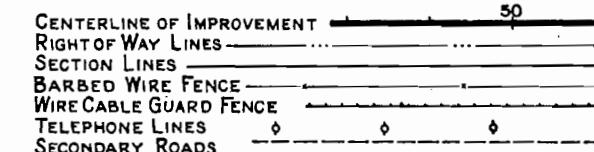


FED. ROAD DIST. NO.	STATE	P.W.A. DOCKET	SHEET NO.	TOTAL SHEETS
3	COLO.	COLO. 1288F UNIT 2	1	

Revised to include Const. Division No. 2, - 2-15-39 - JWS.
REV. AS CONST. - M.H. - 6-17-39.

S. of Kremmling

CONVENTIONAL SIGNS



INDEX OF SHEETS

CONST. DIV. NO. 1	SHEET No. 1	TITLE SHEET
	" " 2	TYPICAL SECTION, SUMMARY OF QUANTITIES, SURFACING PLAN.
	" " 3	LIST OF STRUCTURES, GUARD POSTS, R.O.W. MARKERS.
	" " 4	STANDARD HEADWALLS FOR C.M.P. CULVERTS, M102E.
	" " 5	" TIMBER GUARD POSTS, M19A.
	" " 6	" WIRE CABLE GUARD FENCE, M20B.
	" " 7	" WIRE FENCES AND MARKER POSTS, M24FX.
	" " 8	" METHODS FOR SUPERELEVATION AND WIDENING OF CURVES, M1B.
	" " 9	TYPICAL SIDE APPROACH ROADS~ROADWAY CONST. TRAFFIC SIGNS, M2BX
	" " 10-11	PLAN & PROFILE.
" " 12-29	CROSS SECTIONS.	

CONST. DIV. NO. 2	{	SHEET No.	1...TITLE SHEET
		"	2...TYPICAL SECTION, SUMMARY OF QUANTITIES AND SURFACING PLAN
		"	3...LIST OF STRUCTURES AND GUARD POSTS
		"	3a-3g.DETAILS OF BRIDGE STA. 57+
		"	5...STANDARD TIMBER GUARD POST, M-19-A
		"	10...PLAN AND PROFILE
		"	16&29.CROSS SECTIONS

COLORADO STATE HIGHWAY DEPARTMENT

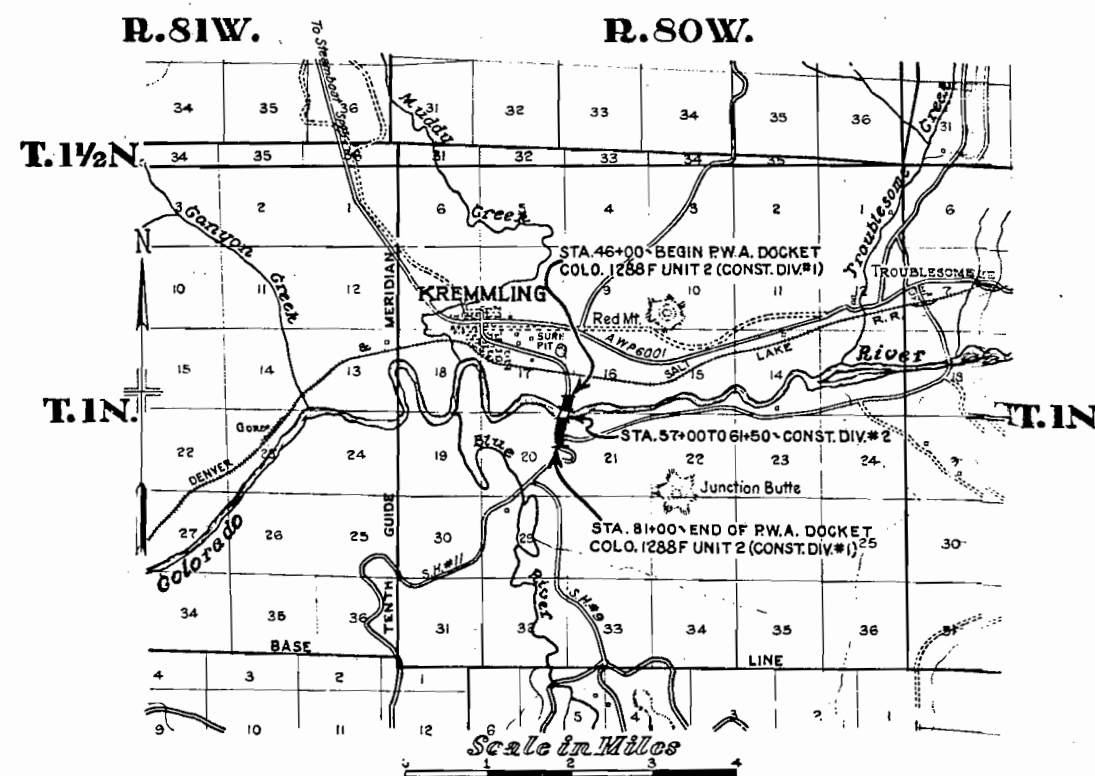
PLAN AND PROFILE OF CONSTRUCTED

P.W.A. DOCKET COLO. 1288F, UNIT NO. 2

STATE HIGHWAY NO. ~~11~~ 9

GRAND COUNTY

SCALES OF ORIGINAL TRACINGS			
ON PLAN, 1 IN. = 100 FT.			
ON PROFILE 1 IN. = 100 FT. HORIZONTAL			
ON PROFILE 1 IN. = 10 FT. VERTICAL			
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD			
GROSS LENGTH OF PROJECT	3,500 FT. = 0.662 MI.	450 FT. = 0.085 MI.	3,500 FT. = 0.662 MI.
NET LENGTH OF PROJECT	3,050 FT. = 0.577 MI.	450 FT. = 0.085 MI.	3,500 FT. = 0.662 MI.
	CONST. DIV. NO. 1	CONST. DIV. NO. 2	TOTAL



It is recommended that Bidders on this Project go over the plan details with one of the following field representatives of this department.
H.L. Jenness - Division Engineer - Glenwood Springs
J.A. Burton - Resident Engineer - Kremmling

RECOMMENDED FOR APPROVAL
S. of Kremmling, CO.
APPROVED
Chas. Davis
STATE HIGHWAY ENGINEER
RECOMMENDED FOR APPROVAL
DIST. ENG. BUREAU PUBLIC ROADS
RECOMMENDED FOR APPROVAL
CHIEF ENG. BUREAU PUBLIC ROADS
APPROVED
DIRECTOR BUREAU PUBLIC ROADS

FINAL LIST OF STRUCTURES

FED. ROAD DIST. NO.	STATE	P.W.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	1288-F UNIT 2	3	

Revised to include Const Division No. 2, 2-15-39-JWS.
REV. AS CONST. - DIV. NO. 1 - W.H. - 6-20-39

LOCATION	DESCRIPTION	REMOVE STRUCT.	UNCLASSIFIED	STRUCTURAL	CONCRETE	REINF. STEEL	CORRUGATED METAL PIPE			MISCELLANEOUS					
			EXCAVATION	EXCAVATION											
			CU. YDS.	CU. YDS.	LBS.	18"	24"	30"							
No	EXCAV.	EMBKT.	D.C.	D.R.	W.C.	W.R.	CL. "A"	CL. "B"							
+00 50 +00 294 to 61+36.8	Approach to Project & Project Marker Road Approach Lt. Road Approach Rt. Bridge (Construction Division No. 2)		(Included in Roadway X-Sections) " " " " " ") 458 (SEE SUMMARY FOR QUANTITIES)												1 Project Marker
60 80 98.5 50 50 to 64+60 35	Road Approach Lt. Remove & Rebuild Pump Plant & Pipe Line C.M.P. Culvert in irrigation Ditch (No Hdwl) Road Approach & Side Drain Rt. Intercepting Ditch Lt. C.M.P. Culvert and Ditches (Intercepting Headwall) Remove Wood Box Culvert		314 1207 23 148		8.3						88 20				(Remove & Rebuild Pump Plant and Pipe Line
50 65 to 74+49 49	C.M.P. Culvert & Ditches (Intercepting Hdwall) Wire Cable Guard Fence on Rt. C.M.P. for Extension on Rt., 1-30" Connecting Band and Outlet Ditch	1-Wd.Box	222 216		348 57		2.30 2.30				44 44				134 Lin. Ft. W.C. Guard Fence 1-24" Connecting Band
50 to 80+00 537 00	Intercepting Ditch Lt. Approach to Project on Rt. Project Marker		131 1658												1- Project Marker
56 00 to 81+70	Road Approach & C.M.P. Side Drain Lt. Intercepting Ditch Lt. Intercepting Ditch & Dyke Rt.		73 120		59						50				
TOTALS CONST. DIV. No. 1			1	2591	9594	19.9	630			4.60	108	138	34		

* Connecting Bands are to be included in the unit price bid for Culvert Pipe.

FINAL TIMBER GUARD POSTS

LOCATION	SPACING	LT.	RT.
46+25 to 55+75	50'		20
48+25 to 55+75	50'	16	
56+40 to 56+90	50'	2	2
61+89.8 to 64+89.8	50'	7	
61+89.8			1
62+89.8 to 64+89.8	50'		5
66+35	Minor Structure	1	1
69+55	Minor Structure	1	1
Approach Road	25'	13	
57+154 to 57+264	Bridge Appr.	* 4	* 4
61+398 to 61+50.8	" "	* 4	* 4
TOTAL CONST. DIV. NO. 1		70	
TOTAL CONST. DIV. NO. 2		16	

* Terminal Guard Post as shown on the Standard Sheet is to be placed under Const. Div. No. 1.

FINAL R.O.W. MARKERS

LOCATION	LT.	RT.
46+00	1	1
65+00	1	1
66+00	1	1
75+60.3	1	1
76+60.3	1	1
78+00	1	1
79+00	1	1
81+00	1	1
TOTAL		13

FINAL B.W. FENCE

LOCATION	SIDE	FENCE	GATES	REM. FENCE
45+03 TO 47+50	LT.			265
45+03 TO 57+00	GROSS			1220
62+40	RT. ALT.			215
45+03 TO 47+50	LT.	265		
45+03 TO 57+50	RT.	1190		
61+00 TO 62+20	RT.	123		
56+00	RT.		1	
DIVISION NO. 1 TOTALS		1578	1	1700

COLORADO STATE HIGHWAY DEPT
PROJECT NO. P.W.1288-F UNIT 2
R.O.W. MAP NO. 1.

SCALE 1 in. = 200 ft.
Revised Feb. 1, 1939 C.T. Long

T.1 N., R.80 W.

N.W. 1/4 of SW 1/4 SEC. 16
STATE OF COLORADO

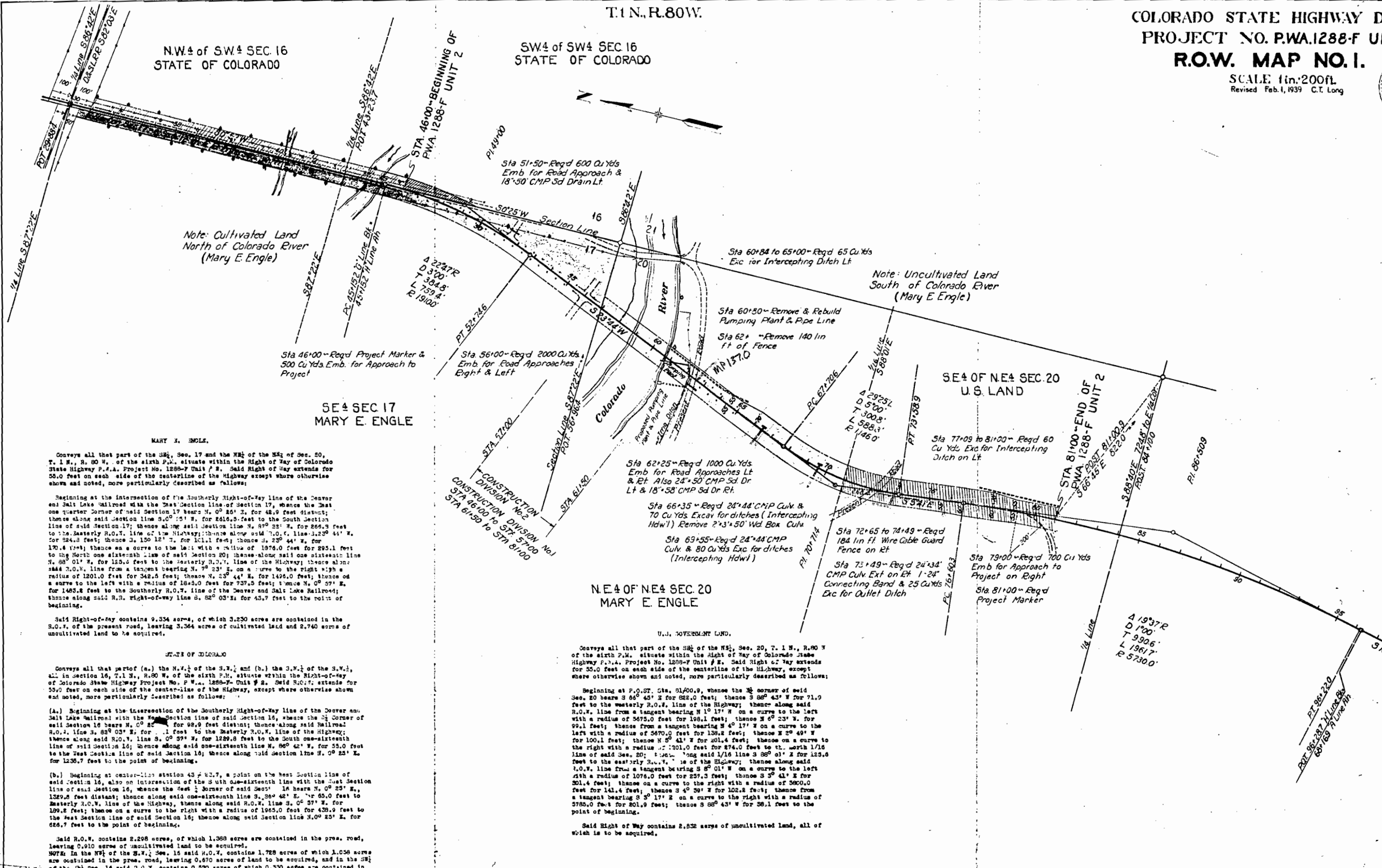
SW 1/4 of SW 1/4 SEC. 16
STATE OF COLORADO

SE 1/4 SEC. 17
MARY E. ENGLE

N.E. 1/4 OF N.E. 1/4 SEC. 20
MARY E. ENGLE

SE 1/4 OF N.E. 1/4 SEC. 20
U.S. LAND

STA 81+00 - END OF
P.W. 1288-F UNIT 2



Note: Cultivated Land
North of Colorado River
(Mary E. Engle)

Note: Uncultivated Land
South of Colorado River
(Mary E. Engle)

MARY E. ENGLE.

Conveys all that part of the SE 1/4 of the SW 1/4 of the NE 1/4 of Sec. 20, T. 1 N., R. 80 W., of the sixth P.M. situated within the Right of Way of Colorado State Highway P.W. 1288-F Unit # 2. Said Right of Way extends for 50.0 feet on each side of the centerline of the Highway except where otherwise shown and noted, more particularly described as follows:

Beginning at the intersection of the Southerly Right-of-Way line of the Denver and Salt Lake Railroad with the East Section line of Section 17, thence the East one quarter corner of said Section 17 bears N. 0° 40' E. for 42.9 feet distant; thence along said Section line S. 0° 05' E. for 246.9 feet to the South Section line of said Section 17; thence along said Section line N. 89° 28' E. for 266.9 feet to the Easterly R.O.W. line of the Highway; thence along said R.O.W. line S. 23° 44' E. for 224.8 feet; thence S. 100° 12' E. for 101.1 feet; thence S. 23° 44' E. for 170.8 feet; thence on a curve to the left with a radius of 1074.0 feet for 295.1 feet to the North one sixteenth line of said Section 20; thence along said one sixteenth line N. 80° 01' E. for 125.0 feet to the Easterly R.O.W. line of the Highway; thence along said R.O.W. line from a tangent bearing N. 7° 23' E. on a curve to the right with a radius of 1201.0 feet for 342.5 feet; thence N. 23° 44' E. for 1496.0 feet; thence on a curve to the left with a radius of 1843.0 feet for 737.5 feet; thence N. 0° 37' E. for 1485.2 feet to the Southerly R.O.W. line of the Denver and Salt Lake Railroad; thence along said R.O.W. right-of-way line S. 82° 03' E. for 43.7 feet to the point of beginning.

Said Right-of-Way contains 9.334 acres, of which 3.230 acres are contained in the R.O.W. of the present road, leaving 3.364 acres of cultivated land and 2.740 acres of uncultivated land to be acquired.

STATE OF COLORADO

Conveys all that part of (a.) the N.W. 1/4 of the S.W. 1/4, and (b.) the S.W. 1/4 of the S.W. 1/4, all in Section 16, T. 1 N., R. 80 W., of the sixth P.M. situated within the Right-of-Way of Colorado State Highway Project No. P.W. 1288-F Unit # 2. Said Right-of-Way extends for 50.0 feet on each side of the centerline of the Highway, except where otherwise shown and noted, more particularly described as follows:

(a.) Beginning at the intersection of the Southerly Right-of-Way line of the Denver and Salt Lake Railroad with the West Section line of said Section 16, thence the SE corner of said Section 16 bears N. 0° 25' E. for 92.0 feet distant; thence along said R.O.W. line S. 82° 03' E. for 1.1 feet to the Easterly R.O.W. line of the Highway; thence along said R.O.W. line S. 0° 37' E. for 1229.8 feet to the South one-sixteenth line of said Section 16; thence along said one-sixteenth line N. 80° 42' E. for 55.0 feet to the West Section line of said Section 16; thence along said Section line S. 0° 25' E. for 1236.7 feet to the point of beginning.

(b.) Beginning at center-line station 43+41.7, a point on the West Section line of said Section 16, also on intersection of the 3 with one-sixteenth line with the East Section line of said Section 16, thence the East 1/4 corner of said Sec. 16 bears N. 0° 23' E. for 1329.5 feet distant; thence along said one-sixteenth line S. 30° 42' E. for 65.0 feet to the Easterly R.O.W. line of the Highway; thence along said R.O.W. line S. 0° 37' E. for 1200.2 feet; thence on a curve to the right with a radius of 1965.0 feet for 439.9 feet to the East Section line of said Section 16; thence along said Section line N. 0° 23' E. for 626.7 feet to the point of beginning.

Said R.O.W. contains 2.298 acres, of which 1.368 acres are contained in the pres. road, leaving 0.910 acres of uncultivated land to be acquired.

NOTE: In the NE 1/4 of the S.W. 1/4 of Sec. 16 said R.O.W. contains 1.728 acres of which 1.036 acres are contained in the pres. road, leaving 0.670 acres of land to be acquired, and in the SE 1/4 of the S.W. 1/4 of Sec. 16 said R.O.W. contains 0.570 acres of which 0.330 acres are contained in the R.O.W. of the pres. road, leaving 0.240 acres of uncultivated land to be acquired.

U.S. GOVERNMENT LAND.

Conveys all that part of the SE 1/4 of the NE 1/4, Sec. 20, T. 1 N., R. 80 W. of the sixth P.M. situated within the Right of Way of Colorado State Highway P.W. 1288-F Unit # 2. Said Right of Way extends for 50.0 feet on each side of the centerline of the Highway, except where otherwise shown and noted, more particularly described as follows:

Beginning at P.O.B. Sta. 81+00.9, thence the SE corner of said Sec. 20 bears S. 66° 45' E. for 622.0 feet; thence S. 86° 43' W. for 71.0 feet to the westerly R.O.W. line of the Highway; thence along said R.O.W. line from a tangent bearing N. 1° 17' W. on a curve to the left with a radius of 5675.0 feet for 108.1 feet; thence N. 0° 23' E. for 99.1 feet; thence from a tangent bearing N. 49° 17' E. on a curve to the left with a radius of 5670.0 feet for 138.8 feet; thence N. 29° 49' E. for 100.1 feet; thence N. 5° 41' E. for 201.4 feet; thence on a curve to the right with a radius of 1201.0 feet for 274.0 feet to the north 1/16 line of said Sec. 20; thence along said 1/16 line S. 86° 01' E. for 125.0 feet to the Easterly R.O.W. line of the Highway; thence along said R.O.W. line from a tangent bearing S. 8° 01' W. on a curve to the left with a radius of 1076.0 feet for 237.3 feet; thence S. 3° 41' E. for 301.4 feet; thence on a curve to the right with a radius of 5660.0 feet for 141.4 feet; thence S. 4° 39' E. for 102.8 feet; thence from a tangent bearing S. 3° 17' E. on a curve to the right with a radius of 3785.0 feet for 201.9 feet; thence S. 86° 43' W. for 56.1 feet to the point of beginning.

Said Right of Way contains 2.232 acres of uncultivated land, all of which is to be acquired.

C.T. Long Jan. 6, 1939

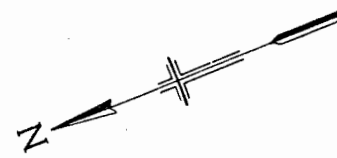
List of Structures, Timber Guard Posts and R.O.W. Markers are tabulated on Sheet #3.

Alignment and Grades shown on the plans are subject to modification during construction, after approval by the Denver office.

All pole lines encroaching on construction are to be moved by their owners.

48+50-Req'd Road Appr. Lt.

P.I. 49+00



PRESENT ROAD

COLORADO

60' 80' Remove and Rebuild Pumping Plant and Pipe Line.

62+40 to 64+60, Req'd 23 Cu Yds. Excavation for Intersecting ditch Lt.

61+98.5-Req'd 18' 88' C.M.P. in Irrigation Ditch (No Headwall)

FED. ROAD DIST. NO.	STATE	P.W.A. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	1288-F UNIT 2	10	

Revised to include Const. Division No. 2-2-15-39-JWS.
REV. AS CONST.-DIV. NO. 1-W.H.-6-21-39.

Δ 29°25' L.T.
D 5°00'
R 1146.0'
T 300.8'
L 588.3'

P.C. 67+70.6

P.I. 70+71.4

Channel
3.0' 57" W.

High Water

46+00, Req'd Project Marker and Emb. for Approach to Project.

Δ 22°47' R.T.
D 3°00'
T 1910.0'
L 759.4

P.C. 45+15.2' G. LINE BK. 2' H. LINE AH.

P.T. 52+74.6

56+00, Req'd 458 Cu Yds. Emb. for Road Approach Lt.

56+00-Req'd 314 Cu Yds. Emb. for Road Approach Rt.

STA. 57+00

57+29.38 to 61+36.79-Req'd. Bridge as per details on Sheets No. 3a to 3g incl. - Remove Bridge.

CONSTRUCTION DIVISION NO. 2
CONSTRUCTION DIVISION NO. 1:
STA. 46+00 TO STA. 57+00 AND
STA. 61+50 TO STA. 81+00.

STA. 61+50

62+25, Req'd 1207 Cu Yds. Embankment for Road Appr. & 18' x 20' C.M.P. Side Drain Rt.

62+56-Req'd 1078 Cu Yds. Emb. for Road Approach & 24' x 50' C.M.P. Side Drain Lt.

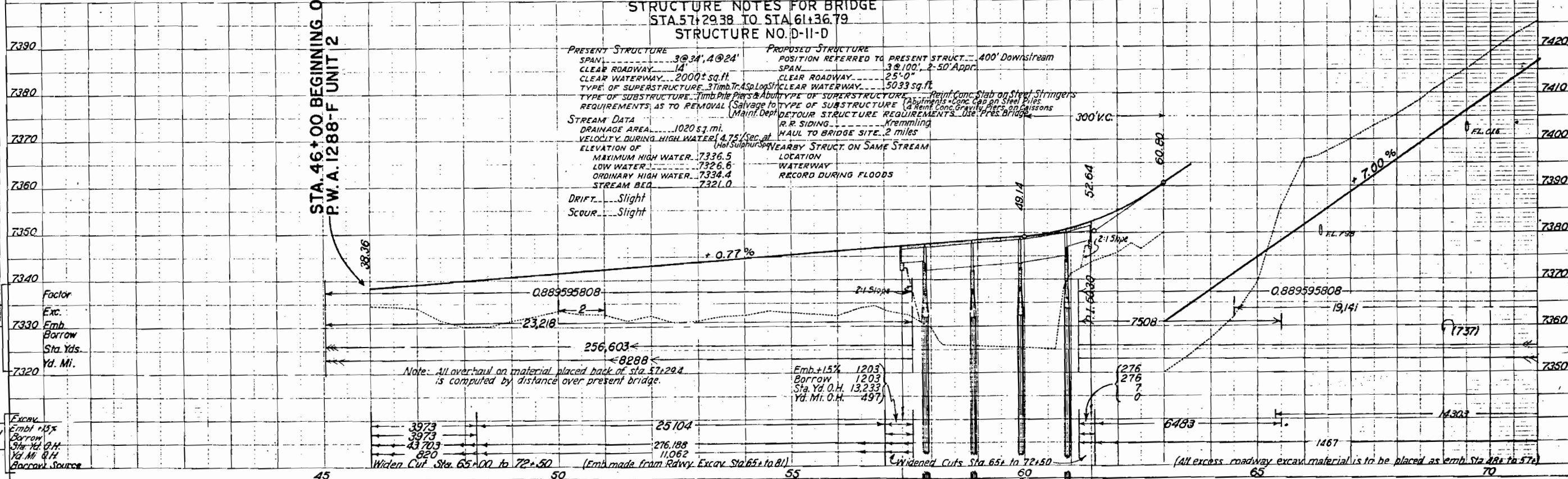
66+35, Req'd 24' x 44' C.M.P. Culvert and 140 Cu Yds. Excavation for ditches (Intersecting Hdwl.) Remove 2' x 3' x 50' Wood Box Culvert.

69+50, Req'd 24' x 44' C.M.P. Culvert and 222 Cu Yds. Excav. for ditches. (Intersecting Hdwl.)

STRUCTURE NOTES FOR BRIDGE STA. 57+29.38 TO STA. 61+36.79 STRUCTURE NO. D-II-D

PRESENT STRUCTURE	PROPOSED STRUCTURE
SPAN: 3@24', 4@24'	POSITION REFERRED TO PRESENT STRUCT. 400' Downstream
CLEAR ROADWAY: 14'	SPAN: 3@100', 2-50' Appr.
CLEAR WATERWAY: 2000' sq. ft.	CLEAR ROADWAY: 25'-0"
TYPE OF SUPERSTRUCTURE: 3 Timb. Tr. & 4 Sp. Lops	CLEAR WATERWAY: 15033 sq. ft.
TYPE OF SUBSTRUCTURE: Timb. Pile Piers & Abutments	TYPE OF SUPERSTRUCTURE: Reinft. Conc. Slab on Steel Stringers
REQUIREMENTS AS TO REMOVAL: (Salvage to TYPE OF SUBSTRUCTURE)	Abutments: Conc. Cap on Steel Piles
	(Main. Dep't. DETOUR STRUCTURE REQUIREMENTS. Use Pres. Bridge)
STREAM DATA	R.R. SIDING: Krenmling
DRAINAGE AREA: 1020 sq. mi.	HAUL TO BRIDGE SITE: 2 miles
VELOCITY DURING HIGH WATER: 4.75'/sec. at (Not Sulphur Sp.)	NEARBY STRUCT. ON SAME STREAM
ELEVATION OF MAXIMUM HIGH WATER: 7336.5	LOCATION: WATERWAY RECORD DURING FLOODS
LOW WATER: 7326.6	
ORDINARY HIGH WATER: 7334.4	
STREAM BED: 7321.0	
DRIFT: Slight	
SCOUR: Slight	

STA. 46+00 BEGINNING OF
P.W.A. 1288-F UNIT 2



PLAN	SURVELED	BY	DATE
	NOTED		
NOTE BOOK	ALUMINUM CHECKED		
NO	HT OF WAY CHECKED		

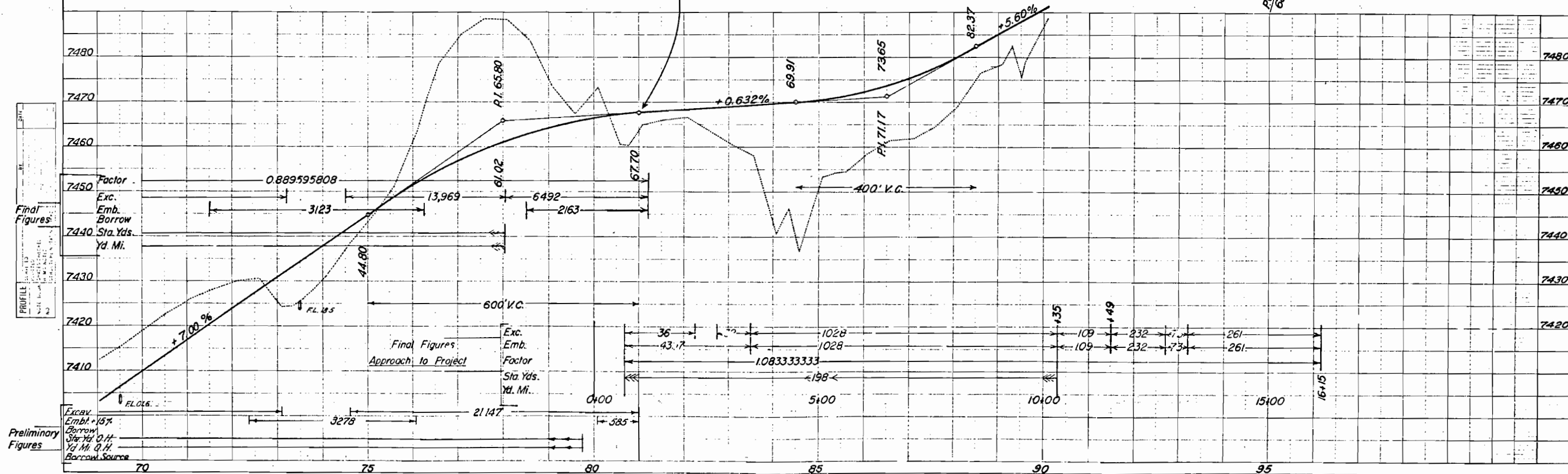
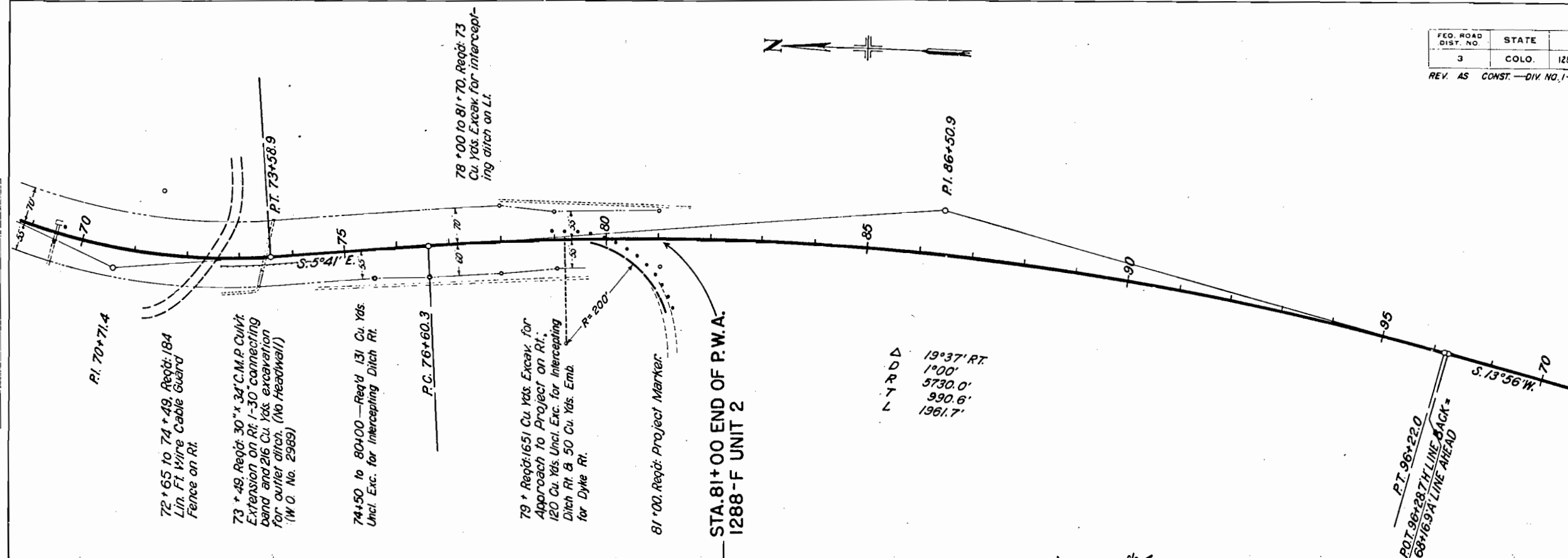
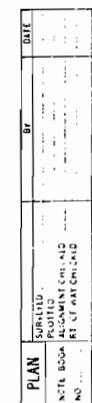
PROFILE	SHEET NO.	DATE
NOTE BOOK	10	

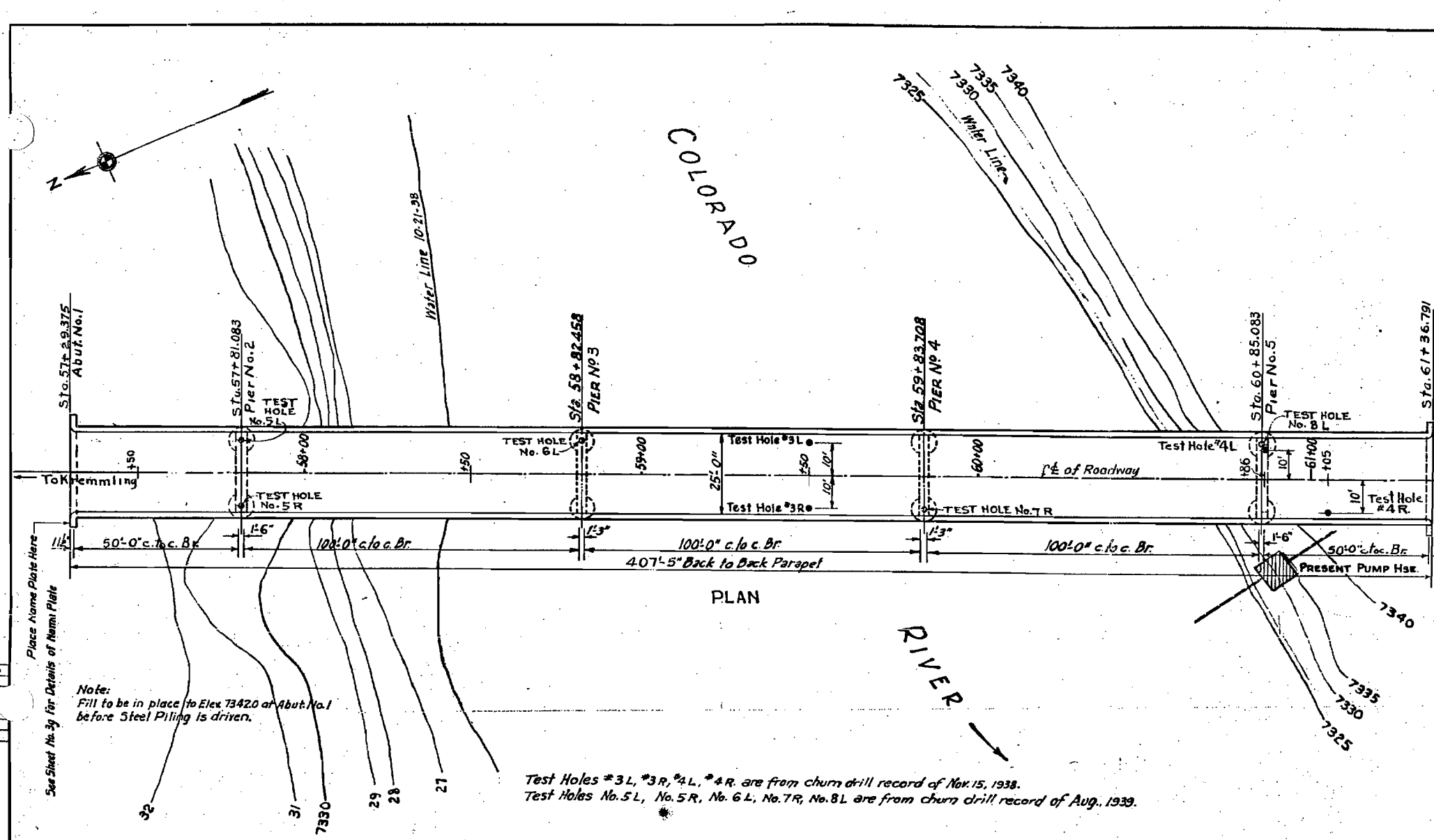
Excav. Emb. 15% Borrow Sta. Yds. O.H. Yd. Mi. O.H. Borrow Source

See Sheet No. 3a For Proper Depths And Soundings

FED. ROAD DIST. NO.	STATE	DWA. PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	1288-F UNIT 2	11	

REV. AS CONST. -- DIV. NO. 1 -- W. H. -- 6-21-39





REVISIONS

REVISED	BY	REASON
3-2-39	MM-M	Changed Quantities
3-15-39	MM-M	& Elev. of Piers
8-16-39	M.G.D.	All Pier bottoms lowered and affected quantities increased. Additional soundings shown.
2-19-40	M.G.D.	Changed Garrison Bottoms to as constructed Elevations.
3-5-40	M.G.D.	Changed quantities as constructed.

FED. ROAD DIST. NO.	STATE	PWA. PROJ. NO.	SHEET NO.	TOT. SHEET
3	COLO.	1288-F#2	3a	

CONST. DIV. N°2

SUMMARY OF QUANTITIES FOR ENTIRE BRIDGE

Item No.	Description	Unit	Super Struct.	Abut. No. 1	Pier No. 2	Pier No. 3	Pier No. 4	Pier No. 5	Abut. No. 6	TOTAL
11c	REMOVAL OF PRESENT BRIDGE	Lump Sum								
13c	UNCLASSIFIED EXCAVATION	Cu. Yd.								
14a	DRY ROCK EXCAVATION (STR.)	Cu. Yd.								
14b	DRY COMMON EXCAVATION (STR.)	Cu. Yd.								
14c	WET ROCK EXCAVATION (STR.)	Cu. Yd.								
14d	WET COMMON EXCAVATION (STR.)	Cu. Yd.								
42a	UNTREATED BRIDGE TIMBER	Mft. BM.								
46a	CLASS "A" CONCRETE	Cu. Yd.	373	10	209.51	182.59	175.16	160.41	10	11
46r	CLASS "A" CONCRETE (HANDRAIL)	Cu. Yd.	37	0.5						
47	REINFORCING STEEL (INCLUDES 1% OVER-RUN)	Lb.	75940	1770	20700	18550	18670	18000	1770	155
48	STRUCTURAL STEEL (INCL. 1% OVER)	Lb.	472500	1735	1600	1625	1625	1600	1735	47
48b	STRUCTURAL STEEL (PILING) (Incl. 1% Over)	Lb.		21,625						
80b	BRONZE NAME PLATE	Ea.		1						
89a	GALV. DRAIN PIPE WITH FLANGE (3" x 6' 4")	Ea.	24							
89b	GALV. DRAIN PIPE WITH FLANGE (3" x 3' 8")	Ea.	8							
*	JOINT FILLER 1/4" AASHQ. SPECS. 1/8" TYPE	Lb.			525	525	675	600		23
+	GALVANIZED SHEET METAL (No. 16 GA.)	Lin. Ft.	45							
+	1/4" EXPANSION JOINT MATERIAL (12" WIDE)	Lin. Ft.	52							

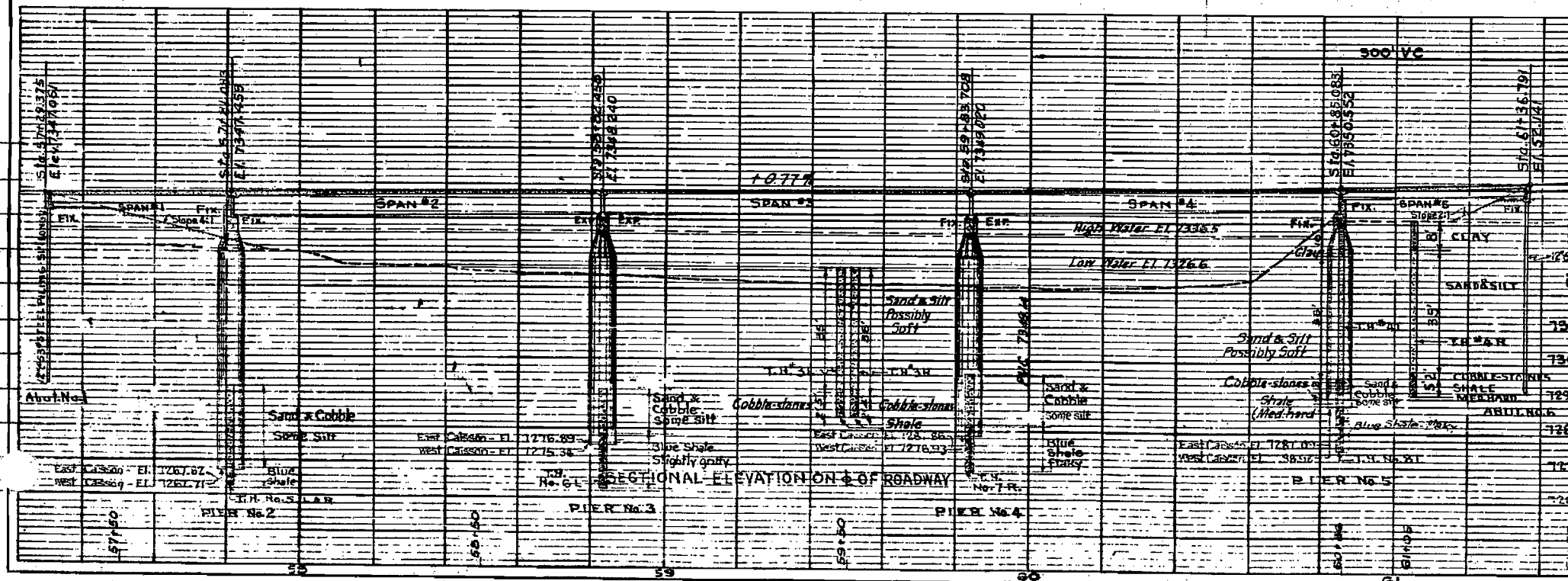
* Include in bid price of Class "A" Concrete. Galv. Sheet Metal 19" wide.
+ Includes 2 Cutting Edges.
* Piling to be 0.2% Copper Bearing Steel.
Wet Line assumed at El. 7327.0
Structural Excavation for Piers to be paid for as the actual excavation based on neat lines.

STREAM DATA

Drainage Area: 1020 Sq. Mi.
Average Velocity during High Water: 4.9 Ft. per Sec.
Clear Water way: 5033 Sq. Ft.
Elevation of:
Maximum High Water: 7336.5
Ordinary High Water: 7334.4
Stream Bed: 7321.0
Drift: Medium
Scour: Slight
Proposed Structure 400 ft. Downstream from Present Structure.

REFERENCE DRAWINGS:

SHEET N° 3b - Details of Superstructure with Bar List (100' Span)
" " " 3c - Details of Deck Plate Girders
" " " 3d - Details of Piers No. 2 and No. 5 with Bar Lists
" " " 3e - Details of Piers No. 3 and No. 4 with Bar Lists
" " " 3f - Details of Superstructure for 50' Spans & Details of Abutments Nos. 1 & 6.
" " " 3g - Details of Name Plate.



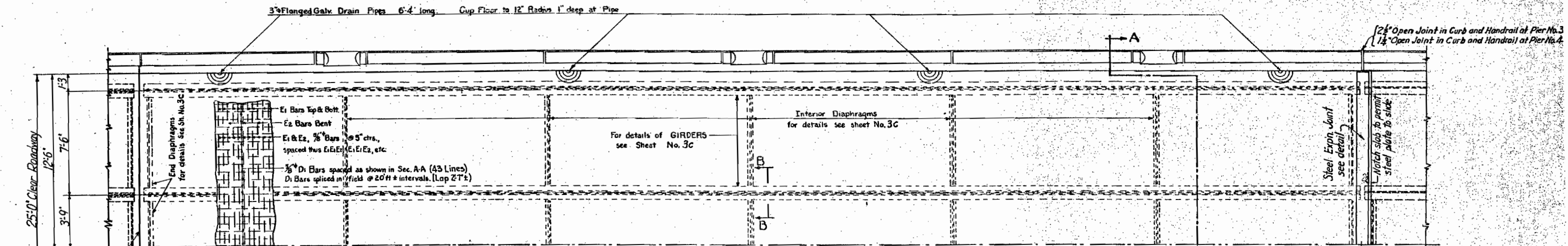
GENERAL NOTES

ALL WORK SHALL BE DONE ACCORDING TO THE STANDARD SPECIFICATIONS OF THE COLORADO STATE HIGHWAY DEPARTMENT ADOPTED JUNE 1st, 1937.
ALL CONCRETE SHALL BE CLASS "A."
FORMS FOR CONCRETE SURFACES EXPOSED IN THE FINISHED WORK SHALL BE CONSTRUCTED OF SHIPLAP OR TONGUE AND GROOVE LUMBER S3S UNLESS FACED WITH PANEL BOARD.
CONCRETE GIRDERS, FLOOR SLABS AND CURB SHALL BE POURED MONOLITHICALLY. FOOTINGS IN ROCK SHALL BE POURED OUT TO THE ROCK AND NOT FORMED.
ALL REINFORCING BARS SHALL BE DEFORMED AND TAGGED WITH THE STATION NUMBER AND LETTER DESIGNATION. MAIN BARS SHALL NOT BE SPLICED.
SOUNDINGS AND DEPTH OF FOOTINGS SHOWN ARE ACCORDING TO THE BEST AVAILABLE DATA. IF ESSENTIALLY DIFFERENT CONDITIONS ARE ENCOUNTERED THE BRIDGE ENGINEER WILL INSPECT AND DETERMINE IF REDESIGN IS NECESSARY.
ALL RIVETS TO BE 3/4" DIA. ALL RIVETS TO BE POWER DRIVEN.
HANDRAIL SHALL BE CONSTRUCTED ACCURATELY TO LINE, GRADE AND DIMENSIONS.
TWO FIELD COATS ALUMINUM PAINT REQUIRED.
FOR DRIVING STEEL PILING THE STEAM HAMMER SHALL DEVELOP AT EACH FULL BLOW, ENERGY OF NOT LESS THAN 10,000 FT. LBS. FOR EACH FULL STROKE OF PISTON, FIXED LEADS ARE REQUIRED.

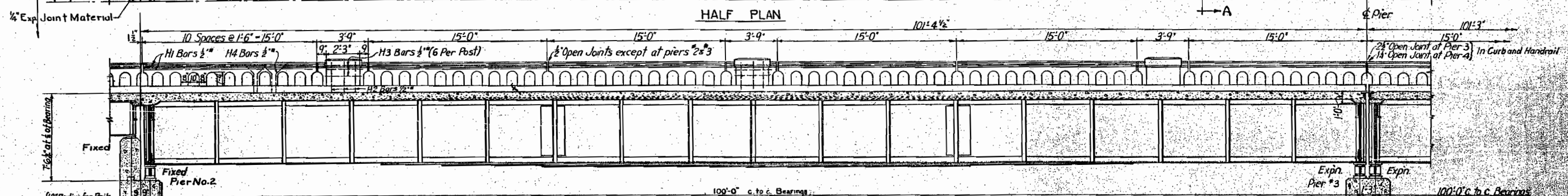
LOADING DATA:
LIVE LOAD - A. A. S. H. O. 1935 CLASS AASH-3
DEAD LOAD - ASSUMES 15 LBS. PER SQ. FT. ADD'L WEARING SURFACE WHICH INCLUDES THE 1/2" CONCRETE MONOLITHIC WEARING SURFACE SHOWN.
DESIGNING DATA:
A.A.S.H.O. 1937 EXCEPT CONCRETE UNIT STRENGTH PER A.A.S.H.O. AUG. 1936

COLORADO
STATE HIGHWAY DEPARTMENT
GENERAL LAYOUT & SUMMARY
OF QUANTITIES FOR 3-100
GIRDER SPANS-250' APPROACH
SPANS-CONCRETE-STEEL BRIDGE
Across COLORADO RIVER
Sta. 57+29.375 to 61+36.791
Near KREMMLING Sec. 20 T. 1 N. R. 80 W.
Designed by H. A. L. F. Approved by J. H. Bailey
Checked by O. W. C. Date: Feb. 15, 1939.

STRUCTURE NO. D-11-D

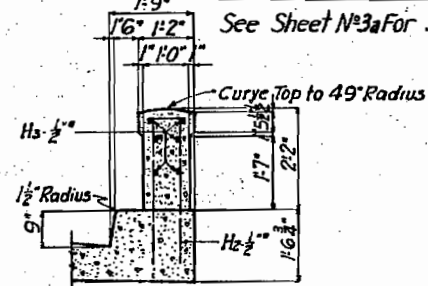


HALF PLAN

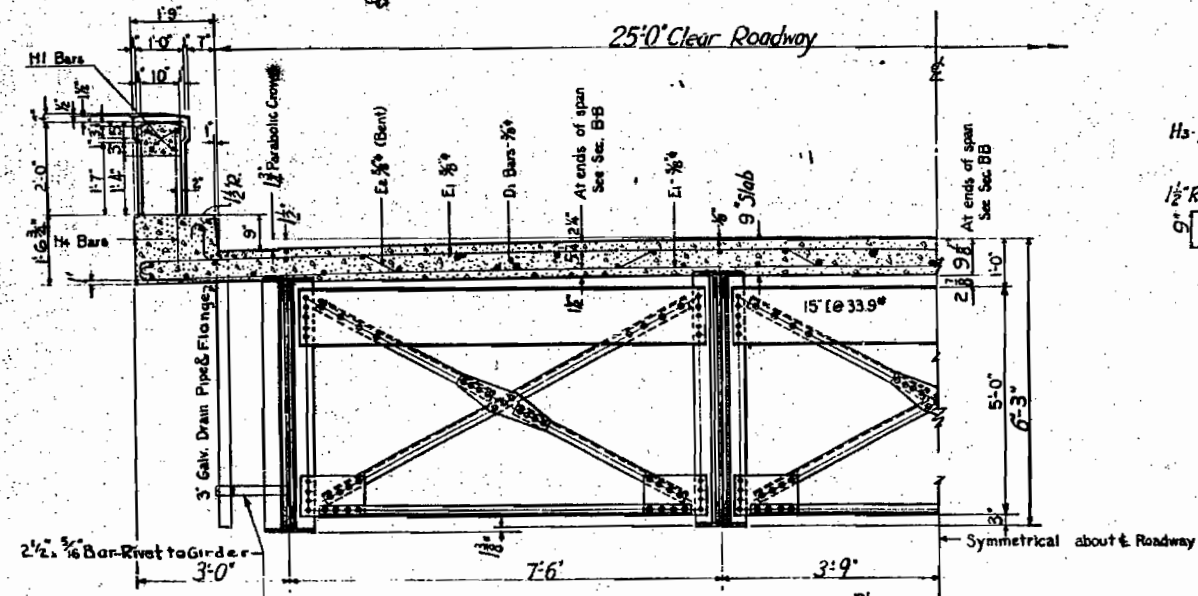


SECTION THRU E ROADWAY

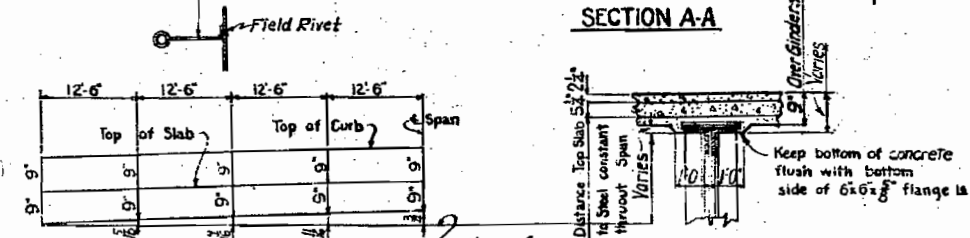
See Sheet No. 3a For Sta. and Elev.



SECTION THRU POST



SECTION A-A



SECTION B-B

ORDINATES FOR CAMBER (FOR ALL SPANS)

BAR LIST FOR 1-100' SPAN OF SUPERSTR. - 3 SPANS REQ'D

Mark	Size	No. Req'd	Length	Bending Diagrams	BAR
E1	5/8"	324	29'-4"		
E2	5/8"	81	28'-10"		
H1	1/2"	48	14'-8"	Straight	
H2	1/2"	18	6'-9"		
H3	1/2"	36	3'-4"	Straight	
D1	5/8"	215	22'-3"	Straight	
H4	1/2"	120	6'-6"		

SUMMARY

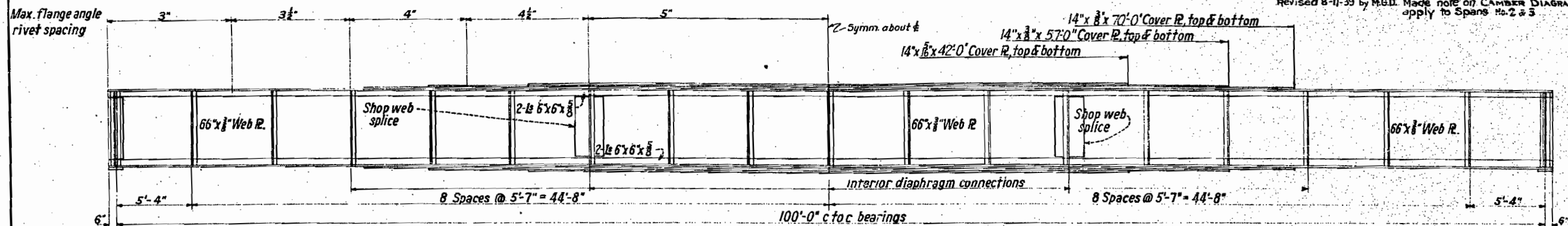
16623	lin. ft. 5/8" @ 1.043 lb. per lin. ft.	=	17338
1726	lin. ft. 1/2" @ 0.850 lb. per lin. ft.	=	1467
	Plus 1% ± for overrun	=	195
	TOTAL	=	19000 (One Span)

LOADING DATA:
LIVE LOAD - A. A. H. O. 1936 CLASS AA (H-20)
DEAD LOAD - ASSUMES 15 LBS. PER SQ. FT. ADDITIONAL WEARING SURFACE WHICH INCLUDES THE 4 INCH CONCRETE MONOLITHIC WEARING SURFACE SHOWN.

DESIGNING DATA:
A.A.S.H.O. 1937 EXCEPT CONCRETE UNIT STRESSES PER A.A.S.H.O. AUG. 1929.

COLORADO
STATE HIGHWAY DEPARTMENT
3-100' DECK PLATE GIRDER SPANS
2-50' CONC. T-BEAM APPROACH SPANS
25'-0" CLEAR ROADWAY
SUPERSTRUCTURE DETAILS - 100' SPAN
Across **COLORADO RIVER**
Sta. 57+2.375 to 61+36.791
Near **KRMILLING** Sec. 20 T. 1N. R. 30W.
Designed by B.R. Approved by **Ed. Bentley**
Made by **H.M.M.** Bridge Engineer
Checked by **Q.M.C.** Date: **Feb. 10, 1939.**

**Max. flange angle
rivet spacing**

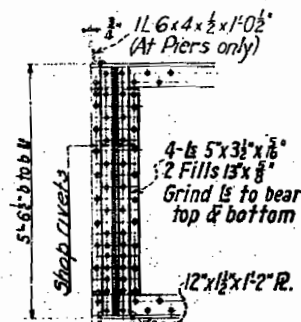


GIRDER DETAILS

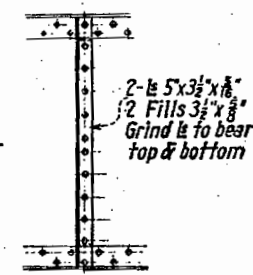
ALL GIRDERS ALIKE EXCEPT FOR DIAPHRAGM AND LATERAL CONNECTIONS AND CAMBER IN SPAN NO. 4

Erector's Note: Girders to be kept in upright position when hauling from railroad siding to bridge site.

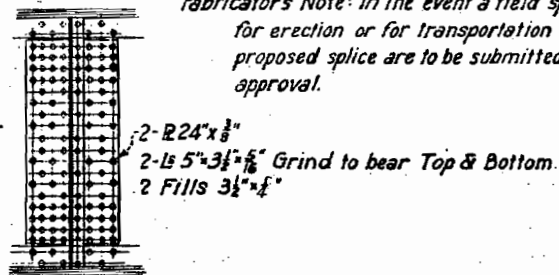
Fabricator's Note: In the event a field splice is considered necessary for erection or for transportation requirements the details of a proposed splice are to be submitted to the Bridge Engineer for approval.



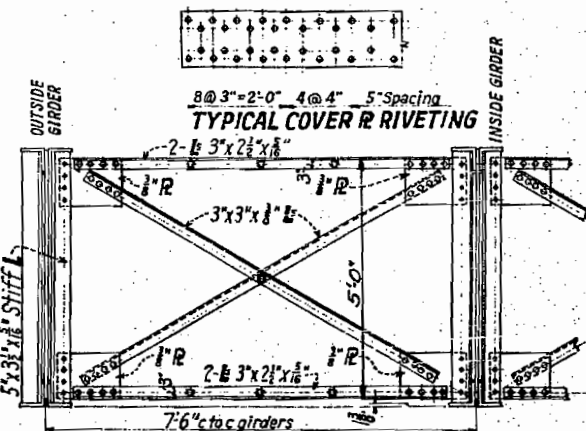
END STIFFENER DETAILS



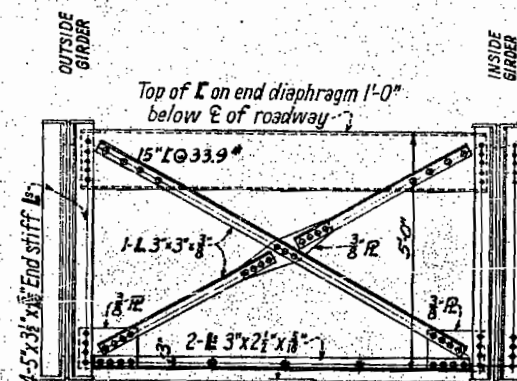
**INTERMEDIATE
STIFFENER**



**SHOP WEB
SPLICE**

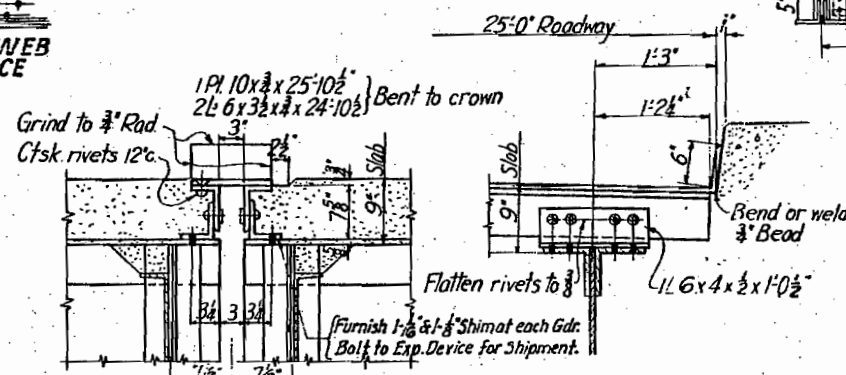


INTERIOR DIAPHRAGMS

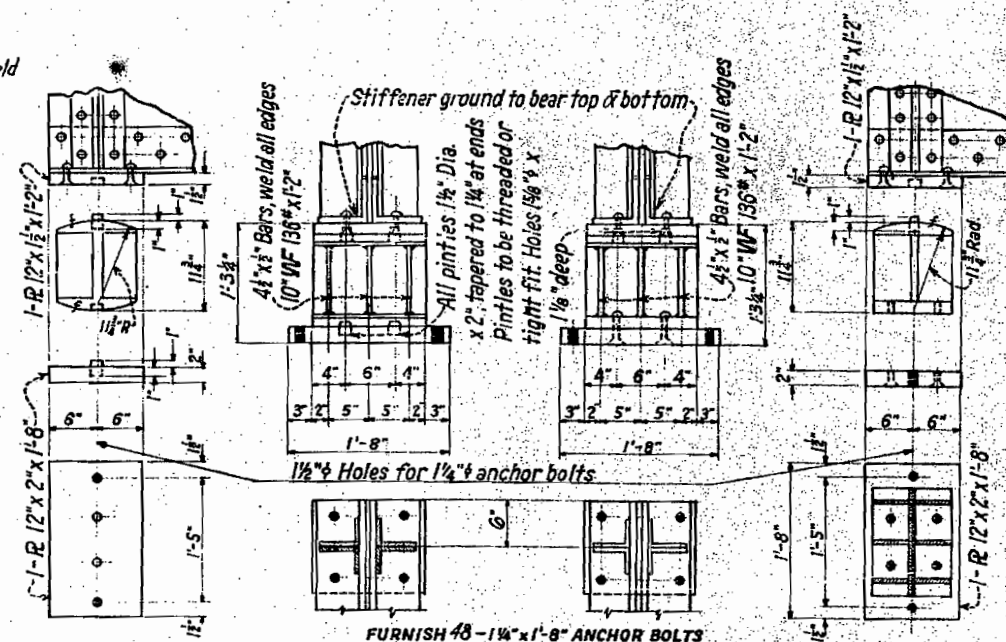


END DIAPHRAGMS

CAMBER DIAGRAM FOR GIR
Camber for girders in Spans #2 & #3 is
1/2" deflection for dead load, 1" camber
in girder, and 1" additional camber in ca
In Span #4 the girder camber is omitt
the vertical curve.

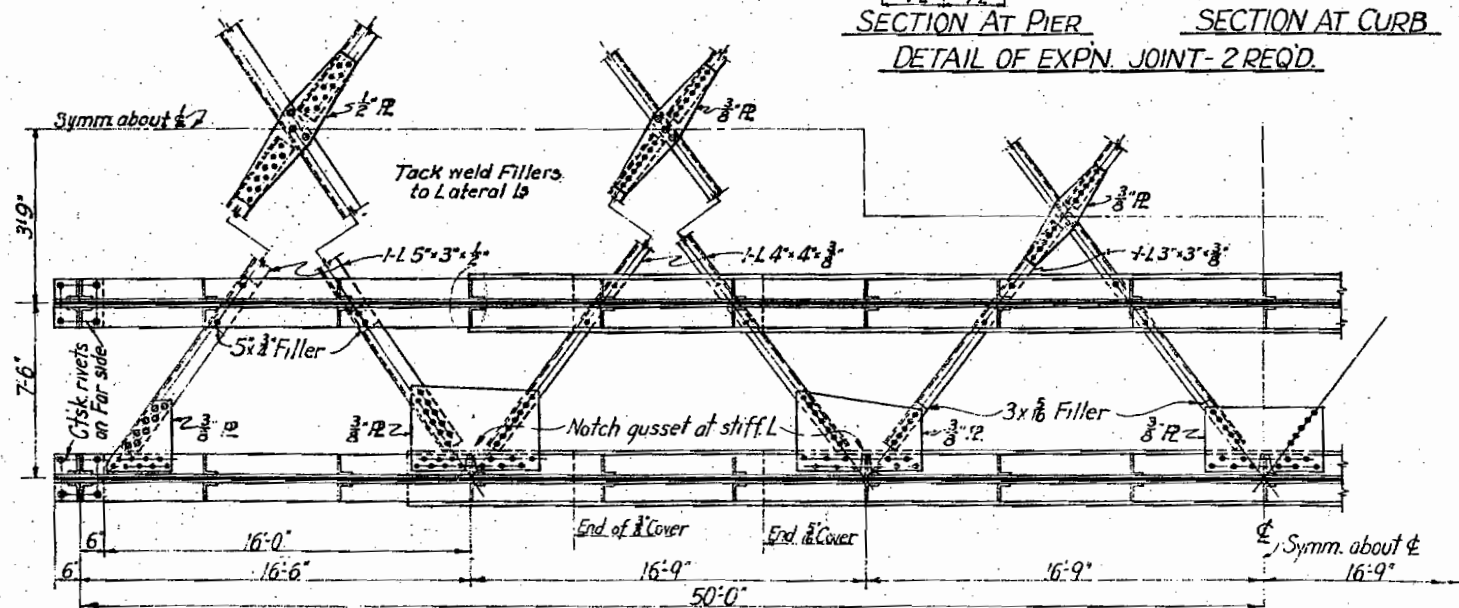


SECTION AT PIER SECTION AT CURB
DETAIL OF EXPN. JOINT- 2 REQ'D.



EXPANSION BEARING
12 REQUIRED

FIXED BEARING
12 REQUIRED



BOTTOM LATERAL BRACING

NOTES

All rivets to be $\frac{3}{4}"$
Open holes to be $\frac{13}{16}"$ u.
noted.
Drumming - None

Paint - All structural steel given two field coats of aluminum paint.

REFERENCE DRAWING

See sheet N° 3a

LOADING DATA.
LIVE LOAD - A. A. S. H. O. 1935
DEAD LOAD - ASSUMES 18 LBS. PER
AL WEARING SURFACE WHICH INCL
CONCRETE MONOLITHIC WEARING

DESIGNING DATA:
A.A.S.H.O. 1937 EXCEPT CONCRETE
PER A.A.S.H.O. AUG. 1928.

COLORADO

COLORADO
STATE HIGHWAY DEPARTMENT
3-100' DECK PLATE GIRDER
2-50' CONC. BEAM APPROACH
25'-0" CLEAR ROADWAY
DETAILS OF GIRDER

Across **COLORADO RIVER**

Sta. 57+29.375 to 61+00.000
Neos KREMMLING Rec. 20 T. 1

Resigned by AR Approved by 3

Made by W. D. M. Bridge Eng

Checked by D.H.C. Date: Feb. 5

FED. ROAD DIST. NO.	STATE	F.W.A.	SHEET NO.
3	COLO.	1288F ²	3e

Const. Div. #2

Rev. by P.D.W. - 3-2-39 - Cap & Bars

Rev Length of Caissons E.W.T. 8-18-39

Rev. 3-6-40 A.D.N. As constructed (Bottom Elev. of

Bar List for One Pier:

Mark	Size	No. reqd	Length	Type	l	m	n	r
S ₁	1"φ	56	17'-0"	I	15'-8"			1'
S ₂	1"φ	56	15'-8"	straight				
S ₂	1"φ	112	15'-8"	straight				
S ₃	1"φ	56	25'-0"	II	15'-1"	1'-6"		
S ₄	1"φ	56	23'-3"	II	13'-4"	1'-6"		
S ₅	1 1/2"φ	146	22'-2"	III				3'-2 1/2"
S ₅	1 1/2"φ	138	22'-2"	III				3'-2 1/2"
P ₁			12'-3" to 21'-10 1/2"					1'-1 1/2"
10'	1/2"	2 each	21'-10 1/2" by 14 1/2"	IV				3'-10 1/2"
P ₈	1 1/4"	5	24'-6"	V				2 1/2"
P ₉	1 1/4"	5	24'-6"	V		15'-0"	3'-1"	9'-8"
P ₁₀	1 1/4"	5	26'-0"	V		6'-6"	8'-1"	10'-1"
P ₁₁	3/4"φ	4	26'-2"	VI	24'-2"			3"
P ₂₉	1 1/4"φ	5	14'-10"	VII	5'-9"			2 1/2"
P ₃₀	1 1/4"φ	4	15'-4"	VII	6'-0"			2 1/2"
P ₃₁	1 1/4"φ	6	16'-4"	VII	6'-6"			2 1/2"
P ₃₂	1 1/4"φ	6	17'-8"	VII	7'-2"			2 1/2"
P ₃₃	1 1/4"φ	4	20'-6"	VII	8'-7"			2 1/2"
P ₁₇	1 1/4"φ	4	7'-6"	straight				
P ₁₈	3/4"φ	2	12'-3"	I	3'-9"			1'-6"
P ₁₉	1 1/4"φ	2	34'-6"	VI	24'-0"			1'-6"
P ₂₀	1 1/4"φ	2	13'-3"	I	4'-3"			1'-6"
P ₂₁	3/4"φ	4	29'-4"	VI	26'-4"			4 1/2"
P ₂₂	1"	10	15'-1"	X				
P ₂₃	1"φ	4	19'-0"	straight				
P ₂₇	3/8"φ	13	11'-8"	VIII				
P ₃₄	5/8"φ	4	22'-4"	VII	9'-6"			2 1/2"
S ₆	1"φ	56	19'-9"	—				
S ₉	1"φ	56	7'-8"	—				

Bar Summary for Pier No. 3.			Unit
253	in ft of 1" @ 5.313	lbs per ft	1342
4395	" " 1" @ 2.670	"	11575
186	" " 1" @ 4.303	"	800
737	" " 1" @ 1.502	"	349
763	" " 1" @ 1.043	"	796
3509	" " 1" @ .850	"	2983
151	" " 1" @ 3.400	"	513
Plus 1% ± for overrun			192
TOTAL			18550 lbs

Bar Summary for Pier No. 4			DATE
253	lin. fr	1 st 5313 lbs. per ft.	1342
4439	"	1 st 2670	11852
186	"	1 st 4303	800
237	"	1 st 1502	349
163	"	1 st 1043	796
3332	"	1 st 850	2632
151	"	1 st 3400	513
Plus 12 ± For Overrun			185
TOTAL			18670 Lbs

LOADING DATA.
LIVE LOAD--A. A. S. H. O. 1936 CL.
DEAD LOAD--ASSUMES 15 LBS. PER SQ.
AL WEARING SURFACE WHICH INCLUDES
CONCRETE MONOLITHIC WEARING SURF.

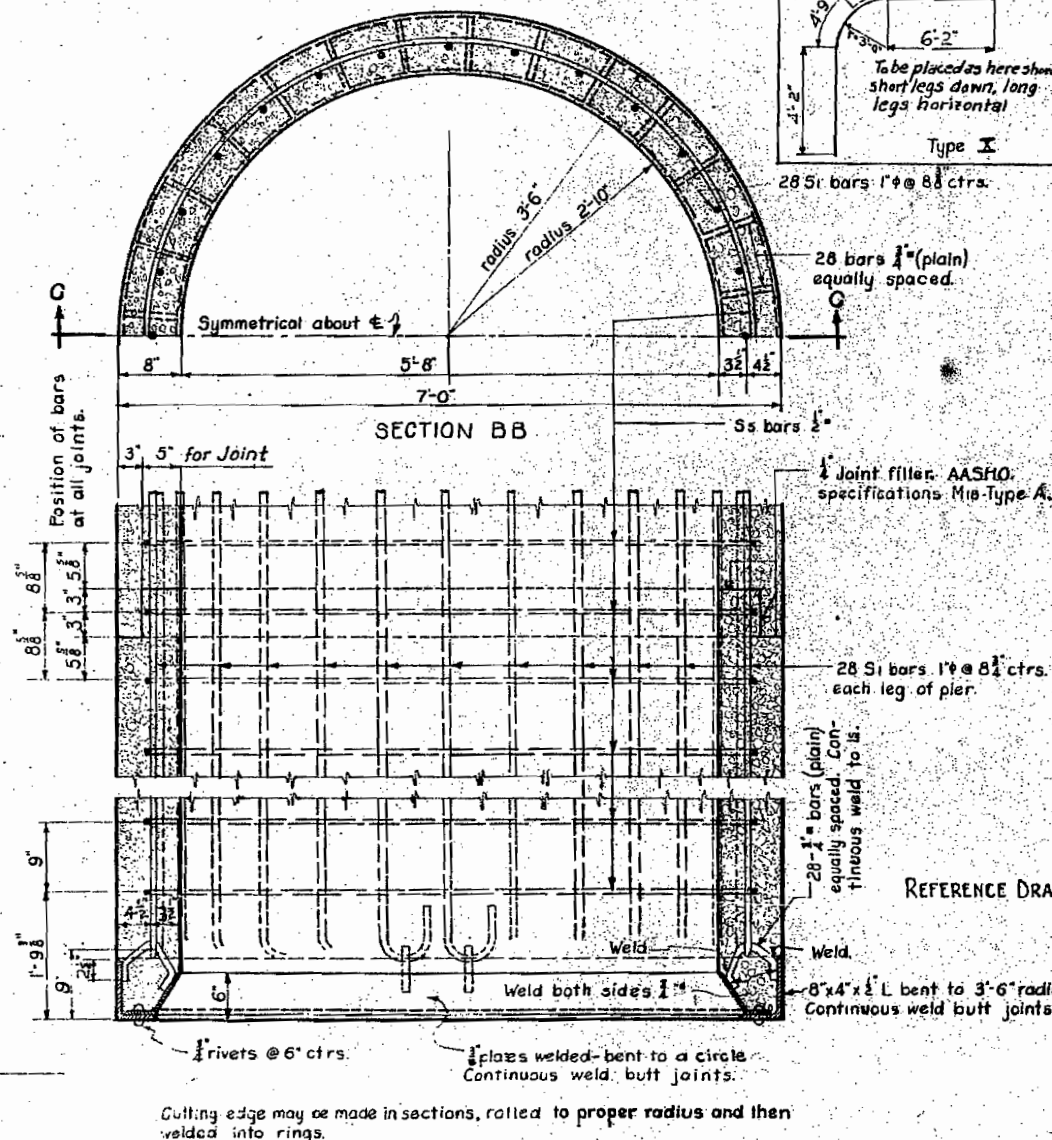
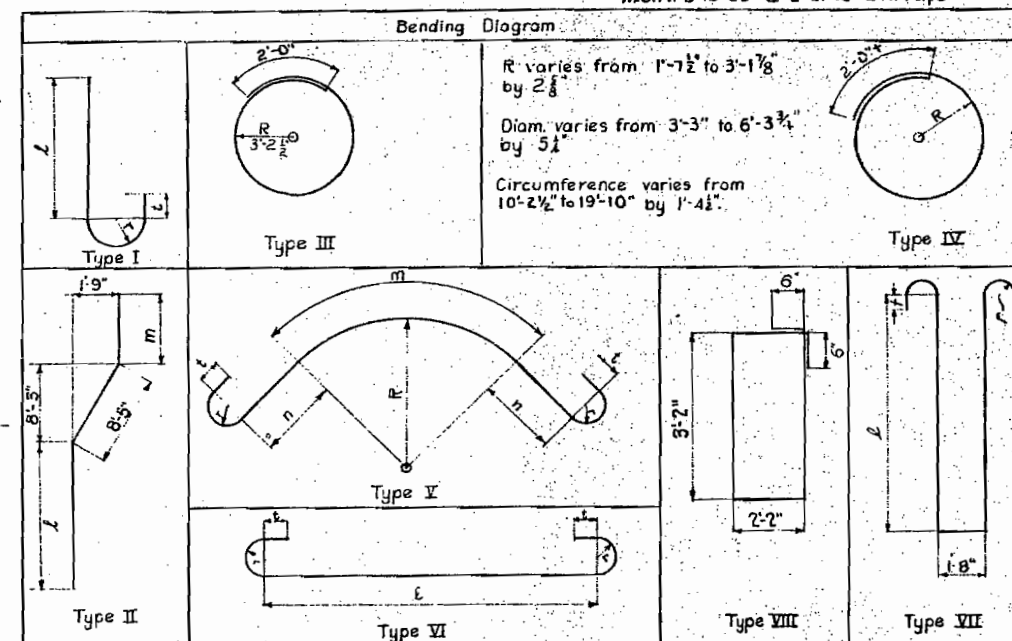
DESIGNING DATA.
A.A.S.H.O. 133T EXCEPT CONCRETE U.
REF. A.A.S.H.O. AUG. 1935

REFERENCE DRAWINGS: See Sheet 3a

COLORADO
STATE HIGHWAY DEPARTMENT
3-100' DECK PLATE GIRDER
2-50" CONC. T-BEAM APPROX
25'-0" CLEAR ROADWAY
Detail of Piers No.3

Across Colorado River
Sta. 57+29.375 to 61+3
Near Kramming Sec. 20 T.1

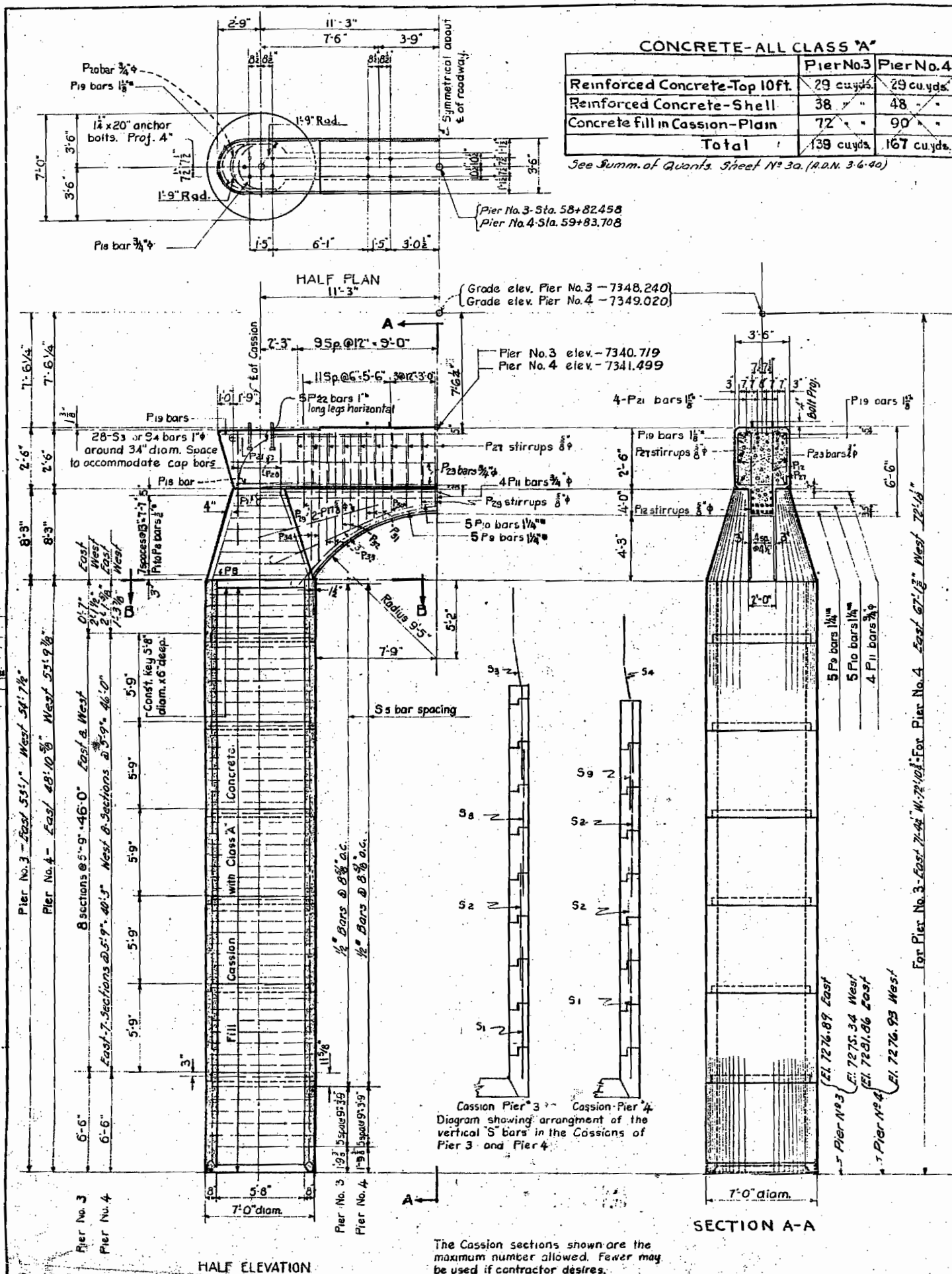
Designed by M.G.D.	Approved by G.
Made by F.E.R.	Bridge Eng.
Checked by O.W.C.	Date: Feb 5



Cutting edge may be made in sections, rolled to proper radius and then welded into rings.

SECTION C-C

Pier No.3- Maximum Load per Caisson = 8.7 Tons per sq. ft.
 Pier No.4- " " " " = 9.5 " " " "
 Shale shall be hard enough to support this load.



The Cassion sections shown are the maximum number allowed. Fewer may be used if contractor desires.

SECTION A-A

REVISIONS

Rev. by P.D.W. 1-7-39 Stringer Connection at Abut. & Abutment Bars.
Rev. by H.M.M. 3-2-39 Increased number of Piles & changed No. of A1 & A2 Bars.

FED. ROAD DIST. NO.	STATE	P.W.A.	SHEET NO.	TOTAL SHEETS
3	COLO.	1288-F#2	31	

BAR LIST FOR ONE 50'-0" APPROACH SPAN - 2 REQ'D.

MARK	SIZE	TYPE	NUMBER	LENGTH	BENDING DIAGRAMS
E1	5/8"	I	164	29'-4"	I rad. = 2 1/2'
E2	5/8"	II	41	28'-10"	
D2	5/8"		86	26'-6"	II Symmetrical About C of Roadway
H1	1/2"		8	14'-8"	
H2	1/2"	III	14	6'-9"	III rad. = 2 1/2'
H3	1/2"		12	3'-4"	
H4	1/2"	IV	56	6'-6"	IV rad. = 2 1/2'
H5	1/2"		12	4'-3"	
H6	1/2"		16	13'-2"	

8272 Lin. Ft. 5/8" Bars @ 1.043 Lbs. Per Lin. Ft. = 8628 Lbs.
878 1/2" @ 0.850 = 746
Plus 1% For Overrun = 96
(For One Span) - TOTAL = 9470 Lbs. (One Span)

BAR LIST FOR ONE ABUTMENT (TWO REQUIRED)

MARK	SIZE	TYPE	NUMBER	LENGTH	r	t	BENDING DIAGRAMS
A1	3/4"	V	44	10'-4"			V 1'-0"
A2	3/4"	VI	54	6'-4"			
A3	3/4"		4	34'-6"			VI 4'-9"
A4	3/4"		3	28'-3"			
A5	3/4"	VII	12	8'-3"			VII 3'-1"
A6	3/4"		2	2'-10"			
H2	1/2"	III	6	6'-9"			III 1'-0"
H3	1/2"		12	2'-7"			

1124 Lin. Ft. 3/4" Bars @ 1.502 Lbs. Per Lin. Ft. = 1688 Lbs.
72 1/2" @ 0.850 = 61
Plus 1% For Overrun = 21
TOTAL = 1770 Lbs. (One Abut.)

REQUIRED FOR ABUTMENTS

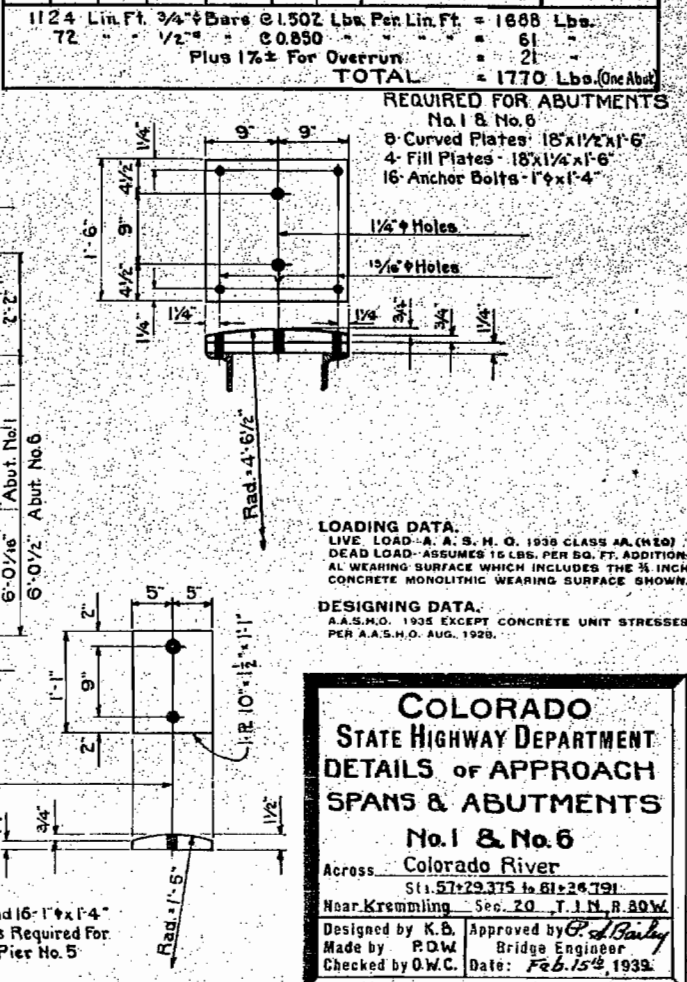
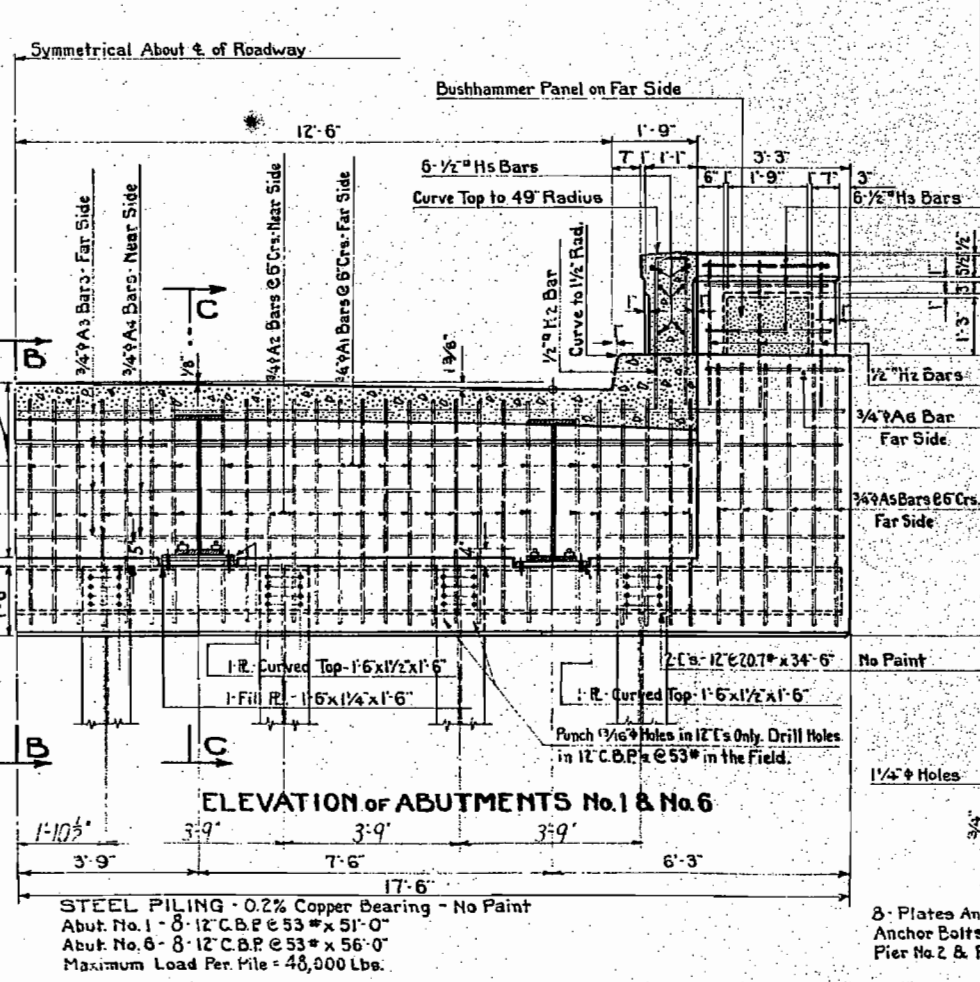
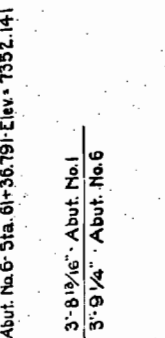
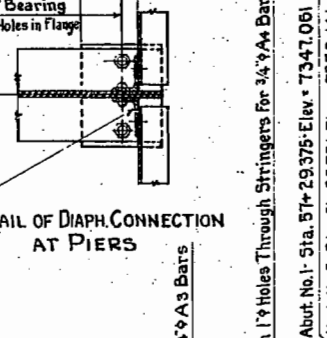
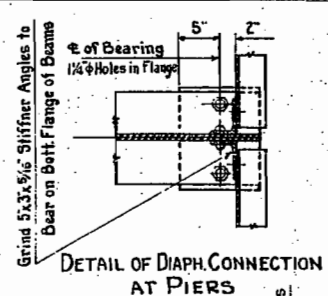
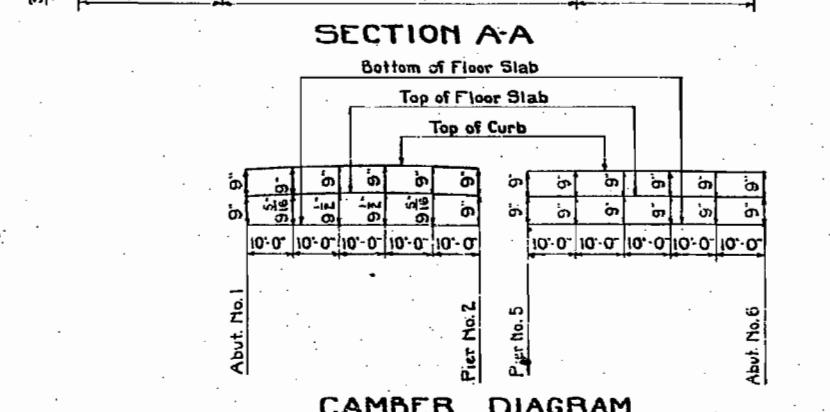
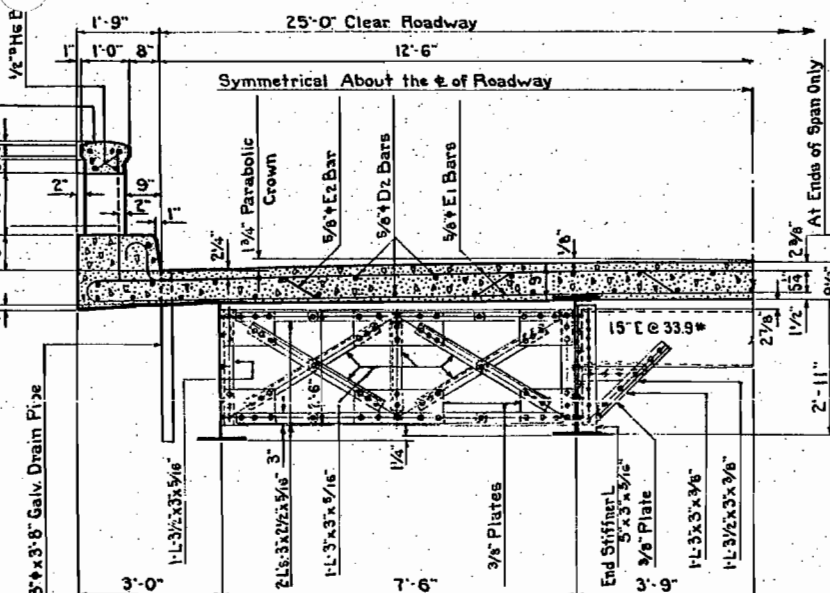
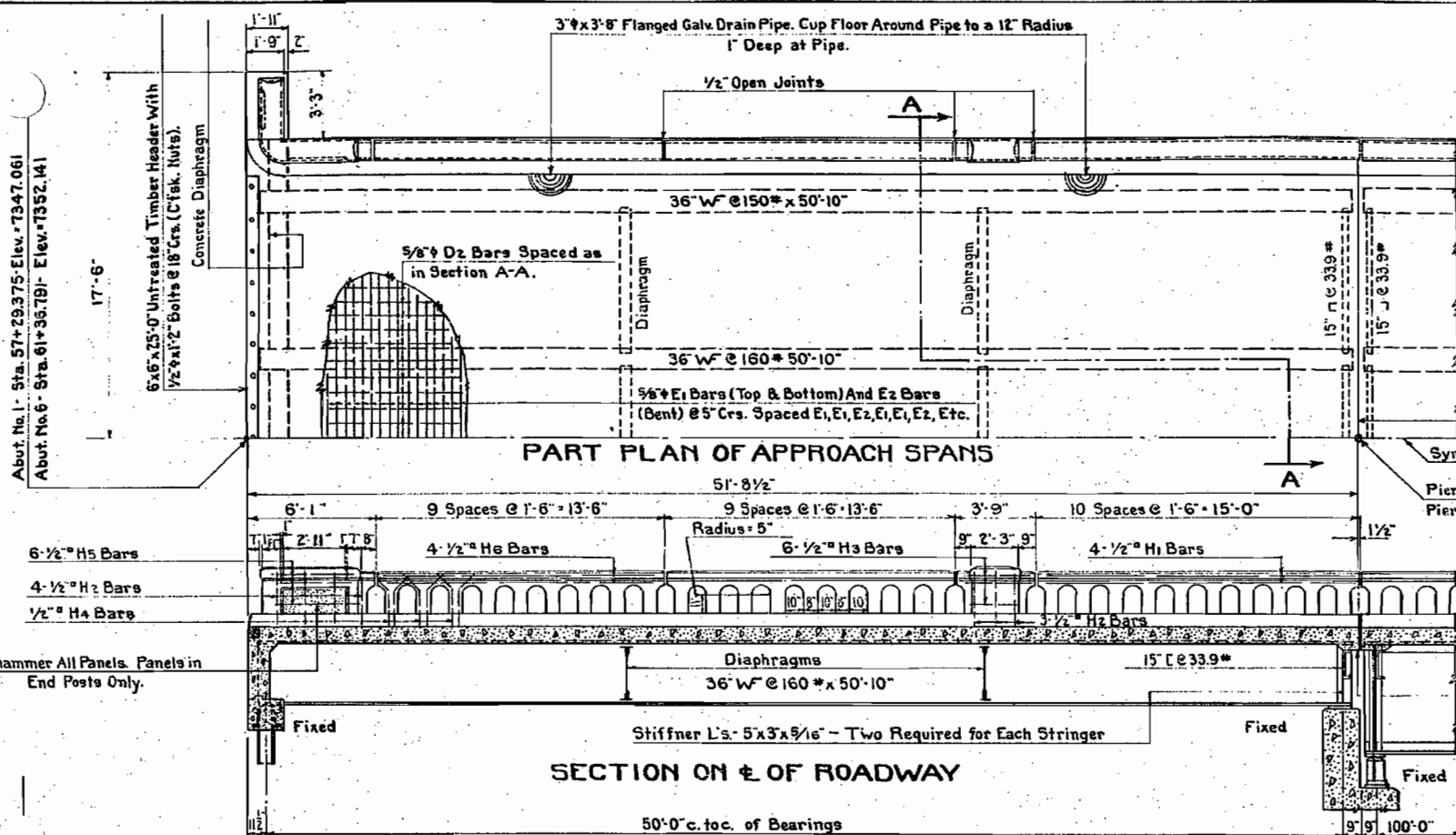
No. 1 & No. 6
8 Curved Plates - 18"x1 1/2"x1'-6"
4 Fill Plates - 18"x1 1/4"x1'-6"
16 Anchor Bolts - 1"x1'-4"

LOADING DATA.
LIVE LOAD - A. A. S. H. O. 1930 CLASS AA (H20)
DEAD LOAD - ASSUMES 15 LBS. PER SQ. FT. ADDITIONAL WEARING SURFACE WHICH INCLUDES THE 3/4" INCH CONCRETE MONOLITHIC WEARING SURFACE SHOWN.

DESIGNING DATA.
A.A.S.H.O. 1935 EXCEPT CONCRETE UNIT STRESSES PER A.A.S.H.O. AUG. 1920.

COLORADO
STATE HIGHWAY DEPARTMENT
DETAILS OF APPROACH SPANS & ABUTMENTS
No. 1 & No. 6
Across Colorado River
Sta. 57+29.375 to 61+24.791
Near Kremmling Sec. 20 T. 1 N. R. 80 W.
Designed by K.B. Approved by P.D.W.
Checked by O.W.C. Date: Feb. 15, 1939

Abut. No. 1 - Sta. 57+29.375 - Elev. 7347.061
Abut. No. 6 - Sta. 61+36.791 - Elev. 7352.141

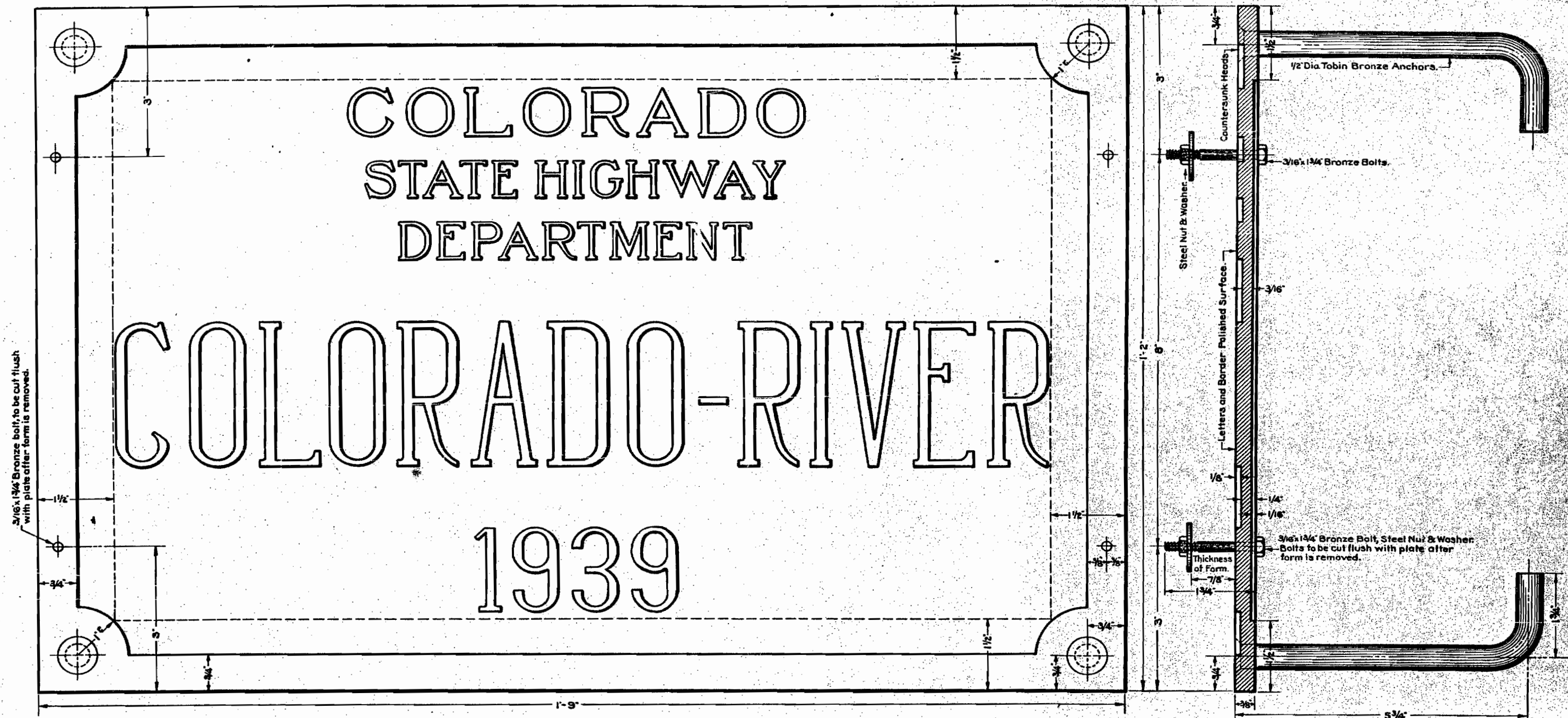


STEEL PILING - 0.2% Copper Bearing - No Paint
Abut. No. 1 - 8 - 12" C.B.P. @ 53" x 51'-0"
Abut. No. 6 - 8 - 12" C.B.P. @ 53" x 56'-0"
Maximum Load Per Pile = 48,000 Lbs.

8 - Plates And 16 - 1"x1'-4" Anchor Bolts Required For Pier No. 2 & Pier No. 5

FED. ROAD DIST. NO.	STATE	SHEET NO.	TOTAL SHEETS
3	COLO.	PWA. 1288-F-2 CONST. DIV. #2	3g

STANDARD M-6-D



BRONZE NAME PLATE.
ITEM N° 80b.

One Required in Panel of Right Hand Post of Abutment No. 1
Sta. 57+29.375.
See General Layout on Sheet No. 3a For Location

GENERAL NOTES.

All work shall be done according to the standard specifications of the Colorado State Highway Department. Adopted June 1, 1937.

SECTION.

COLORADO STATE HIGHWAY DEPARTMENT TYPICAL STANDARD NAME PLATE	
Across COLORADO RIVER	
Sta. 57+29.375.	
Near KREMMLING Sec. 20 T. 1N. R. 80W.	
Designed by A.G.K.	Approved by <i>P.D.W.</i>
Made by A.G.K.	Bridge Engineer
Checked by	Date: May 24, 1937.

Standard Modified by P.D.W. - 2-10-39