FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	282-A	1	

COLORADO
STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED
FEDERAL AID PROJECT NO. 282 A
STATE HIGHWAY NO. 13
MOFFAT COUNTY

INDEX OF SHEETS

CONVENTIONAL SIGNS

[illegible]

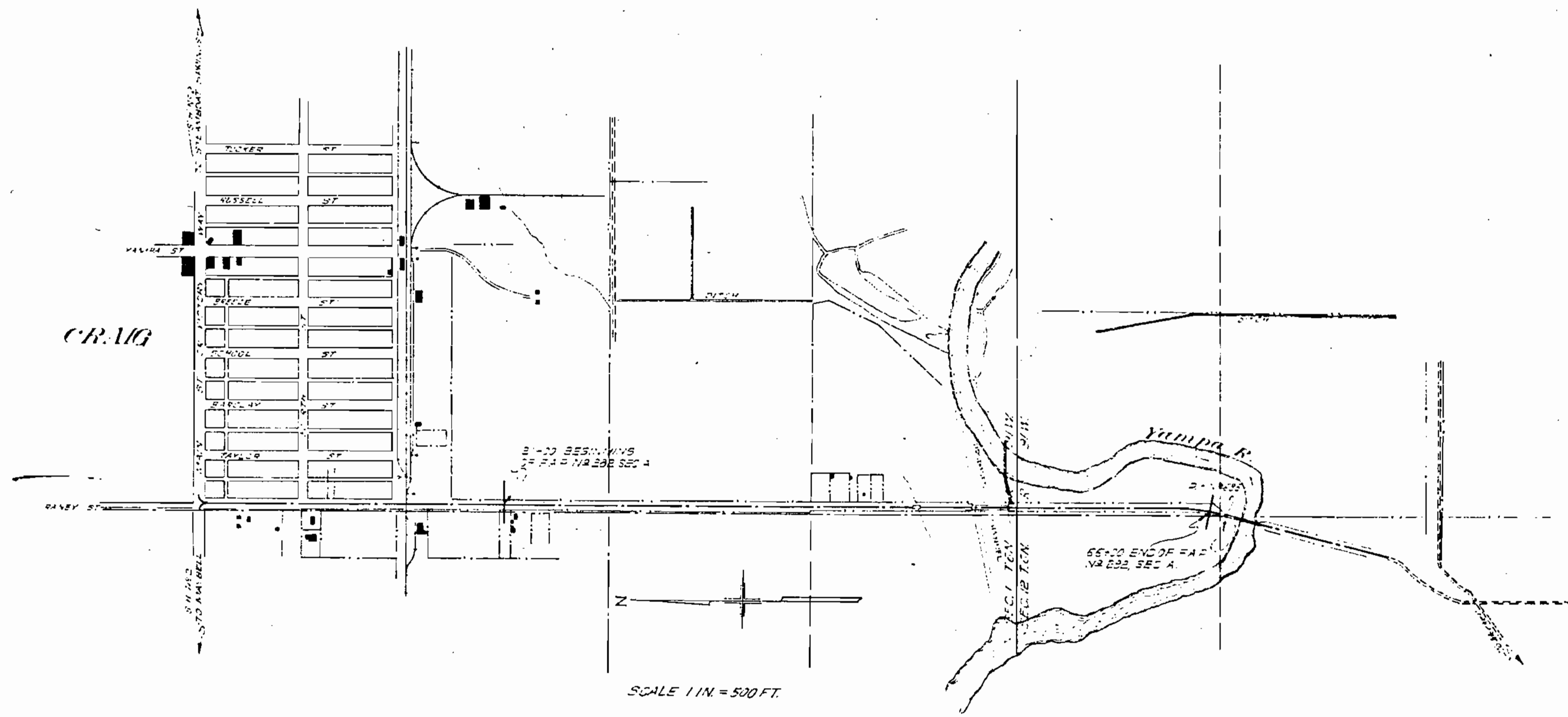
SCALES

ON PLAN, 1 IN. - 100 FT.

ON PROFILE { 1 IN. - 100 FT. HORIZONTAL; 1 IN. - 10 FT. VERTICAL

GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD

GROSS LENGTH OF PROJECT }
NET LENGTH OF PROJECT } 4500.0 FT. = 0.852 MI.



RECOMMENDED FOR APPROVAL
[redacted]
ASSISTANT ENGINEER

APPROVED
[redacted]
STATE HIGHWAY ENGINEER

RECOMMENDED FOR APPROVAL
[redacted]
DIST. ENG. BUREAU PUBLIC ROADS

RECOMMENDED FOR APPROVAL
[redacted]
CHIEF ENG. BUREAU PUBLIC ROADS

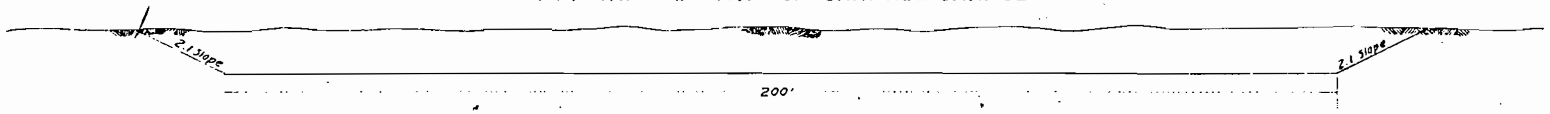
APPROVED
[redacted]
DIRECTOR BUREAU PUBLIC ROADS

TYPICAL CROSS SECTION OF IMPROVEMENT AND SUMMARY OF QUANTITIES

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	282-A	2	

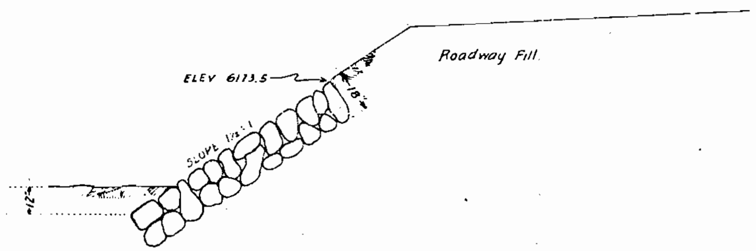
Rev Dec. 14, 1925 A.C.L.
Rev 12/28/25 by EEB

TYPICAL SECTION OF CHANNEL CHANGE



Note: See Sheet No. 2A for Typical Roadway Section.

TYPICAL CROSS SECTION OF RIP RAP



General Notes

Excavation outside of ditch and "slope" shown by Standard Sections is to be classified and paid for as "Borrow Excavation".

Earthwork data on profile is to be considered approximate only.

The entire project is to be cleared for the full width of the right of way and for the full width of the channel change, this work to be included in the contract lump sum price for clearing and grubbing. [illegible]

Sta 21 to 53 [illegible]
Sta 54 to 56 2 Acres
Sta [illegible] channel change 3 Acres.

LIST OF STRUCTURES

LOCATION	DESCRIPTION	CORR MET PIPE LIN FT 15"	24"	CONCRETE CU YDS. CL A	CL B	REMOVE CULV	EXC FOR STRUC CU YDS. COM.		ROCK RIP RAP SQ. YDS.
24+30	CROSS CULVERT EXTENSION		10		3.4		3		
27+00	CROSS CULVT		30		3.4		17		
	TWO SIDE CULVTS.	40			1.8		2		
	WOOD CULVT REMOVAL					1			
32+50	CROSS CULVT EXTENSION		10		3.4		7		
35+87	" " "		14		3.4		6		
40+00	REMOVAL OF WOOD BOX CULVT.					1			
	CROSS CULVT		30		3.4		5		
	TWO SIDE CULVTS.	40			1.8		2		
43+00	TWO SIDE CULVTS	40			1.8		2		
43+65	REMOVAL OF WOOD BOX					1			
47+00	CROSS CULVT.		40		3.4		8		
	TWO SIDE CULVTS	40			1.8		2		
	REMOVAL OF WOOD BOX					1			
49+00 TO 50+00	REMOVAL OF 7 C.M.P. CULVTS					7			
50+00	REMOVAL OF WOOD BRIDGE					1			
53+00	" " " "					1			
53+26	REMOVAL OF 2 C.M.P. CULVTS					2			
55+64	REMOVAL OF C.M.P. CULVT					1			
58+36	REMOVAL OF WOOD BOX CULVT					1			
	" " C.M.P.					1			
59+12 59+12	REMOVAL OF TWO C.M.P. CULVT.					2			
60+35	REMOVAL OF CMP CULVT					1			
62+30	REMOVAL OF TWO C.M.P. CULVTS					2			
48+40 to 50+40	ROCK RIP RAP								270
	BRIDGE SEE SHEET NO 3								
47 to 63	REMOVE CRIBBING								
TOTALS		160	134		27.6	23	54		

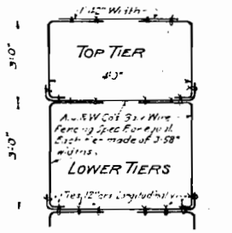
SUMMARY

ITEM	UNIT	QUANTITY
COMMON EXCAVATION	CU YD.	12000
ROCK EXCAVATION	CU YD	100
OVERHAUL	STA YD.	212000
DRY COMMON STRUCT. EXCAVATION	CU. YD.	400
WET " " "	CU YD.	60
DRY ROCK " "	CU YD	30
WET " "	CU. YD.	70
CLASS "A" CONCRETE	CU. YD	502
CLASS "B" CONCRETE	CU YD	28
REINFORCING STEEL	LB	75500
STRUCTURAL STEEL	LB.	301500
15" CORRUGATED METAL CULVERT PIPE	LIN FT.	160
24" " " " "	LIN. FT.	134
TREATED TIMBER	M BD. FT.	0.40
RIP RAP (18" THICK)	SQ. YD.	270
ROCK FILL BULKHEAD (6' HIGH)	LIN. FT.	162
ROCK FILL BULKHEAD (10' HIGH)	LIN. FT	240
ROCK FILL BULKHEAD (14' HIGH)	LIN. FT.	270
REMOVING 23 STRUCTURES	LUMP SUM	
" CRIBBING	" "	
CLEARING AND GRUBBING	LUMP SUM	
DETOUR TO BE CONSTRUCTED BY STATE FORCES	" "	

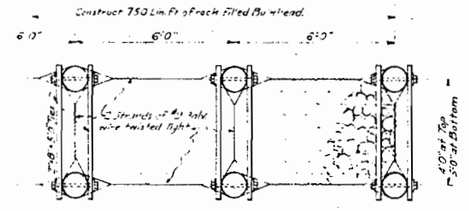
A.J. Strong.

FED. ROAD DIST. NO.	STATE	FED. AID PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	68 E 2 A REOPENED	25	

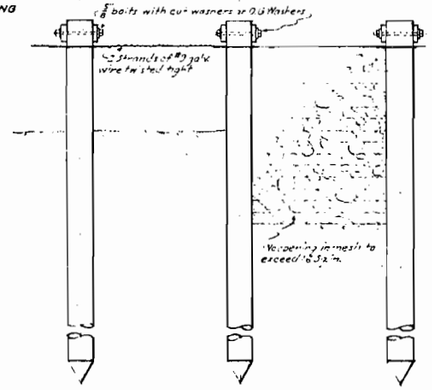
Revised July 3, 1928 by RMA



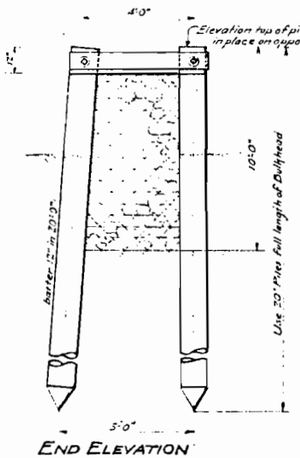
DETAIL OF WIRE BASKET SHOWING METHOD OF LAPPING SECTIONS.



PLAN OF ROCK FILLED BULKHEAD



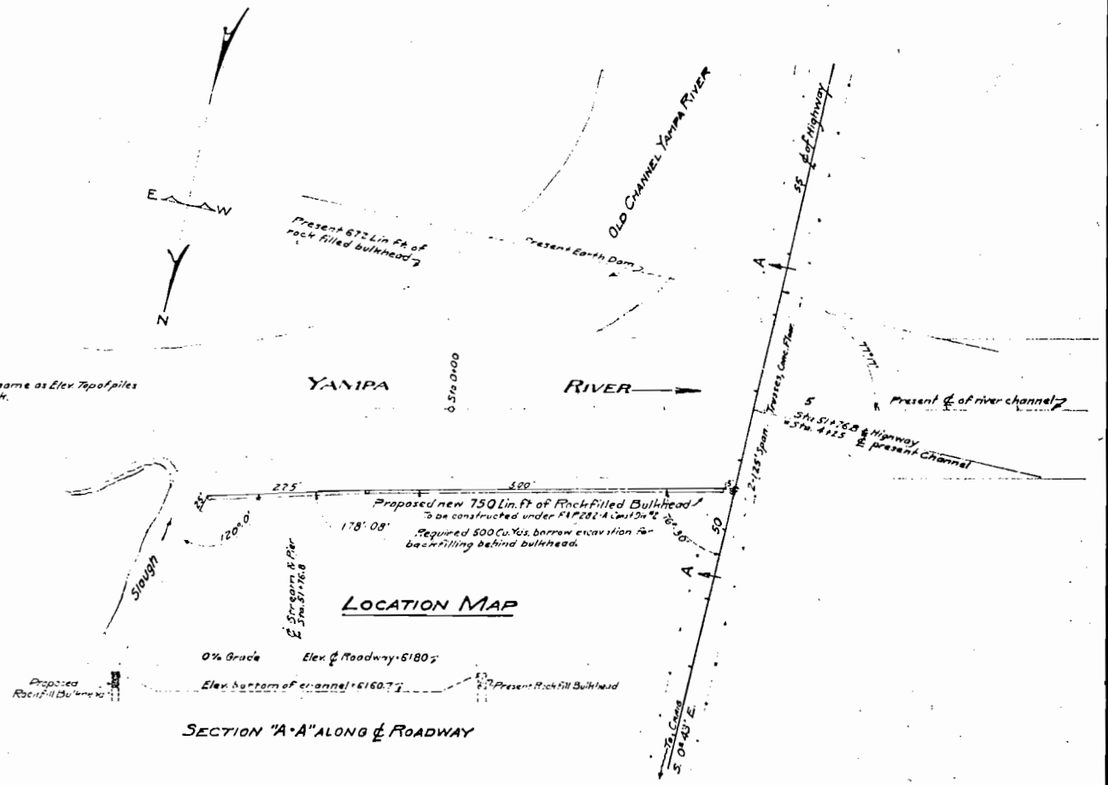
SIDE ELEVATION



END ELEVATION

ESTIMATED QUANTITIES

Item No 49	Rock Fill Bulkhead		750 Lin. Ft.
" 7a	Structural Excavation	Dry Common	600 Cu. Yds.
" 7b	" "	Wet Common	650 Cu. Yds.
" 5c	Borrow Excavation		500 Cu Yds.



SECTION "A-A" ALONG ℄ ROADWAY

GENERAL NOTES

ALL WORK SHALL BE DONE ACCORDING TO THE STANDARD SPECIFICATIONS OF THE [illegible]

ALL TIMBER & PILES TO BE TREATED AS SPECIFIED IN COLORADO PAMPHLETS No. VII & No. VIII

SOUNDINGS AND DEPTH OF FOOTINGS SHOWN ARE ACCORDING TO THE BEST AVAILABLE DATA. IF ESSENTIALLY DIFFERENT CONDITIONS ARE ENCOUNTERED, THE ENGINEER WILL INSPECT AND DETERMINE IF REDESIGN IS NECESSARY.

COLORADO
STATE HIGHWAY DEPARTMENT
LOCATION MAP
DETAILS OF ROCKFILL BULKHEAD

ALONG YAMPA RIVER
Sta. 50+50
Near CRAIG Sec. 1 T. 7N. R. 91W.

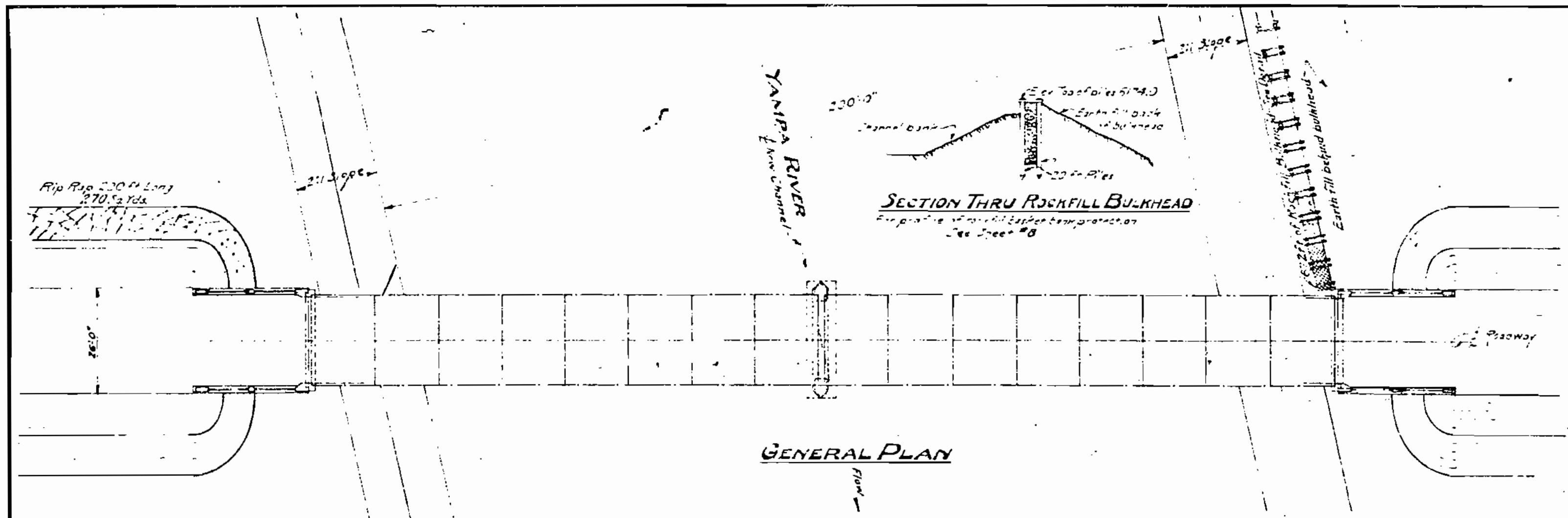
Designed by E.P.V.	Approved by C. D. Bailey
Made by E.F.W.	Bridge Engineer
Checked by P.S.B.	Date: March 16, 1928

STRUCTURE NO. B-6-C

Fed. Road Dist. No.	State	Fed. Aid Proj. No.	Sheet No.	Total Sheets
3	COLO.	282-A	3	

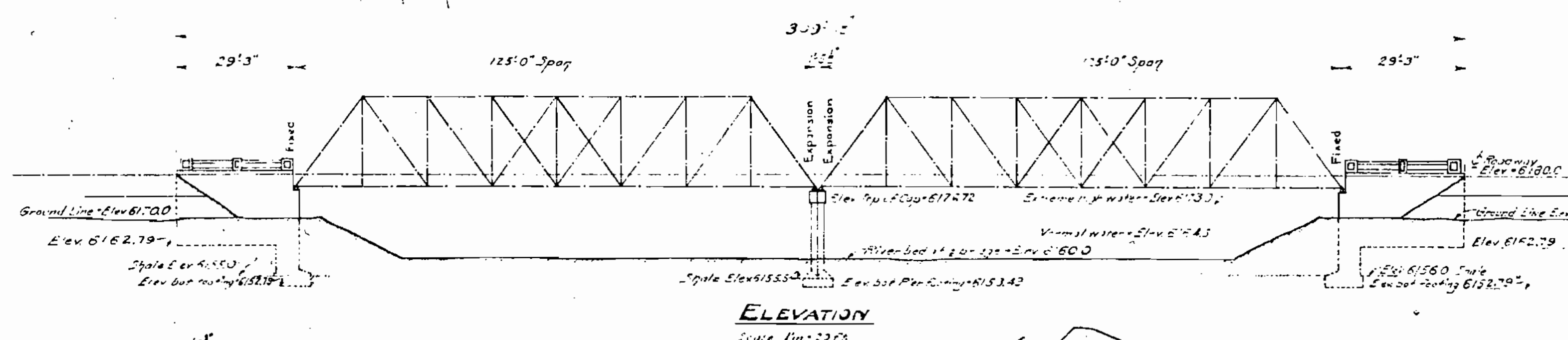
Revised Dec. 1, 1925 by EEW.
Revised Dec. 30, 1925. by EEW.

Revised Quantities as Constructed 3-13-39 R.S.S.



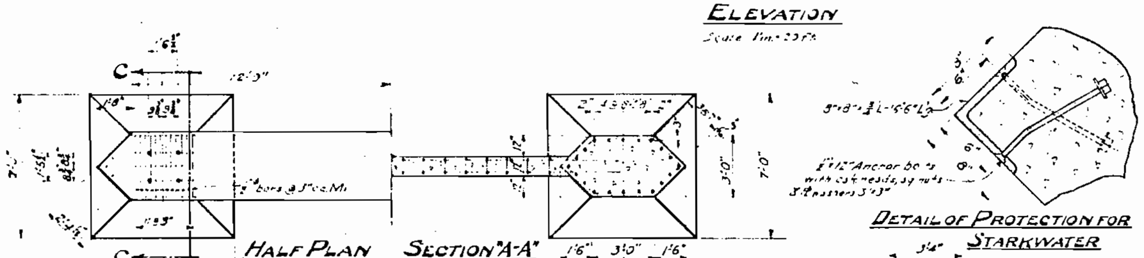
General Plan

Section Thru Rockfill Bulkhead



Elevation

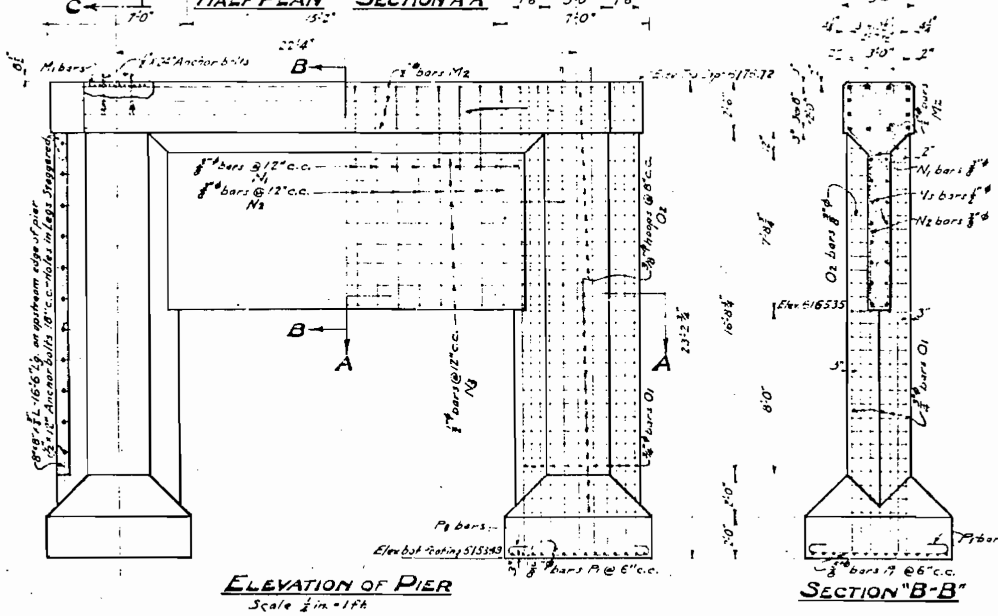
Scale 1 in. = 25 ft.



Half Plan

Section "A-A"

Detail of Protection for Starkwater



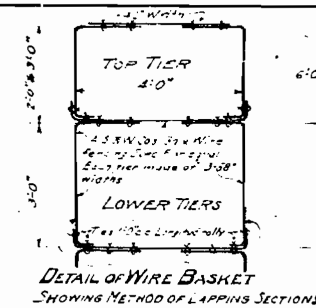
Elevation of Pier

Scale 1/4 in. = 1 ft.

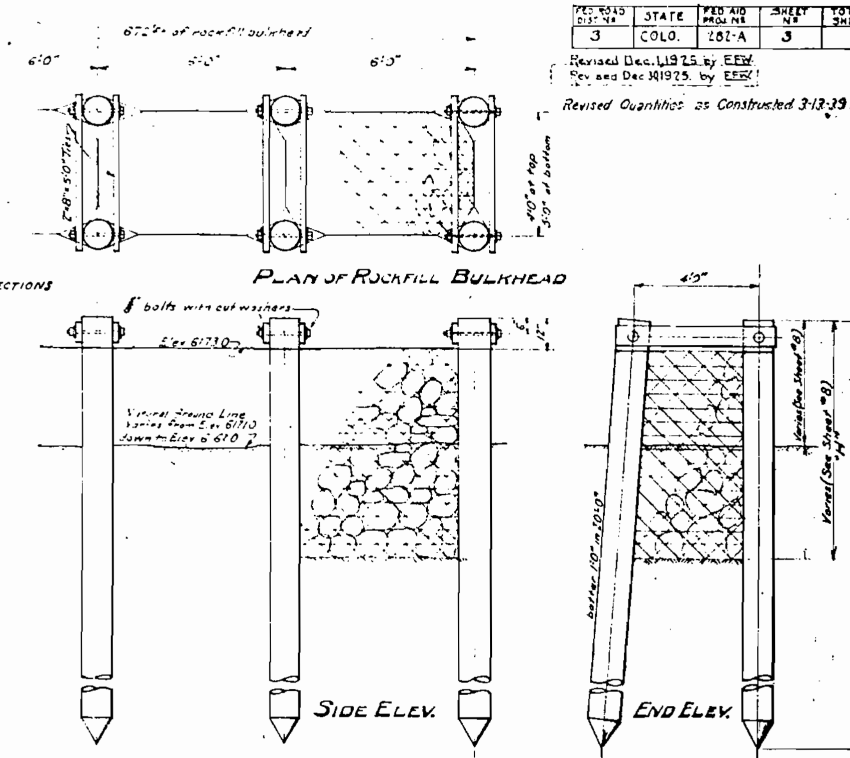
Section "B-B"

General Notes

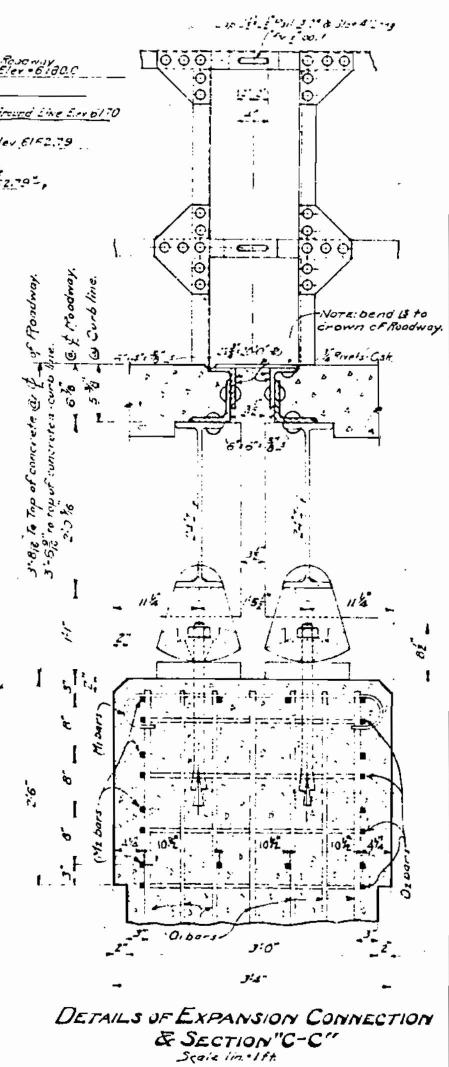
1 - All work to be done in accordance with the Standard Specifications of the Colorado State Highway Department.
2 - All concrete to be Class "A" Mixture.
3 - All exposed surfaces to be rubbed free of form marks.
4 - Panels in hand rails shall be bush hammered.
5 - All reinforcing bars shall be round or square, plain or deformed as shown.
6 - Maximum soil pressure is 8200 Lbs. per ft.
7 - All walls to have forms on both sides.
8 - All construction joints shall be thoroughly cleaned before fresh concrete is poured.
9 - All exposed edges & corners, excepting handrails, to be beveled 2".
10 - The soundings & depth of footings as shown are based on the best available data, if essencially different conditions are encountered the engineer will inspect and determine if redesign is necessary.



Detail of Wire Basket
Showing Method of Lapping Sections



Plan of Rockfill Bulkhead



Details of Expansion Connection & Section "C-C"

Scale 1 in. = 1 ft.

Bar List for Pier

Mark	Size	No. Req'd.	Length	A	b	R	Bending Diagram
M2	1/2" φ	12	25'-2"				straight
N3	1/2" φ	16	21'-0"				straight
O1	3/4" φ	40	22'-6"				straight
M1	1/2" φ	24	4'-0"	2'-8"	2"	2"	hook, R = Radius
P1	5/8" φ	57	1'-9"	6'-1"	2"	2 1/2"	
P2	3/4" φ	1	4'-0"	2'-0"	2 1/2"	3"	
N1	5/8" φ	18	12'-3"				
N2	3/8" φ	16	23'-3"				N2 = 10'-9", R = 2 1/2"
N4	3/8" φ	1	3'-4"				N4 = 0'-3"
O2	3/8" φ	64	14'-3"				

Summary of Quantities for Wire Basket Rockfill Bulkhead

Description	H	Length
Wire Basket Rockfill Bulkhead	6'-0"	162 Lin. Ft.
" " " " "	10'-0"	240 " "
" " " " "	14'-0"	270 " "
Total		672 " "

Summary of Quantities - Pier

804 Lin. Ft. of 3/4" φ bars @ 1.502 Lbs. per lin. ft.	=	1358 Lbs.
442 " " " 5/8" φ " @ 1.043 " " " "	=	461 "
302 " " " 1/2" φ " @ 0.85 " " " "	=	257 "
432 " " " 1/2" φ " @ 0.668 " " " "	=	289
1508 " " " 3/8" φ " @ 0.376 " " " "	=	567
Plus 3% ± for over run	=	118
TOTAL	=	3050
Structural Steel (For Starkwater)		674 Lbs.
Plus 3% ± for over run		26
TOTAL		700
Concrete Class "A"		42 Cu. Yds.
Excavation: Wet Common		63.1 " "
Excavation: Wet Rock		11.7 " "
Excavation: Dry Common		47.5 " "

Summary for Bridge

Items		Pier Sh. 3	Abts Sh. 4	Truss Sh. 5	Total
Reinforcing Steel		3050 Lbs.	34400 Lbs.	38000 Lbs.	75450 Lbs.
Structural Steel		700 Lbs.	145 Lbs.	300500 Lbs.	301345 Lbs.
Concrete Class "A"		42 Cu. Yds.	306 Cu. Yds.	154 Cu. Yds.	502 Cu. Yds.
Treated Timber Headers				040 M	0.40 M.
Excavation	Dry Common	47.5 Cu. Yds.	92.7 Cu. Yds.		140.2 Cu. Yds.
	Wet Common	63.1 Cu. Yds.	169.3 " "		232.4 " "
	Dry Rock		" "		0 " "
	Wet Rock	11.7 Cu. Yds.	84.8 " "		96.5 " "

For Abutment Details See Sheet No. 4.
For Details of 125 ft. x 20 ft. Thru Truss see Sheet No. 5.

Colorado State Highway Department

General Layout & Pier Details Thru Truss, Concrete Floor Bridge 2-125 ft. Spans

Across The Yampa River
Station 50+50
Near Craig Sec. 1. T. 7 N. R. 91 W.

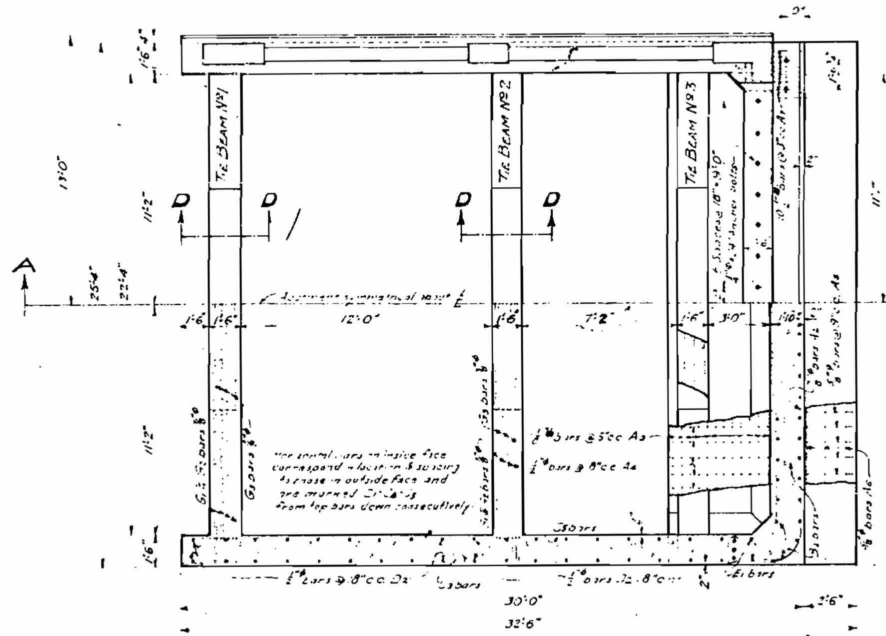
Designed by EEW.	Approved by P. A. Bailey, Bridge Engineer
Made by EEW.	
Checked by R.W.J.	Date Oct. 19, 1925

Structure No. B-8-C.

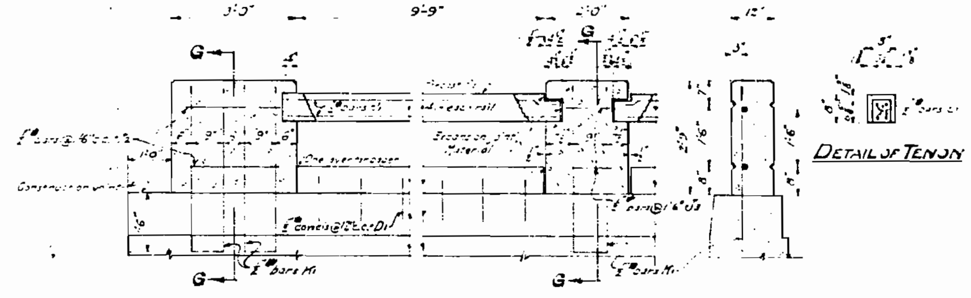
Proj. No.	State	F.A.P. No.	Sheet No.	Total Sheets
3	COLO	282-A	4	

Revised Dec 1,1925 by E.F.W.
Revised 12/30/25 by E.F.W.
Revised Mar.13,1925 by E.F.W.

Revised Quantities as Constructed 3-13-39 R.S.S.



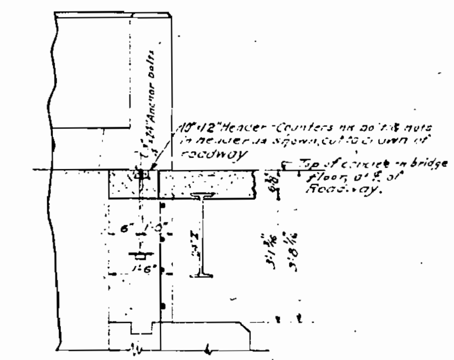
PLAN & SECTION "C-C"



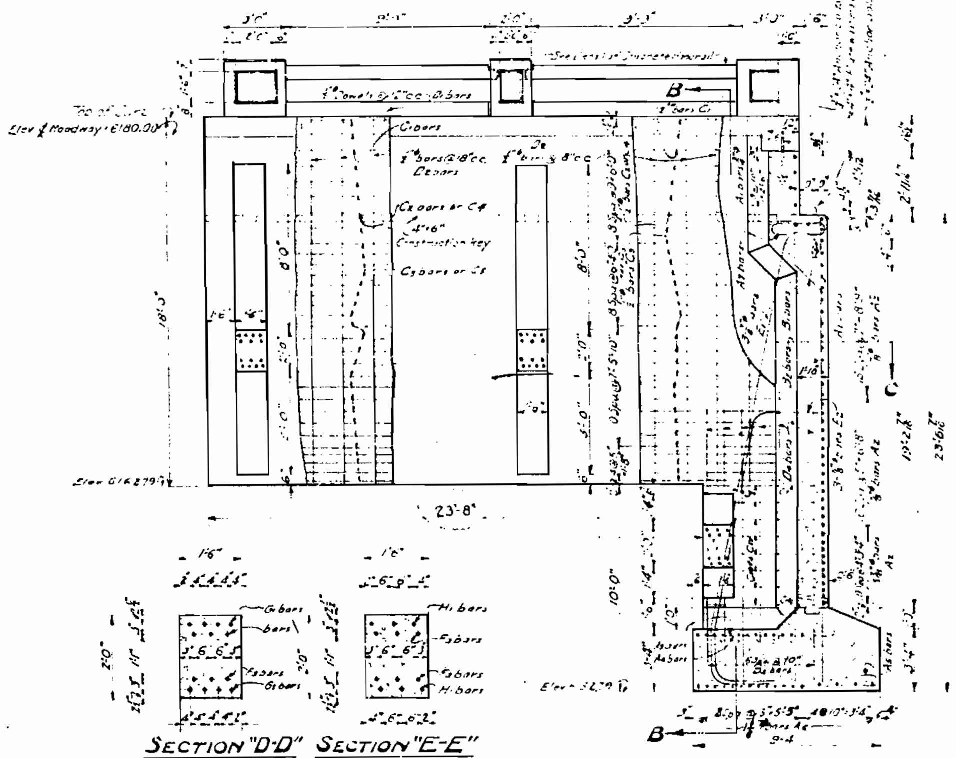
ELEVATION & DETAIL OF CONCRETE HANDRAIL   SECTION "G-G"

DETAIL OF TENON

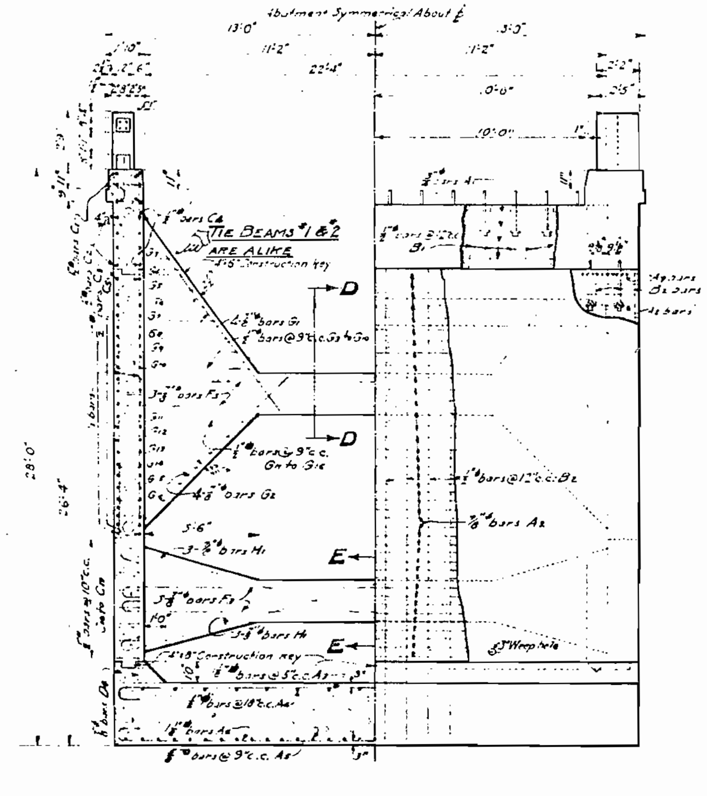
HANDRAIL NOTES



DETAIL OF PARAPET WALL & FLOOR CONNECTION



SECTION "D-D" TIE BEAMS Nos 1 & 2   SECTION "E-E" TIE BEAM No 3   SECTIONAL ELEVATION "A-A"



HALF SECTIONAL ELEVATION "B-B"   HALF FRONT ELEVATION

BAR LIST FOR TWO ABUTMENTS

Mark	Size	No Reqd.	Length	Bending Diagram
A3	[illegible]	52	6'-6"	Straight
B2	[illegible]	76	22'-6"	
C1	[illegible]	24	25'-0"	
D1	[illegible]	80	1'-0"	
D2	[illegible]	152	17'-6"	
D4	[illegible]	56	13'-4"	
U1	[illegible]	32	10'-2"	
U2	[illegible]	16	2'-6"	
U3	[illegible]	8	1'-0"	
B1	½"	48	7'-6"	5'-6", 45°
C2	½"	16	31'-6"	A 26'-9", B 2'-9", R=1'-3"
C3	½"	96	33'-0"	A 28'-3", B 2'-9"
C4	½"	16	32'-6"	A 25'-9", B 4'-9"
C5	½"	96	34'-0"	A 27'-3", B 4'-9"
A1	¾"	8	31'-0"	A 22'-6", B 2'-3", Radius=1'-3"
A2	⅝"	84	31'-0"	A 22'-6", B 2'-3"
A5	⅝"	66	9'-6"	8'-8", R=2½"
A3	1⅛"	36	27'-0"	A 24'-0", t 4", R 4½"
A4	1⅛"	36	27'-0"	A 24'-0", t 4", R 4½"
A7	½"	41	3'-8"	A 2'-4", t 2", R 2"
F1	⅝"	36	26'-8"	A 24'-0", t 3", R 3½"
F2	⅝"	1	5'-4"	A 3'-0", t 3", R 3½"
K1	½"	1	4'-4"	A 3'-0", t 2", R 2"
K4	⅝"	1	6'-0"	A 3'-0", t 4", R 4½"
G1	⅝"	16	36'-4"	A 9'-4", B 12'-4", C 10'-0", D 7'-3", R=3½"
G2	⅝"	16	30'-8"	A 8'-0", B 10'-2", C 7'-0", D 8'-0"
H1	⅝"	12	27'-8"	12'-4", 11'-0"
K1	½"	24	8'-9"	4'-0"
E1	⅞"	12	28'-0"	5'-3", 1'-3", R=9", 19'-5", 12", R=9", 3'-4"
E2	⅞"	12	19'-0"	5'-3", 2'-0", R=9", 10'-0", R=9", 2'-6", 3'-8"
C10 to C17	½"	4 Each	12'-4" to 10'-0" by 4"	4'-10 to 3'-8" Decr by 2"
G3 to G10	½"	8 Each	8'-4" to 13'-4" by 1'-0"	G3 to G10: 2'-10" to 6'-4" Incr. by 6"
G11 to G18	½"	8 Each	15'-2" to 6'-10" by 1'-8"	G11 to G18: 6'-3" to 2'-1" Decr. by 10"

SUMMARY OF QUANTITIES FOR TWO AB'T'S.

1680 Lin Ft of 1⅛" bars @ 4.303 Lbs per lin. ft =	7229 Lbs.
6286 " " " ⅞" " @ 2.044 " " " =	12849 "
248 " " " ¾" " @ 1.502 " " " =	373 "
627 " " " ⅝" " @ 1.043 " " " =	654 "
10600 " " " ½" " @ 0.850 " " " =	9010 "
4941 " " " ½" " @ 0.668 " " " =	3301 "
Plus 3% ± for over run	984 "
TOTAL	34403 Lbs.
Structural Steel (Anchor bolts Etc.)	140 Lbs.
Plus 3% for over run	5 "
TOTAL	145 Lbs.
Concrete Class "A"	306 Cu.Yds.
Excavation: Dry Common	92.7 Cu.Yds.
Wet "	169.3 " "
Dry Rock	" "
Wet "	84.8 " "
Treated Timber Header	400 Bd.Ft.

For General Notes, Summary of Quantities for Bridge and Layout see Sheet #3
For Detail of 125 ft x 20 ft. Thru Truss see Sheet No 5

COLORADO
STATE HIGHWAY DEPARTMENT
ABUTMENT DETAILS FOR
THRU TRUSS CONCRETE FLOOR BRIDGE
2-125 Ft. SPANS
Across YAMPA RIVER
Station 50+50.0
Near CRAIG   Sec.1, T.7, N.R.91, W.

Designed by E.F.W.	Approved by C. E. Bailey
Made by E.F.W.	Bridge Engineer
Checked by R.W.J.	Date 10-19-1925

STRUCTURE No B6-C

FED ROAD DIST NO.	STATE	FED AID PROJ NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	282-A	7	

Revised Jan. 7, 1926 PSE

To Craig

Sta 24+50 Extend 22'+22' CMP 10 ft and add Hdwls.

Sta 27+00 — Required 24'+30' CMP with Headwalls Also Two 15'+20' Side Culverts under Ditch. Remove 3'+3'+16 Wood Box. (Owner likely for Sure Culvert)

Sta 32+50 Extend 8'+22' CMP 10 ft and add Hdwls.

Sta 35+81, Extend 24'+18' CMP 14 and add Hdwls.

Sta 40+00 Required - 24'+30' CMP with Headwalls Also two 15'+20' C.M.P. side culverts with Hdwls. Remove 1'+4'+14' Wood Box.

Irrigation Ditch

STA. 21+00 BEGINNING OF F.A. PROJ. 282-A

S. 0° 43' E

10.38

-0.8 %

-0.2 %

+0.4 %

- 100' V.C. -

6176.8 6176.48 6176.3 6176.4

6174.3 6174.28 6174.4 6174.2

PL 7.6 PL 7.0 PL 11.8 PL 12.00

6190 6180 6170 6160

EXC. COM CU YDS.
EMB 15% CU YDS.
CU YDS.
OVERHAUL STA YDS.

20 25 30 35 40

PLAN SURVEYED PLOTTED NOTE BOOK No. BY C.M. & S. ENGINEERS

Irrigation Ditch

House Chicken House Barn

Sta 41+00 Reqd - 24'+30' CMP with 10 ft Hdwls Also Two 5'+20' Side Culverts with Hdwls Remove 1'+6'+16' Wood Box

Sta 43+65 Remove 13'+16' Wood Box. Sta 43+00 Required - Two 15'+20' Side Culverts with Headwalls

Sta +2+00 to 54+00, Remove three 48'+22' CMP and four 36'+22' CMP culverts Sta 50+00, Remove Bridge

Sta 47+25 Channel Survey of Sta 51+16.8 Highway

Sec 1, T6N, R91W.

Sec 12, T6N, R91W.

Sta 53+00, Remove Wood Bridge Sta 53+26, Remove Two 36'+22' C.M.P. Culverts

Sta 53+64, Remove 30'+22' C.M.P. Culvert.

YAMPA RIVER

Sta 58+36, Remove Wood Box Culvert and 30'+22' C.M.P.

Sta 60+35, Remove 36'+22' C.M.P. Culvert

Sta 62+30, Remove two 36'+22' C.M.P. Culverts.

Pt. 63+04.8

Sta 59+12 Remove Two 36'+22' C.M.P. Culverts.

Required - Two 125' span thru trusses with Concrete floor as per sheets 3, 4 and 5.

1/4 Sec Corner.

Sta 47+00 to Sta 63+00 Required to remove or Bridge along roadway

See sheet No. 8 for additional bridge data.

PC 63+64.1

Δ 14°00' R
D 5°
R 1146.0
T 140.7
L 280.0

PT 66+44.1

S. 15° 17' W.

YAMPA RIVER

STA. 56+00, END OF F.A. PROJ. 282-A

6180.0 6180.0 6180.0 6179.9 6179.6

+0.4 % 0.0 % -0.8 %

- 400' V.C. -

- 100' V.C. -

6174.4 6173.5 6172.8

Maximum High Water 6173.0

PI 6172.8

Profile of New Channel

Future Grade at Old Bridge Site. Bridge will be removed and old channel will be filled across, as part of future Project.

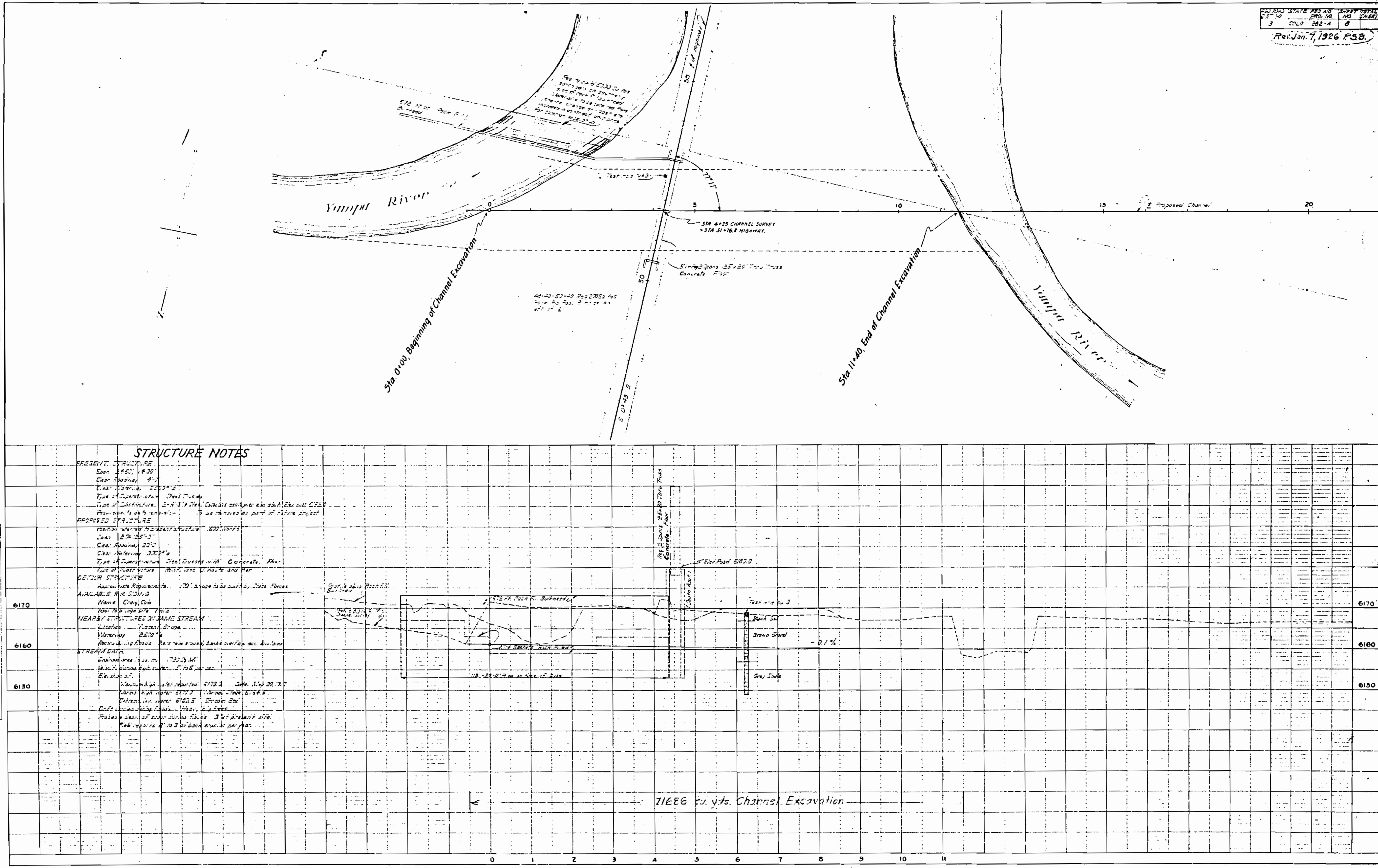
PROFILE SURVEYED PLOTTED NOTE BOOK No. BY C.M. & S. ENGINEERS

EXC. COM. CU YDS. 53
EMB. 15% CU YDS. 15491
CU YDS. 153-1
OVERHAUL STA YDS. 167-100

10 376
10 376
4-1772

40 45 50 55 60 65

EUGENE DIETZGEN CO. CHGO-N.Y.



STATE COLO
FED. AID PROJ. NO. 282-A
SHEET NO. 8
Rev. Jan. 7, 1926 P.S.B.
PLAN
PROFILE
Yampa River
Sta. 0+00, Beginning of Channel Excavation
Sta. 11+40, End of Channel Excavation
STA. 4+25 CHANNEL SURVEY = STA. 51+76.8 HIGHWAY.
Concrete Floor
℄ of Highway
℄ Proposed Channel
STRUCTURE NOTES
PRESENT STRUCTURE
Span
Clear Roadway
Clear Waterway
Type of Superstructure Steel Trusses
Type of Substructure
PROPOSED STRUCTURE
Span
Clear Roadway
Clear Waterway
Type of Superstructure Steel Trusses with Concrete Floor
Type of Substructure
DETOUR STRUCTURE
Approximate Requirements
AVAILABLE R.R. SIDING
Name Craig, Colo
NEARBY STRUCTURES ON SAME STREAM
Location
Waterway
STREAM DATA
Elevation of
Elev. Road 6180.0
Test pit no. 3
Black Soil
Brown Gravel
Grey Shale
-0.1%
6170
6160
6150
71686 cu. yds. Channel Excavation