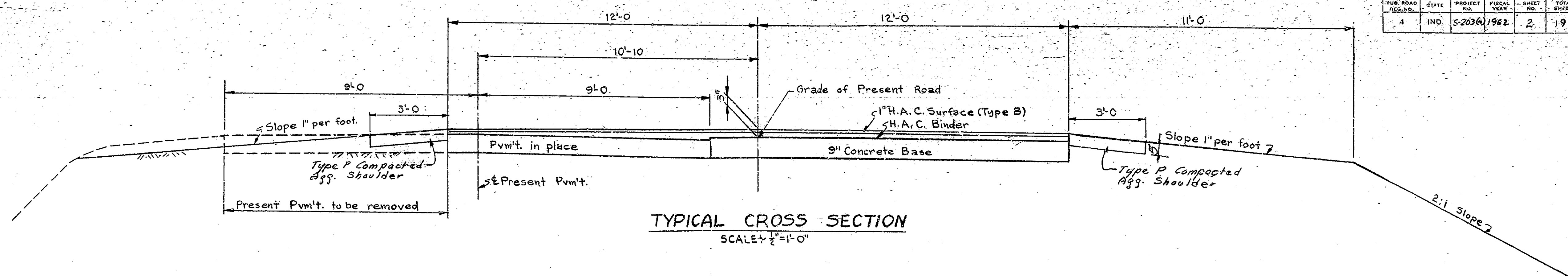
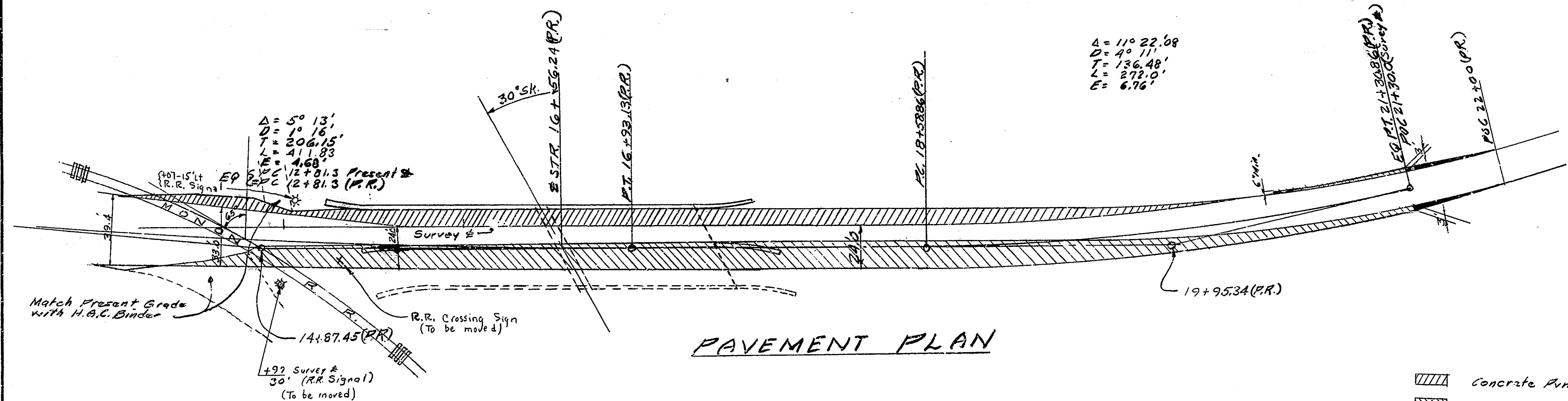




BRIDGES OVER 20' SPAN				
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	TOTAL SHEETS
4	IND.	S-203(4)	1962	2
				19



TYPICAL CROSS SECTION  
SCALE: 1/2" = 1'-0"



PAVEMENT PLAN

NOTE: See Sheet 2A for revised detail of R.R. Crossing.

PAVEMENT DETAILS  
STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE: 1" = 30' UNLESS NOTED JULY 27 1961

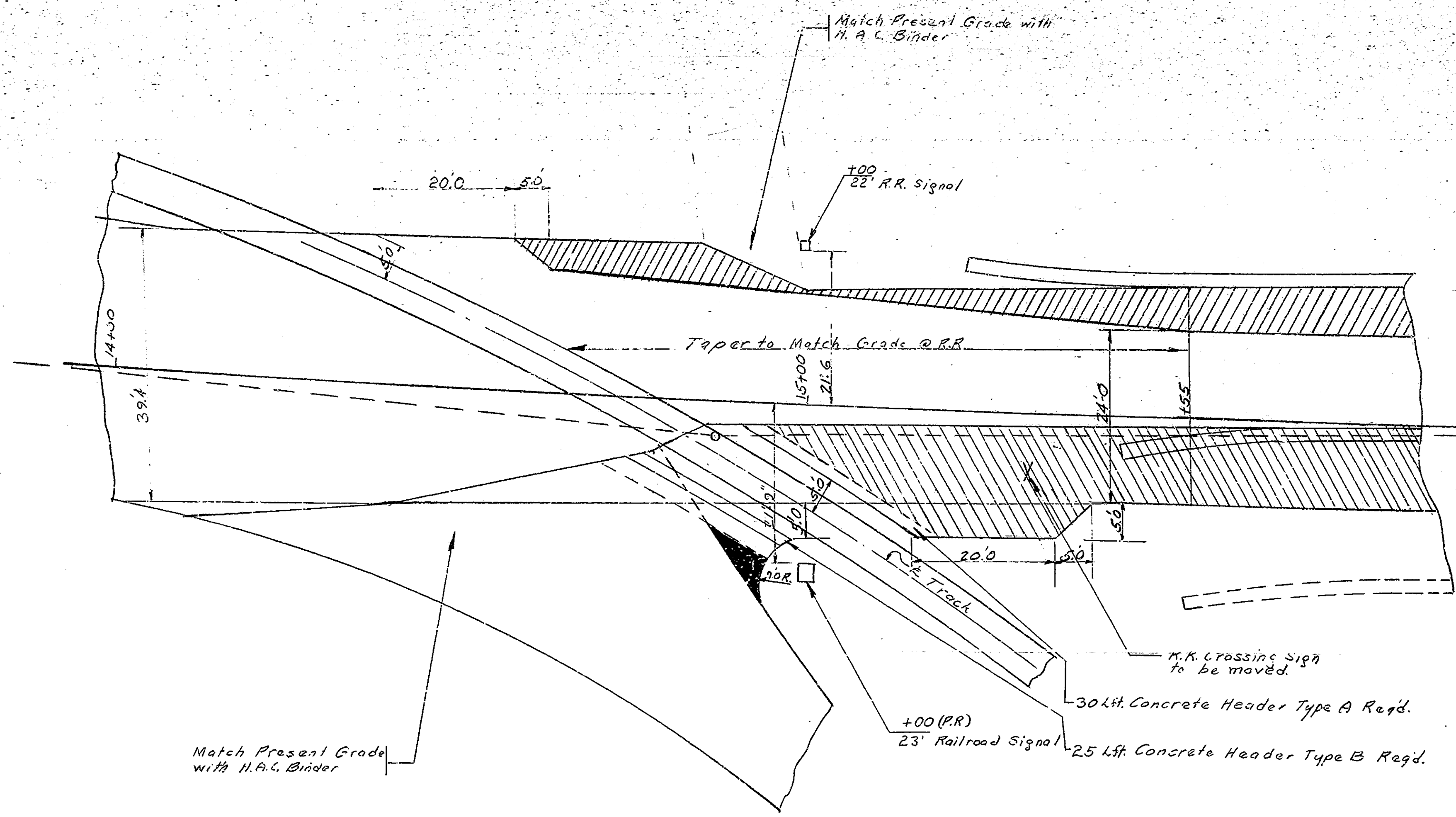
RECOMMENDED FOR APPROVAL: *C.R. Rimmer*  
ENGINEER OF BRIDGE DESIGN

DRAWING OF  
PROJECT: S-203(4)  
BRIDGE CONTRACT NO. 6426  
BRIDGE FILE: 56-G-3710A

DESIGNED: CKD  
DRAWN: *AVK* 1-16-61 CKD *DDM*  
TRACED: CKD

Revised 8/1/64 R.R. Crossing  
Revised 7/1/65 R.R. Crossing

BRIDGES OVER 20' SPAN					
STATE ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	5-203(a)	1962	29	19



- Concrete Pav't. to be Removed.
- 9" Concrete Base Ref'd.
- 9" Hot Asphaltic Concrete Binder

NOTE: Remaining pavement to be covered with H.A.C. Surface & H. A. C. Binder  
See Typical Cross Section Sh. N<sup>o</sup> 2

DESIGNED	CK'D
DRAWN <i>AKK</i>	CK'D <i>W.C.S.</i>
TRACED	CK'D

**REVISED PAVEMENT DETAILS**  
**INDIANA STATE HIGHWAY COMMISSION**

SCALE: 1" = 10'

AUGUST 4, 1964

RECOMMENDED FOR APPROVAL:

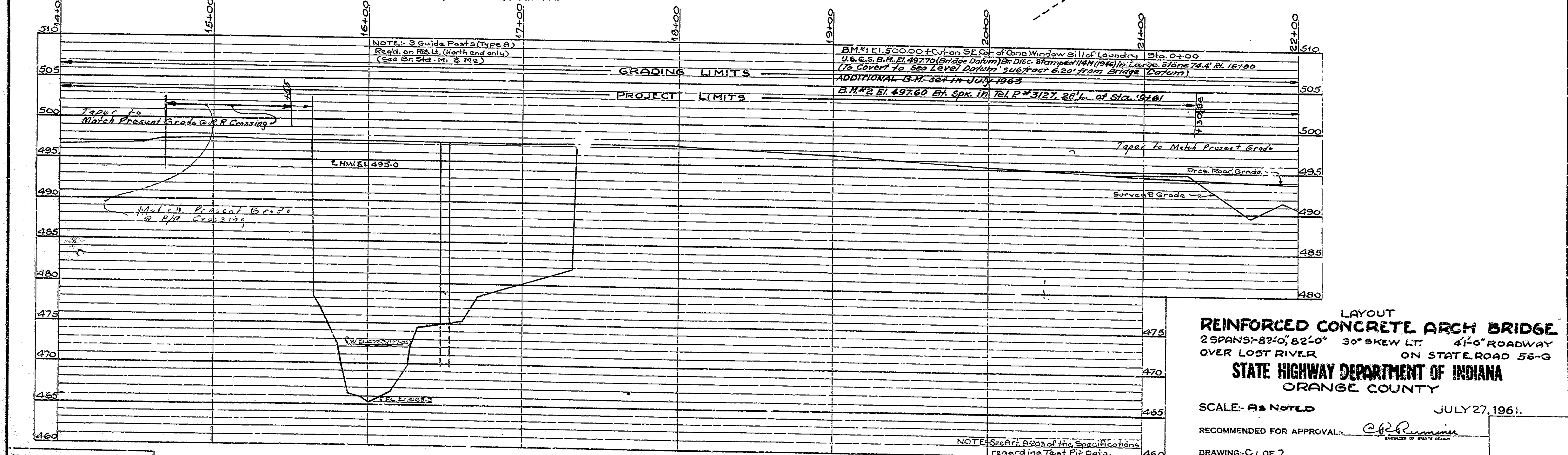
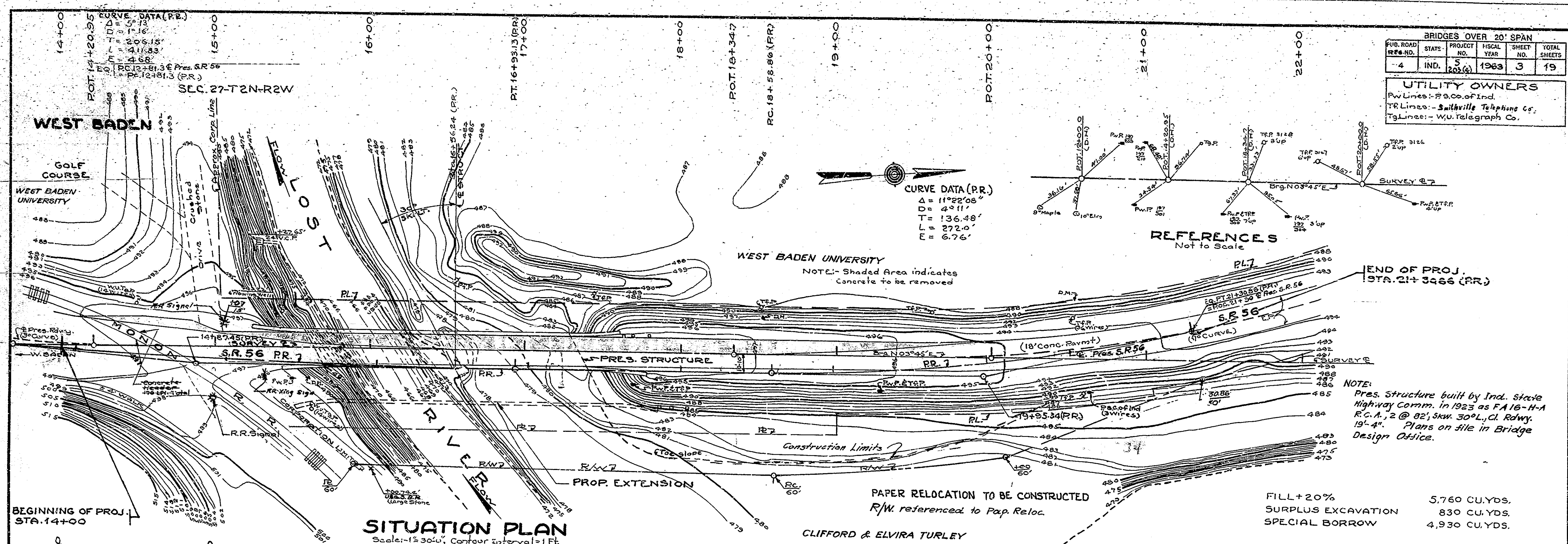
*C.R. Rummel*  
ENGINEER OF BRIDGE DESIGN

DRAWING OF  
PROJECT: 5-203(a)  
BRIDGE CONTRACT NO. 6426  
BRIDGE FILE: 56-G-3710A

BRIDGES OVER 20' SPAN					
PUB. ROAD	STATS.	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	5	1963	3	19

UTILITY OWNERS	
Pw Lines:	Pa. Co. of Ind.
TR Lines:	Smithville Telephone Co.
Tg Lines:	W.U. Telegraph Co.



**LAYOUT**  
**REINFORCED CONCRETE ARCH BRIDGE**  
 2 SPANS - 82'-0", 82'-0" 30° SKEW LT. 4'-0" ROADWAY  
 OVER LOST RIVER ON STATE ROAD 56-G  
**STATE HIGHWAY DEPARTMENT OF INDIANA**  
 ORANGE COUNTY

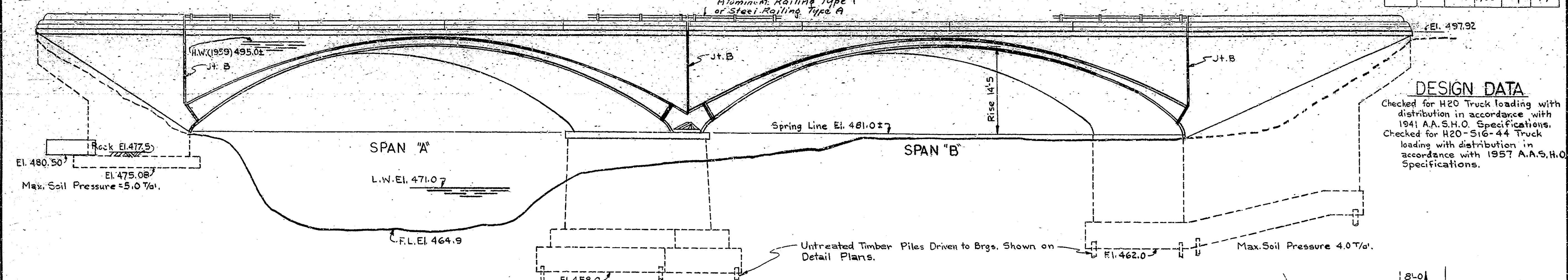
SCALE - As NOTED JULY 27, 1961.

RECOMMENDED FOR APPROVAL: *C. J. Rimmer*  
 ENGINEER OF BRIDGE DESIGN

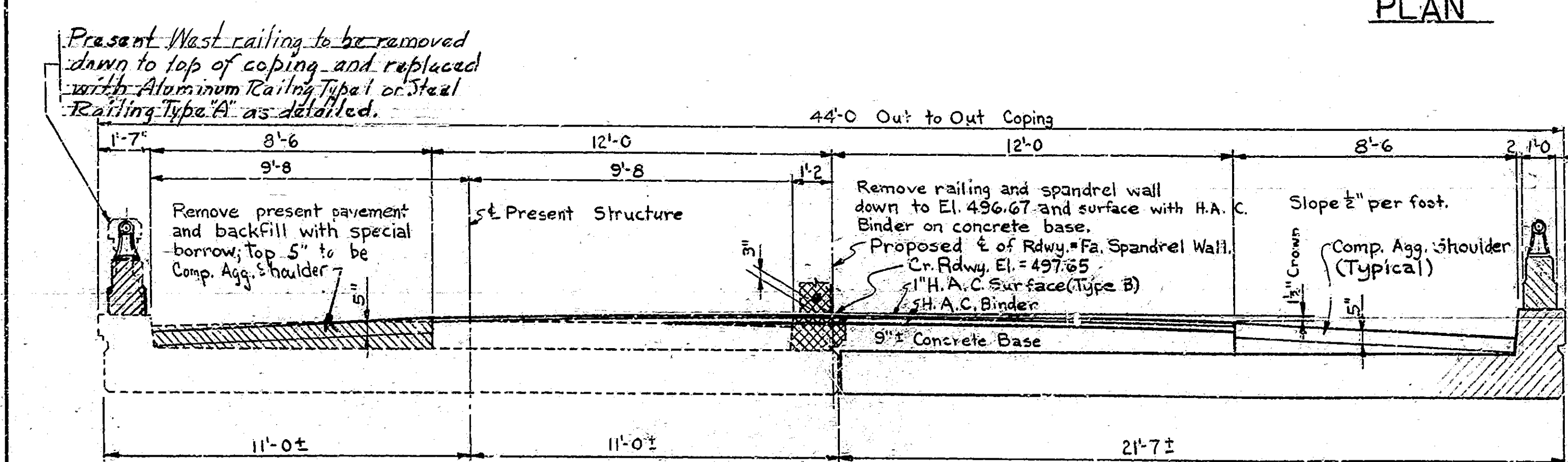
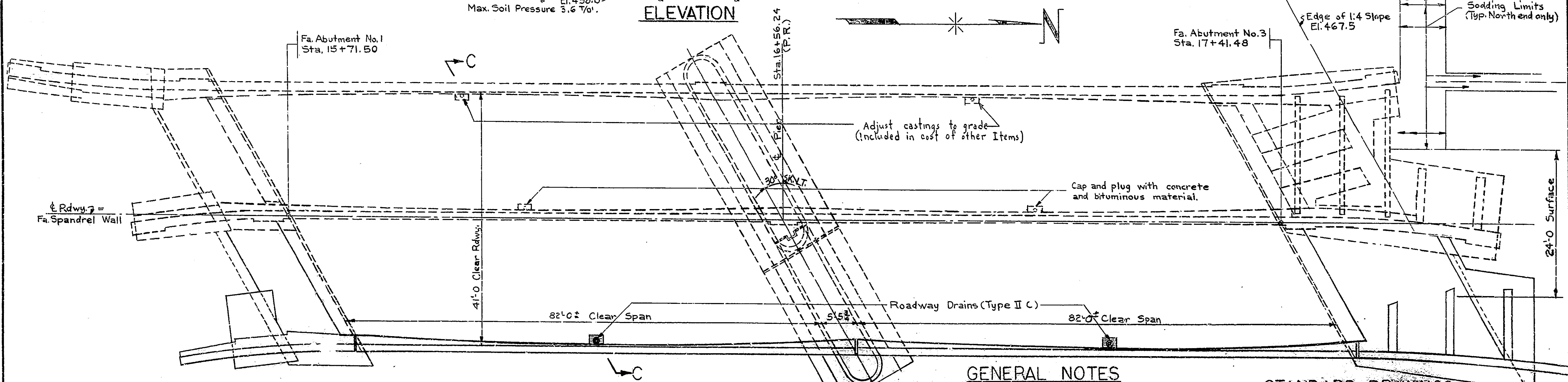
DRAWING - C 1 OF 7  
 PROJECT - S-203(4) STATION - 16+56.24 (P.R.)  
 BRIDGE CONTRACT NO. 6426  
 BRIDGE FILE - 56-G-3710A

STRUCTURE TO BE BUILT LEVEL

BRIDGES OVER 20' SPAN					
STA. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-203(4)	1962	4	19



**DESIGN DATA**  
 Checked for H20 Truck loading with distribution in accordance with 1941 A.A.S.H.O. Specifications.  
 Checked for H20-S16-44 Truck loading with distribution in accordance with 1957 A.A.S.H.O. Specifications.



**SECTION C-C**  
 SCALE: 3/8" = 1'-0"

NOTE: Spalled or disintegrated areas to be cleaned and repaired with pneumatically placed mortar as directed by the Engineer.

**GENERAL NOTES**

- Depth of footings to be extended if found necessary. See Art. B403.2(a) of Specifications.
- Footings shall extend minimum of 1'-0" into solid rock at abut. #1.
- Reinforcing steel not to be ordered until rock is uncovered at abut. #1.
- Piles shall have minimum bearing value shown on detail drawings.
- Determine pile lengths by Art. F103 of Specifications.
- Reinforcing steel covering shall be 3 inches in footings, except bottom steel which shall be 4 inches, and 2 inches in all other parts unless noted.
- Concrete in footings, wingwalls, abutments, and counterforts, and in pier system to be Class "E".
- Concrete in railing, railing pedestal to be Class "F".
- Concrete not noted above, in arch ring to be Class "D".
- Continuous concrete piers shall be required between construction joints as shown on detail plans.
- Waterproof abutments, wingwalls, counterforts, arch rings, and spandrel walls in accordance with Specifications.
- Bevel forms 1/4" under copings; sand chamfer exposed edges 1 inch unless noted.
- Two standard type IIC roadway drains to be placed as shown on this drawing.
- Dumped rip-rap to be placed on wing slopes.
- Outlet ends of drains thru structure to project 3". Cut or turn off inlet ends flush with concrete.
- All railings to be constructed vertical.
- See Special Provisions for items included in this contract.

**TYPICAL CROSS SECTION**

**STANDARD DRAWINGS**

BR. RD.	PURPOSE
C1	Reinf. Bar Notes - Misc. Details
C2	Arch Ring Stirrups & Capring Flashing
D	Rdwy. Drain Type IIC
M	Guide Posts, Sodding, Pot. Drive & Evert. Outsets
R1a	Steel Railing Details
R1A	Aluminum Railing Details
S2	Special Filling Material Details
MB	R/W markers, Sodding Details, Conc. Header
SB3	Std. Marker Signs
SB2	Sign Design Details
SB1	Construction Signs, Right-of-Way Signs

**REINFORCED CONCRETE ARCH BRIDGE**  
 2 SPANS: 82'-0" & 82'-0" 30" SK. LT. (EXT.) 41'-0" ROADWAY  
 OVER LOST RIVER ON STATE ROAD 56-G  
**STATE HIGHWAY DEPARTMENT OF INDIANA**

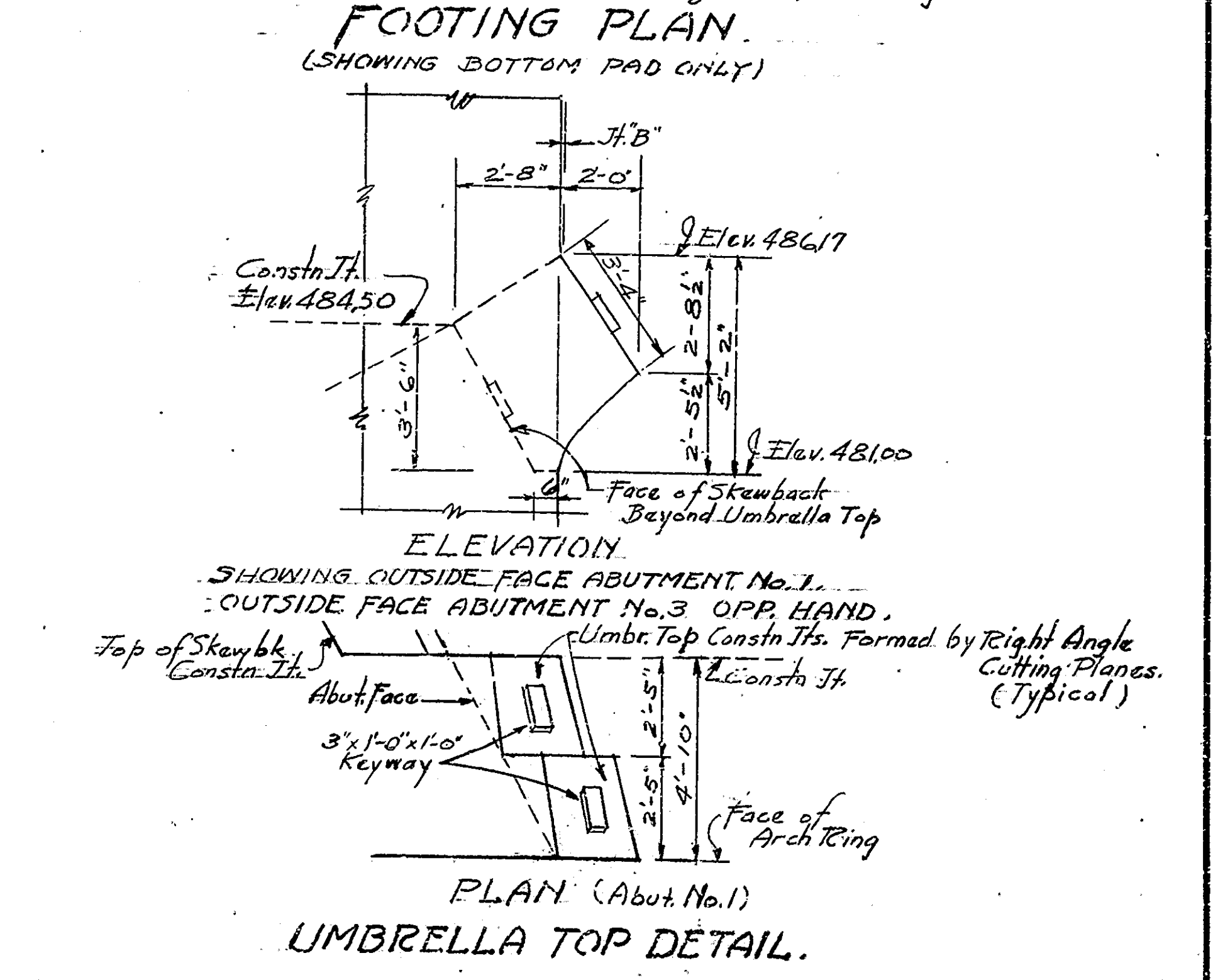
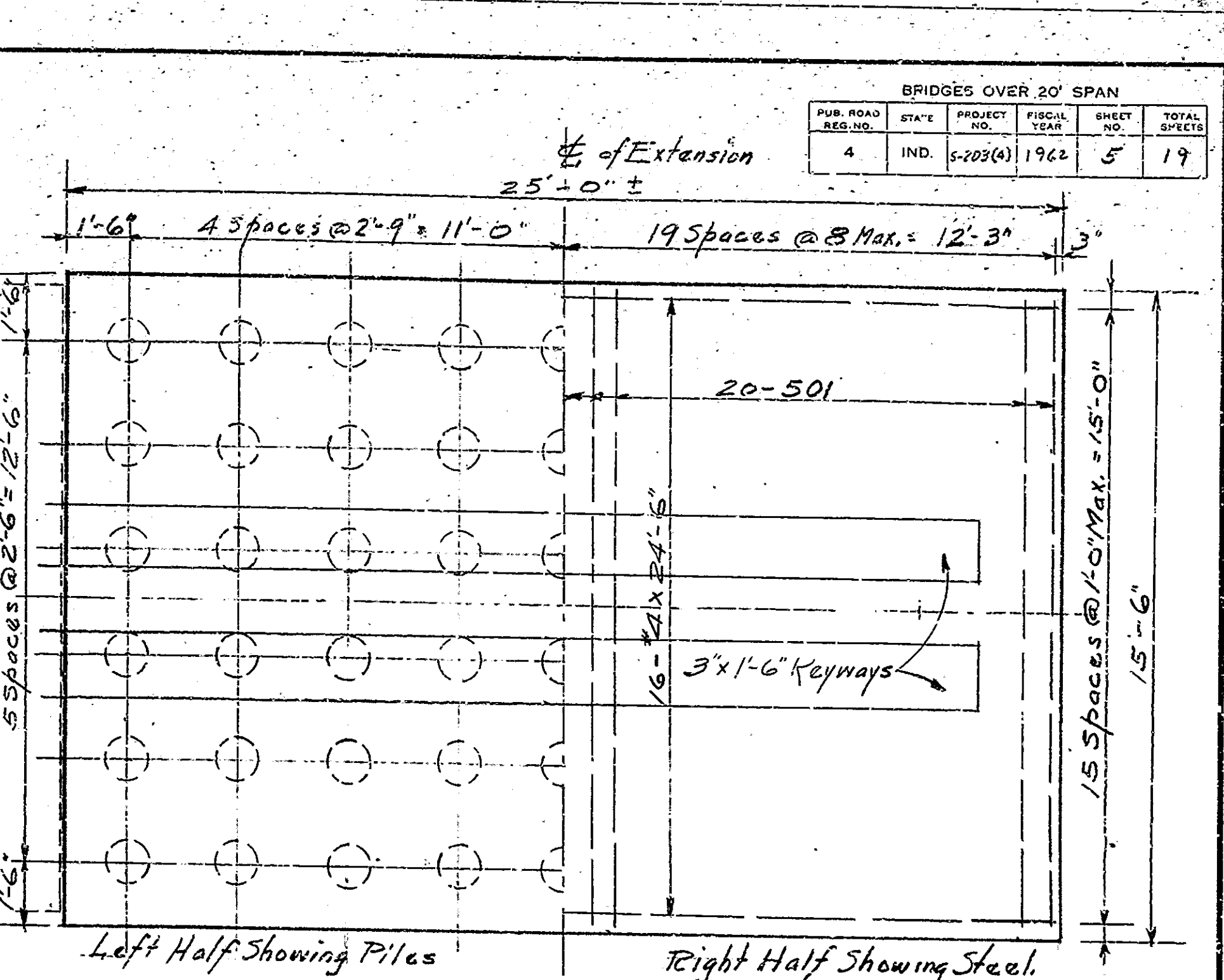
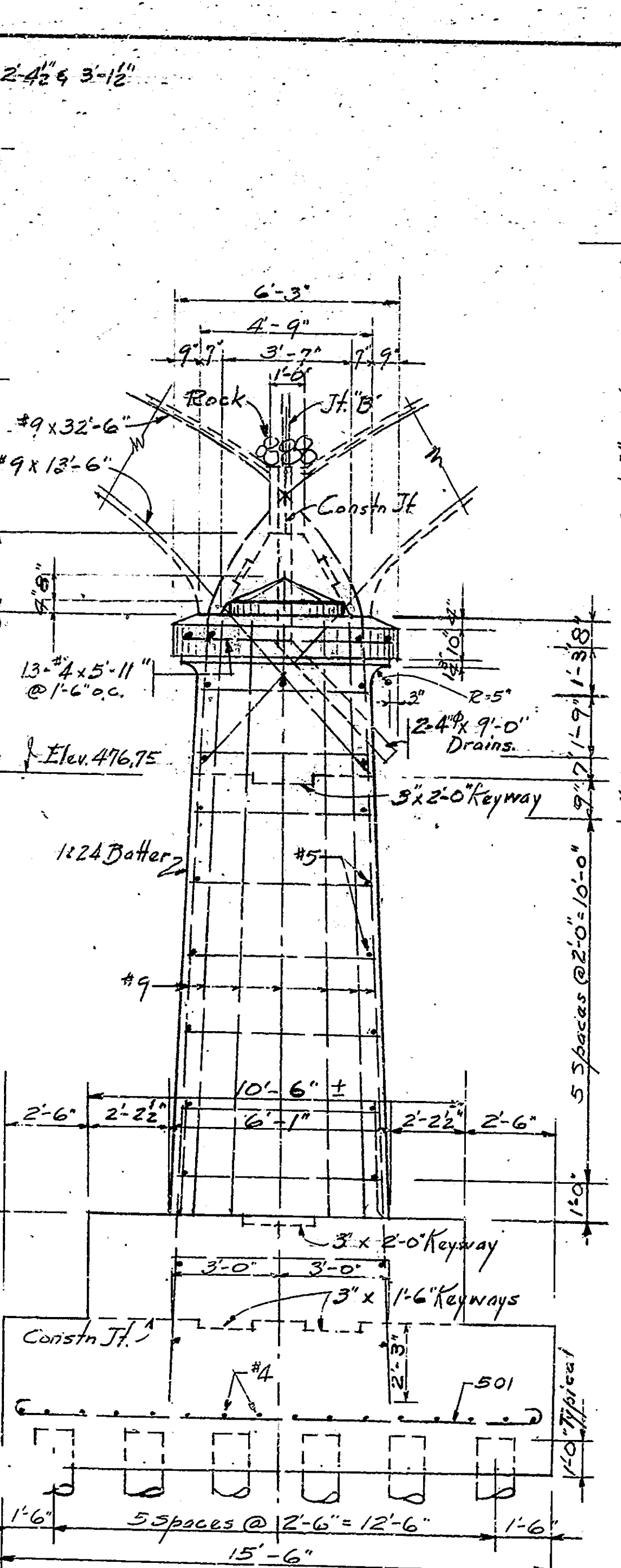
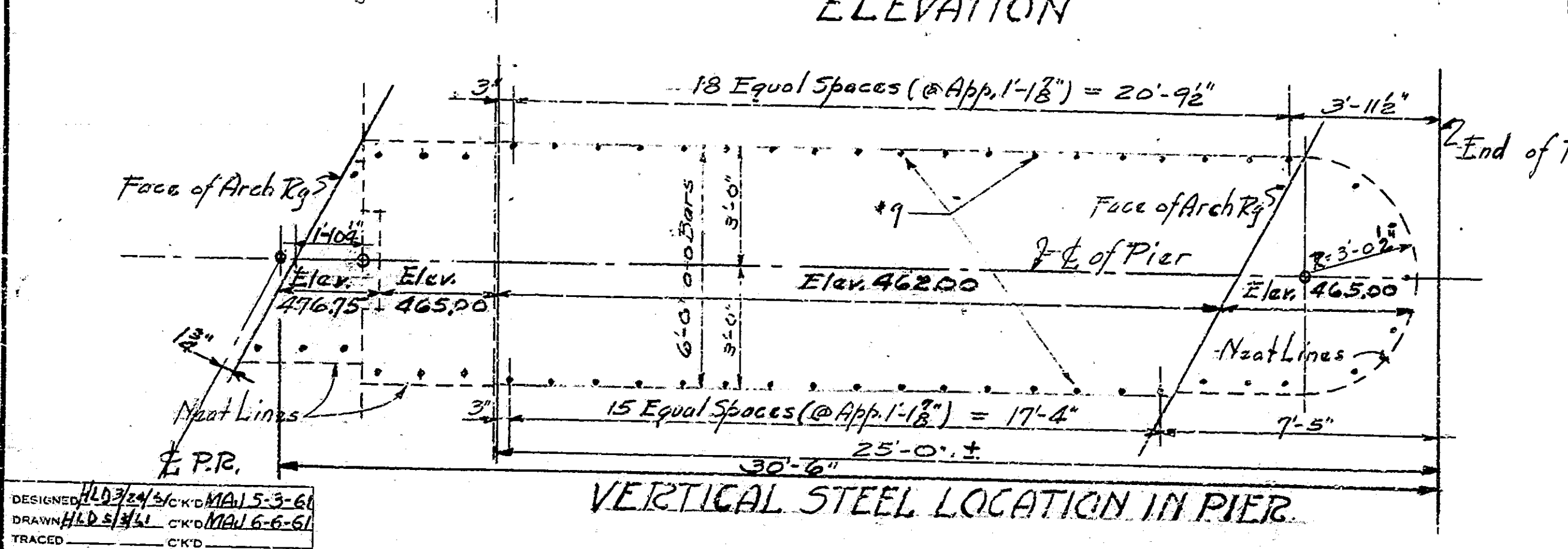
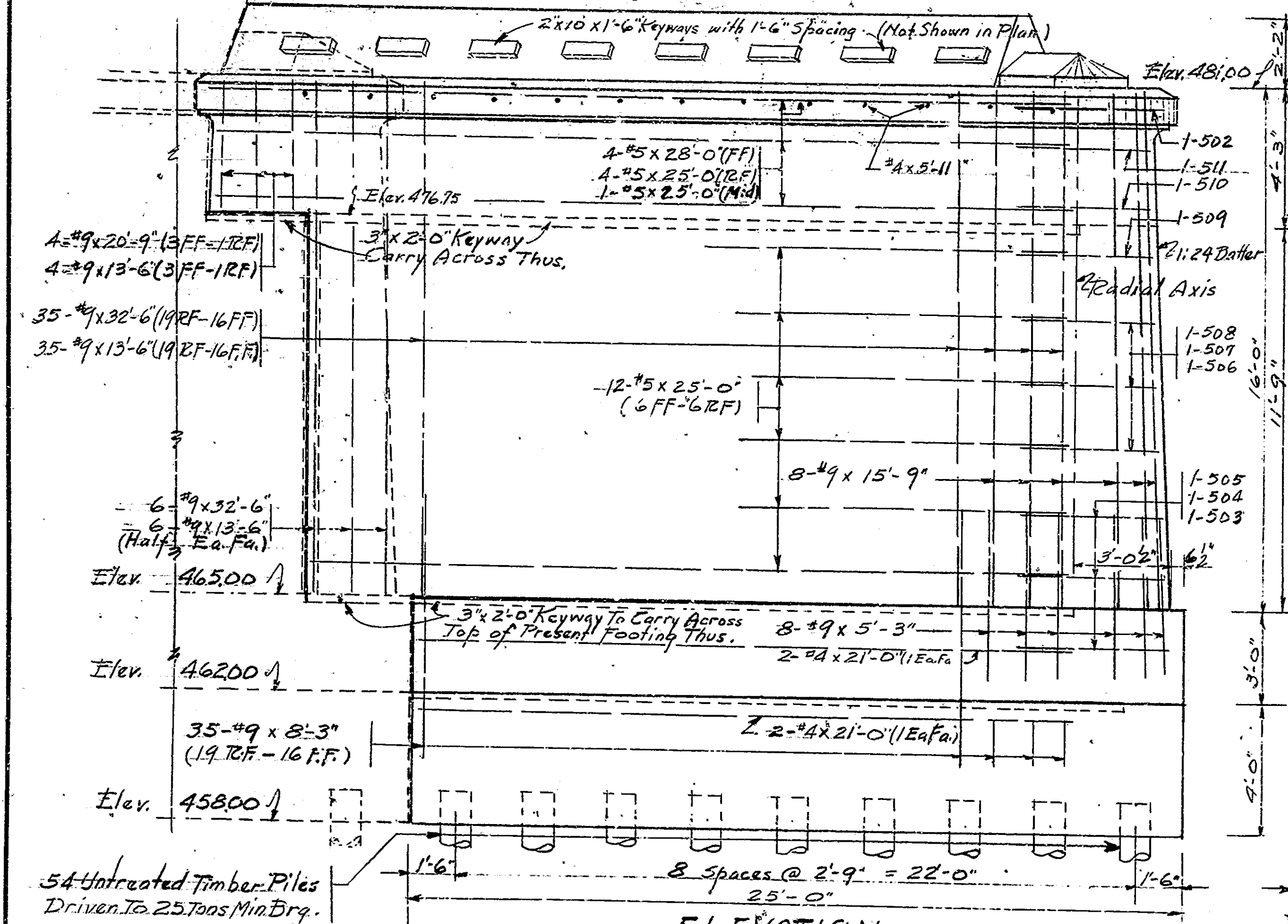
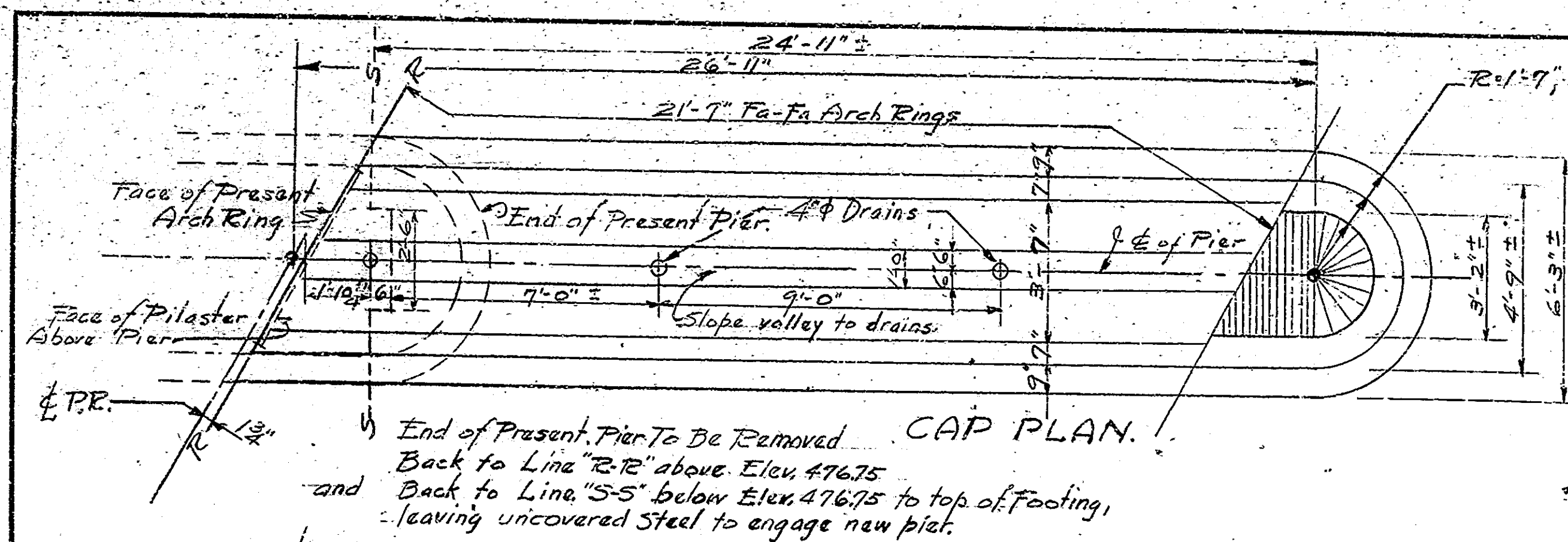
SCALE: 3/8" = 1'-0" UNLESS NOTED. JULY 23, 1961

RECOMMENDED FOR APPROVAL: *C.R. Rimmer*  
CHIEF ENGINEER

DRAWING: C2 of 7  
 PROJECT: S-203(4)  
 BRIDGE CONTRACT NO. 6426  
 STATION: 16+56.24 (P.R.)  
 BRIDGE FILE: 56-G-3710A

DESIGNED: C.K.D.  
 DRAWING: M.J.L. & C.K.D. 11/26/61  
 TRACED: C.K.D.

BRIDGES OVER 20' SPAN				
PUB. ROAD REG. NO.	STATE	PROJECT NO.	FISCAL YEAR	TOTAL SHEETS
4	IND.	S-203(4)	1962	5
				19



**PIER No. 2 DETAILS.**  
**STATE HIGHWAY DEPARTMENT OF INDIANA**

SCALE: 3/8" = 1'-0" Unless Noted. JULY 27 1961

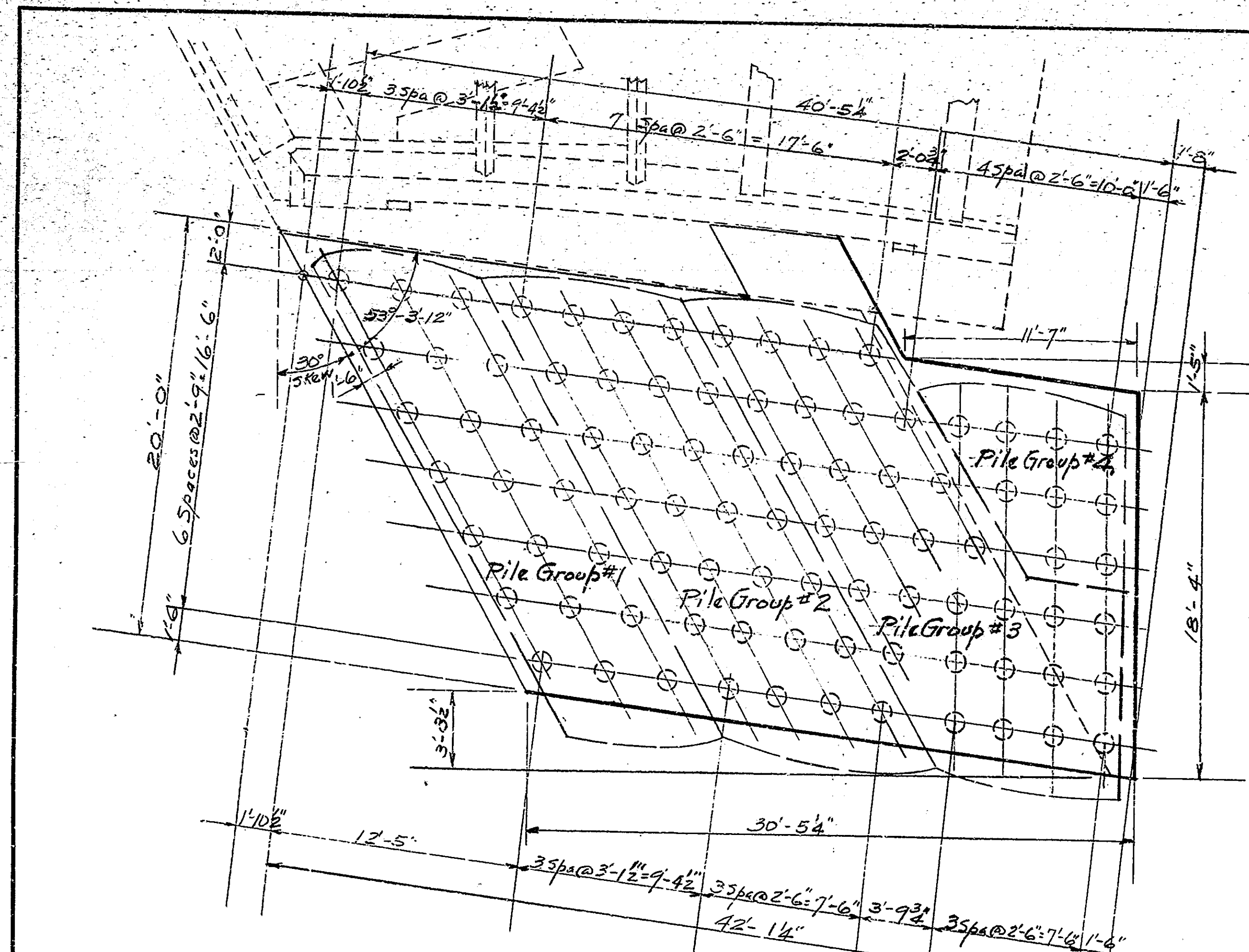
RECOMMENDED FOR APPROVAL: *C. P. Summers*  
ENGINEER OF BRIDGE DEPT.

DRAWING - C3 OF 7  
PROJECT - S-203(4)  
BRIDGE CONTRACT NO. 6426  
BRIDGE FILE - 56-G-3710A

Note - See Br. Std. C1 for Reinforcing Bar Notes.

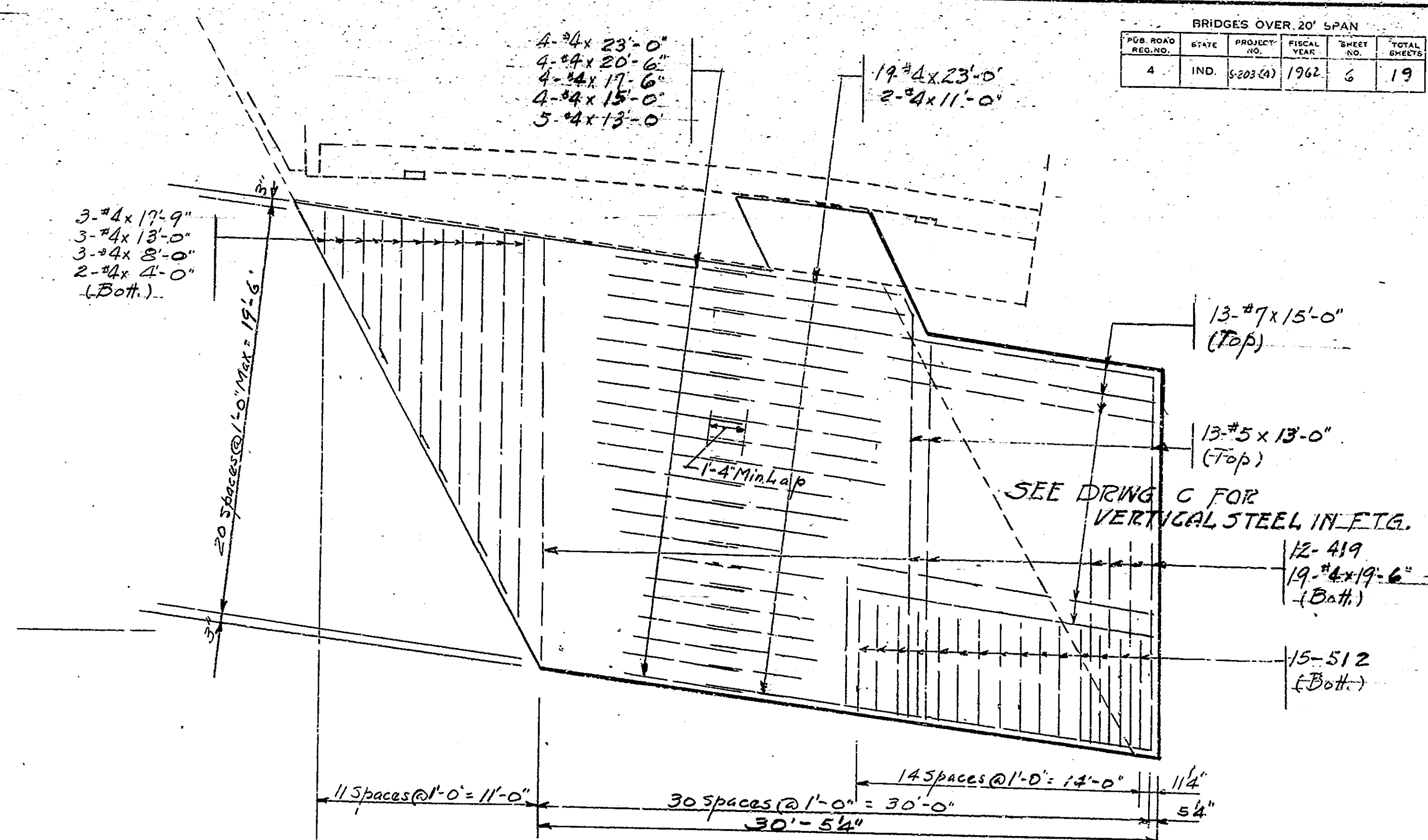
DESIGNED BY: H. D. S. / C. K. M. / S. S. G.  
DRAWN BY: H. D. S. / C. K. M. / S. S. G.  
TRACED BY: C. K. M.

BRIDGES OVER 20' SPAN					
STATE ROAD NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	5-203 (A)	1962	6	19



ABUTMENT No. 3-FOOTING PLAN.  
SHOWING PILES.  
Untreated Timber Piles

Group No.	Number of Piles	Bearing Capacity.
1	21	15 Tons.
2	28	20 "
3	31	25 "
4	9	15 "
Total	89	



ABUTMENT No. 3-FOOTING PLAN  
SHOWING STEEL.  
Note- See Br. Std. C1 For Reinforcing Bar Notes.

DESIGNED: HLD 7/25/61 C.K.M. MAL 5-3-61  
DRAWN: HLD 3/16/61 C.K.M. MAL 6-6-61  
TRACED: C.K.M.

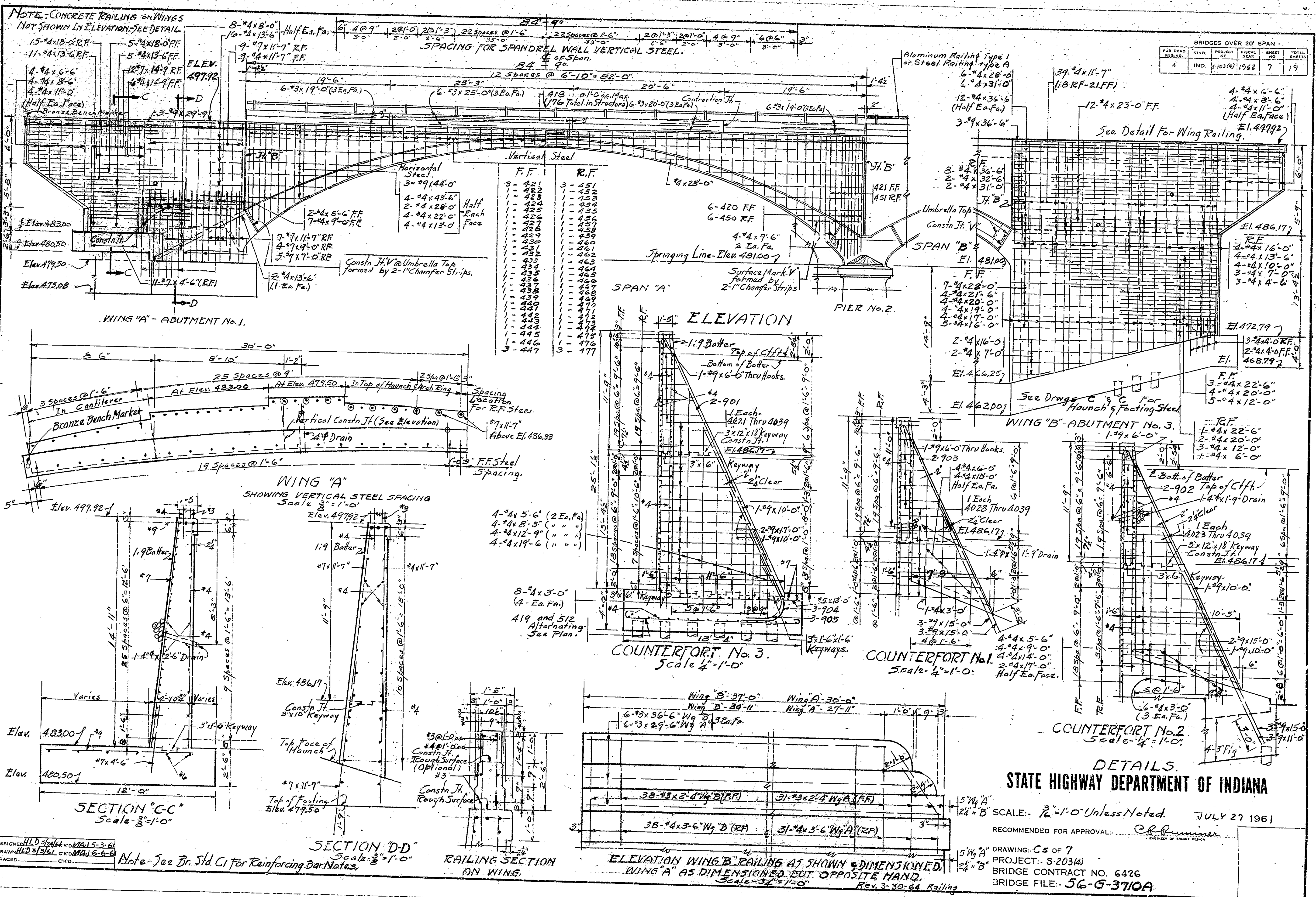
DETAILS.  
STATE HIGHWAY DEPARTMENT OF INDIANA

SCALE: 1/4" = 1'-0" Unless Noted. JULY 27 1961

RECOMMENDED FOR APPROVAL: *C. R. Rimmer*  
ENGINEER OF BRIDGE DESIGN

DRAWING: C4 OF 7  
PROJECT: 5-203 (A)  
BRIDGE CONTRACT NO. 6426  
BRIDGE FILE: 56-G-3710A

BRIDGES OVER 20' SPAN					
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-203(4)	1962	7	19



	F.F.	R.F.
3 - 421	421	451
1 - 422	422	452
1 - 423	423	453
1 - 424	424	454
1 - 425	425	455
1 - 426	426	456
1 - 427	427	457
1 - 428	428	458
1 - 429	429	459
1 - 430	430	460
1 - 431	431	461
1 - 432	432	462
1 - 433	433	463
1 - 434	434	464
1 - 435	435	465
1 - 436	436	466
1 - 437	437	467
1 - 438	438	468
1 - 439	439	469
1 - 440	440	470
1 - 441	441	471
1 - 442	442	472
1 - 443	443	473
1 - 444	444	474
1 - 445	445	475
1 - 446	446	476
3 - 447	447	477

NOTE - CONCRETE RAILING ON WINGS NOT SHOWN IN ELEVATION - SEE DETAIL

15-#4x18-S.R.F.  
11-#4x18-6.R.F.  
4-#4x6-6  
4-#4x8-6  
4-#4x11-0  
(Half Ea. Face)  
Bronze Bench Marker

5-#4x18-OFF  
5-#4x18-6.F.F.  
12-#7x14-9.R.F.  
16-#4x11-9.F.F.  
ELEV. 497.92

8-#4x8-0 Half Ea. Fa.  
16-#4x13-6  
9-#7x11-7.R.F.  
9-#4x11-7.F.F.

SPACING FOR SPANDREL WALL VERTICAL STEEL.  
12 Spaces @ 6'-10" = 82'-0"  
20'-6"

Aluminum Railing Type 1 or Steel Railing Type A  
6-#4x28-6  
6-#4x31-0  
12-#4x36-6  
3-#9x36-6

39-#4x11-7 (1/8.R.F.-21.F.F.)  
12-#4x23-0.F.F.  
See Detail for Wing Railing.

4-#4x6-6  
4-#4x8-6  
4-#4x11-0  
(Half Ea. Face)  
Elev. 497.92

8-#4x36-6  
2-#4x32-6  
2-#4x31-0

Umbrella Top  
Constn. Jt. "V"

SPAN "B"  
Elev. 481.00

7-#4x28-0  
4-#4x21-6  
4-#4x20-0  
4-#4x19-0  
4-#4x17-0  
5-#4x16-0

2-#4x16-0  
2-#4x17-0  
Elev. 466.25  
Elev. 462.00

See Drawg. C & C For Haunch & Footing Steel

WING "B" - ABUTMENT No. 3

3-#4x22-6  
4-#4x20-0  
5-#4x12-0

1-#4x22-6  
2-#4x20-0  
3-#4x12-0  
7-#4x6-0

2 Bottom of Batter  
2-902 Top of Cft. H.

1 Each A023 Thru 4039  
3-#12x18 Keyway  
Constn. Jt. 1  
Elev. 486.17

1-#9x10-0 Thru Hooks  
2-903  
4-#4x6-0 Half Ea. Fa.

1 Each A028 Thru 4039  
Elev. 486.17

1-#9x10-0 Thru Hooks  
1-#9x10-0 Thru Hooks  
1-#9x10-0 Thru Hooks

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1-#9x10-0 Thru Hooks  
1-#9x10-0 Thru Hooks

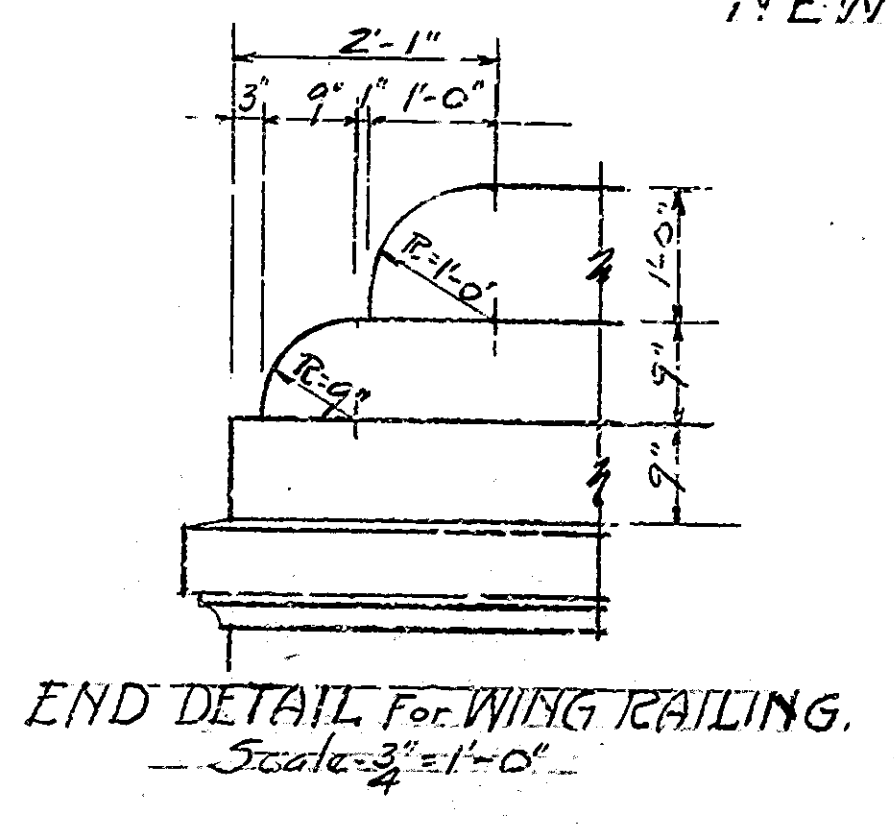
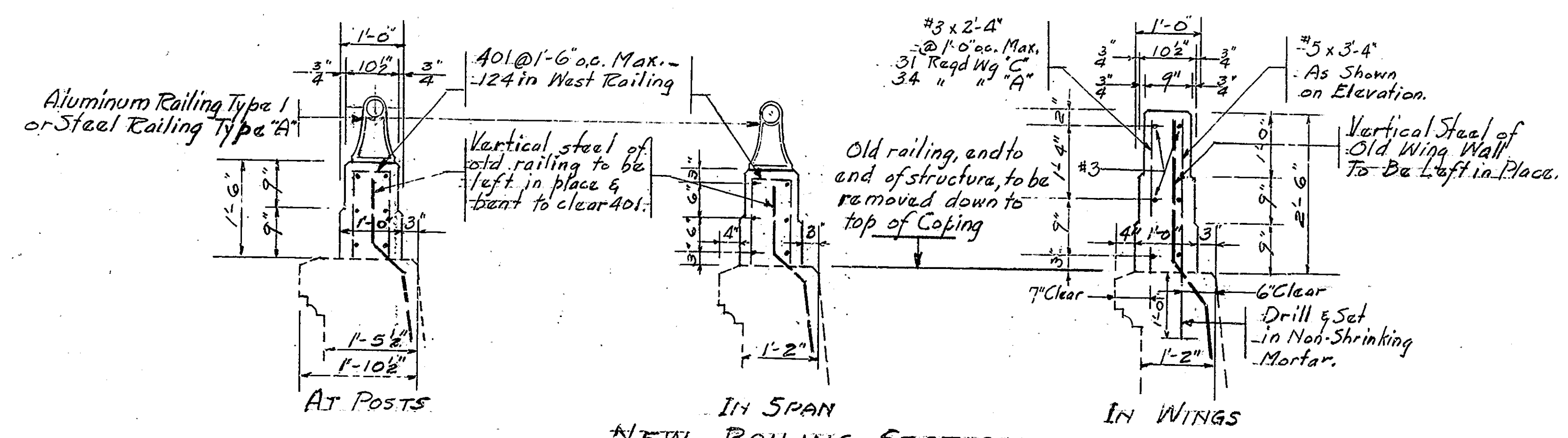
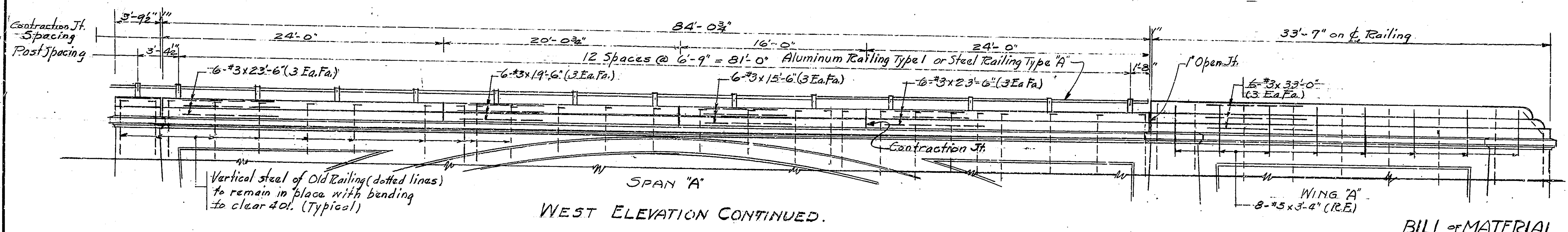
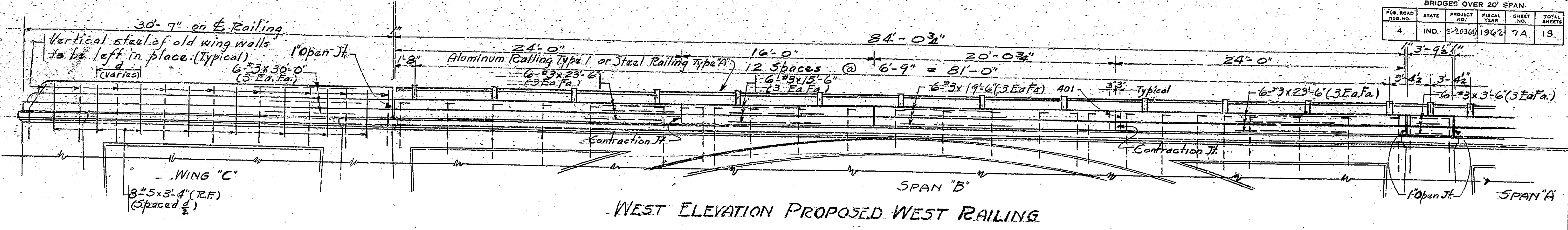
1-#9x10-0 Thru Hooks  
1-#9x10-0 Thru Hooks  
1-#9x10-0 Thru Hooks

1-#9x10-0 Thru Hooks  
1-#9x10-0 Thru Hooks  
1-#9x10-0 Thru Hooks

1-#9x10-0 Thru Hooks  
1-#9x10-0 Thru Hooks  
1-#9x10-0 Thru Hooks



BRIDGES OVER 20' SPAN.					
FOR ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
4	IND.	S-203(A)	1962	7A	19



**BILL OF MATERIAL.**

REINFORCING STEEL.				
Size	No.	LENGTH	WEIGHT	
Mark	Bars		Lbs.	
#5	16	3'-4"	56	
401	124	3'-4"	276	
#3	6	33'-0"		
#3	6	30'-0"		
#3	24	23'-6"		
#3	12	19'-6"		
#3	12	15'-6"		
#3	65	2'-4"		
Total #3			569	
TOTAL STEEL			901	
- CONCRETE - Cu Yds.				
Class "A" - Railing Conc. 14.0				
- MISCELLANEOUS -				
Aluminum Railing Type A or Steel Railing Type A 172 Lbs.				

**DETAIL OF WEST RAILING  
INDIANA STATE HIGHWAY COMMISSION**

SCALE: 3/4" = 1'-0" Unless Noted APRIL 16, 1964

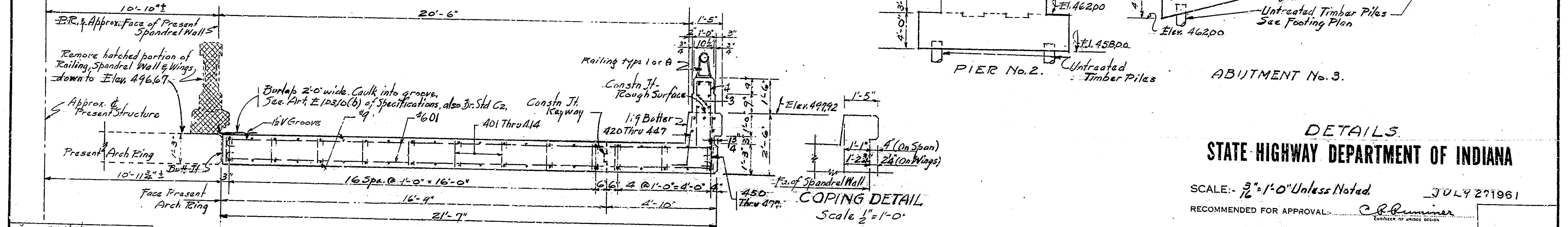
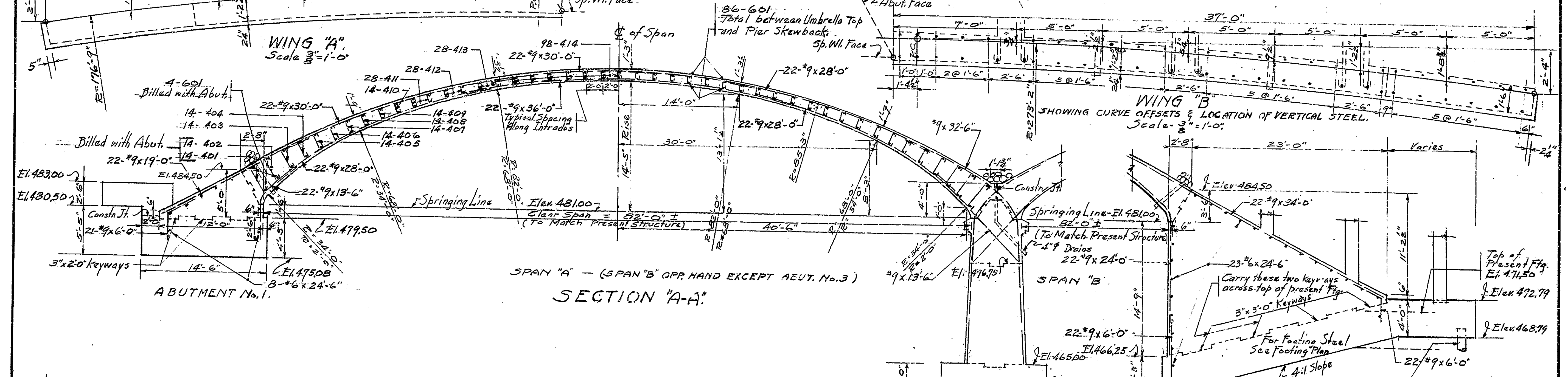
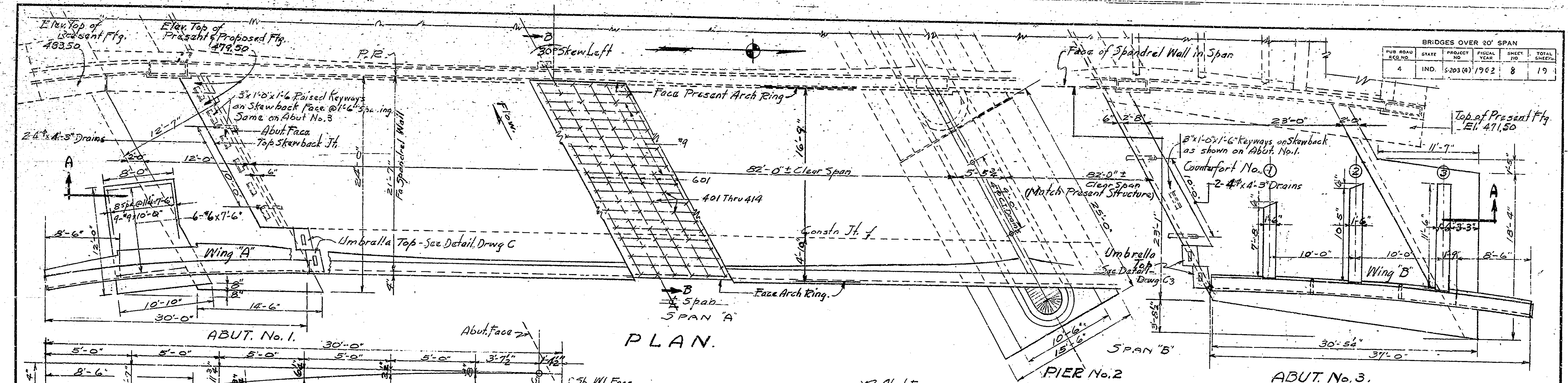
RECOMMENDED FOR APPROVAL: *C.R. Rummel*  
ENGINEER OF BRIDGE SECT.

DRAWING: C 5A OF 7  
PROJECT: S-203(A)  
BRIDGE CONTRACT NO. 6426  
BRIDGE FILE: 56-G-3710A

NOTE: See Br. Std. C1 For Reinforcing Bar Notes.

DESIGNED: CKD  
DRAWN: ALD, CKD  
TRACED: CKD

BRIDGES OVER 20' SPAN				
PUB. ROAD DIST. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
4	IND.	5203(4)	1962	8
				TOTAL SHEETS
				19



**DETAILS**  
**STATE HIGHWAY DEPARTMENT OF INDIANA**

SCALE:  $\frac{3}{8}'' = 1'-0''$  Unless Noted. JULY 27 1961  
 RECOMMENDED FOR APPROVAL: *C. R. Rimmer*  
 DRAWING: C6 OF 7  
 PROJECT: S-203(4)  
 BRIDGE CONTRACT NO. 6426  
 BRIDGE FILE: 56-G-3710A

DESIGNED: HLD 3/24/61, MAJ 5-3-61  
 DRAWN: HLD 5/16/61, MAJ 6-6-61  
 TRACED: C.K.D.

Note: See Br. Std. C1 For Reinforcing Bar Notes. Rev. 3-30-64 Rebaring



BRIDGES OVER 20' SPAN						
APPROX. ROAD DIST. FROM	DATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS	
4	IND.	S-203(4)	1962	10	19	

ITEM	CONCRETE		RAILING CONCRETE		REINFORCING STEEL (19.34 STD. WTS.)											STRUCTURAL STEEL	CAST IRON	UNTREATED TIMBER PILES	12oz. SOFT COPPER FLASHING (10" WIDE)	12oz. SOFT COPPER FLASHING (20" WIDE)	RAILING (TYPE 111)
	CLASS D	CLASS E ABOVE FTG.	CLASS E FTG.	CLASS F	#1 (1 1/4")	#2 (1 1/2")	#3 (1 3/4")	#4 (2")	#5 (2 1/4")	#6 (2 3/4")	#7 (3")	#8 (3 1/2")	#9 (4")	TOTALS							
	Cu. Yds.	Cu. Yds.	Cu. Yds.	Lin. Ft.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.							
ABUTMENT N#1		59.2	60.9	2.3				3469	987	518		992	94	6060		69		13	36		
SPAN A	1526			4.4				14362		3358		2544	187	20451		198				85	
PIER N#2		96.3	86.6					8431			1345	369		10145		113	541080	13	25		
SPAN B	1526			4.4				14362		3358		2544	187	20451		198				85	
ABUTMENT N#3		79.6	106.4	2.9				7231	399	1003	270	4127	116	13162		76	891780	13	36		
WEST RAILING				14.0							56	276	569	901						172	
SPLICE BARS								97		16	34	21	112	6	186						
TOTALS	305.2	226.1	253.9	28.0				47972	1402	8271	1692	10864	1159	71360		654	1432860	* 39	* 97	342	

**BILL OF SPLICE BARS**

Size	Number	Pieces	Length	Weight
#9	3		9'-6"	97*
#7	1		8'-0"	16*
#3	3		7'-6"	34*
#3	3		6'-9"	21*
#3	3		6'-0"	12*
#3	3		5'-6"	6*
Total Splice Bars				186*

**BILL OF MATERIALS FOR R.C. BRIDGE APPROACH**

Size	Mark	No. Pcs.	Length	No. Pcs.	Length	No. Pcs.	Length	Weight
REINFORCING STEEL								

**BARRICADES, BARRIERS, TRAFFIC SIGNS, & LIGHTS**

ITEM	UNIT	QUANTITY	ASSEMBLY
WARNING SIGNS	Each		Signs X-1
			" X-8
			" X-7
			" X-9
STD. BARRICADES (TYPE A)	Each		Torches
			Barricades (Type A)
			Signs X-11
STD. BARRICADES (TYPE B)	Each		" X-15
			" X-14
STD. BARRICADES (TYPE C)	Each		Lanterns
3'-0" x 4'-0" SIGNS	Each		Signs X-11
BRIDGE (SUITABLE) BARRIERS	Each	2	* Suitable Barriers
			* Lanterns or Torches
STD. BARRICADES (TYPE B)	Each		Barricades (Type B)
			Signs X-11
TYPICAL SIGN STANDARDS	Each	12	Lanterns or Torches
			Signs XW 182, XM 2
			" XW 101
			" XW 4
FEDERAL AID SIGNS	Each	2	Lanterns
			Signs X-16
			" XM 7
			" X-18

**APPROACH STRUCTURES**

STRUCT. NO.	LOCATION	DESCRIPTION	CL. D CONC. IN STRUCT. CU. YDS.	REINF. STEEL LBS.	CAST IRON LBS.	REMARKS

**SUMMARY**

ITEM	DESCRIPTION	UNIT	QUANTITY
1	Class F Concrete	Cu. Yds.	
2	Class D Concrete	Cu. Yds.	305.2
3	Class E Concrete above Footings	Cu. Yds.	226.1
4	Class E Concrete in Footings	Cu. Yds.	253.9
5	Railing Concrete	Lin. Ft.	407.2
6	Reinforcing Steel	Lbs.	71360
7	Structural Steel	Lbs.	
8	Cast Iron	Lbs.	654
9	Untreated Timber Piles Furnished	Lin. Ft.	2860
10	Untreated Timber Piles Driven	Lin. Ft.	2888
11	Furnishing Equipment for Driving Piles	Lump Sum	1
12	Wet Excavation	Cu. Yds.	
13	Waterway Excavation	Cu. Yds.	
14	Common Excavation	Cu. Yds.	
15	Special Borrow	Cu. Yds.	4930
16	Grade B Special Borrow	Cu. Yds.	1602
17	Sodding	Sq. Yds.	700
18	Mulched Seeding	Sq. Yds.	1630
19	Cement Concrete Pavement	Sq. Yds.	
20	Reinforced Cement Concrete Pavement	Sq. Yds.	
21	Thickened Reinf. Cement Concrete Pavement	Sq. Yds.	
22	Aggregate for Compacted Aggregate Base	Tons	
23	Removal Present Structure (Portions)	Lump Sum	1
24	Temporary Bridge and Approaches	Lump Sum	
25	Warning Signs	Each	
26	Sld. Barricades (Type A)	Each	
27	Class D Concrete in Structures	Cu. Yds.	
28	R/W Markers	Each	3
29	Steel Pile Shells Furnished	Lin. Ft.	
30	Steel Pile Shells Driven	Lin. Ft.	
31	Class X Excavation	Cu. Yds.	193
32	Guide Posts (Type A)	Each	6
33	Hot Asphaltic Conc. Binder	Tons	230
34	Hot Asph. Conc. Surface (Type B)	Tons	106
35	Railing (Type 111)	Lin. Ft.	342
36	Railing Concrete	Cu. Yds.	28.0
37	Concrete Header (Type A)	Lin. Ft.	170
38	Concrete Base 9"	Sq. Yds.	875
39	Pavement Removal	Sq. Yds.	450
40	Type P Compacted Agg. Shoulder	Tons	140
41	Bridge Foundation Excavation	Lump Sum	1
42	Calcium Chloride	Tons	0.5
43	Typical Sign Standards	Each	12
44	Pneumatically Placed Mortar	Sq. Ft.	50
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SUMMARY  
STATE HIGHWAY DEPARTMENT OF INDIANA

JULY 27, 1961.

RECOMMENDED FOR APPROVAL: *C.R. Rummel*  
SUPERVISOR OF BRIDGE WORK

PROJECT: S-203(4)

BRIDGE CONTRACT No 6426

BRIDGE FILE: 56-G-3710A

Rev. 9-18-64 Item 3  
Rev. 4-16-64 Items 6, 3F, 261 & 4  
Rev. 3-30-64 Railing, Signs, & Shoulder

DESIGNED BY: J.E. S. H. D. 67-61  
CHECKED BY: S. H. S. 61-1110, S. H. S. 61-1110