742.967
743.136	60 "	-0.038	+0.015	-0.123	742.990
743.129	59 "	-0.043	+0.015	-0.123	742.978
743.144	58 "	-0.048	+0.015	-0.123	742.988
743.131	57 "	-0.053	+0.015	-0.123	742.970
Total					3714.893
Average					742.979

Standard Temperature = 68°F
 Coef. of Exp. of Tape = 0.00000645
 Tape Correction = +0.002' per 100'

ADJUSTMENT OF BASE LINE BD					
Measurement	Temp.	Temp. Correction	Tape Correction	Slope Correction	Corrected Distance
670.505	60°F	-0.035	+0.013	-0.085	670.398
670.495	60 "	-0.035	+0.013	-0.085	670.388
670.505	61 "	-0.030	+0.013	-0.085	670.403
670.500	62 "	-0.026	+0.013	-0.085	670.402
Total					2681.591
Average					670.398

Angle No.	Mean Observed	After Station Adjustment	After Triangle Adjustment	After Side Adj. (Final Angle)
1	44°-54'-50.00"	44°-54'-46.94"	44°-54'-48.98"	44°-54'-49.36"
2	38°-14'-50.00"	38°-14'-49.73"	38°-14'-51.77"	38°-14'-51.29"
3	44°-24'-35.00"	44°-24'-34.73"	44°-24'-33.84"	44°-24'-34.23"
4	52°-25'-43.55"	52°-25'-46.30"	52°-25'-45.41"	52°-25'-45.12"
5	39°-52'-06.25"	39°-52'-07.62"	39°-52'-04.87"	39°-52'-05.32"
6	43°-17'-39.18"	43°-17'-38.63"	43°-17'-35.88"	43°-17'-35.48"
7	50°-22'-17.48"	50°-22'-16.93"	50°-22'-17.12"	50°-22'-17.43"
8	46°-28'-05.00"	46°-28'-01.94"	46°-28'-02.13"	46°-28'-01.77"
118	91°-22'-45.82"	91°-22'-48.88"		
2+3	82°-39'-24.18"	82°-39'-24.46"		
4+5	92°-17'-56.67"	92°-17'-53.92"		
6+7	93°-39'-55.00"	93°-39'-55.55"		

FINAL DISTANCES	
A-C	742.979 Measured
B-D	670.398 "
A-B	834.067 Calculated
C-D	758.202 "
A-E	59.990 Measured
B-F	45.412 "

TRIANGULATION TO H₃
 Angle No. 2 = 38°-14'-51.29"
 " 3 = 44°-24'-34.23"
 "(2+3) = 82°-39'-25.52"
 Mean Obs'd. Adjusted
 Angle No. 9 = 53°-35'-48.33" - 5.16" = 53°-35'-43.17" (Final)
 " 10 = 29°-03'-47.50" - 5.15" = 29°-03'-42.35" (Final)
 " (2+3) = 82°-39'-35.83" 82°-39'-25.52"
 " (2+3) = 82°-39'-25.52" 82°-39'-25.52"
 2/10.31 Error 0.00
 -5.155" Correction to ls No. 9 & 10

Computed Distance - Mon. A to Hub No. 3 = 1231.046'

Note: In the station adjustment for Point C, 1/5 of the error was applied to Angle No. 5 and 2/5 each to Angles No. 4 and No. 4+5. This was done because conditions were not as favorable for sighting point A as for points B & D. In the station adjustment for all other points 1/5 of the error was applied to each angle.

BRIDGE OVER CUMBERLAND RIVER Sheet No. 16-B
 COMMONWEALTH OF KENTUCKY
 STATE HIGHWAY DEPARTMENT
 FRANKFORT
 COUNTY OF
 TRIGG
 MURRAY - CADIZ

TRIANGULATION SYSTEM

Drawing No 4505

16B

KENTUCKY DEPARTMENT OF HIGHWAYS

CUMBERLAND RIVER BRIDGE AT CANTON

TRIGG COUNTY

CADIZ - MURRAY ROAD

GENERAL NOTE

SPECIFICATIONS - Kentucky Department of Highways 1956, with subsequent amendments.
Design Load - Bridge designed for H15-S12-14 loading as specified in A.A.S.H.O. 1957 Edition, except that under Article 1.2.10(1) Wind Loads, the forces applied to all spans for the substructure design are those described under "Gale" (52 lbs. per square foot) and are approximately equal to decreasing the wind velocity from 100 m.p.h. to 50 m.p.h. for Group II loading conditions.

Design Stresses - f_c 3,000 p.s.i.; f_s 18,000 p.s.i.; f_t 18,000 p.s.i.
Foundation Pressures - 20,000 p.s.f. on rock
Concrete - Class "A" Concrete to be used throughout (except in piling).

Reinforcement - Dimensions shown from face of concrete are clear dimensions. Spacing of bars is center to center of bars.

Construction Joints - Construction joints shall be made at locations shown on the plans. Substantial keys shall be provided at all construction joints. Beveled edges - All exposed edges shall be beveled $\frac{1}{4}$ " unless otherwise shown.

Erosion Joint Material, Corner Stone, Toe Stone - The cost of these items to be included in the unit price bid for Class "A" Concrete.

Piling - 14" Precast Concrete Piles shall be used (See Std. Draw. P-2). All piles shall have a minimum penetration of 20 ft. unless solid rock is encountered. Piles shall be driven to refusal or to support a load of 50 tons per pile. Test piles shall be located accurately so that they will act as a part of the permanent piling system.

Anchor Bolts - Anchor bolts shall be set accurately, as shown on the plans and in accordance with the Specifications. Bearing areas to receive superstructure shall be finished smooth and level at the elevations shown on the plans.

Structural Steel - The Lump Sum Bid for Structural Steel shall include all structural steel, bolts, anchor bolts, steel pins, cast iron, and lead plates required to be furnished and all other materials, equipment, labor, falsework, painting, welding, drawings, etc. necessary to complete all alterations to the steel structure as shown on the plans and in accordance with the Specifications or as approved by the Engineer. All structural steel removed from the existing structure and all new steel not remaining in the finished structure shall become the property of the Contractor to remove from the job site and dispose of as he sees fit.

MILL TEST REPORTS - The Contractor shall furnish the Department of Highways with three copies of mill test reports showing that all steel to be used in the finished structure meets the requirements of the specifications.

Record Shop Drawings - A set of line tracings of Approved Drawing of Shop Details shall become the property of the Kentucky Department of Highways when the work is completed. No direct payment will be made for this item. The cost of this work is incidental to the Lump Sum Bid for Structural Steel.

Welding - No direct payment shall be made for welding or welding material. The cost of this work is incidental to the Lump Sum Bid for Structural Steel.
Painting - All existing steel areas where paint is damaged during construction and all new steel shall be painted in accordance with the Specifications. No direct payment will be made for this work. The cost of painting is incidental to the Lump Sum Bid for Structural Steel.

Navigation Facilities - The channel shall be kept open to navigation at all times and temporary navigation shall be provided whenever permanent facilities are out of operation. No direct payment will be made for this item. The cost of this work is incidental to the Lump Sum Bid for Existing the Existing Cumberland River Bridge.

Driving Barges - The Lump Sum Bid for Existing the Existing Cumberland River Bridge shall include the disconnecting, raising and reconnecting of the superstructure; raising the existing steel bents; the removal of portions of the existing concrete abutments, piers, floor and railings; the furnishing of all temporary members, falsework, equipment, materials, labor, etc., necessary to complete the entire operation in a workmanlike manner. This item does not include the specific items of new construction which are to be paid for at the contract unit prices.

The details on these plans are intended to outline and show in some detail the scope of the work to be done, however, the Contractor is responsible for checking details and dimensions in the field, and preparing necessary detail drawing and construction procedures which must be approved by the Engineer before work may proceed.

Slope Protection - Slope protection shall be concrete slope-wall in accordance with Standard Drawing 10.05.
Old Shop Plans - The Department of Highways will furnish to the successful bidder, prints of the following shop detail plans for this old bridge:
 Nashville Bridge Company - Contract 4632 (CS3 Sheets)
 Vincennes Bridge Company - Contract 7374 (15 Sheets)

ITEM	SHEET NO.	CONCRETE		REINFORCEMENT	STRUCTURE EXCAVATION		14" PRECAST R.C. PILING		RAISING EXISTING CUMBERLAND RIVER BRIDGE LUMP SUM	STRUCTURAL STEEL LUMP SUM	SLOPE PROTECTION SQ. YD.
		CU. YD.	LB.		COMMON CU. YD.	S.R. CU. YD.	FURNISH LIN. FT.	DRIVING LIN. FT.			
TITLE SHEET	1										
LAYOUT SHEET	2										
ABUTMENT (BENT NO. 1)	3-4	61.5	12,820		140		220	220			1,275
APPROACH BENT DETAILS	5-6										
ALTERATIONS TO STEEL BENTS	7-8										
BENTS 2-15 - ENCASEMENT	9	343.3	60,800								
BENTS 16-35 - EXTENSION	10	312.6	63,160								
BENTS 34-47 - EXTENSION	11	353.1	59,970								
ABUTMENT (BENT NO. 48)	12-13	82.9	14,150		10		230	230			875
PILING PLAN & RECORD	14										
PIER 1	15	78.2	5,610								
PIER 2	16	325.2	15,930								
PIER 3	17-18	647.8	34,480								
PIER 4	19-20	916.9	84,820	1,150		3,250	3,250				
PIER 5	21-22	377.0	44,860	170		1,800	1,800				
LIFTING STAGES & JACKING METHOD	23-24										
ANCHOR BOLT PLAN	25										
TRUSS ALTERATIONS	26										
FLOOR BEAM & BEARING	27										
NEW FLOOR BEAMS	28										
MISCELLANEOUS	29										
ROADWAY SLAB ALTERATIONS	30-31	80.0	18,370								
TOTALS		3,610.8	417,770	1,470		5,500	5,500	Lump Sum	Lump Sum		2,150

This item is included in the Lump Sum Bid for Existing the Existing Cumberland River Bridge. The cost of this work is incidental to the Lump Sum Bid for Existing the Existing Cumberland River Bridge.

DESIGNED BY: [Name] CHECKED BY: [Name] DATE: [Date]
 REVISED BY: [Name] DATE: [Date]
 TAILED BY: [Name] DATE: [Date]

STANDARD DRAWINGS
 G-51
 9-2
 10.05
 Old Design Drawings
 4505 (20 sheets)

ITEM	NO. REQ'D	SIZE	LOCATION
Copper Strip	2	20'-0" long	At Bents 1 & 48, Between Spans
1/2" Prem. Exp. Jt. Matl.	2	3'-0" x 24'-0"	At Bents 1 & 48, Between Spans
1/2" Prem. Exp. Jt. Matl.	1	1'-6" x 22'-0"	Top of Cap, Bent #48

Note: Quantities shown in Bill of Incidental Materials are approximate only and the Contractor is responsible for furnishing enough material to complete the work in accordance with the plans and specifications.

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 1 OF 31

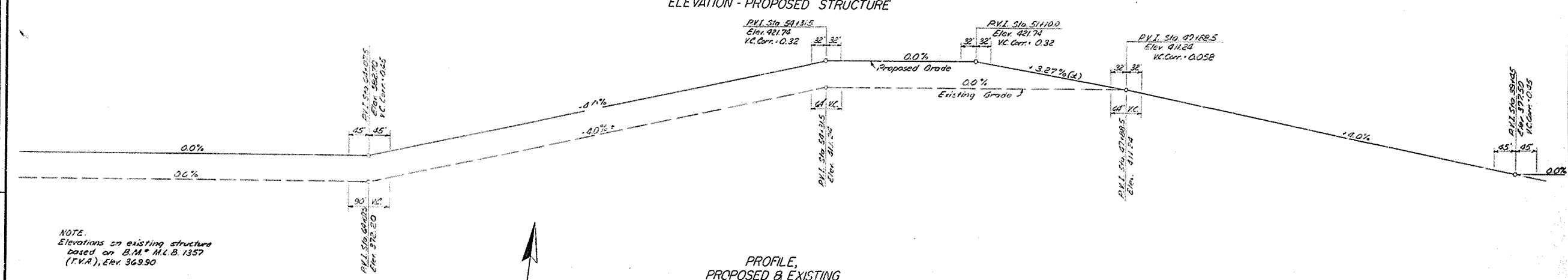
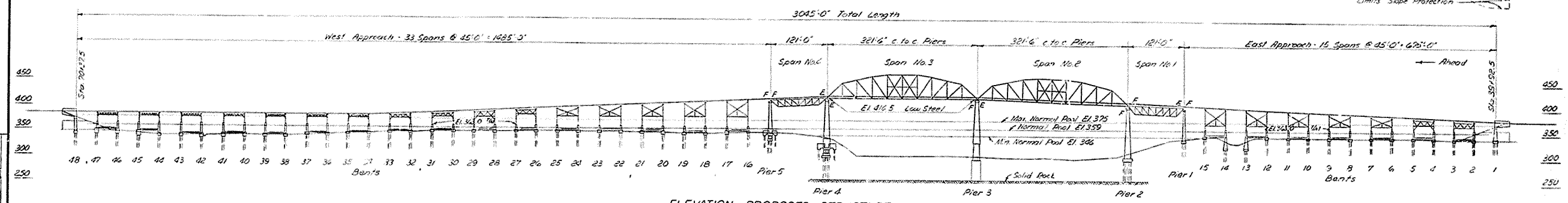
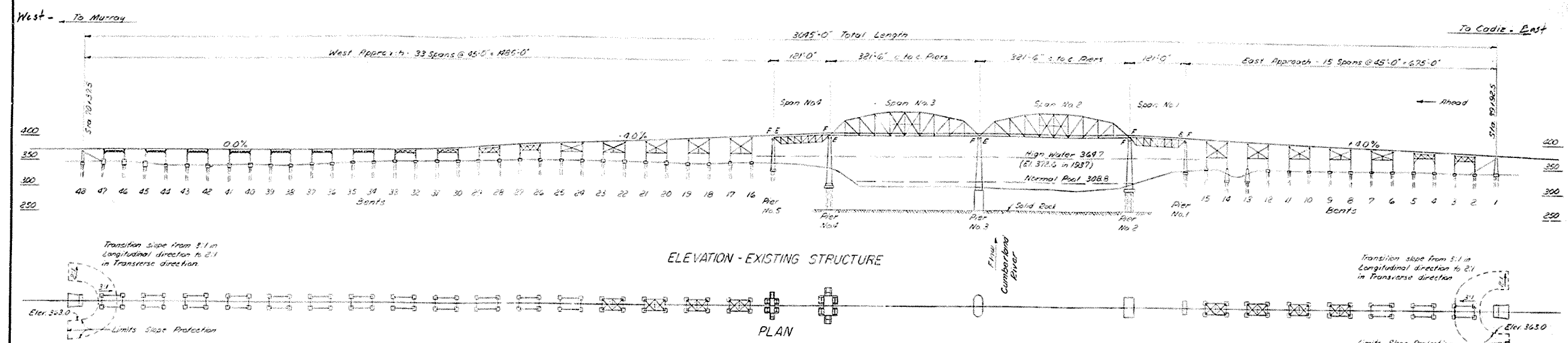
COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
TRIGG
 CADIZ - MURRAY
 ROAD

STATION: _____ BRIDGE NUMBER: _____ PROJECT NO.: _____

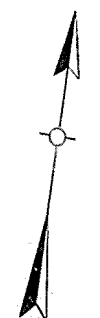
DRAWING NO. 13879

BRIDGE

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



NOTE:
Elevations on existing structure based on B.M. M.C.B. 1357 (T.V.R.), Elev. 369.90



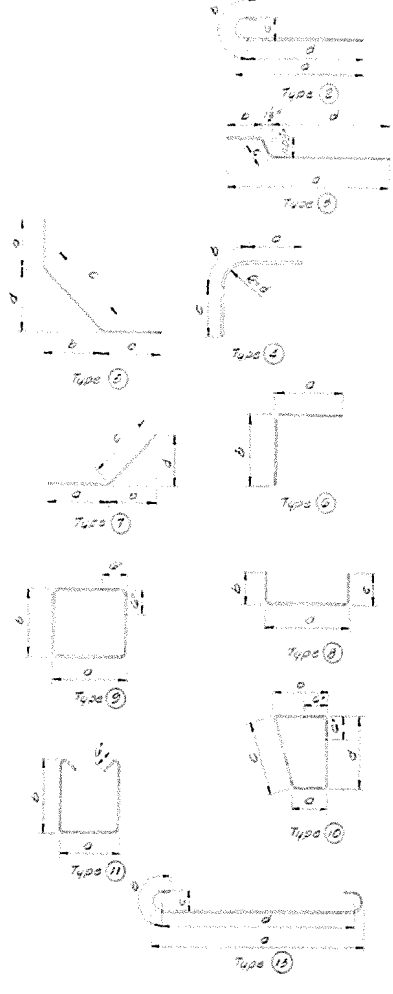
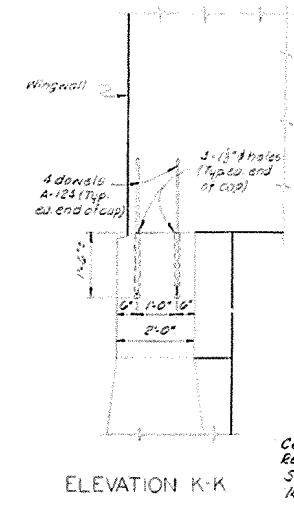
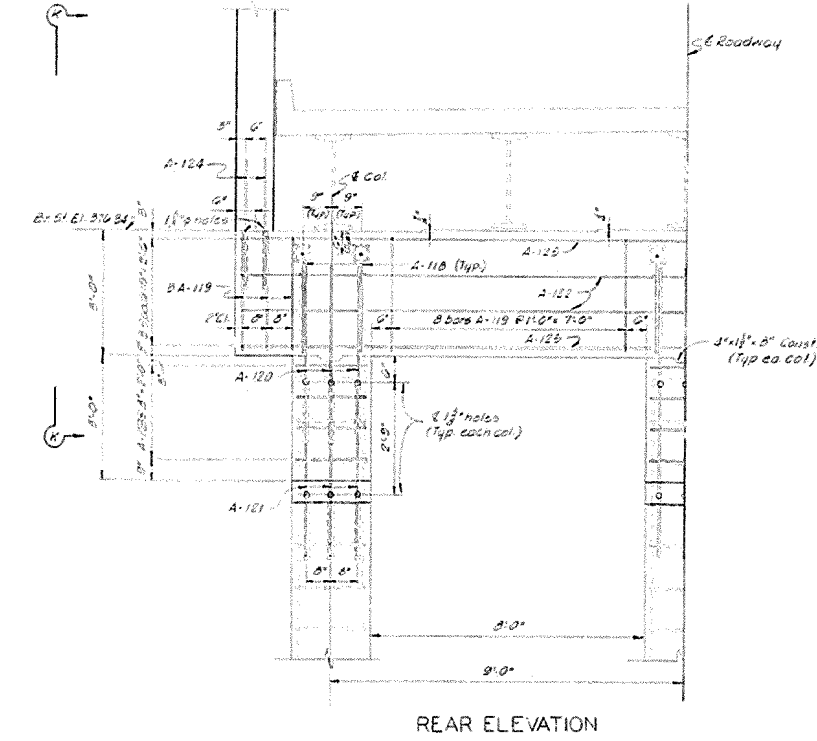
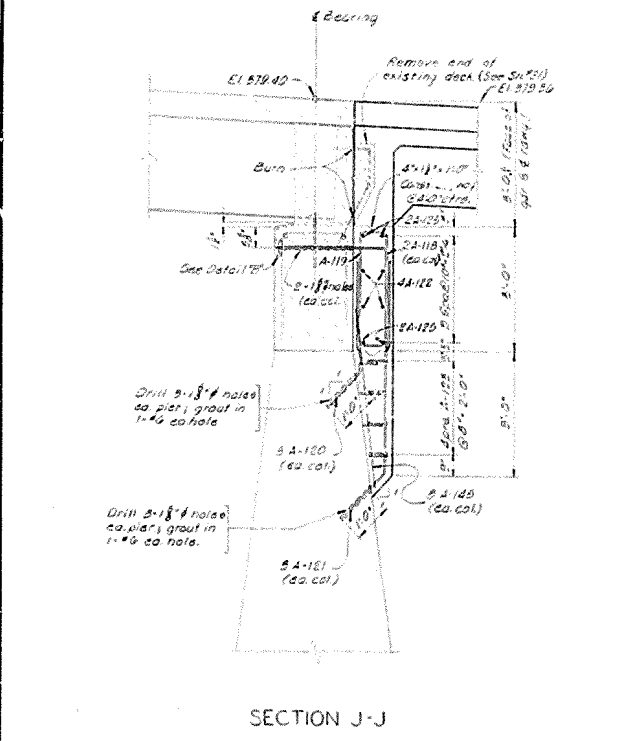
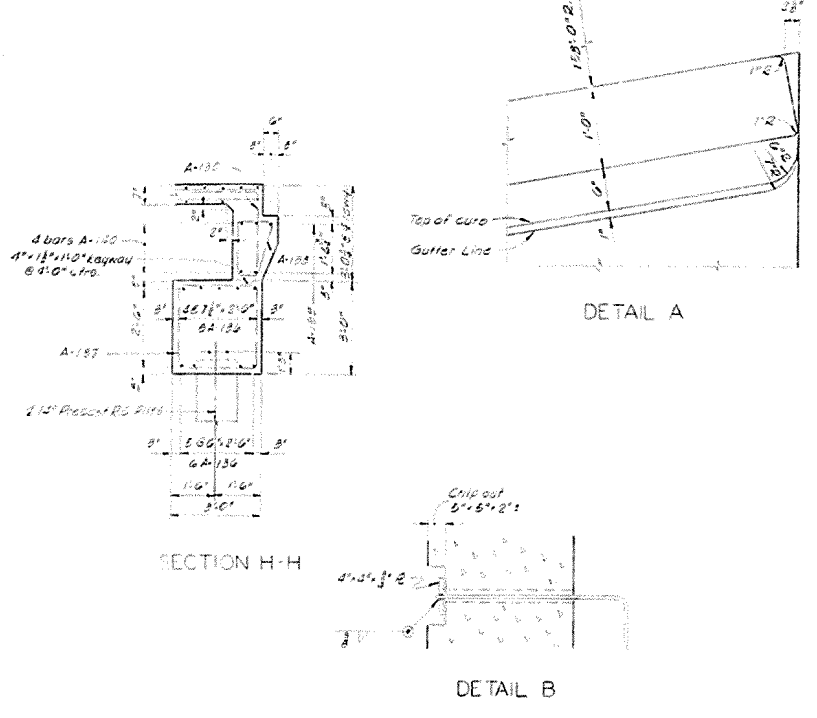
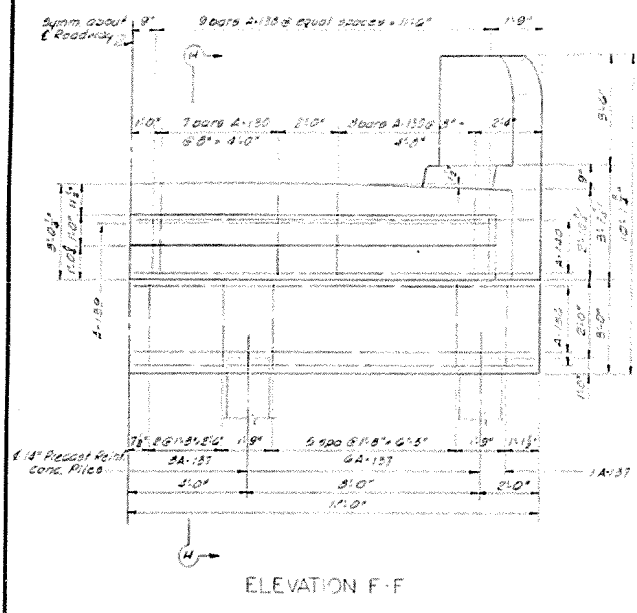
DESIGNED BY: JDD
CHECKED BY: JDD
DATE: 10-27-79
REVISED: 10-27-79

CLIMBERLAND RIVER BRIDGE AT CANTON SHEET 2 OF 31

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
TRIGG
CADIZ - MURRAY
ROAD

STATION: _____ PROJECT NO.: _____
BRIDGE NUMBER: _____ DRAWING NO.: 13879

BRIDGE



Mark	Type	No.	Size	Length	Ft.	In.	Location												
							Ft.	In.	Ft.	In.									
A-101	1	20	8	28	3														
A-102	2	20	8	6															
A-103	2	20	4	9															
A-104	2	20	12	0															
A-105	2	20	12	0															
A-106	2	20	1	10	7														
A-107	2	20	8	13	7														
A-108	2	20	6	23	9														
A-109	4	4	10	0															
A-110	16	4	20	0															
A-111	6	0	20	0															
A-112	2	0	9	0															
A-113	4	9	17	0															
A-114	20	5	20	0															
A-115	12	5	0	11															
A-116	110	5	0	0															
A-117	572	4	5	0	3														
A-118	4	8	4	9															
A-119	9	22	4	7	0														
A-120	7	9	0	3	0														
A-121	7	9	0	7	0														
A-122	572	4	0	22	0														
A-123	8	24	4	2	0														
A-124	572	8	0	3	3														
A-125	572	4	9	23	0														
A-126	4	4	0	10	3														
A-127	572	4	0	20	8														
A-128	572	4	5	20	9														
A-129	572	20	5	20	0														
A-130	6	20	5	4	3														
A-131	6	4	0	8	9														
A-132	5	4	5	0	0														
A-133	8	8	5	20	4														
A-134	572	12	5	20	0														
A-135	572	6	3	20	0														
A-136	572	11	8	27	0														
A-137	9	20	5	11	5														
A-138	10	18	5	0	2														
A-139	572	1	3	24	4														
A-140	572	4	5	27	0														
A-141	11	28	4	0	5														
A-142	13	5	11	32	0														
A-143	12	6	10	23	0														
A-144	12	3	10	23	0														
A-145	572	9	5	0	0														
A-146	13	4	7	30	0														

ESTIMATE OF QUANTITIES

Concrete, Class "A" 61.8 cu yds.

Reinforcing Steel 12,820 lbs.

Structure Excavation Com 140 cu yds.

14" Precast RC Piling 220 Lin. Ft.

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 4 OF 31

COMMONWEALTH OF KENTUCKY

DEPARTMENT OF HIGHWAYS

FRANKFORT

COUNTY OF TRIGG

CADIZ-MURRAY

ROAD PROJECT NO.

STATION BRIDGE NUMBER

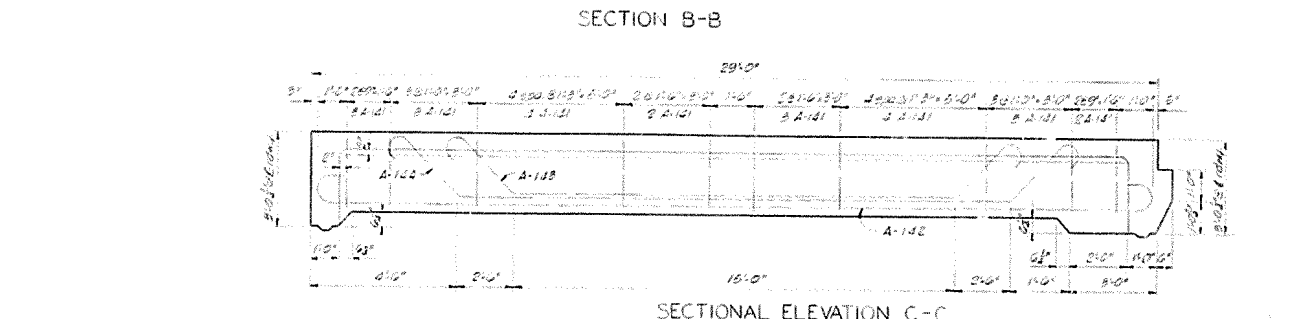
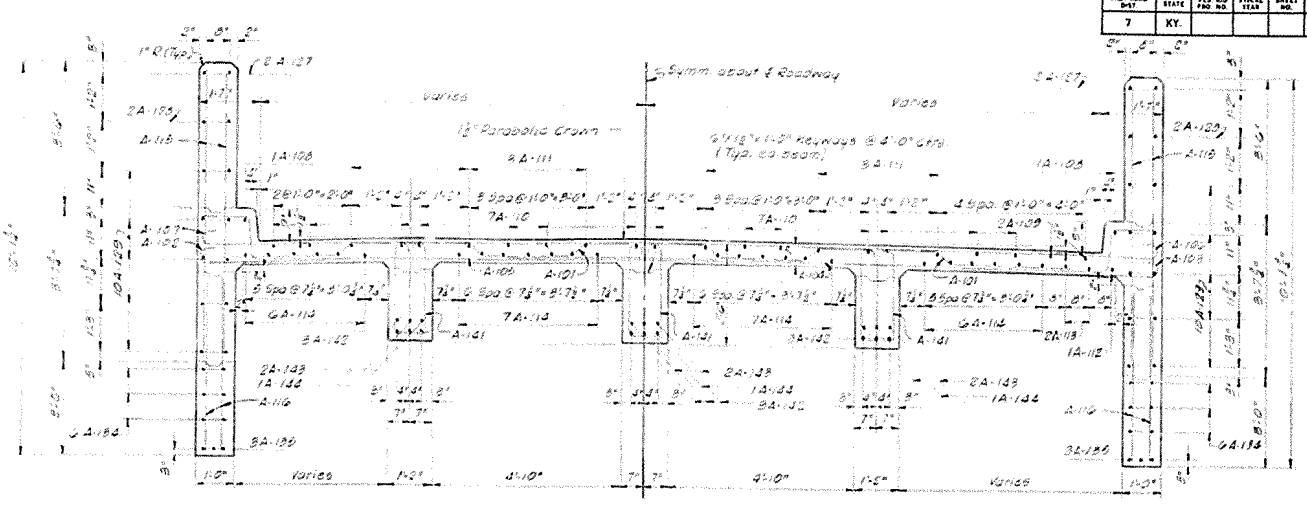
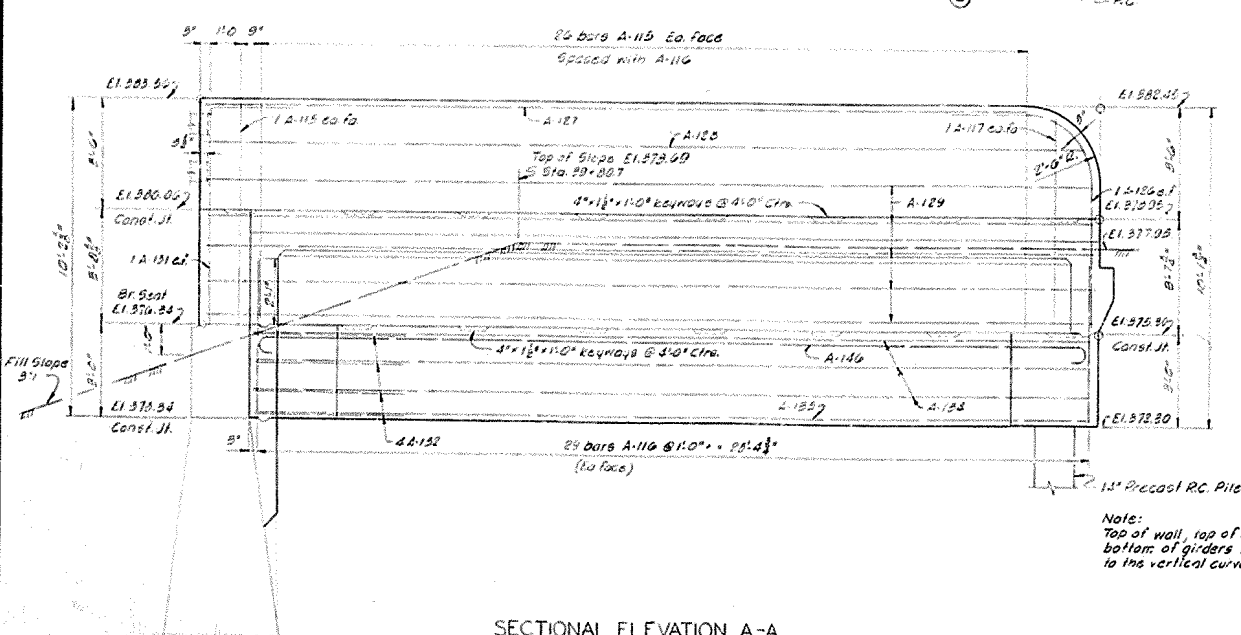
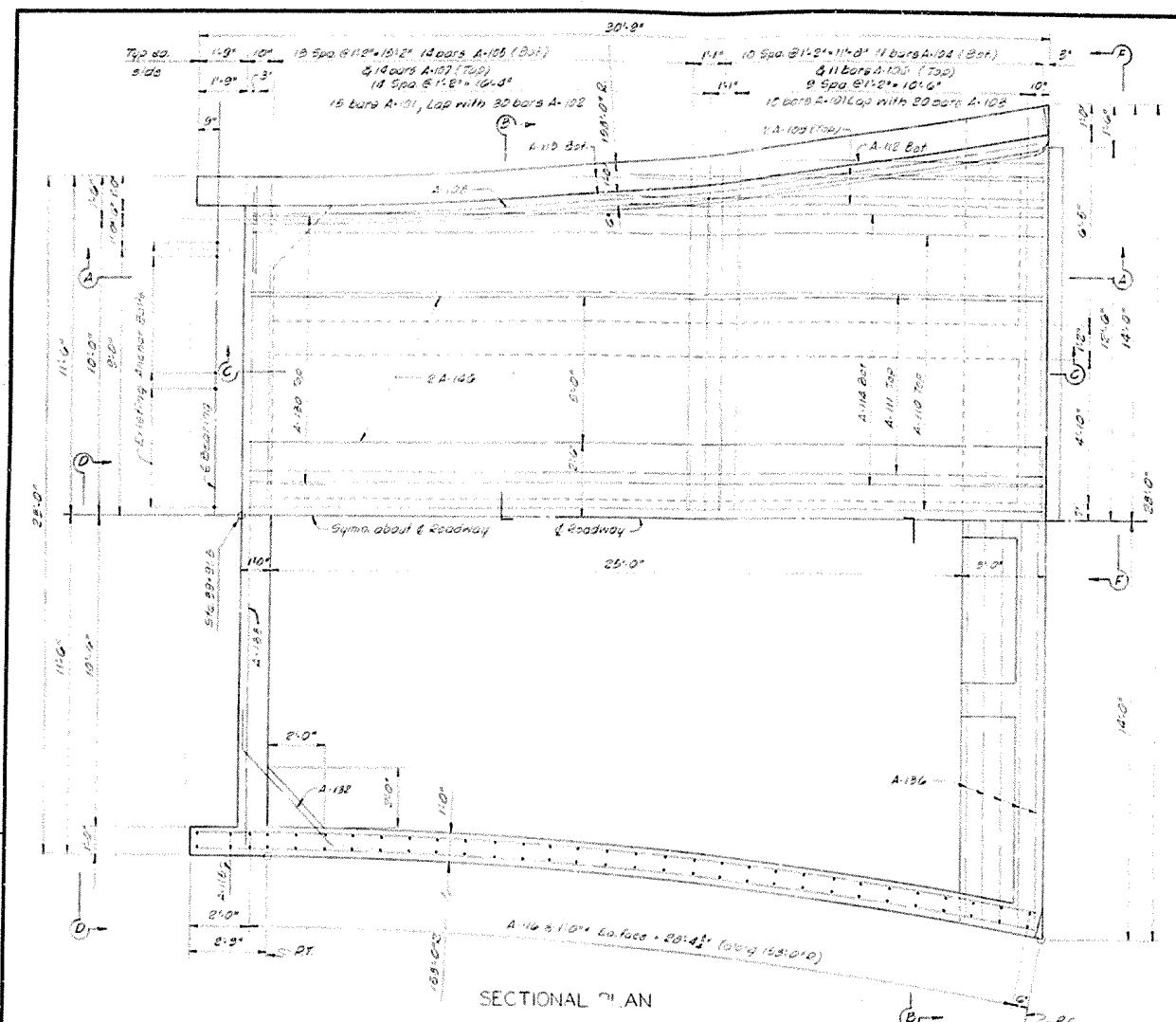
DRAWING INDEX

no. 13874

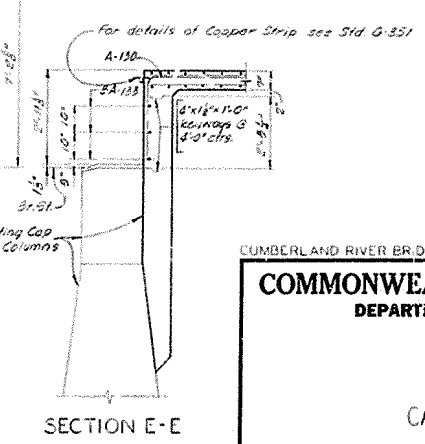
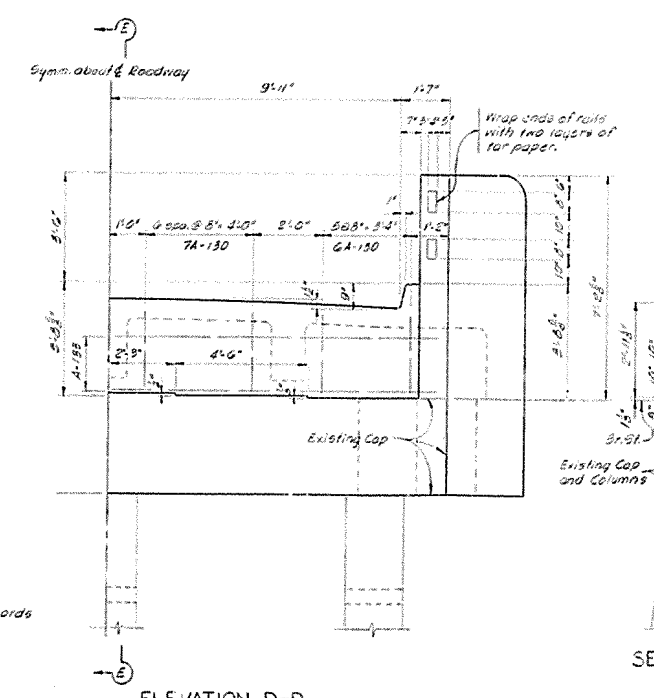
ABUT-BENT NO. 1

BRIDGE

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY				



NOTE:
The deck slab, above the construction joint, may be poured without the use of bottom forms provided a well compacted porous backfill is placed between the girders and carefully formed to the bottom of the slab section. A layer of Sisalcraft (or equal) building paper should be placed over the backfill material. Care should be exercised to insure a 7 inch minimum slab thickness throughout.



Note:
Top of wall, top of curb and bottom of girders follow chords to the vertical curve.

DESIGNED BY: JLR
 CHECKED BY: JLR
 DATE: 11/22/21
 TRAFFIC BY: JLR
 CHECKED BY: JLR
 DATE: 11/22/21
 REVISIONS:

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 3 OF 31

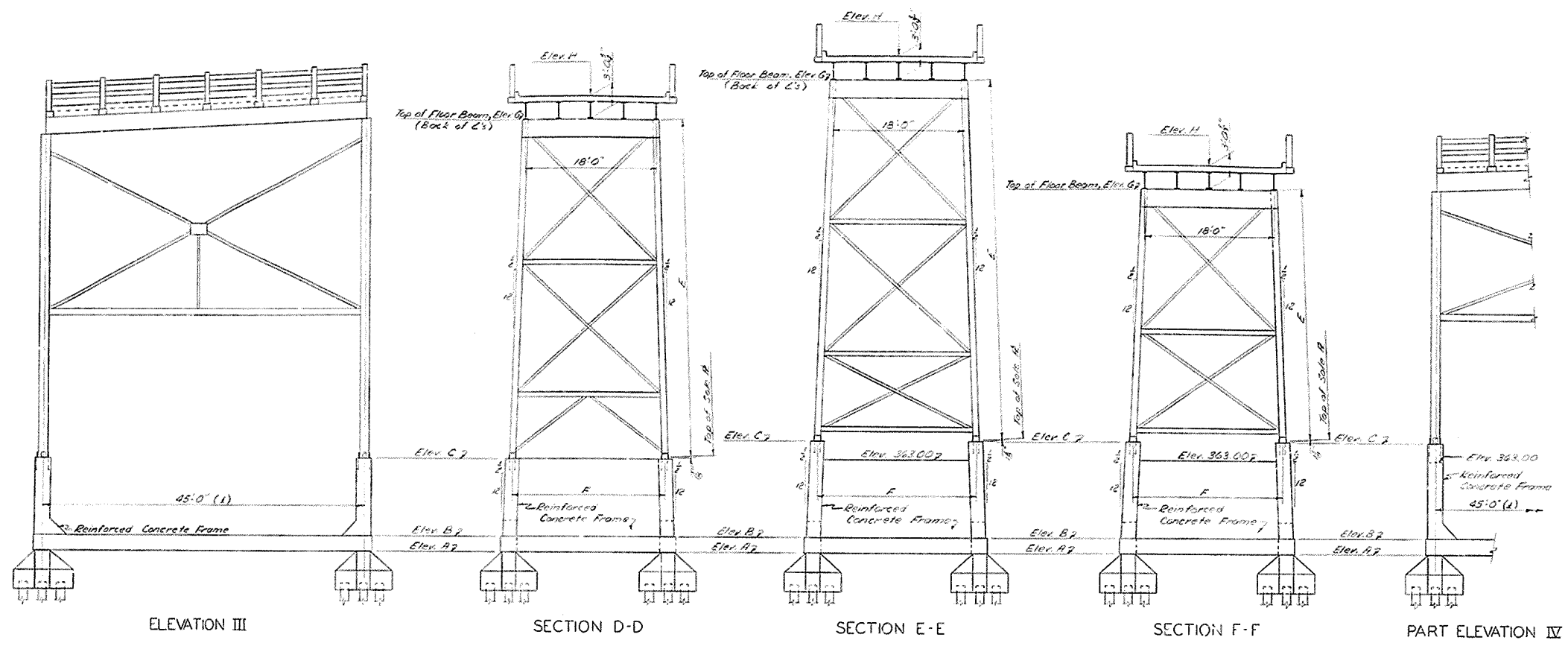
COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF TRIGG
 CADIZ-MURRAY ROAD

STATION: [] PROJECT NO. []
 BRIDGE NUMBER: [] DRAWING INDEX: []
 NO. 13879

ABUT.-BENT NO. 1

BRIDGE

FED. ROAD DIST.	STATE	FISCAL YEAR	PROJECT YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



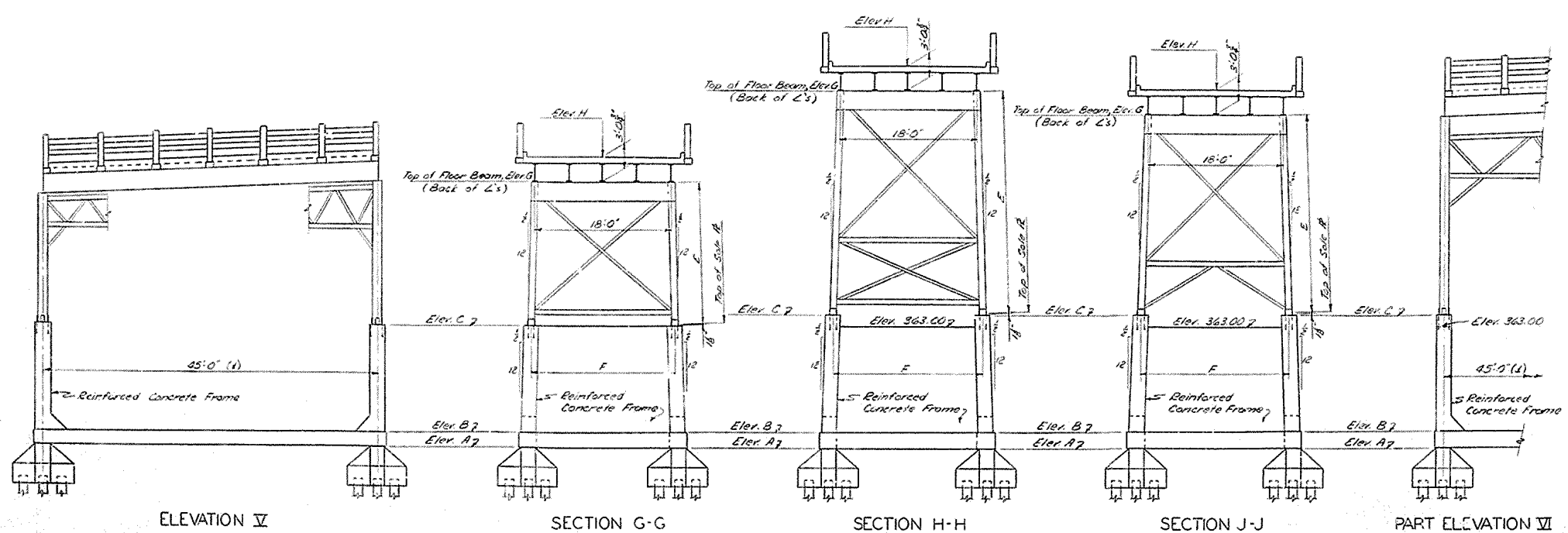
ELEVATION III

SECTION D-D

SECTION E-E

SECTION F-F

PART ELEVATION IV



ELEVATION V

SECTION G-G

SECTION H-H

SECTION J-J

PART ELEVATION VI

Note:
For location of Elevations III, IV, V and VI see table,
Sheet 6
Work this sheet with sheets 6 thru 11 inclusive.

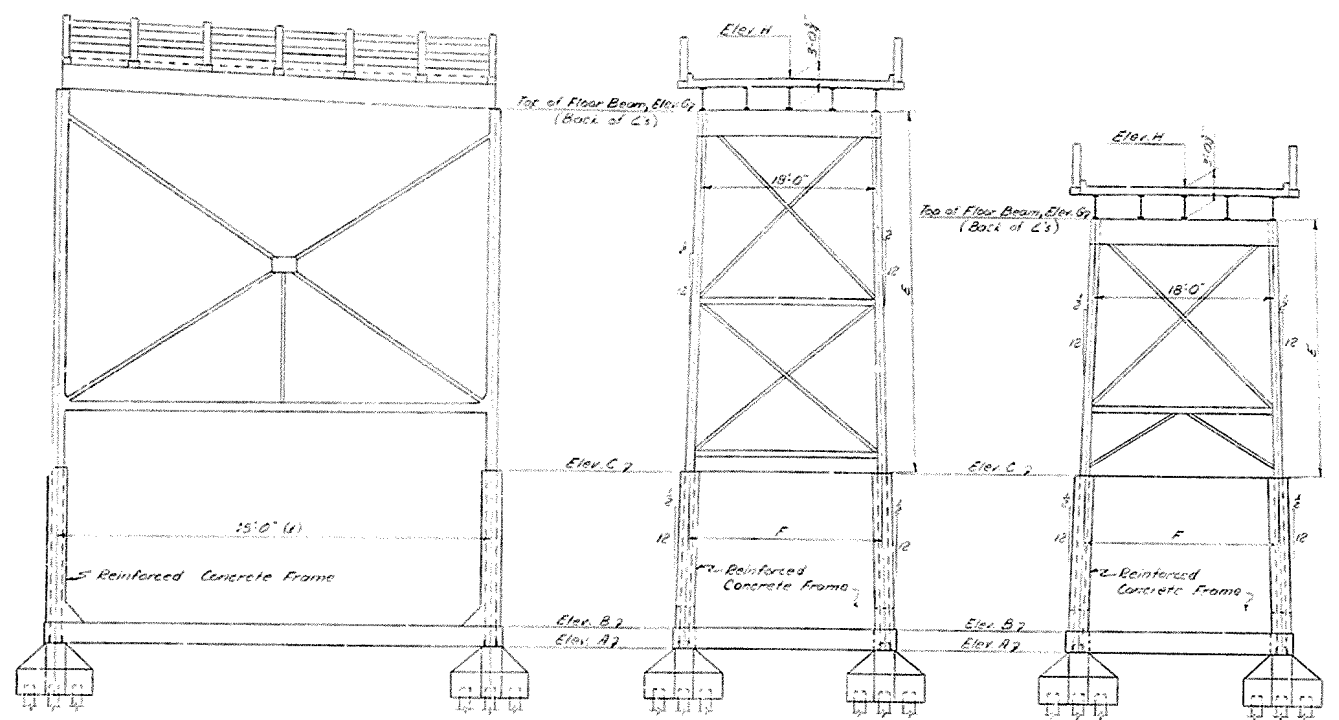
CUMBERLAND RIVER BRIDGE AT CANTON SHEET 15 OF 31

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
 TRIGG
 CADIZ - MURRAY
 ROAD

STATION	PROJECT NO.
BRIDGE NUMBER	DRAWING INDEX
	NO. 13879

APPROACH BENTS

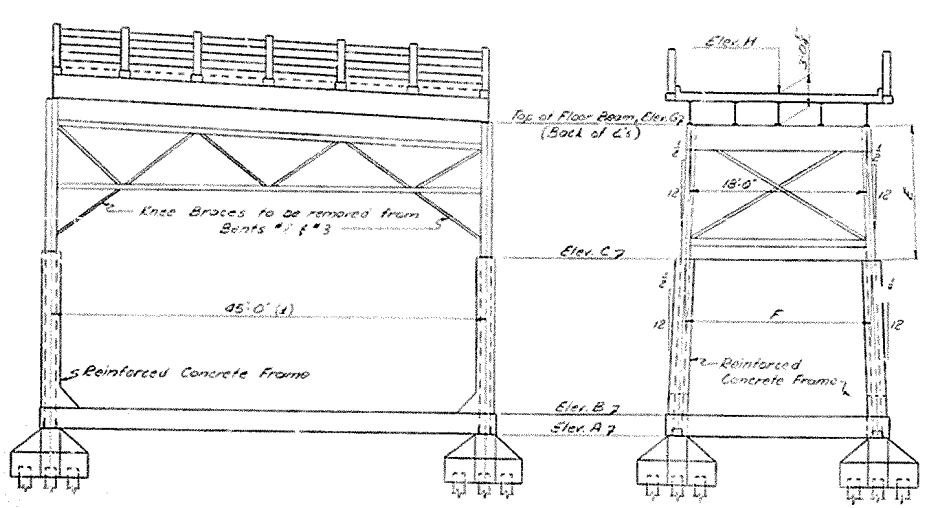
DESIGNED BY: RAO
 CHECKED BY: JDD
 DATE: 11-10-57
 REVISED BY: JDD
 DATE: 11-10-57
 TRACED BY: JDD
 DATE: 11-10-57



ELEVATION I

SECTION A-A

SECTION B-B



ELEVATION II

SECTION C-C

Bent No.	Station	Elevation	Section	A	C	G	H	Length of Cut-off Column	Length of Existing Column	E	F	
<i>East Approach</i>												
2	40+37.5	II	C-C	345.23	363.00	372.21	381.27	0	15'-0 1/2"	19'-3 1/2"		
3	40+82.5		C-C	345.29		380.02	383.08	0		17'-0 1/2"	19'-5"	
4	41+27.5		C-C	346.26		391.82	394.88	0		18'-10 1/2"	19'-6 1/2"	
5	41+72.5	I	C-C	346.27		383.60	386.66	0	20'-7 1/2"	19'-8 1/2"		
6	42+17.5		B-B	346.20		385.40	388.46	0		20'-5 1/2"	19'-10 1/2"	
7	42+62.5	I	B-B	346.26		381.20	380.26	0	24'-2 1/2"	20'-0 1/2"		
8	43+07.5		B-B	346.80		389.03	388.09	0		26'-0 1/2"	20'-2"	
9	43+52.5	I	A-A	346.77		380.83	383.99	0	27'-10 1/2"	20'-3 1/2"		
10	43+97.5		A-A	347.22		382.62	385.68	0		29'-7 1/2"	20'-5 1/2"	
11	44+42.5	I	A-A	347.26		384.39	387.45	0	31'-5"	20'-7 1/2"		
12	44+87.5		A-A	348.72		396.17	389.23	0		33'-2 1/2"	20'-9 1/2"	
13	45+32.5	I	A-A	348.78		398.00	401.06	0	35'-0 1/2"	20'-11"		
14	45+77.5		A-A	349.76		399.82	402.88	0		36'-10 1/2"	21'-0 1/2"	
15	46+22.5	I	A-A	349.75	363.00	401.55	404.61	0	38'-7"	21'-2 1/2"		
16	55+97.5	IV	E-E	353.29	363.74	372.04	375.10	0	48'-3"	48'-3"	22'-0 1/2"	
17	56+42.5		L-L	353.34	363.74	410.84	413.90	0		40'-5 1/2"	46'-5 1/2"	21'-10 1/2"
18	56+87.5	III	D-D	350.80	363.00	408.44	411.50	1'-9 1/2"	47'-1 1/2"	45'-4 1/2"	21'-9 1/2"	
19	57+32.5		D-D	350.81		406.24	409.70	1'-9 1/2"		45'-4 1/2"	45'-7 1/2"	21'-7 1/2"
20	57+77.5	III	D-D	352.27		404.84	407.90	3 1/2"	42'-0 1/2"	41'-9 1/2"	21'-5 1/2"	
21	58+22.5		D-D	352.23	363.00	403.04	406.10	3 1/2"		40'-2 1/2"	39'-11 1/2"	21'-3 1/2"
22	58+67.5	IV	F-F	355.26	365.74	401.24	404.30	0	38'-5 1/2"	35'-5 1/2"	20'-11 1/2"	
23	59+12.5		F-F	355.29	365.74	399.44	402.50	0		33'-7 1/2"	33'-7 1/2"	20'-9 1/2"
24	59+57.5	IV	F-F	355.29	365.74	397.64	400.70	0	31'-10"	31'-10"	20'-7 1/2"	
25	60+02.5		F-F	355.30	365.74	395.84	398.90	0		30'-0 1/2"	30'-0 1/2"	20'-6"
26	60+47.5	VI	H-H	354.73	365.24	394.04	397.10	0	28'-8 1/2"	28'-8 1/2"	20'-4 1/2"	
27	60+92.5		H-H	354.78	365.24	392.24	395.30	0		26'-11 1/2"	26'-11 1/2"	20'-2 1/2"
28	61+37.5	VI	J-J	353.79	364.24	390.44	393.50	0	26'-1 1/2"	26'-1 1/2"	20'-2 1/2"	
29	61+82.5		J-J	353.81	364.24	388.64	391.70	0		24'-3 1/2"	24'-3 1/2"	20'-0 1/2"
30	62+27.5	VI	J-J	353.29	363.74	386.84	389.90	0	25'-0 1/2"	25'-0 1/2"	19'-11"	
31	62+72.5		J-J	353.26	363.74	385.04	388.10	0		21'-2 1/2"	21'-2 1/2"	19'-9 1/2"
32	63+17.5	V	G-G	351.29	363.00	383.20	386.30	1'-3 1/2"	21'-5 1/2"	20'-1 1/2"	19'-8 1/2"	
33	63+62.5		I	351.10		381.44	384.50	1'-3 1/2"		19'-7 1/2"	18'-4 1/2"	19'-6 1/2"
34	64+07.5	V		349.29		380.09	383.15	3'-3 1/2"	20'-3 1/2"	17'-0 1/2"	19'-5"	
35	64+52.5			349.29		378.21	381.70	3'-3 1/2"		19'-9 1/2"	16'-0 1/2"	15'-4 1/2"
36	64+97.5	I		345.78				6'-9 1/2"	23'-3 1/2"			
37	65+42.5			345.79				6'-9 1/2"		23'-3 1/2"		
38	65+87.5	V		344.29				8'-3 1/2"	24'-9 1/2"			
39	66+32.5			344.30				8'-3 1/2"		24'-9 1/2"		
40	66+77.5	V		345.29				7'-3 1/2"	23'-9 1/2"			
41	67+22.5			345.30				7'-3 1/2"		23'-9 1/2"		
42	67+67.5	V		344.28				8'-3 1/2"	24'-9 1/2"			
43	68+12.5			344.26				8'-3 1/2"		24'-9 1/2"		
44	68+57.5	V		343.28				9'-3 1/2"	25'-9 1/2"			
45	69+02.5			343.28				4'-3 1/2"		20'-9 1/2"		
46	69+47.5	V		350.25				2'-3 1/2"	18'-3 1/2"			
47	69+92.5		G-G	350.25	363.00	379.64	382.70	2'-3 1/2"		18'-3 1/2"	16'-6 1/2"	15'-1 1/2"

Note:
Work this sheet with sheets 5 and 7-11 inclusive

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 6 OF 31

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
TRIGG
CADIZ - MURRAY
ROAD

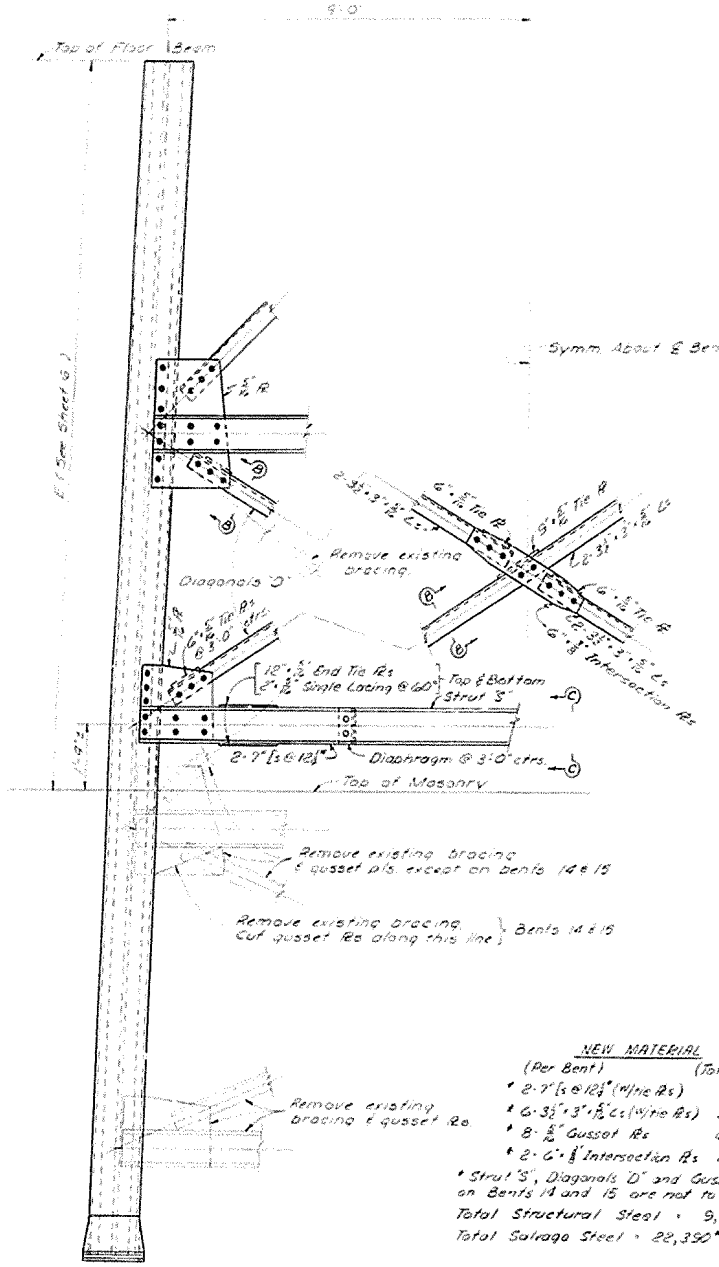
STATION: _____
BRIDGE NUMBER: _____
DRAWING INDEX: _____
PROJECT NO. 13879

APPROACH BENTS

DESIGNED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 REVISIONS: _____
 TRACED BY: _____ DATE: _____



FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SAFETY NO.	TOTAL SHEETS
7	KY.				

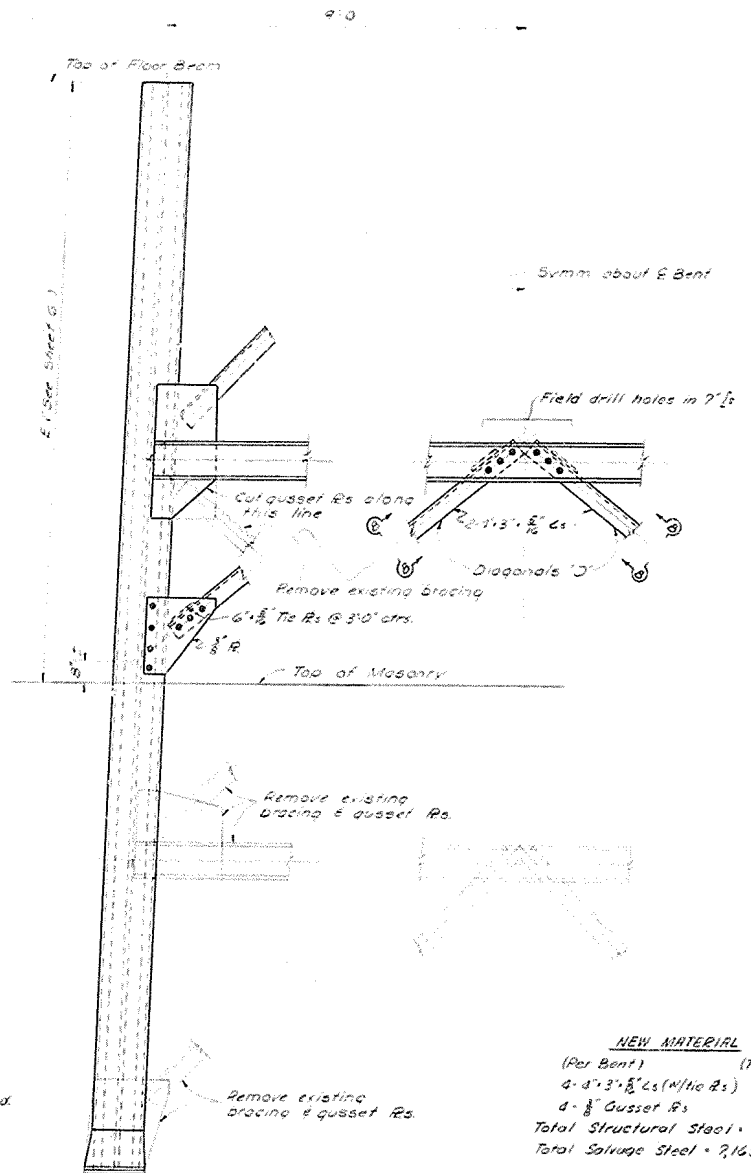


TRANSVERSE ELEVATION
BENTS 9, 10, 11, 12, 13, 14, & 15

NEW MATERIAL

(Per Bent)	(Total)
* 2" x 6" @ 12' (W/No Rs)	10
* 6" x 3 1/2" x 3/8" (W/No Rs)	30
* 8" x 8" Gusset Rs	40
* 2" x 6" x 1/2" Intersection Rs	10

* Strut 'S', Diagonals 'D' and Gusset R on Bents 14 and 15 are not to be moved.
Total Structural Steel = 9,920"
Total Salvage Steel = 22,390"

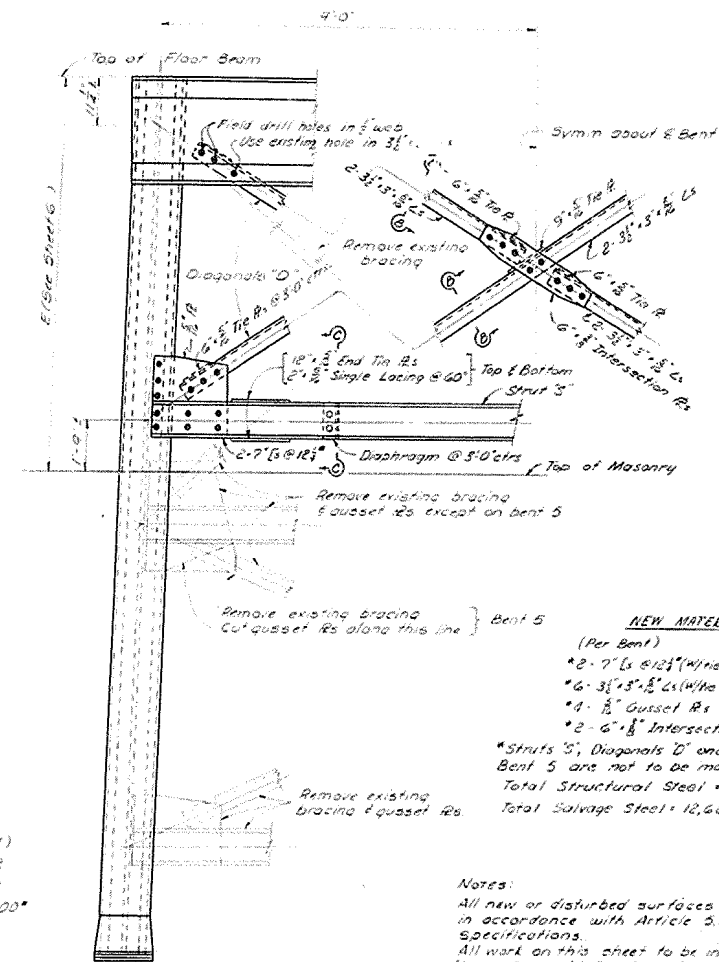


TRANSVERSE ELEVATION
BENTS 6, 7, & 8

NEW MATERIAL

(Per Bent)	(Total)
4" x 3" x 5/8" (W/No Rs)	12
4" x 8" Gusset Rs	12

Total Structural Steel = 1,200"
Total Salvage Steel = 2,165"



TRANSVERSE ELEVATION
BENTS 2, 3, 4, & 5

NEW MATERIAL

(Per Bent)	(Total)
* 2" x 7" x 5/16" (W/No Rs)	6
* 6" x 3 1/2" x 3/8" (W/No Rs)	18
* 4" x 8" Gusset Rs	12
* 2" x 6" x 1/2" Intersection Rs	6

* Struts 'S', Diagonals 'D' and Gusset Rs on Bent 5 are not to be moved.
Total Structural Steel = 5,130"
Total Salvage Steel = 12,620"

Notes:
All new or disturbed surfaces to be painted in accordance with Article 5.28-C of the Specifications.
All work on this sheet to be included in the 'Lump Sum' bid for Structural Steel.
Snap rivets to be 3/8" except 1/2" rivets to be used in flange of 7" I for end tie Rs and lacing.
Field connections to be made with 3/8" rivets or 3/8" high strength bolts.
Work this sheet with sheets 5, 6 and 8.

SECTION B-B
Typical on Diagonals 'D' throughout

SECTION C-C
Typical on Struts 'S' throughout

- Revision Notes:**
1. Remove transverse bracing and connections as noted.
 2. Furnish new Diagonals 'D', Struts 'S' and Gusset Rs to new positions as shown.
 3. Plug weld all holes above El. 343.0 (top of masonry).
 4. Remove existing paint from areas to be erased.
 5. Paint as per the Specifications.

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 7 OF 31

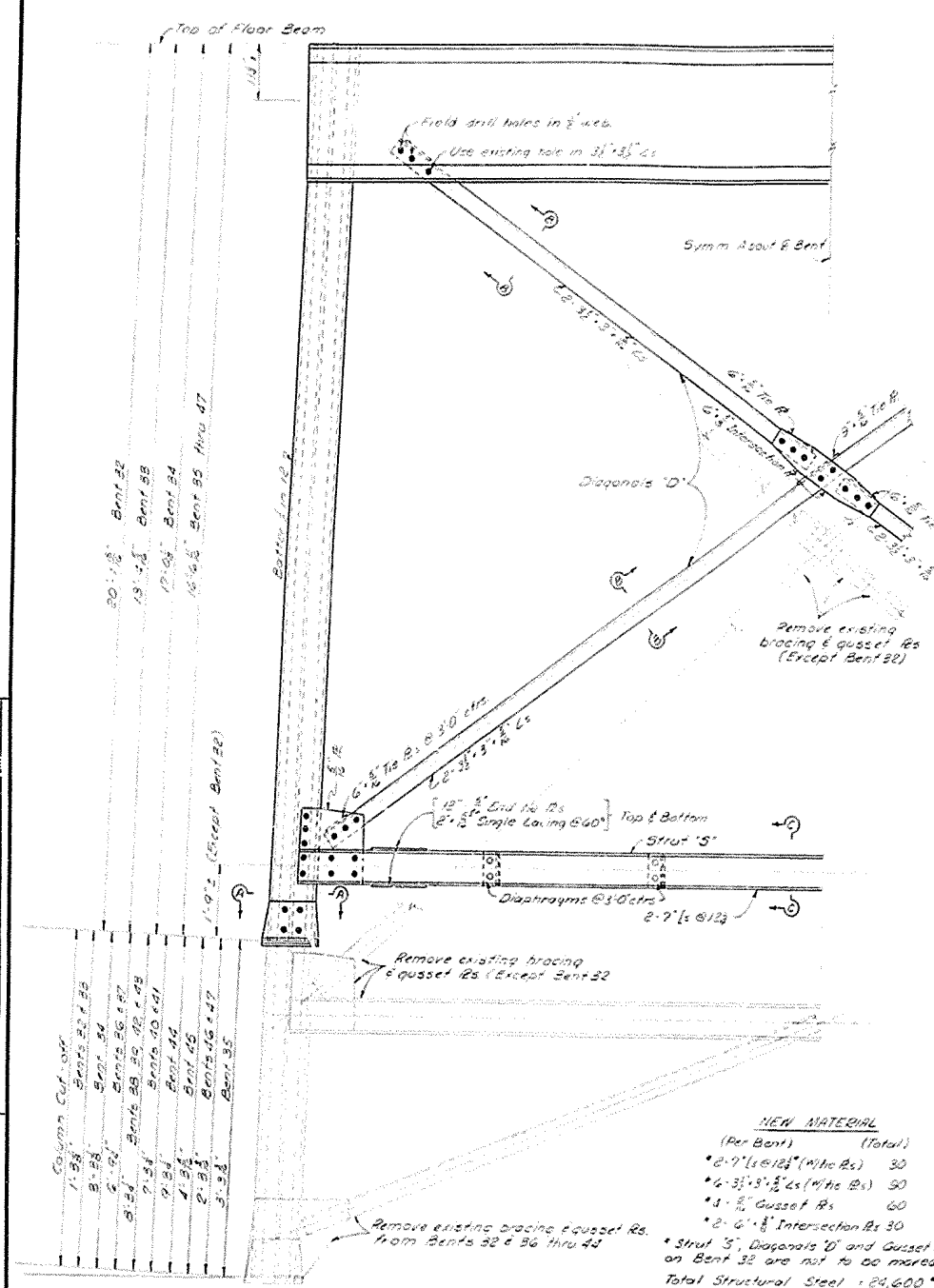
COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
TRIGG
CADIZ MURRAY
ROAD

STATION: _____
BRIDGE NUMBER: _____
PROJECT NO.: _____
DRAWN: _____
INDEX: _____
NO. 13879

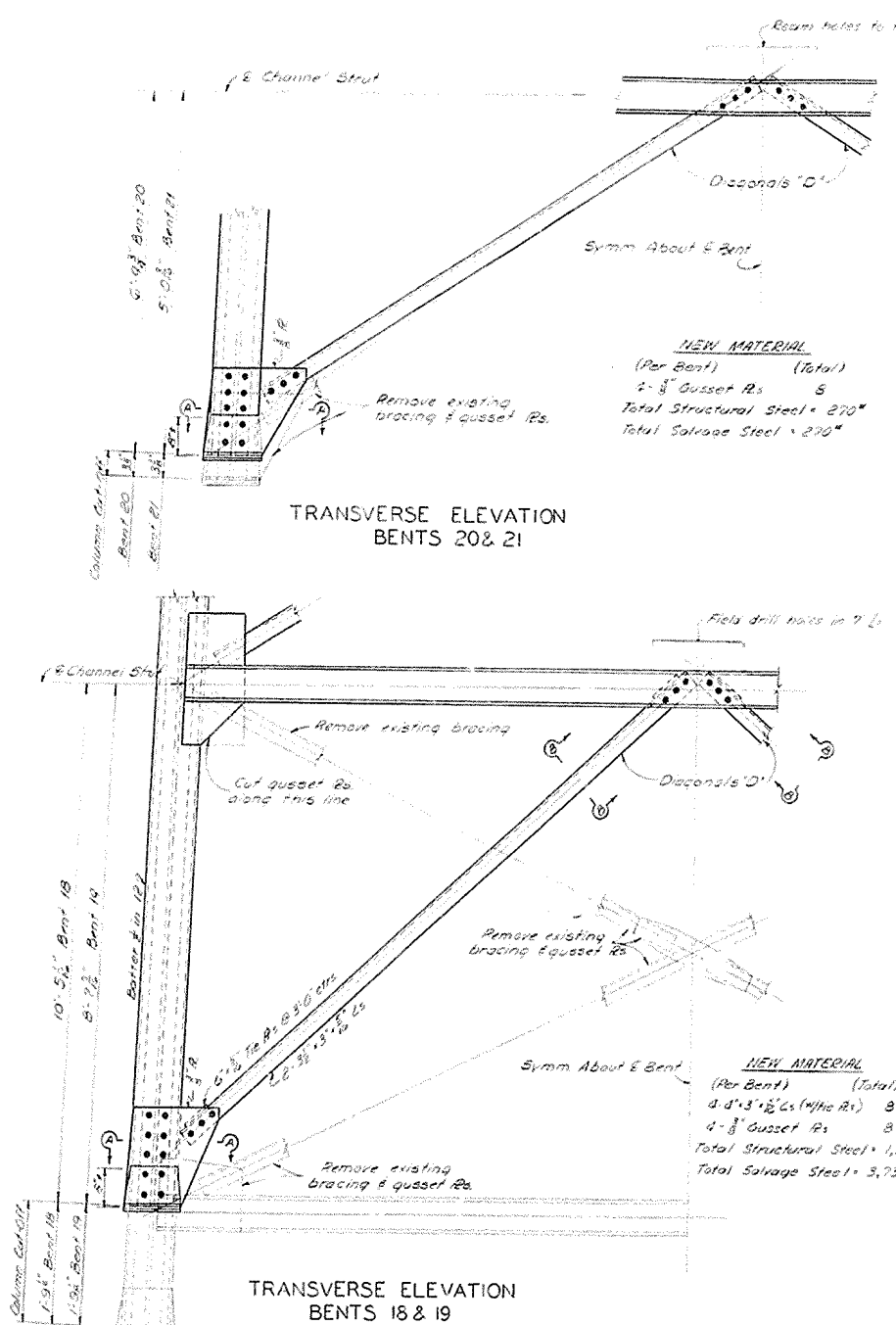
ALTERATIONS TO STEEL BENTS

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DRAWN BY: _____	CHECKED BY: _____	DATE: _____
TRACED BY: _____	CHECKED BY: _____	DATE: _____

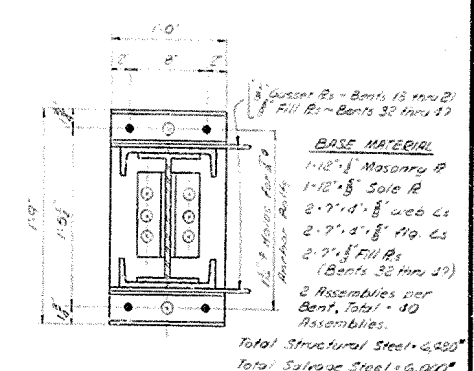
FIC NO.	STATE	FED. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



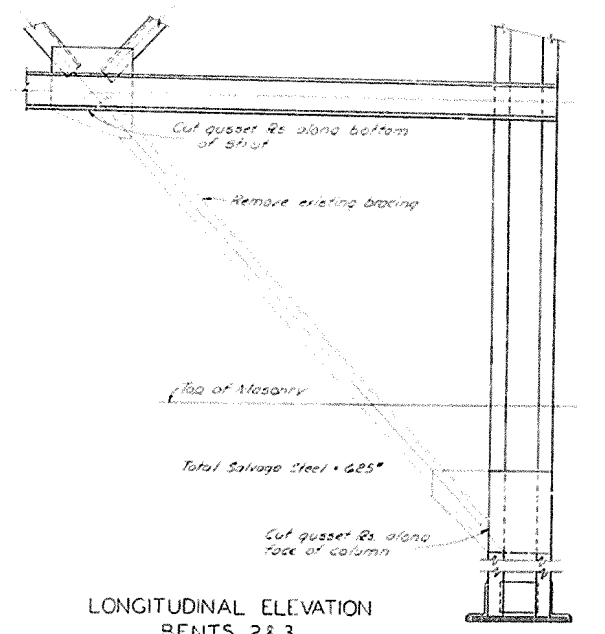
TRANSVERSE ELEVATION
BENTS 32, 33, 34, 35, 36, 37,
38, 39, 40, 41, 42, 43, 44, 45,
46, & 47



TRANSVERSE ELEVATION
BENTS 18 & 19



TYPICAL SECTION A-A



LONGITUDINAL ELEVATION
BENTS 2 & 3

Notes:
All new or disturbed surfaces to be painted in accordance with article 523-C of the specifications. All work on this sheet to be included in the "mp Sum" bid for Structural Steel.
Work this sheet with sheet 5, 6 and 7.

- Revision Notes:
1. Remove transverse bracing & connections as noted
 2. Remove column bearing material.
 3. Provide column cut-off as shown.
 4. Mill burned end of column to bear on sole plate or chip burned surfaces and provide full cutt weld to sole plate.
 5. Furnish new Diagonals 'D', Struts 'S' and Gusset Rs to new positions as shown.
 6. Plug weld all open holes.

NOTES:
Revision of transverse bracings not required on Bents 16, 17, 22, 23, 24, 25, 26, 27, 28, 29, 30, & 31.
Snap rivets to be 3/8" except 5/8" rivets to be used in flange of 7" Ls for end Ha Rs and lacing.
Field connections to be made 3/8" rivets or 3/8" high strength bolts.

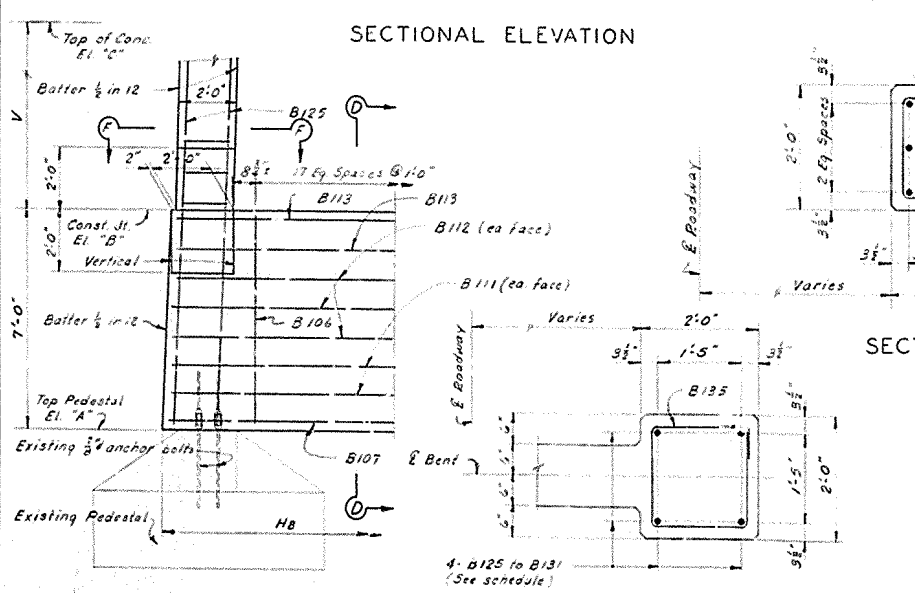
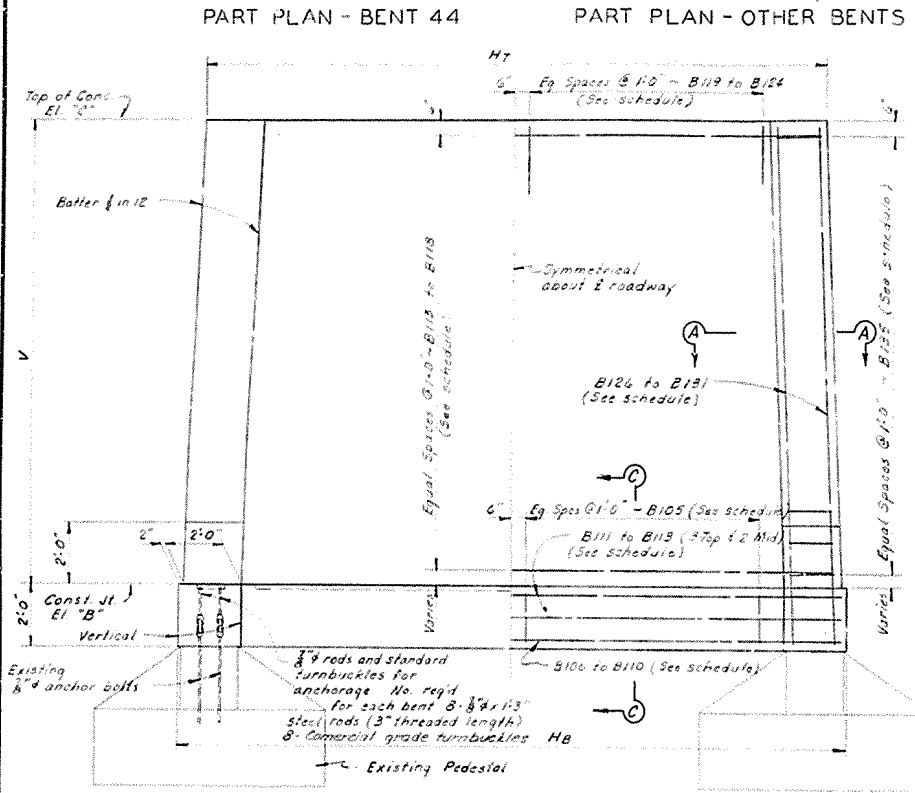
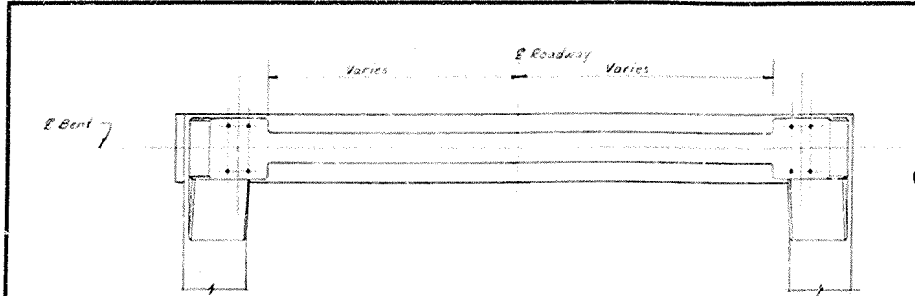
CUMBERLAND RIVER BRIDGE AT CANTON SHEET 8 OF 31

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
TRIGG
CADIZ - MURRAY
ROAD

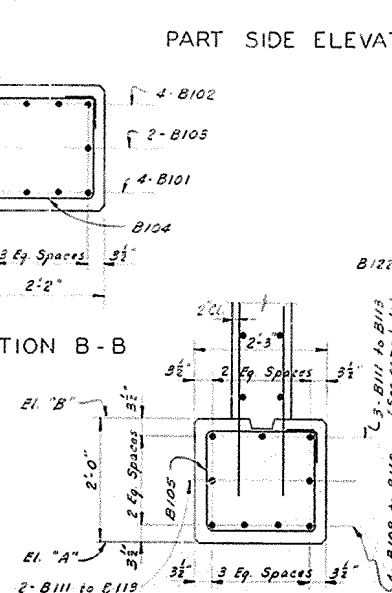
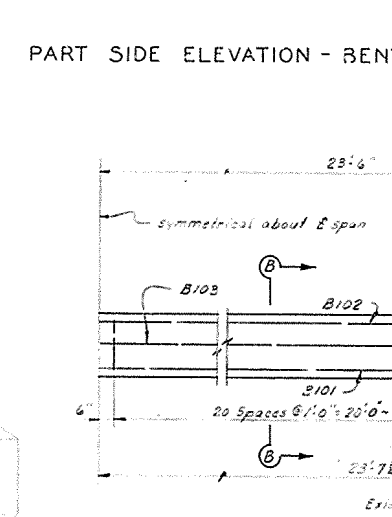
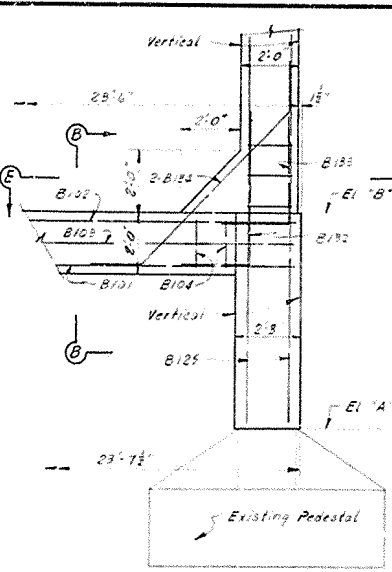
STATION PROJECT NO.
BRIDGE NUMBER DRAWING NO. 13819

ALTERATIONS TO STEEL BENTS

DESIGNED BY	DATE	REVISION	DATE
CHECKED BY	DATE	REVISION	DATE
TRACED BY	DATE	REVISION	DATE



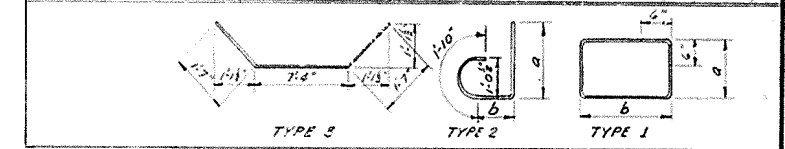
SECTIONAL ELEVATION - BENT 44
SECTION A-A
SECTION F-F - Opposite Hand



SECTION B-B
SECTION C-C
SECTION D-D
SECTION E-E

SCHEDULE OF BENTS									
BENT NO.	STATION	VARIABLE ELEVATIONS			VARIABLE DIMENSIONS			H	V
		A	B	C	H	H	V		
34	64+07.5	349.29	351.29	363.00	22'-8"	21'-4"	11'-8"		
35	64+32.5	349.29	351.29		22'-8"	21'-4"	11'-8"		
36	64+57.5	345.79	347.79		22'-11"	21'-4"	15'-2"		
37	65+22.5	345.79	347.79		22'-11"	21'-4"	15'-2"		
38	65+47.5	348.79	346.79		22'-11"	21'-4"	15'-2"		
39	66+22.5	348.79	346.79		22'-11"	21'-4"	15'-2"		
40	66+47.5	345.29	347.29		22'-11"	21'-4"	15'-2"		
41	67+22.5	345.29	347.29		22'-11"	21'-4"	15'-2"		
42	67+47.5	344.28	346.28		22'-11"	21'-4"	15'-2"		
43	68+22.5	344.28	346.28		22'-11"	21'-4"	15'-2"		
44	68+47.5	343.28	345.28		22'-11"	21'-4"	15'-2"		
45	69+22.5	343.28	345.28		22'-11"	21'-4"	15'-2"		
46	69+47.5	350.25	352.25		22'-11"	21'-4"	15'-2"		
47	69+72.5	350.25	352.25	363.00	22'-11"	21'-4"	15'-2"		

SCHEDULE OF REINFORCEMENT																	
BENT	TYPE	SIZE	NO. BARS REQ'D PER BENT										LENGTH	LOCATION	FA	FB	FC
			1	2	3	4	5	6	7	8	9	10					
B101	Str	11	8	8	8	8	8	8	8	8	8	8	40' 9"	Long Em - Bot			
B102	Str	7	8	8	8	8	8	8	8	8	8	40' 9"	Long Em - Top				
B103	Str	6	4	4	4	4	4	4	4	4	4	40' 9"	Long Em - Mid				
B104	1	4	8	8	8	8	8	8	8	8	8	7' 5"	Long Em - Str	1	7	1	7
B105	1	4	8	18	18	18	18	18	18	18	18	7' 7"	Transv Em - Str	1	7	1	10
B106	1	4	8	18	18	18	18	18	18	18	18	7' 7"	Transv Em - Str	6	7	1	10
B107	Str	7										22' 0"	Transv Em - Bot				
B108	7											22' 0"					
B109	7											22' 0"					
B110	7	4	4	4	4	4	4	4	4	4	4	22' 0"					
B111	5											22' 0"	Transv Em - Bot				
B112	5											22' 0"	Transv Em - Top				
B113	5	5	5	5	5	5	5	5	5	5	5	22' 0"	Transv Em - Wall				
B114	5	5	5	5	5	5	5	5	5	5	5	22' 0"	Wall - Horiz				
B115	5	5	5	5	5	5	5	5	5	5	5	21' 9"					
B116	5	5	5	5	5	5	5	5	5	5	5	21' 6"					
B117	5	5	5	5	5	5	5	5	5	5	5	21' 6"					
B118	5	4	4	4	4	4	4	4	4	4	4	21' 0"	Wall - Horiz				
B119	5	4	4	4	4	4	4	4	4	4	4	21' 0"	Wall - Vert				
B120	5											17' 0"					
B121	5											17' 0"					
B122	5											14' 0"					
B123	5	18	18									18' 0"	Wall - Vert				
B124	5											18' 0"	Columns				
B125	10											19' 3"					
B126	10											17' 3"					
B127	10											17' 3"					
B128	10											16' 9"					
B129	10											16' 3"					
B130	10	8	8									18' 3"					
B131	Str	10										8' 8"	Columns				
B132	2	10	4	4	4	4	4	4	4	4	4	9' 6"	Col. Dowels	4	4	3	4
B133	2	10	4	4	4	4	4	4	4	4	4	10' 0"	Col. Dowels	4	4	3	10
B134	3	7	4	4	4	4	4	4	4	4	4	10' 6"	Dowels				
B135	1	4	24	24	24	24	24	24	24	24	24	22' 22'	Column Ties	1	7	1	7



		PER FRAME						TOTAL	
		34-35	36-37	38-39	40-41	42-43	44-45	46-47	
CONCRETE, CLASS "A"		441 cy	510 cy	540 cy	520 cy	541 cy	557 cy	402 cy	353.1 cy
REINFORCING STEEL		7791 #	8504 #	8898 #	8669 #	8898 #	8544 #	7576 #	58,870 lb

For anchor bolt location see sheet 25.



Note: Work this sheet with sheets 5, 6, 9 and 10

BENTS 34-47 EXTENSIONS

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 11 OF 31

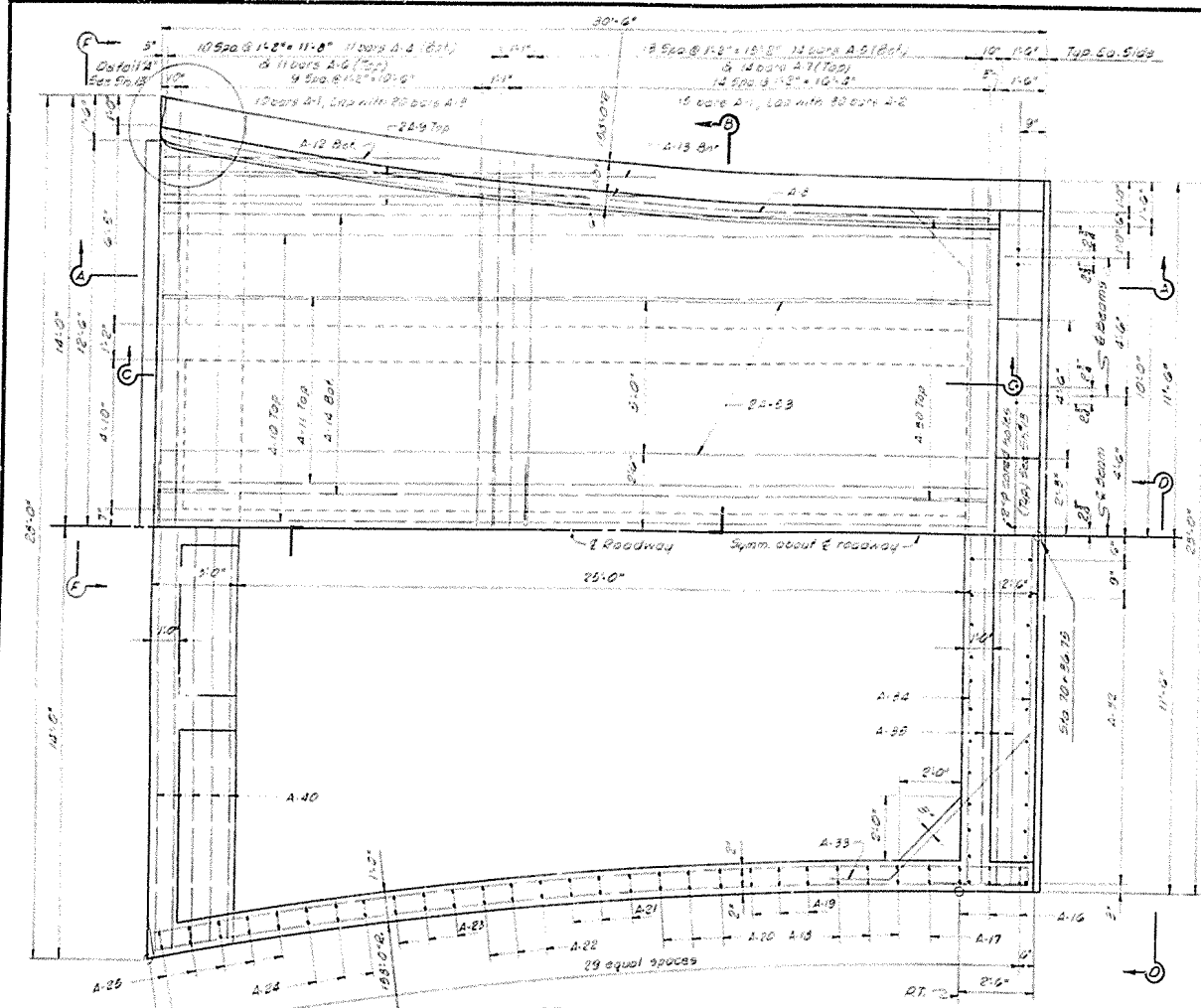
COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF TRIGG
 CADIZ - MURRAY ROAD

STATION	PROJECT NO.
BRIDGE NUMBER	DRAWING INDEX
	NO. 13879

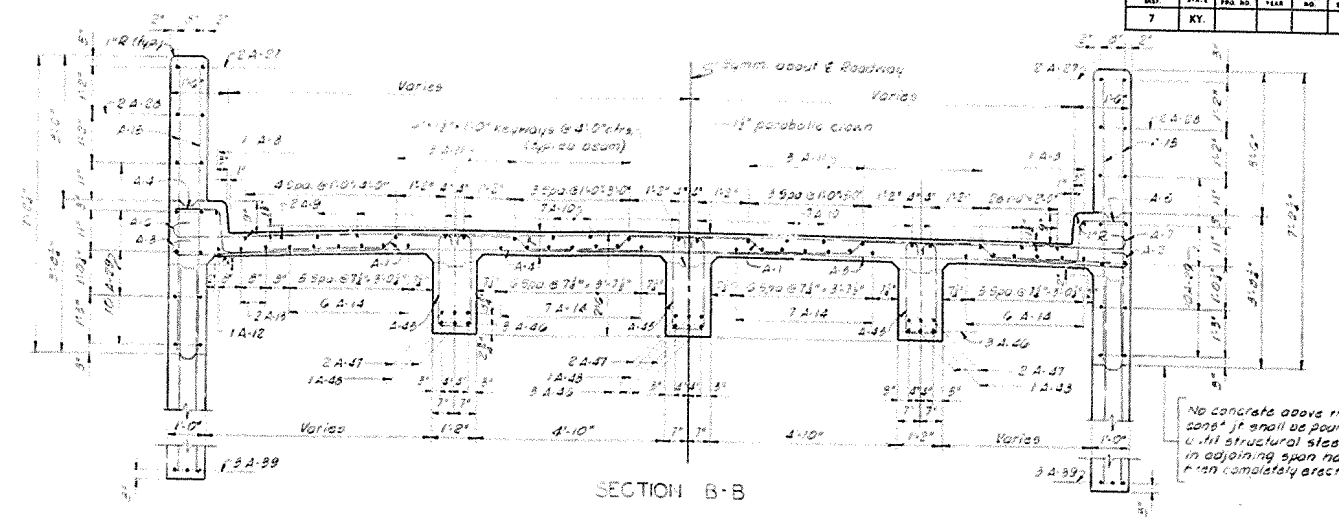
DESIGNED BY: [Signature] CHECKED BY: [Signature]
 DATE: [Date] DATE: [Date]
 REVISIONS: [Table]
 TRACED BY: [Signature] CHECKED BY: [Signature]
 DATE: [Date] DATE: [Date]



FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

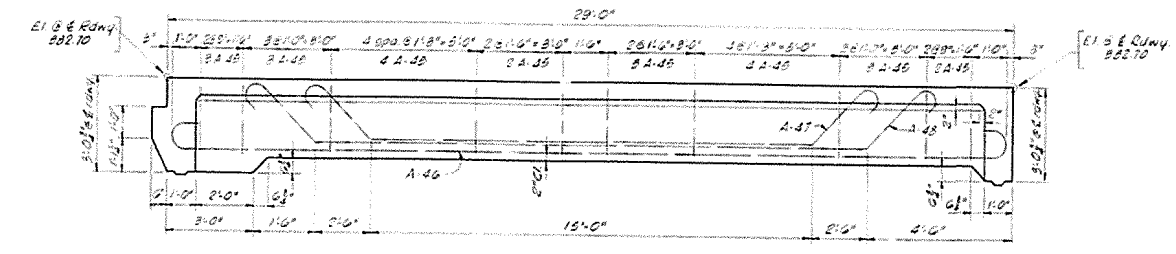


SECTIONAL PLAN

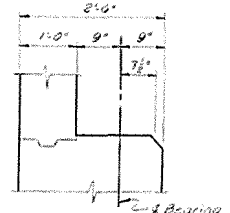


SECTION B-B

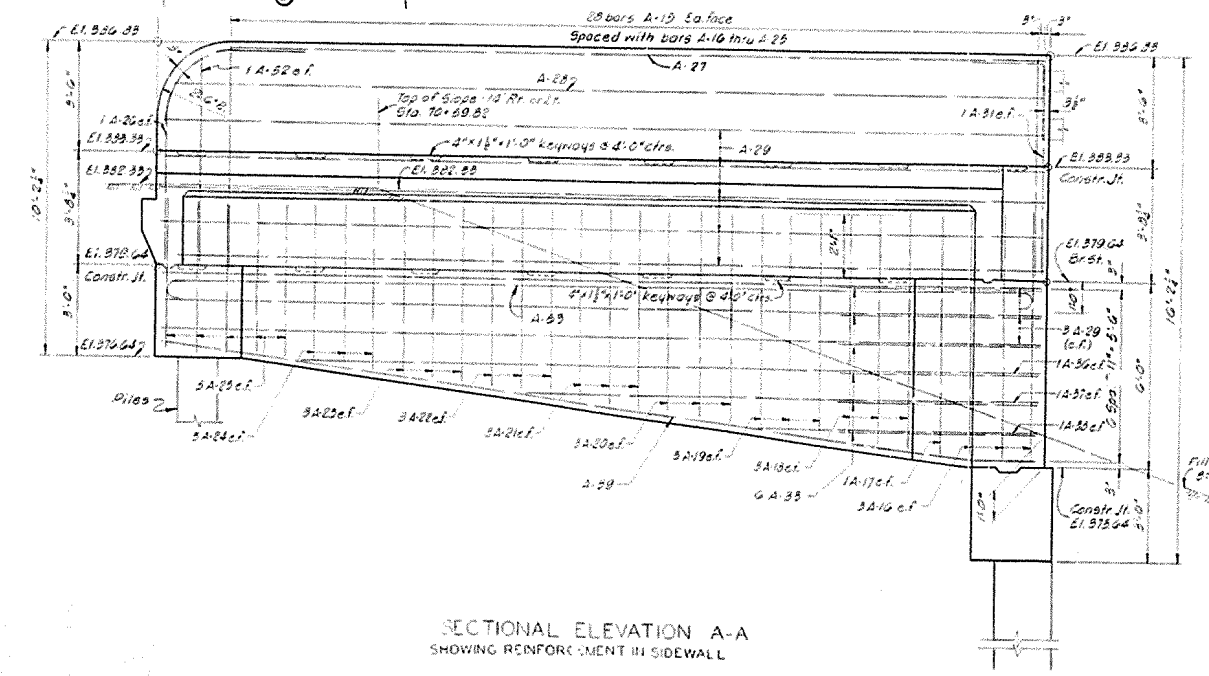
No concrete above this zone if shall be poured with structural steel in adjoining span has been completely erected.



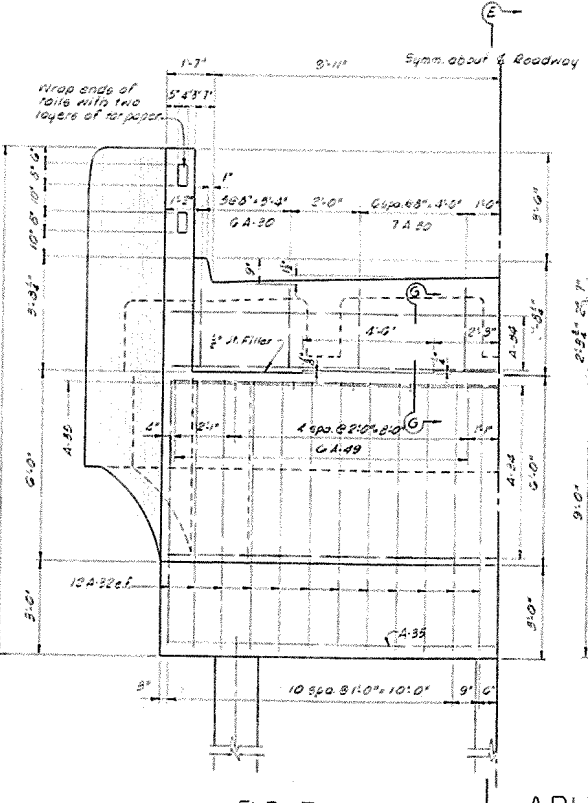
SECTIONAL ELEVATION C-C



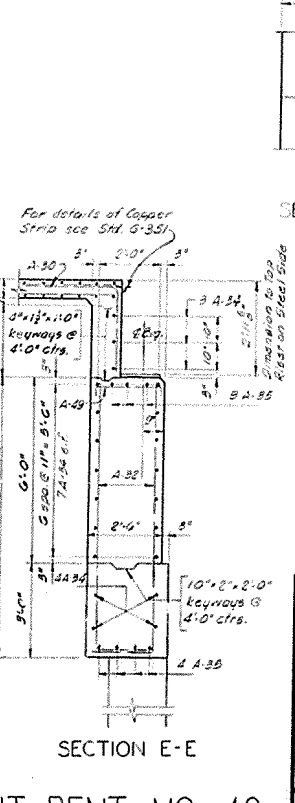
SECTION C-C



SECTIONAL ELEVATION A-A
SHOWING REINFORCEMENT IN SIDEWALK



ELEVATION D-D



SECTION E-E

NOTE:
The deck slab, above the construction joint, may be poured without the use of bottom forms provided a well compacted porous backfill is placed between the girders and carefully formed to the bottom of the slab section. A layer of Sisalcraft (or equal) building paper should be placed over the backfill material. Care should be exercised to insure a 7 inch minimum slab thickness throughout.

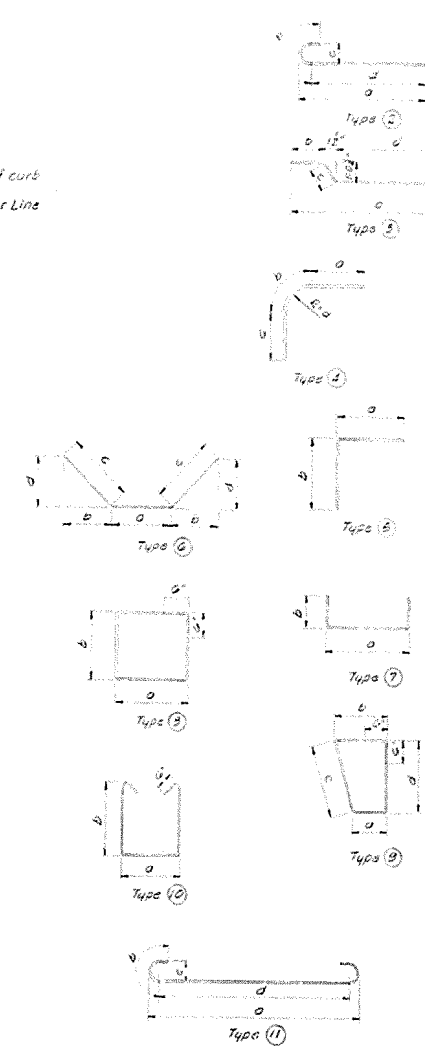
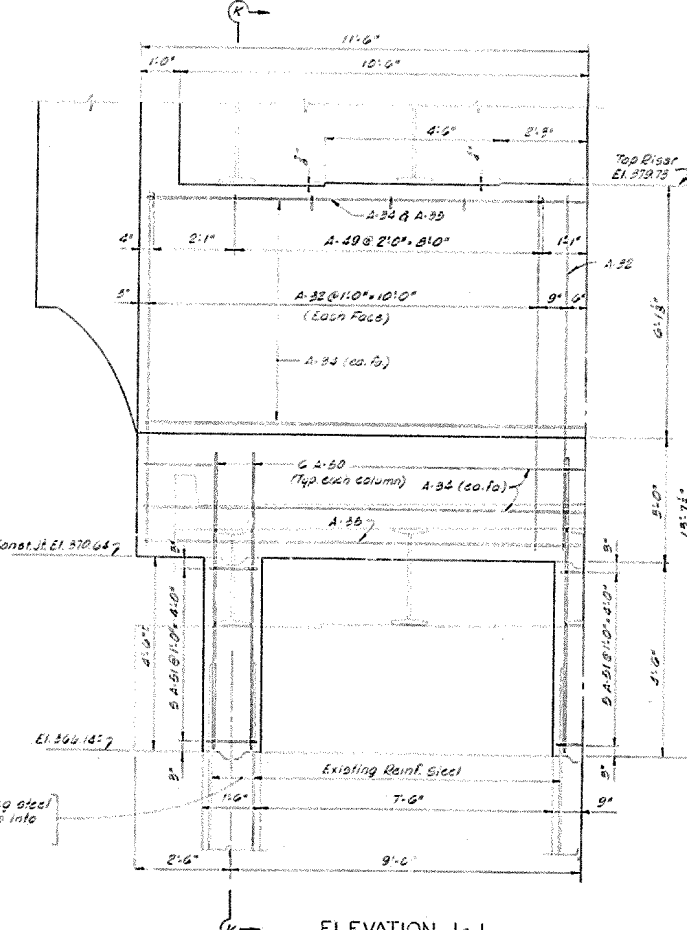
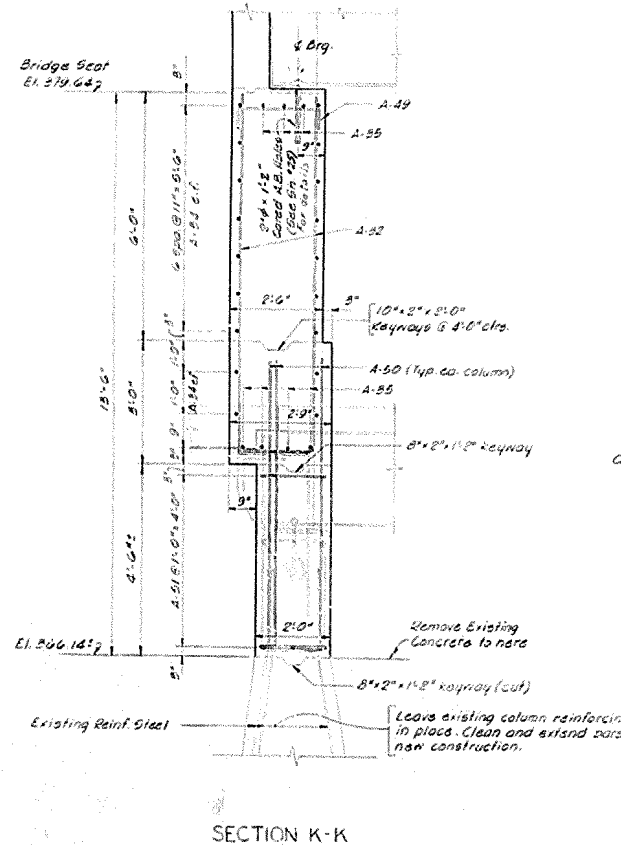
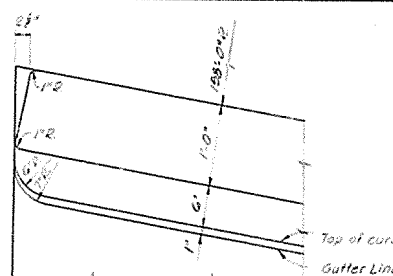
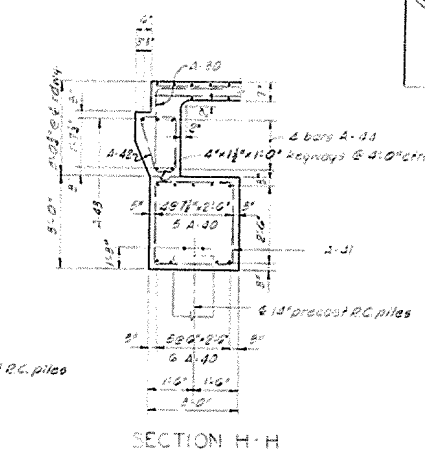
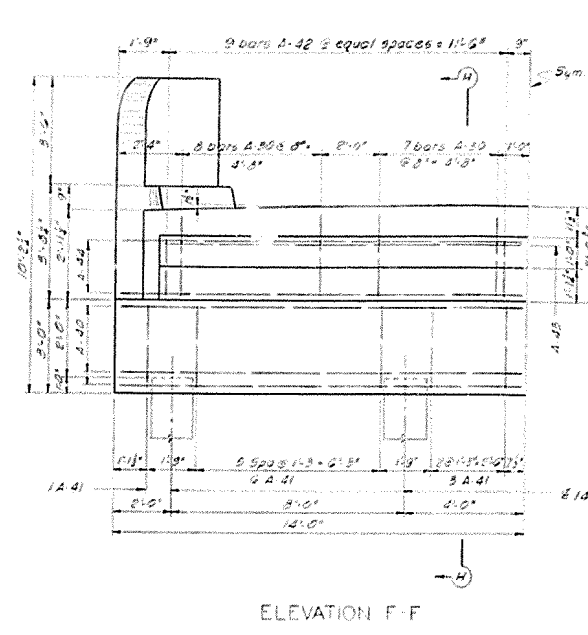
DESIGNED BY	DATE	REVISED	DATE
CHECKED BY	DATE	REVISED	DATE
INCHES BY	DATE	REVISED	DATE

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 12 OF 31

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
TRIGG
 CADIZ-MURRAY
 ROAD

STATION PROJECT NO.
 BRIDGE NUMBER DRAWING INDEX
 NO. 13879

BRIDGE



Mark	Type	No.	Size	Length	Location	Ft.	In.	Ft.	In.	Ft.	In.	Ft.	In.
A-1		20	1/2	20	Deck Slab								
A-2		20	1/2	20									
A-3		20	1/2	20									
A-4		20	1/2	20									
A-5		20	1/2	20									
A-6		20	1/2	20									
A-7		20	1/2	20									
A-8	STR	5	1/2	20									
A-9		4	1/2	20									
A-10		13	1/2	20									
A-11		6	1/2	20									
A-12		2	1/2	20									
A-13		4	1/2	20									
A-14		20	1/2	20	Deck Slab								
A-15		11	1/2	20	Wing Wall								
A-16		12	1/2	20									
A-17		4	1/2	20									
A-18		12	1/2	20									
A-19		7	1/2	20									
A-20		6	1/2	20									
A-21		6	1/2	20									
A-22		6	1/2	20									
A-23		12	1/2	20									
A-24		12	1/2	20									
A-25	STR	20	1/2	20									
A-26		4	1/2	20									
A-27	STR	4	1/2	20									
A-28	STR	4	1/2	20									
A-29	STR	22	1/2	20	Wing Wall								
A-30		5	1/2	20	Backwall								
A-31		5	1/2	20	Wing Wall								
A-32		5	1/2	20	Pier Cap & Abut. Stem								
A-33		6	1/2	20	Wing Wall								
A-34		7	1/2	20	Pier Cap, Abut. Stem, & Backwall								
A-35	STR	7	1/2	20	Pier Cap & Ab. St.								
A-36		4	1/2	20	Wing Wall								
A-37		4	1/2	20									
A-38		4	1/2	20									
A-39		6	1/2	20	Wing Wall								
A-40	STR	11	1/2	20	Pile Cap								
A-41		8	1/2	20									
A-42		9	1/2	20	Backwall								
A-43	STR	7	1/2	20									
A-44	STR	2	1/2	20	Backwall								
A-45		10	1/2	20	Abut. Stem								
A-46		11	1/2	20									
A-47		6	1/2	20	Abut. Stem								
A-48		12	1/2	20	Abut. Stem								
A-49		12	1/2	20	Bridge Seat								
A-50	STR	18	1/2	20	Pier Column								
A-51		8	1/2	20									
A-52	STR	4	1/2	20	Wing Wall								
A-53		11	1/2	20	Cap to Cap								

ESTIMATE OF QUANTITIES
 Concrete, Class "A" 82.9 cu yds.
 Reinforcing Steel 14,150 lbs.
 Structure Excavation Cum. 10 cu yds.
 14" Precast R.C. Piling 230 Lin Ft.

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 13 OF 31

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT COUNTY OF
 TRIGG
 CADIZ - MURRAY

ROAD PROJECT NO.

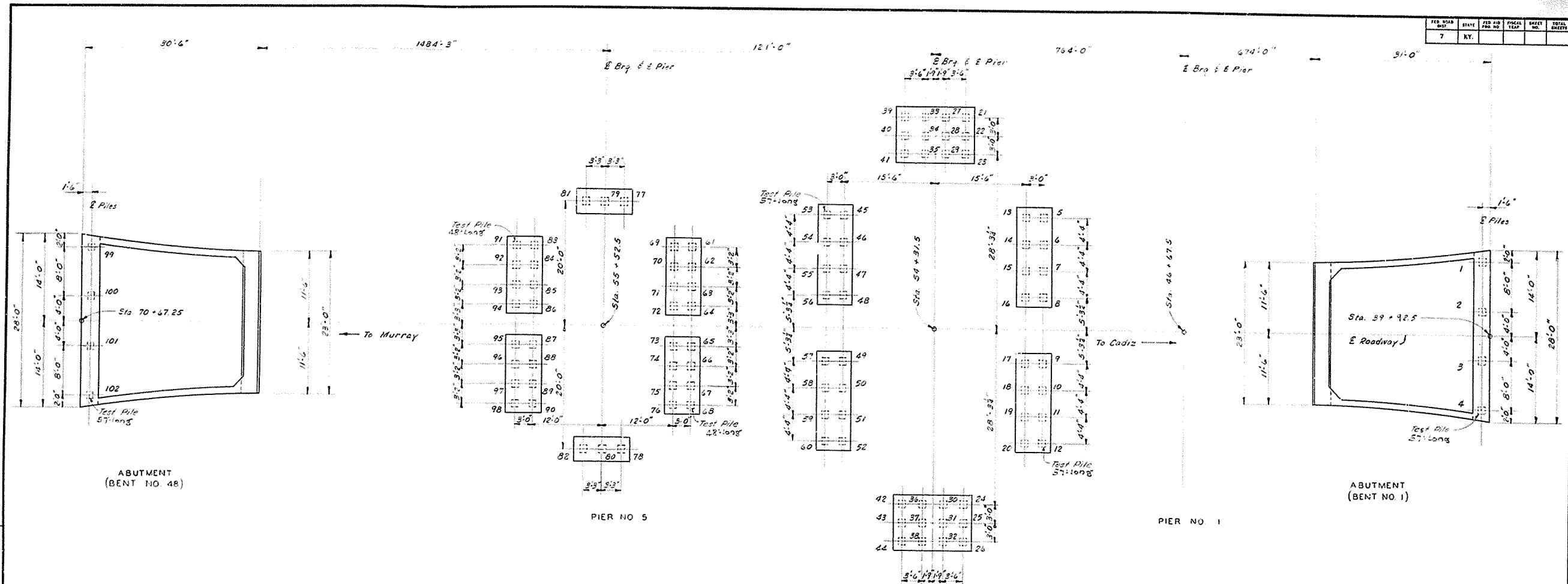
STATION BRIDGE NUMBER PROJECT NO. DRAWING INDEX

13879

ABUT.-BENT NO. 48



DESIGNED BY: [Name] CHECKED BY: [Name] DATE: [Date]
 REVISED BY: [Name] CHECKED BY: [Name] DATE: [Date]
 TRACED BY: [Name] CHECKED BY: [Name] DATE: [Date]



PILE LAYOUT PLAN

PILE RECORD																			
Pile No.	Cut-off Elevation As Shown	Tip of Pile Elevation As Driven	Length in Place	Calculated Bearing Capacity Tons	Pile No.	Cut-off Elevation As Shown	Tip of Pile Elevation As Driven	Length in Place	Calculated Bearing Capacity Tons	Pile No.	Cut-off Elevation As Shown	Tip of Pile Elevation As Driven	Length in Place	Calculated Bearing Capacity Tons	Pile No.	Cut-off Elevation As Shown	Tip of Pile Elevation As Driven	Length in Place	Calculated Bearing Capacity Tons
ABUTMENT (BENT NO. 1)																			
1	375.31				23	322.95				47	322.95				70	346.84			
2					24					48					71				
3					25					49					72				
4	373.31				26					50					73				
					27					51					74				
PIER No. 4																			
5	322.95				28					52					75				
6					29					53					76				
7					30					54					77				
8					31					55					78				
9					32					56					79				
10					33					57					80				
11					34					58					81				
12					35					59					82				
13					36					60	322.95				83				
14					37					PIER No. 5									
15					38					61	346.84				84				
16					39					62					85				
17					40					63					86				
18					41					64					87				
19					42					65					88				
20					43					66					89				
21					44					67					90				
22	322.75				45					68					91				
					46	322.95				69	346.84				92				
										70	346.84				93	346.84			

NOTES:
 This pile record does not replace other pile records required to be kept and submitted by the Resident Engineer. After all piles have been driven, the Resident Engineer shall record the tip of pile elevation as driven, length of pile in place, calculate the bearing capacity of each pile, and return one blueprint copy of this sheet with this data to the Bridge Engineer to be recorded on original plans. Length of piles in place, shown hereon are the actual length of piles in the finished structure below cut-off elevation and is not necessarily the Pay Item.

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 14 OF 31

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF TRIGG
 CADIZ-MURRAY ROAD

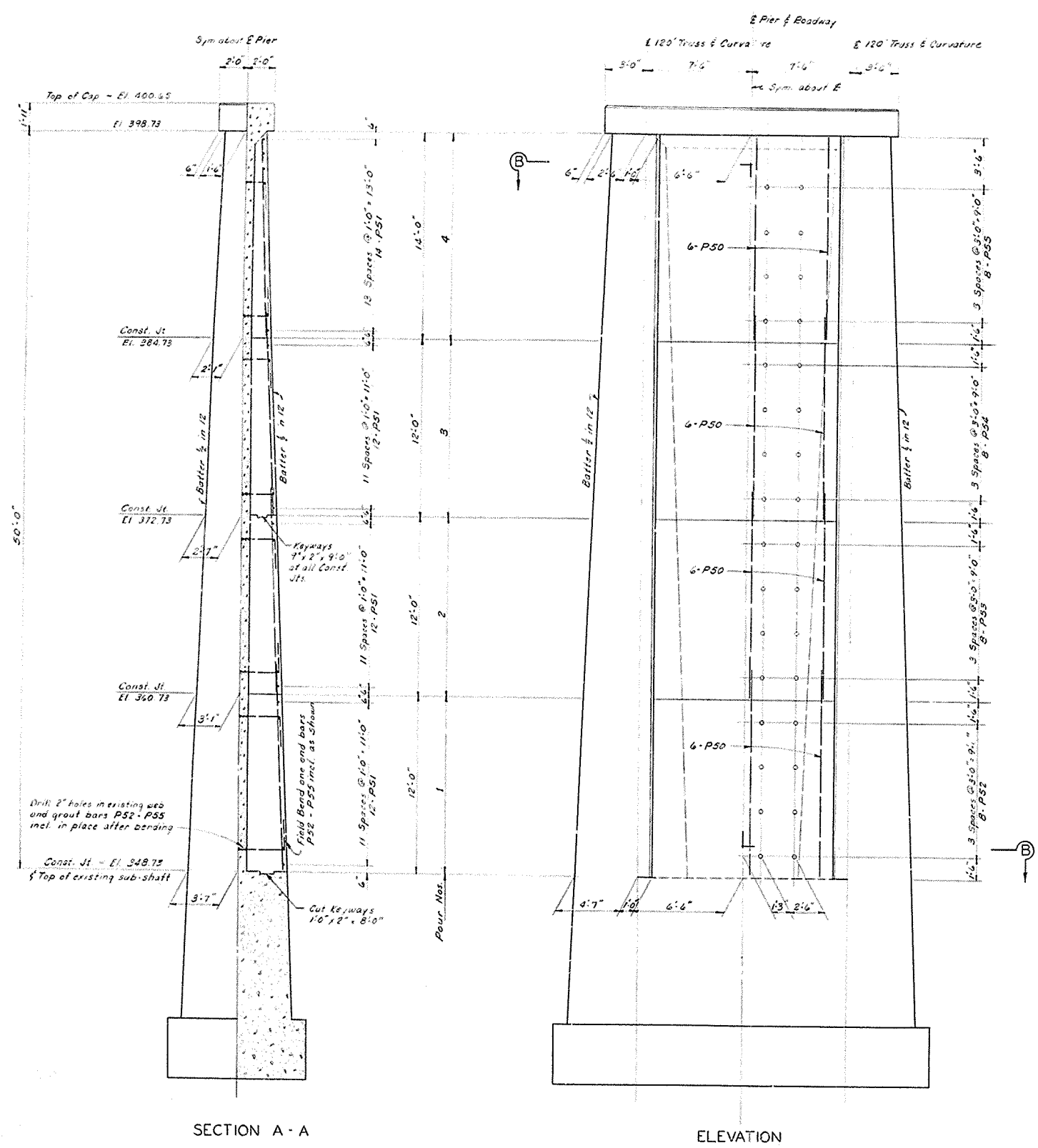
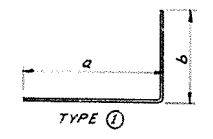
STATION PROJECT NO.
 BRIDGE NUMBER DRAWING INDEX
 No. 13879

PIILING PLAN & RECORD

DESIGNED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 TRACED BY: _____ DATE: _____

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				

BILL OF REINFORCEMENT													
Mark	Type	No.	Size	Length Fr. In.	Location	a		b		c		d	
						Fr.	In.	Fr.	In.	Fr.	In.	Fr.	In.
P50	Str.	96	5	13	10	Encasement - Vertical							
P51	Str.	100	8	12	6	- Horiz							
P52	1	16	6	10	9	- Pour #1	8	10	2	0			
P53	1	16	6	9	9	- Pour #2	7	10	2	0			
P54	1	16	6	8	9	- Pour #3	6	10	2	0			
P55	1	16	6	7	9	Encasement - Pour #4	5	10	2	0			



ESTIMATE OF QUANTITIES
 Reinforcement 5610 lbs.
 Concrete, Class 'A' 78.2 c.y.

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 15 OF 31

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF TRIGG

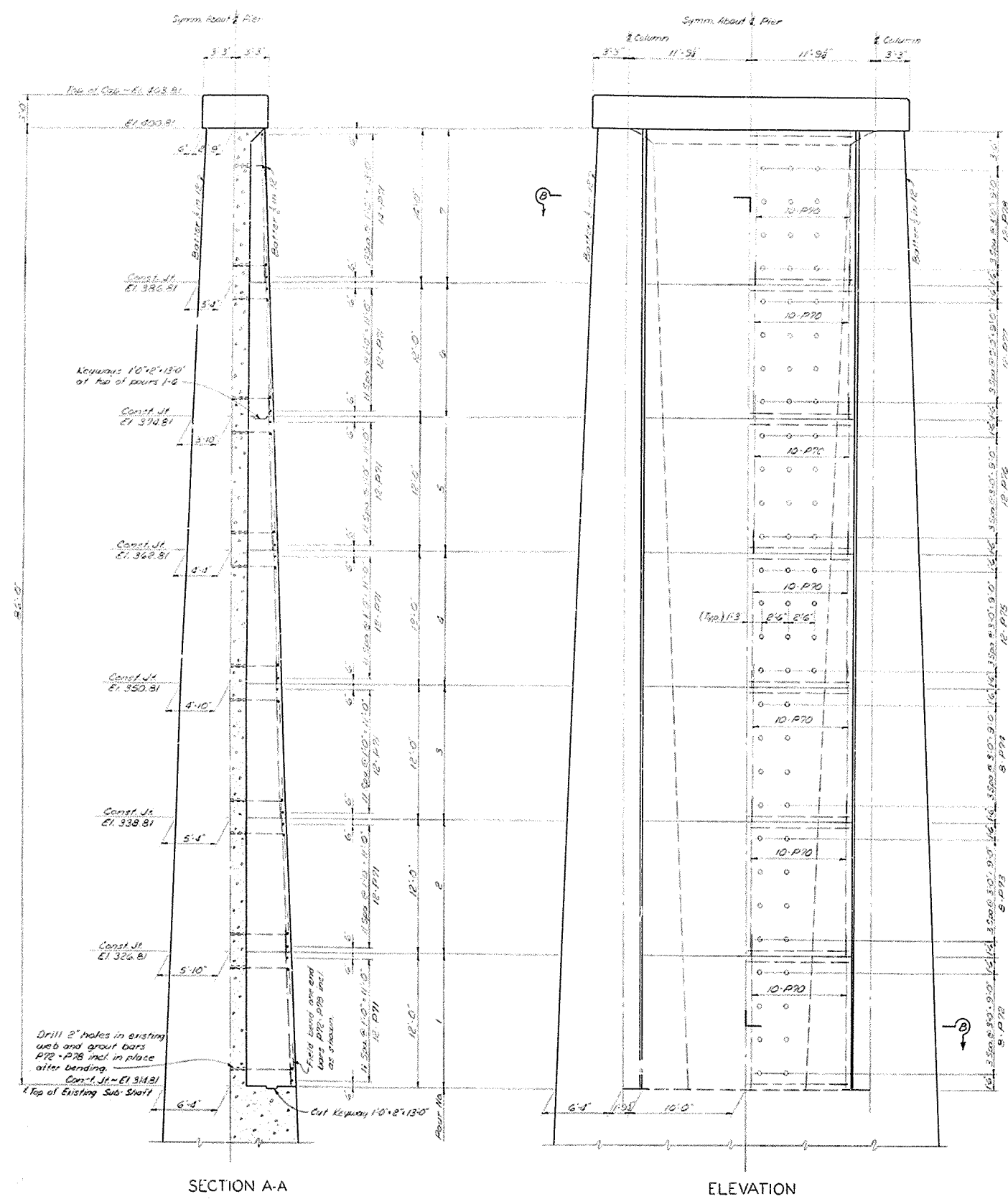
CADIZ - MURRAY ROAD

STATION PROJECT NO.
 BRIDGE NUMBER INDEX
 No. 13879

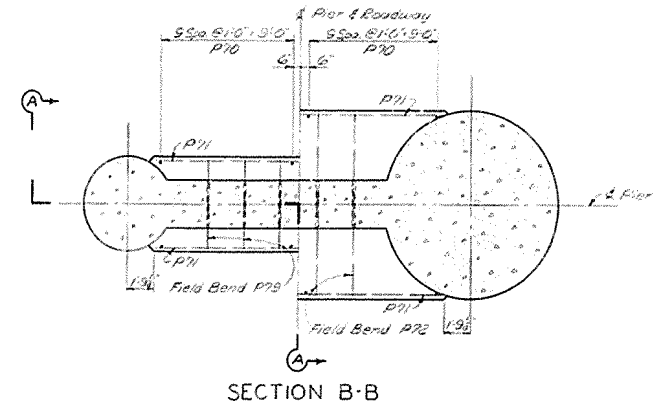
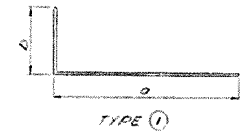
PIER NO. 1

DESIGNED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 TRACED BY: _____ DATE: _____

CONTRACT NO.	DATE	PERIOD	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



BILL OF REINFORCEMENT													
MARK	TYPE	NO.	SIZE	LENGTH	LOCATION	a		b		c		d	
						ft	in	ft	in	ft	in	ft	in
P70	3#	280	5	13	10	Encasement Vertical							
P71	3#	178	8	19	8	Horiz							
P72	1	10	6	15	1	Row 1	13	2	2	0			
P73	1	12	6	16	1		2	13	2	0			
P74	1	23	6	13	1		4	11	2	0			
P75	1	24	6	12	1		5	10	2	0			
P76	1	24	6	11	1		6	9	2	0			
P77	1	23	6	10	1	Encasement Pour 2	7	8	2	0			



ESTIMATE OF QUANTITIES
 Class A Concrete 3252 CY
 Reinforcement 15330 lbs.

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 16 OF 31

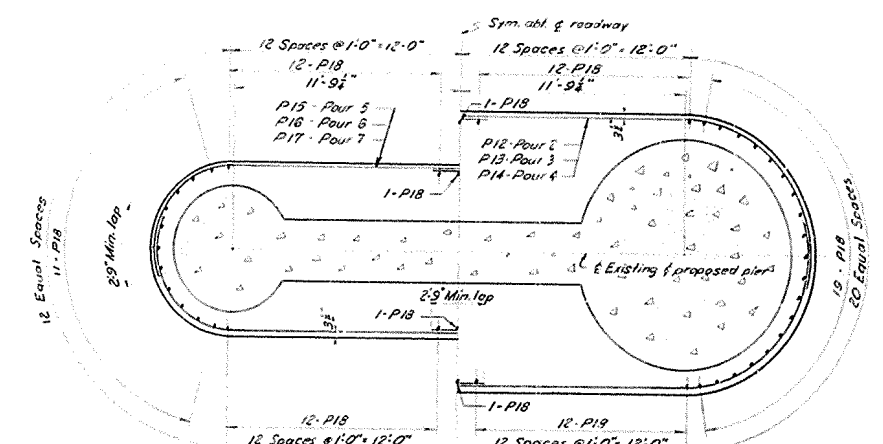
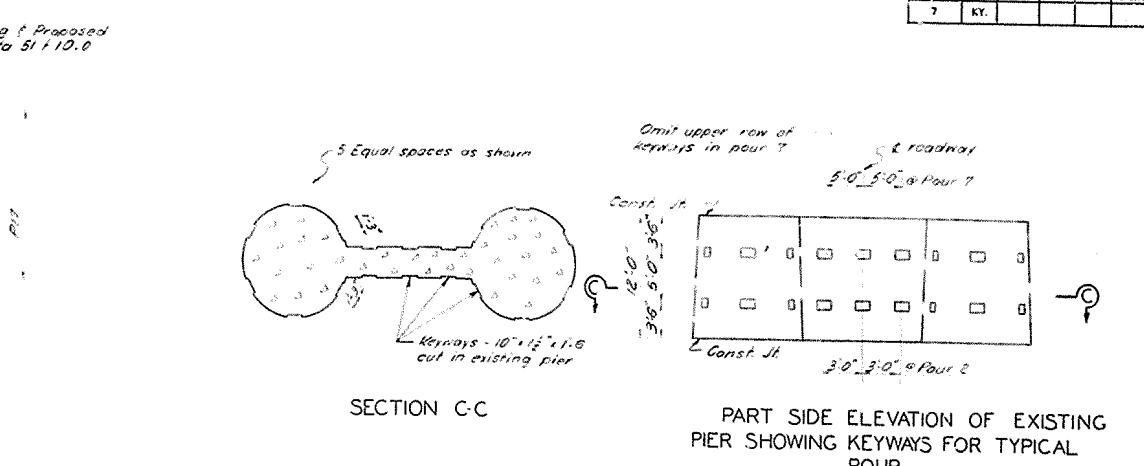
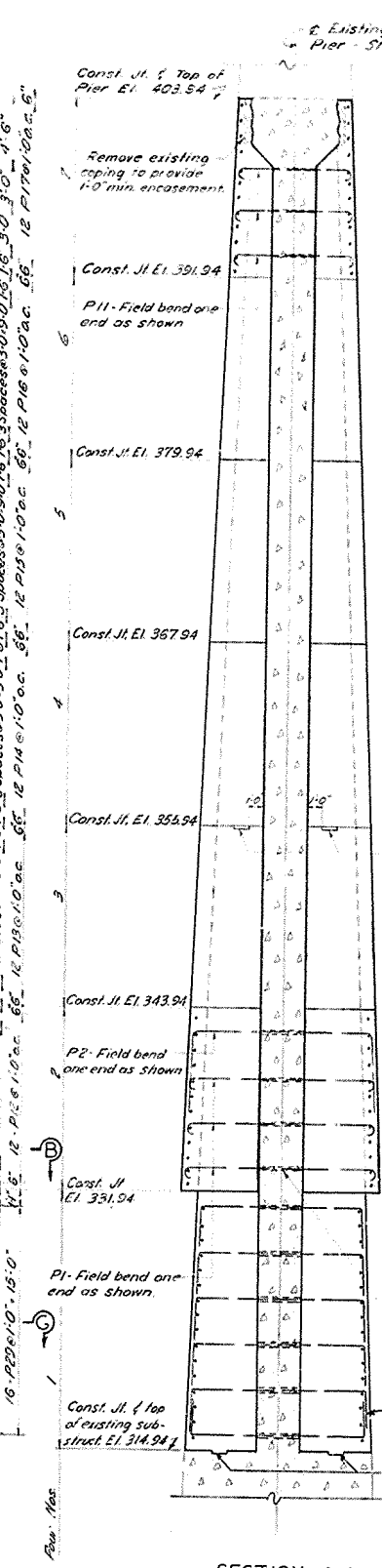
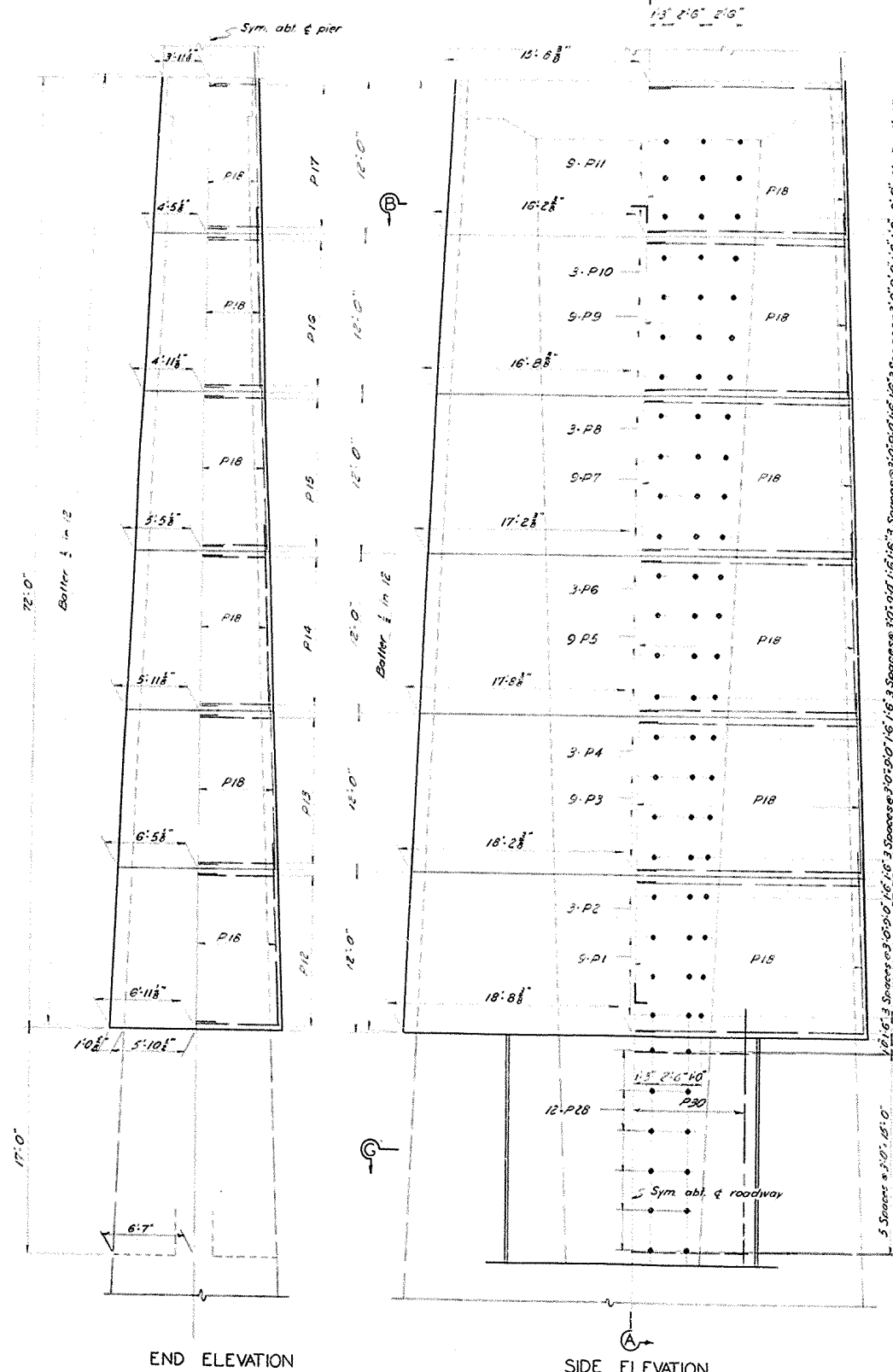
COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
 TRIGG
 CADIZ-MURRAY
 ROAD

STATION PROJECT NO.
 BRIDGE NUMBER DRAWING INDEX
 no. 3879

PIER NO. 2



PER. ACAD. DIST.	DATE	PER. CIV. ENGR. NO.	FOCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



DESIGNED BY	DATE	REVISION	DATE
Detailed by	12-22		
CHECKED BY	DATE	REVISION	DATE
TRACED BY	DATE	REVISION	DATE

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 17 OF 31

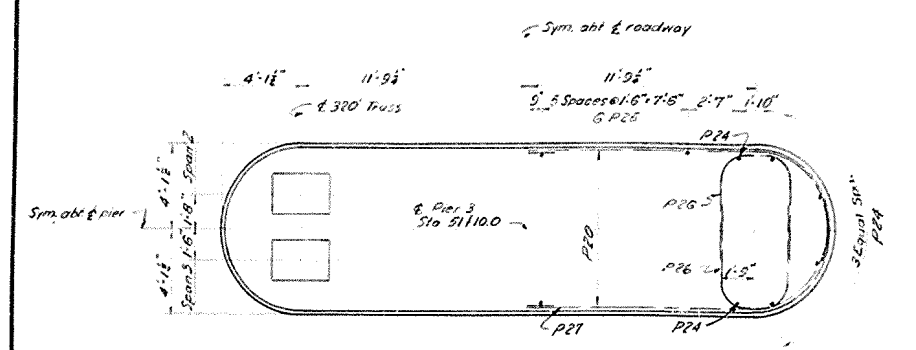
COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
TRIGG
 CADIZ - MURRAY
 ROAD

STATION PROJECT NO.
 BRIDGE NUMBER DRAWING INDEX
 NO. 13879

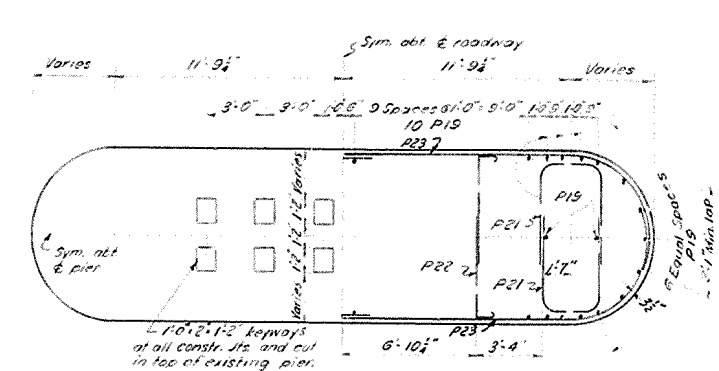
PIER 3



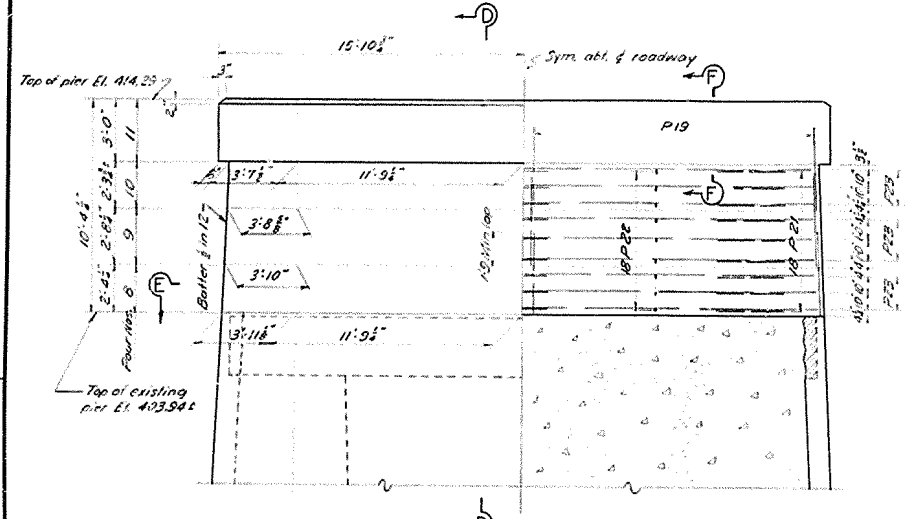
FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



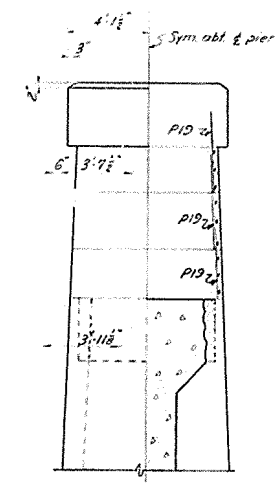
PLAN OF CAP



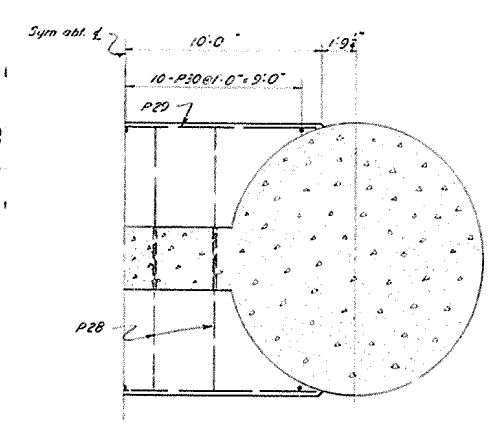
SECTION E-E
TYPICAL FOR POURS 8-11



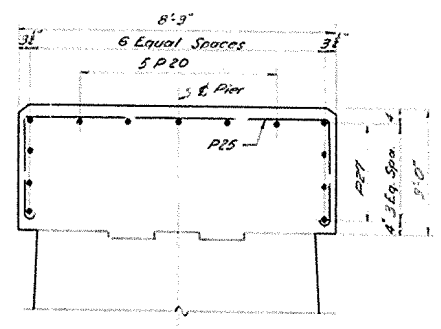
ELEVATION



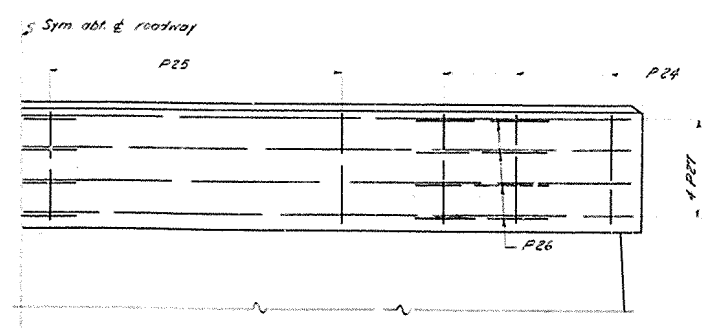
SECTION D-D



HALF SECTION G-G

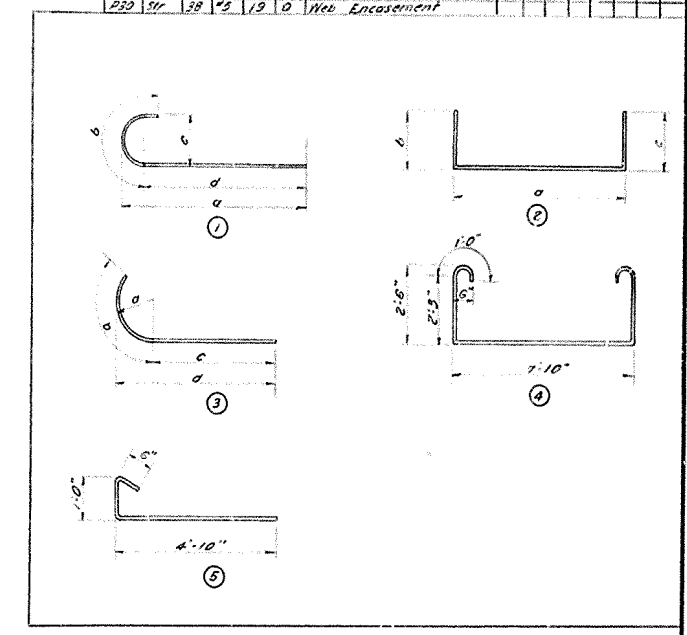


SECTION F-F



HALF ELEVATION OF CAP

MARK	TYPE	W/A	Q/A	BAR	LENGTH	Location			
						a	b	c	d
P1	1	18	5	14	8				
P2	2	6	16	21	5				
P3	1	18	15	13	5				
P4	2	6	16	20	5				
P5	1	18	15	12	8				
P6	2	6	16	19	5				
P7	1	18	15	11	8				
P8	2	6	16	18	5				
P9	1	18	15	10	8				
P10	2	6	16	17	5				
P11	1	18	15	9	8				
P12	3	18	18	22	5				
P13	3	18	18	24	7				
P14	3	18	18	23	5				
P15	3	18	18	22	10				
P16	3	18	18	22	0				
P17	3	18	18	21	1				
P18	Str.	180	15	13	9				
P19	Str.	210	15	4	6				
P20	Str.	5	15	20	0				
P21	2	36	16	12	7				
P22	5	36	16	6	1				
P23	3	30	16	19	7				
P24	Str.	12	16	2	6				
P25	A	12	15	14	2				
P26	2	10	16	13	3				
P27	3	18	16	20	0				
P28	Str.	24	16	16	5				
P29	Str.	32	18	19	8				
P30	Str.	28	15	19	0				



ESTIMATE OF QUANTITIES
 Class A Concrete 647.8 cu.
 Reinforcement 34,480 lbs

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 18 OF 31

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
 TRIGG

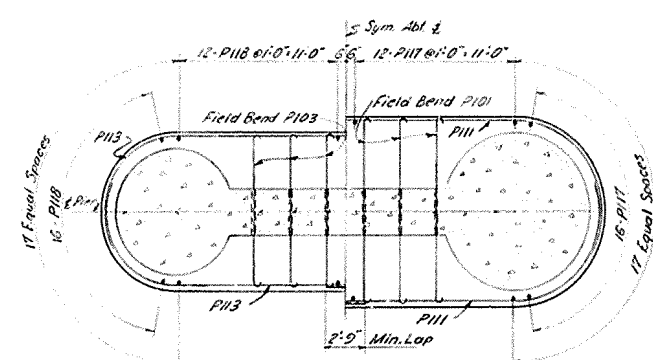
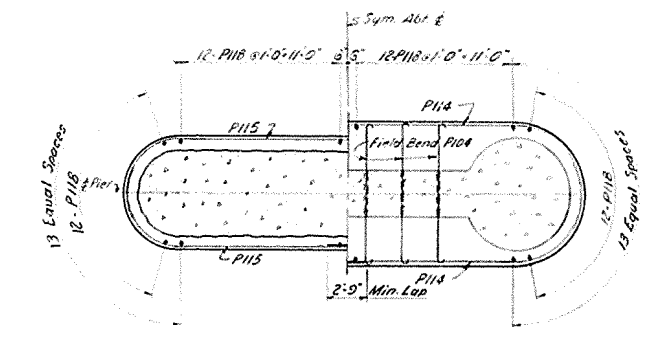
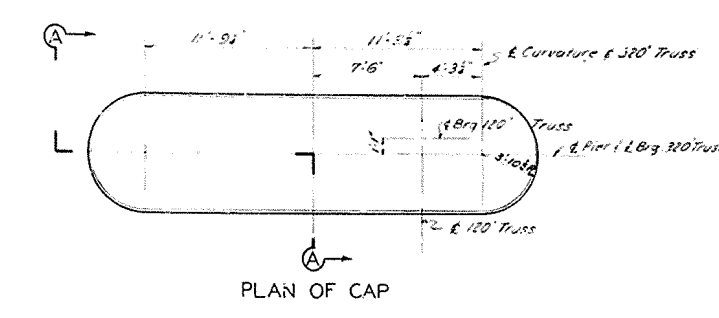
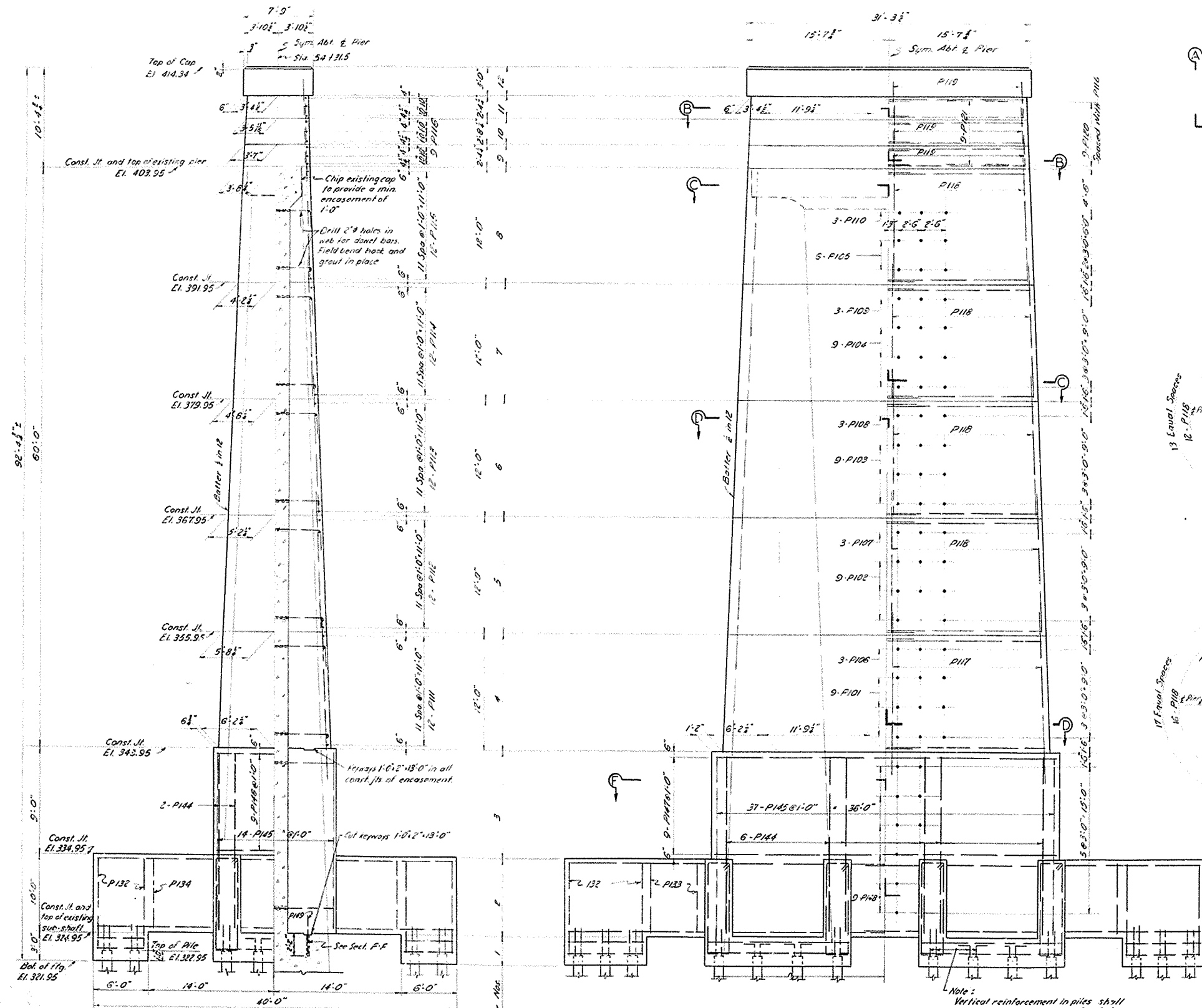
CADIZ-MURRAY
 ROAD

STATION PROJECT NO.
 BRIDGE NUMBER DRAWING NO. 13879

PIER 3

DESIGNED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 REVISIONS: _____ DATE: _____
 TRACED BY: _____ DATE: _____

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



Note: Vertical reinforcement in piers shall be stripped for a distance of 40' above pile cut-off to avoid into loading.

DESIGNED BY	DATE	REVISION	DATE
CHECKED BY	DATE	REVISION	DATE
APPROVED BY	DATE	REVISION	DATE

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 19 OF 31

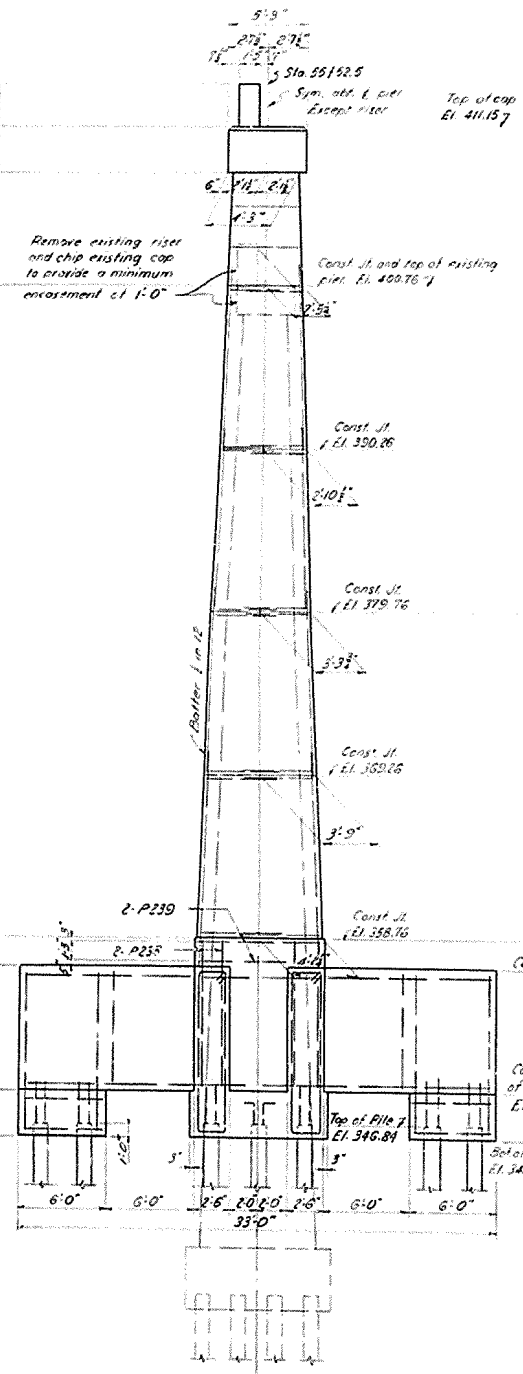
COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
TRIGG
 CADIZ - MURRAY
 ROAD

STATION: _____
 BRIDGE NUMBER: _____
 PROJECT NO.: _____
 DRAWING NO.: 13879

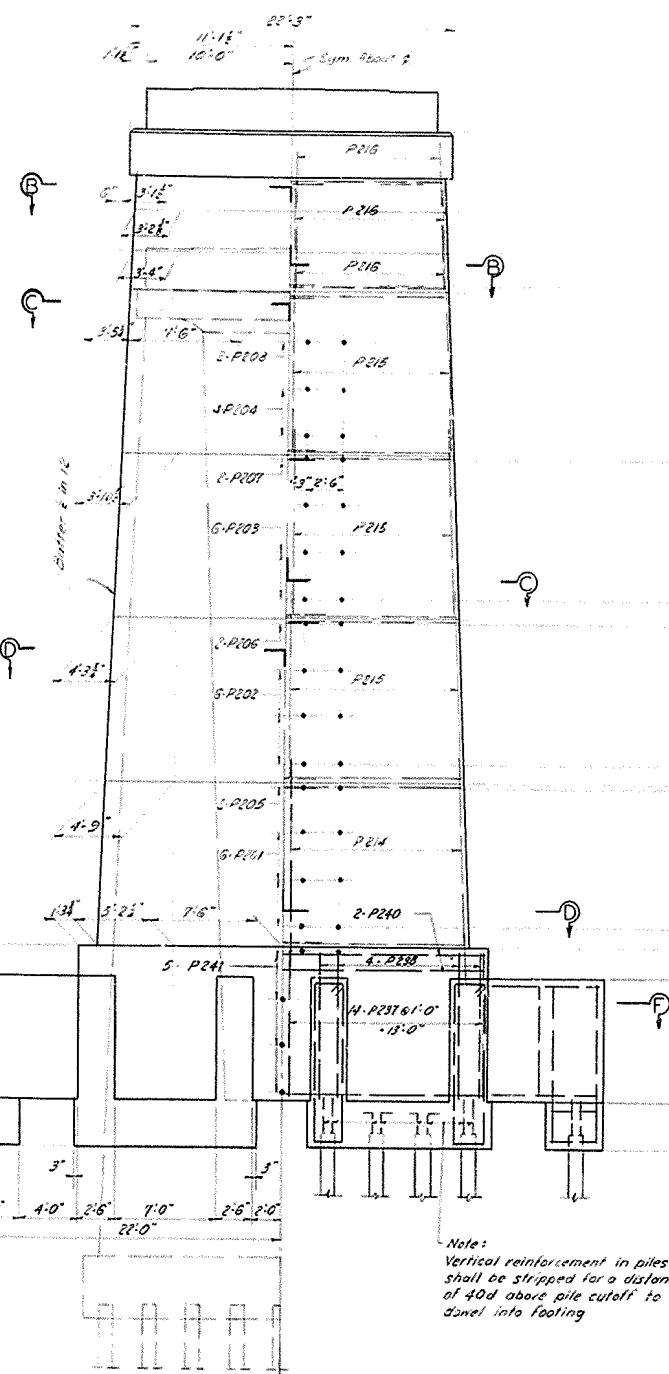
PIER 4

BRIDGE

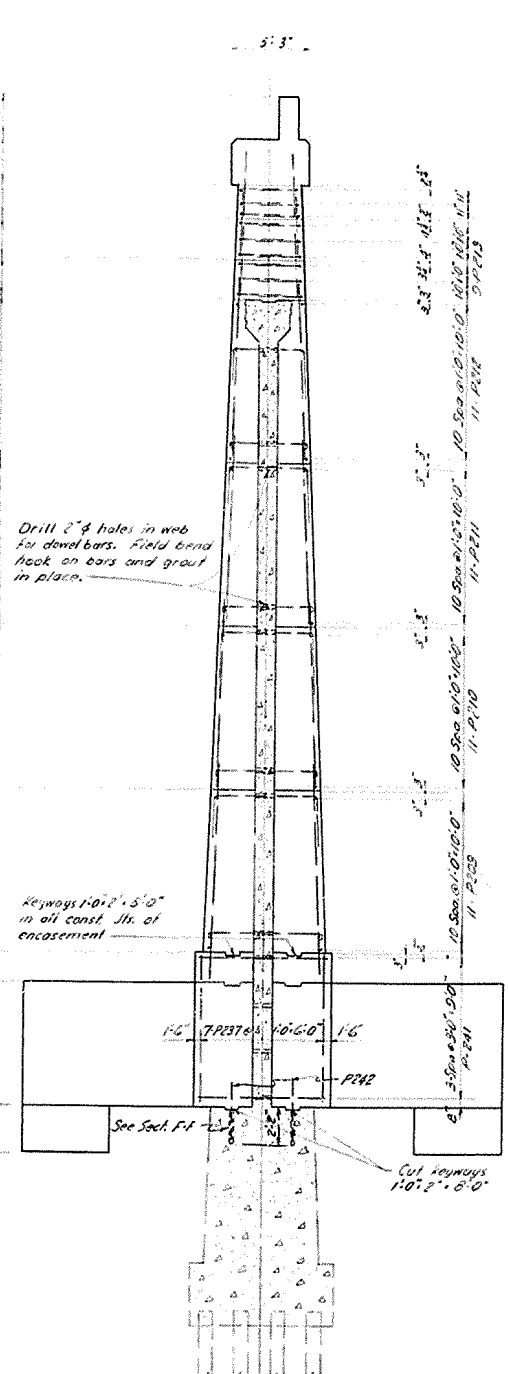
P.R. NO.	STATE	P.R. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



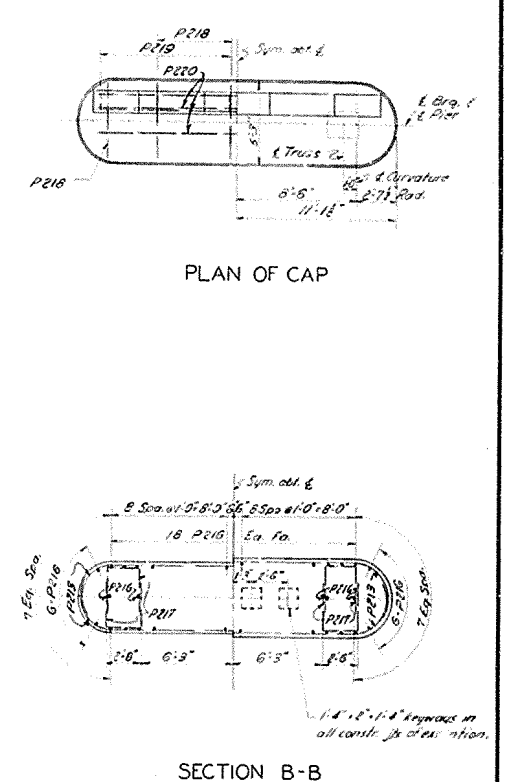
END ELEVATION



ELEVATION



SECTION A-A



PLAN OF CAP

SECTION B-B

DESIGNED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____
 REVISIONS:
 NO. DATE BY DESCRIPTION
 1. _____
 2. _____
 3. _____
 4. _____
 5. _____
 6. _____
 7. _____
 8. _____
 9. _____
 10. _____
 11. _____
 12. _____

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 21 OF 31

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
TRIGG

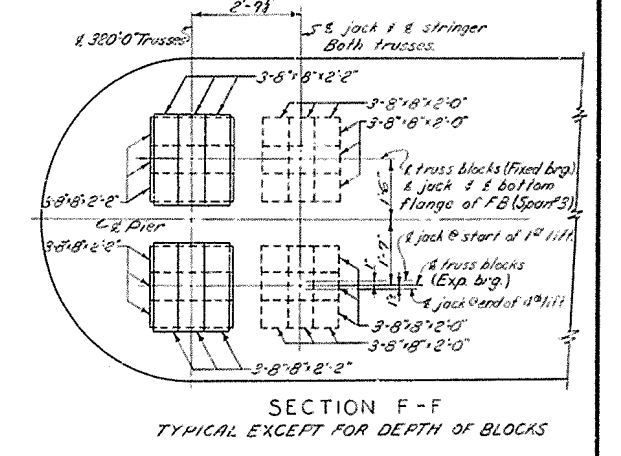
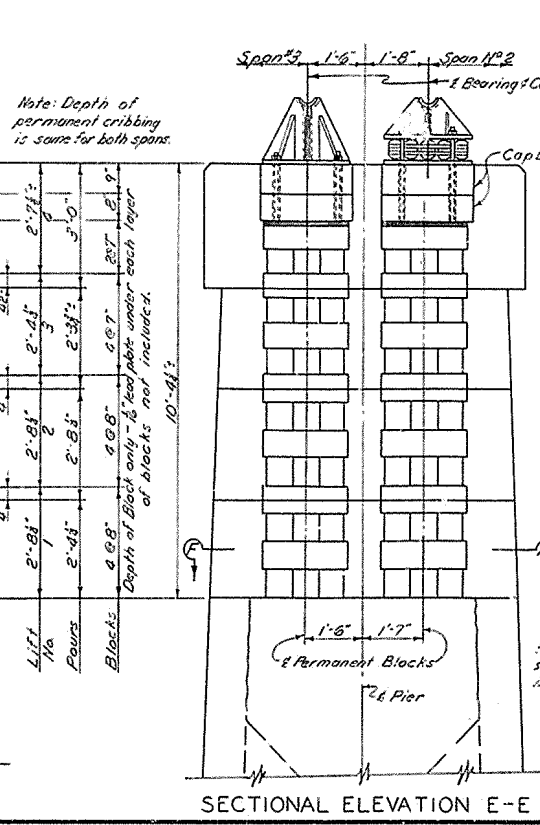
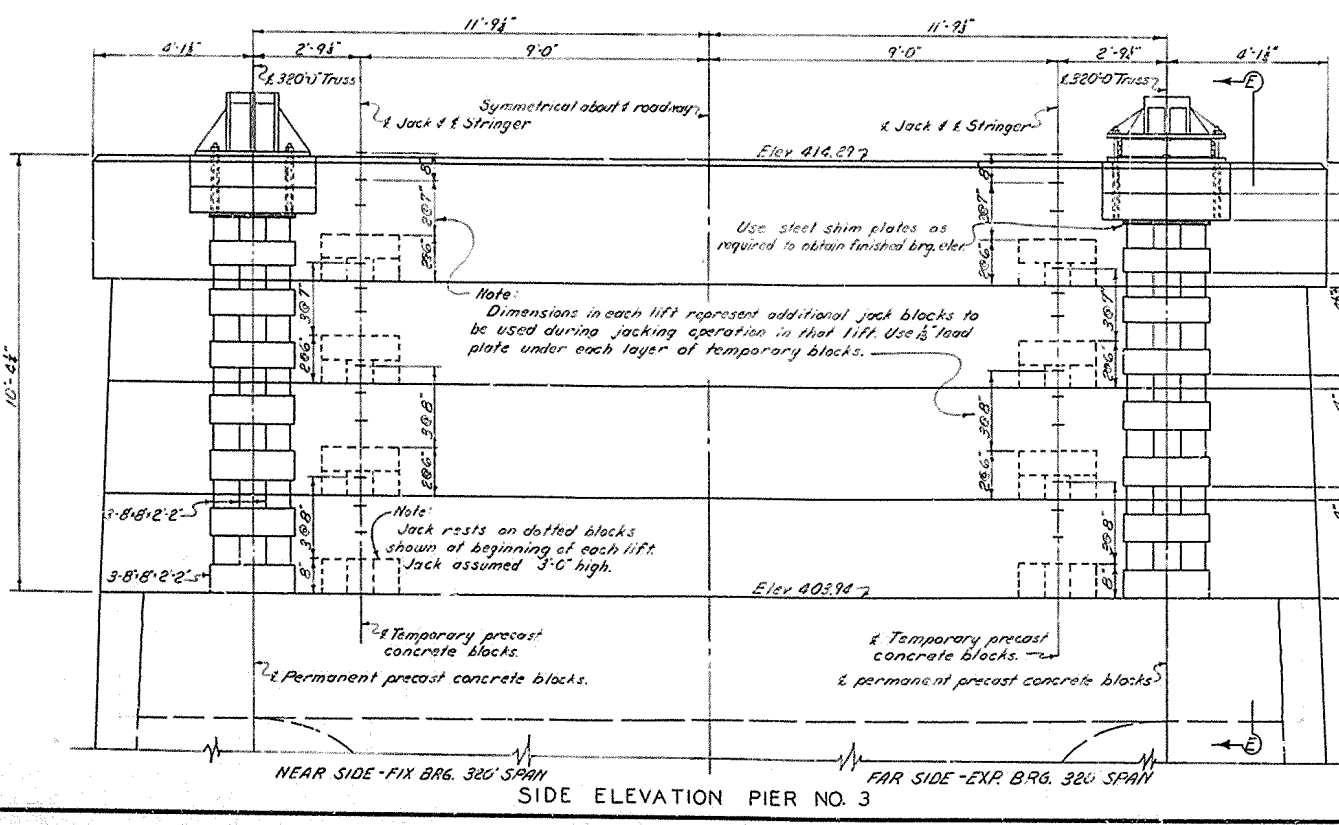
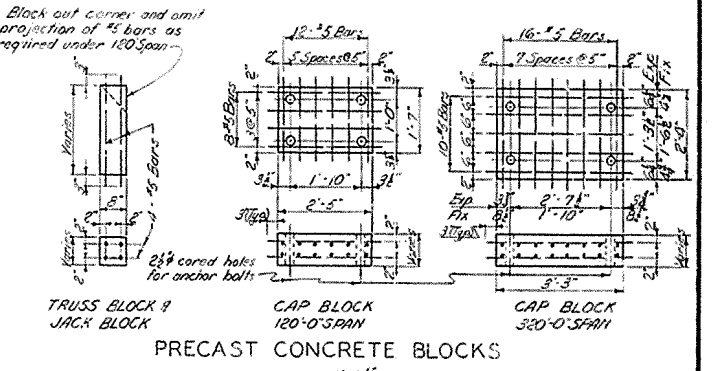
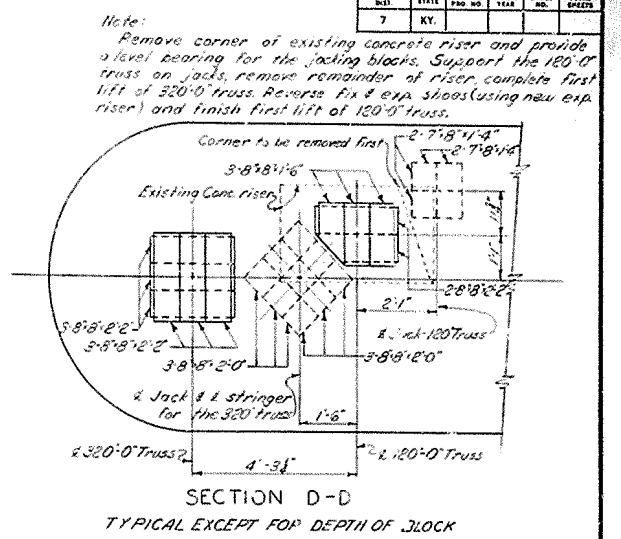
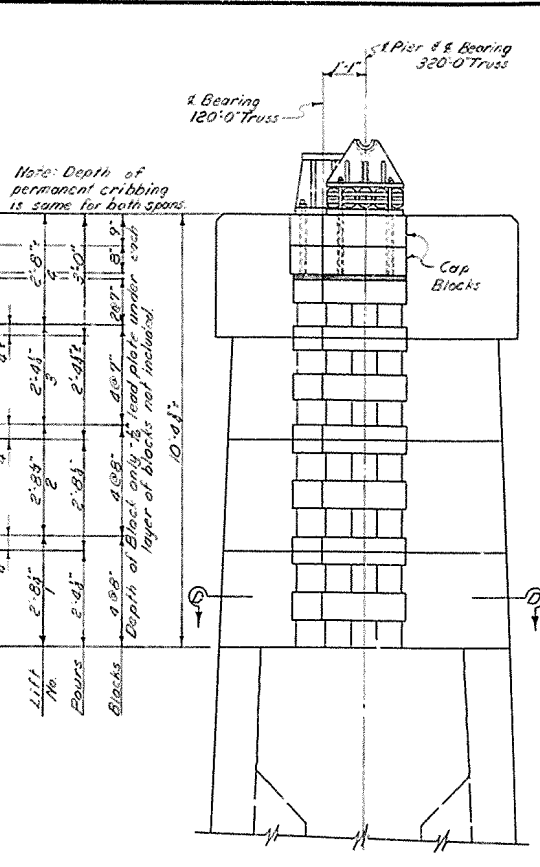
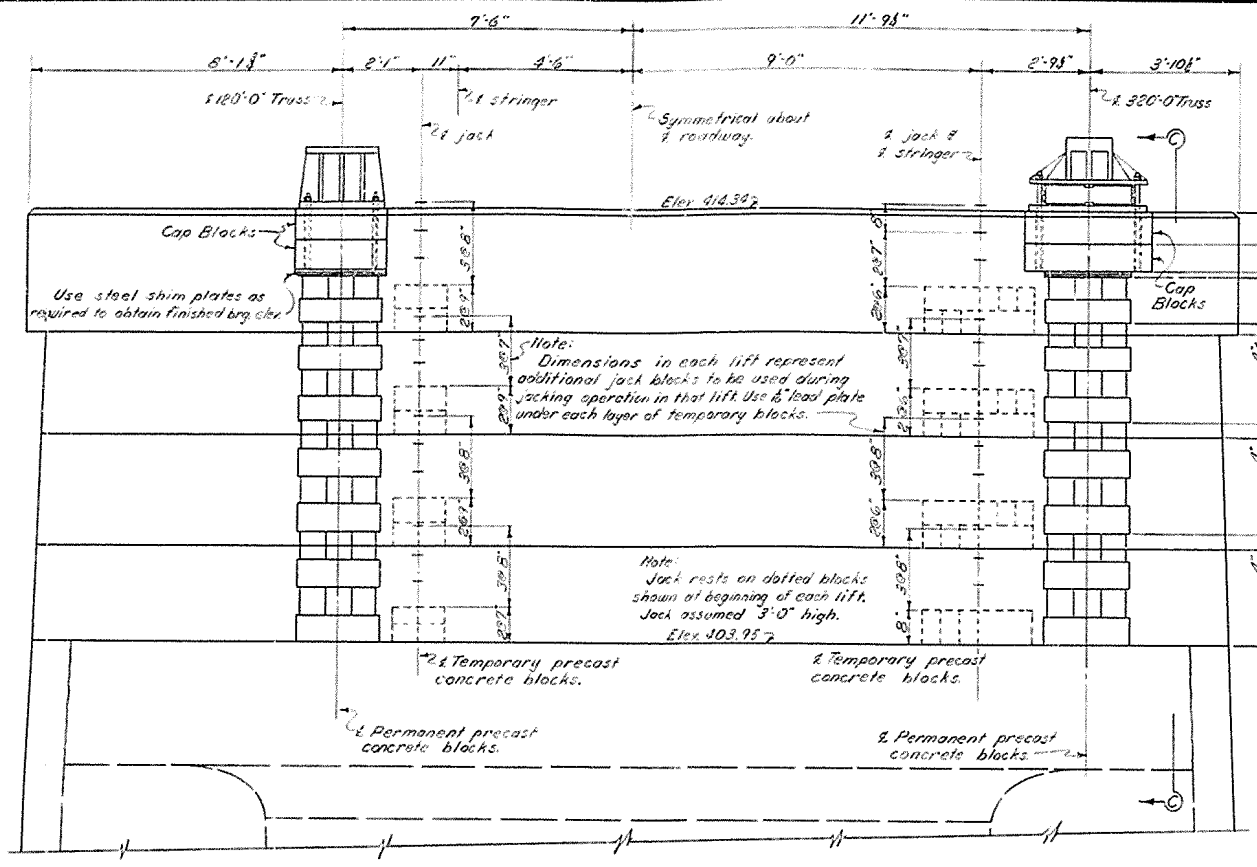
CADIZ - MURRAY
 ROAD

STATION _____ PROJECT NO. _____
 BRIDGE NUMBER _____ DRAWING NO. 13879 INDEX _____

PIER 5



FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



LIFTING STAGES & JACKING METHOD

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 24 OF 31

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT COUNTY OF
TRIGG
CADIZ-MURRAY ROAD

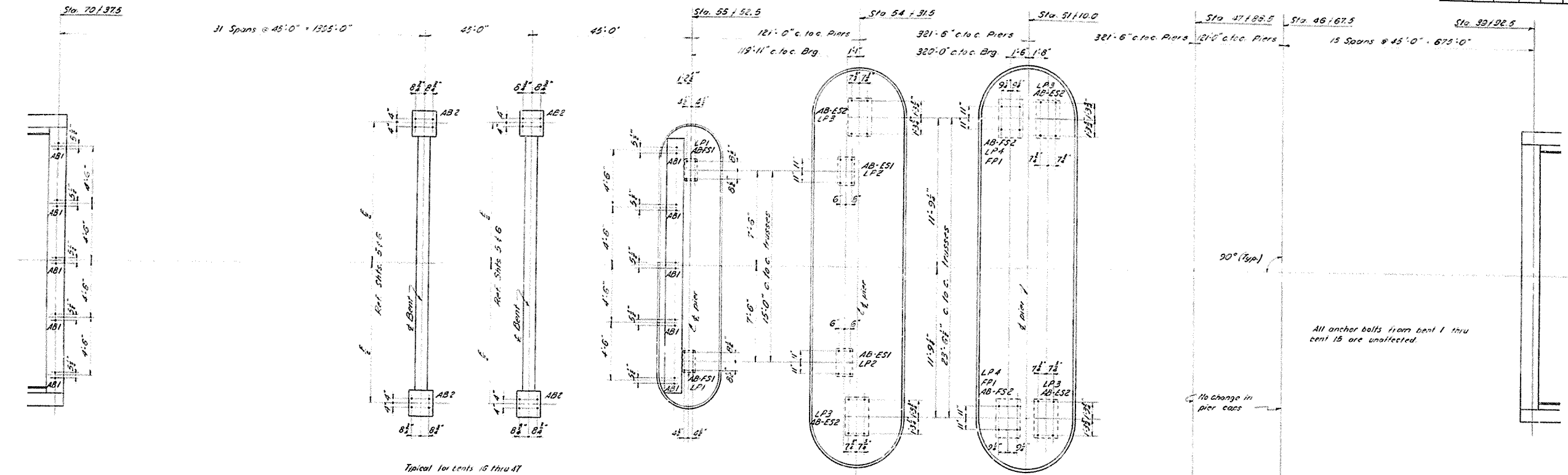
STATION: _____ PROJECT NO.: _____
BRIDGE NUMBER: _____ DRAWING NO.: 13879

Estimated weight of structural steel shown on this sheet is 6,000 lbs. (Includes 2150' load)

DESIGNED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
REVISIONS: _____
DATE: _____



FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



ABUTMENT (BENT 10)

BENT 17

BENT 16

PIER 5

PIER 4

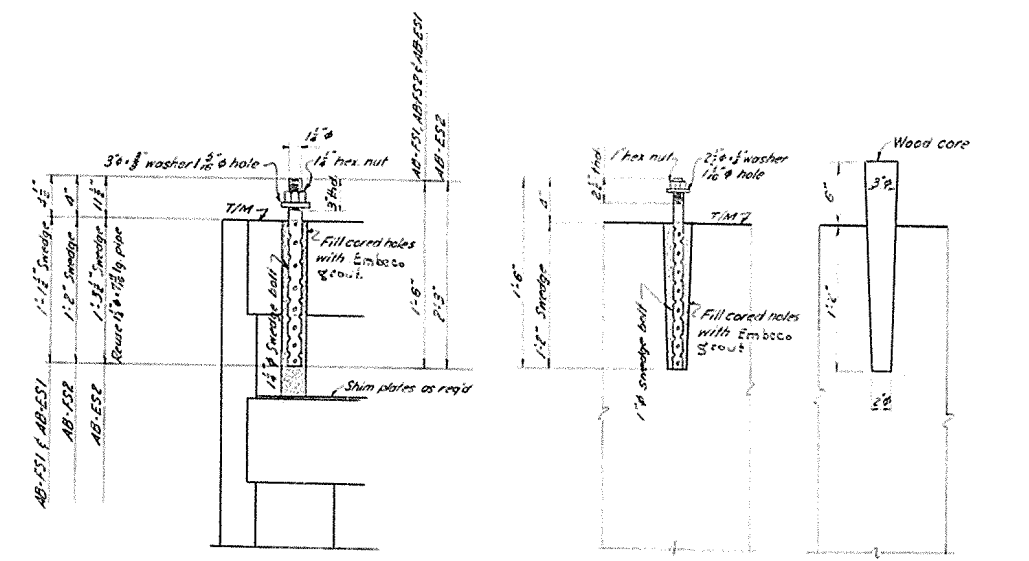
PIER 3

PIER 2

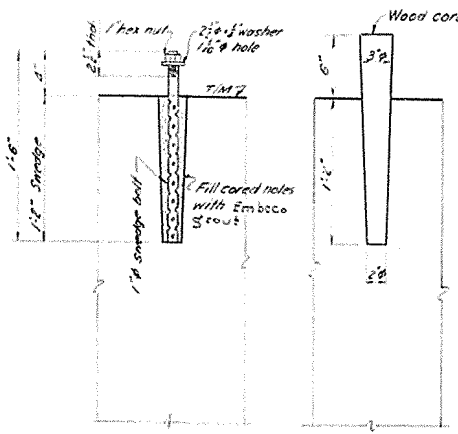
PIER 1

ABUTMENT (BENT 1)

PLAN

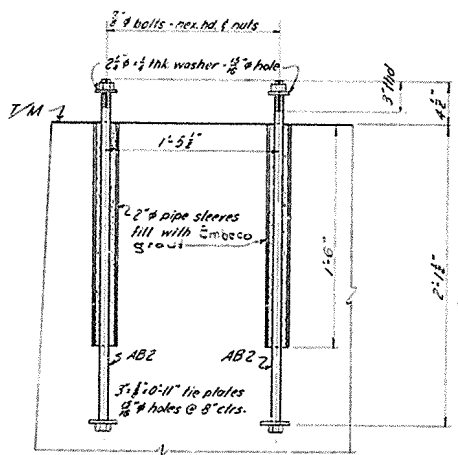


ANCHOR BOLTS
 8-REQD - MK AB-F31
 8-REQD - MK AB-E31
 8-REQD - MK AB-F32
 16-REQD - MK AB-E32



ANCHOR BOLT
 20-REQD - MK AB1

DETAIL OF CORED HOLES FOR ANCHOR BOLTS AB1



ANCHOR BOLTS
 256-REQD - MK AB2 (64 Columns)
 Material for one column bearing is:
 4 - 2 1/2" x 3" thd. hex hd. & nuts
 4 - 2 1/2" x 1 1/2" thd. washers - 3/8" hole
 4 - 2" x 10" x 1/2" pipe sleeves
 2 R.S. - 3" x 10" x 1/2" holes @ 8" ctrs.

Note:
 This steel is intended only to give the approximate location and materials required. Although theoretical dimensions are shown, the contractor is responsible for carefully checking all dimensions.

All work shown on this sheet to be included in the Lump Sum bid for Raising the Existing Cumberland River Bridge and the Lump Sum Bid for Structural Steel.
 Estimated weight of structural steel shown on this sheet is 3750 lbs

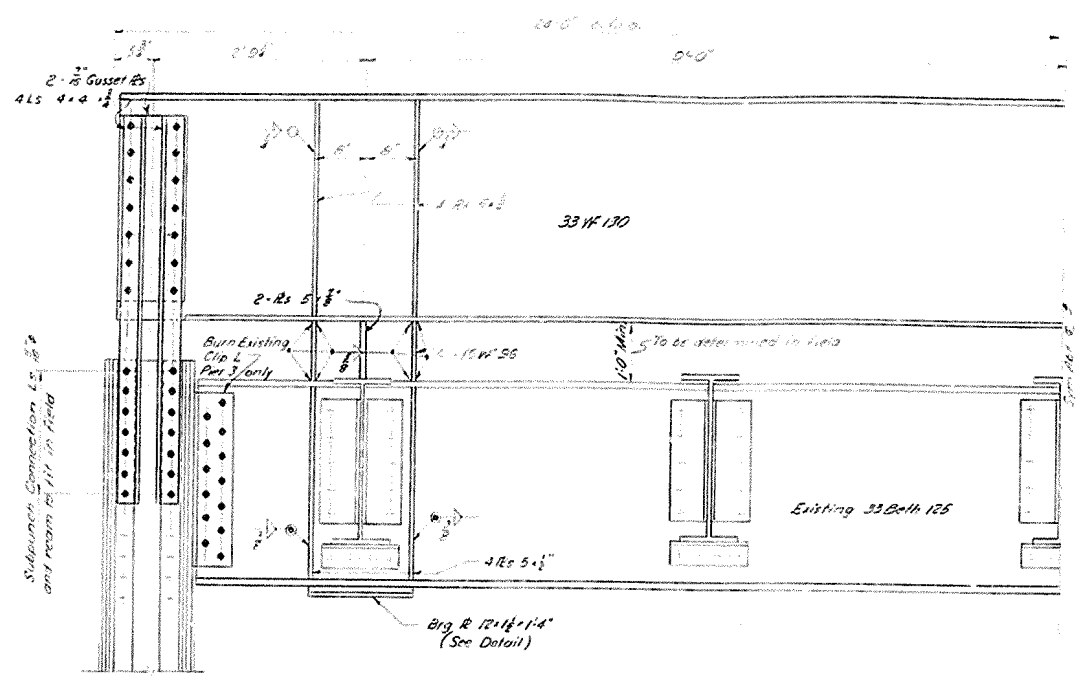
DESIGNED BY	CHECKED BY	DATE	REVISED BY	DATE
TRACED BY	CHECKED BY	DATE	REVISED BY	DATE

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 25 OF 31

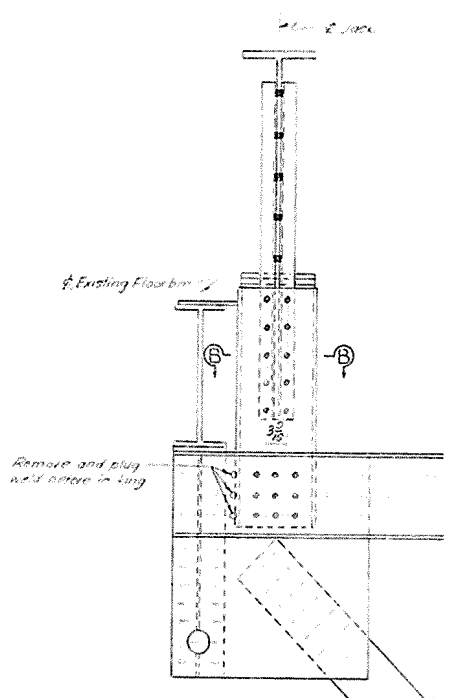
COMMONWEALTH OF KENTUCKY DEPARTMENT OF HIGHWAYS FRANKFORT COUNTY OF TRIGG CADIZ-MURRAY ROAD	
STATION BRIDGE NUMBER	PROJECT NO. INDEX
	NO. 15819

ANCHOR BOLT PLAN

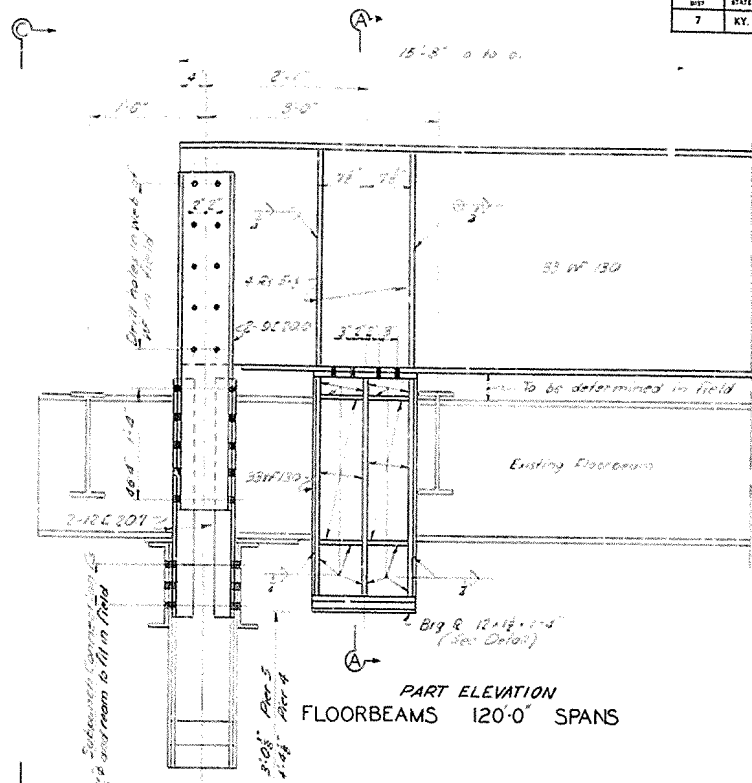




HALF ELEVATION
FLOORBEAMS 320' SPANS



ELEVATION C-C



PART ELEVATION
FLOORBEAMS 120' SPANS

SURFACE FINISH OF STEEL - SPECIFICATIONS

Steel Splice	A.S.A. 1000
Heavy Plates in Contact in Shoes to be Welded	A.S.A. 1000
Milled Ends of Compression Members, Stirrers & Fillers	A.S.A. 500
Bridge Rollers and Rockers	A.S.A. 250
A.S.T.M. SPECIFICATIONS	
Structural Steel	A 9-367
Structural Rivet Steel	B 141-56
Steel Lead and Lead for Anchor Detail Holes	B 29 Cur. Spec.
High Strength Bolts - Heads & Washers	A 315-55T

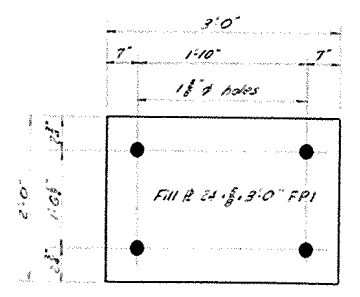
Estimated Weight of Structural Steel on this Sheet is 23,920 lbs.
(Includes 575# lead) Estimated Salvage \$1,550 lbs.

3'-1"	LP 4	
3'-1"	LP 3	
2'-4"	LP 2	
1'-10"	LP 1	
1 1/2"	1'-10"	LP 4
2 3/8"	2'-7 1/2"	LP 3
3"	1'-10"	LP 2
2 1/2"	1'-5"	LP 1

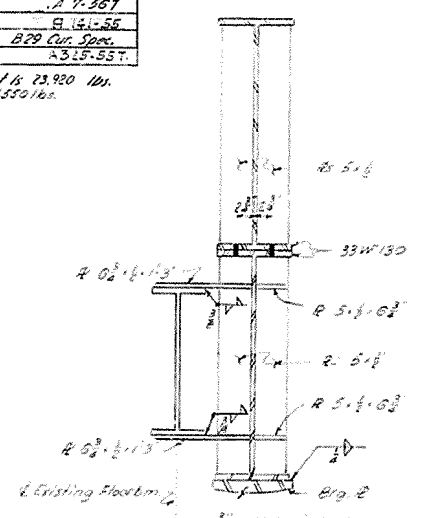
1 1/2" holes

LP 4	2'-1"
LP 3	1'-6"
LP 2	1'-2"
LP 1	1'-0"
LP 4	1'-0 1/2"
LP 3	1'-3 1/2"
LP 2	1'-0"
LP 1	0"

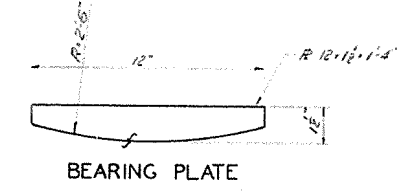
LEAD PLATES
2 Req'd MK LP 1
2 Req'd MK LP 2
3 Req'd MK LP 3
2 Req'd MK LP 4



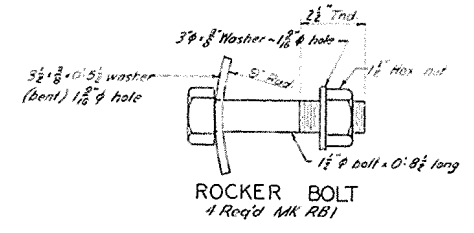
FILL PLATE
2 Req'd MK FPI



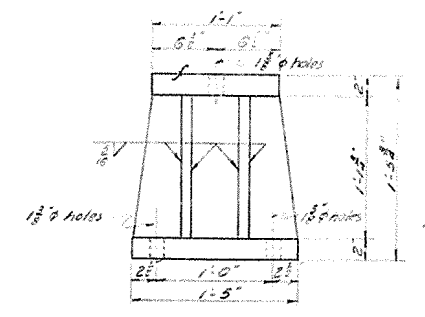
SECTION A-A



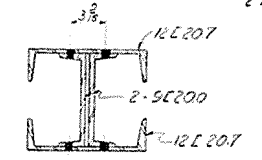
BEARING PLATE



ROCKER BOLT
4 Req'd MK RB1

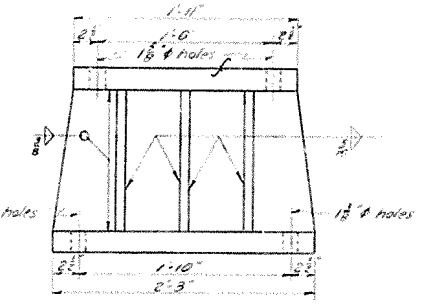
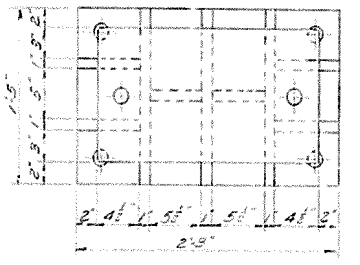


EXPANSION SHOE RISER
2 Req'd of Pier 4



SECTION B-B

TRUSS ALTERATIONS



CUMBERLAND RIVER BRIDGE AT CANTON SHEET 26 OF 31

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
TRIGG
CADIZ - MURRAY
ROAD

STATION	PROJECT NO.
BRIDGE NUMBER	DRAWING NO. 13879

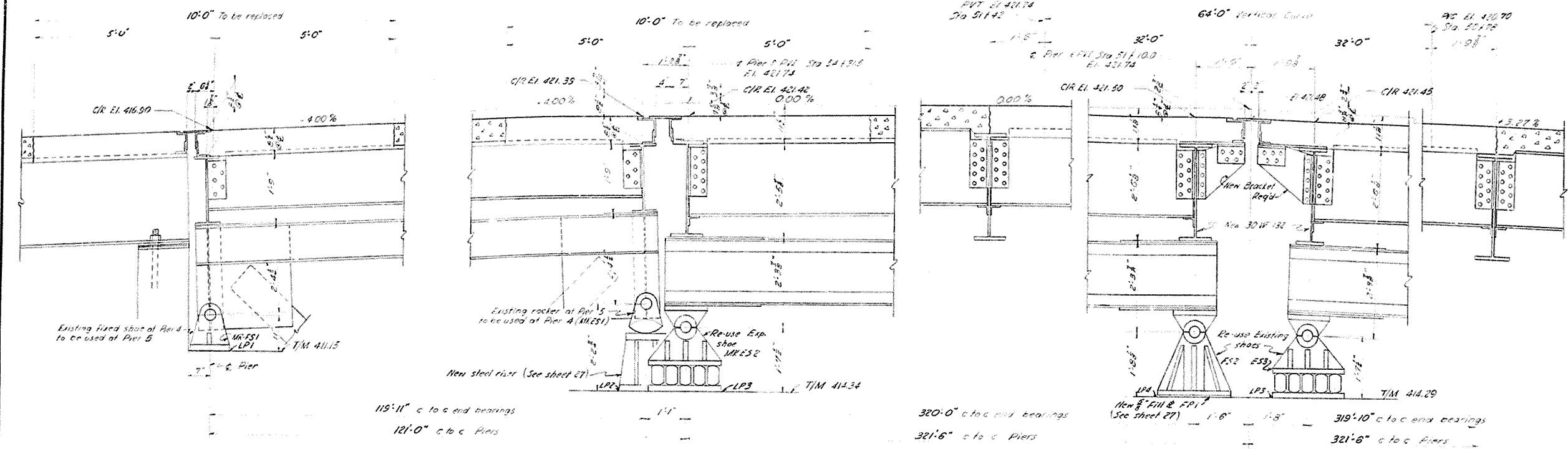
DESIGNED BY: CEV
CHECKED BY: [Signature]
DATE: [Date]

REVISIONS:

NO.	DATE	DESCRIPTION



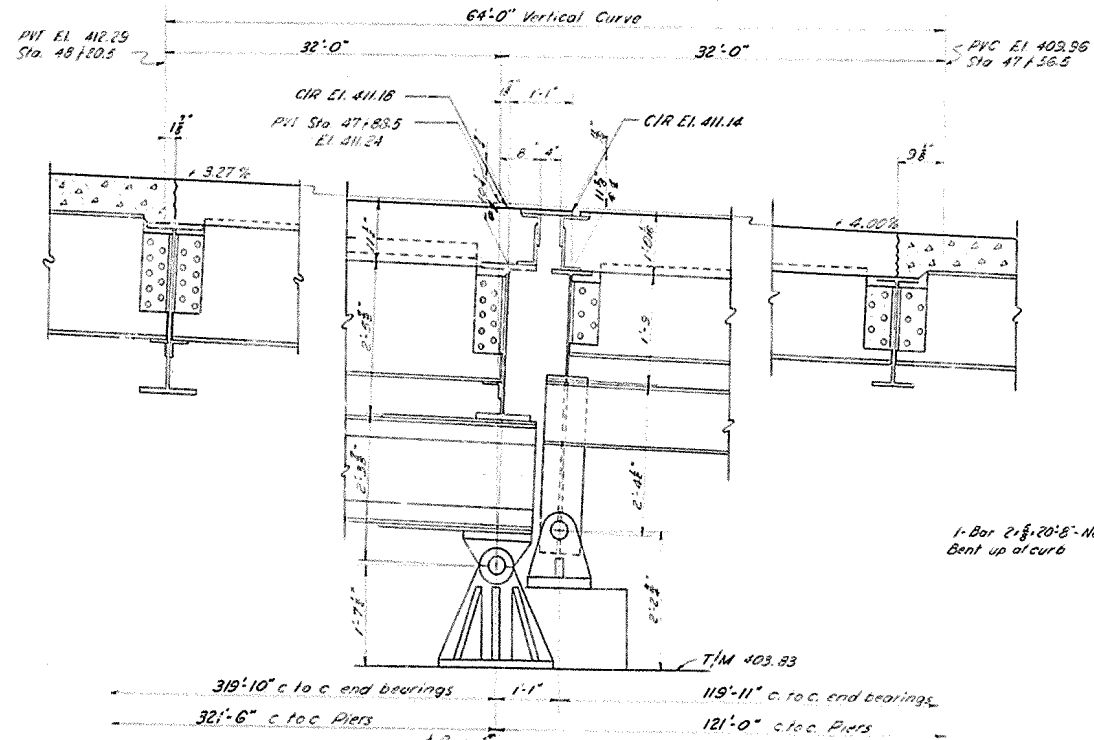
FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



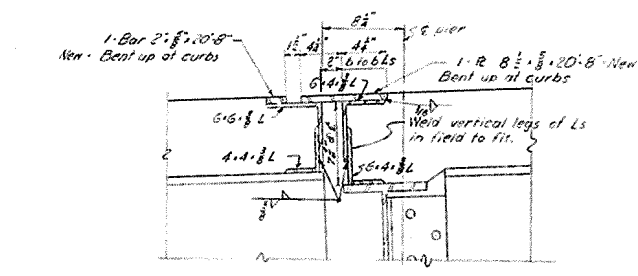
PIER 5

PIER 4

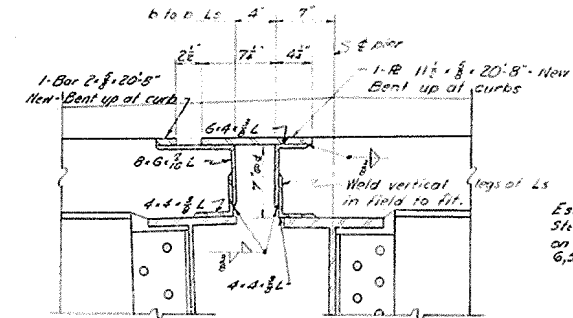
PIER 3



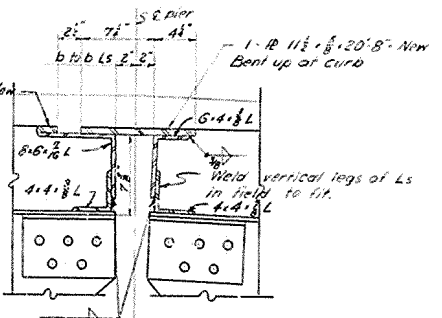
PIER 2



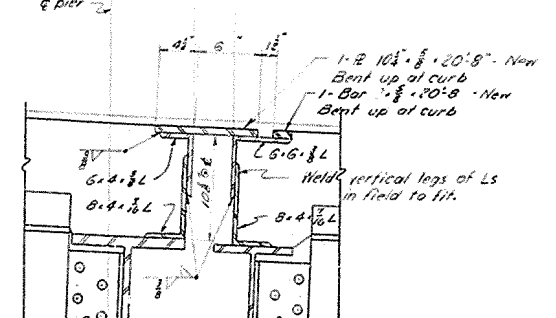
PIER 5



PIER 4



PIER 3



PIER 2

FLOOR BEAMS & BEARINGS

Estimated weight of Structural Ste. in expansion devices shown on this sheet is approximately 6,500 lbs. Estimated Salrags 6,500 lbs.

Note: All work shown on this sheet, except replacing portions of roadway slab, to be included in the lump sum bid for Structural Steel.
For Anchor Bolt Location see sheet 25
For Other Struct. Steel Alterations see shts. 27, 28 & 29
For Roadway Slab Alterations see sht. 30 & 31

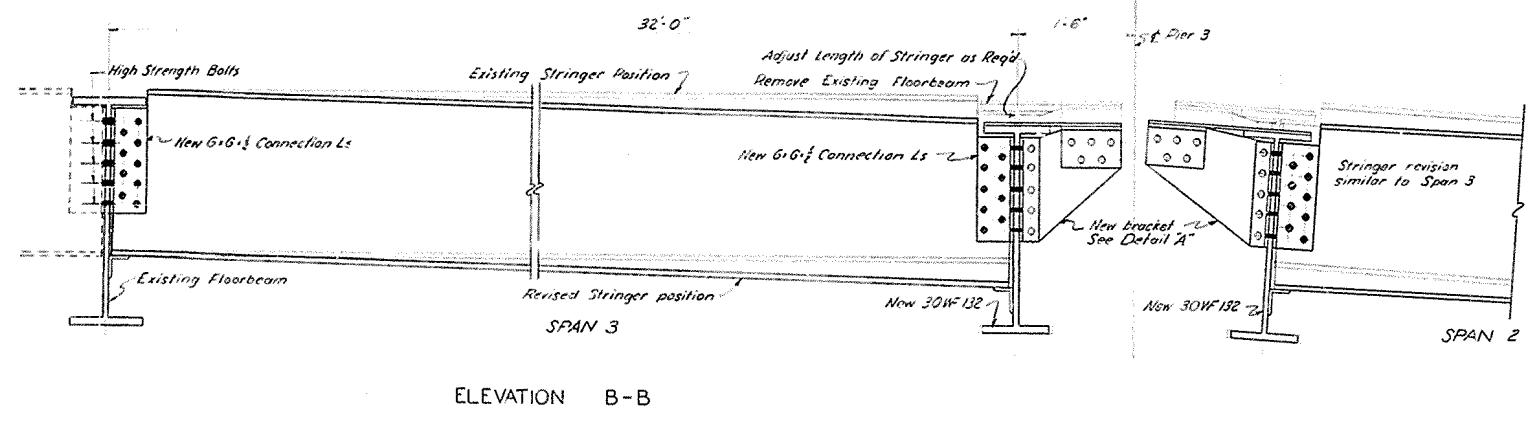
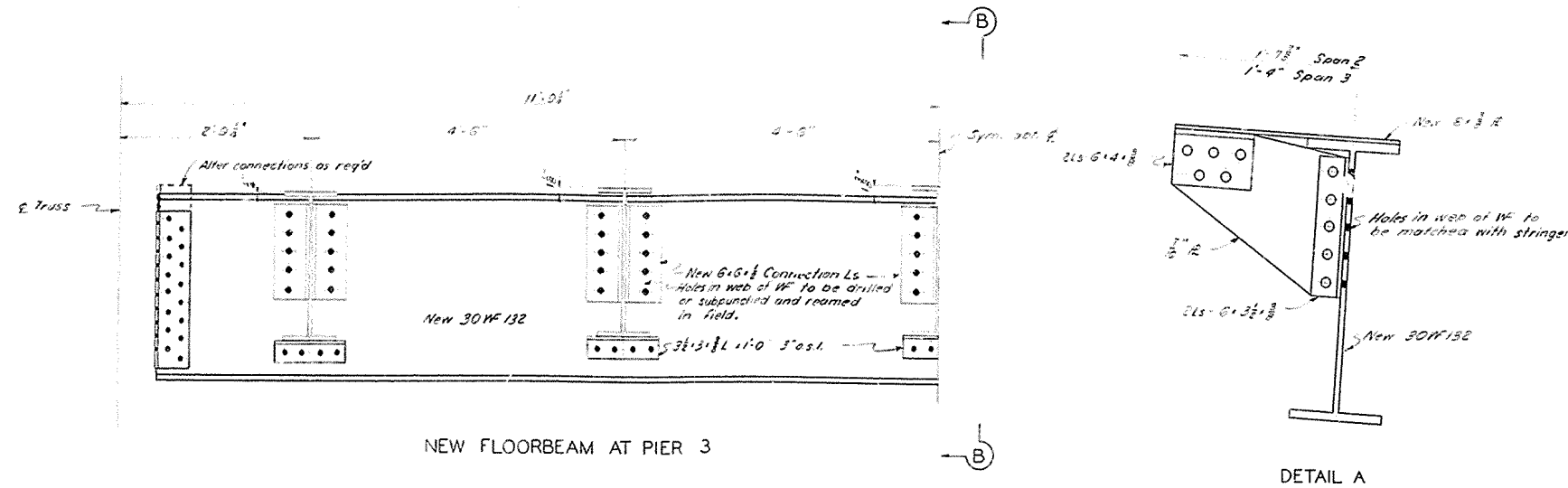
DATE	DATE	DATE	DATE
REVISION	REVISION	REVISION	REVISION
DESIGNED BY	CHECKED BY	DESIGNED BY	CHECKED BY
DATE	DATE	DATE	DATE

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 27 OF 31

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
 TRIGG
 CADIZ - MURRAY
 ROAD

STATION	PROJECT NO.
BRIDGE NUMBER	NO. 13879

FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



Note:
 All work shown on this sheet to be included in the Lump Sum bid for Structural Steel. Estimated weight of structural steel shown on this sheet is 8100 lbs. Estimated Salrage 8100 lbs. Shop rivets to be 3/8". Field connections to be made with 3/8" rivets or 3/8" high strength bolts. Work this sheet with sheets 28, 27, 29, 30, 31.

CUMBERLAND RIVER BRIDGE AT CANTON SHEET 28 OF 31

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
 TRIGG
 CADIZ - MURRAY
 ROAD

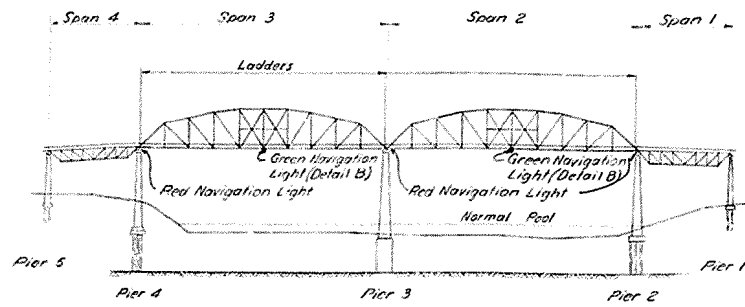
STATION: _____
 BRIDGE NUMBER: _____
 PROJECT NO.: _____
 DRAWING NO.: 13879

NEW FLOOR BEAMS

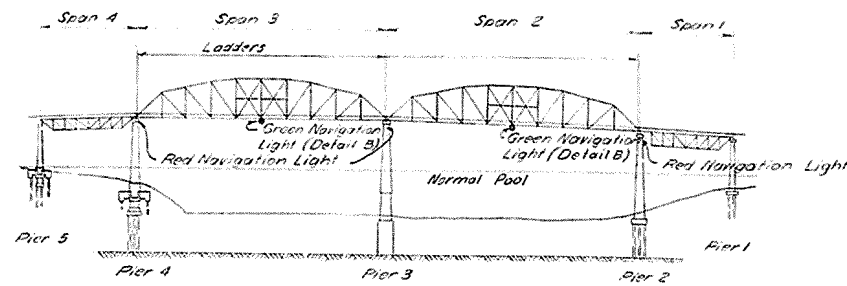
DESIGNED BY	DATE	REVIEWED	DATE
Detailed by	11/28/57	Checked by	11/28/57
TRACED BY			



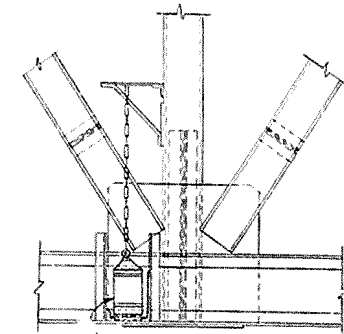
FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY.				



EXISTING ELEVATION

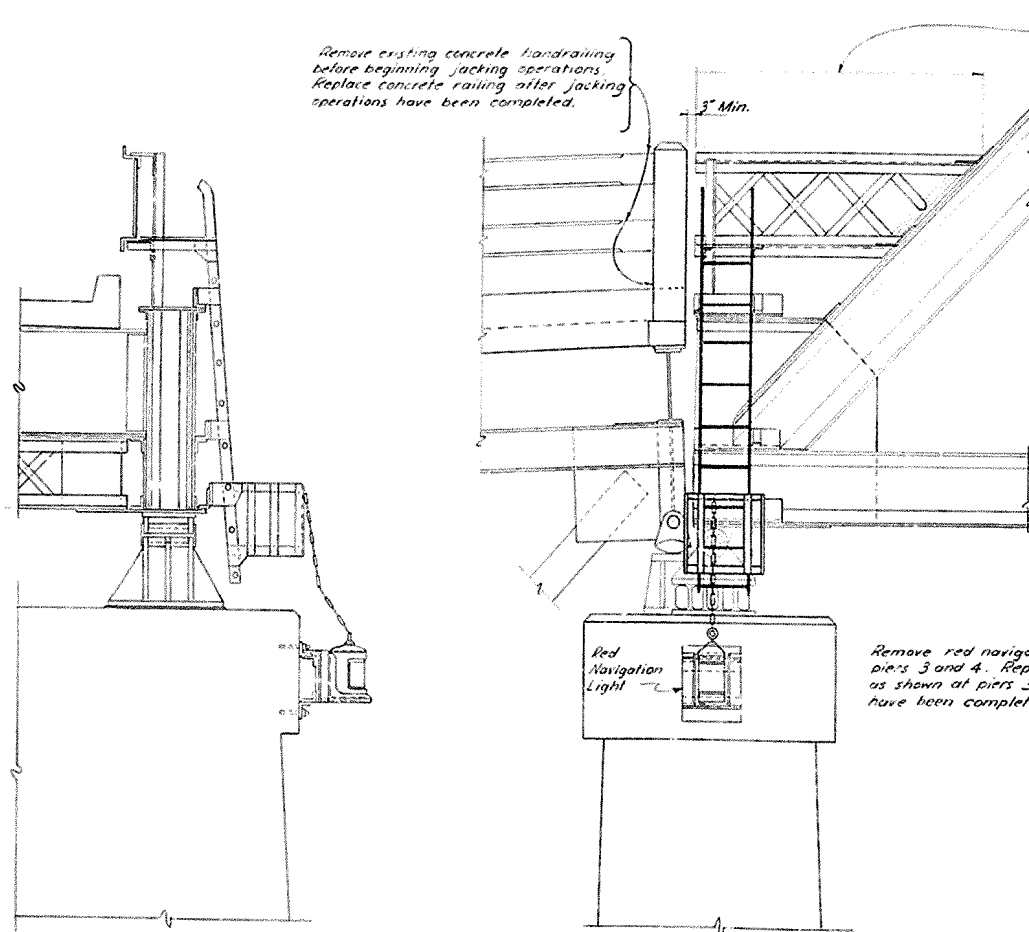


PROPOSED ELEVATION

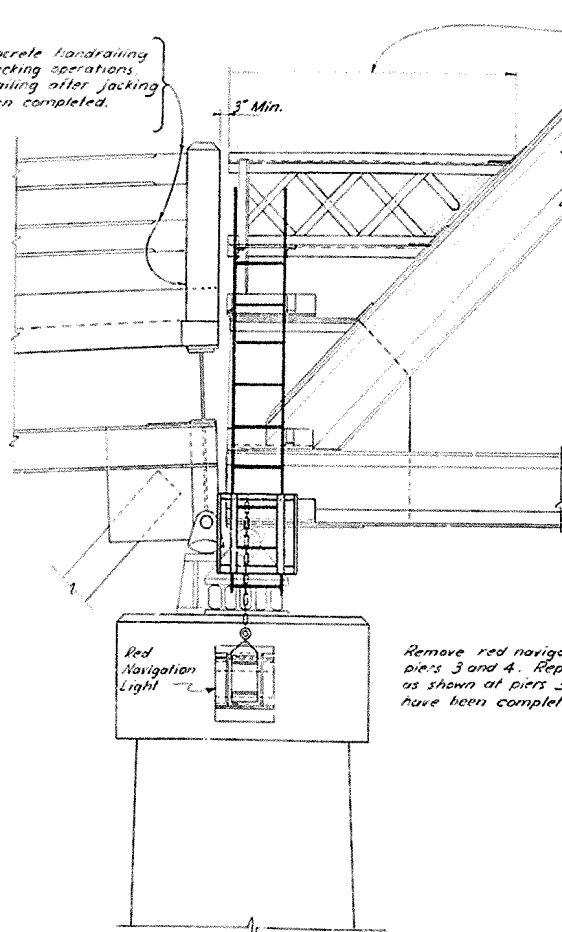


Existing Green Navigation Lights shall not be disturbed.

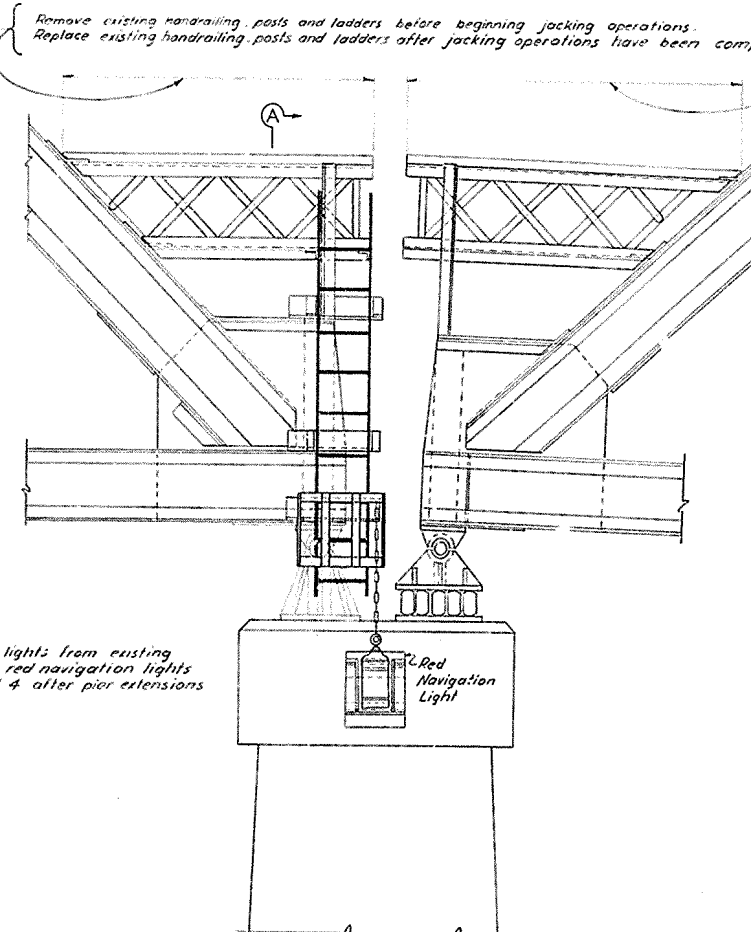
DETAIL B



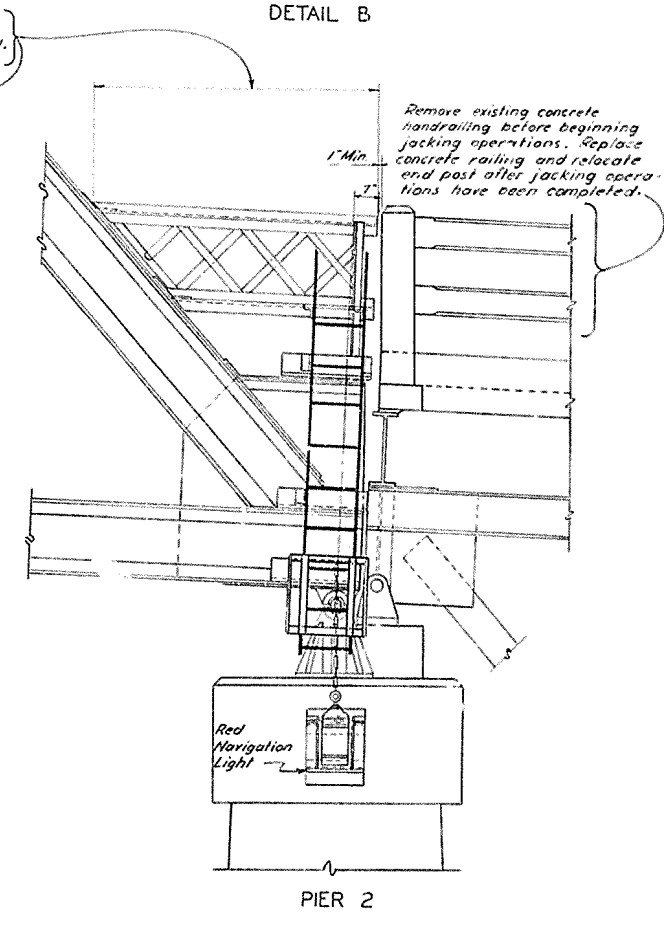
SECTION A-A



PIER 4



PIER 3



PIER 2

DESIGNED BY	CHECKED BY	DATE	REVISION	DATE
DETAILS BY	CHECKED BY	DATE	REVISION	DATE
DRAWN BY	CHECKED BY	DATE	REVISION	DATE

Note:
All work shown on this sheet, with the exception of concrete railing and end post replacement, to be included in the Lump Sum bid for Raising the Existing Cumberland River Bridge.

MISCELLANEOUS

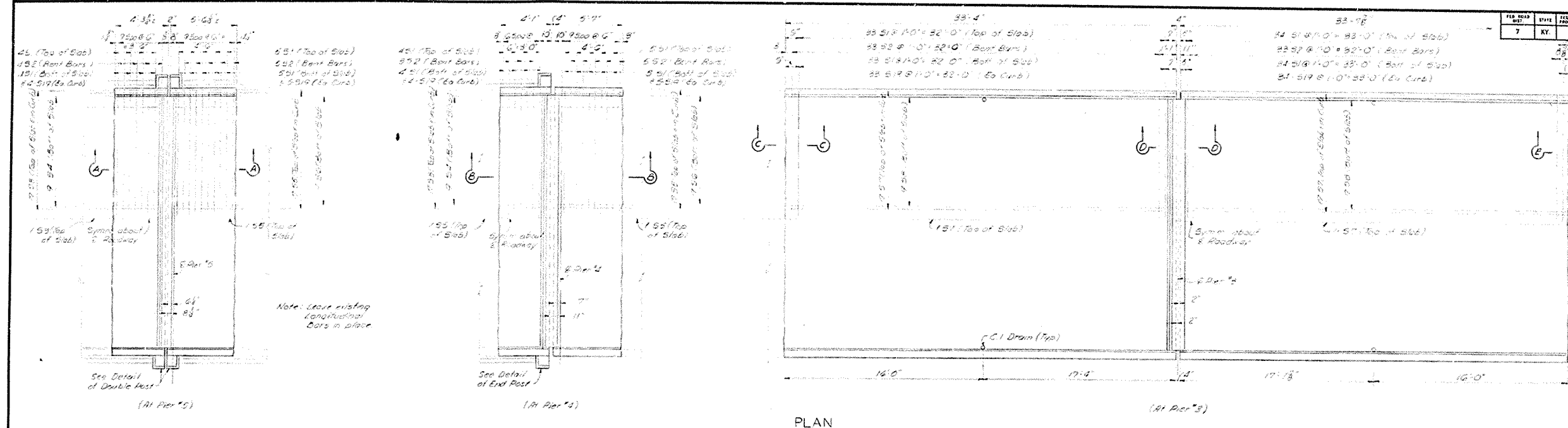
CUMBERLAND RIVER BRIDGE AT CANTON SHEET 29 OF 31

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
 TRIGG
 CADIZ - MURRAY
 ROAD

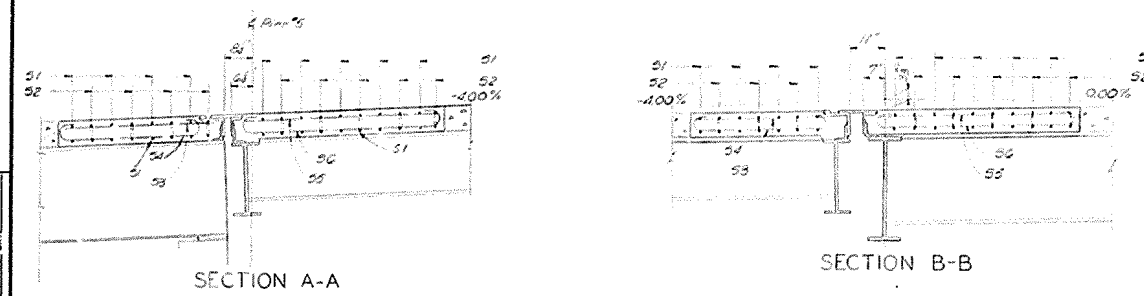
STATION: _____ PROJECT NO. _____
 BRIDGE NUMBER: _____ DRAWING INDEX: _____
 no. 3879



FED. ROAD DIST.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
7	KY				

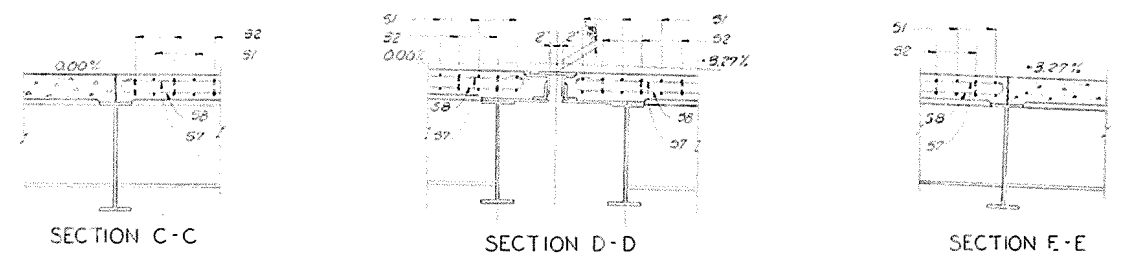


PLAN



SECTION A-A

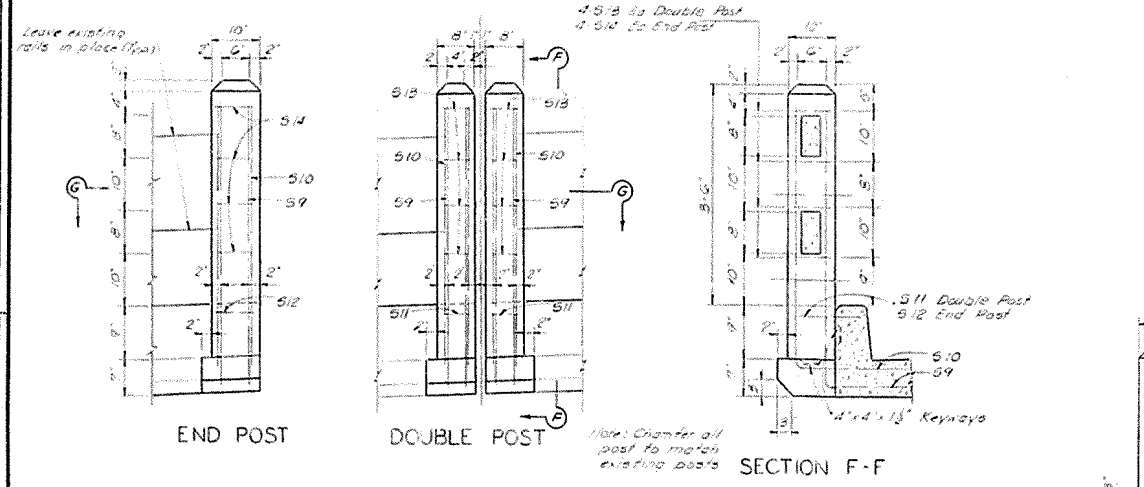
SECTION B-B



SECTION C-C

SECTION D-D

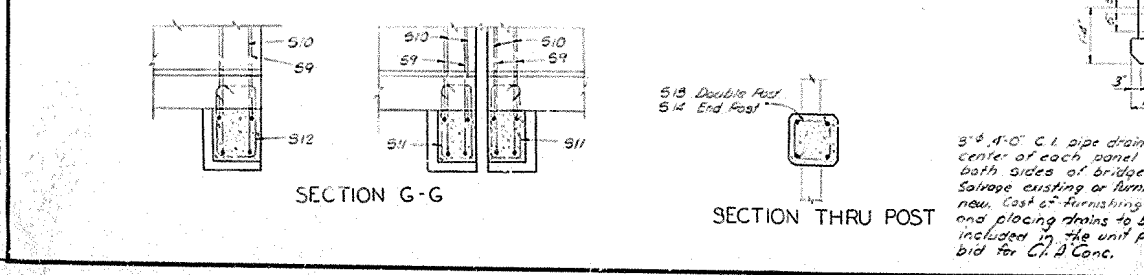
SECTION E-E



END POST

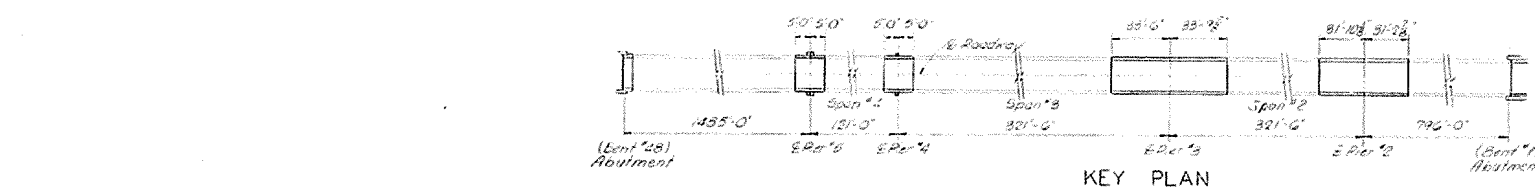
DOUBLE POST

SECTION F-F

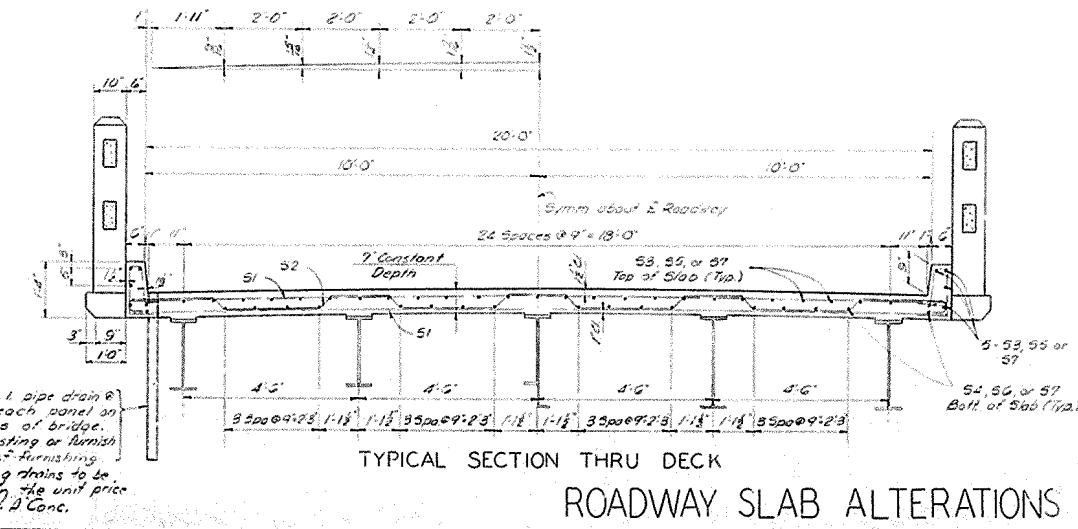


SECTION G-G

SECTION THRU POST



KEY PLAN



TYPICAL SECTION THRU DECK

ROADWAY SLAB ALTERATIONS

NOTE:
All work shown on this sheet to be included in the unit bid price for concrete and reinforcing, except removing existing concrete and replacing handrails and posts damaged during construction to be included in the Lump Sum bid for Raising the Existing Cumberland River Bridge.

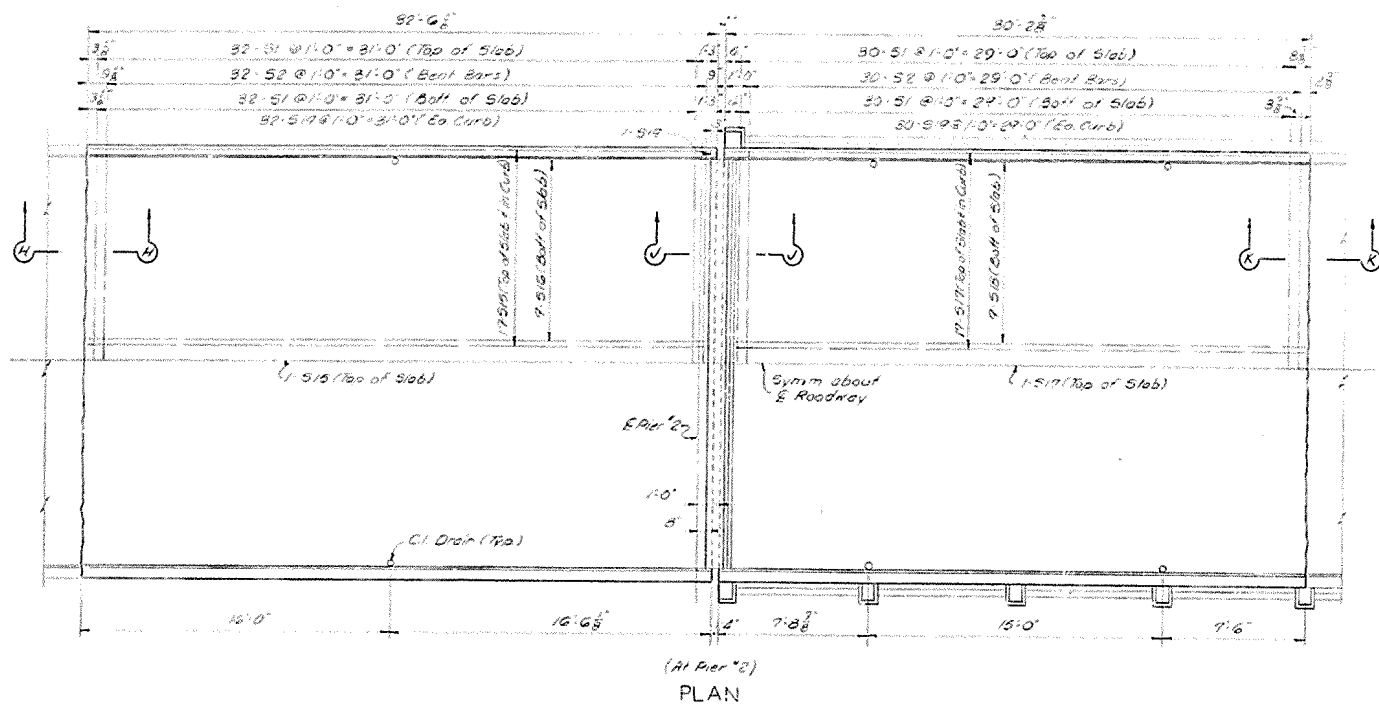
CUMBERLAND RIVER BRIDGE AT CANTON SHEET 30 OF 31

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
TRIGG
CADIZ - MURRAY
ROAD

STATION: _____
BRIDGE NUMBER: _____

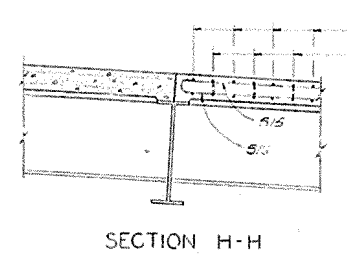
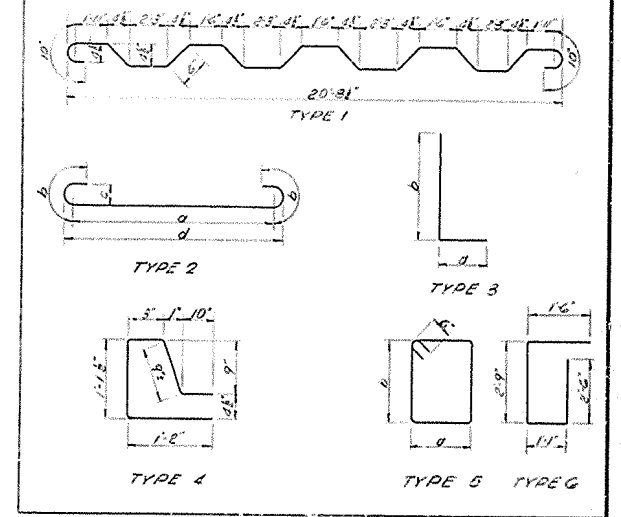
PROJECT NO. _____
DRAWING NO. 13879

REVISIONS:
DATE: _____
BY: _____
CHECKED BY: _____
DATE: _____
BY: _____
CHECKED BY: _____
DATE: _____

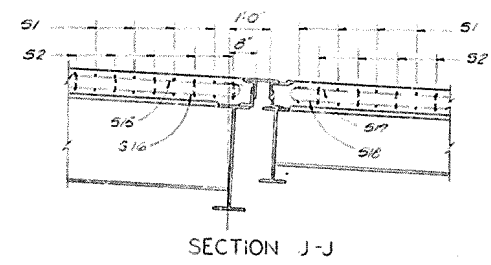


NOTE
Remove portions of existing slab as required for lifting and altering the existing piers and trusses. After the spans are in their final position, remove the remaining existing slab to the final lines as shown, being careful not to damage the existing reinforcing or structural steel that is to remain in the finished structure. A minimum of 1/4" of the existing longitudinal reinforcing should be carefully cleaned to lap with new reinforcement. The excess reinforcement shall be removed.

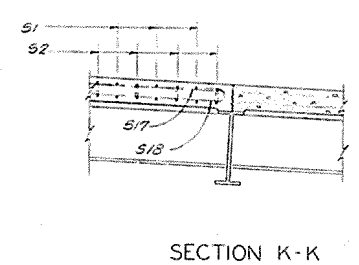
BILL OF REINFORCEMENT									
MATERIAL	NO.	QTY	SIZE	LENGTH	LOCATION	FT	IN	FT	IN
S1	Str	302	5	20	9				
S2	1	146	5	23	0				
S3	Str	82	4	3	9				
S4	7	36	5	5	0				
S5	Str	70	4	5	1				
S6	2	36	5	6	4				
S7	Str	70	4	23	0				
S8	2	36	5	34	3				
S9	3	32	5	5	9				
S10	3	32	5	6	0				
S11	5	4	4	3	9				
S12	5	12	4	4	1				
S13	5	16	4	2	9				
S14	5	48	4	3	1				
S15	Str	35	4	32	2				
S16	2	18	5	33	5				
S17	Str	25	4	29	10				
S18	2	18	5	31	1				
S19	4	20	5	3	10				
S20	6	20	5	7	7				
S21	3	22	5	1	8				



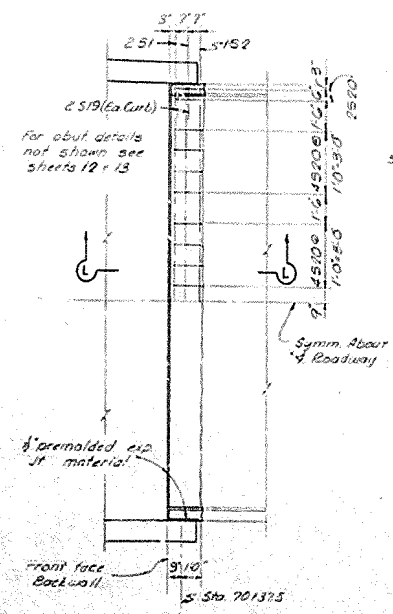
SECTION H-H



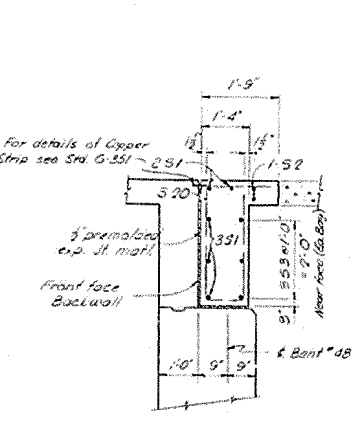
SECTION J-J



SECTION K-K

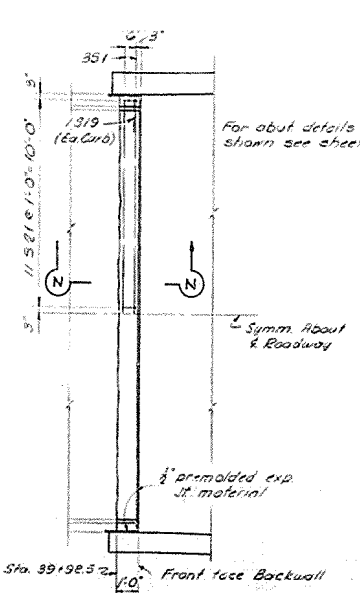


PLAN (BENT 48)

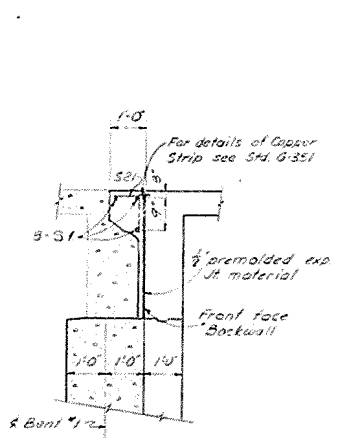


SECTION L-L

NOTE:
Remove concrete from end of existing bridge, being careful not to damage the existing reinforcing and structural steel. Disconnect superstructure from bent. Raise or temporarily remove superstructure. Re-raise bent to new Bridge Seat. Place superstructure in final position and pour new end of bridge before completing the Abutment backwall.



PLAN (BENT I)



SECTION N-N

NOTE:
Remove concrete from end of existing bridge as shown, being careful not to damage the existing reinforcing and structural steel. Burn off existing reinforcement that would project from face of new concrete. Tie new reinforcing to existing reinforcing. Pour new concrete to face completing the Abutment backwall.

ESTIMATE OF QUANTITIES						
ABUT.	PIER #5	PIER #4	PIER #3	PIER #2	ABUT.	TOTAL
(Bent 48)					(Bent 48)	
33	52	50	529	326	12	800.00
						18370 Lbs.

* Total includes 2.0 cu. in 1/4" Mandrill Posts required to be replaced.

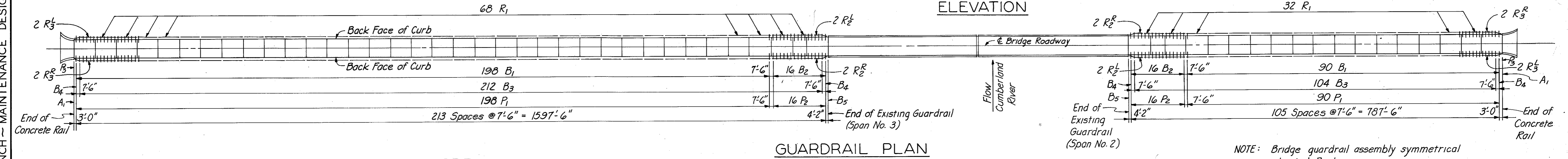
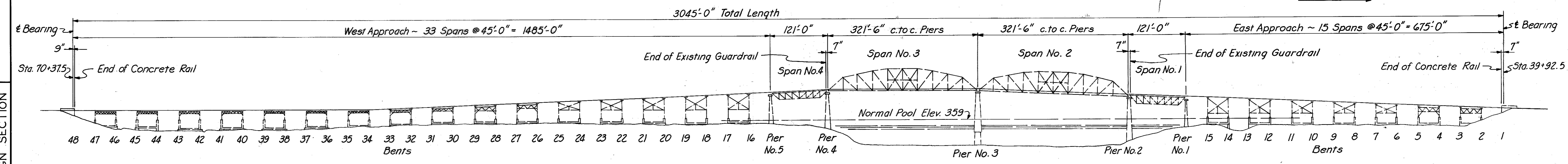
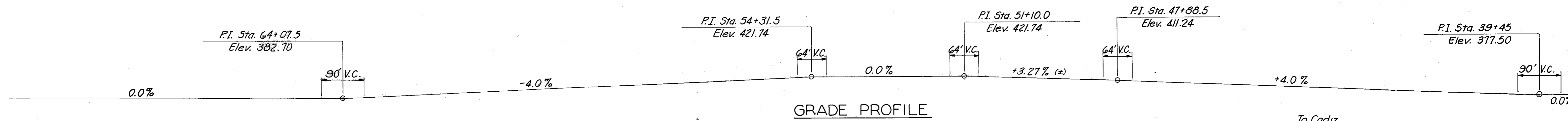
CUMBERLAND RIVER BRIDGE AT CANTON SHEET 31 OF 31

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT COUNTY OF
TRIGG
CADIZ - MURRAY ROAD

STATION: _____ PROJECT NO.: _____
BRIDGE NUMBER: _____ DRAWING INDEX: _____
NO. 13819

DESIGNED BY: _____ CHECKED BY: _____ DATE: _____
REVISIONS: _____ DATE: _____
TRACED BY: _____





GENERAL NOTE

NOTE: Bridge guardrail assembly symmetrical about ϵ Bridge Roadway.

SPECIFICATIONS: The Kentucky Department of Highways Standard Specifications for Road and Bridge Construction, current edition with revisions, shall apply to this project.

DESIGN LOAD: This Bridge Rating is designed in accordance with the 1965 AASHTO Specifications.

DESIGN STRESSES: For Structural Steel, $f_s = 20,000$ psi

PAYMENT FOR STRUCTURAL STEEL: Furnishing and placing Structural Steel and all incidental metal items, which are called for on these plans but not included in the Estimate of Quantities, shall be included in the "Lump Sum Bid for Structural Steel".

SHOP DRAWINGS: The Contractor shall submit full sets of prints of the detailed shop drawings for all structural steel to the Department for approval in accordance with Article 408.3.1A of the Specifications.

PAINTING NEW STRUCTURAL STEEL: All new structural steel shall be given one shop primer coat, one intermediate coat, and one finish coat of paint in accordance with Section 661.4.8 of the Specifications. The exposed surfaces which are not accessible after erection shall be given all three coats of paint before erection. Paint will not be required on interior surfaces of rectangular tubing. The cost of painting new steel is to be included in the "Lump Sum Bid for Structural Steel".

MILL TEST REPORTS: Notarized test reports shall be furnished in triplicate to the Department showing that all the materials used in the structural steel conform to the requirements of the Specifications.

WELDING: All welding and welding materials shall conform to the Specifications for Welded Highway and Railway Bridges of the American Welding Society, current edition. The cost of welding, welding materials, straightening, altering, and burning new or existing steel is to be included in the "Lump Sum Bid for Structural Steel".

STRUCTURAL STEEL MATERIALS: ASTM Specifications, current edition, as designated below, shall govern the materials furnished.

ASTM A36-67	MATERIALS Structural Steel
A307-67	Machine Bolts

PROHIBITED FIELD WELDING: Except as shown on the plans, no welding of any nature shall be performed on the load carrying members of the bridge without the written consent of the Director, Division of Bridges, or his authorized representative, and then only in the manner and at the locations designated in the authorization.

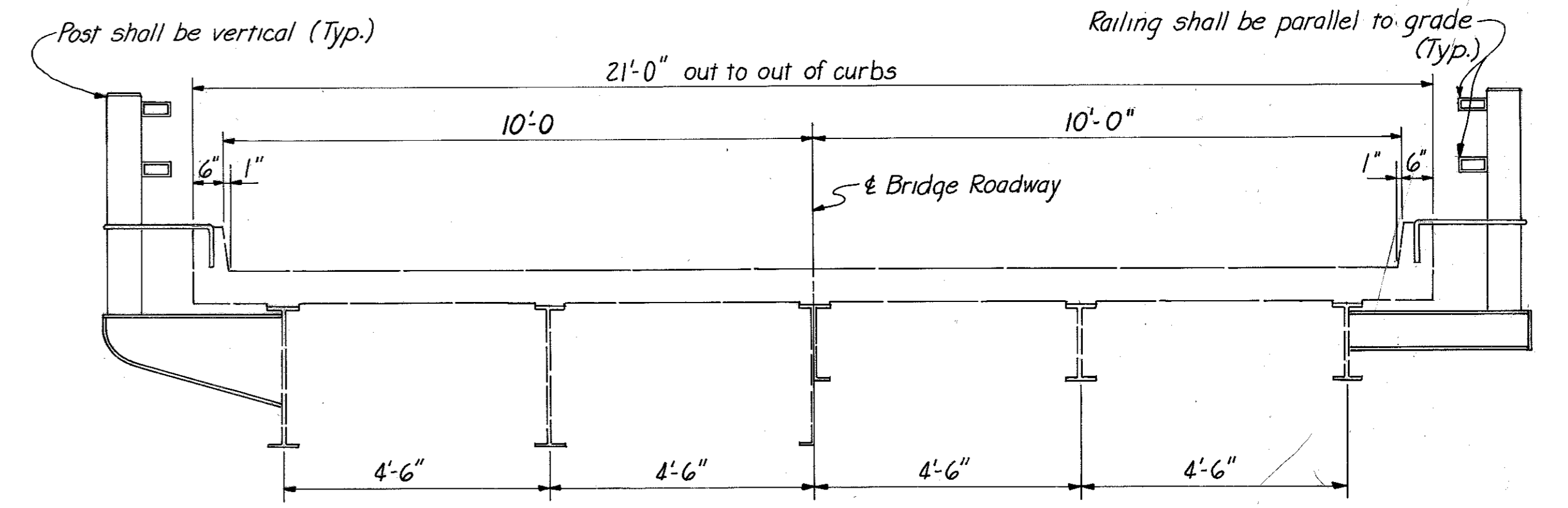
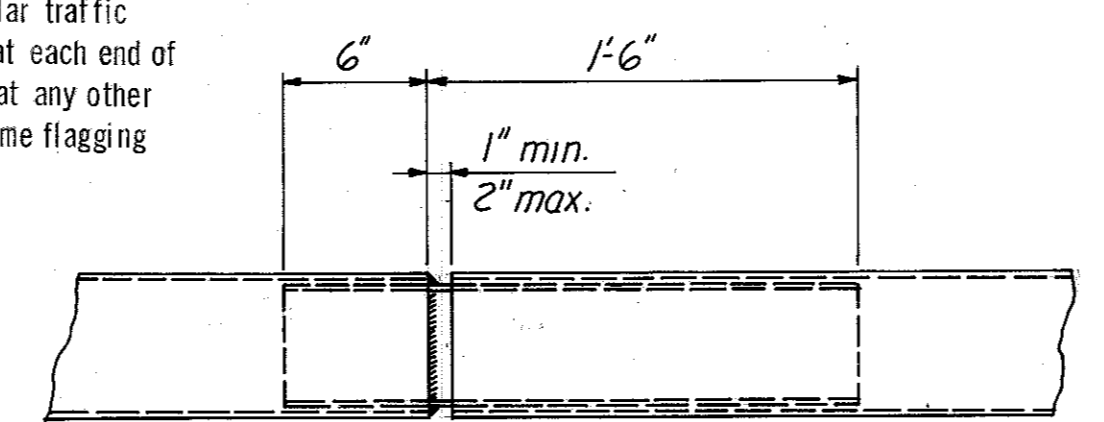
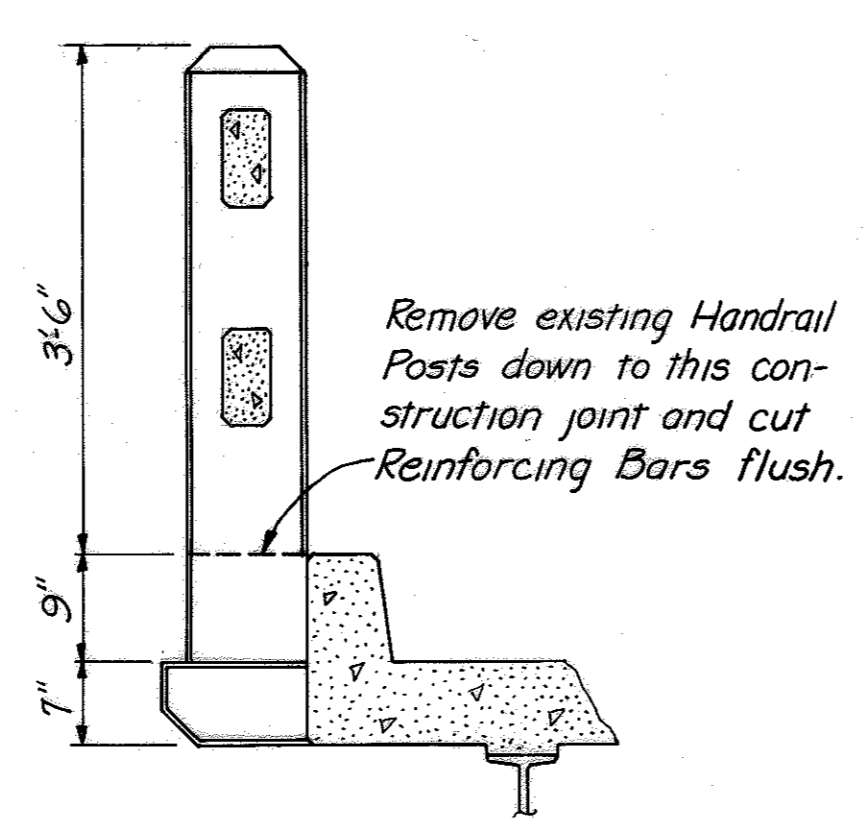
PAINTING BURNT AREAS: All areas of new or existing structural steel on which the paint has been damaged by the Contractor with weld burns or by other means shall be cleaned and spot painted with one primer coat, one intermediate coat, and one finish coat of paint in accordance with Section 661.4.8 of the Specifications. The cost of this touch up painting is to be included in the "Lump Sum Bid for Structural Steel".

DAMAGE TO THE STRUCTURE: The Contractor is responsible for any and all damage to the structure during reconstruction, even to the replacement of any portion of the structure at his expense, should it be damaged by him for any cause whatsoever.

MAINTENANCE OF TRAFFIC: One lane of vehicular traffic shall be maintained and protected on a 24 hour basis during construction. The cost of this item is to be included in the "Lump Sum Bid for Maintaining Traffic". The Contractor has the option of borrowing from the Department of Highways one controller and four signal heads for maintenance of traffic. For this option, dual indications shall be provided on each approach. The Contractor shall install, maintain, and be responsible for power used. He shall also be responsible for procuring the equipment from the Division of Traffic at Frankfort and returning the same, in its original condition, thereto when no longer needed on the project.

DRILLING HOLES IN CONCRETE: The cost of drilling holes in existing concrete and the cost of Epoxy Grouting shall be included in the "Lump Sum Bid for Structural Steel".

MAINTENANCE OF TRAFFIC: One lane of vehicular traffic shall be maintained and protected on a 24 hour basis during construction. The cost of this item is to be included in the "Lump Sum Bid for Maintaining Traffic". Work shall be so scheduled that no more than 750 feet of one lane vehicular traffic will be required at one time. Flagmen will be required at each end of the construction site during the construction period and at any other time that handrail protection is not available. If night time flagging is required, flagging stations shall be illuminated.



BEAM SPANS DECK TRUSS SPANS
TYPICAL SECTION THRU DECK

Special Provision No. 15. Bid Proposal Guaranty and Contract Bonds.
Special Provision No. 73 for Epoxy Grouting.
Chronological listing of Revisions to the 1965 Edition of the Standard Specifications. Sheet 1 of 2
Repairs to Bridge over Cumberland River at Canton

ESTIMATE OF QUANTITIES

STRUCTURAL STEEL ①	1	LUMP SUM
REMOVE CONCRETE MASONRY	185.0	CU. YDS.
MAINTAINING TRAFFIC	1	LUMP SUM

① Estimated weight of Structural Steel = 223,383 lbs.

LAYOUT

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS
FRANKFORT
COUNTY OF
TRIGG
CADIZ-BENTON
ROAD

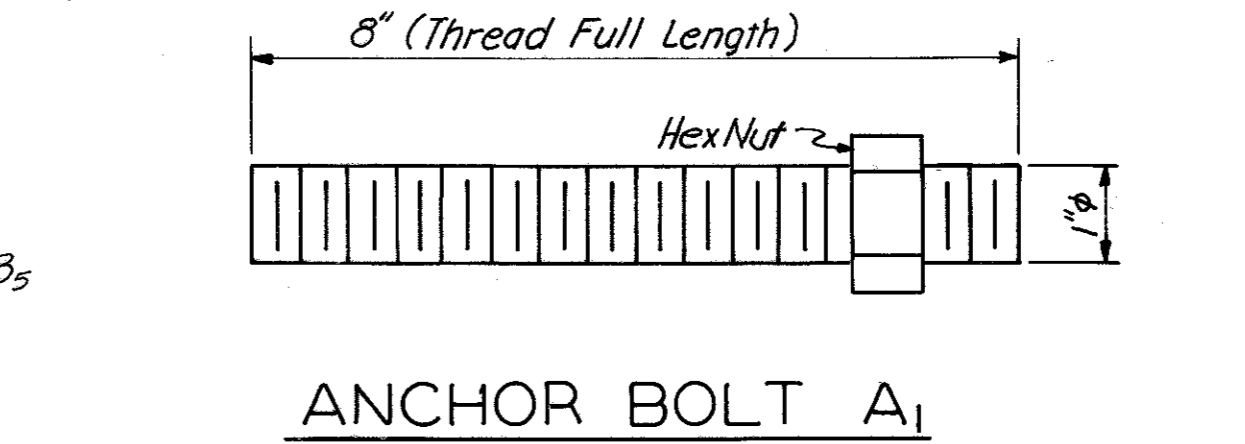
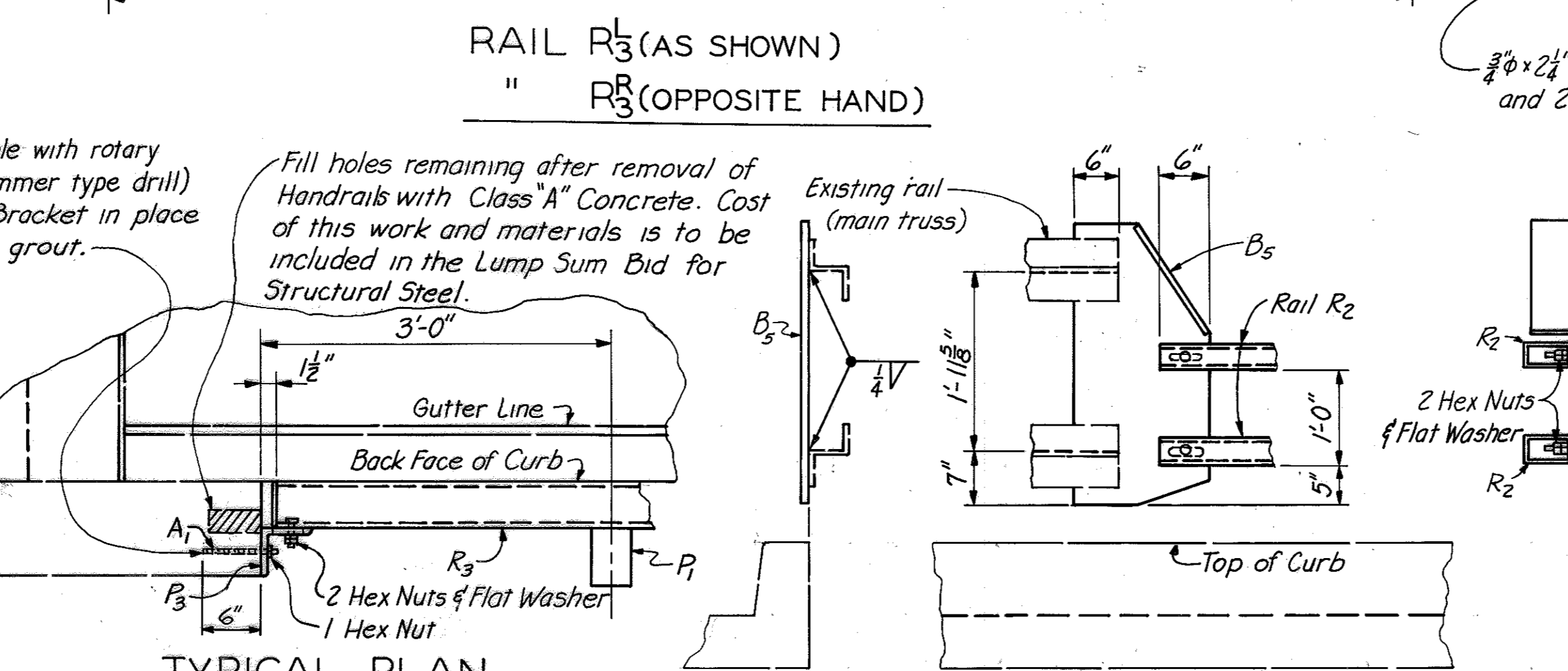
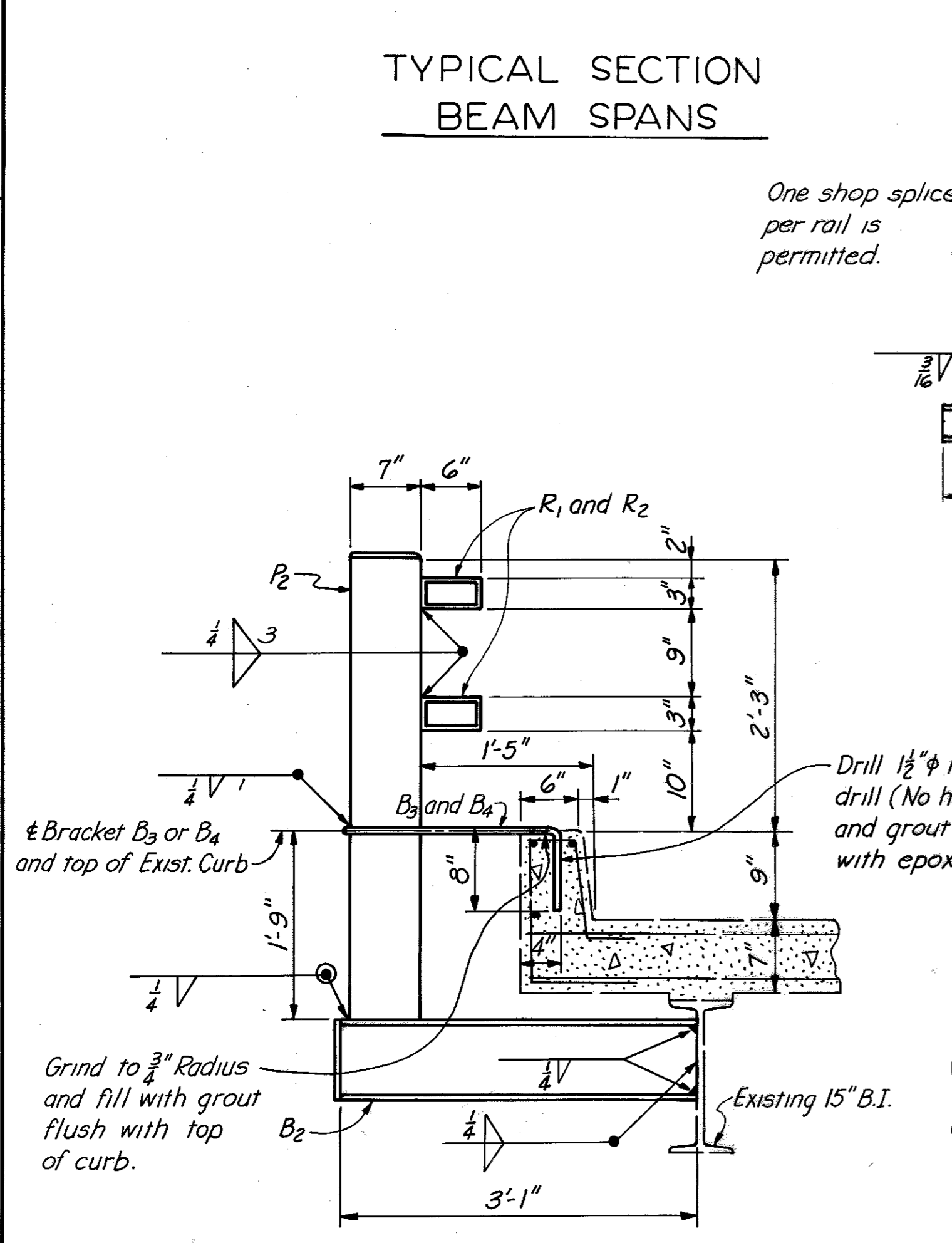
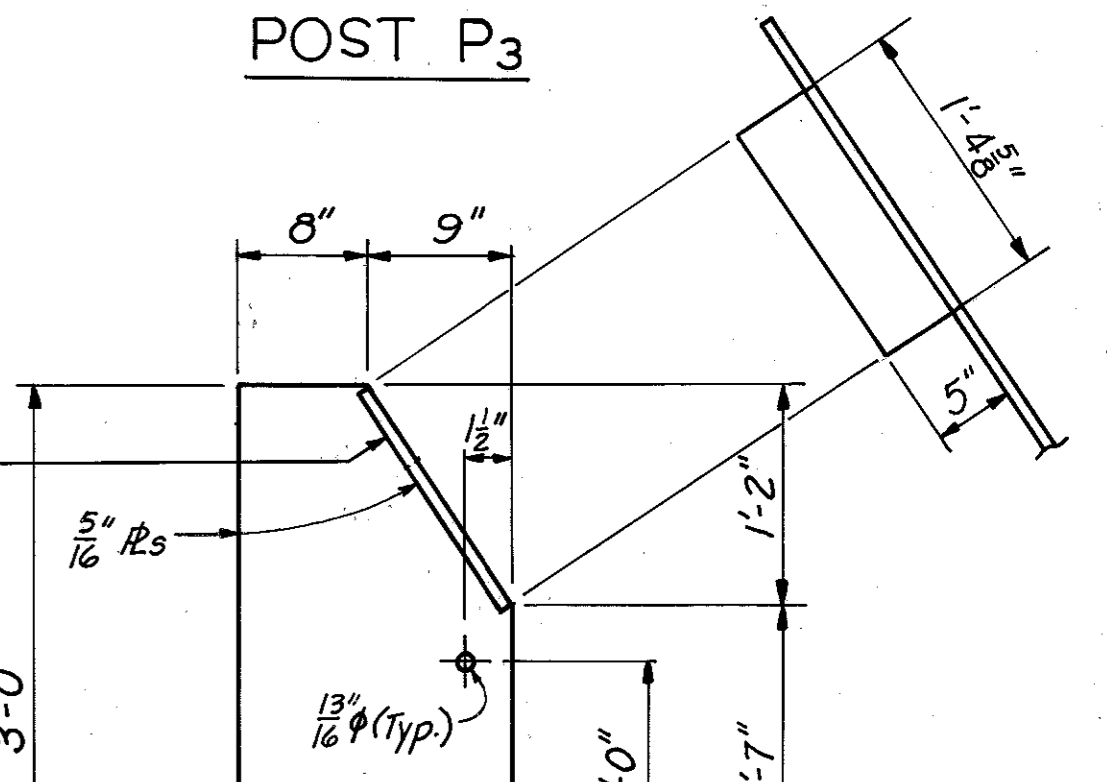
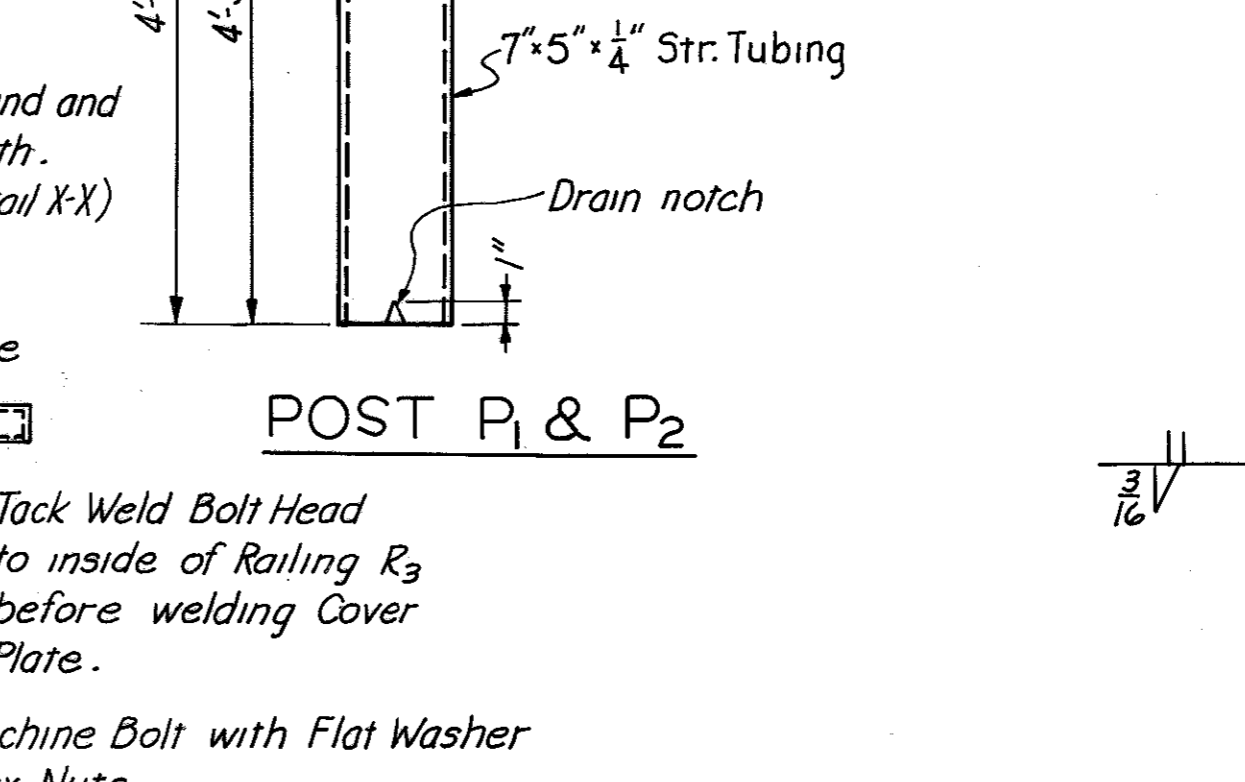
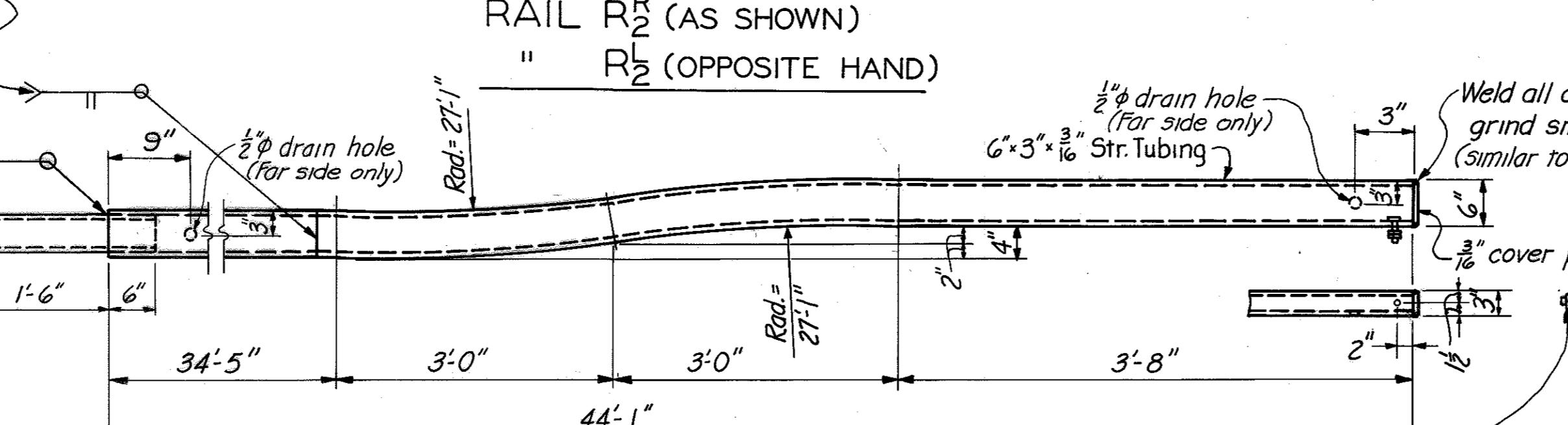
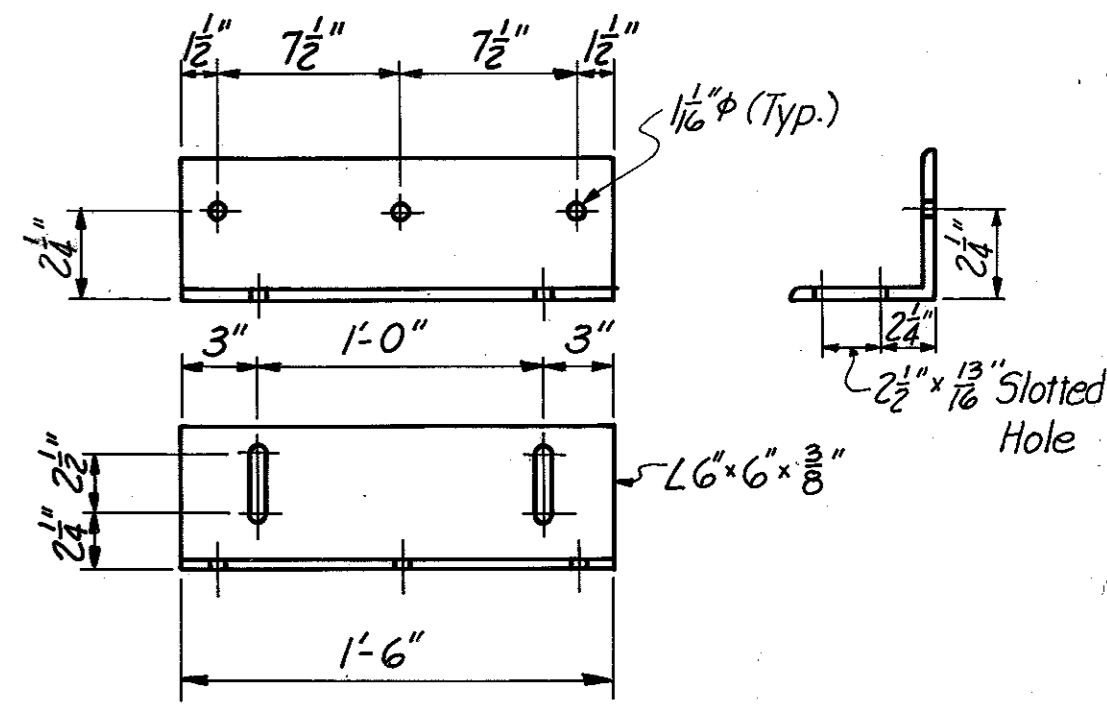
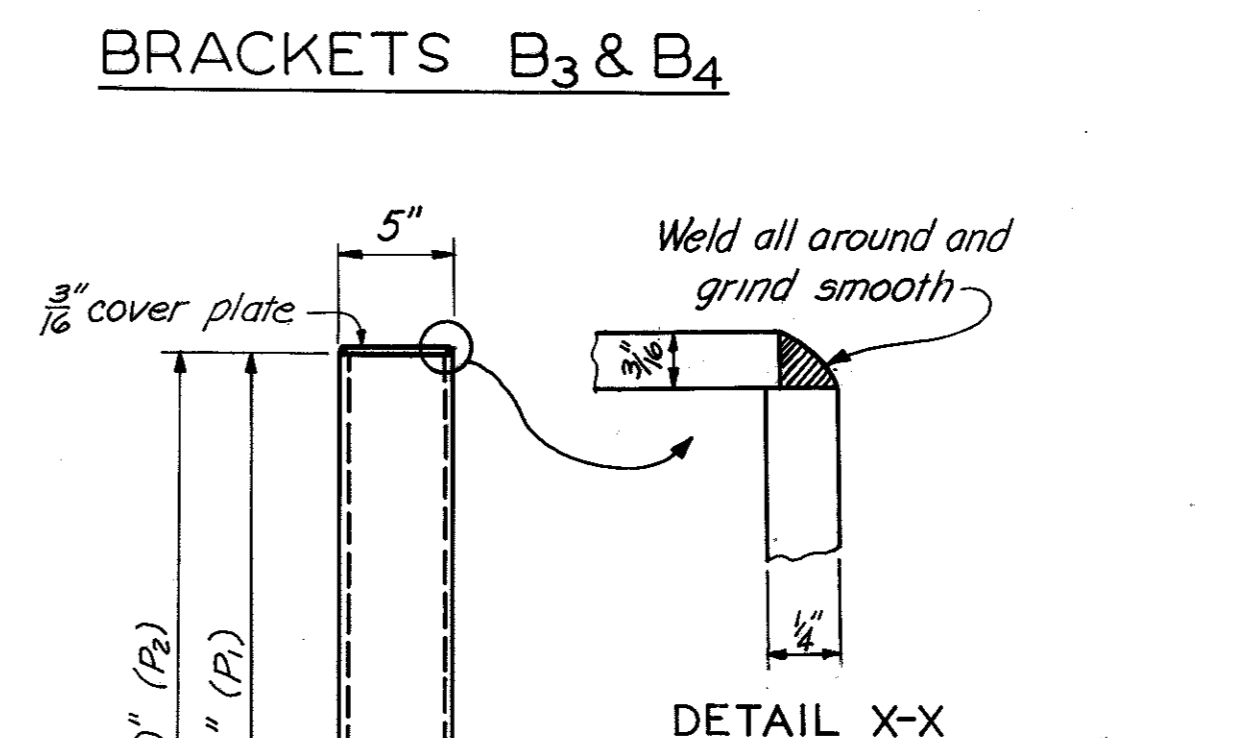
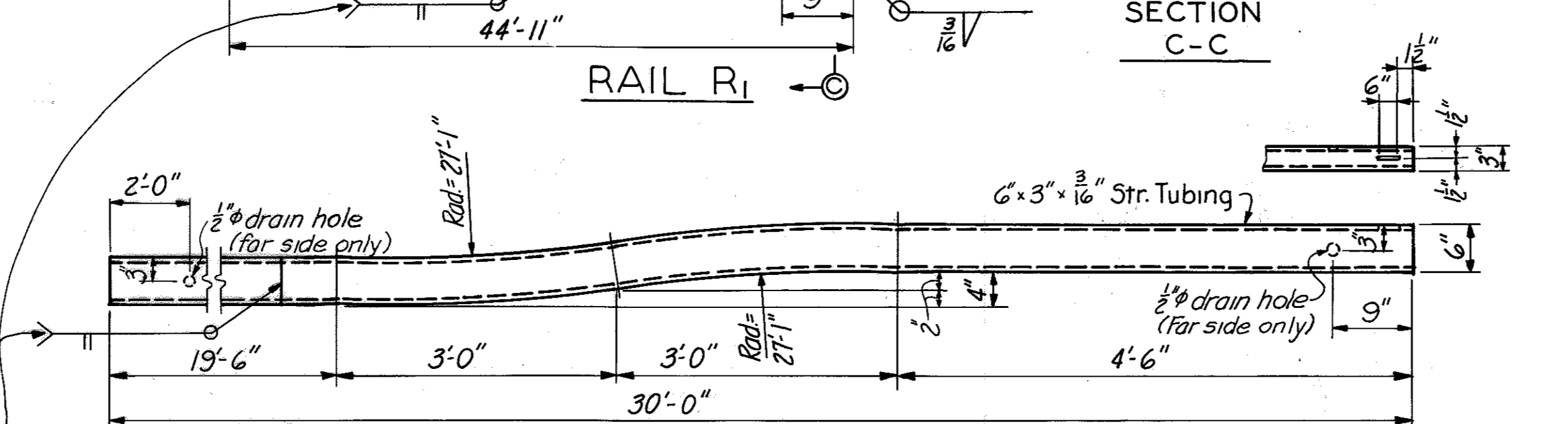
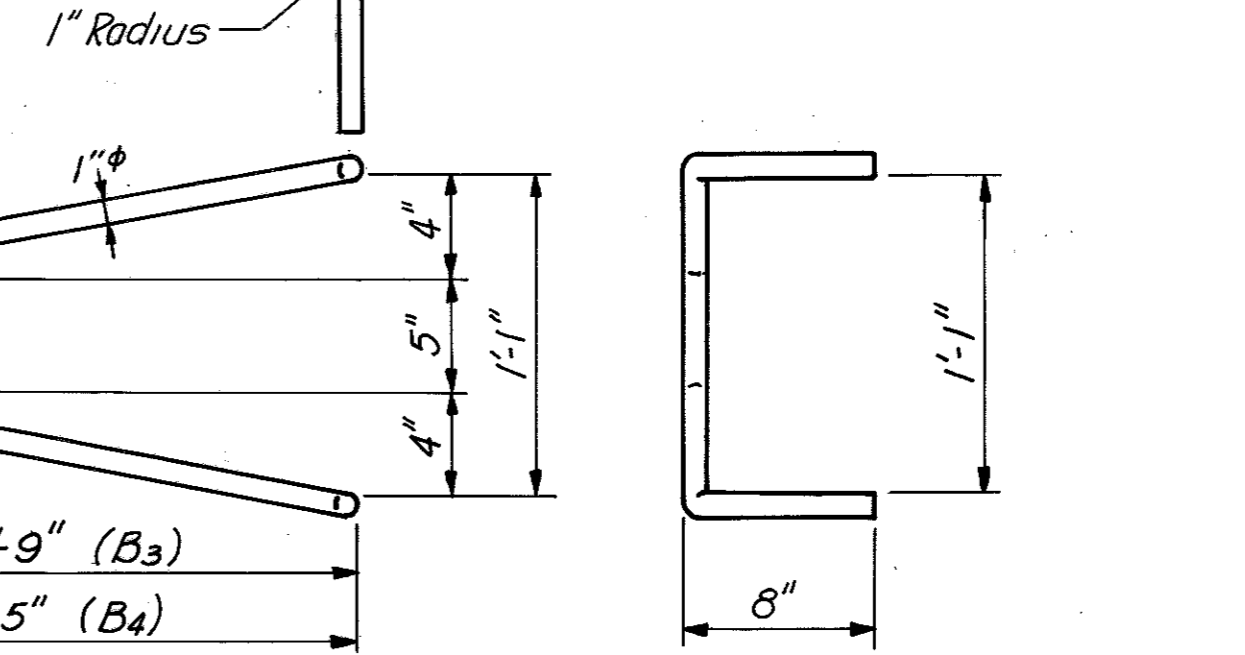
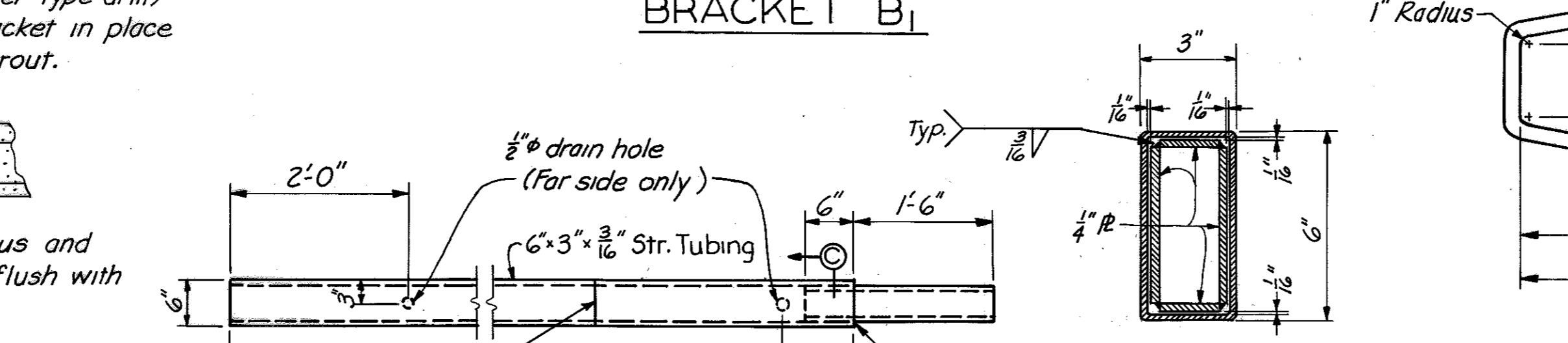
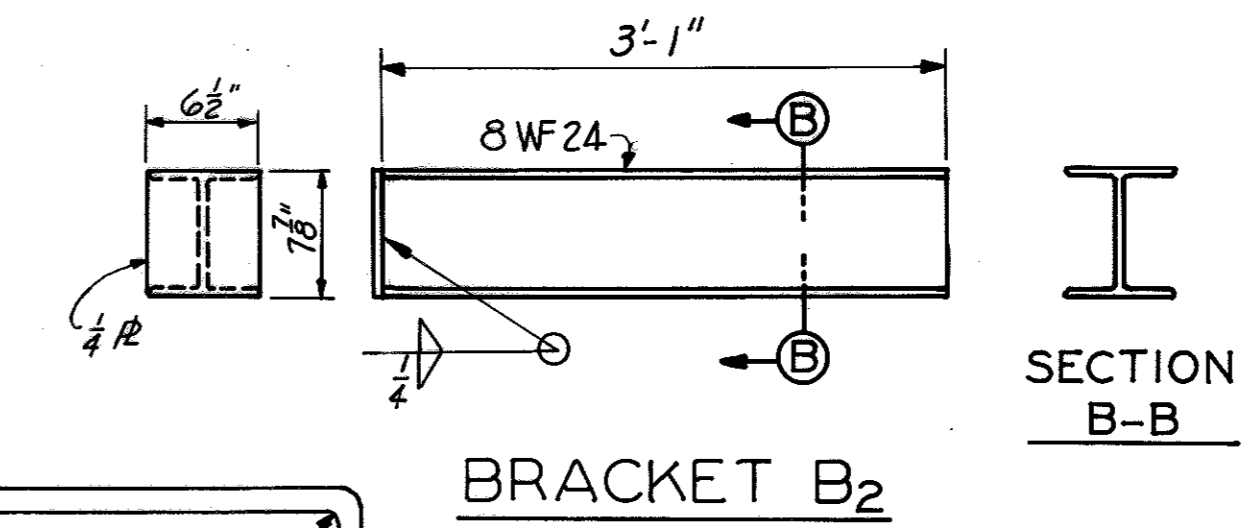
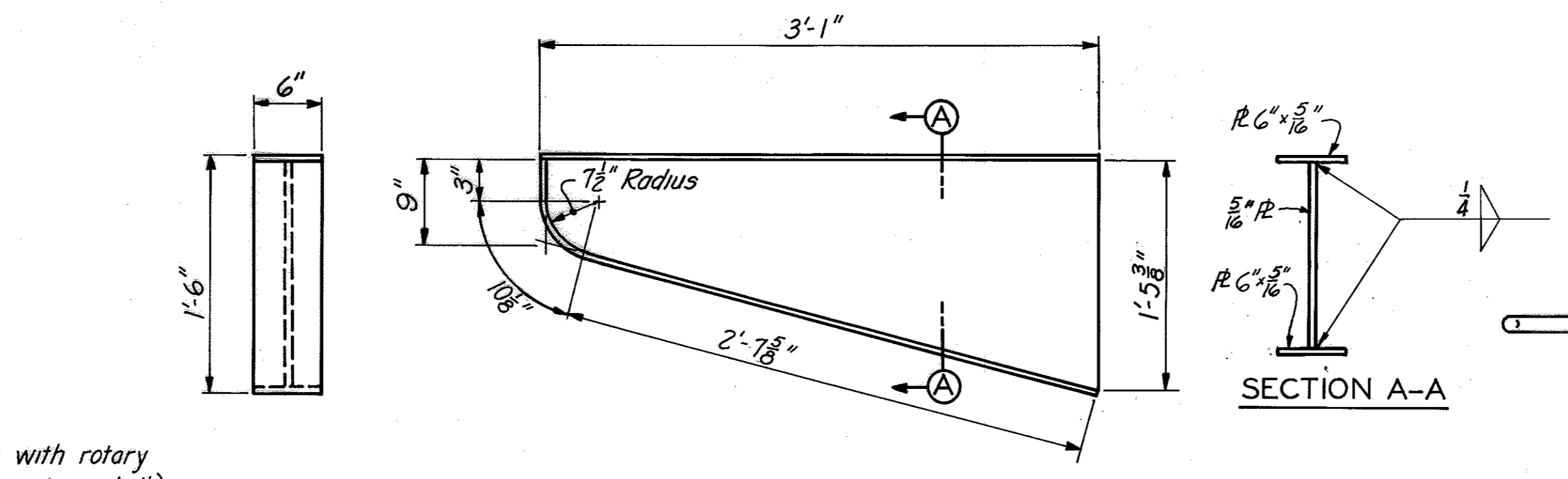
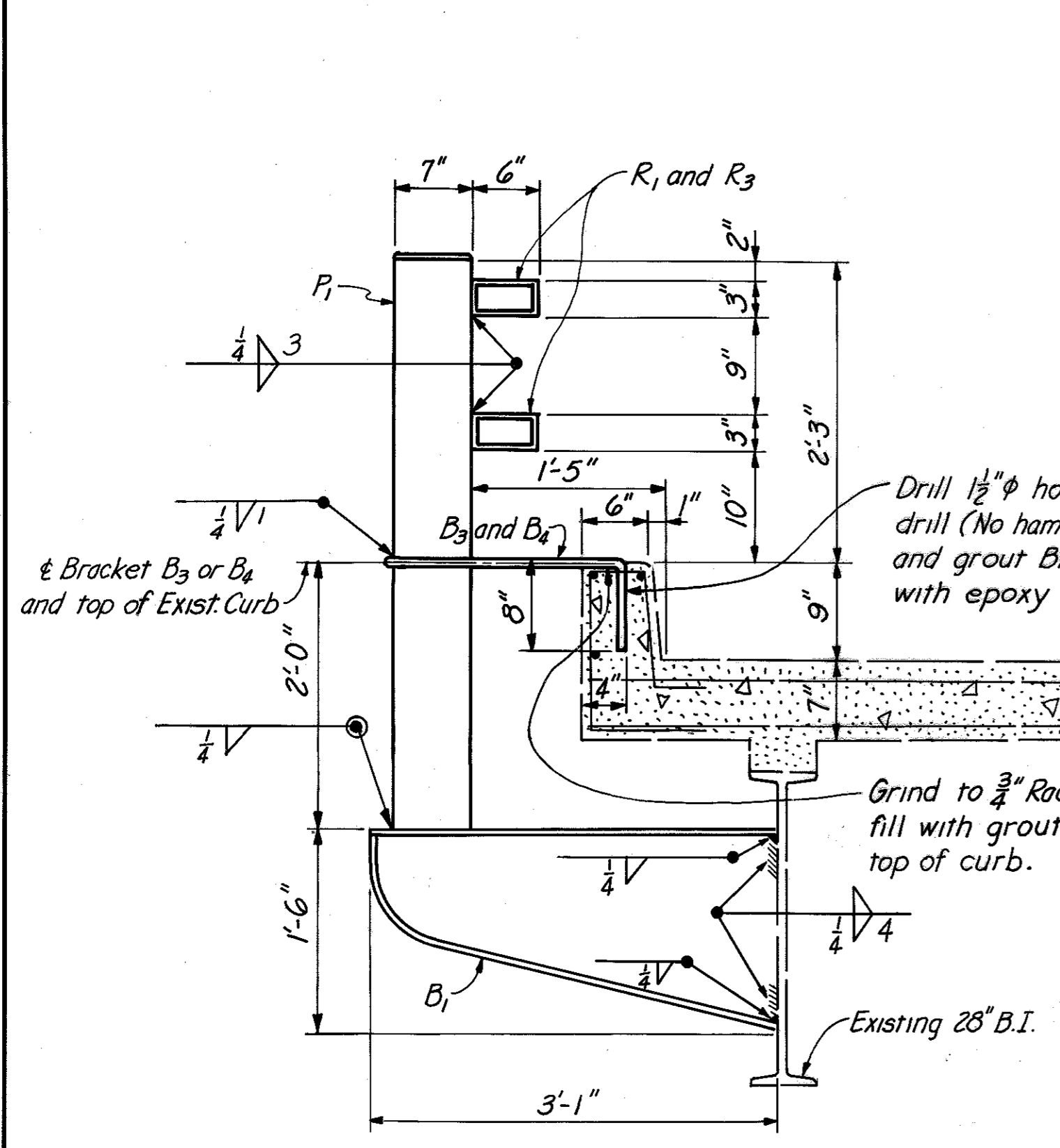
STATION PROJECT NO. SP III-254

BRIDGE NUMBER	MP III-254-5	DRAWING NO.	17393	INDEX	
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MICROWELL
 LYNCH - MAINTENANCE DESIGN SECTION
 DESIGNED BY: R.C.P. DATE: 7-68
 CHECKED BY: J.T.F. DATE: 7-68
 REVISIONS: REVISIONS: REVISIONS: REVISIONS:

STRUCTURAL STEEL

MARK	NO.	DESCRIPTION
B ₁	576	Bracket - see detail
B ₂	64	" " " "
B ₃	632	" " " "
B ₄	8	" " " "
B ₅	4	" " " "
P ₁	576	Guardpost - " " "
P ₂	64	" " " "
R ₁	200	Guardrail - " " "
R ₂	4	" " " "
R ₃	4	" " " "
R ₄	4	" " " "
R ₅	4	" " " "
Bolts	8	¾" φ × 2¼" Machine Bolt with Flat Washer
Nuts	16	Heavy Hex Nut for ¾" φ Machine Bolt
A ₁	12	1" φ × 8" Anchor Bolts - see detail
P ₃	4	Guardpost - see detail



DESIGNED BY: J.T.F.
 CHECKED BY: J.T.F.
 DATE: _____

DESIGNED BY: RCP
 CHECKED BY: RCP
 DATE: _____

Sheet 2 of 2
 Repairs to Bridge over Cumberland River at Canton

COMMONWEALTH OF KENTUCKY
 DEPARTMENT OF HIGHWAYS
 FRANKFORT
 COUNTY OF
TRIGG
 CADIZ - BENTON
 ROAD

STATION: _____
 BRIDGE NUMBER: _____
 PROJECT NO. SP III-254-III

DRAWING NO. 17393
 INDEX

MICROFILMED-77

UPDATE DATE 1-20-77
LETTING DATE 1-20-77

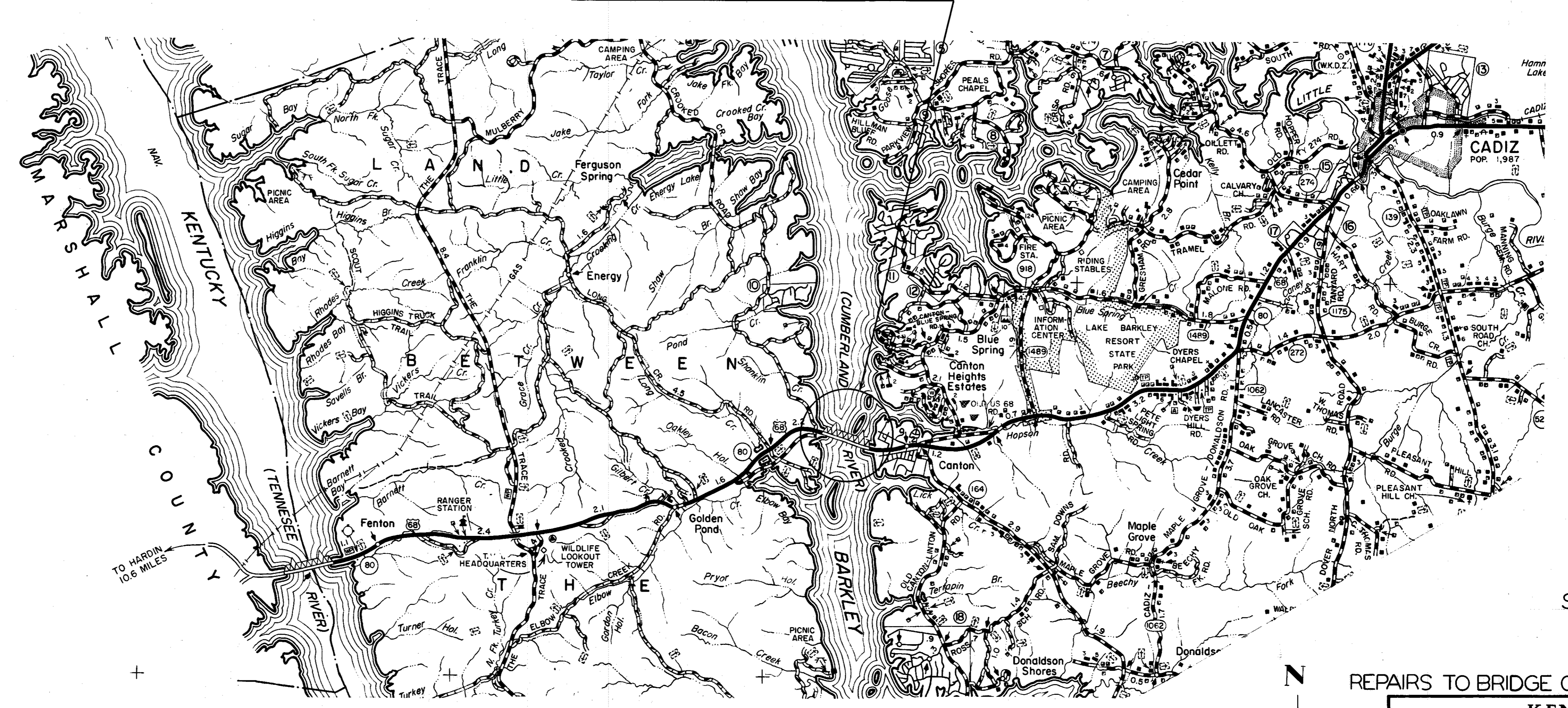
SHEET NO.	DESCRIPTION
1	LOCATION MAP
2	GENERAL NOTE
3	LAYOUT
4	STRUCTURAL STEEL DETAILS

**COMMONWEALTH OF KENTUCKY
DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS**

**PLANS OF
PROPOSED PROJECT
TRIGG COUNTY**

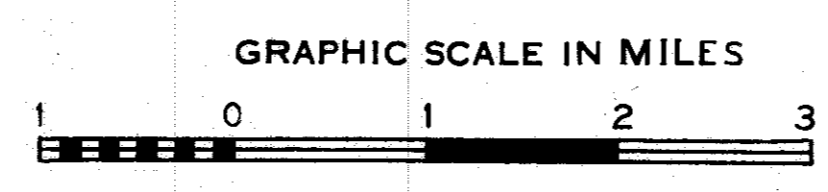
BRIDGE REPAIRS
M.P. III-0068-B0020

SPECIAL NOTES
FOR FINISH COAT

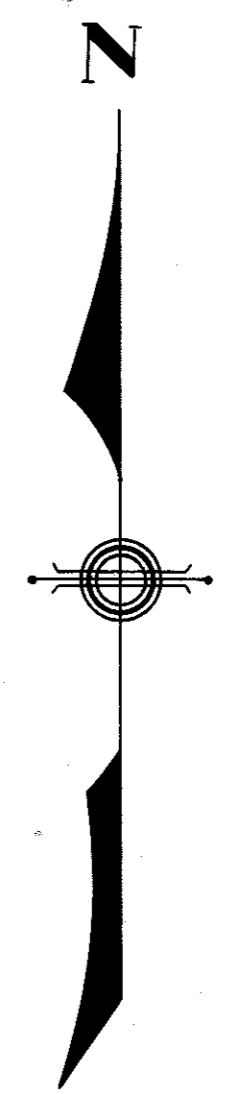


SHEET 1 OF 4

DATE	DATE
DATE	DATE
REVIS	REVIS
REVIS	REVIS
FINAL CHECK	DATE
<i>[Signature]</i>	1/27



LAYOUT MAP



REPAIRS TO BRIDGE OVER BARKLEY LAKE

**KENTUCKY
BUREAU OF HIGHWAYS
TRIGG
COUNTY
CADIZ-MURRAY
ROAD**

PROJECT NO. MP III-0068-B0020

PLAN APPROVED 12/27/76 by C. R. Cook
DIRECTOR OF BRIDGES

PLAN APPROVED 12/27/76 by Geo. F. Kemper
STATE HIGHWAY ENGINEER

DRAWING NO. 19431

Letting Date 1-20-77

GENERAL NOTE

SPECIFICATIONS

THE KENTUCKY BUREAU OF HIGHWAYS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION SHALL APPLY TO THIS PROJECT.

STRENGTHEN FLOOR BEAMS

THE UNIT PRICE BID FOR THIS ITEM SHALL INCLUDE THE FURNISHING AND PLACING OF THE STRUCTURAL STEEL, WELDING, CLEANING AND PAINTING, AND INCIDENTALS NECESSARY FOR THE STRENGTHENING OF EACH FLOOR BEAM AS SHOWN ON THE PLANS.

REVISE PORTALS

THE UNIT PRICE BID FOR THIS ITEM SHALL INCLUDE THE FURNISHING AND PLACING OF THE STRUCTURAL STEEL, MODIFYING EXISTING STEEL, CLEANING AND PAINTING, AND INCIDENTALS NECESSARY FOR THE REVISION OF EACH PORTAL FRAME AS SHOWN ON THE PLANS.

SHOP DRAWINGS

THE CONTRACTOR SHALL SUBMIT FULL SETS OF PRINTS OF THE DETAILED SHOP DRAWINGS FOR ALL STRUCTURAL STEEL TO THE BUREAU FOR REVIEW IN ACCORDANCE WITH SECTION 607.04 OF THE SPECIFICATIONS.

PAINTING NEW STRUCTURAL STEEL

ALL NEW STRUCTURAL STEEL SHALL BE CLEANED AND PAINTED IN ACCORDANCE WITH SECTION 607.25 OF THE SPECIFICATIONS EXCEPT THE LAST TWO COATS OF PAINT SHALL BE GRAY INSTEAD OF ALUMINUM. THIS GRAY PAINT IS TO BE IN ACCORDANCE WITH THE SPECIAL SPECIFICATIONS FOR FINISH COAT. THE FIRST GRAY COAT IS TO BE TINTED WITH LAMP BLACK AS DIRECTED BY THE ENGINEER TO PROVIDE A CONTRAST IN THE TWO COATS.

MILL TEST REPORTS

NOTARIZED MILL TEST REPORTS SHALL BE FURNISHED IN TRIPLICATE TO THE BUREAU SHOWING THAT ALL THE MATERIALS USED IN STRUCTURAL STEEL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS.

WELDING

ALL WELDING AND WELDING MATERIALS SHALL CONFORM TO THE SPECIFICATIONS FOR WELDED HIGHWAY AND RAILWAY BRIDGES OF THE AMERICAN WELDING SOCIETY, CURRENT EDITION.

PROHIBITED FIELD WELDING

EXCEPT AS SHOWN ON THE PLANS, NO WELDING OF ANY NATURE SHALL BE PERFORMED ON THE LOAD CARRYING MEMBERS OF THE BRIDGE WITHOUT THE WRITTEN CONSENT OF THE DIRECTOR, DIVISION OF BRIDGES, OR HIS AUTHORIZED REPRESENTATIVE, AND THEN ONLY IN THE MANNER AND AT THE LOCATIONS DESIGNATED IN THE AUTHORIZATION.

STRUCTURAL STEEL MATERIALS

ALL STRUCTURAL STEEL FURNISHED SHALL CONFORM TO ASTM SPECIFICATIONS A36-75

STRAIGHTENING BENT MATERIALS

IN LIEU OF STATEMENTS MADE TO THE CONTRARY IN SECTION 607.20 OF THE 1976 STANDARD SPECIFICATIONS, MATERIAL SHALL NOT BE STRAIGHTENED BY DIRECT HAMMERING.

PAINTING DAMAGED AREAS

ALL AREAS OF NEW OR EXISTING STRUCTURAL STEEL ON WHICH THE PAINT HAS BEEN DAMAGED BY THE CONTRACTOR WITH WELD BURNS OR BY OTHER MEANS SHALL BE CLEANED AND SPOT PAINTED IN ACCORDANCE WITH SECTION 607.25 OF THE SPECIFICATIONS USING THE SAME FOUR COATS OF PAINT SPECIFIED FOR NEW STEEL.

CLEANING EXISTING STEEL

ALL AREAS OF EXISTING STEEL THAT ARE TO BE IN CONTACT WITH NEW STEEL, INCLUDING AREAS UNDER BOLT HEADS, SHALL BE CLEANED OF ALL DIRT, RUST, PAINT AND OTHER FOREIGN MATTER, BEFORE INSTALLING THE NEW STEEL.

MAINTAIN TRAFFIC

THE CONTRACTOR SHALL MAINTAIN AT LEAST ONE LANE OF TRAFFIC AT ALL TIMES AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL FURNISH ALL NECESSARY SIGNS, DEVICES, AND FLAGMEN WHEN A LANE CLOSURE IS NEEDED. THE CONTRACTOR SHALL NOTIFY THE ENGINEER ONE DAY IN ADVANCE OF ALL LANE CLOSURES. NO LANE CLOSURES ARE PERMITTED FROM NOON FRIDAY THRU 8:00 A.M. MONDAYS. NO LANE CLOSURES ARE PERMITTED THREE(3) DAYS PRIOR TO THREE(3) DAYS AFTER ANY NATIONAL HOLIDAYS. ALL TRAFFIC SHALL BE CONTROLLED IN ACCORDANCE WITH THE BUREAU MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES EXCEPT AS HEREIN SPECIFIED.

BOATING PUBLIC SAFETY

IN THE EVENT THAT THIS WORK WOULD CREATE A SAFETY HAZARD TO THE BOATING PUBLIC, THE CONTRACTOR WILL BE REQUIRED TO MAKE SURE THAT NECESSARY ARRANGEMENTS ARE TAKEN CARE OF TO PROTECT THE BOATING PUBLIC. NO BOATS ARE TO BE STOPPED. HOWEVER, SPECIAL SIGNING AND FLAGMEN IN BOATS ARE METHODS TO CONTROL BOATING SAFETY. ALL COST INCURRED AS A RESULT OF CONTROLLING BOATING SAFETY SHALL BE INCIDENTAL TO THE LUMP SUM BID FOR MAINTAIN TRAFFIC.

ON SITE INSPECTION

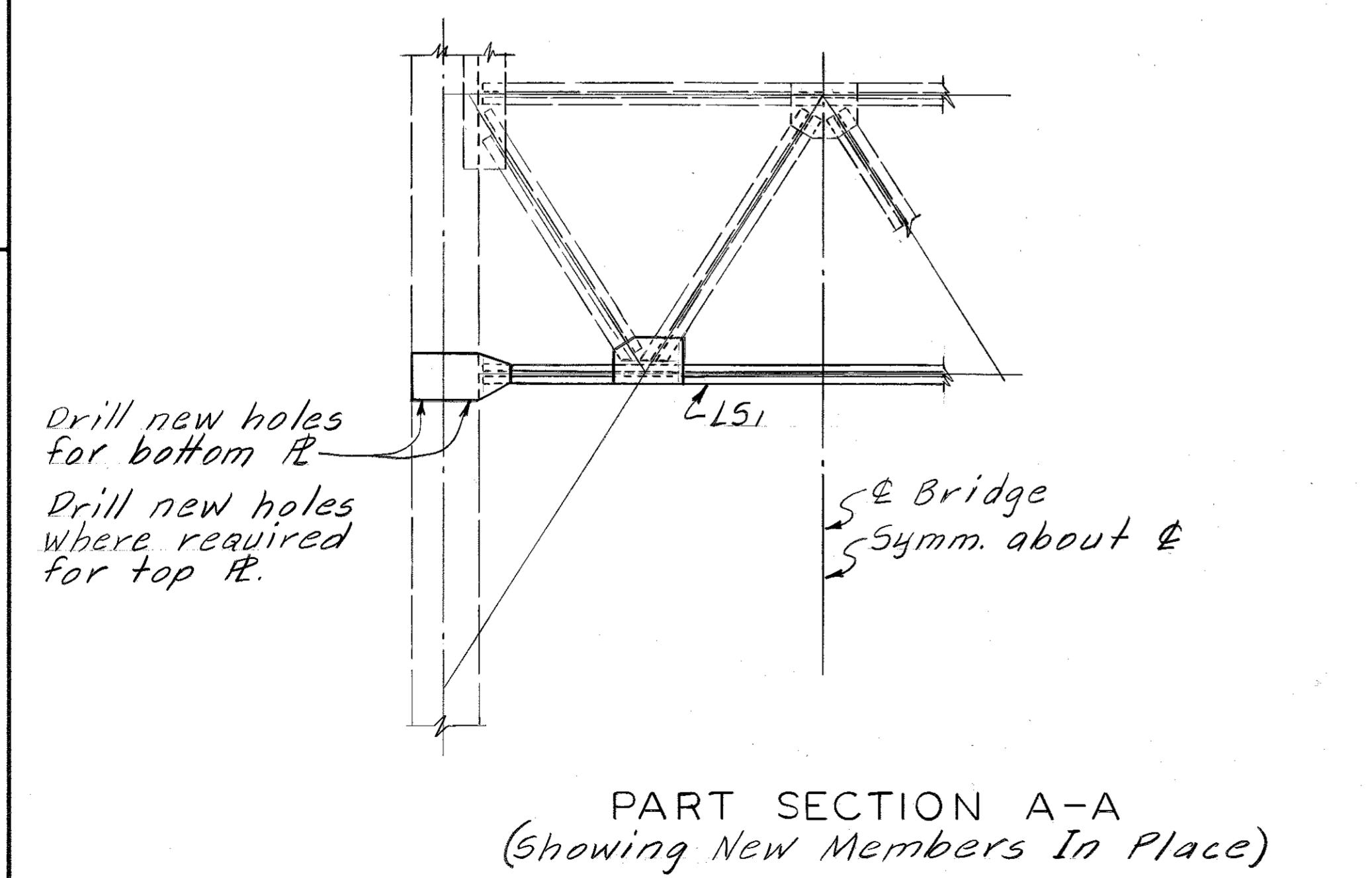
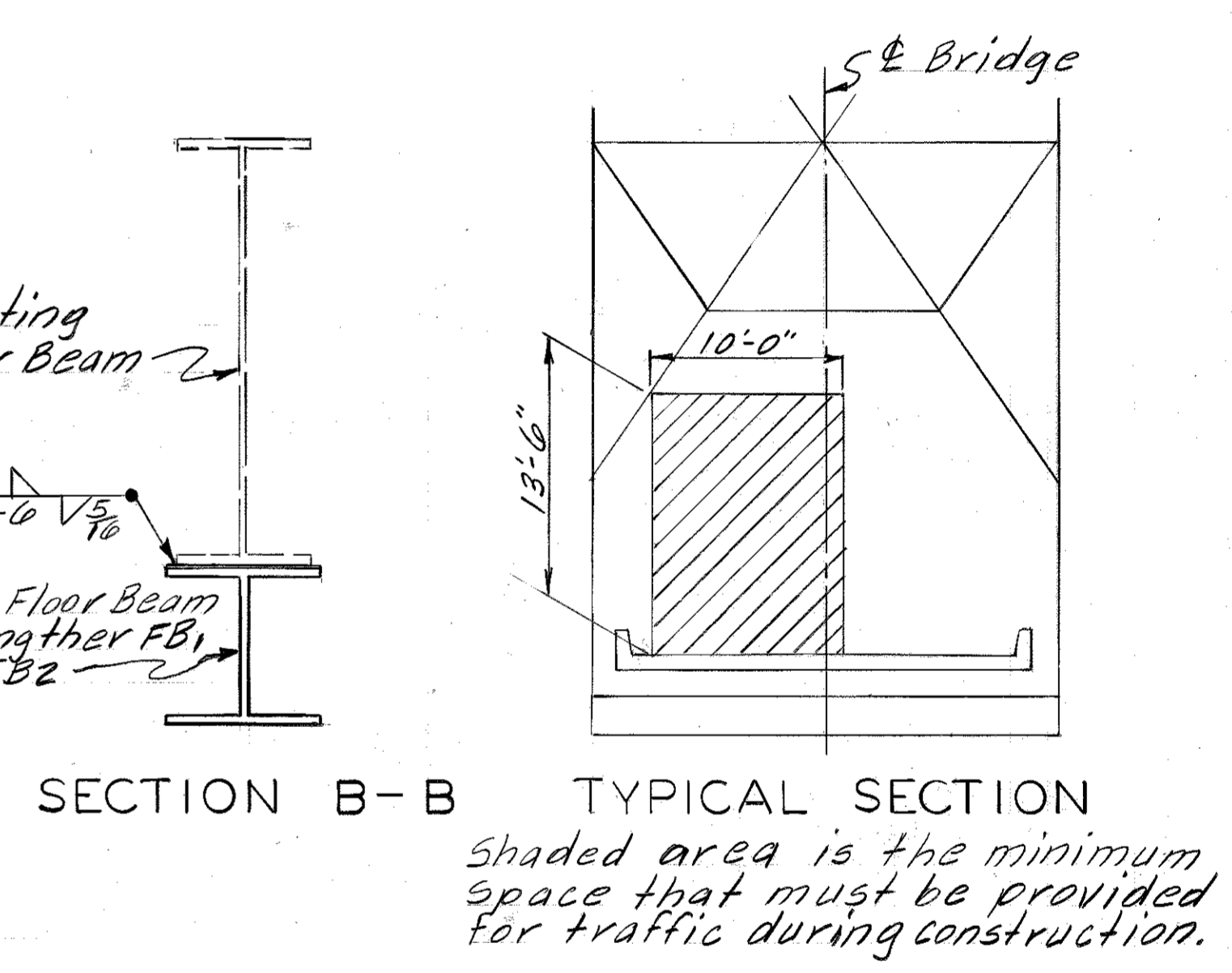
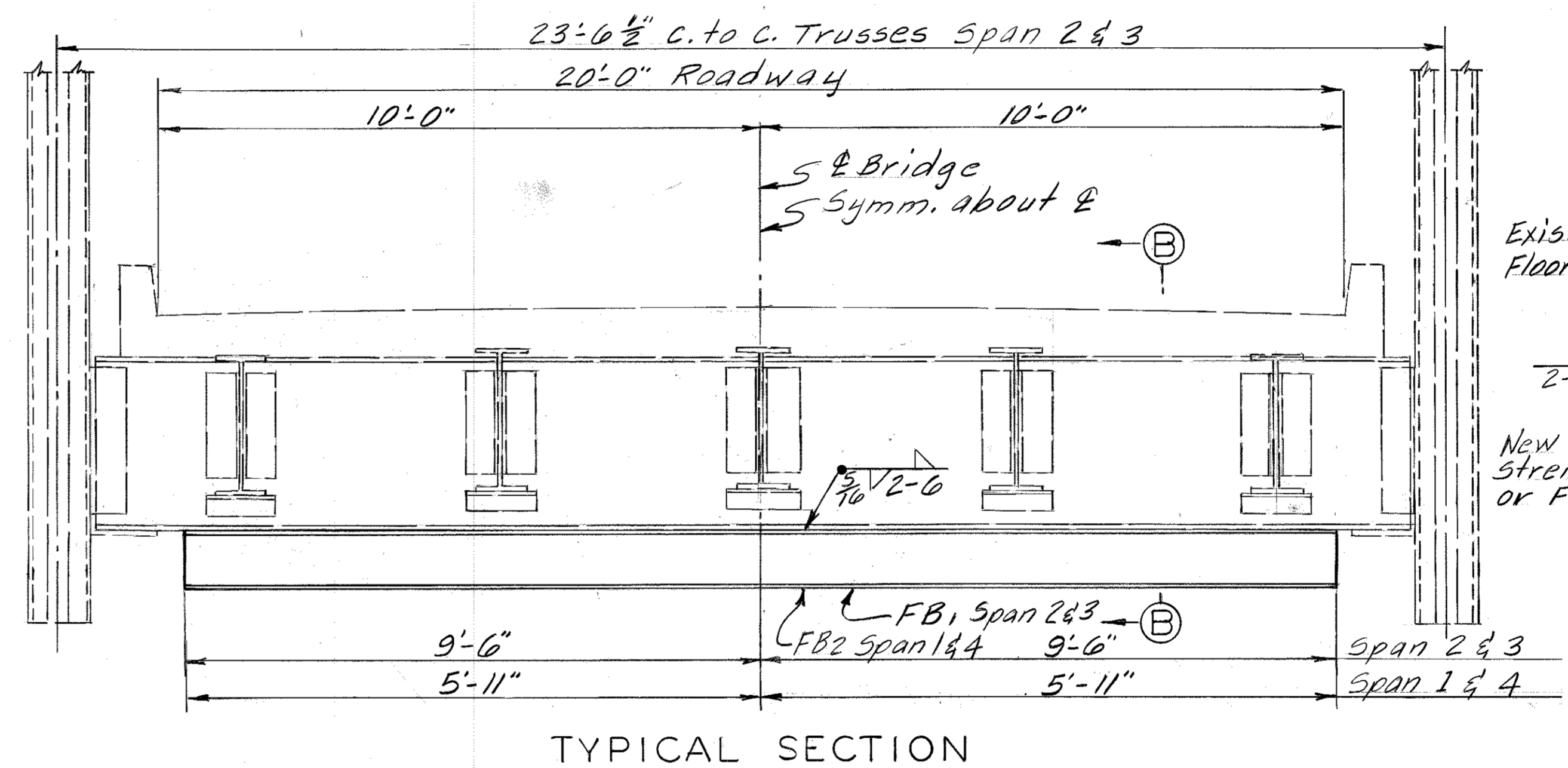
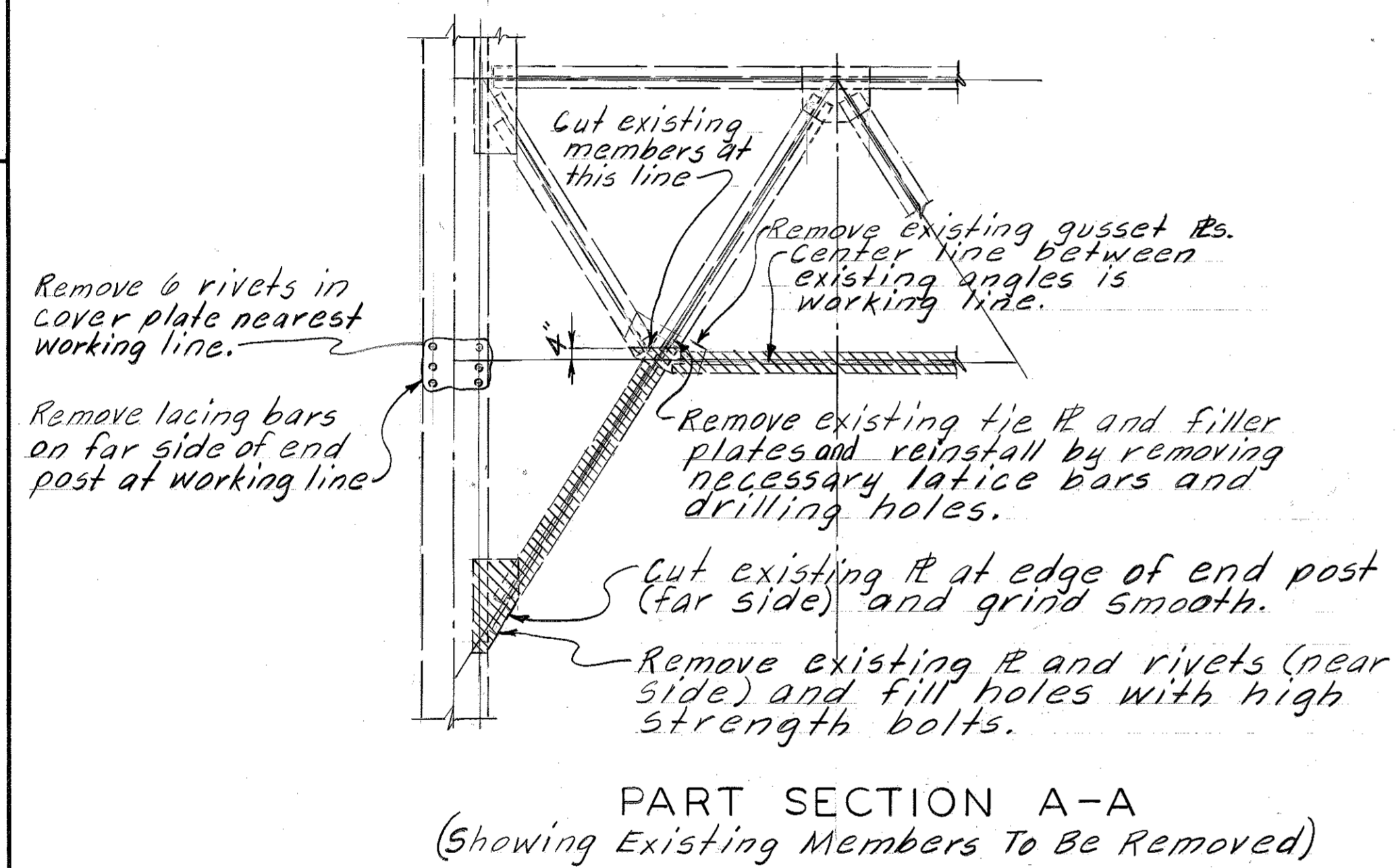
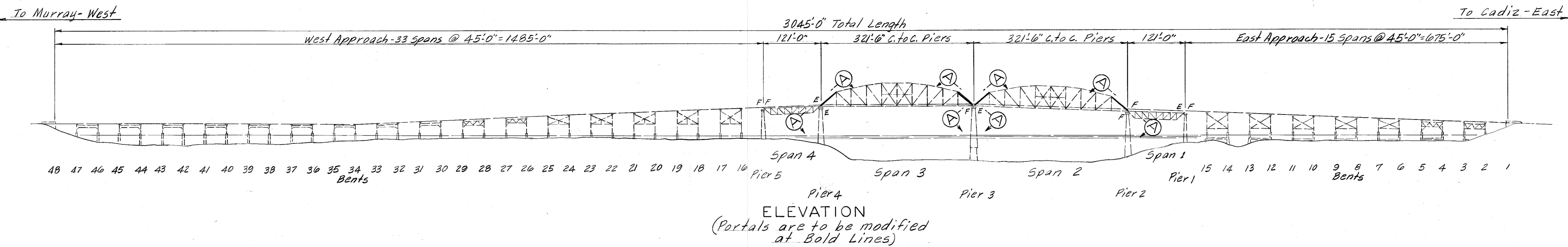
EACH CONTRACTOR SUBMITTING A BID FOR THIS WORK SHALL MAKE A THOROUGH INSPECTION OF THE BRIDGE AND THE SITE PRIOR TO SUBMITTING HIS BID AND SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS SO THAT WORK CAN BE EXPEDITIOUSLY PERFORMED AFTER A CONTRACT IS AWARDED. A SUITABLE METHOD OF INSTALLING THIS STRUCTURAL STEEL SHOULD BE INVESTIGATED. SUBMISSION OF A BID WILL BE CONSIDERED EVIDENCE OF THIS INSPECTION HAVING BEEN MADE. ANY CLAIMS RESULTING FROM SITE CONDITIONS WILL NOT BE HONORED BY THE BUREAU.

LETTING DATE _____
 DESIGNED BY _____ CHECKED BY _____
 DETAILED BY _____ CHECKED BY _____
 TRACED BY _____ CHECKED BY _____
 REVISED _____ DATE _____
 REVISED _____ DATE _____
 REVISED _____ DATE _____

REPAIRS TO CANTON BRIDGE OVER BARKLEY LK SHEET 2 COMMONWEALTH OF KENTUCKY BUREAU OF HIGHWAYS FRANKFORT COUNTY OF TRIGG CADIZ-MURRAY ROAD		
STATION	P.E. PROJECT NO. MP111-0068-80020	
CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO. 19431

GENERAL NOTE

UPDATE DATE
LETTING DATE



TOTAL ESTIMATE OF QUANTITIES

Strengthen Floor Beams	32	Each
Revise Portals	4	Each
Maintain and Control Traffic	1	Lump Sum
Demobilization	1	Lump Sum

Estimated Weight of Structural Steel = 30607 Lbs.

LAYOUT

DATE DATE DATE
REVISIONS
CHECKED BY: STRAHOH
DESIGNED BY: STRAHOH
1994

Sheet 3
Repairs to Bridge over Lake Barkley

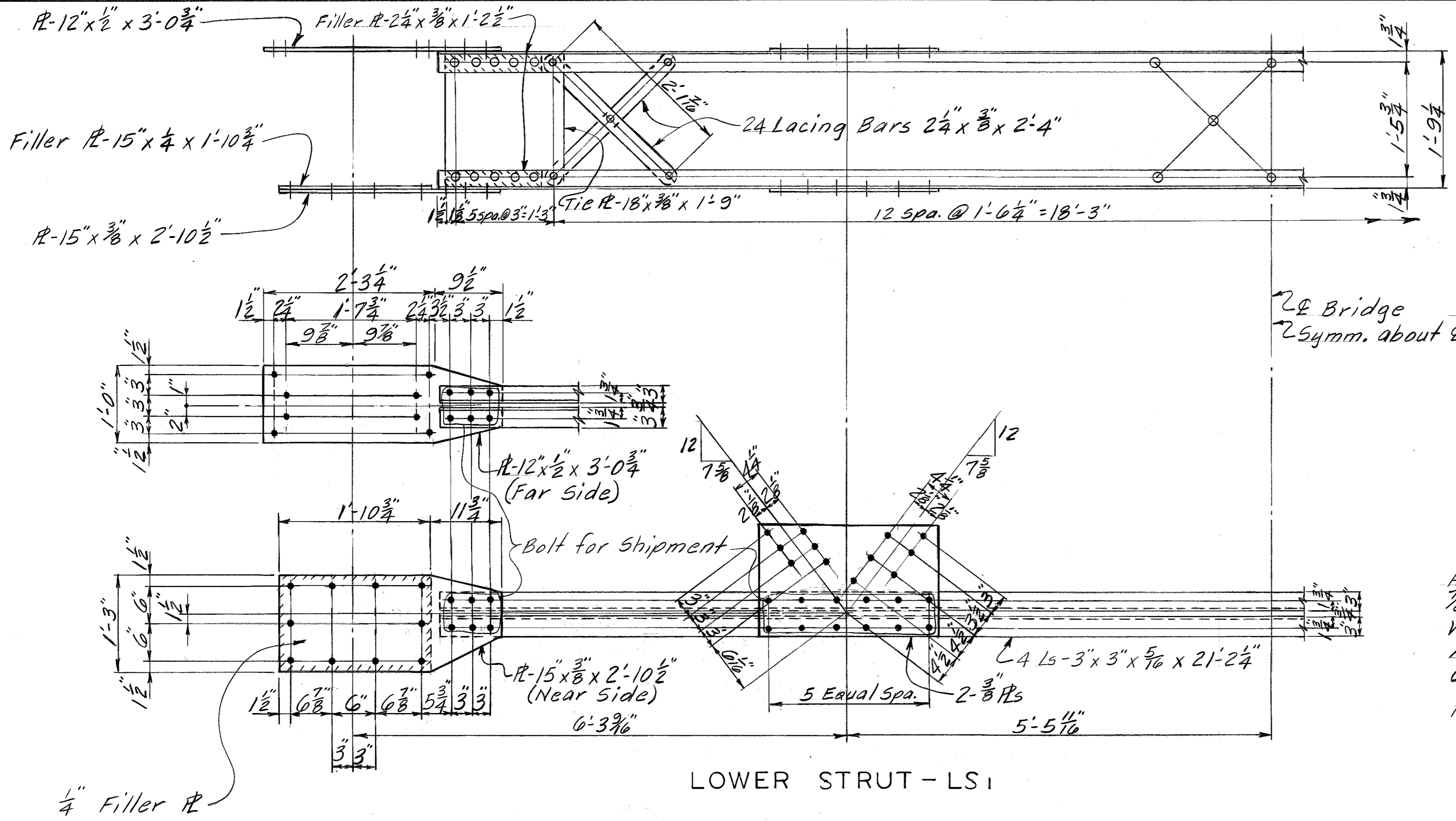
COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
FRANKFORT
COUNTY OF

TRIGG
CADIZ-MURRAY
ROAD
P.E. PROJECT NO.

STATION	CONSTRUCTION PROJECT NO.	MAINTENANCE PROJECT NO.	DRAWING NO. 19431
---------	--------------------------	-------------------------	----------------------

UPDATE DATE
LETTING DATE

DESIGNED BY: STRAHON
CHECKED BY: [Signature]
DATE: [Blank]
REVISIONS: [Blank]



LOWER STRUT - LS1

STRUCTURAL STEEL		
MARK	NO.	DESCRIPTION
LS1	4	Lower strut (see Detail)
FB1	18	HP12 x 53 x 19'-0"
FB2	14	HP10 x 42 x 11'-10"
Field Bolts	512	3/8" x 2 1/2" High Strength Bolt with Hex Nut.
Field Bolts	64	3/8" x 2 1/2" " " " " " "
Field Bolts	48	3/8" x 2 1/4" " " " " " "
Washers	624	Flat Washers for High Strength Bolts.

Estimated Weight of Structural Steel = 30607 Lbs.

All shop and field connections shall be 7/8" High Strength Steel Bolts conforming with A.S.T.M. A 325-74. All holes shall be 15/16". All joints are designed as friction type connections. Tightening shall be done with properly calibrated wrenches.

Sheet 4

Repairs to Bridge over Lake Barkley

COMMONWEALTH OF KENTUCKY
BUREAU OF HIGHWAYS
 FRANKFORT
 COUNTY OF
TRIGG
 CADIZ-MURRAY
 ROAD
 STATION P.E. PROJECT NO.
 CONSTRUCTION PROJECT NO. MAINTENANCE PROJECT NO. DRAWING NO.
 19431