



**ENGINEERING CONSTRUCTION CONTRACTING SECTION
MONTANA DEPARTMENT OF TRANSPORTATION**

As-Built Drawings

The following are as-built drawings for the structures. MDT provides them for informational purposes only. They do not include drawings for modifications to the structures, such as joint replacements and guardrail revisions and may not completely represent current conditions. Thus, some of the information contained in these documents may be out of date or not applicable with regard to the advertised project. The contractor should not rely solely on the as-built drawings provided for bidding purposes nor does any data in these files supersede the data in the contract documents.

STATE OF MONTANA
STATE HIGHWAY COMMISSION

BRIDGE PLANS & QUANTITIES

FEDERAL AID PROJECT NO. 1-IG-90-1(9)65 P.E.
1-90-1(22)71 CONSTRUCTION
TARKIO- EAST
MINERAL COUNTY

LIST OF DRAWINGS

SHEET NO.	DWG. NO.	TITLE
1	6468	GENERAL LAYOUT
2	6469	FOOTING PLAN
3	6470	BENTS NO. 1 & NO. 10
4	6471	BENT NO. 2
5	6472	BENT NO. 3
6	6473	BENTS NO. 4 & NO. 7
7	6474	PIERS NO. 5 & NO. 6
8	6475	BENT NO. 8
9	6476	BENT NO. 9
10	6477	GIRDER DETAILS FOR SPANS NO. 3 & NO. 7

SHEET NO.	DWG. NO.	TITLE
11	6478	TRANSVERSE GIRDER AT BENTS NO. 4 & NO. 7 & DIAPHRAGM DETAILS
12	6479	GIRDERS FOR SPANS NO. 4, NO. 5, & NO. 6
13	6480	CROSS FRAME & STRINGER DETAILS FOR SPANS NO. 4, NO. 5 & NO. 6
14	6481	CAMBER DIAGRAM & ERECTION PLAN
15	6482	SLAB JOINTS & SHOES FOR SPANS NO. 4, NO. 5 & NO. 6
16	6483	SLAB & CURB DETAILS
17	PRES-BEAM STD. NO. 1 TYPE -A (Rev. 8-24-62)	STANDARD PRE-TENSIONED & POST-TENSIONED PRESTRESSED CONCRETE BEAMS
18	SLAB-30 TO 70-R28-L1S (Rev. 7-1-62)	STANDARD SLAB, CURB & DIAPHRAGM FOR PRESTRESSED CONCRETE BEAMS
19	EB. 30 TO 50-R28-L1S (Rev. 9-5-62)	STANDARD END BENT FOR PRESTRESSED CONCRETE BEAMS
20	SBR-T4 (Rev. 10-8-62)	STANDARD STEEL BRIDGE RAIL TYPE NO. 4

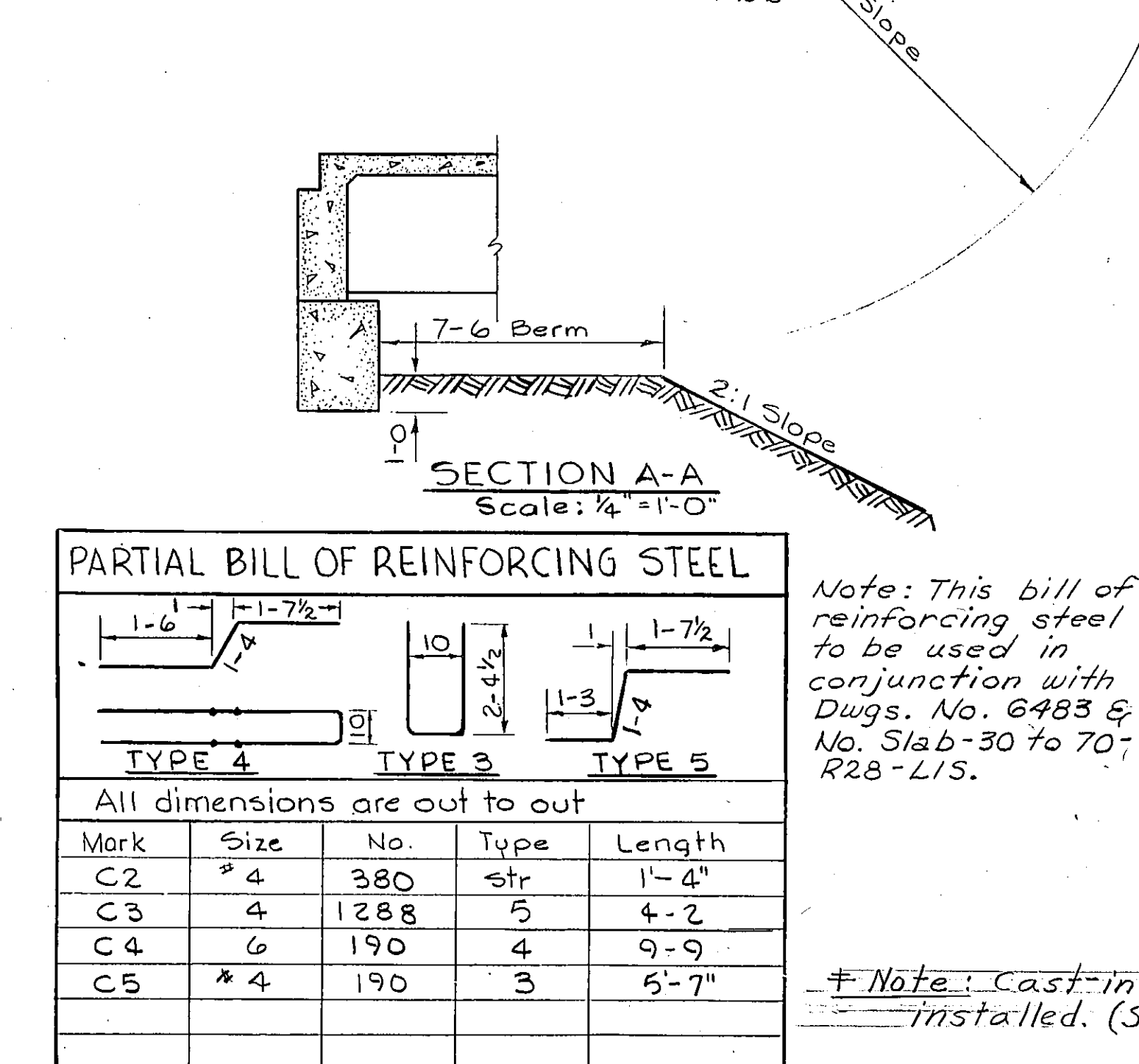
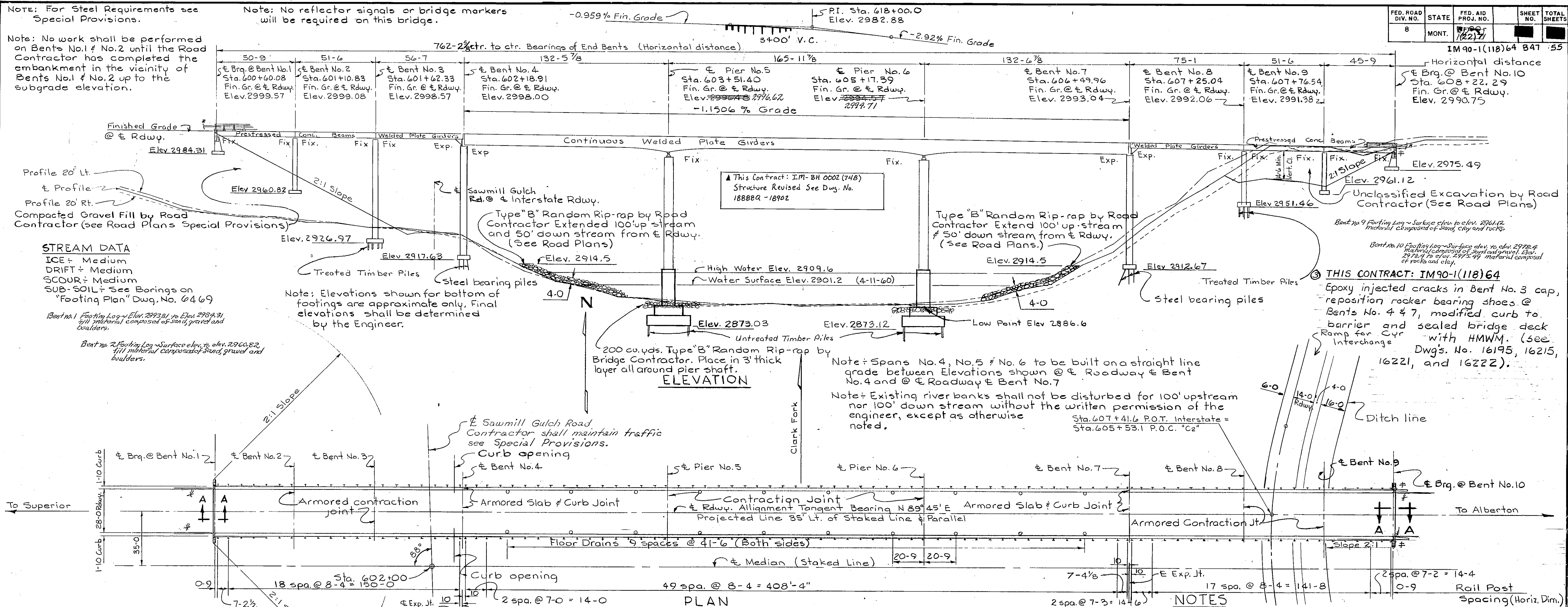
ESTIMATED BRIDGE PLAN QUANTITIES																		5 % Swell in Class "A" Concrete 15 % Swell in Structure Excavation			
LOCATION	LENGTH IN FEET	REINFORCING STEEL LBS.	STRUCTURAL STEEL LUMP SUM	CLASS "A" CONCRETE CU. YDS.	CLASS "AD" CONCRETE CU. YDS.	STEEL BRIDGE RAIL LIN. FT.	STRUCTURE EXCAVATION CU. YDS.	TEST PILES			UNTREATED TIMBER PILES		TREATED TIMBER PILES		STEEL BEARING PILES		PRESTRESSED BEAMS TYPE-A EACH		TYPE "B" RANDOM RIPRAP CU. YDS.	SHORING & CRIBS LUMP SUM	FLOOR DRAINS EACH
								UNTR. TBR. LUMP SUM	TR. TBR. LUMP SUM	STL. BRG. LUMP SUM	FURNISH LIN. FEET	DRIVE LIN. FEET	FURNISH LIN. FEET	DRIVE LIN. FEET	FURNISH LBS.	DRIVE LIN. FEET	45'	50'			
BENT NO. 1		3,325 3523	LUMP SUM	17.99 19	7.69 7.7		84.6 80													LUMP SUM	
BENT NO. 2		4675		40.75 43			110.3 130														
BENT NO. 3		11,854 11,812		27.75 30	6398 640		150.4 155		0.5 L.S.			793.0 1,170	775.0 1,144								
BENT NO. 4		21,020 21,863		17.72 19	9599 969		164.7 185			0.5 L.S.				33,600 26,880	775.25 624						
PIER NO. 5		55,917		573.59 616	161.70 161.8		744.0 820	0.5 L.S.			1,960 1,960	1,410.8 1,519									
PIER NO. 6		55,345 55,279		573.59 616	158.2		635.4 755	0.5 L.S.			2,150 1,960	1,659.7 1,519									
BENT NO. 7		21,020 21,863		17.72 19	9599 969		201.0 235			0.5 L.S.				44,368 43,680	1,024 1,024						
BENT NO. 8		4,822 5,002		41.43 44			148.4 160		0.5 L.S.				2640 480	3437 472							
BENT NO. 9		3,839 3,866		34.70 36			63.0 60														
BENT NO. 10		3,325 3,523		17.99 19	7.69 7.7		85.2 140														
SUPERSTRUCTURE	762.22	118,048 116,171		573.59 616	572.5	1,527.19															
TOTAL	762.22	303,494	LUMP SUM	1,461	1,165.7	1,527.19	2,720	1.0 L.S.	1.0 L.S.	1.0 L.S.	3,920	3,038	1,650	1,616	70,560	1,648	4	12	400	LUMP SUM	20
		303,770		1,363.23	1,176.98		2,390.0				4,116	3,065.5			79,968	1,838.0				LUMP SUM	20

Made by: J.J.Z. 6-14-63 Checked by: R.D.K. 6-20-63

Note: For Steel Requirements see Special Provisions.

Note: No reflector signals or bridge markers will be required on this bridge.

Note: No work shall be performed on Bents No. 1 & No. 2 until the Road Contractor has completed the embankment in the vicinity of Bents No. 1 & No. 2 up to the subgrade elevation.



REFERENCES	
Drawing No.	Description
6469	FOOTING PLAN
6470	BENT NO. 1 & NO. 10
6471	BENT NO. 2
6472	BENT NO. 3
6473	BENTS NO. 4 & NO. 7
6474	PIERS NO. 5 & NO. 6
6475	BENT NO. 8
6476	BENT NO. 9
6477	GIRDER DETAILS FOR SPANS NO. 3 & NO. 7
6478	TRANSVERSE GIRDER AT BENTS NO. 4 & NO. 7; DIAPHRAGM DETAILS
6479	GIRDERS FOR SPANS NO. 4, NO. 5 & NO. 6
6480	CROSS FRAME & STRINGER DETAILS FOR SPANS NO. 4, NO. 5 & NO. 6
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6483	SLAB & CURB DETAILS
PRES-BEAM STD. NO. 1 TYPE-A (Rev. 8-24-62)	STANDARD PRE-TENSIONED & POST-TENSIONED PRESTRESSED CONCRETE BEAMS
SLAB-30 to 70-R28-LIS (Rev. 7-1-62)	STANDARD SLAB, CURB & DIAPHRAGM FOR PRESTRESSED CONCRETE BEAMS
EB, 30 to 50-R28-LIS (Rev. 9-5-62)	STANDARD END BENT FOR PRESTRESSED CONCRETE BEAMS
SBRT-4 (Rev. 10-8-62)	STANDARD STEEL BRIDGE RAIL TYPE NO. 4

SPECIFICATIONS: Montana State Highway Commission Standard Specifications for Road and Bridge Construction, 1962 Edition, and any amendments thereto, and Special Provisions shall govern unless otherwise noted. Design prepared in accordance with A.A.S.H.O. Specifications, 1961 Edition. All welding shall be done according to the American Welding Society Specifications for Welded Highway and Railway Bridges, 1963 Edition.

LIVE LOAD: Standard H20-S16 or Alternate Loading. Alternate Loading for bridges and floor systems with spans under 40 feet consists of two axles four feet apart with each axle weighing 24,000 lbs.

FINISHED GRADE: Finished plan grade of bridges is same as profile grade shown on road plans except as noted.

CAST IN PLACE CONCRETE: All Concrete of superstructure and as noted on Bents & Piers shall be Class "AD". All other concrete in Bents & Piers shall be Class "A" Concrete except as otherwise noted. An Air Entraining Agent shall be added to all concrete except Class "S". Chamfer all exposed edges of concrete 3/4 inch and fillet entrant angles 3/4 inch unless otherwise noted. Quantities of Class "AD" Concrete have been computed using pretensioned Beams. Quantities of Class "AD" concrete and reinforcing steel will vary slightly using post-tensioned Beams.

PRECAST PRESTRESSED CONCRETE BEAMS: All precast prestressed concrete beams shall have a minimum compressive strength of 5000 p.s.i. at the age of 28 days. (See Sub. Section 4.1.10 for Precast Prestressed Concrete Beams.) An Air Entraining Agent may be added to any precast prestressed concrete. Chamfer all exposed edges of concrete 3/4 inches and do not fillet entrant angles unless otherwise noted.

REINFORCING STEEL: Bends in reinforcing steel shall be made to a radius of not less than four (4) diameters of the bar except for stirrups and tie bars, which shall be bent around a pin having a diameter of not less than two (2) bar diameters. Hooks shall conform to the dimensions shown in the following sketches, except as otherwise noted.

OTHER NOTES: For other notes see Dwg. No. 6471, No. 6472, No. 6474 & No. 6479.

**STATE OF MONTANA
STATE HIGHWAY COMMISSION**

BRIDGE OVER CLARK FORK

AT STA. 604 + 33.70

FEDERAL AID PROJECT NO. I-90-1(22) 71

MINERAL COUNTY

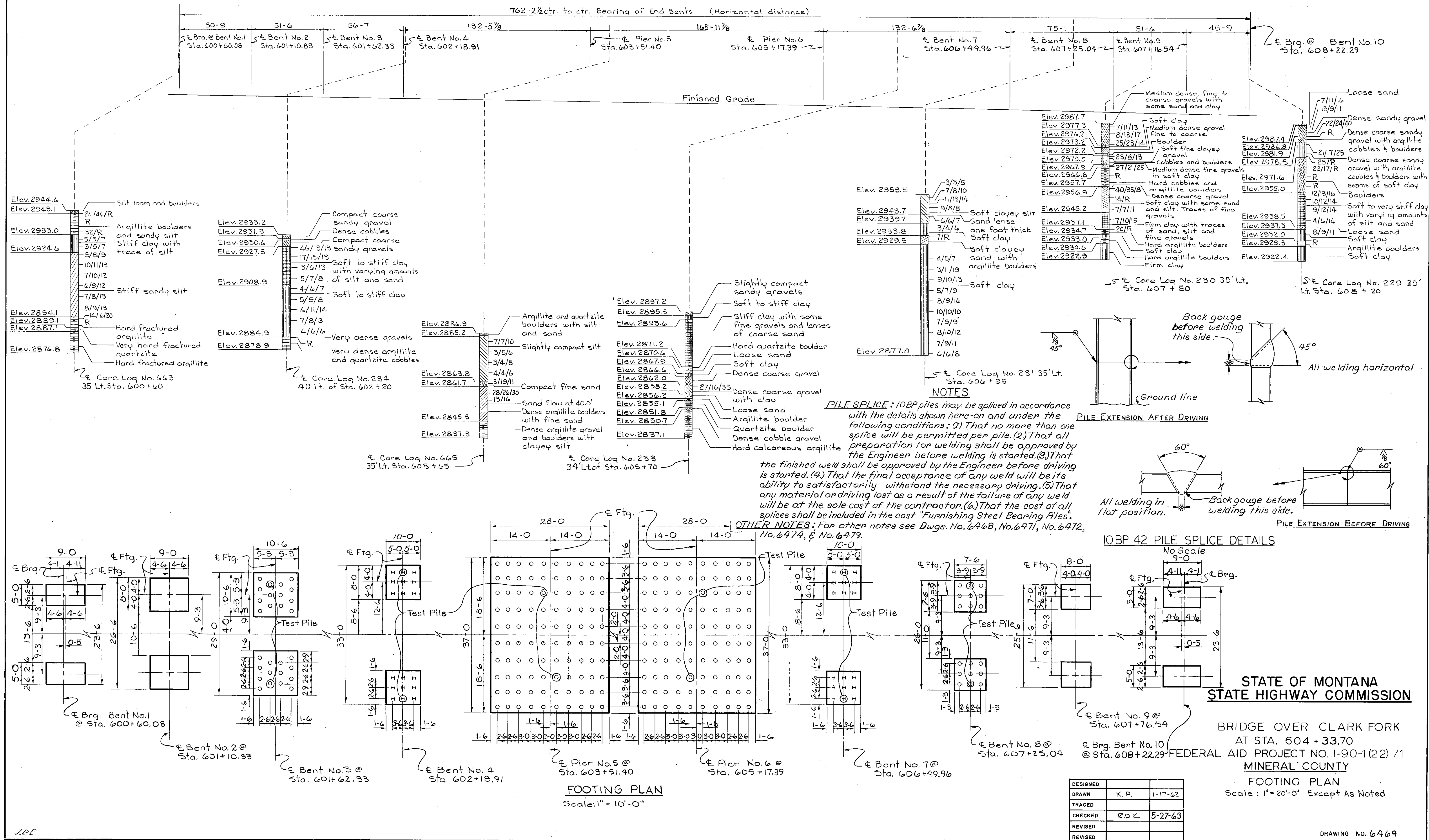
GENERAL LAYOUT

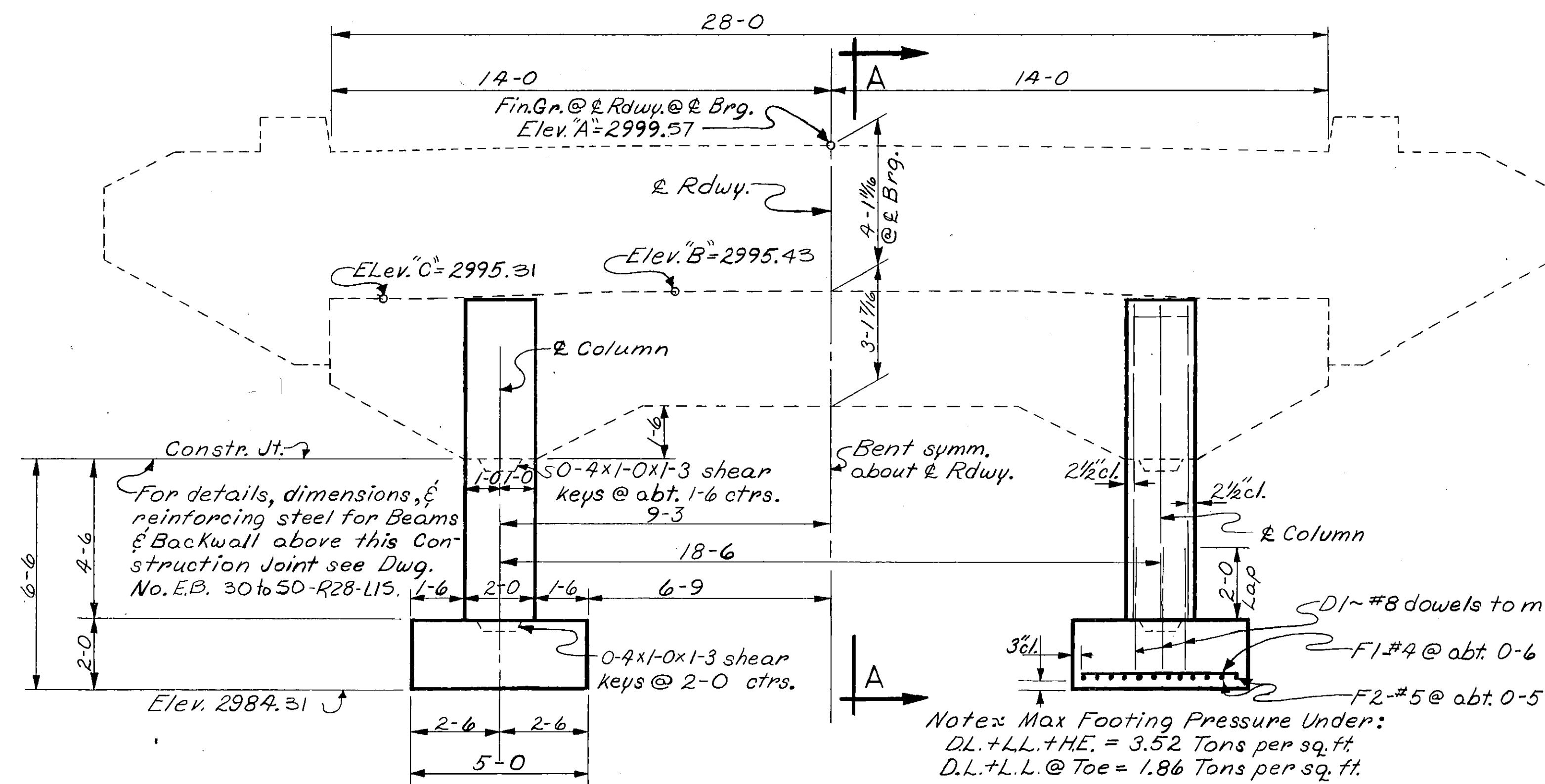
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APPROVED BY: [Signature]

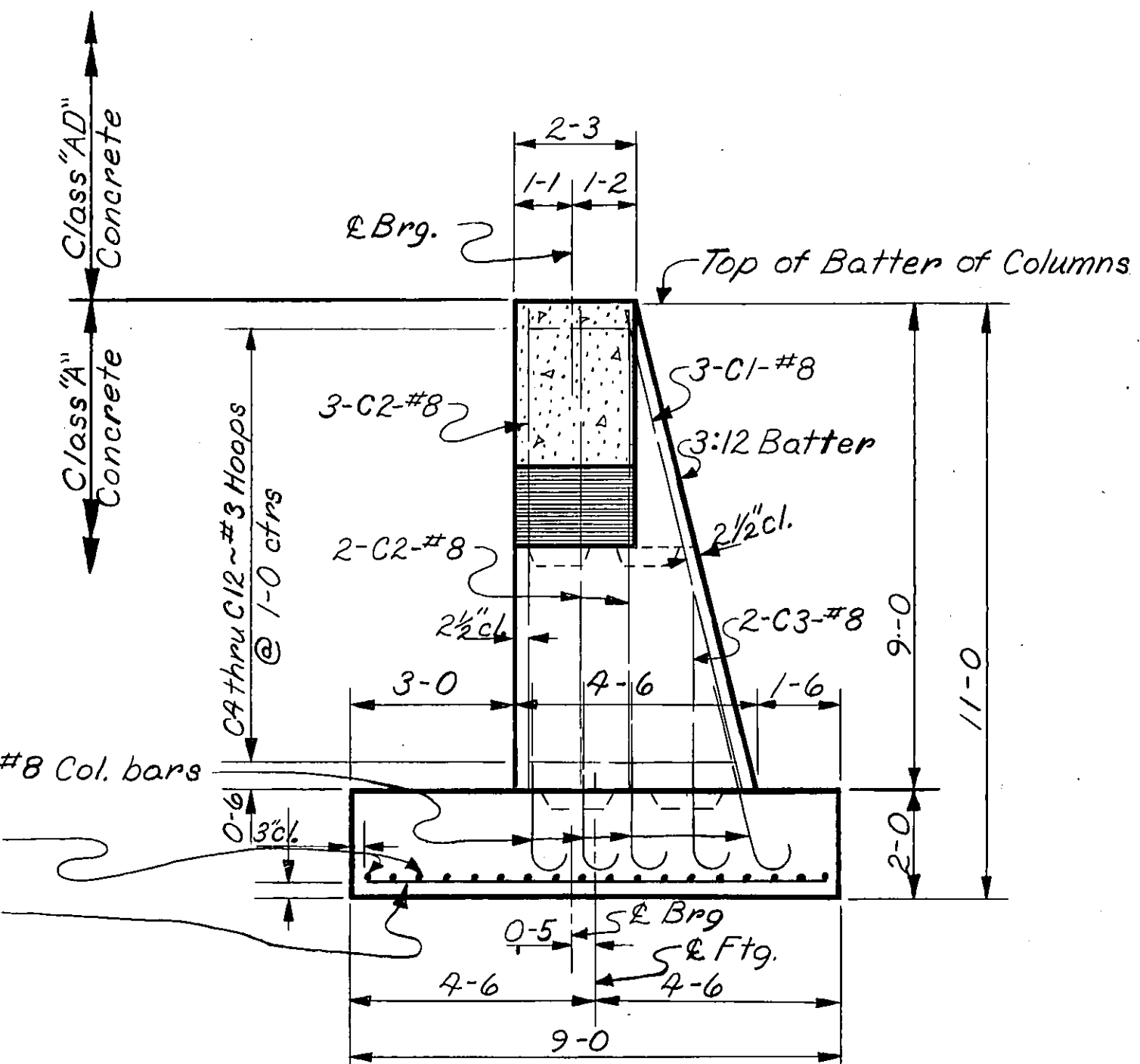
ENGINEER

DRAWING NO. 6468





ELEVATION
(Bent No. 1 Back On Line)



SECTION A-A

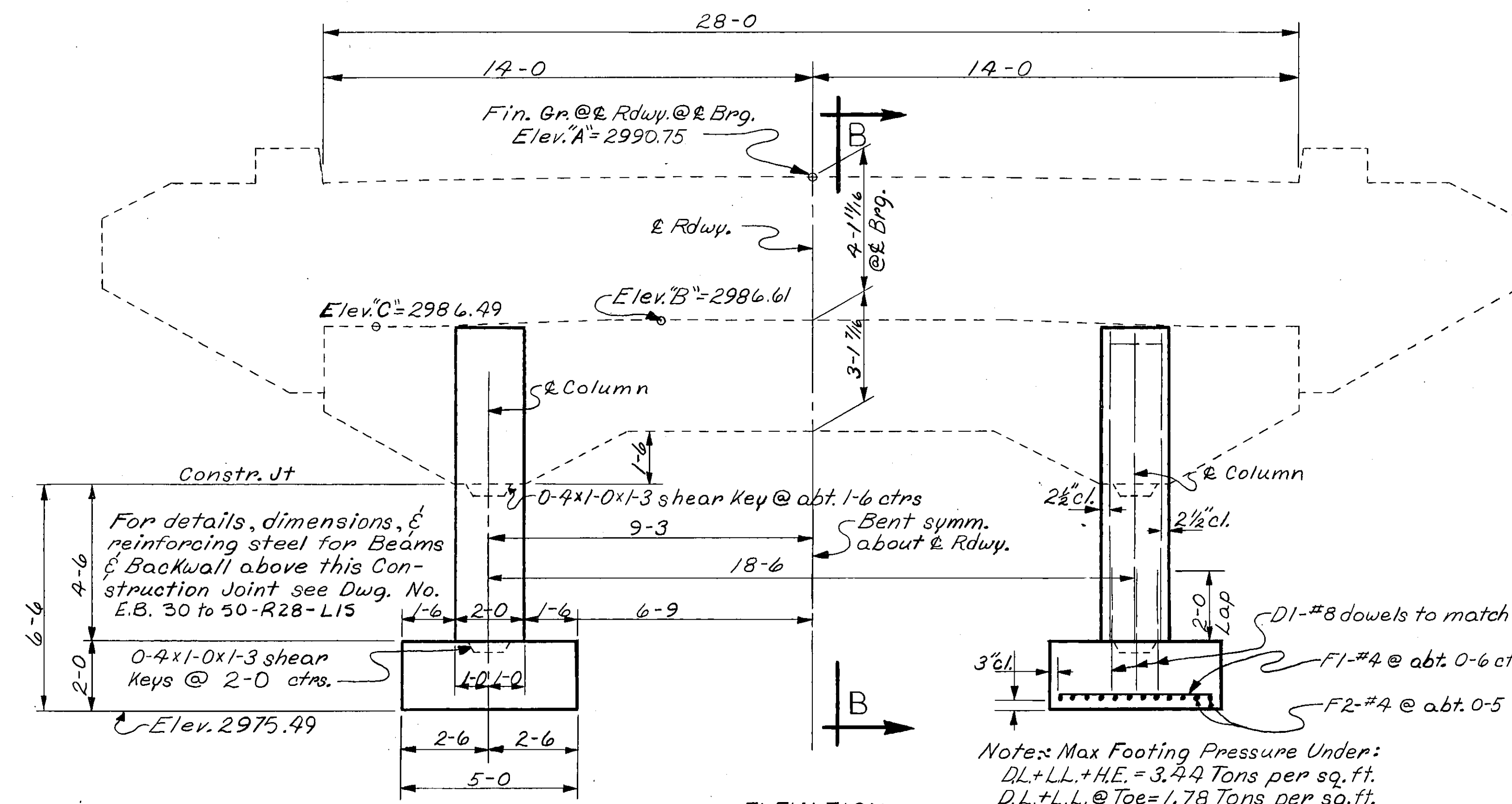
BILL OF REINFORCING STEEL (BENT 1)											
TYPE 1				TYPE 2							
STRAIGHT BARS				BENT BARS (All dimensions are out to out)							
MARK	SIZE	NO.	LENGTH	MARK	SIZE	TYPE	NO.	LENGTH	A	B	C
				04	#3	1	2	8-1	2'-0"	1'-8"	0'-4"
				05	#3	1	2	8-7	2'-3"		
01	#8	6	9'-0"	06	#3	1	2	9-1	2'-6"		
02	#8	14	8'-10"	07	#3	1	2	9-7	2'-9"		
				08	#3	1	2	10-1	3'-0"		
				09	#3	1	2	10-7	3'-3"		
				10	#3	1	2	11-1	3'-6"		
				11	#3	1	2	11-7	3'-9"		
F1	#4	36	4'-6"	12	#3	1	2	12-1	4'-0"	1'-8"	0'-4"
F2	#5	24	8'-6"	C3	#8	2	4	6-4	5'-3"	1'-1"	
				D1	#8	2	20	4'-10"	3'-9"	1'-1"	

BILL OF REINFORCING STEEL (BENT 10)
Same as Bent No. 1

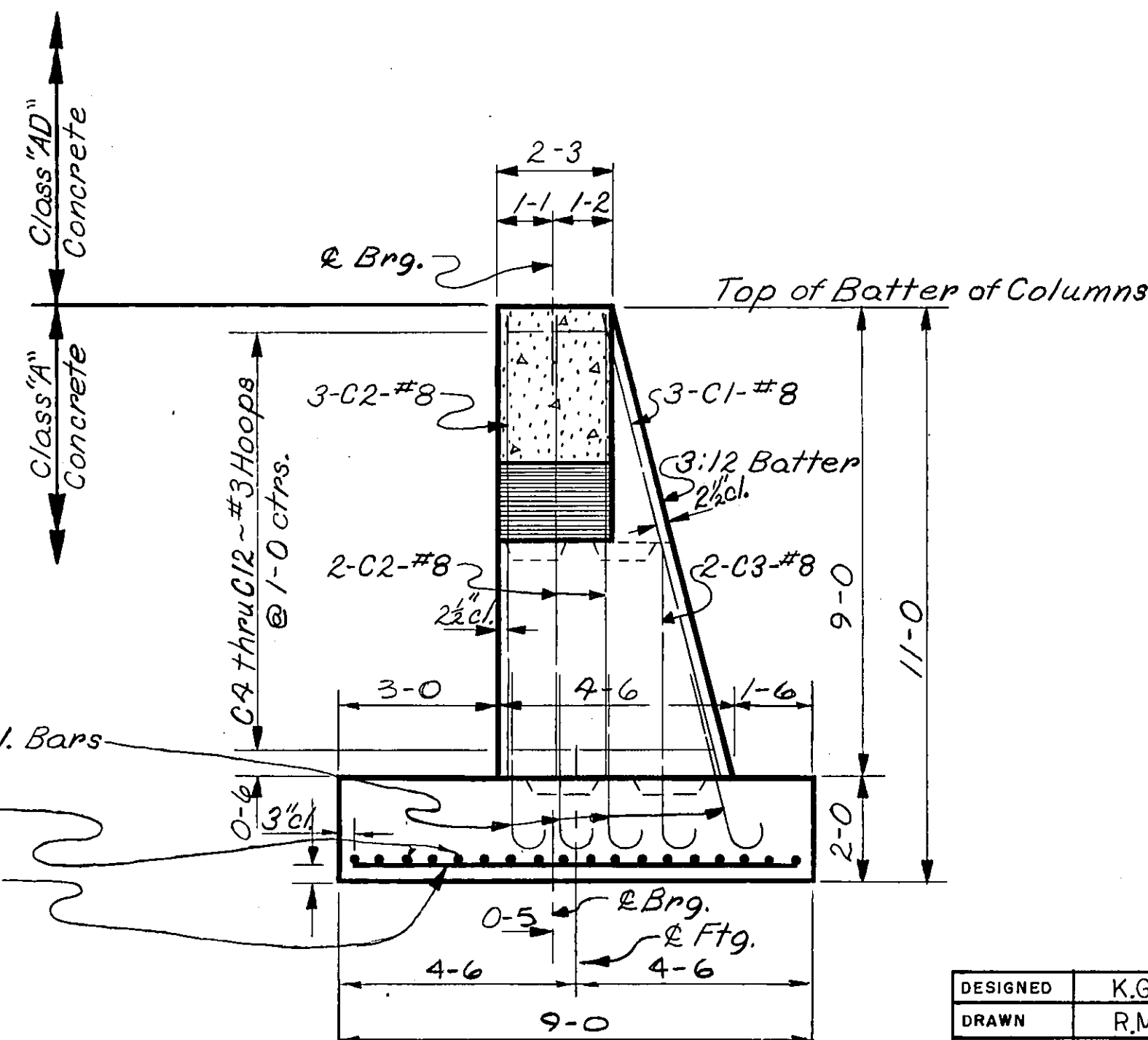
Notes: This Bill of Reinforcing Steel to be used in conjunction with the Bill of Reinforcing Steel on Dwg. No. E.B. 30 to 50-R28-L15

NOTES

OTHER NOTES: For other notes see Dwg. No. 6468, No. 6471, No. 6472 & No. 6474



ELEVATION
(Bent No. 10 Ahead On Line)

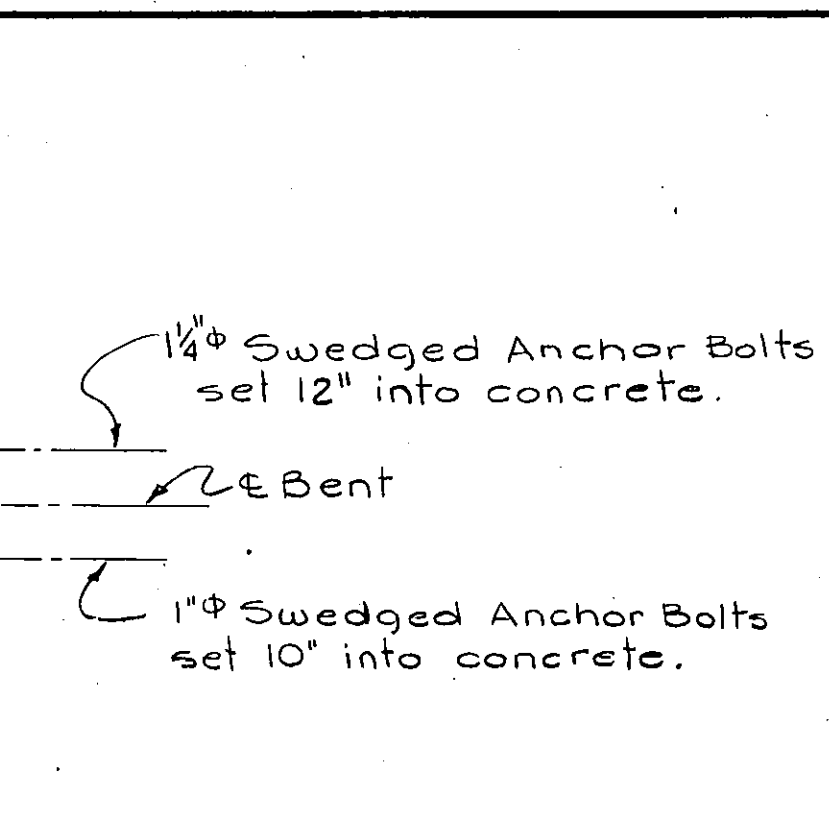


SECTION B-B

STATE OF MONTANA
STATE HIGHWAY COMMISSION

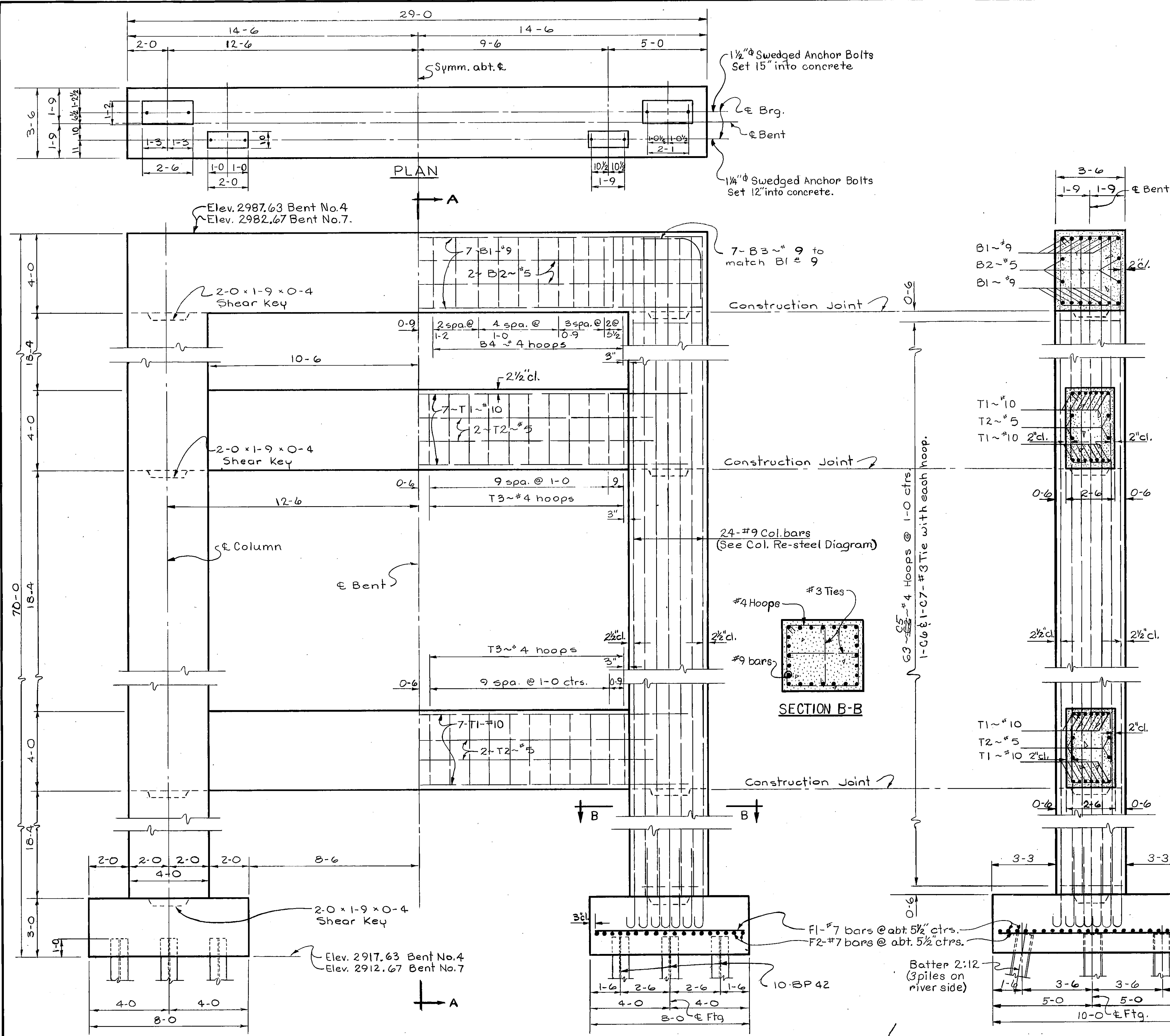
BRIDGE OVER CLARK FORK
AT STA. 604+33.70
FEDERAL AID PROJECT NO I-90-1(22) 71
MINERAL COUNTY
COLUMNS AND FOOTINGS
BENTS NO. 1 & NO. 10
Scale: 3/8" = 1'-0"

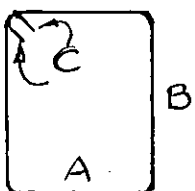
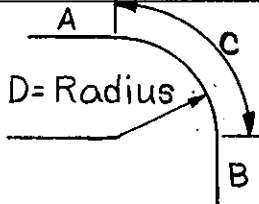
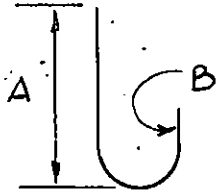
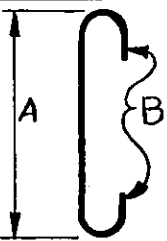
DESIGNED	K.G.R.	8-6-62
DRAWN	R.M.M.	1-8-63
TRACED		
CHECKED	E.D.K.	5-27-63
REVISED		
REVISED		

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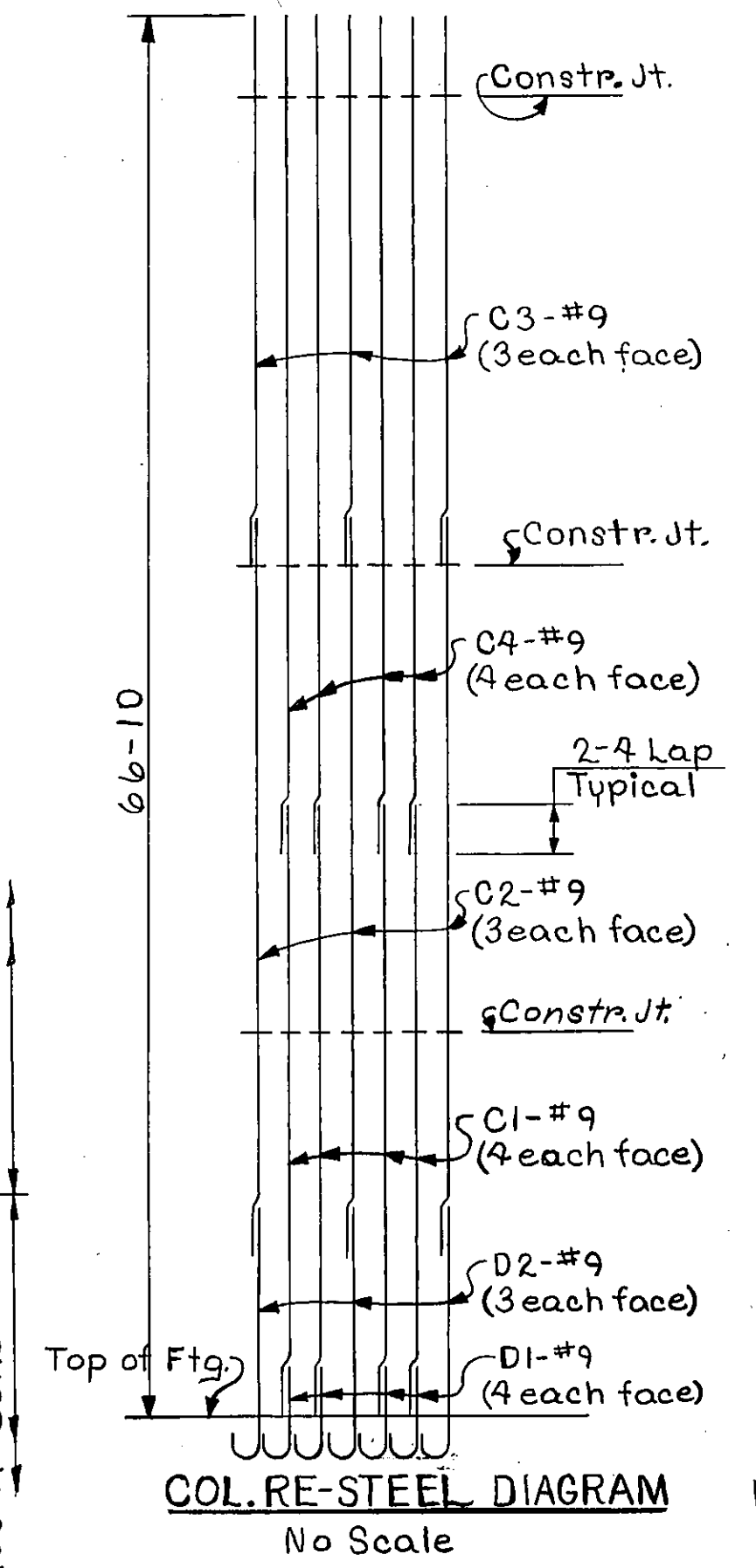
STATE OF MONTANA
STATE HIGHWAY COMMISSION
BRIDGE OVER CLARK FORK
AT STA. 604 + 33.70
FEDERAL AID PROJECT NO. 1-90-1(22) 7/
MINERAL COUNTY
BENT NO. 3
Scale $\frac{3}{8}" = 1'-0"$ Except As Noted

DESIGNED	KGR	8-7-62
DRAWN	NEH	4-18-63
TRACED		
CHECKED	RDK	5-27-63
REVISED		
REVISED		



BILL OF REINFORCING STEEL (For one Bent only)															
															
TYPE 1				TYPE 2				TYPE 3				TYPE 4			
STRAIGHT BARS				BENT BARS (All dimensions are out to out)											
Mark	Size	No.	Length	Mark	Size	No.	Type	Length	A	B	C	D	E		
B1	9	14	28-8	B3	9	14	2	6-3	2-4	2-4	1-7	1-0			
B2	5	4	28-8	B4	4	24	1	14-5	3-2	3-8	0-4½				
C1	9	32	29-2	C5	4	126	1	14-5	3-2	3-8	0-4½				
C2	9	16	35-4												
T1	10	28	27-0	T3	4	44	1	12-5	2-2	3-8	0-4½				
T2	5	8	24-0												
F1	7	44	7-6	D1	9	32	3	5-7	4-4	1-3					
F2	7	36	9-6	D2	9	16	3	13-3	12-0	1-3					
C3	9	16	26-2	C6	3	126	4	4-6	3-8	0-5					
C4	9	32	40-0	C7	3	126	4	4-0	3-2	0-5					

NOTES
OTHER NOTES: For other notes see Dugs. No. 6468, No. 6471, No. 6472 & No. 6474

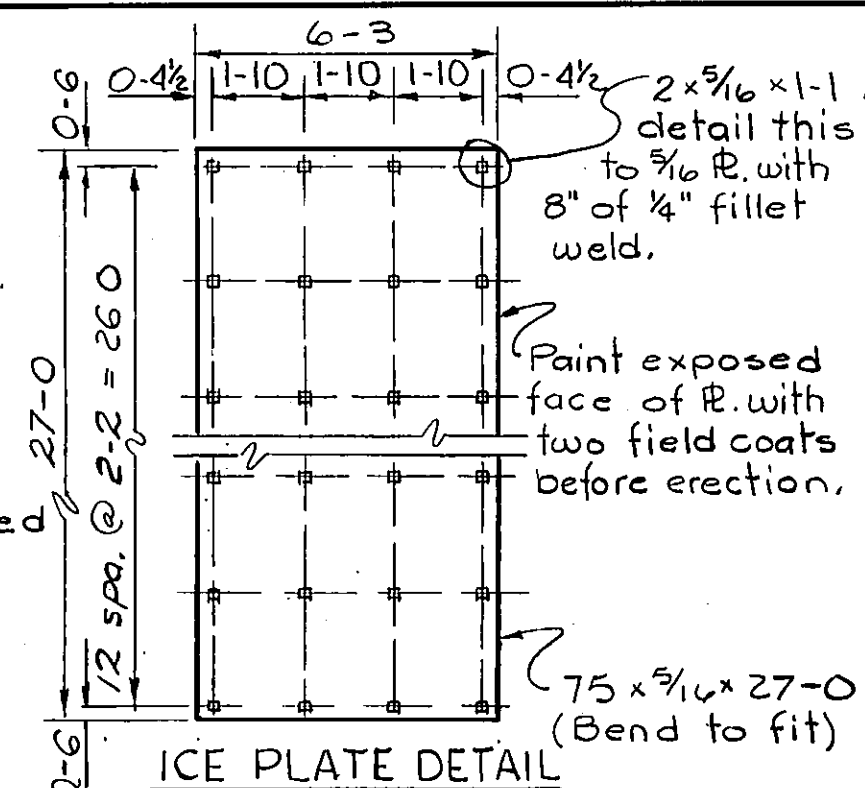
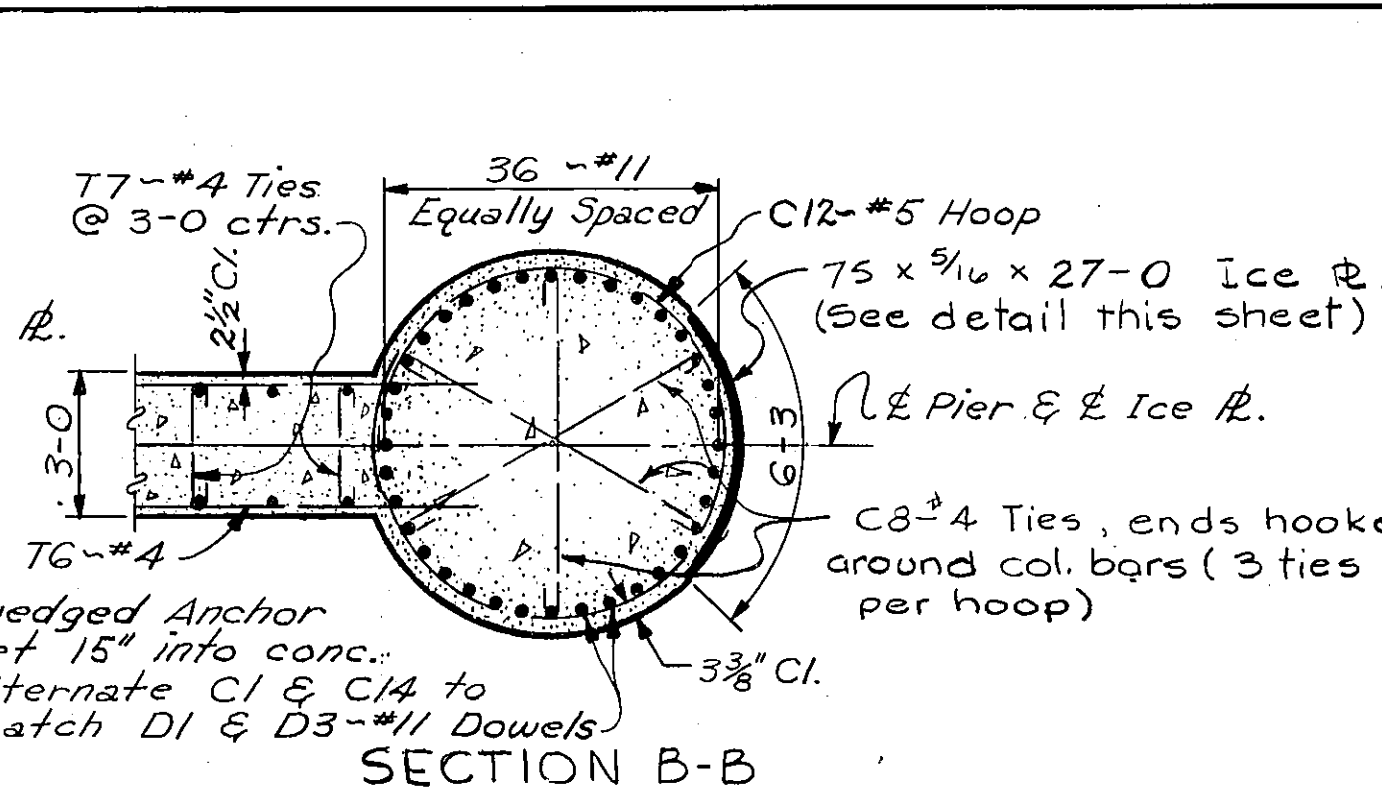
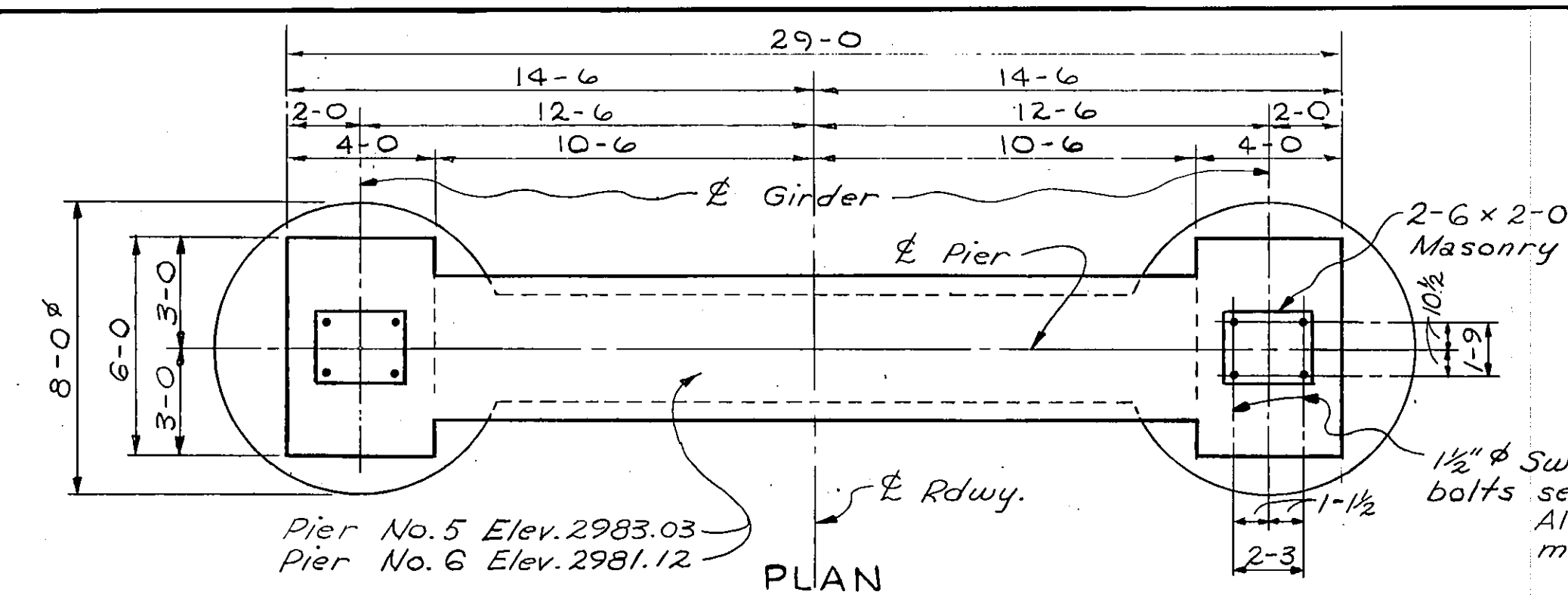


**STATE OF MONTANA
 STATE HIGHWAY COMMISSION**
 BRIDGE OVER CLARK FORK
 AT STA. 604+33.70
 FEDERAL AID PROJECT NO. I-90-1(22)7/
 MINERAL COUNTY
 BENTS NO. 4 & NO. 7
 Scale: 3/8" = 1'-0"

DESIGNED	RND	12-7-62
DRAWN	NEH	4-26-63
TRACED		
CHECKED	EDL	5-28-63
REVISED		
REVISED		

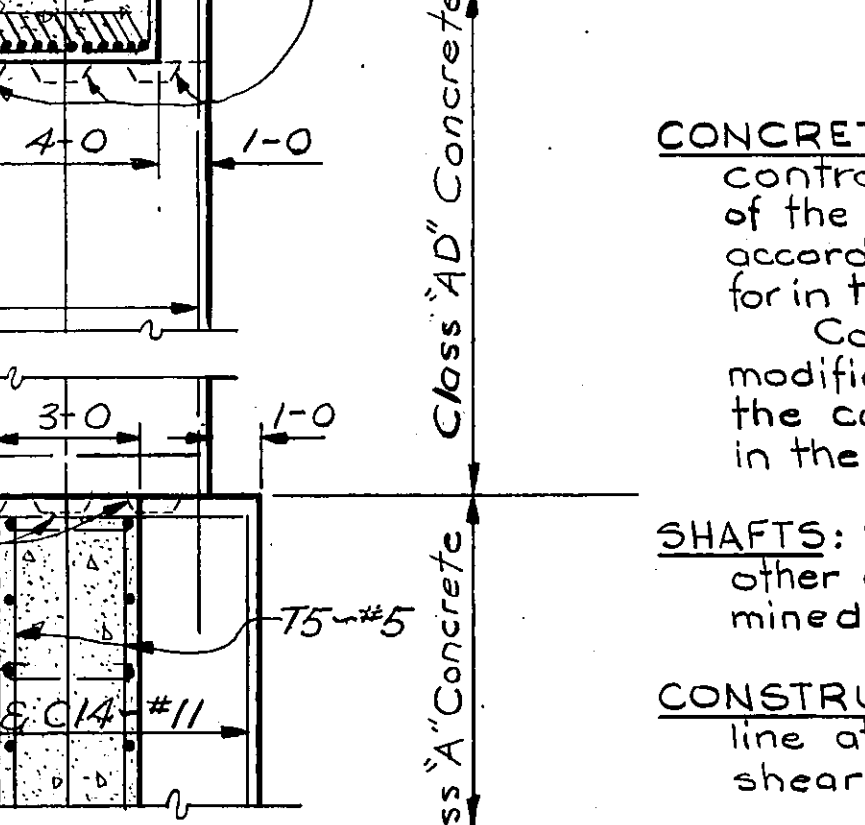
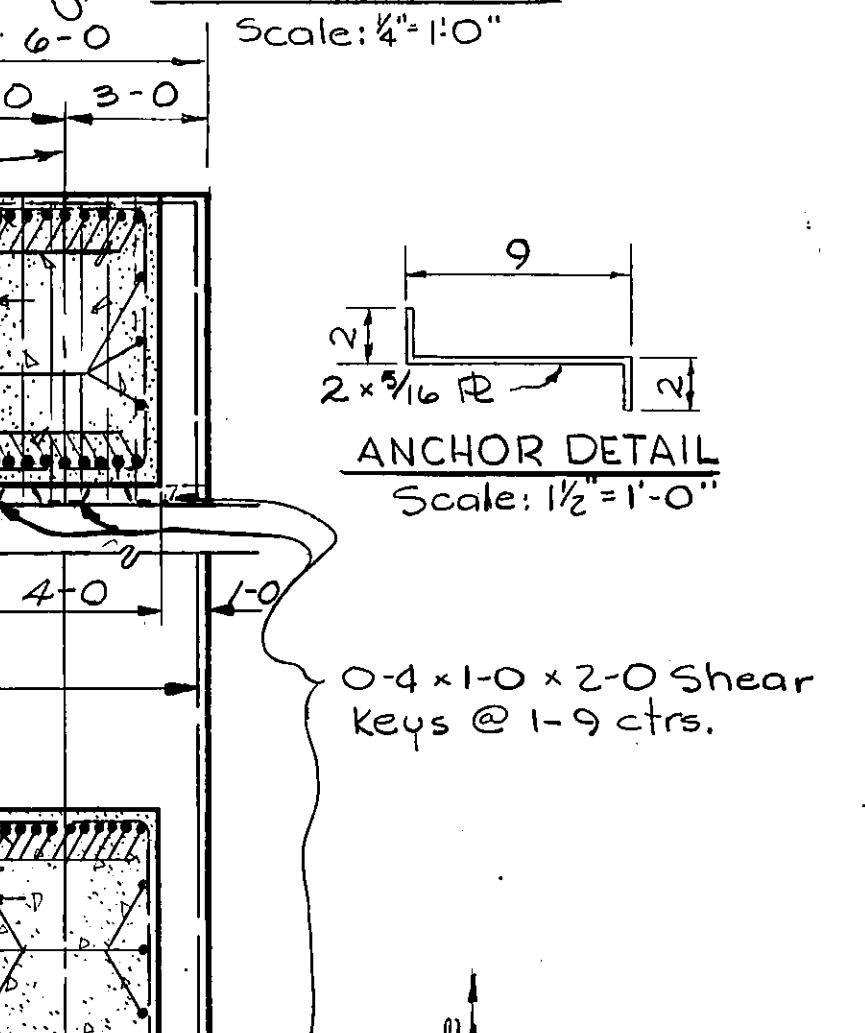
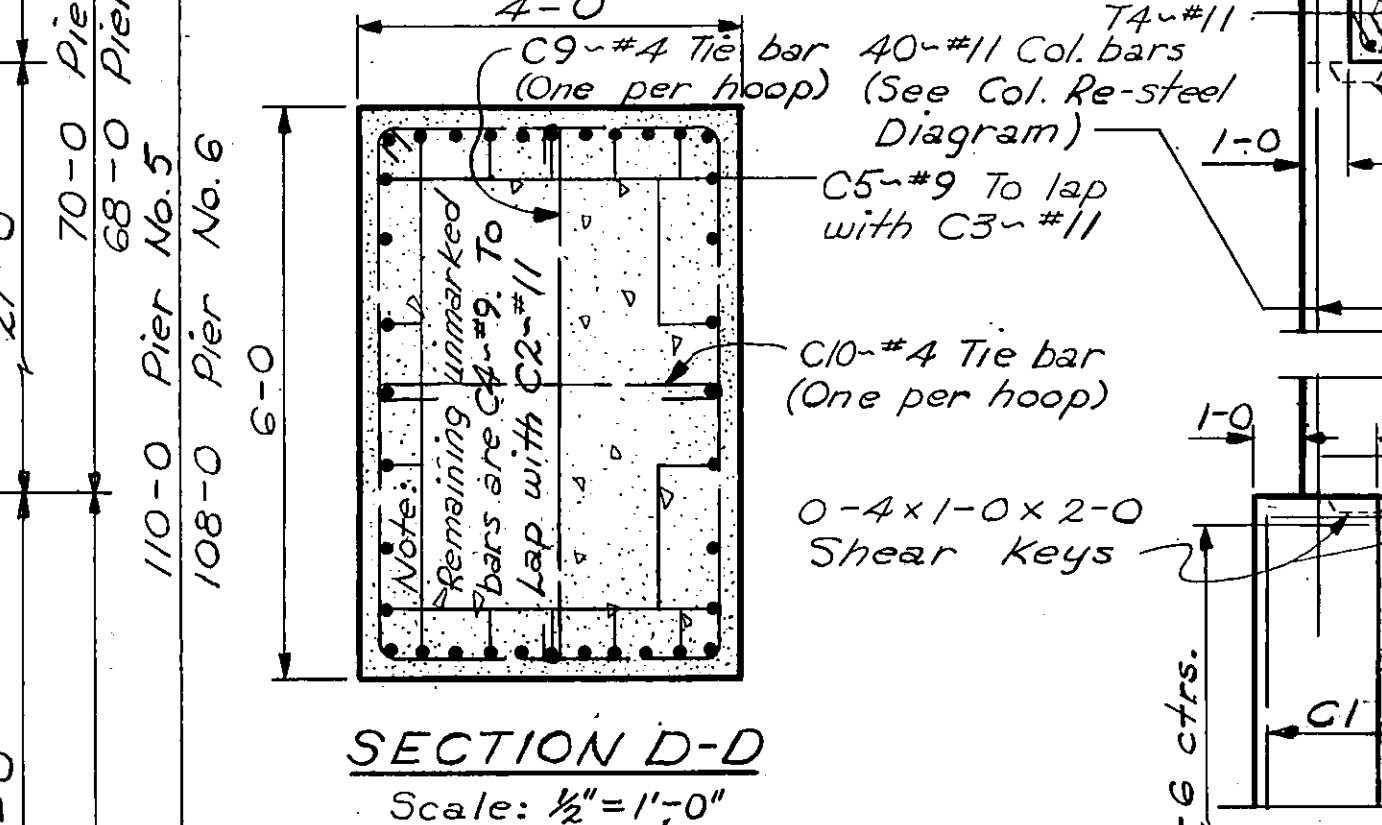
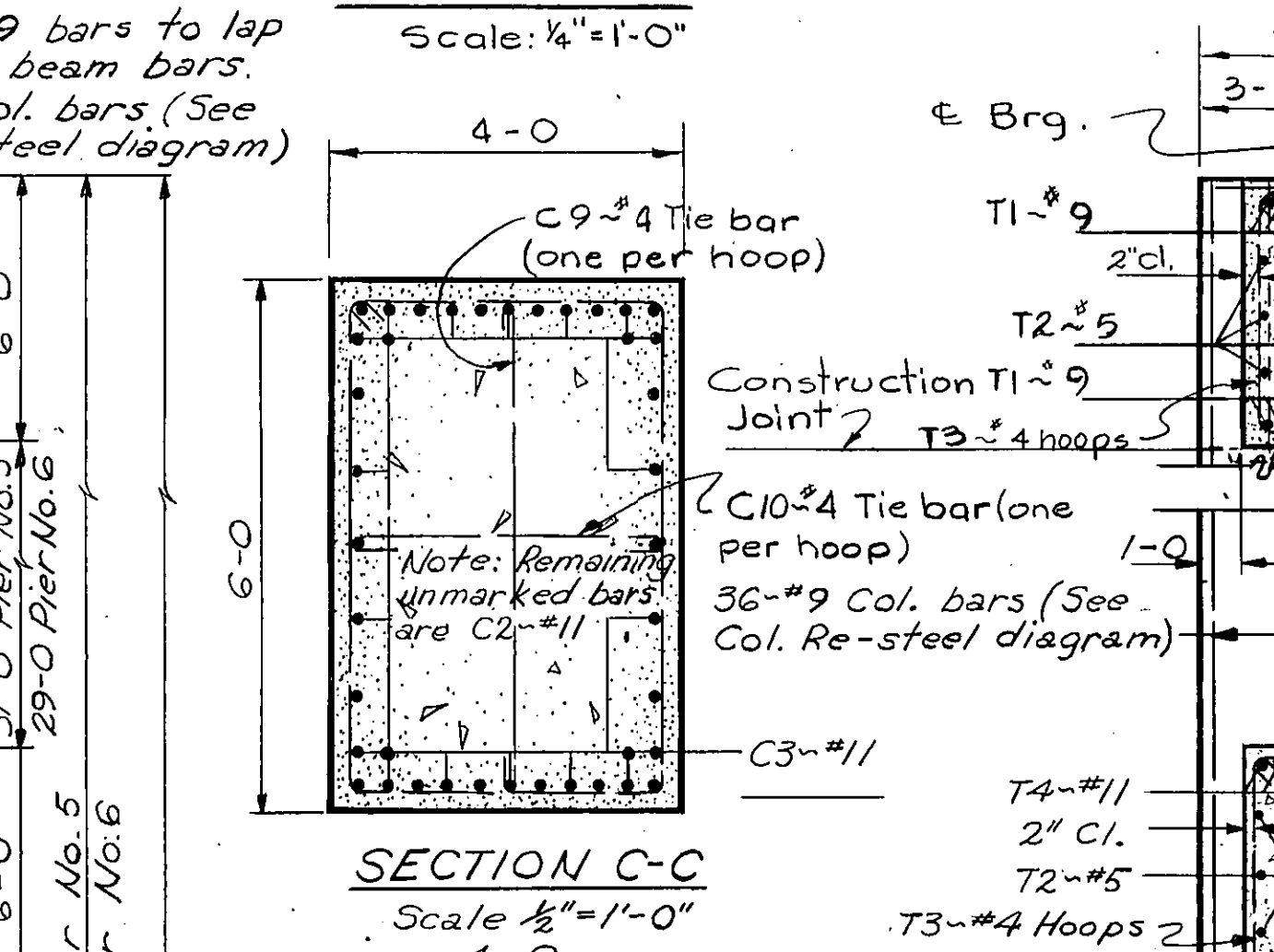
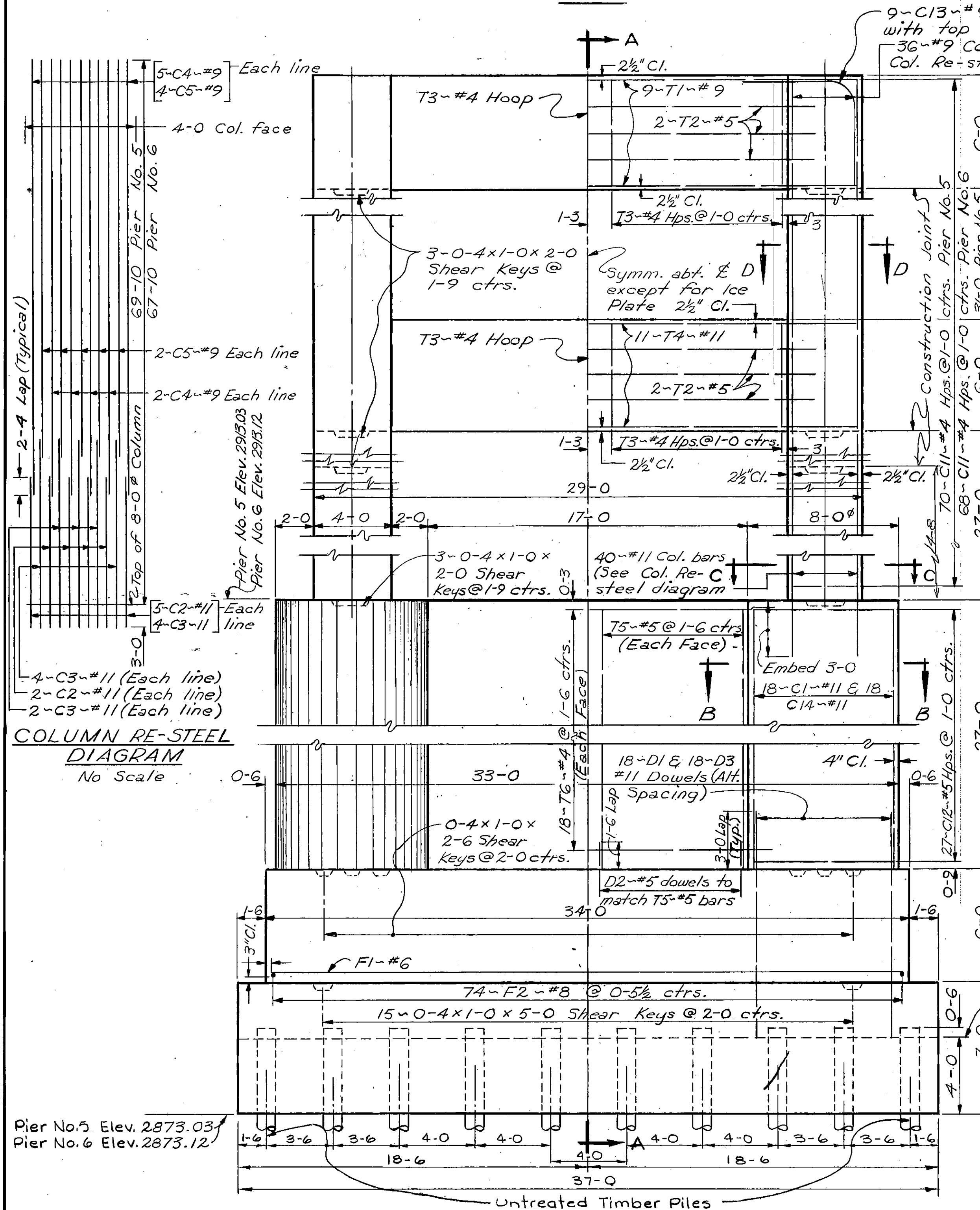
ELEVATION
 (Ahead on Line Bent No. 4)
 (Back on Line Bent No. 7)
 Note: For location of Test Pile see 'FOOTING PLAN'.
 Note: Max. Pile Pressure Under DL+L.L. = 36.5 Tons/pile Bent No. 4
 Max. Pile Pressure Under DL+L.L. = 36.5 Tons/pile Bent No. 7
 Estimated Pile Length = 40.50ft. Bent No. 4
 Estimated Pile Length = 35.69ft. Bent No. 7

SECTION A-A



BILL OF REINFORCING STEEL (For Pier No. 5)														
STRAIGHT BARS					BENT BARS (All dimensions are out to out)									
Mark	Size	No.	Length	Weight	Mark	Size	No.	Type	Length	A	B	C	D	E
T1	#9	18	28'-6"		T3	#4	42	1	19'-5"	5'-8"	3'-8"	0'-4 1/2"		
T2	#5	12	24'-0"		T7	#4	54	4	3'-7"	2'-7"	0'-6"	0'-6"		
T4	#11	22	28'-6"		C8	#4	162	4	8'-5"	7'-5"	0'-6"	0'-6"		
T5	#5	24	26'-10"		C9	#4	140	4	6'-8"	5'-8"	0'-6"	0'-6"		
T6	#4	36	19'-6"		C10	#4	140	4	4'-8"	3'-8"	0'-6"	0'-6"		
C1	#11	36	26'-10"		C11	#4	140	1	19'-5"	5'-8"	3'-8"	0'-4 1/2"		
C2	#11	36	20'-0"		C12	#5	54	2	24'-10"	7'-5"	1'-6"			
C3	#11	44	25'-0"		C13	#9	18	3	11'-4"	4'-9"	5'-0"	1'-7"	1'-0"	
C4	#9	36	55'-2"											
C5	#9	36	50'-2"											
C14	#11	36	18'-10"											
D1	#11	36	20'-0"											
D2	#5	24	3'-0"											
D3	#11	36	12'-0"											
F1	#6	22	33'-6"											
F2	#8	74	21'-6"											

BILL OF REINFORCING STEEL for Pier No. 6 is the same as for Pier No. 5 except for the following changes.														
C4	#9	36	53'-2"		C9	#4	136	4	6'-8"	5'-8"	0'-6"	0'-6"		
C5	#9	36	48'-2"		C10	#4	136	4	4'-8"	3'-8"	0'-6"	0'-6"		
					C11	#4	136	1	19'-5"	5'-8"	3'-8"	0'-4 1/2"		



NOTES

CONCRETE: All concrete in piers shall be of class noted on the drawings. The contractor will be permitted to deposit Class "S" concrete in that portion of the pier base shown as a seal course in which case he shall place it in accordance with the requirements for "Depositing Concrete Under Water," as called for in the Standard Specifications.

Concrete placed outside of neat lines shown on the plans, or neat lines as modified by the engineer, as well as the change in mix for the seal, will be for the contractor's convenience, and he shall include all cost connected therewith in the unit price bid for Class "A" concrete.

SHAFTS: Shafts of piers shall be poured in not more than two (2) continuous runs; other construction joints shall be made only as noted on the plans or as determined by the Engineer.

CONSTRUCTION JOINTS: Construction joints shall be made on a true horizontal line at the surfaces of the piers and left rough in the interior with satisfactory shear keys.

CHAMFER: Chamfer all exposed corners with enclosed angles less than 120°, 3/4 inch and fillet all entrant angles 3/4 inch except as otherwise noted.

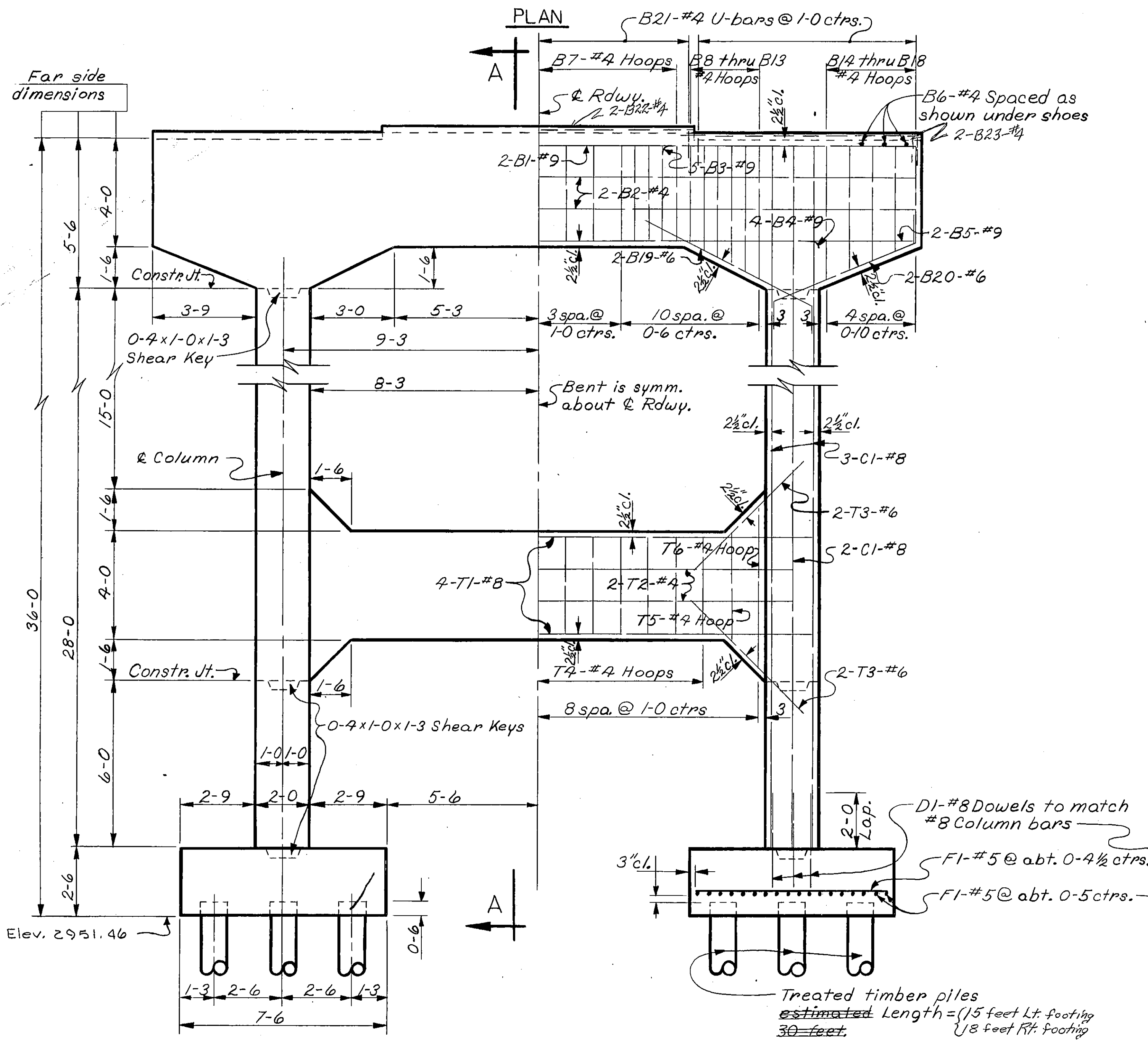
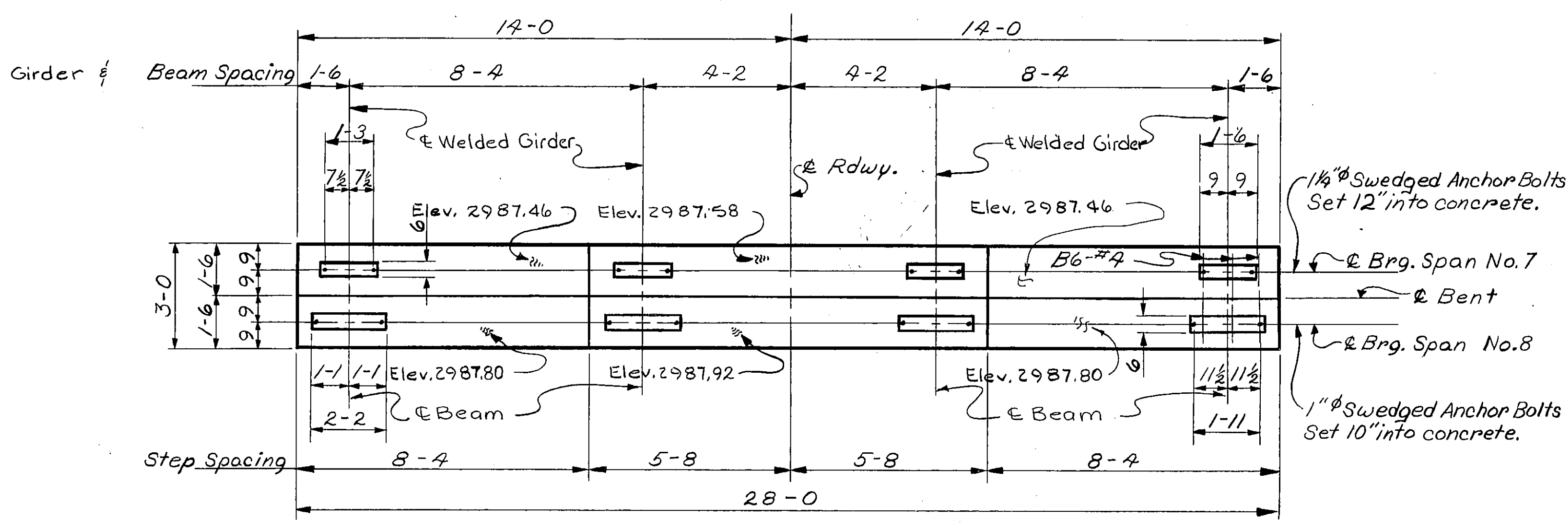
OTHER NOTES: For other notes see Dwgs. No. 6468, No. 6471, No. 6472 & No. 6479



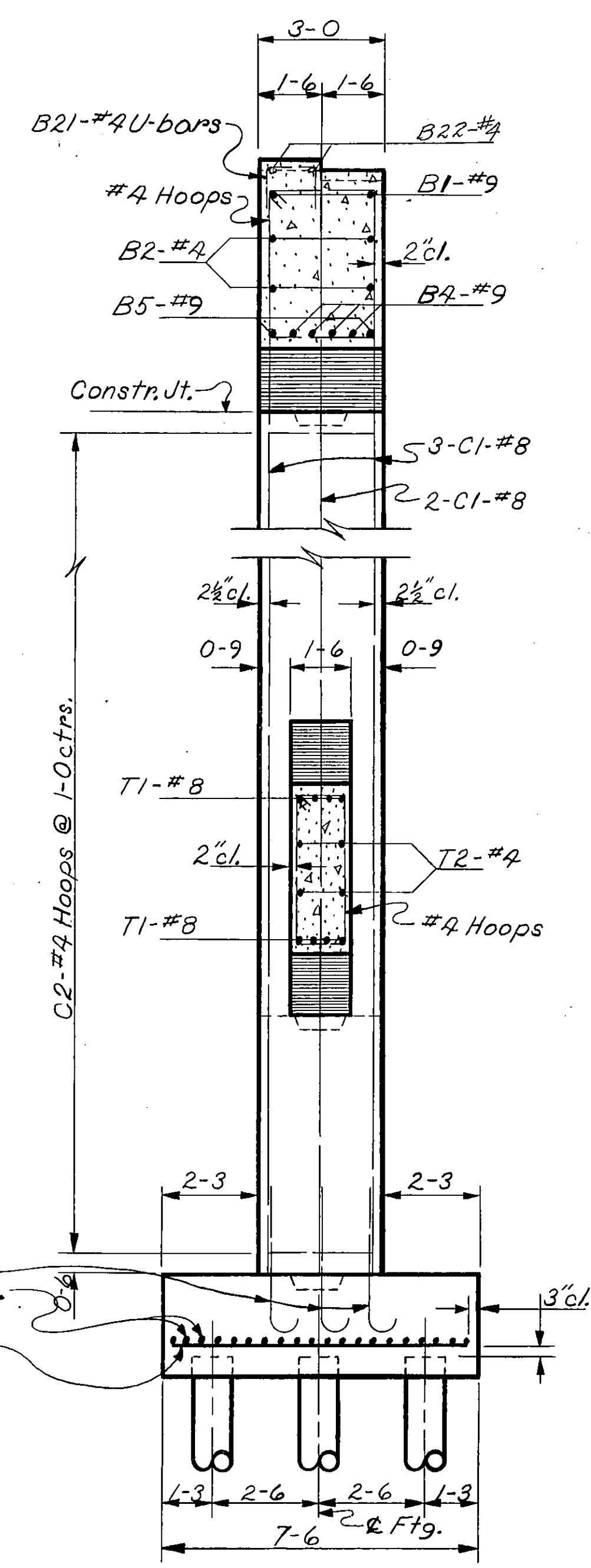
DESIGNED	R. N. D.	11-30-62
DRAWN	NEH	4-23-63
TRACED		
CHECKED	R. D. K.	5-29-63
REVISED		
REVISED		

**STATE OF MONTANA
STATE HIGHWAY COMMISSION**

BRIDGE OVER CLARK FORK
AT STA. 604+33.70
FEDERAL AID PROJECT NO. 1-90-1(22)71
MINERAL COUNTY
PIERS NO. 5 & NO. 6
Scale: 1/4" = 1'-0" Except as noted



ELEVATION
(Back On Line)



SECTION A-A

BILL OF REINFORCING STEEL

TYPE 1

TYPE 2

TYPE 3

TYPE 4

STRAIGHT BARS

BENT BARS (All dimensions are out to out)

MARK	SIZE	NO.	LENGTH	MARK	SIZE	NO.	TYPE	LENGTH	A	B	C
B1	#9	2	27'-8"	B7	#4	15	1	13'-5"	3'-8"	2'-8"	0'-4 1/2"
2	4	4	27-8"	9				14-2	3-9"		
3	9	10	9-6	10				14-8	4-3 1/2"		
4	9	4	20-6	11				15-2	4-6 1/2"		
5	9	2	27-8"	12				15-8	4-9 1/2"		
B6	4	6	2-8	13				16-2	5-0 1/2"		
				14				16-2	5-0 1/2"		
				15				15-6	4-8 1/2"		
				16				14-10	4-4 1/2"		
C1	8	16	33-3	17				14-2	4-0 1/2"		
				18	4	2	1	13-6	3-8 1/2"	2-8	0-4 1/2"
				19	6	4	3	7-11	6-11	1-0	0-10 1/2"
				20	6	4	2	7-9	5-9	1-0	0-11
F1	5	76	7-0	B21	4	30	5	3-2	1-0	1-2	
				C2	4	56	1	9-5	2-8	1-8	0-4 1/2"
				D1	8	16	4	4-10	3-9	1-1	
T1	8	8	20-2	T4	4	13	1	10-5	3-8	1-2	0-4 1/2"
T2	4	4	19-0	T5	4	2	1	11-1	4-0	1-2	0-4 1/2"
T3	#6	8	5-6	T6	#4	2	1	15-1	6-0	1-2	0-4 1/2"
B22	4	2	11-0	B23	4	4		10-2			

NOTES

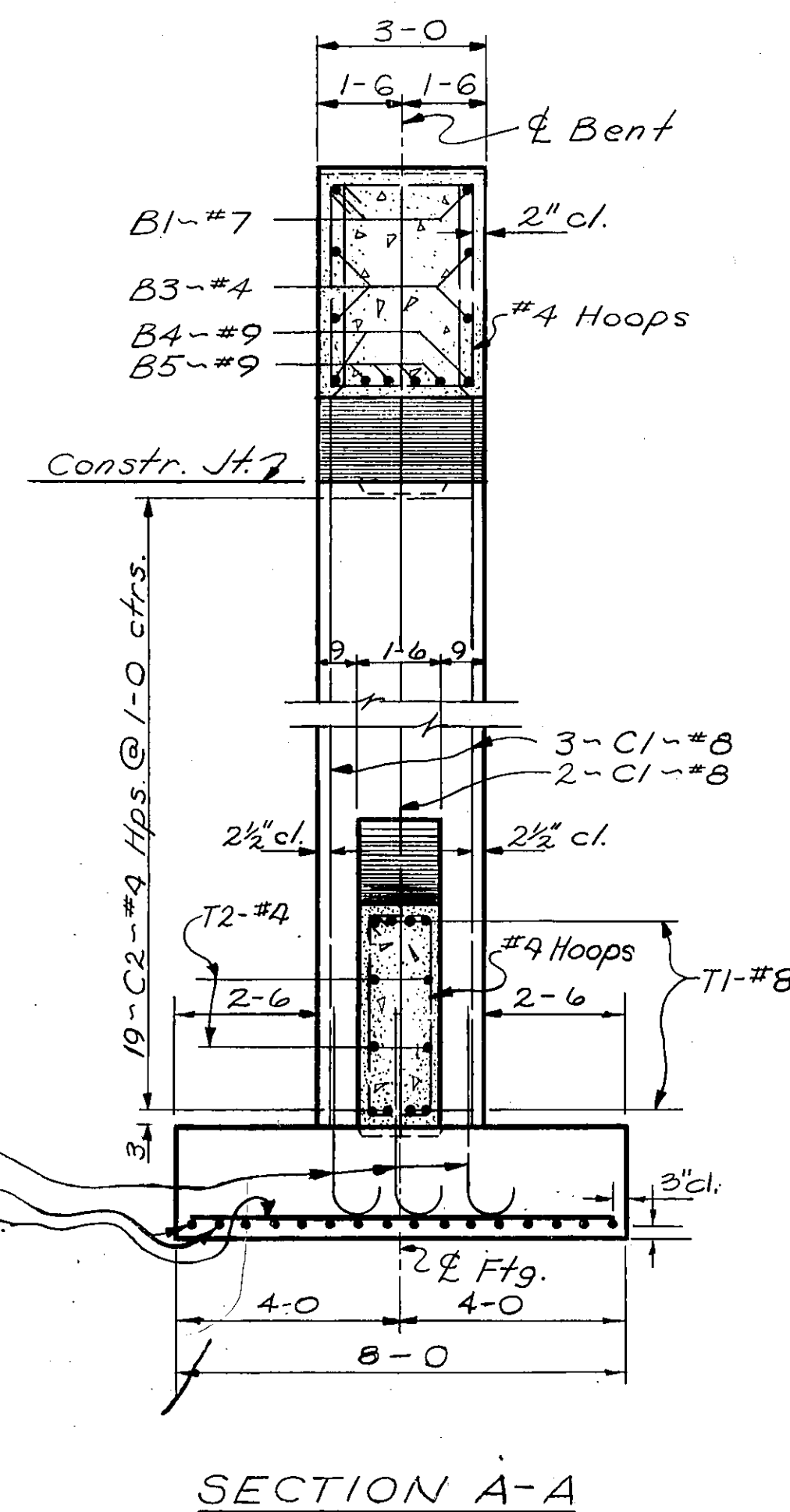
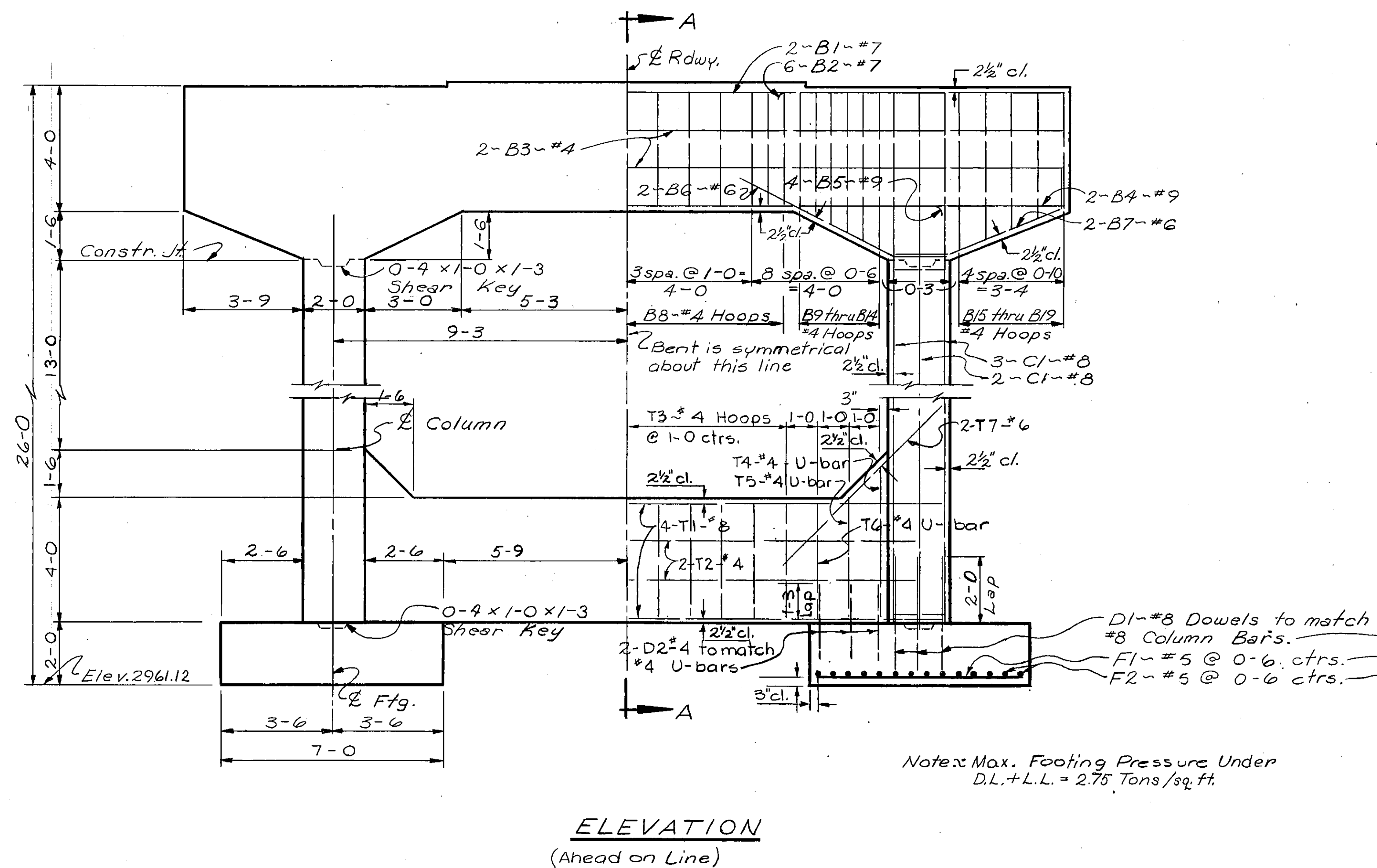
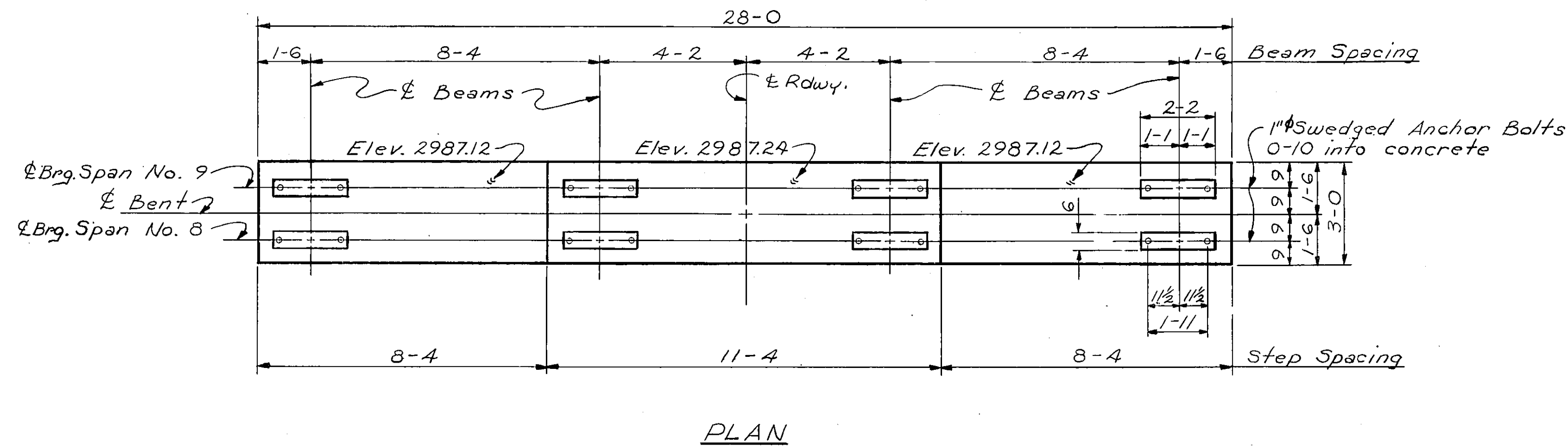
OTHER NOTES: For other notes see Dwg. No. 6468, No. 6471, No. 6472 & No. 6474

Notes: Max. Pile pressure under:
DL + L.L. + L.F. + 0.3W + WL =
29.06 Tons per Pile.

STATE OF MONTANA
STATE HIGHWAY COMMISSION

BRIDGE OVER CLARK FORK
AT STA. 604+33.70
FEDERAL AID PROJECT NO. 1-90-1(22)71
MINERAL COUNTY
BENT NO. 8
Scale: 3/8" = 1'-0"

DESIGNED	K.G.R.	8-6-62
DRAWN	R.M.M.	1-15-62
TRACED		
CHECKED	W.D.	5-29-63
REVISED		
REVISED		



BILL OF REINFORCING STEEL													
STRAIGHT BARS							BENT BARS (All dimensions are out to out)						
Mark	Size	No.	Length	Mark	Size	No.	Type	Length	A	B	C	D	E
B1	#7	2	27'-8"	B6	#6	4	2	7'-0"	5'-0"	2'-0"	0'-11"		
B2	#7	12	9'-0"	B7	#6	4	3	6'-10"	3'-10"	2'-0"	1'-0"	0'-9"	0'-11"
B3	#4	4	27'-8"	B8	#4	13	1	13'-5"	3'-8"	2'-8"	0'-4 1/2"		
B4	#9	2	27'-8"	B9	#4	2	1	13'-8"	3'-9 1/2"				
B5	#9	4	20'-6"	B10	#4	2	1	14'-2"	4'-0 1/2"				
				B11	#4	2	1	14'-8"	4'-3 1/2"				
				B12	#4	2	1	15'-2"	4'-6 1/2"				
C1	#8	16	23'-9"	B13	#4	2	1	15'-8"	4'-9 1/2"				
				B14	#4	2	1	16'-2"	5'-0 1/2"				
				B15	#4	2	1	16'-2"	5'-0 1/2"				
F1	#5	32	6'-6"	B16	#4	2	1	15'-6"	4'-8 1/2"				
F2	#5	28	7'-6"	B17	#4	2	1	14'-10"	4'-4 1/2"				
				B18	#4	2	1	14'-2"	4'-0 1/2"				
D2	#4	12	2'-6"	B19	#4	2	1	13'-6"	3'-8 1/2"	2'-8"	0'-4 1/2"		
T1	#8	8	20'-2"										
T2	#4	4	19'-0"	C2	#4	38	1	9'-5"	2'-8"	1'-8"	0'-4 1/2"		
T7	#6	4	5'-6"	D1	#8	16	4	4'-10"	3'-9"	1'-1"			
				T3	#4	11	1	10'-5"	3'-8"	1'-2"	0'-4 1/2"		
				T4	#4	2	5	11'-2"	5'-0"	1'-2"			
				T5	#4	2	5	9'-2"	4'-0"	1'-2"			
				T6	#4	2	5	8'-10"	3'-10"	1'-2"			

NOTES

OTHER NOTES: For other notes see Dwg. No. 6468, No. 6471, No. 6472 & No. 6474.

STATE OF MONTANA STATE HIGHWAY COMMISSION

BRIDGE OVER CLARK FORK

AT STA. 604+33.70

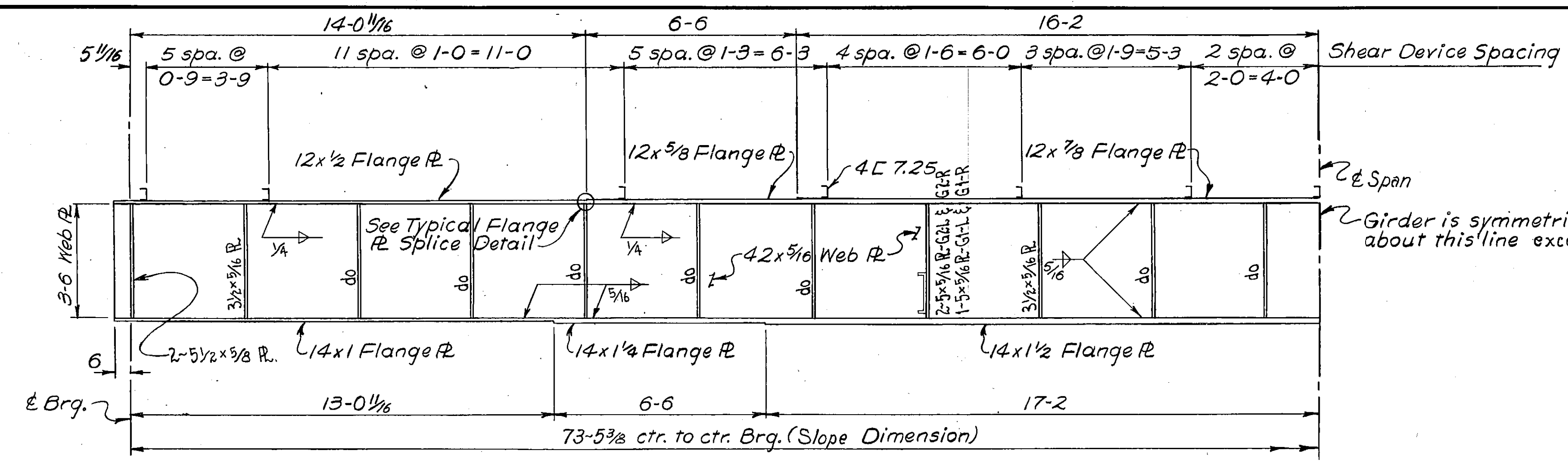
FEDERAL AID PROJECT NO. I-90-1(22)71

MINERAL COUNTY

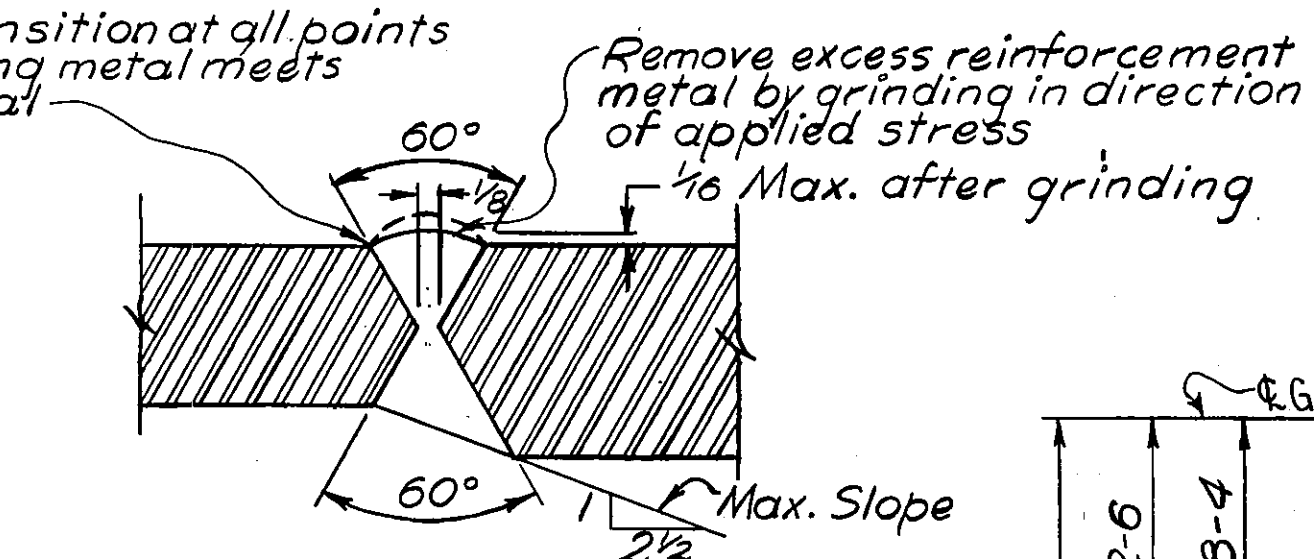
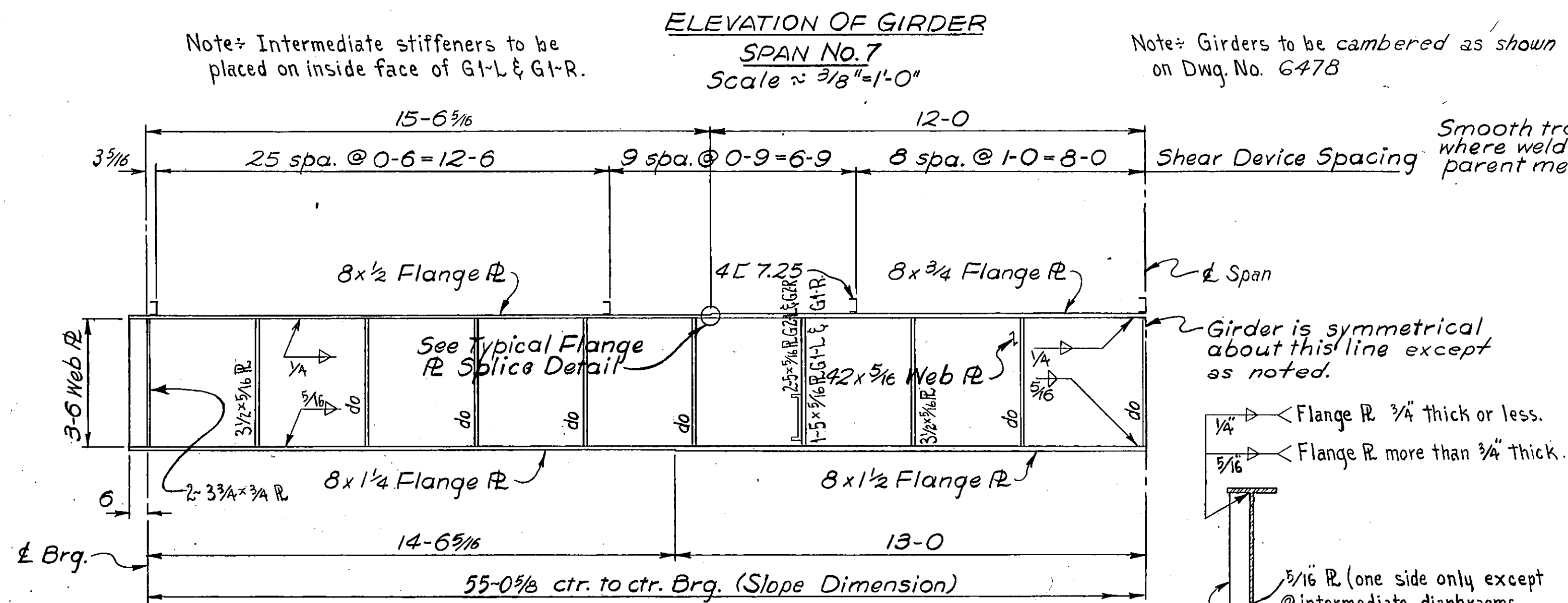
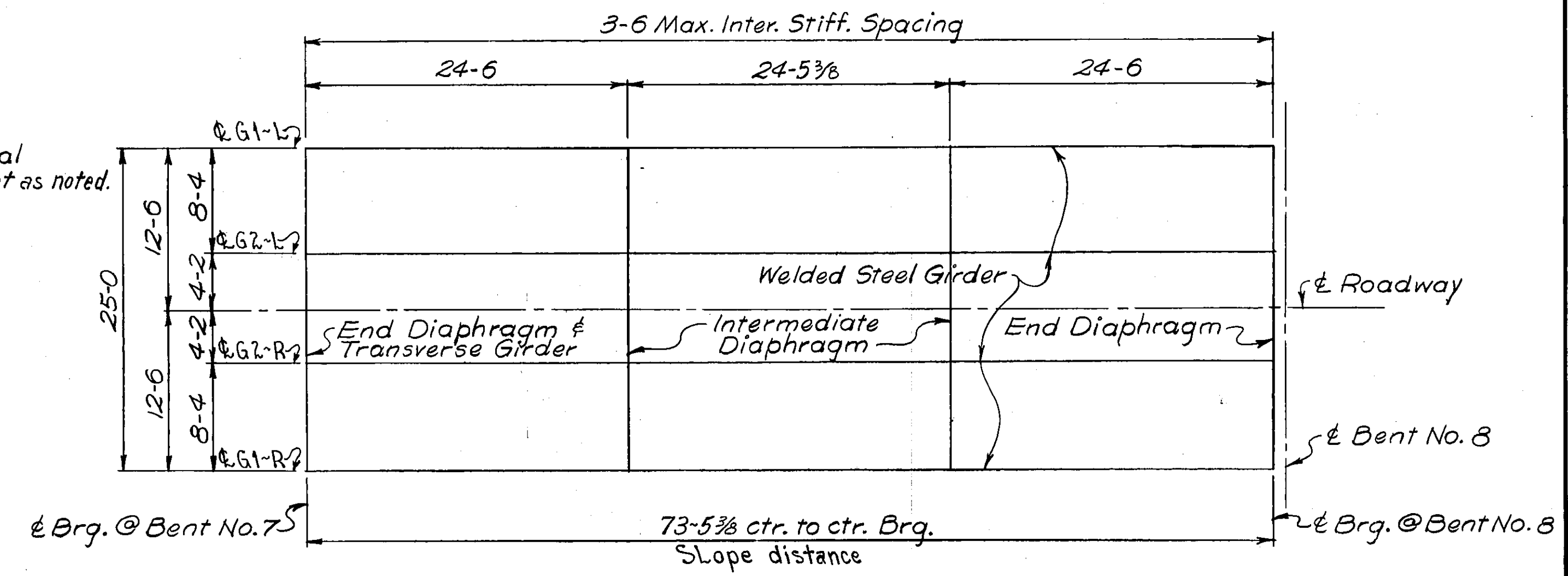
BENT NO. 9

Scale: 3/8" = 1'-0"

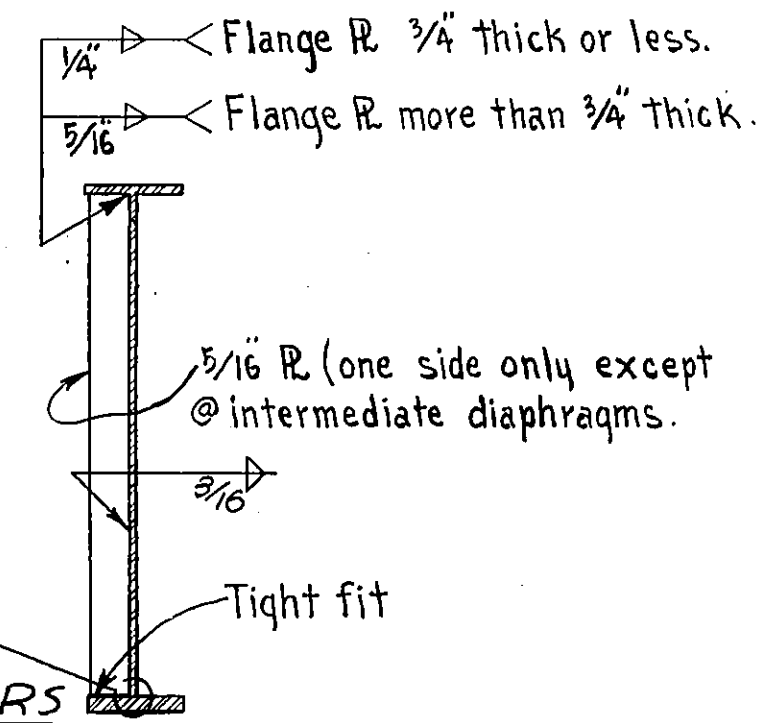
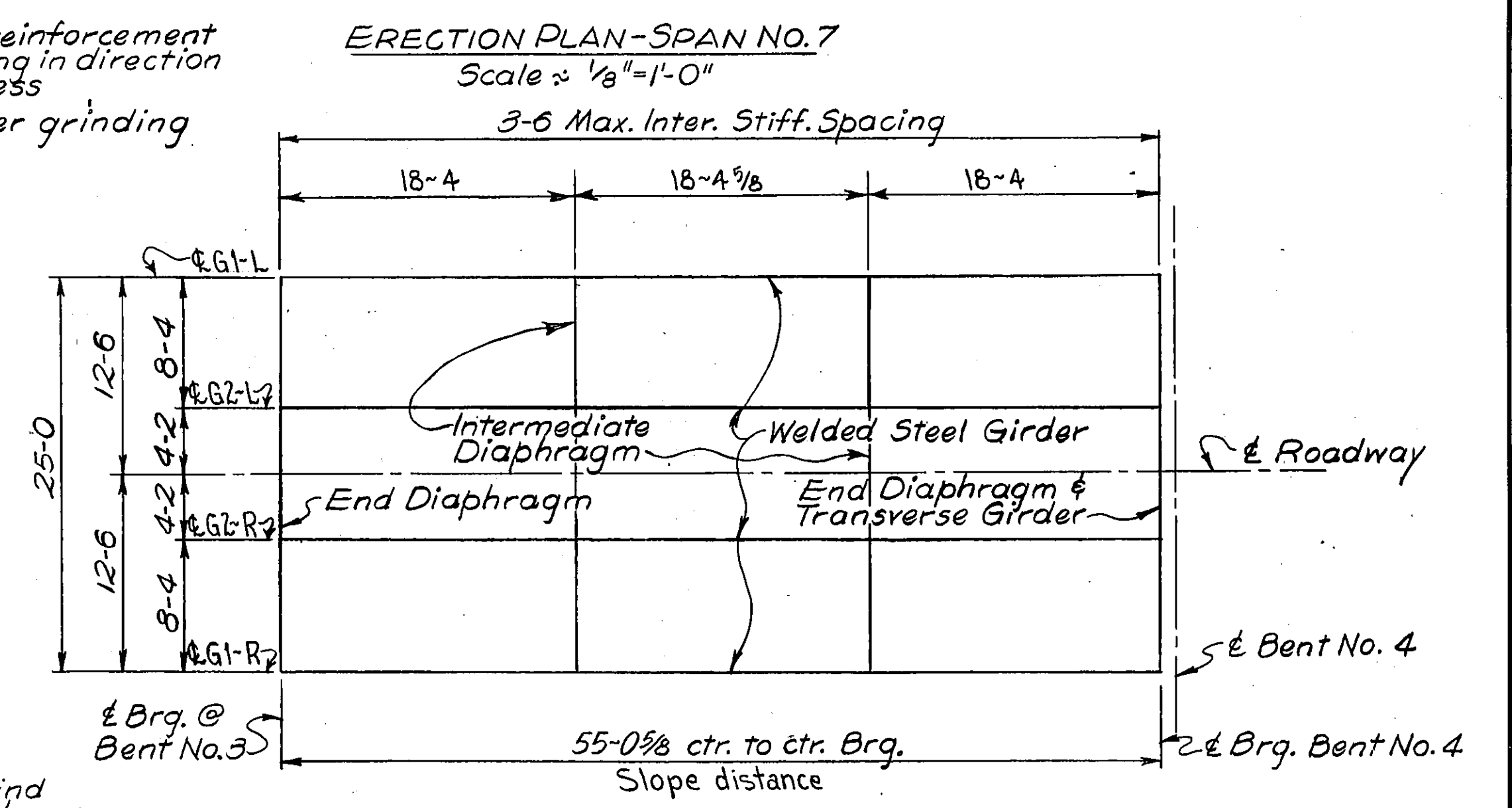
DESIGNED	K. G. R.	7-17-62
DRAWN	J. J. Z.	4-22-62
TRACED		
CHECKED	R. D. K.	5-29-63
REVISED		
REVISED		



Note: For typical Slab Section # details see Dwg. No. 6478
 Note: See Special Provisions For Steel Requirements.



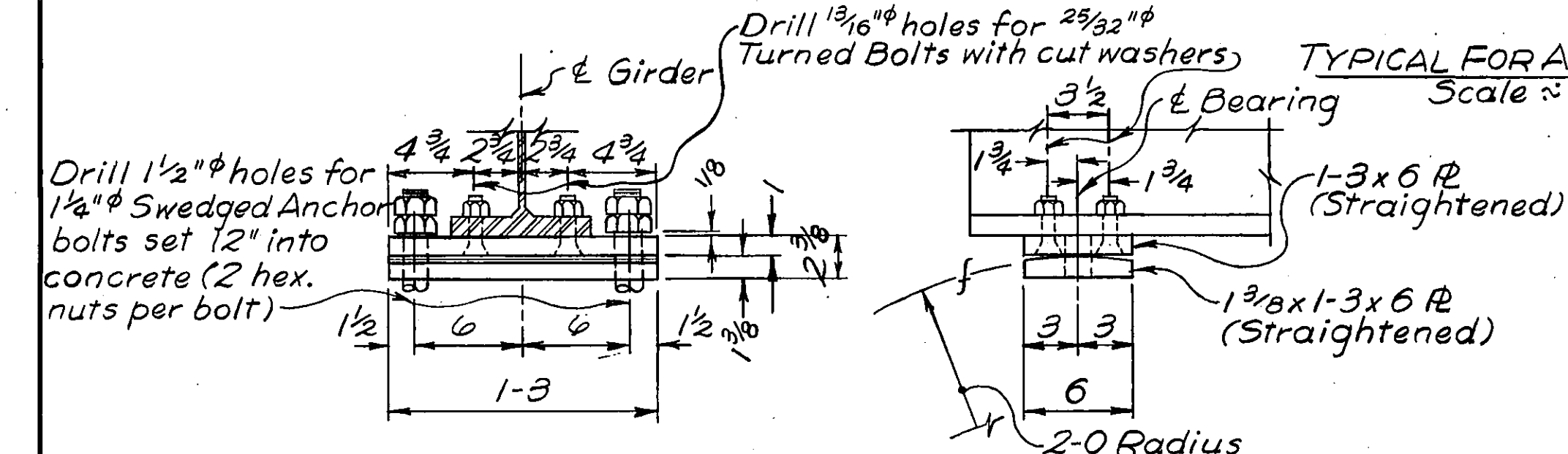
TYPICAL FLANGE PLATE SPLICE
 No Scale



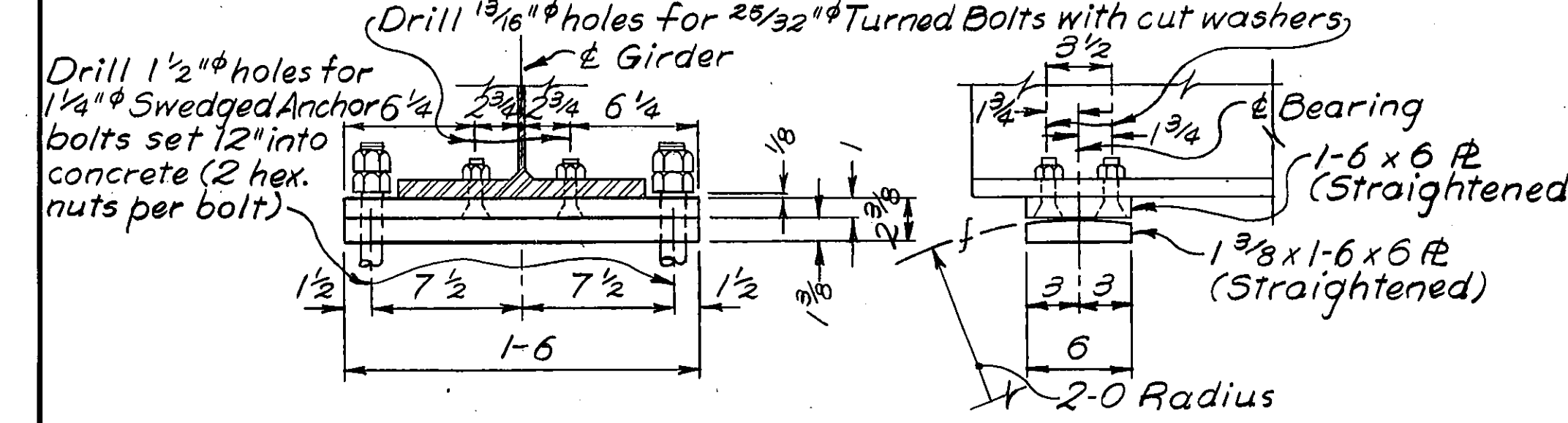
INTERMEDIATE STIFFENER
 FOR SPAN NO. 3
 (Span No. 7 Similar)
 Scale: 3/4" = 1'-0"

BEARING STIFFENER
 FOR SPAN NO. 3
 Scale: 3/4" = 1'-0"

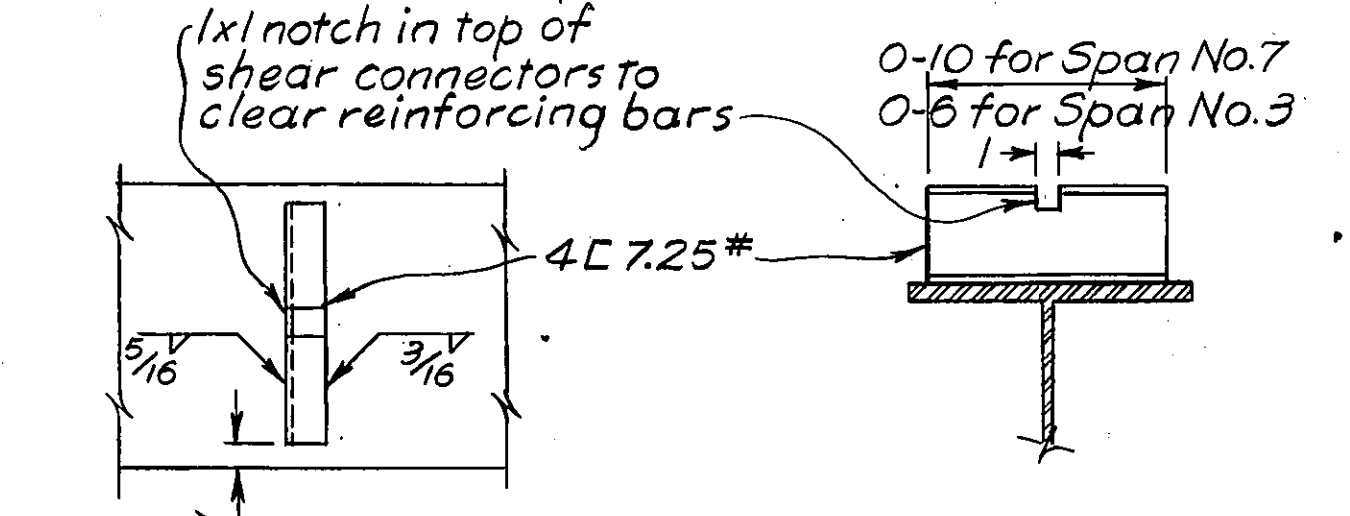
BEARING STIFFENER
 FOR SPAN NO. 7
 Scale: 3/4" = 1'-0"



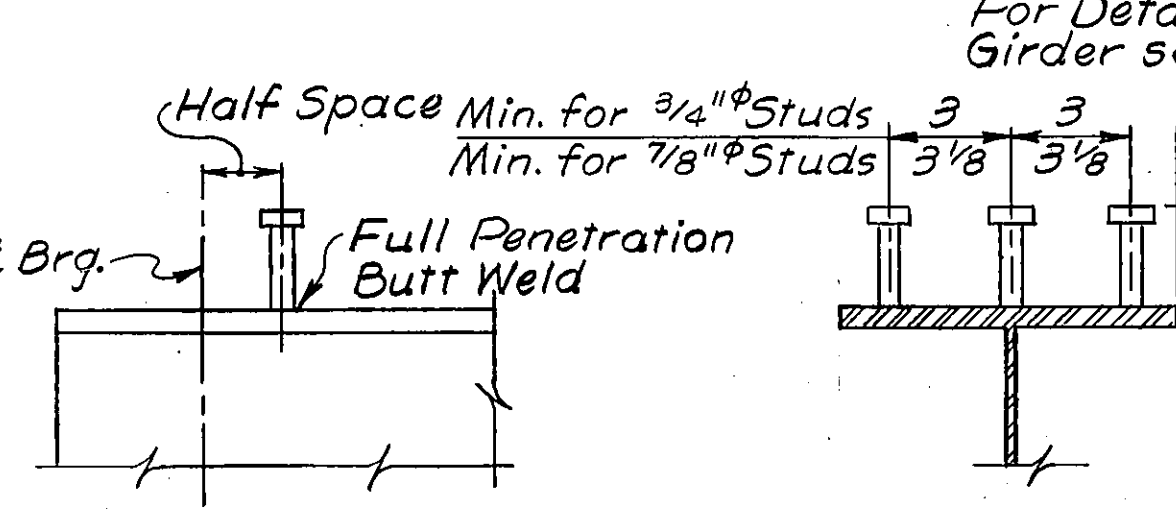
FIXED SHOE FOR SPAN NO. 3 @ BENT NO. 3
 Scale: 1 1/2" = 1'-0"



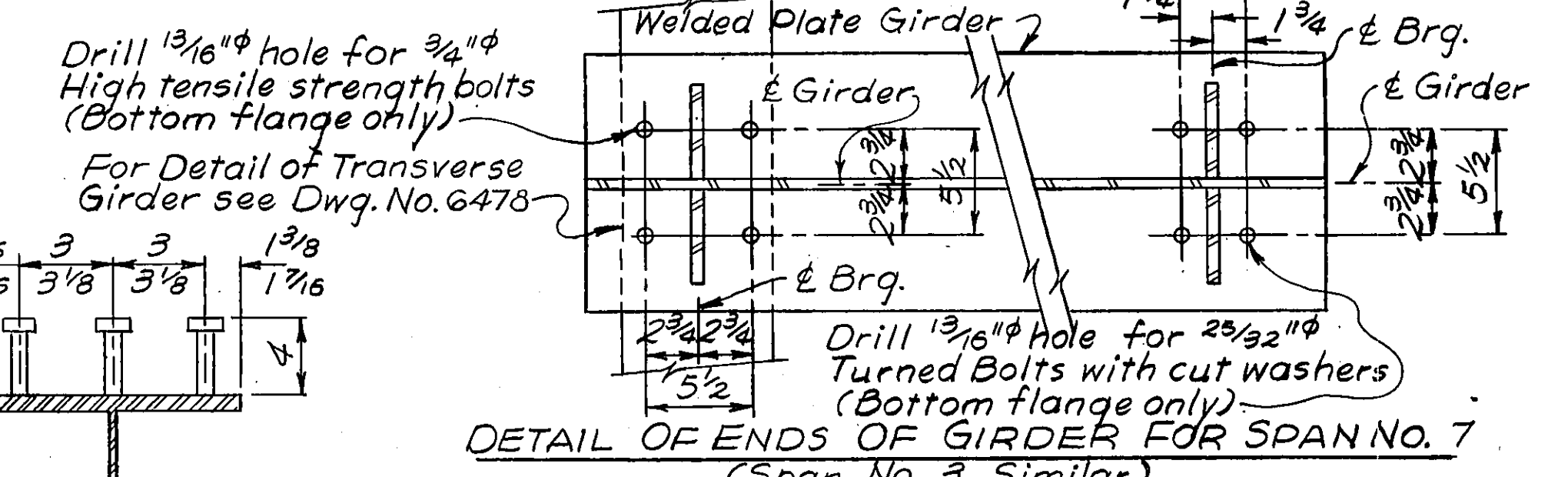
FIXED SHOE FOR SPAN NO. 7 @ BENT NO. 8
 Scale: 1 1/2" = 1'-0"



SHEAR DEVICE WELDING DETAILS FOR SPAN NO. 7
 Span No. 3 Similar Except as Noted
 Scale: 1 1/2" = 1'-0"



STUD SHEAR DEVICE WELDING DETAILS
 Scale: 1 1/2" = 1'-0"



DETAIL OF ENDS OF GIRDER FOR SPAN NO. 7
 (Span No. 3 Similar)
 Scale: 1 1/2" = 1'-0"

STATE OF MONTANA
 STATE HIGHWAY COMMISSION

BRIDGE OVER CLARK FORK
 AT STA. 604+33.70
 FEDERAL AID PROJECT NO. 1-90-1(22)71
 MINERAL COUNTY
 GIRDER DETAILS FOR SPANS NO. 3 & NO. 7
 Scale: As Noted

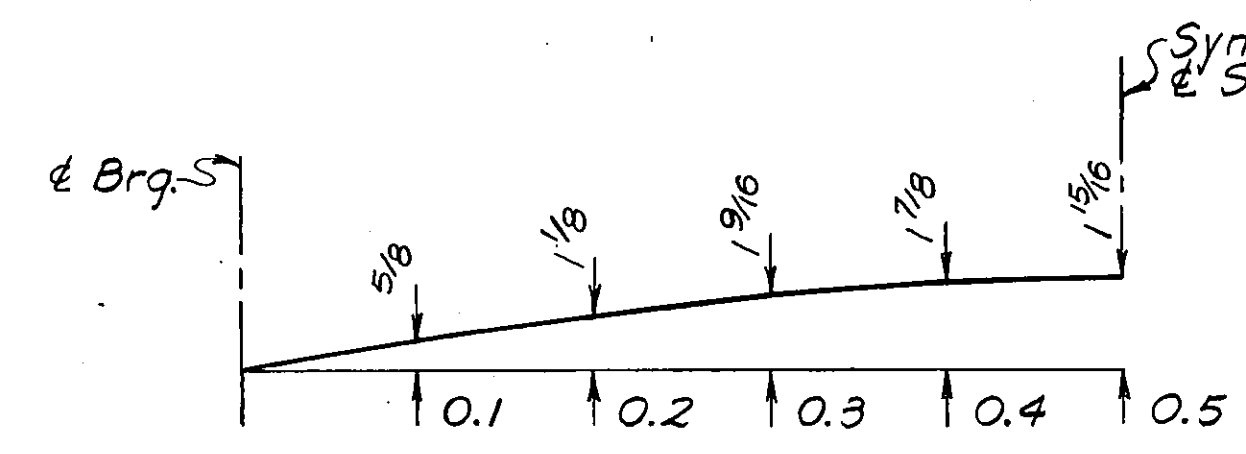
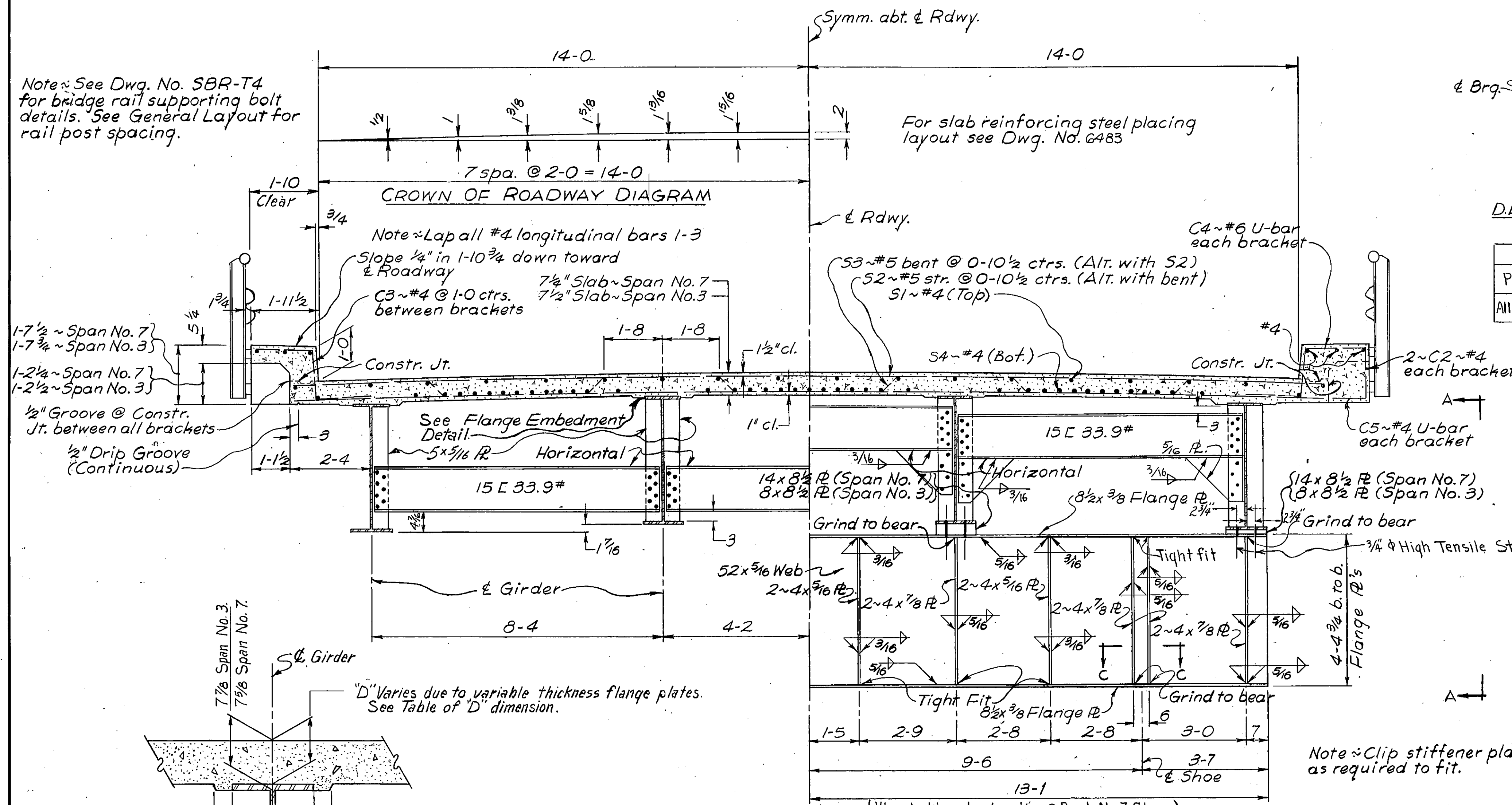
NOTES
 OTHER NOTES: For other notes see Dwg. No. 6468, No. 6471, No. 6472, No. 6474 & No. 6479

DESIGNED	H.G.R.	7-19-62
DRAWN	C.M.G.	1-4-62
TRACED		
CHECKED	RDK	5-9-63
REVISED		
REVISED		

Note: The contractor will be permitted to substitute stud-welded shear connectors in place of channel shear devices shown on girder details. Size and spacing of stud-welded connectors shall be designed to provide shear resistance equal to that of the channel shear device shown.
 Shear resistance for channels is as follows:
 4" L @ 7.25# = 1,473# per lineal inch
 Shear resistance for stud-welded shear connectors is as follows:
 3/4" = 2,542# per stud
 7/8" = 3,459# per stud
 Substitutions shall be submitted to the Engineer for approval prior to fabrication of the girders.

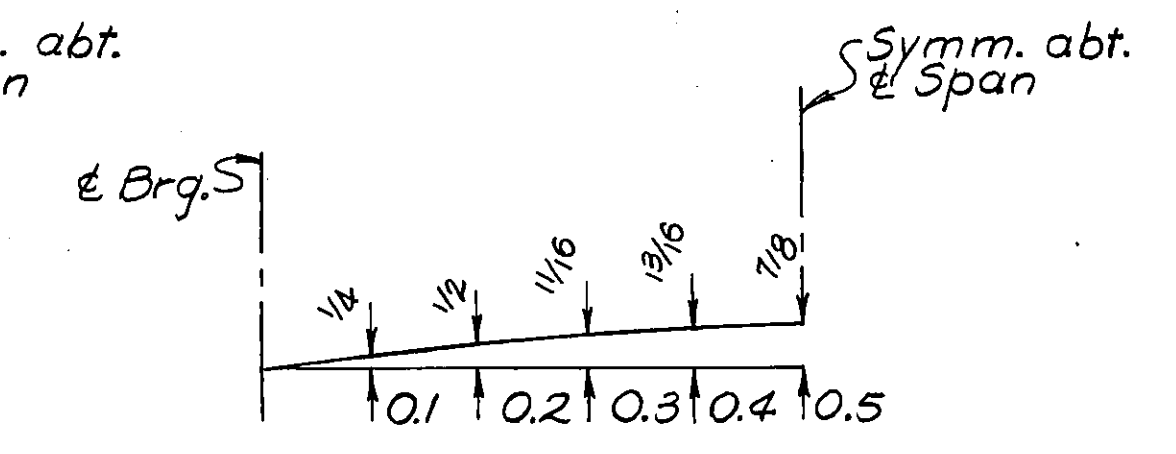
Notes: Web plates are to be trimmed to match D.L. Camber Diagram before flange plates are attached.

Note: See Dwg. No. SBR-T4 for bridge rail supporting bolt details. See General Layout for rail post spacing.



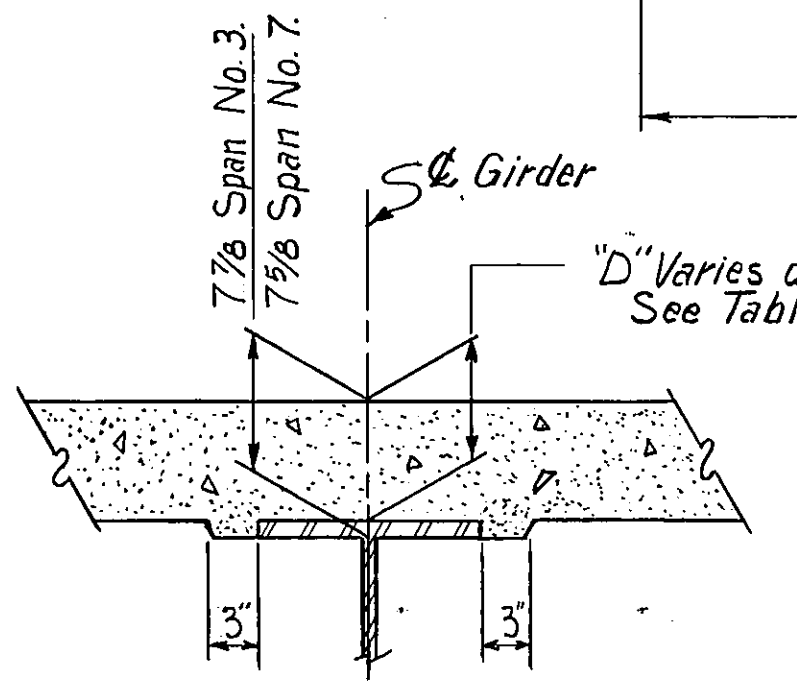
D.L. CAMBER DIAGRAM FOR SPAN NO. 7
No Scale

TABLE OF "D" DIMENSIONS					
Point	Brq.	.1	.2	.3	.4
All Girders	7 1/8	7 1/8	7	6 3/4	6 3/4



D.L. CAMBER DIAGRAM FOR SPAN NO. 3
No Scale

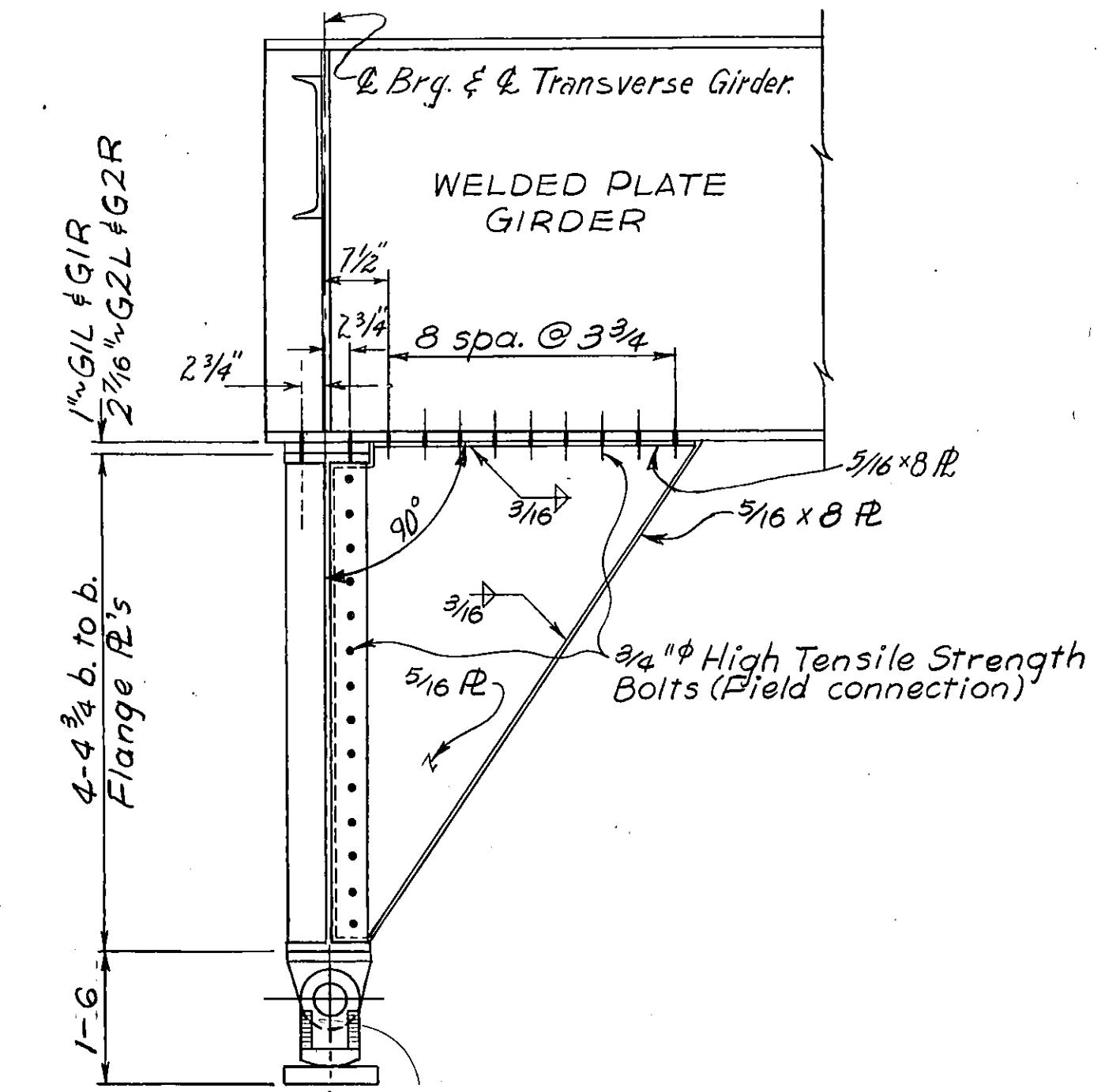
TABLE OF "D" DIMENSIONS					
Point	Brq.	.1	.2	.3	.4
All Girders	7 3/8	7 3/8	7 3/8	7 1/8	7 1/8



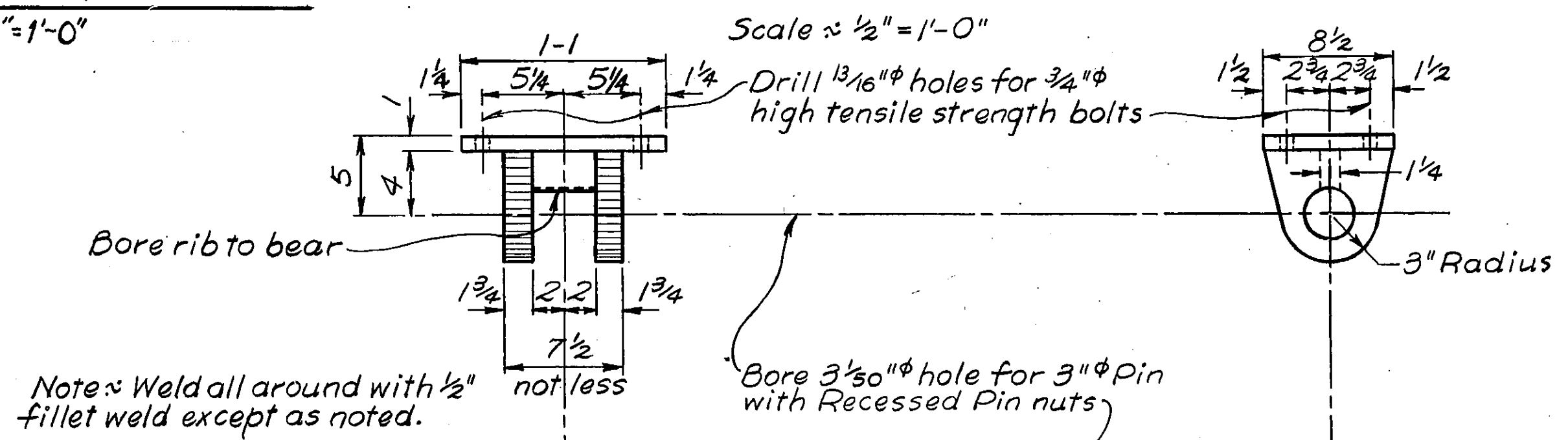
FLANGE EMBEDMENT DETAIL
Scale 1/2" = 1'-0"

NEAR INTERMEDIATE DIAPHRAGM

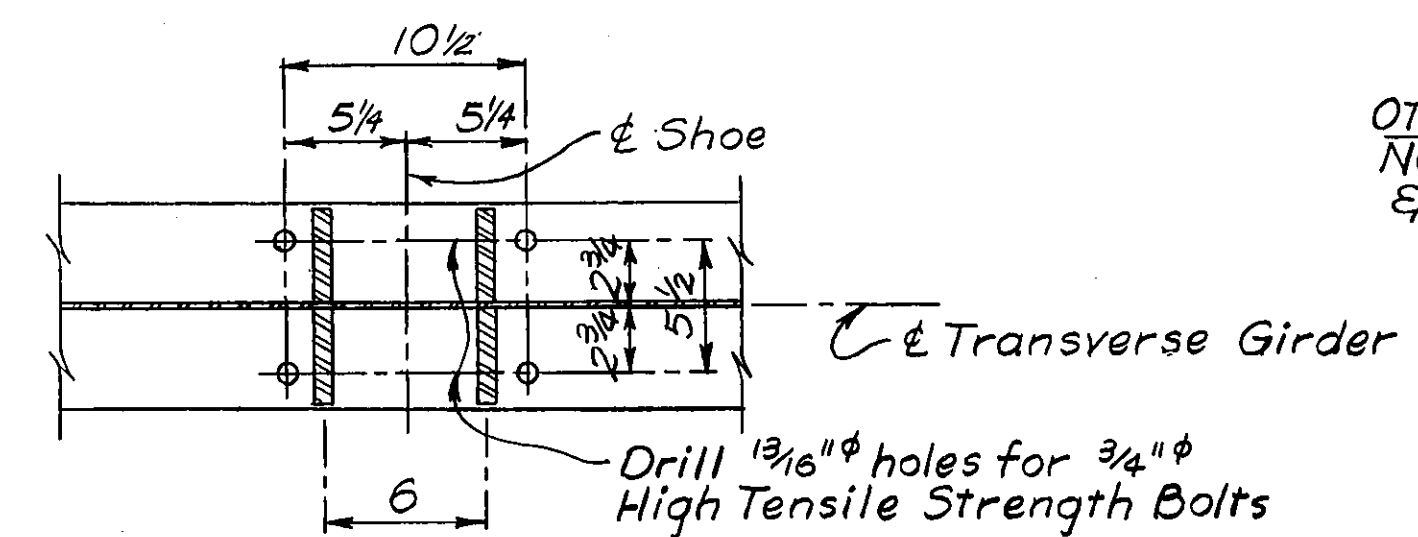
ROADWAY SECTION FOR SPANS NO. 3 & NO. 7
(View looking ahead on line @ Bent No. 7 Shown)
(End diaphragm at other end of spans is same)



VIEW A-A
Scale 3/4" = 1'-0"



ROCKER SHOES FOR TRANSVERSE GIRDER
Scale 1/2" = 1'-0"

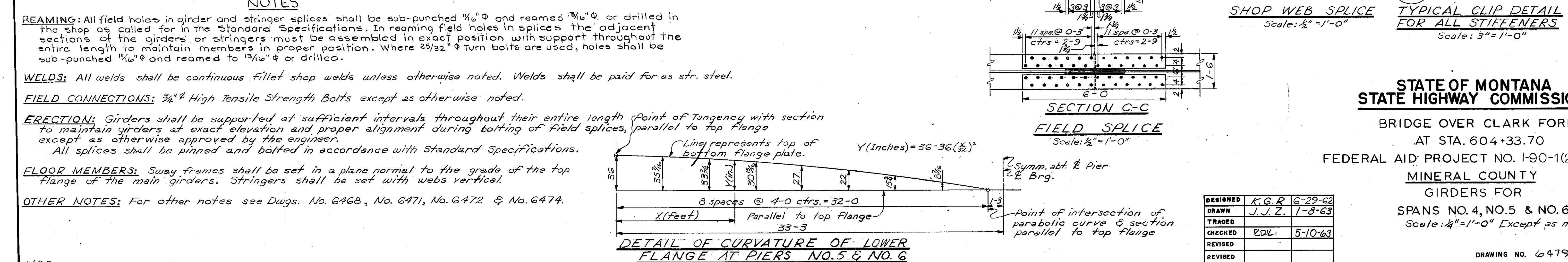
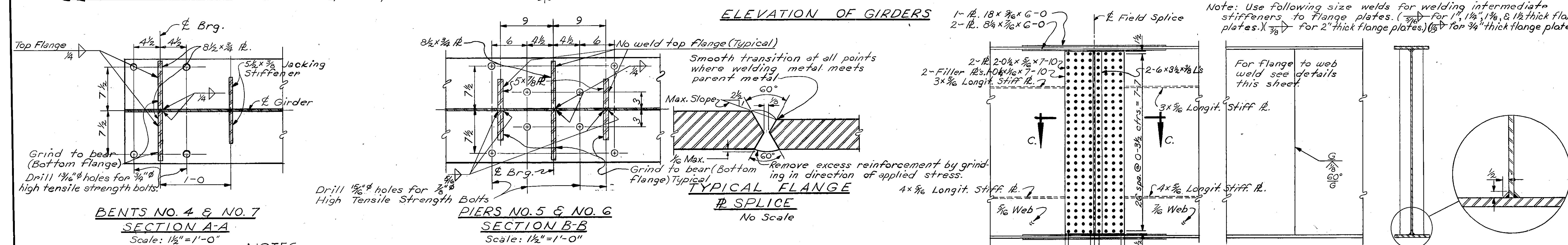
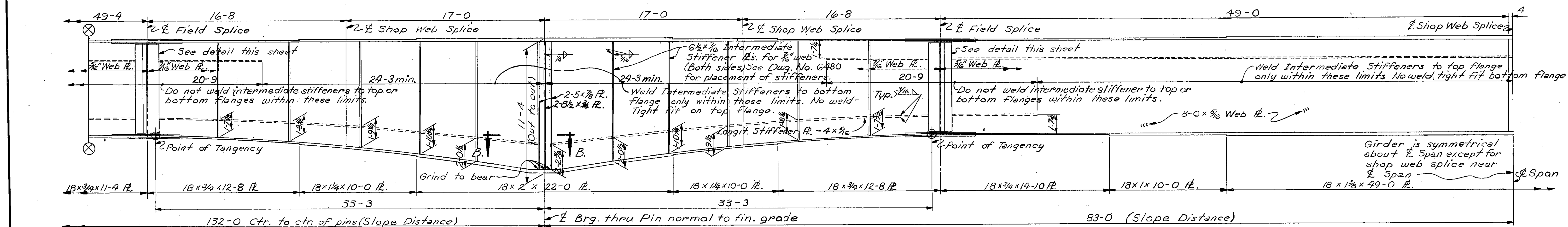
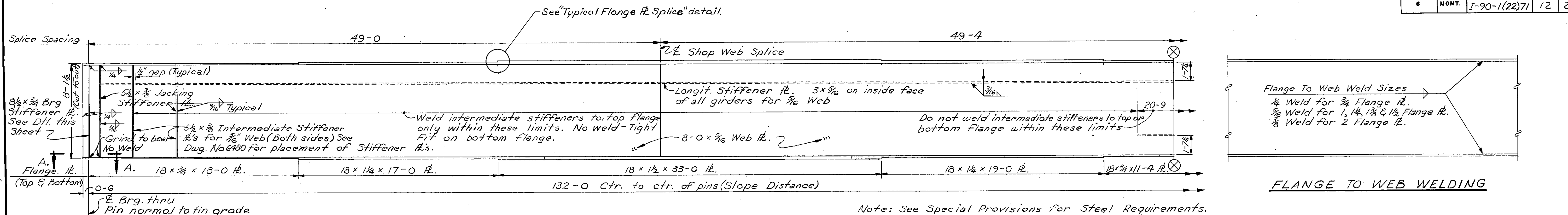


SECTION C-C
Scale 1/2" = 1'-0"

NOTES
OTHER NOTES: For other notes see Dwg. No. 6468, No. 6471, No. 6472, No. 6474 & No. 6479

STATE OF MONTANA
STATE HIGHWAY COMMISSION
BRIDGE OVER CLARK FORK
AT STA. 604+33.70
FEDERAL AID PROJECT NO. 1-90-1(22)71
MINERAL COUNTY
TRANSVERSE GIRDER AT BENTS NO. 4 & NO. 7 & DIAPHRAGM DETAILS
Scale: As Noted

DESIGNED	H.G.R.	7-31-62
DRAWN	C.M.G.	1-9-62
TRACED		
CHECKED	EDK.	5-9-63
REVISED		
REVISED		



STATE OF MONTANA STATE HIGHWAY COMMISSION

BRIDGE OVER CLARK FORK
AT STA. 604+33.70
FEDERAL AID PROJECT NO. I-90-1(22)71
MINERAL COUNTY
GIRDERS FOR
SPANS NO. 4, NO. 5 & NO. 6
Scale: 1/4\"=1'-0\" Except as noted

DESIGNED	K.G.R.	6-29-62
DRAWN	J.J.Z.	1-8-63
TRACED		
CHECKED	20L.	5-10-63
REVISED		
REVISED		

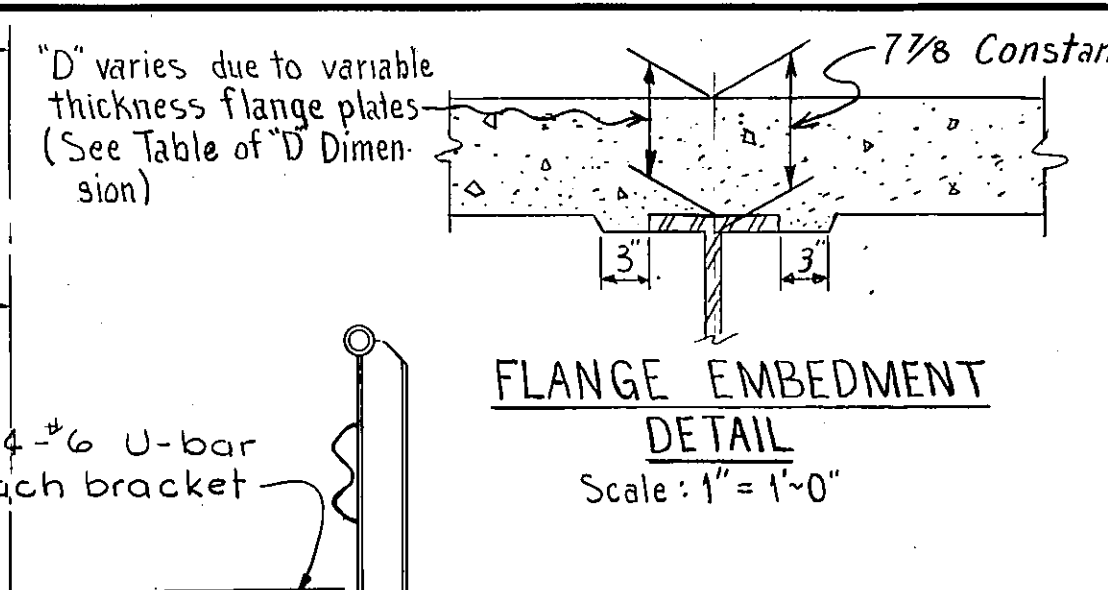
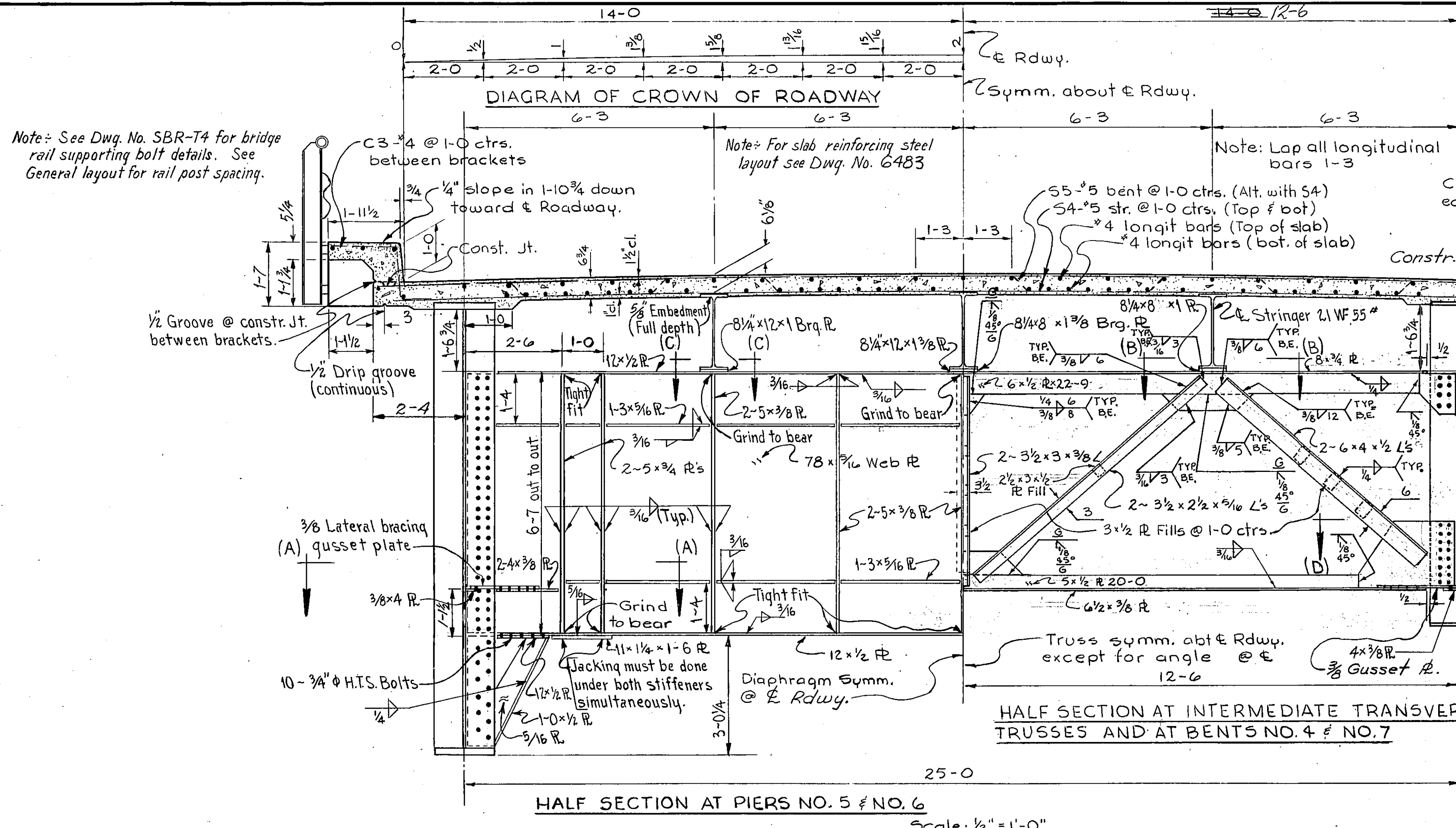
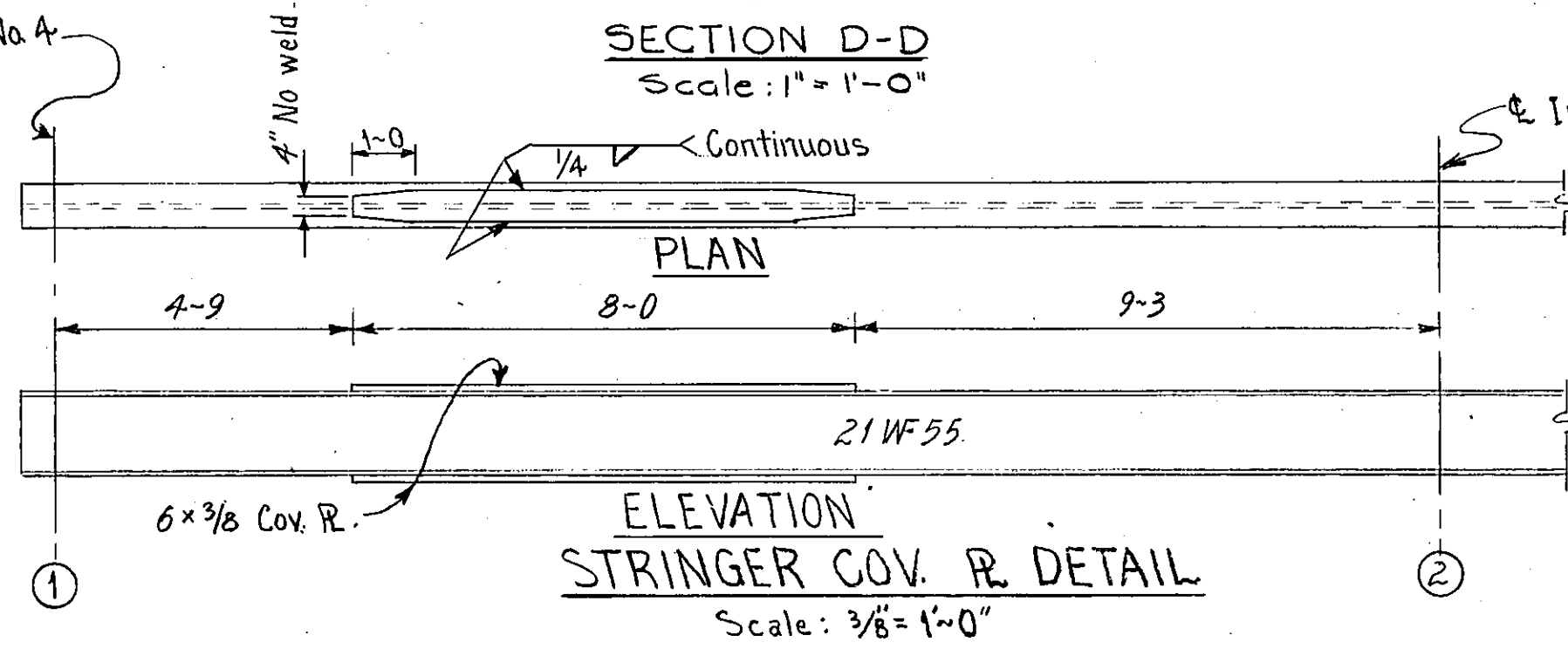
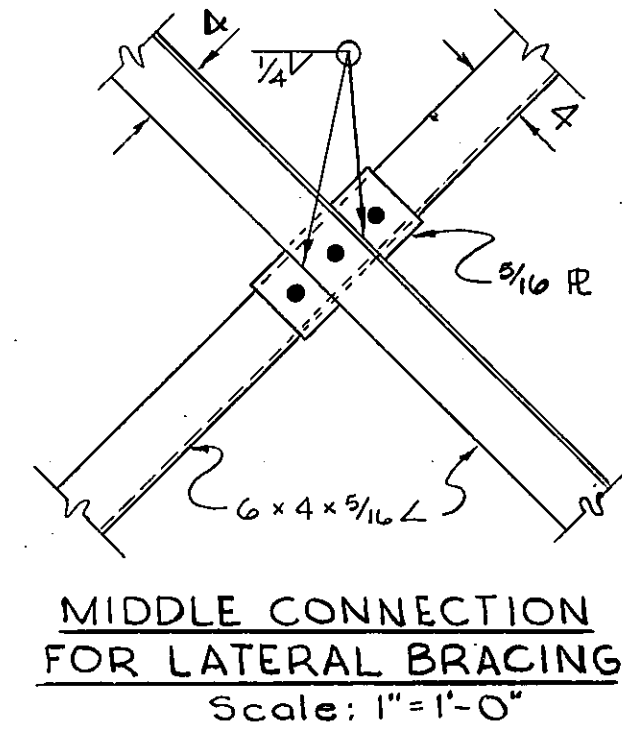
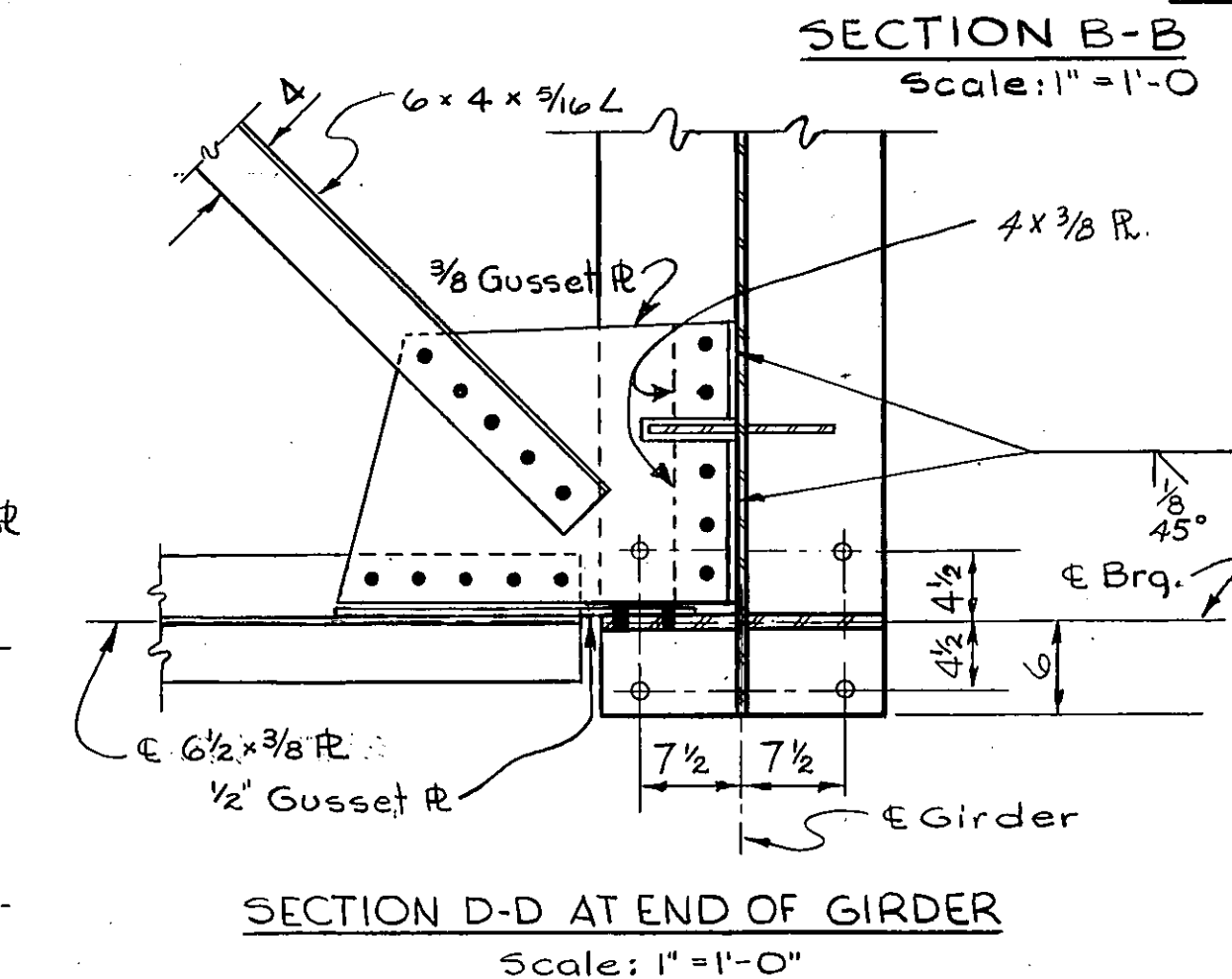
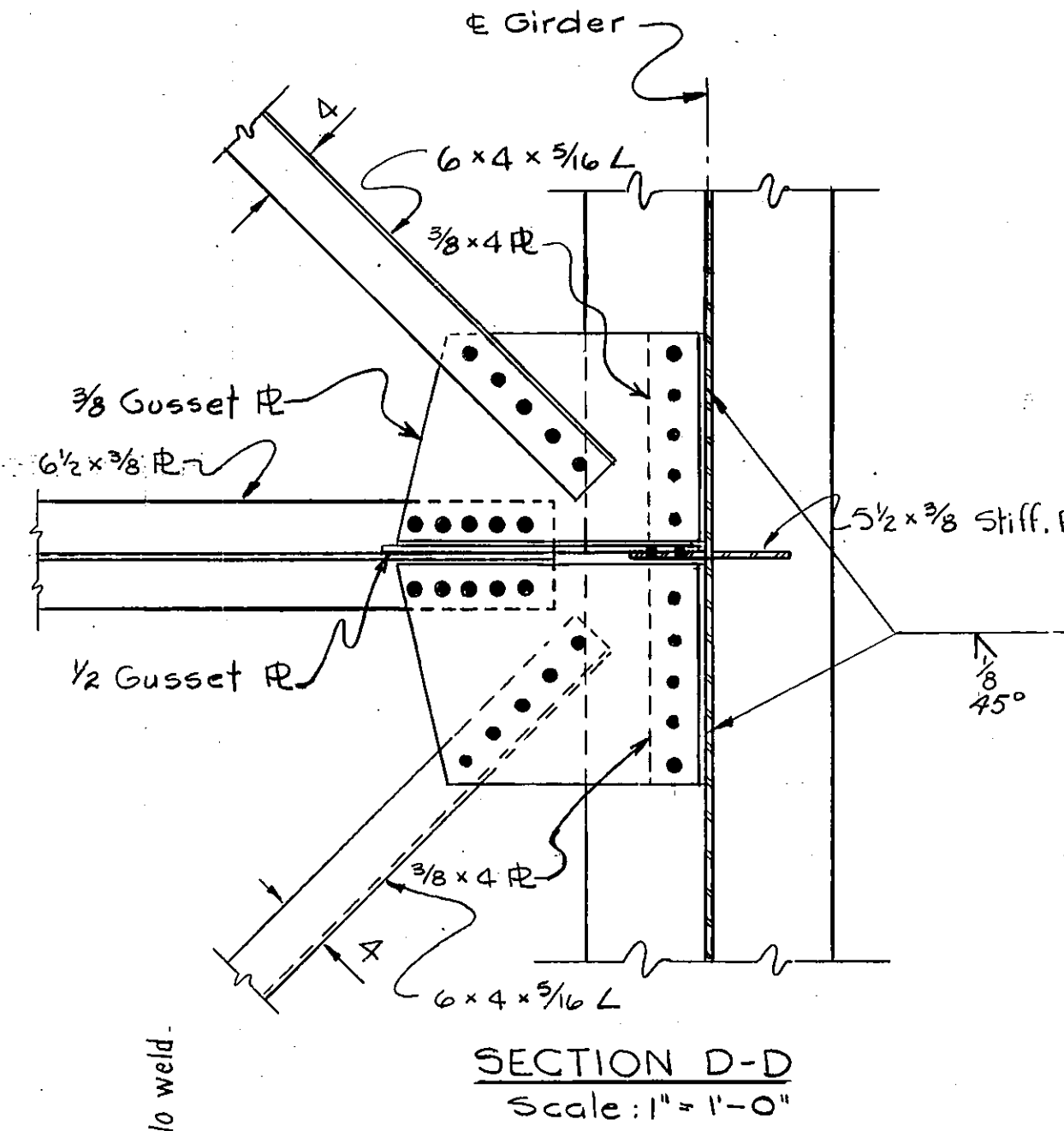
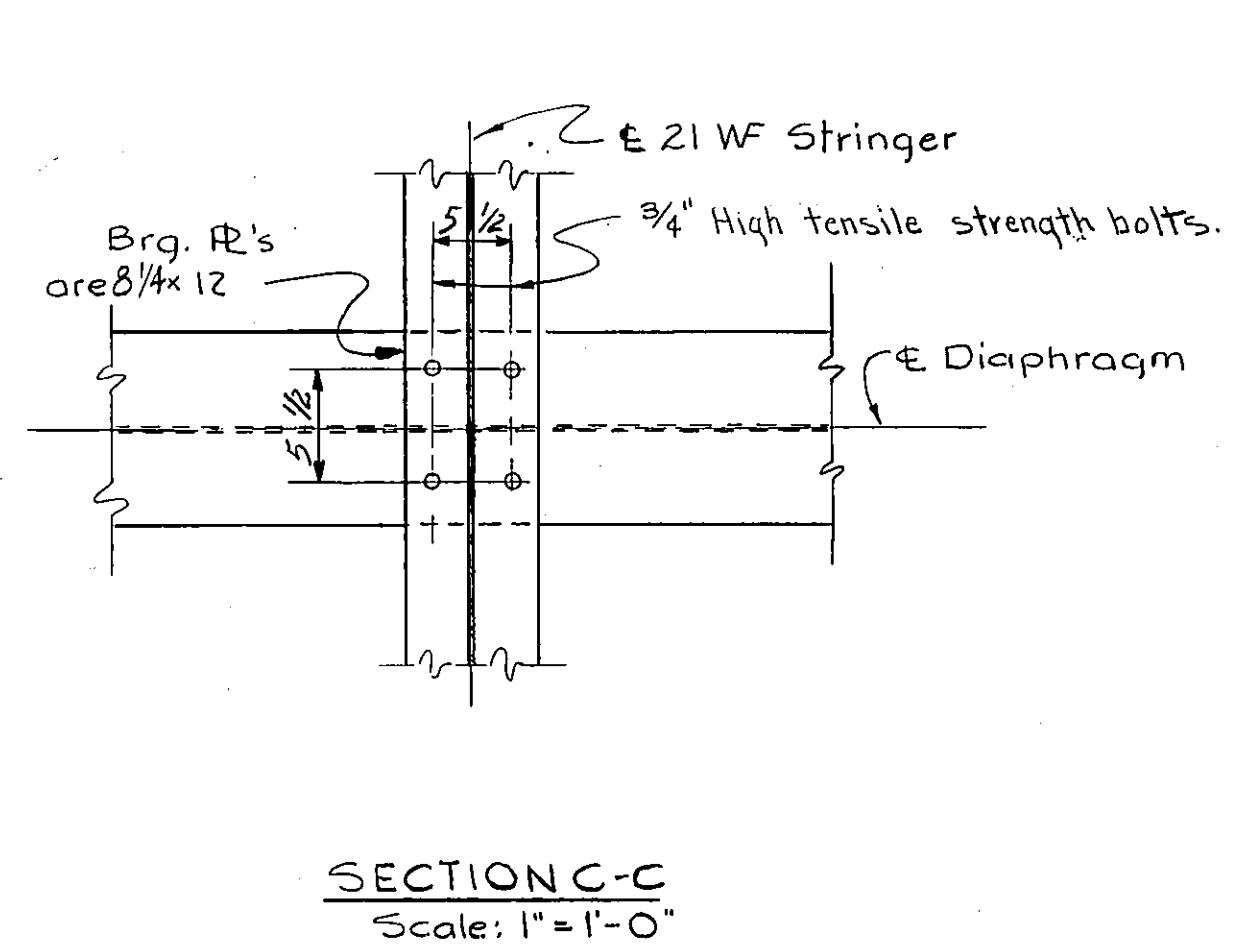
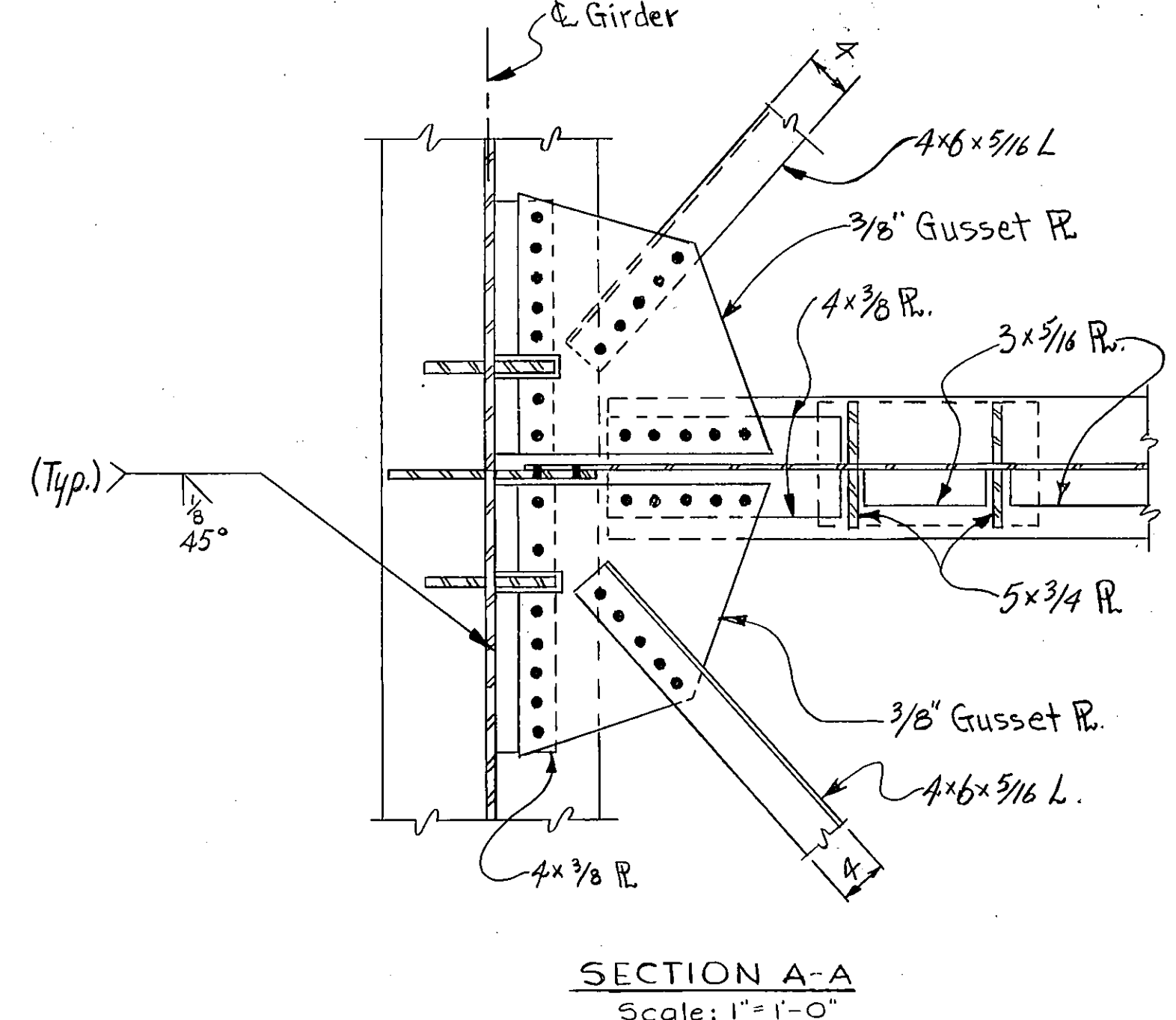
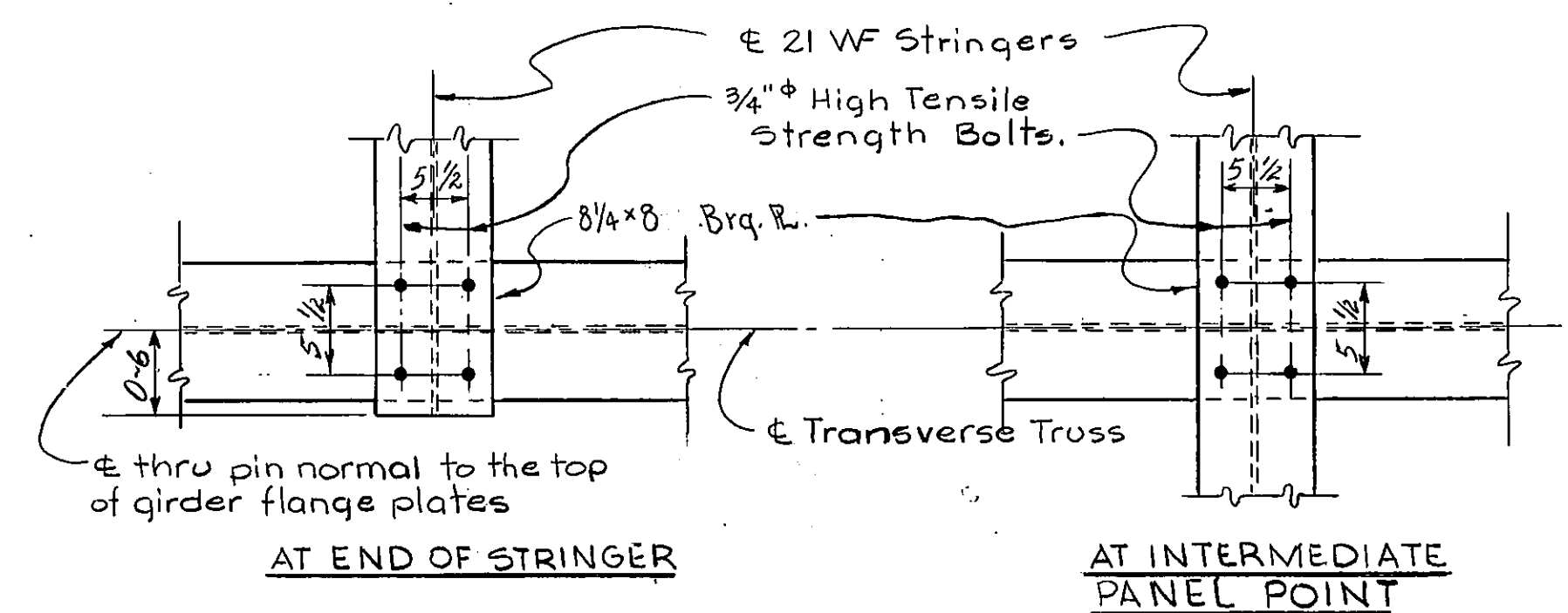
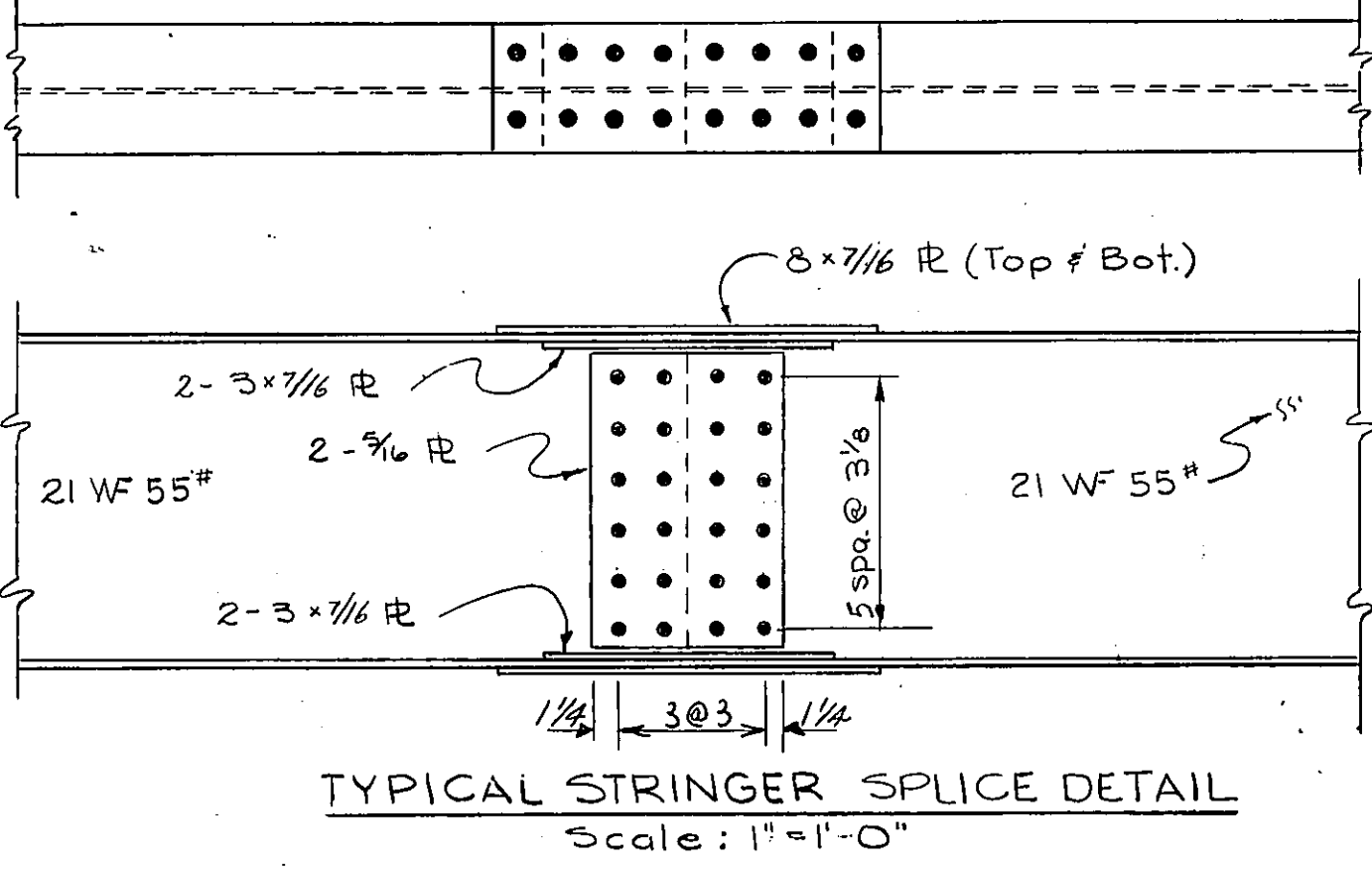


TABLE OF "D" Dimensions

Point	R	1	2	3	4	5	6	7	8	9	R1	1	2	3	4	5
"D"	7/8	7/8	6 3/8	6 3/8	6 3/8	6 3/8	6 3/8	7/8	7/8	6 3/8	5 7/8	6 3/8	7/8	6 3/8	6 1/2	6 1/2

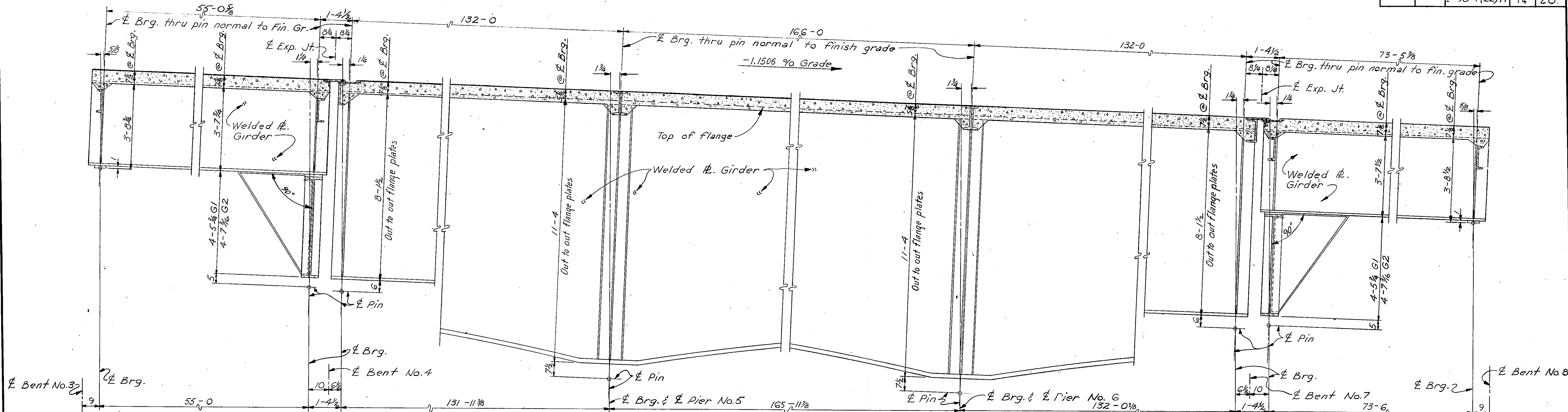
Span No. 4 Span No. 5

Note: Table of "D" Symm. abt. E Span No. 5.

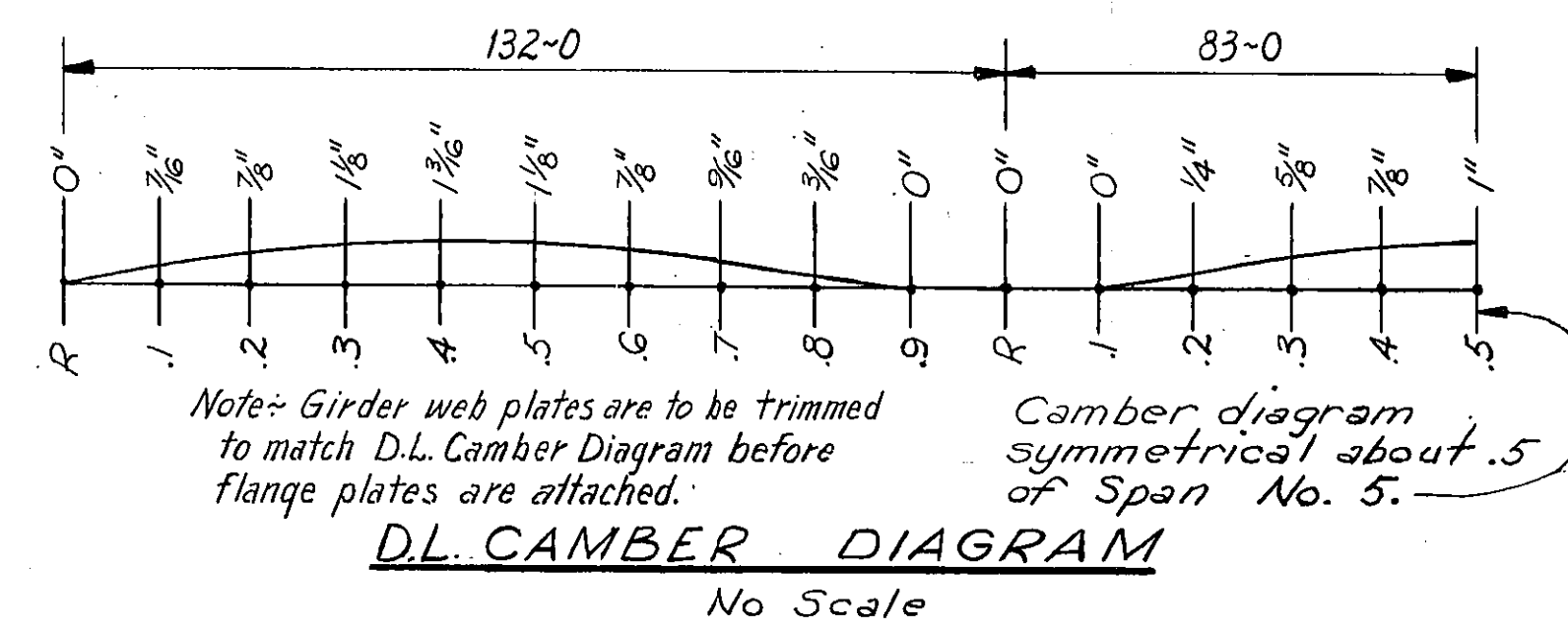


NOTES
 OTHER NOTES: For other notes see Dwg. No. 6468, No. 6471, No. 6472, No. 6474 & No. 6479.
STATE OF MONTANA
STATE HIGHWAY COMMISSION
 BRIDGE OVER CLARK FORK
 AT STA. 604+33.70
 FEDERAL AID PROJECT NO. I-90-1(22)71
 MINERAL COUNTY
 CROSS FRAME & STRINGER DETAILS
 FOR SPANS NO. 4, NO. 5 & NO. 6
 Scale as noted

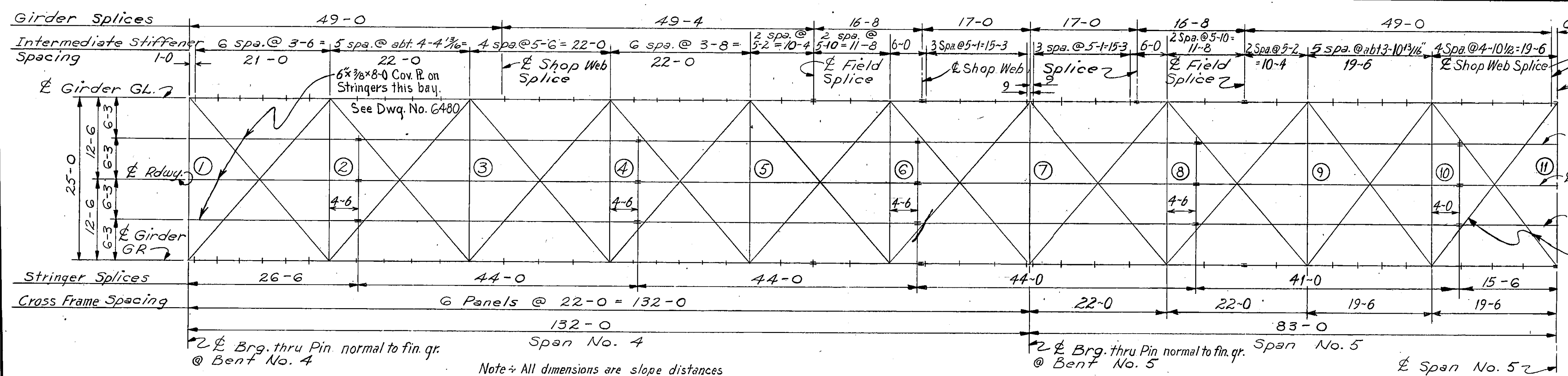
DESIGNED	KGR	6-29-62
DRAWN	NEH	4-5-63
TRACED		
CHECKED	RDL	5-10-63
REVISED		



LONGITUDINAL SECTION THRU DECK
Scale: 1/2" = 1'-0"



DESIGN INFORMATION									
D.L. = Dead Load L.L. = Live Load		55'-0"	132'-0"	166'-0"	132'-0"	73'-6"			
		Span No. 3	Span No. 4	Span No. 5	Span No. 6	Span No. 7			
Moment in kip ft. Shears & Reactions in kips. Deflections in inches.		R1	R1 R2	R3	R4	R5 R6	R6		
		Span No. 3	Span No. 4	Span No. 5	Span No. 6	Span No. 7	R1	R2 & R5	R3 & R4
Moment	D.L.	385	2497	2283	702				-5455
	L.L.	695	2284	2180	992				-3253
Reactions	D.L.						28.0	100.6	-183.4
	L.L.						57.9	99.0	-124.0
Shear	D.L.						28.0	100.6	361.4
	L.L.						57.9	99.0	38.8
Deflections	D.L.	0.8253	1.1853	0.9861	1.9368				
	L.L.	0.6000	1.4164	1.3594	0.8175				



ERECTION DIAGRAM
Scale: 1" = 10'-0"

Erection diagram symm. about $\frac{1}{2}$ Span No. 5 except for shop web splice near $\frac{1}{2}$ Span No. 5

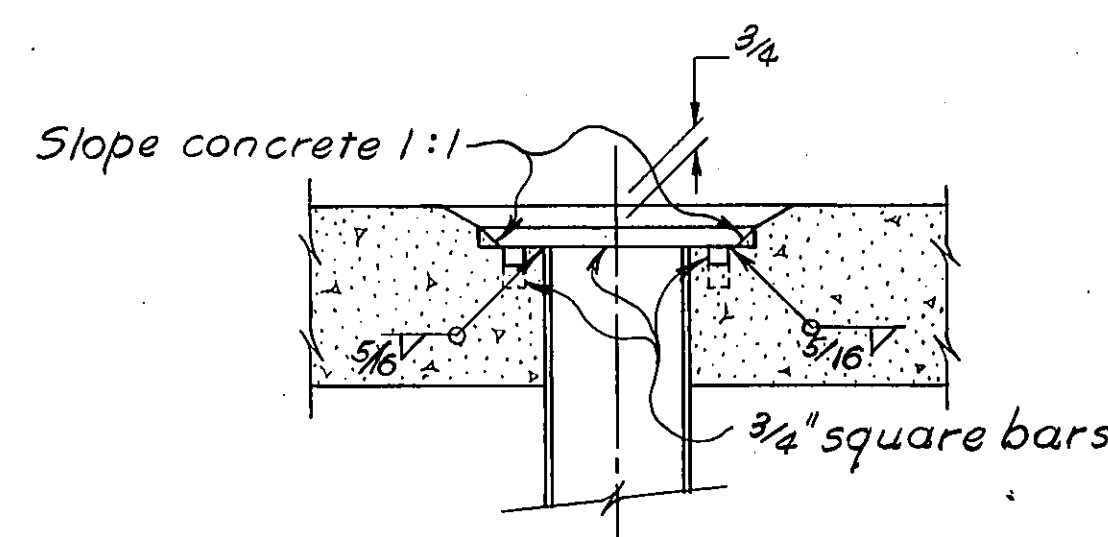
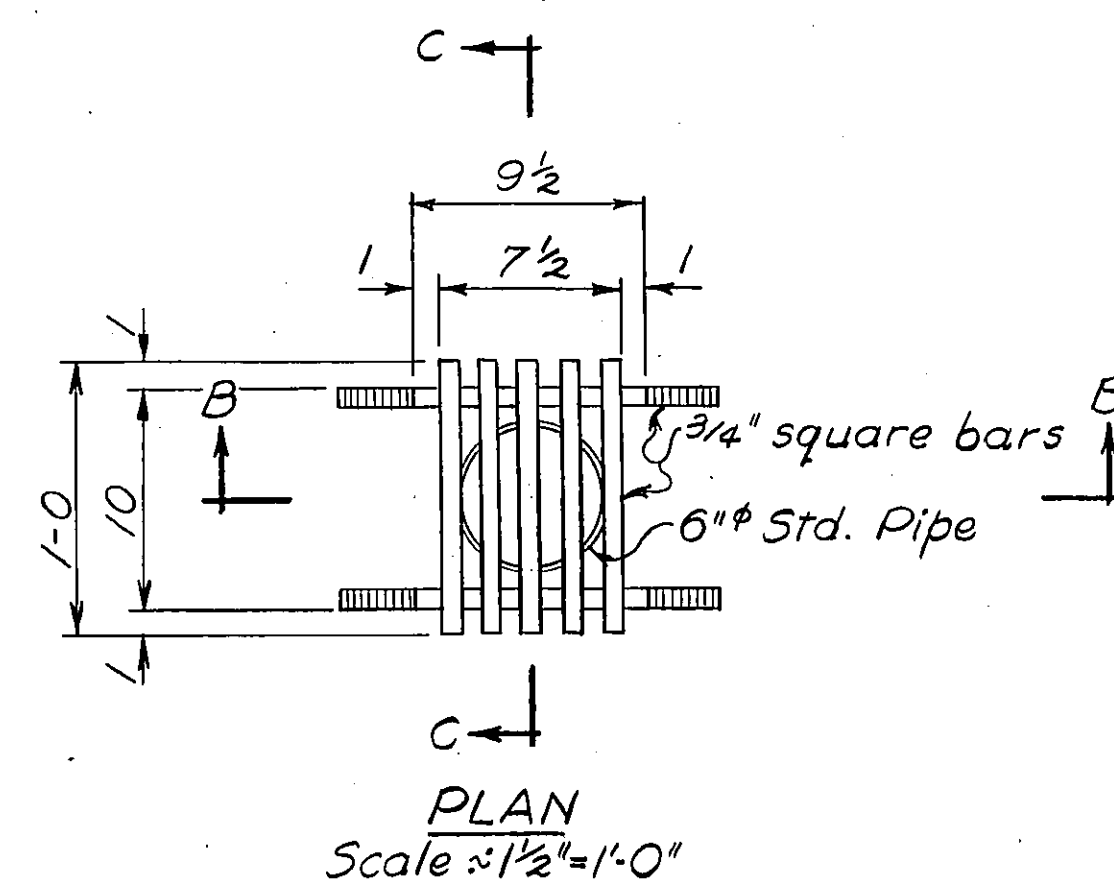
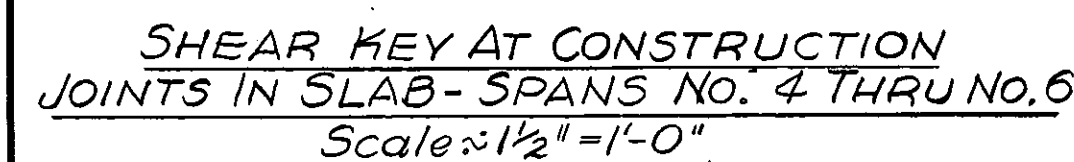
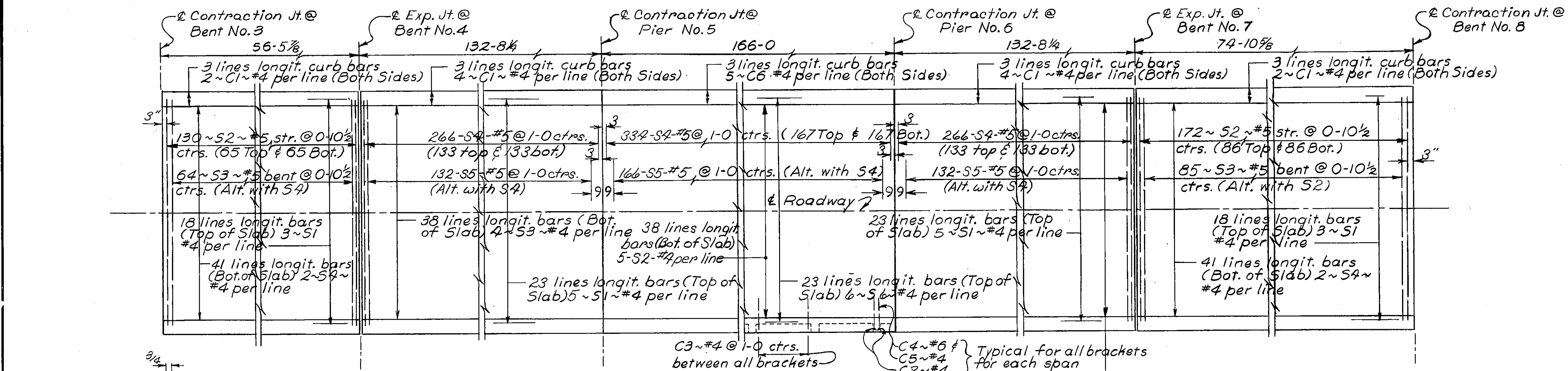
* Note: Expansion Joint at Bent No. 4, replaced by IR 90-1(88)39. See Dwg. No. 12350.

**STATE OF MONTANA
STATE HIGHWAY COMMISSION**

BRIDGE OVER CLARK FORK
AT STA. 604+33.70
FEDERAL AID PROJECT NO. I-90-1(22)71
MINERAL COUNTY

CAMBER DIAGRAM & ERECTION PLAN
Scale: As Noted

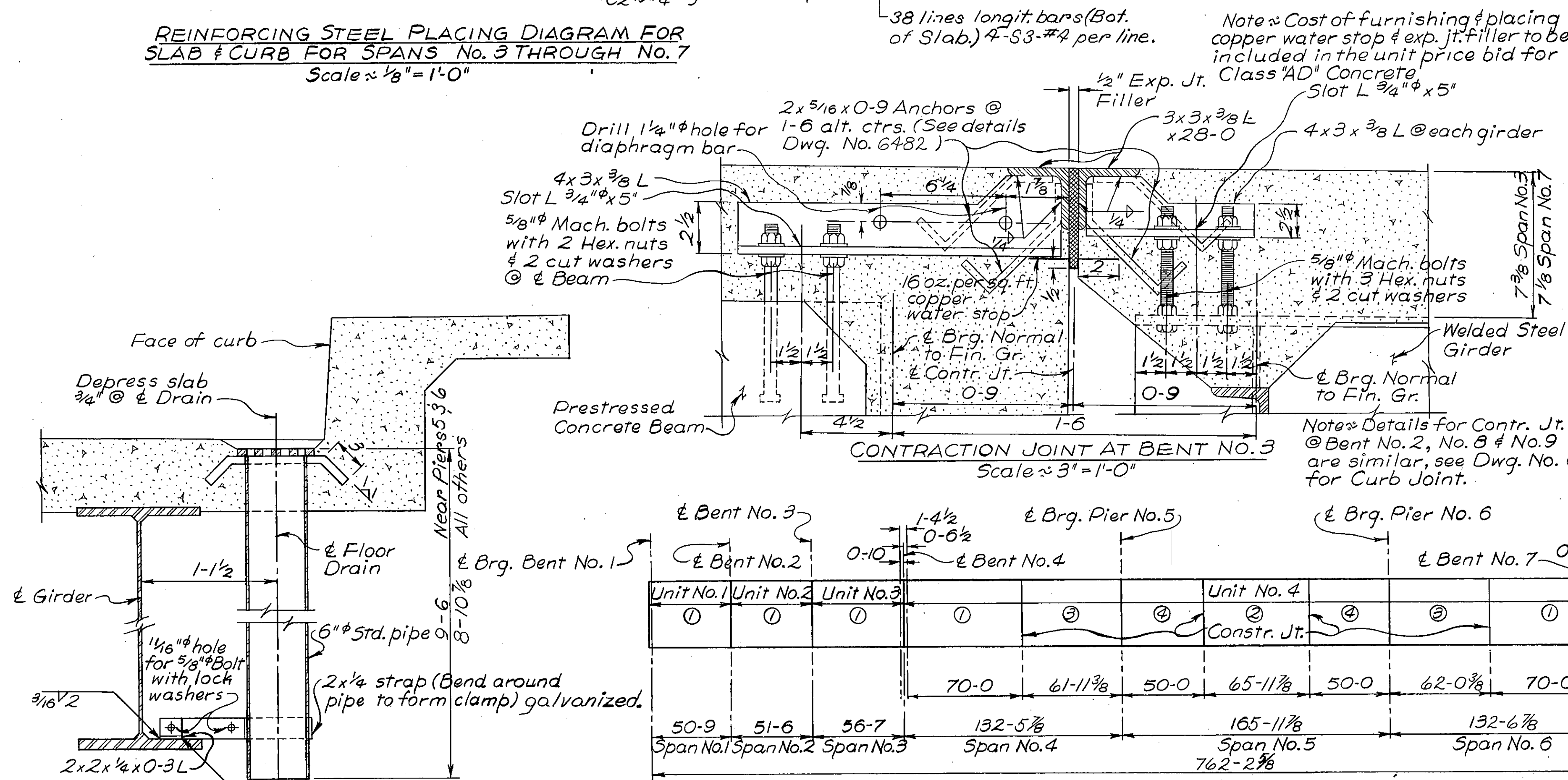
DESIGNED	K.G.R.	7-3-62
DRAWN	J.J.Z.	1-15-63
TRACED		
CHECKED	EDL	5-8-63
REVISD	NTP	9-4-78
REVISD		



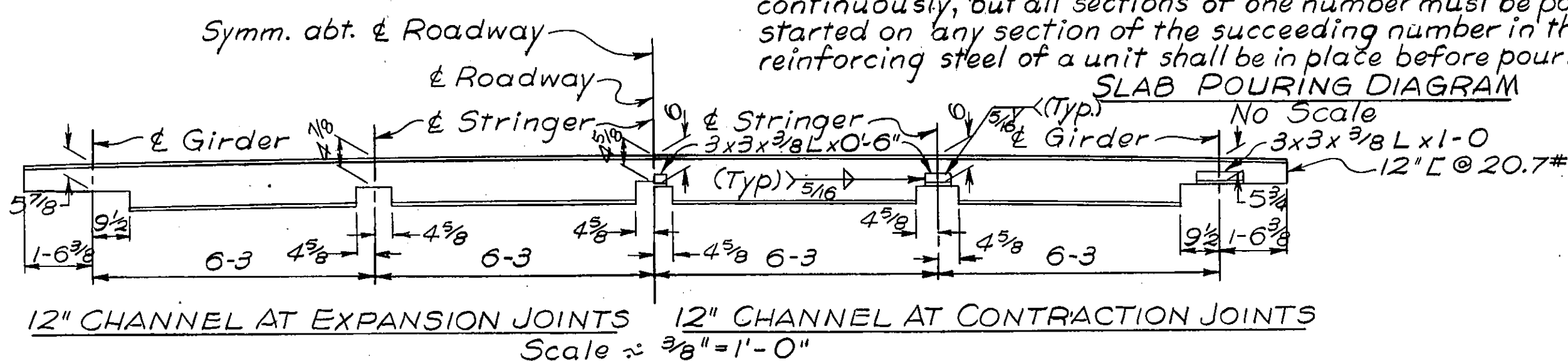
SECTION C-C
Scale $\approx 1\frac{1}{2}'' = 1'-0''$

Notes: Top of drain assemblies shall be set horizontal. See "General Layout" for drain spacing & location. Drain assemblies shall be galvanized after welding is completed. The unit price bid for "Floor Drains" shall be full payment for the drains complete in place, including galvanizing, welding, pipe, bars & all incidentals pertaining thereto.

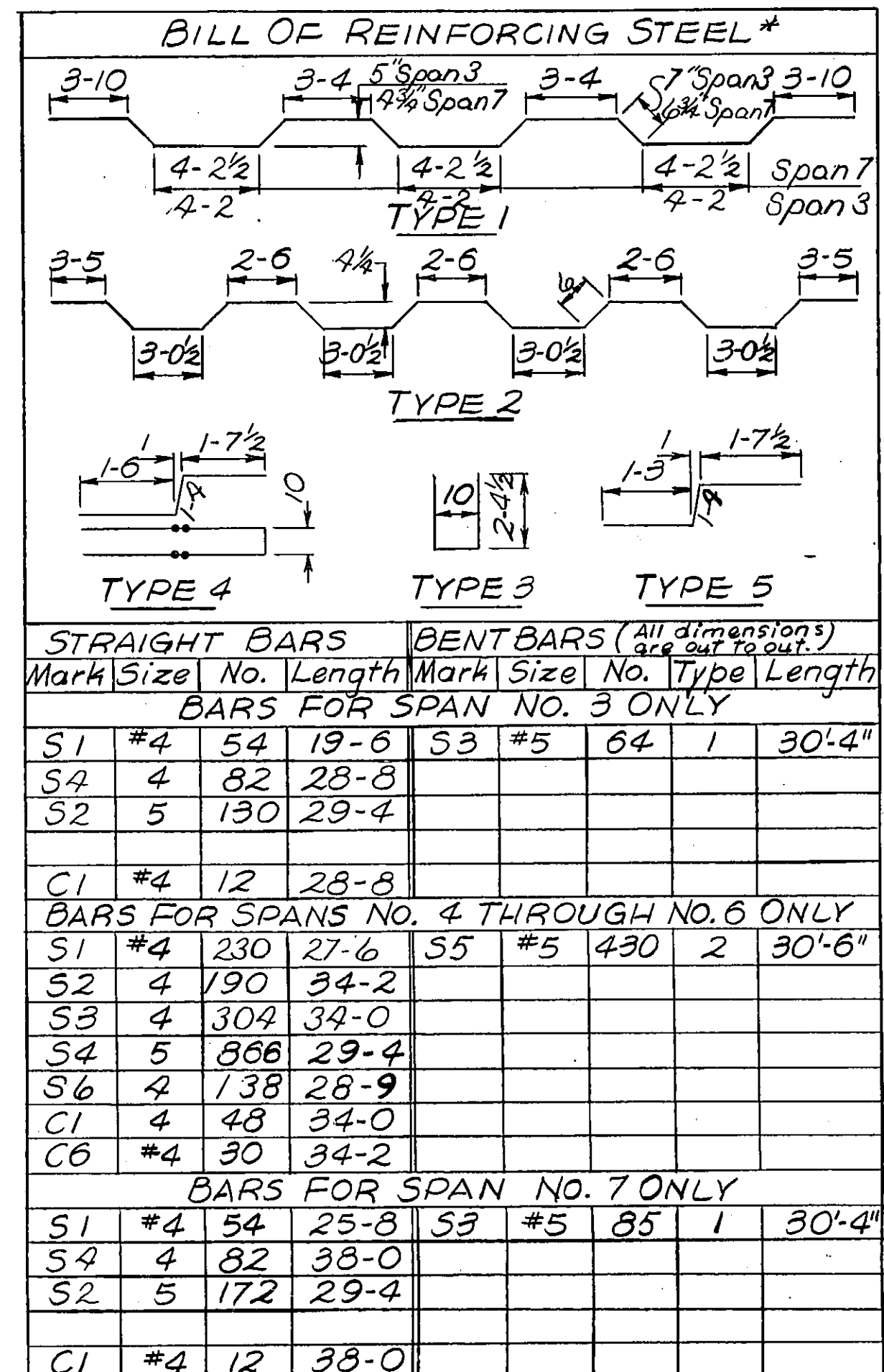
FLOOR DRAIN DETAILS



SECTION B-B
Scale $\approx 1\frac{1}{2}" = 1'-0"$



12" CHANNEL AT EXPANSION JOINTS 12" CHANNEL AT CONTRACTION JOINTS
Scale $\approx \frac{3}{8}" = 1' - 0"$



*Note: For number of C2, C3, C4 and C5 bars that are required for completed structure, see "Partial Bill of Reinforcing Steel" on General Layout.

Note: The diagram above has been divided into seven units, namely, Unit No. 1, Unit No. 2, Unit No. 3, Unit No. 4, Unit No. 5, Unit No. 6, Unit No. 7. The numbers inscribed in the circles represent the sequence of pouring sections of a particular unit. Slab sections of the same number are independent of those of a different unit and may be poured independently. Sections within a unit of the same number need not be poured simultaneously. A combination of sections numbered successively may be poured continuously, but all sections of one number must be poured before pouring is started on any section of the succeeding number in the same unit. All forms and reinforcing steel of a unit shall be in place before pouring of that unit is started.

SLAB POURING DIAGRAM

NOTES

OTHER NOTES: For other notes see Dwg.
No.

STATE OF MONTANA
STATE HIGHWAY COMMISSION
BRIDGE OVER CLARK FORK
AT STA. 604+33.70
FEDERAL AID PROJECT NO. 1-90-1(22) 71
MINERAL COUNTY
SLAB & CURB DETAILS
Scale x As Noted

DESIGNED		
DRAWN	C.M.G.	1-16-62
TRACED		
CHECKED	R.D.K.	5-24-62
REVISED		
REVISED		