

D. R. Andrew

S 30 38(4)
RS 0069(5)

See Standard M-100-A for STANDARD SYMBOLS

STATE DEPARTMENT OF HIGHWAYS DIVISION OF HIGHWAYS—STATE OF COLORADO

R.O.W. Utilities P.E. on Proj. CS 16-0069-16
RS 0069(5)

FEDERAL ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.
VIII	COLORADO	RS 0069(5)	1

AS CONSTRUCTED
INDEX OF SHEETS
REVISED DATE 6/22/76

PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. RS 0069(5) STATE HIGHWAY NO. 69 HUERFANO COUNTY

SCALES OF ORIGINAL DRAWINGS
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

TAB OF LENGTH AND DESIGN DATA

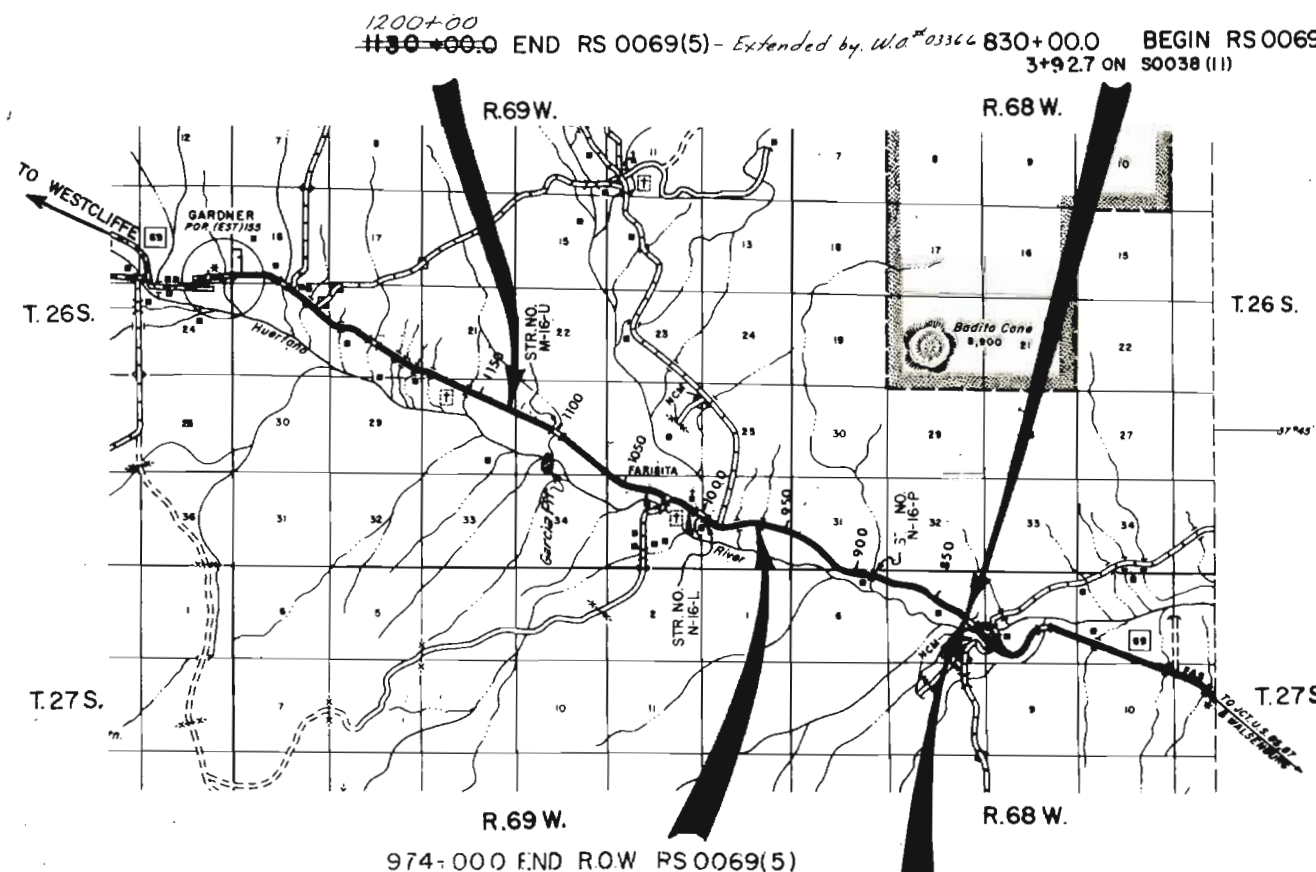
	ROADWAY LIN. FT.	MAJOR STRUCTURES LIN. FT.	R.O.W. LIN. FT.
830+00.0 BEGIN RS 0069(5) = 3+92.7 ON S 0038(11)	743.1		
831+15.6 BEGIN ROW RS 0069(5)			627.5
837+43.1 BK = EQUATION 837+50.5 AH	5,386.0		
891+36.5 STRUCTURE NO. N-16-P 891+63.5	120.7	27.0	5,533.7
892+84.2 BK = EQUATION 892+73.9 AH			8,126.1
974+00.0 END ROW 0069(5)	10,606.1		
998+80.0 STRUCTURE NO. N-16-L 999+41.0	10,131.0	61.0	
1100+72.0 STRUCTURE NO. M-16-U 1101+33.4 1179+ STRUCTURE NO. M-16-N 1130+00.0 END RS 0069(5) 1200+00 W.D. # 03366	2,866.6	61.4 20.8	
TOTALS	36,832.7	149.4	14,287.3

SUMMARY

	LIN. FT.	MILES
TOTAL ROADWAY	36,832.7	6.976
MAJOR STRUCTURE	170.4	0.322
TOTAL ROADWAY (NET AND GROSS LENGTH)	36,662.3	6.654
RIGHT OF WAY LENGTH	14,287.3	2.706

DESIGN DATA

MAXIMUM DEGREE OF CURVE	11°
MAXIMUM GRADE	7.6%
MINIMUM S.S.D. HORIZONTAL	320'
MINIMUM S.S.D. VERTICAL	310'
MAXIMUM DESIGN SPEED	45 MPH
1995 DESIGN TRAFFIC VOLUMES	142 DHV 720 ADT



974+000 END ROW RS 0069(5)

831+15.6 BEGIN R.O.W RS 0069(5)

SHEET NO.	
1	TITLE SHEET, SKETCH MAP AND TABULATION OF LENGTH AND DESIGN
2	TYPICAL SECTIONS
3	GENERAL NOTES
4 - 5	SUMMARY OF APPROXIMATE QUANTITIES
6 - 8	STRUCTURE QUANTITIES
9	SUMMARY OF EARTHWORK AND SETTING QUANTITIES
10	GUARD RAIL TABULATION AND DELINEATORS
11	SURFACING PLAN
12	PIT SKETCH
13	TYPE 3 GUARD RAIL CONNECTION TO EXISTING STRUCTURE
14	GUARD RAIL (TYPE 3A) CONNECTION TO EXISTING STRUCTURE
15	CULVERT HEADWALLS STATION 891+40
16	DETAIL OF INLET BASIN AND CONCRETE LINED IRRIGATION DITCH
17 - 27	ALIGNMENT PLAN AND PROFILE SHEETS
28 - 41	Structures Cross Sections
42 - 44	Stripping - Garfield Dist
45 - 47	Roadway X Sect. Sta. 830+00 to 850+00
M-100-A	STANDARD SYMBOLS
M-203-B	APPROACH ROADS, FLARING, CUT SLOPE TREATMENT, BRIDGE & CREST WIDENING
M-203-C	DITCH TYPES
M-203-SC	SUPERELEVATION OF CURVES-CROWNED HIGHWAYS
M-206-AA	EXCAVATION AND BACKFILL FOR STRUCTURES
M-500-A	LETTERS AND FIGURES FOR STRUCTURE NUMBERS
M-601-KA	CULVERT TYPE "S" SADDLE HEADWALL FOR PIPE
M-601-L	HEADWALL INTERCEPTING HEADWALL AND CULVERT OUTLET PAVING
M-601-WW	WINGWALLS FOR CONCRETE BOX CULVERTS
M-603-MA	METAL CULVERT PIPE - H-20 LOADING
M-603-RC	REINFORCED CONCRETE PIPE
M-606-AB	GUARD RAIL, TYPE 3
M-607-A	WIRE FENCE AND GATES
M-614-TB	TRAFFIC SIGNING FOR HIGHWAY CONSTRUCTION

S-612-51A	TYPICAL DELINEATOR INSTALLATIONS	(2 SHEETS)	10-26-72
S-614-52A	BARRICADES, DRUMS AND VERTICAL PANEL CHANNELIZING DEVICES		12-4-74

DIVISION OF HIGHWAYS

APPROVED
E. N. Haase by J. M. Cox 8/29/75
CHIEF ENGINEER DATE

AS CONSTRUCTED INFORMATION

CONTRACTOR	Pioneer Const. Co.
ENGINEER	B. B. Warren
PROJECT STARTED	Oct 6, 1975
PROJECT COMPLETED	June 22, 1976
AS CONSTRUCTED PLANS APPROVED	
TITLE	DATE

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED DATE

DIVISION ENGINEER

SCALE OF MILES

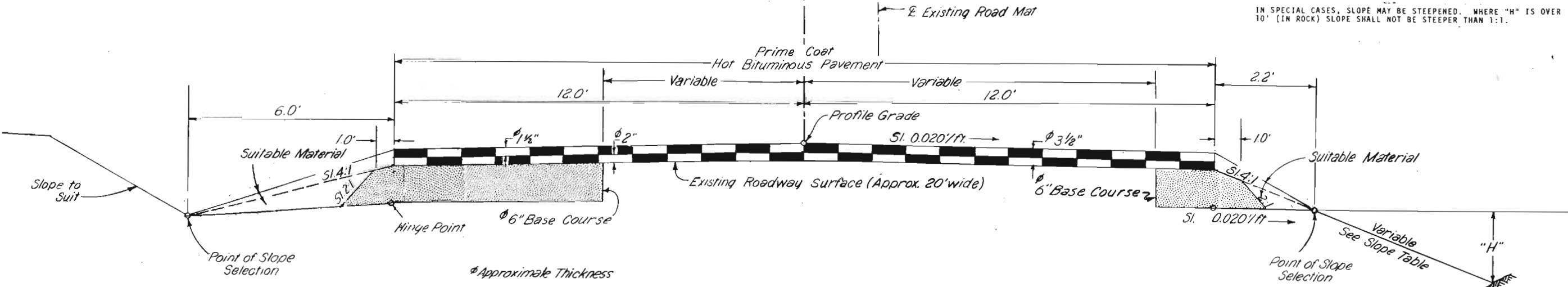
AS CONSTRUCTED
REVISED DATE 6/22/76

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(5)	2	47

NOTE:
SEE STANDARDS FOR DETAILS OF CUT SLOPE TREATMENT, FLARING AND WIDENING.

TYPICAL SECTION "A"
STA. 830+00 to STA. 851+00
STA. 866+00 to STA. 895+00
STA. 919+00 to STA. 949+00
STA. 976+00 to STA. 1058+50
STA. 1130+00 to STA. 1200+00
To be constructed

FILL SLOPES:
SLOPE 4:1 WHERE "H" IS 3' OR LESS
SLOPE 3:1 WHERE "H" IS 3' TO 5'
SLOPE 2:1 WHERE "H" IS OVER 5'
IN SPECIAL CASES, SLOPE MAY BE STEEPENED, WHERE "H" IS OVER 10' (IN ROCK) SLOPE SHALL NOT BE STEEPER THAN 1:1.



THE DEPTH AND WIDTH OF THE SIDE DITCH SHALL BE VARIED WHERE NECESSARY IN ORDER TO PROVIDE PROPER DRAINAGE.

BREAK POINTS ON SLOPES AND IN BOTTOMS OF DITCHES SHALL BE ROUNDED ON CONSTRUCTION FOR A PLEASING APPEARANCE.

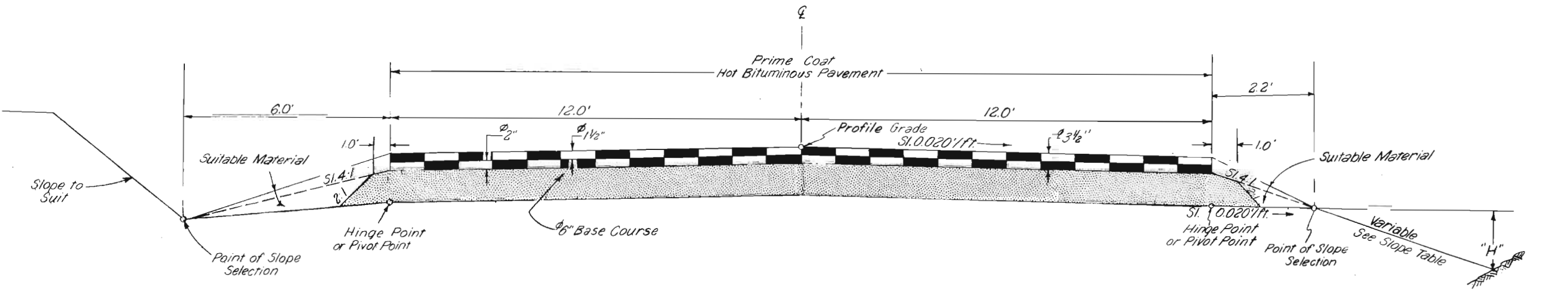
TYPICAL SECTION "B"

STA. 851+00 to STA. 866+00
STA. 895+00 to STA. 919+00
STA. 949+00 to STA. 976+00
STA. 866+00 to STA. 895+00
STA. 835+40 to STA. 851+00
STA. 1058+50 to STA. 1070+00

MATERIAL SHALL BE PLACED IN SEPARATE COURSES AT THE FOLLOWING APPROXIMATE RATES PER 100 LIN. FT. OF ROADWAY.

BITUMINOUS PAVEMENT	TOP LAYER	22 TONS
	BOTTOM LAYER	30 TONS

THESE RATES HAVE BEEN DETERMINED FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. RATES SHOULD BE ADJUSTED DURING CONSTRUCTION TO OBTAIN THE REQUIRED APPROXIMATE THICKNESS.



MATERIAL SHALL BE PLACED IN SEPARATE COURSES AT THE FOLLOWING APPROXIMATE RATES PER 100 LIN. FT. OF ROADWAY.

	Plan	Final
BITUMINOUS PAVEMENT		
TOP LAYER	22 TONS	30 TONS
BOTTOM LAYER	30 TONS	22 TONS
BASE COURSE	87 TONS	87 TONS

THESE RATES HAVE BEEN DETERMINED FROM INFORMATION AVAILABLE AT THE TIME OF DESIGN. RATES SHOULD BE ADJUSTED DURING CONSTRUCTION TO OBTAIN THE REQUIRED APPROXIMATE THICKNESS.

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(5)	3	47

AS CONSTRUCTED
REVISED DATE 6/22/76

GENERAL NOTES

FOR PRELIMINARY PLAN QUANTITIES OF BITUMINOUS MATERIALS
, THE FOLLOWING RATES OF APPLICATION WERE USED:

PRIME COAT MC 70 @ 0.25 GALS. PER SQ. YD.
TACK COAT CSS-1(DILUTED EM. ASPH.) @ 0.1 GALS. PER SQ. YD.

DILUTED EMULSIFIED ASPHALT FOR TACK COAT SHALL CONSIST OF 1 PART
EMULSIFIED ASPHALT AND 1 PART WATER.

RATES OF APPLICATION SHALL BE AS DETERMINED BY THE ENGINEER AT THE
TIME OF APPLICATION.

WATER SHALL BE USED AS A DUST PALLIATIVE WHERE REQUIRED. LOCATIONS SHALL
BE AS ORDERED.

ANY LAYER OF BITUMINOUS PAVEMENT THAT IS TO HAVE A SUCCEEDING LAYER PLACED
THEREON SHALL BE COMPLETED FULL WIDTH BEFORE SUCCEEDING LAYER IS PLACED.

ROAD APPROACHES WHICH REQUIRE BITUMINOUS PAVEMENT SHALL BE PRIMED AND A
2" THICKNESS OF PAVEMENT PLACED AS FOLLOWS:

PUBLIC APPROACHES AND ENTRANCES TO BUILDINGS OR RESIDENCES SHALL BE
PAVED 50 FT. OUT FROM EDGE OF SHOULDER OR TO THE RIGHT OF WAY LINE
WHICHEVER IS LESS. FIELD ENTRANCES SHALL BE PAVED 4 FT. OUT FROM
EDGE OF SHOULDER.

DEPTH OF MOISTURE-DENSITY CONTROL FOR THIS PROJECT SHALL BE AS FOLLOWS:

FULL DEPTH OF ALL EMBANKMENTS.
BASES OF CUTS 0.5 FOOT.
BASES OF FILLS 0.5 FEET.

EXCAVATION REQUIRED FOR COMPACTION OF BASES OF CUTS AND FILLS WILL
BE CONSIDERED AS SUBSIDIARY TO THAT OPERATION AND WILL NOT BE PAID
FOR SEPARATELY.

IT IS ~~ESTIMATED~~ THAT ~~1000~~ ¹⁸⁷⁵ HOURS OF FLAGGING FOR CONTROLLING TRAFFIC WILL
BE REQUIRED FOR THIS PROJECT.

SIGNS, GUARD POSTS AND DELINEATORS ~~WILL BE~~ REMOVED BY STATE FORCES.

THE FOLLOWING ~~SHALL BE~~ ^{WILL BE} FURNISHED WITH EACH BITUMINOUS PAYER:

SKI TYPE DEVICE AT LEAST 30 FEET IN LENGTH.

SHORT SKI OR SHORT SHOE.

IT IS ESTIMATED THAT 40 HOURS OF BLADING WILL BE REQUIRED TO PROVIDE
DRAINAGE.

SIGNING AND STRIPING TO BE DONE BY STATE FORCES.

FINAL
SUMMARY OF APPROXIMATE QUANTITIES

ASS. CONSTRUCTION
REVISED DATE - 6/22/76

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
XXX	CCCC	RS 0069(5)	4	47

INDEX Form #305 BOOK PAGE SHEET			CONTRACT ITEM NO.	CONTRACT ITEM	W.O. #03366 Plan	UNIT	Roadway Plan	Including W.O. & Roadway Final	Major Str. No. N-16-P	Major Str. No. N-16-P Final	Major Str. No. N-16-L Final	Major Str. No. N-16-L Plan	Major Str. No. N-16-N W.O. Final	Major Str. No. N-16-U W.O. Final	Major Str. No. N-16-U Plan	Project TOTAL w/w.o. Plan	PROJECT TOTALS	Project TOTAL w/w.o. Final	Diff. + -	% diff. +
			202	Removal of Structure	1	Each	16	16								17	16	16	0	-
			202	Removal of Headwall		Each			2	2						2	2	2	0	-
			202	Removal of Bridge		Each	1	1								1	1	1	0	-
			202	Removal of Portions of Present Structure		Each										1	1	1	0	-
			202	Removal of Portions of Present Structure	1179+ 1	Each							1		1	1	1	1	0	-
			202	Removal of Fence		Lin. Ft.	800	880								880	800	880	+80	+10.0%
			203	Unclassified Excavation	2621	Cu. Yd.	23,000	33,436								25,621	23,000	33,436	+10,436	+45.4%
			203	Rock Fill		Cu. Yd.	300	308								300	300	308	+8	+2.7%
			203	Stripping		Cu. Yd.	5,600	9,522								5600	5,600	9,522	+3,922	+70.0%
													Pay Final Field Quantity							
			203	Compaction (AASHTO T 99)	1044	Cu. Yd.	28,000	40,426								29,049	28,000	40,426	+12,426	+44.4%
			203	Blading	20	Hour	40	47								60	40	47	+7	+17.5%
			204	Haul	363	Yd. Mi.	8,300	11,900								8663	8,300	11,900	+3,600	+43.4%
			204	Haul	7668	Ton. Mi.	91,000	89,536								98668	91,000	89,536	-1,464	-1.6%
			206	Structure Excavation	14	Cu. Yd.	780	711	780	780						1574	1,560	1491	-69	-4.4%
			206	Structure Backfill (Class 2)	16	Cu. Yd.	460	443	230	230						706	690	673	-17	-2.5%
			209	Wetting	623	M. Gal.	1,490	1271								2113	1,490	1271	-219	-14.7%
			210	Reset Mailbox Structure	2	Each	2	2								4	2	2	0	-
			304	Aggregate Base Course (Class 6)	1848	Ton	12,400	15,108.45								14,248	12,400	15,108.45	+2,708.45	+21.8%
			403	Hot Bituminous Pavement (Grading E) (Hydrated Lime)	3640	Ton	16,600	19,514.85								20,240	16,600	19,514.85	+2,914.85	+17.6%
			411	Asphalt Cement (AC-10)	222	Ton	950	1140.66								1172	950	1140.66	+190.66	+20.1%
			411	Emulsified Asphalt (CSS-1)	1867	Gal.	7,400	1576								9261	7,400	1576	-5824	-78.7%
			411	Liquid Asphaltic Material (MC-70)	2100	Gal.	10,400	15,432								12,500	10,400	15,432	+5032	+48.4%
			506	Riprap	5	Cu. Yd.	82	87	78	77						165	160	164	+4	+2.5%
			507	Concrete Slope and Ditch Paving (Reinforced)	0	Cu. Yd.	5	4.58								5	5	4.58	-0.42	-8.4%
			509	Structural Steel (Galvanized)	2620	Lbs.							2620	6,975	6,975	9595	6,975	9595	+2620	+37.6%
			601	Concrete Class A (Wall)		Cu. Yd.	5	5.00	46	46.00						51	51	51.00	0	-
			602	Reinforcing Steel		Lb.	200	140	2900	2900						3040	3,100	3040	-60	-1.9%
			603	24 Inch Reinforced Concrete Pipe	26	Lin. Ft.	22	50								48	22	50	+28	+127.3%
			603	18 Inch Corrugated Steel Pipe		Lin. Ft.	36	36								36	36	36	0	-
			603	24 Inch Corrugated Steel Pipe		Lin. Ft.	710	720								710	710	720	+10	+1.4%
			603	36 Inch Corrugated Steel Pipe		Lin. Ft.	132	26								132	132	26	-106	-80.3%
			603	72 Inch Corrugated Steel Pipe		Lin. Ft.	90	90								90	90	90	0	-
			603	84 Inch Corrugated Steel Pipe		Lin. Ft.			140	140						140	140	140	0	-
			603	29x18 Inch Corrugated Steel Pipe Arch		Lin. Ft.	218	218								218	218	218	0	-
			603	36x22 Inch Corrugated Steel Pipe Arch		Lin. Ft.	260	260								260	260	260	0	-
			603	43x27 Inch Corrugated Steel Pipe Arch		Lin. Ft.	162	174								162	162	174	+12	+7.4%

FEDERAL ROAD DIVISION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
XIX	COLORADO	RS0069(5)	5	47

STRUCTURE QUANTITIES

REVISIONS
DATE 6/22/76

FEDERAL ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.
1	COLORADO	RS 0089(5)	6

INDEX Form #305			LOCATION	UNCLASSIFIED EXCAVATION			STRUCTURE EXCAVATION CUBIC YARD	STRUCTURE BACKFILL CUBIC YARD	REMOVAL OF STRUCTURE EACH	AGGREGATE BASE COURSE SURFACING (CLASS 6) TON	HOT BITUMINOUS PAVEMENT (GRADING E) TON	CONCRETE Wall CUBIC YARD	REINFORCING STEEL LB.	RIPRAP CUBIC YARD	CULVERT PIPE ITEM 603										"H" OVER CULV. FT.	SLOPE AND DITCH PAVING CUBIC YARD	END SECTION			MISCELLANEOUS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
BOOK	PAGE	SHEET		CUBIC YARD											CSP	RCP	CSPA	LINEAR FEET									EACH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
				EXCAV.	EMB.	DITCH												18"	24"	36"	72"	84"	24"	216"				36"	432"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
			S-0	827+88							39.35																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

* Quantities Included In Major Structure Summary.

880
Remove: 240 lin. ft. of fence, Rt.
Required: 1000 lin. ft. of barbed wire (fence, metal posts; (one barbed wire gate); 2 end posts and 2 corner and line brace posts.

4.58
Req'd 5 Cu. Yds. Concrete Slope and Ditch Paving (Reinforced) for Irrig. Ditch Lt.
Req'd 25 Lin. Ft. Guard Rail Type 3

308
Req'd 300 Cu. Yds. Rock Fill in Ditch Rt.

1-Removal of Bridge

1-Maintenance Of Detours.

STRUCTURE QUANTITIES

AS CONSTRUCTED
REVISED DATE 6/22/76

FEDERAL ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.
9	COLORADO	RS 0089 (5)	7

INDEX Form #305			LOCATION	UNCLASSIFIED EXCAVATION			STRUCTURE EXCAVATION		STRUCTURE BACKFILL		REMOVAL OF STRUCTURE	AGGREGATE BASE COURSE SURFACING (CLASS 6)	HOT BITUMINOUS PAVEMENT (GRADING E)	CONCRETE Wall	REINFORCING STEEL	RIPRAP	CULVERT PIPE ITEM 603												"H" OVER CULV.	SLOPE AND DITCH PAVING	END SECTION				MISCELLANEOUS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
BOOK	PAGE	SHEET		CUBIC YARD			CUBIC YARD		CUBIC YARD								LINEAR FEET														EACH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
				EXCAV.	EMB.	DITCH			CL 2								EACH	TON	TON	CL. A	LB.	CUBIC YARD	CSP	RCP	CSPA	18"	24"	36"			72"	84"	24"	36"		48"	60"	72"	FT.	CUBIC YARD																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
Form # 266																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																</

Right 125 Lin. Ft. Guard Rail Type 3*

STRUCTURE QUANTITIES

AS CONSTRUCTED
REVISED DATE 6/22/76

FEDERAL ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.
9	COLORADO	RS 0069(5)	8

INDEX Form #305			LOCATION	UNCLASSIFIED EXCAVATION			STRUCTURE EXCAVATION		STRUCTURE BACKFILL		REMOVAL OF STRUCTURE	AGGREGATE BASE COURSE SURFACING (CLASS 0)	HOT BITUMINOUS PAVEMENT (GRADING)	CONCRETE	REINFORCING STEEL	RIPRAP	CULVERT PIPE Item 603										"H" OVER CULV.	DITCH PAVING	PEND SECTION		MISCELLANEOUS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
BOOK	PAGE	SHEET		CUBIC YARD			CUBIC YARD	CUBIC YARD	EACH	TON							TON	CUBIC YARD	CL. A	LB.	CUBIC YARD	LINEAR FEET										FT.	CUBIC YARD	EACH																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
				EXCAV.	EMB.	DITCH																18"	24"	36"	72"	84"			24"	36"					48"	60"	72"	84"	96"	108"	120"	144"	168"	192"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
Form # 266																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												</

*Quantities Included In Major Structure Summary.

AS CONSTRUCTED
REVISED DATE 6/22/76

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(5)	9	47

SUMMARY OF EARTHWORK QUANTITIES

WETTING QUANTITIES

INDEX D.O.H. Form #7				Plan	Final
BOOK	PAGE	SHEET	WETTING	M. Gal.	M. Gal.
1					
2			Compaction	1,101	208.4
			H.P.I. Surf. (Minim.)	0	198.0
			Surfacing	186	458.8
			Dust Palliative	197	406.0
			Total For Pay Quantity	1,484	1271.20

INDEX BOOK PAGE SHEET				Plan	Final
				Cu. Yds.	Cu. Yds.
Misc.	11		Unclassified Excavation		
Form # 127	Sh. 44		Rock Fill		308
	Sheet 8		Roadway Cross Sections	21,491	30,484
	Sheet 8		Structure Quantities As Excav.	200	53
			Structure Quantities As Ditch	650	174
			Est. For Cut Slope Treatment	100	0
		44	Shoulder Exc.		2981
			Total For Pay Quantity	22,441	33,700
					33,436
			Compaction (AASHTO T-99)	Cu. Yds.	Cu. Yds.
			Moisture and Density Control		
			Base of Cuts & Fills (w.o. # 03364)		1,037
		44	Embankment (Net)	15,756	23,574
		44	Base of Cuts And Fills	11,000	8,779
		Sheet 8	Structure Quantities As Emb.(Net)	770	149
		Form # 266-14-27, 36, 37, 43, 45	Added Emb. (Scarify oil Mat)		6,761
			Total For Pay Quantity	27,526	40,300
					40,426
			Haul	Yd. Mi.	Yd. Mi.
			From Mass Diagram		11,392
		Form # 127	Est. For Shoulder Material	3,458	11,452
			Est. For Flattening Slopes	1,556	0
			Est. For Structure Quant. As Emb.	957	0
		5-31	Est. For Rock Fill	1,856	23
				440	485
			Total For Pay Quantity	8,267	11,960
					11,900
			Roadway Quantities Balance [For Information Only]	Cu. Yds.	Cu. Yds.
			Excavation - Unclassified	21,491	
			Embankment Net & Factored (1.0)	Cu. Yds.	Cu. Yds.
			Roadway From Cross Sections	15,756	
			Structure Quant. As Emb.	770	
			Flattening Slopes	3,462	
			Shoulder Material	1,203	
			Rock Fill	300	
			Total	21,491	

CONSTRUCTED
AS F
REVISED DATE 6/22/76

FEDERAL ROAD DESIGN NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(5)	10	47

DELINEATORS

Ref. Hwy #266
Ref. Sta. 266

Station to Station	Side	Spacing	Type I		Type III	
			Plan	Each Final	Plan	Each Final
832+ to 836+	Lt. & Rt.	7'00" Curve	8	8		
838+ to 845+	Lt. & Rt.	6'00" Curve	10	10		
846+ to 850+	Lt. & Rt.	5'00" Curve	6	6		
852+ to 872+	Lt. & Rt.	1'30" Curve	18	16		
875+ to 884+	Lt. & Rt.	3'00" Curve	10	10		
887+ to 892+	Lt. & Rt.	10'00" Curve	10	10		
893+ to 902+	Lt. & Rt.	1'00" Curve	10	8		
906+ to 918+	Lt. & Rt.	8'00" Curve	14	14		
923+ to 931+	Lt. & Rt.	1'00" Curve	8	8		
934+ to 951+	Lt. & Rt.	5'00" Curve	16	16		
960+ to 975+	Lt. & Rt.	5'00" Curve	14	14		
980+ to 991+	Lt. & Rt.	6'00" Curve	16	16		
992+ to 995+	Lt. & Rt.	3'00" Curve	6	6		
997+ to 998+	Rt.	Appr. to Bridge	4	4	1	1
999+ to 1001+	Lt.	Appr. to Bridge	4	4	1	1
1002+ to 1009+	Lt. & Rt.	11'00" Curve	12	14		
1012+ to 1025+	Lt. & Rt.	2'30" Curve	10	12		
1028+ to 1038+	Lt. & Rt.	1'00" Curve	8	8		
1042+ to 1051+	Lt. & Rt.	3'00" Curve	10	10		
1056+ to 1082+	Lt. & Rt.	1'20" Curve	20	20		
1099+ to 1102+	Lt. & Rt.	Bridge	8	8	2	2
1103+ to 1117+	Lt. & Rt.	4'00" Curve	12	12		
1179+ to 1180+	Lt. & Rt.	Appr. to Bridge	0	8	0	2
1183+ to 1195+	Lt. & Rt.	4'00" Curve	0	16		
Totals			234	258	4	6

Guard Rail Tabulation

Station to Station	Side	Guard Rail Type 3		Type 3A Anchors	
		Lin. Ft. Plan	Final	Each Plan	Final
891+40	Rt.	175	175	2	2
997+30 to 1000+17.5	Rt.	225	200	2	2
998+05 to 1000+92.5	Lt.	225	225	2	2
1099+22 to 1102+08	Rt.	225	225	2	2
1099+97 to 1102+83	Lt.	225	225	2	2
* 1177+93 to 1179+43	Lt. & Rt.	0	225	0	2
* 1179+64 to 1181+14	Lt. & Rt.	0	225	0	2
Totals		1075	1500	10	14

* - W.O. # 03366
* 5'-3" Spacing
See Details
Guard Rail for Bridges Included in Major Structure Summary

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS-0069(5)	11	47

AS CONSTRUCTED
REVISED DATE 6/22/76

SURFACING PLAN

		Ref. Work Sheets						Ref. Work Sheets					
Station to Station	Source	Quantity - Tons						Haul - Ton Mile					
		Base Course Plan	Surface Course - Hot Bit. Pavement				Base Course Plan	Surface Course - Hot Bit. Pavement					
			Note: Aggr. Layer Reversed										
			Base Course	Plan	Final	Plan		Final	Base Course	Plan	Final	Plan	Final
Aggr. Base Course Class 6	Aggr. Base Course Cl. 6 Final	Top Layer Grading E	Top Layer Grading E	Bottom Layer Grading E	Bottom Layer Grading E	Aggr. Base Course Class 6 Plan	Aggr. Base Course Class 6 Final	Top Layer Grading E	Top Layer Grading E	Bottom Layer Grading E	Bottom Layer Grading E		
① 830+00 to 832+00 ^{837+43' BK.}	Garcia Pit	—	128.85	44	210.65	60	186.05	715.16	250	1169.18	340	1032.64	
② 832+00 to 851+00 ^{837+50.5 AH.}		781	671.45	418	366.50	570	319.50	4,265	3592.86	2,283	1961.11	3,113	1709.61
③ 851+00 to 880+00 ^{892+84.2 BK.}		1,305	1,834.75	330	1167.25	450	947.50	6,708	8856.07	1,697	5634.14	2,313	4573.44
④ 880+00 to 895+00 ^{892+73.9 AH.}		525	219.20	638	77.95	870	79.65	2,478	966.92	3,012	343.85	4,107	351.35
⑤ 895+00 to 919+00		2,088	1,131.45	528	663.20	720	531.35	8,812	4,709.61	2,229	2,760.54	3,038	2,211.72
⑥ 919+00 to 949+00 ⁹⁴⁸⁺⁰⁰		639	1,440.65	660	777.80	900	574.05	2,371	5,273.59	2,449	2,847.19	3,339	2,101.35
⑦ 949+00 to 970+00 ⁹⁴⁸⁺⁰⁰ ⁹⁵⁸⁺⁰⁰		2,349	873.00	594	257.15	810	233.50	7,447	2,873.26	1,883	846.34	2,568	768.51
⑧ 970+00 to 1068+00 ⁹⁵⁸⁺⁰⁰ ⁹⁷⁶⁺⁰⁰		2,019	965.85	2,464	507.35	3,360	442.25	3,736	2,922.75	4,559	1,535.29	6,216	1,338.29
⑨ 1068+00 to 1089+00 ⁹⁷⁶⁺⁰⁰ ¹¹³⁰⁺⁰⁰		22	4,947.80	22	4,427.65	30	3,540.20	18	6,913.59	18	6,186.78	24	4,946.74
* ⑩ 1089+00 to 1090+00 ¹¹³⁰⁺⁰⁰ ¹²⁰⁰⁺⁰⁰			2,329.85	22	2,195.00	30	1,732.75		3,255.51	18	3,067.09	25	2,421.18
1090+00 to 1130+00	1,108		880		1,200		1,341		1,065		1,452		
From List of Structures	380	451.95		213.55	165	64.00	1,292	820.14		586.92	561	116.79	
Widening For Guard Rails	37	113.65	11	—	11	#	120	158.80	36	#	36	#	
Est. For Corr. Irregularities	1,126	#	—	720	#	3,859	#	#	#	1,922	—		
TOTALS		12,379	15,108.45	6,611	10,864.05	9,896	8,650.80	42,447	41,058.26	19,499	26,938.43	29,054	21,571.62

- Included with Roadway Quantities
* - Work Order # 03366

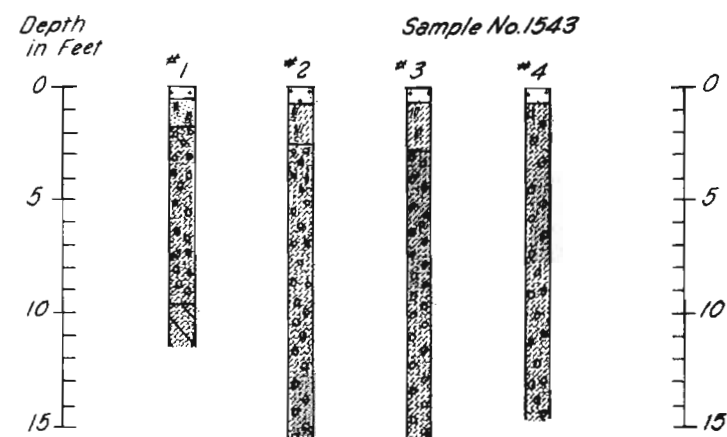
Note: Stabilization Based On:

- 1 EDLA 18" 10
- 2 Regional Factor 1.25
- 3 Serviceability Index 2.0
- 4 Subgrade R Value 14 Min.
- 5 Strength Coefficients:
Hot Bituminous Pavement . 0.44
Aggr. Base Course 0.14

AS CONSTRUCTED
REVISED DATE 6/22/76

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
III	COLORADO	RS0069(5)	12	47

LOG OF PIT

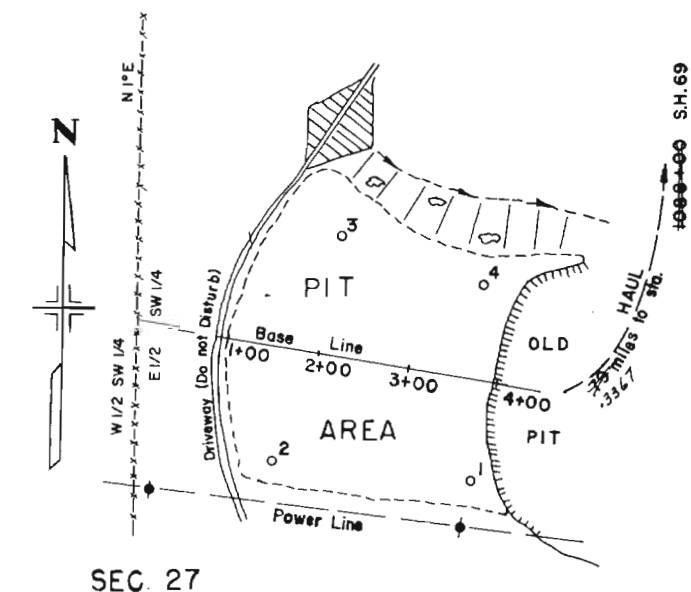


For Test Symbols See Standard M-100-A

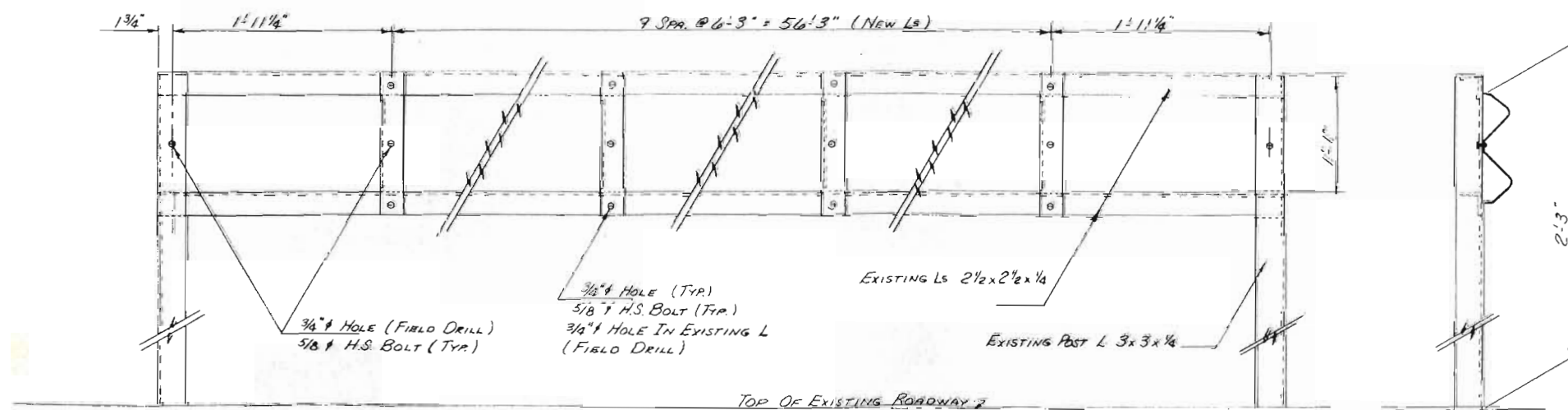
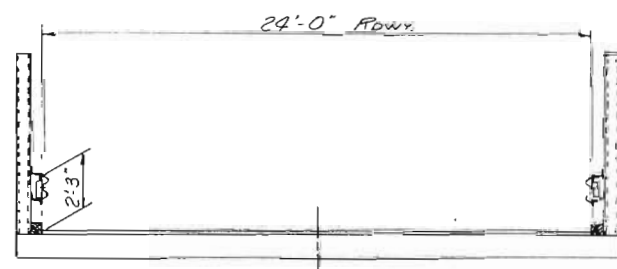
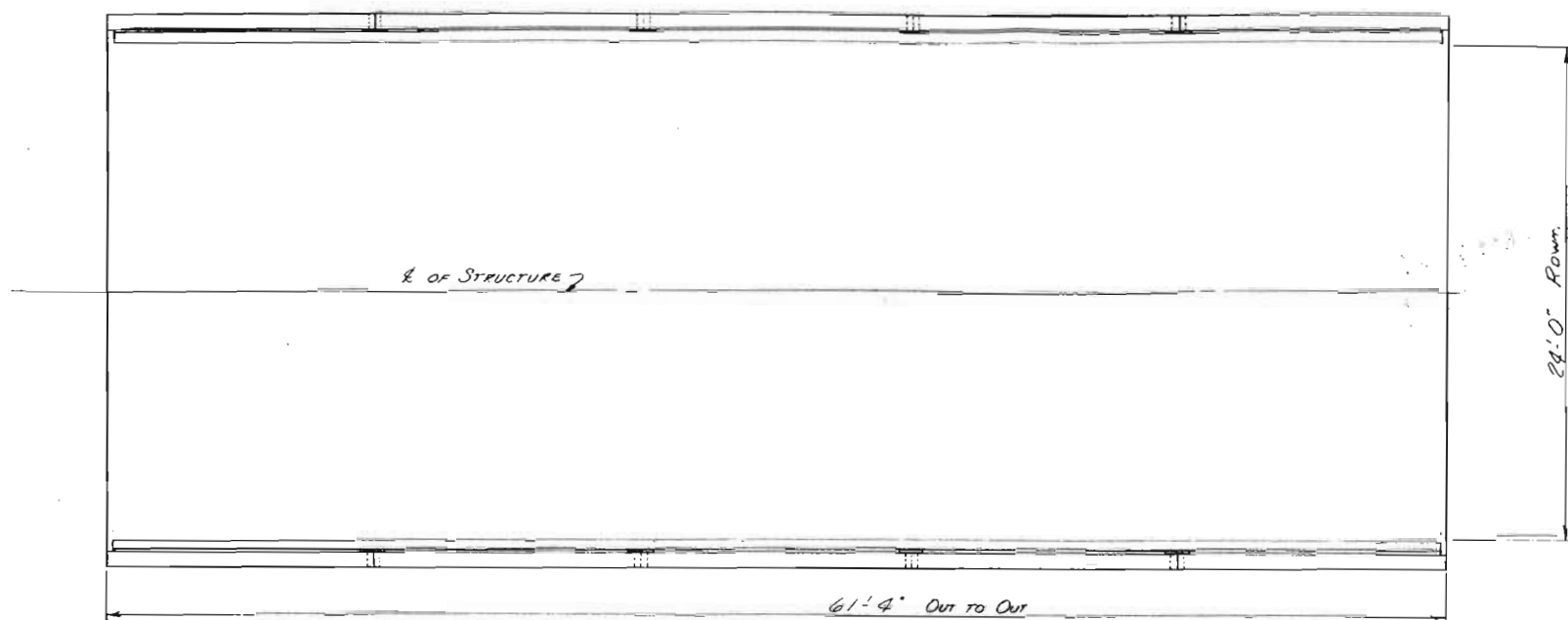
GARCIA PIT

LOCATION: Part of the east 1/4 of the southwest 1/4 Sec. 27 T. 26 S. R. 69 W.
OWNER: Augustine Garcia, Route 1, Box 4 Gardner, Colorado 81040
USE: Base Course, Hot Bituminous Pavement
QUANTITY AVAILABLE: 38,200 Cu. Yds.
HAUL ROUTE: 0.75 mile to Sta. 1109+00
STRIPPING: Removing Overburden 2,800 Cu. Yds. 4761
Replacing Overburden 2,800 Cu. Yds. 4761

Note: One Temporary Cattle Guard will be required



DESIGNED BY	CHECKED BY	DATE	CHECKED BY	QUANTITIES BY	CHECKED BY



AS CONSTRUCTED
NO REVISIONS DATE 6/22/76

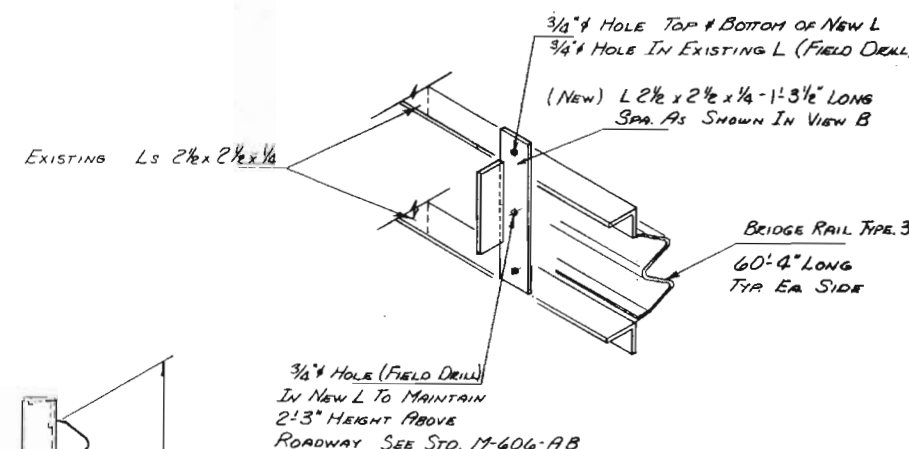
FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS0069(5)	13	47
REVISIONS				

BOLTS AND ANGLES (GALVANIZED) REQUIRED TO ATTACH TYPE 3 GUARD RAIL TO STRUCTURE N-16-L WILL NOT BE PAID SEPARATELY BUT SHALL BE INCLUDED IN THE WORK.

SEE STANDARD M-606-AB FOR CONNECTION TO ROADWAY GUARD RAIL.

ROADWAY WILL CARRY THE ITEM TYPE 3 GUARD RAIL

GUARD RAIL WILL BE PAID FOR AS GUARD RAIL TYPE 3



DIVISION OF HIGHWAYS	
TYPE 3 GUARD RAIL CONNECTION TO EXISTING STRUCTURE	
Designer J. EWERT	Structure N-16-L
Detailer D. SOLT	Numbers
Drawing Number B	of Drawings

Revision Dates	(Preliminary Stage Only)

AS CONSTRUCTED
REVISED DATE 6/22/76

FEDERAL ROAD REGION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	RS 0069(5)	14	47

REVISIONS	

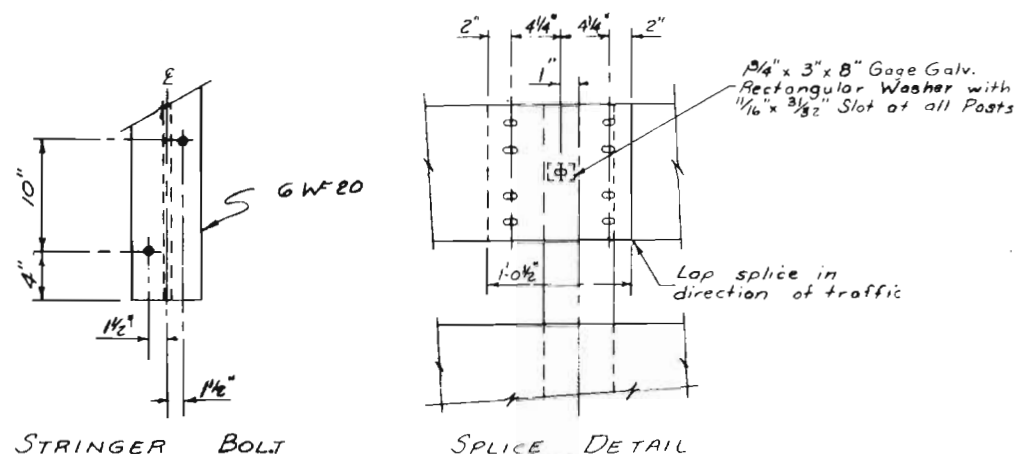
NOTES:

POSTS SHALL BE PERPENDICULAR TO THE GRADE OF THE DECK.

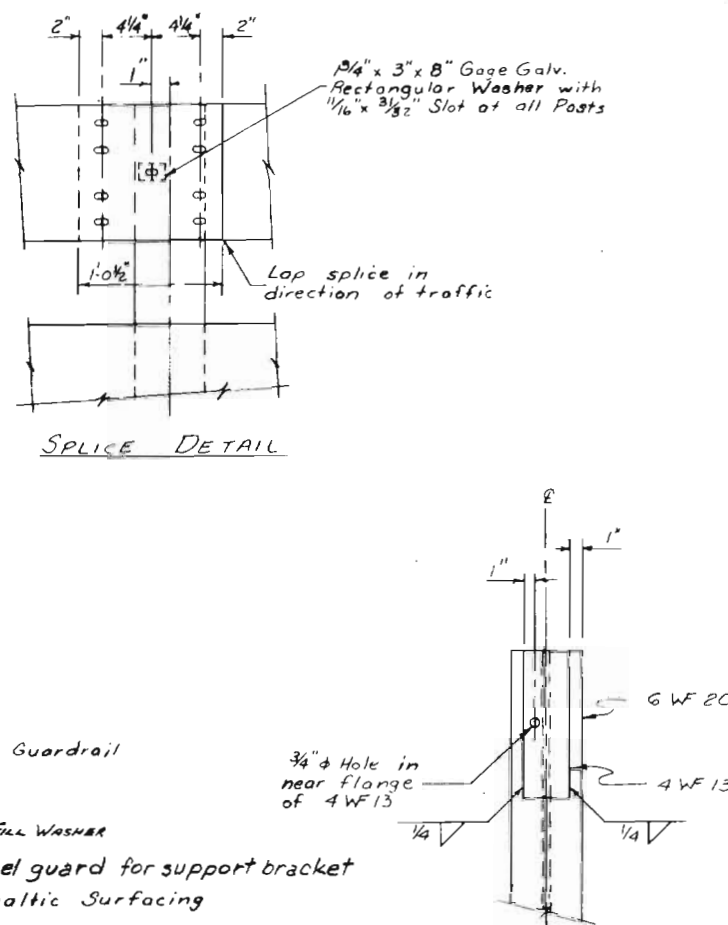
ALL POSTS, CHANNEL, CHANNEL SPLICE, *POST BRACKETS*,
SLEEVES, BOLTS, NUTS AND WASHERS SHALL BE
GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH THE
SPECIFICATIONS AND SHALL BE MEASURED AND PAID FOR IN
ACCORDANCE WITH SECTION 509.

~~CHANNEL SHALL BE CONTINUOUS OVER NOT LESS THAN TWO~~
~~(2) POSTS.~~

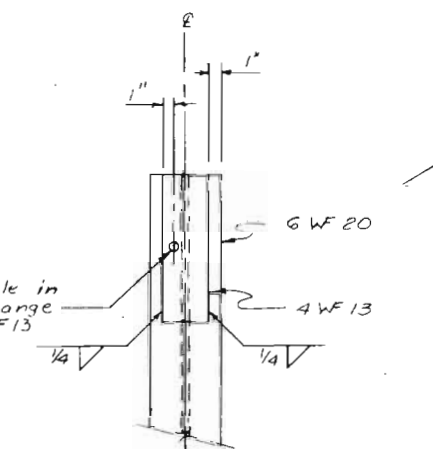
ALL EXPOSED CORNERS SHALL BE GROUND SMOOTH.
SEE STANDARD M-606-AB FOR ADDITIONAL DETAILS.



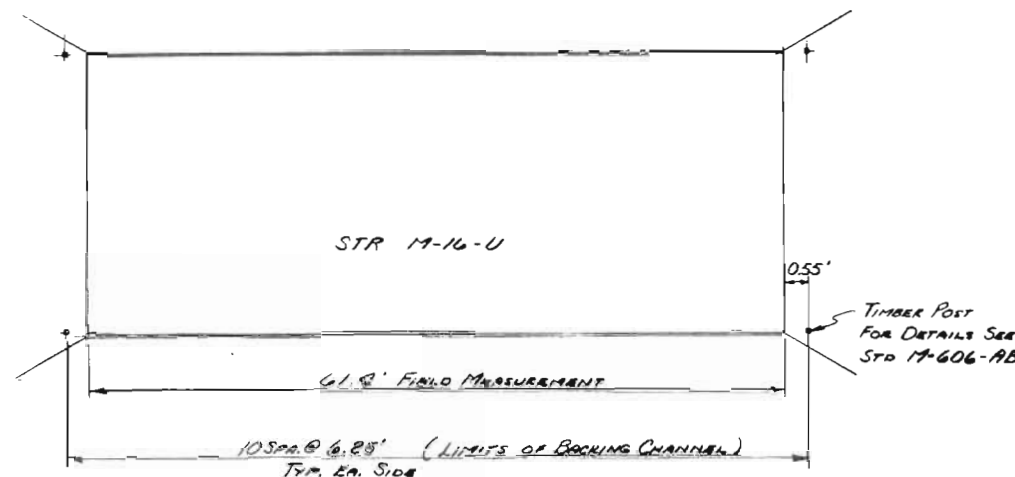
POST TO STRINGER BOLT
ARRANGEMENT



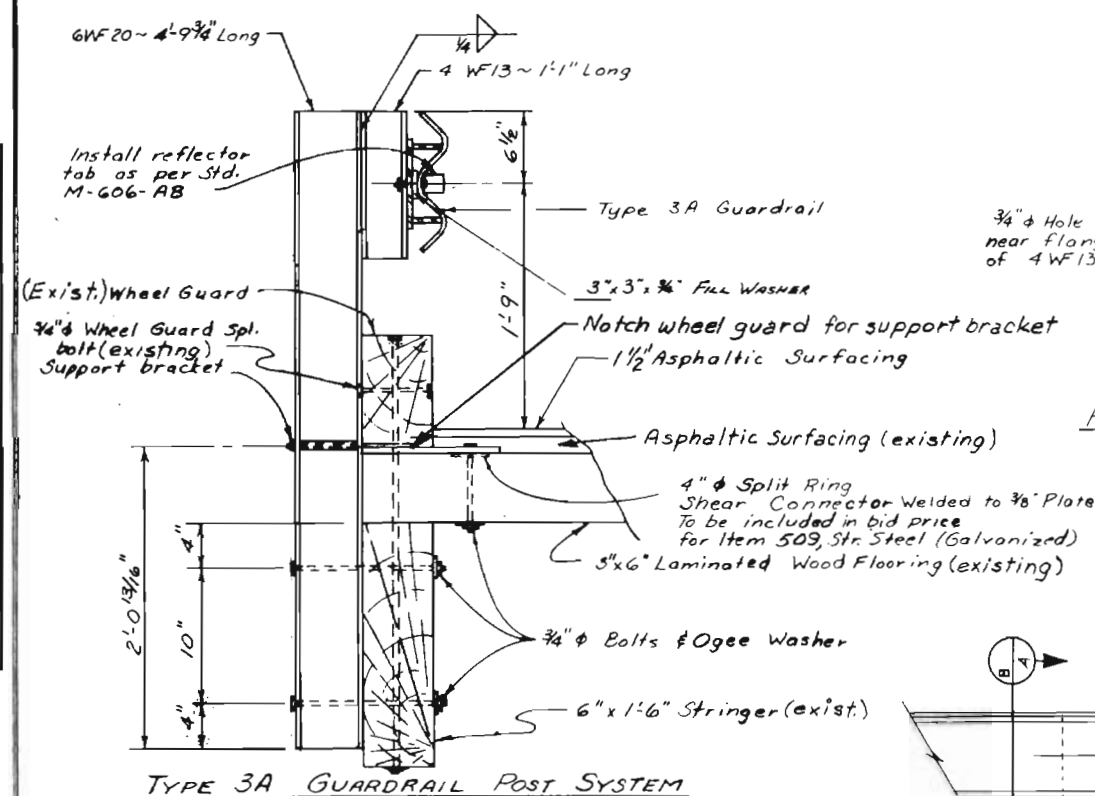
SPLICE DETAIL



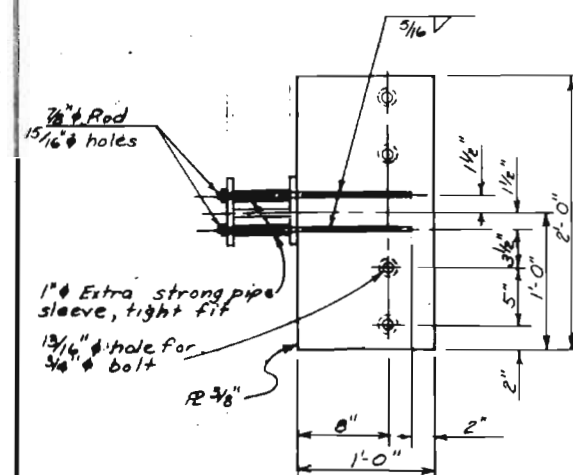
POST LOCATION OF 4WF13



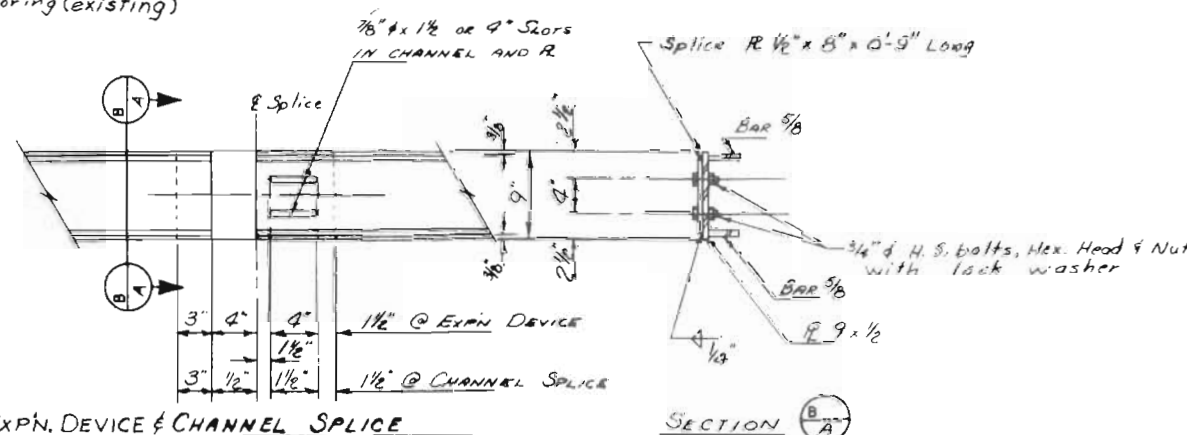
No channel splice or exp'n. device to be used on this project



TYPE 3A GUARDRAIL POST SYSTEM



SUPPORT BRACKET DETAIL



EXP'N. DEVICE & CHANNEL SPLICE

SECTION $\left(\frac{B}{A} \right)$

Item	Description	Unit	14-16-U	Super-
			Super-structure	structure
			Plan	Final
202	Removal of Portions of Present Str.	Ea.	1	1
509	Structural Steel (Galvanized)	Lb.	6975	6975
606	Guard Rail Type 3A	Lin. Ft.	125.0	125.0

DIVISION OF HIGHWAYS

GUARD RAIL (TYPE 3A)
CONNECTION TO EXISTING
STRUCTURE

Approved:
Pchawarsky P.E.
Bridge Engineer
Date: Aug. 21, 1975

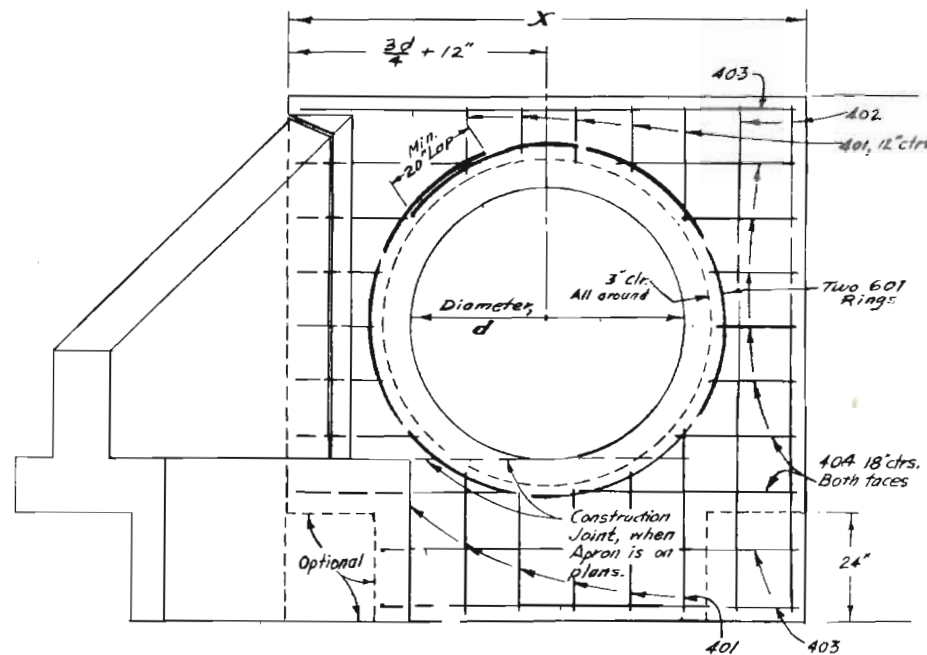
Designer: J. GRAVINA	Detailer: D. SOL
Structure	17-16-UFM-16
Members	W.O. # 03366
DWG No. 1	of 1

DWG No. 1 of

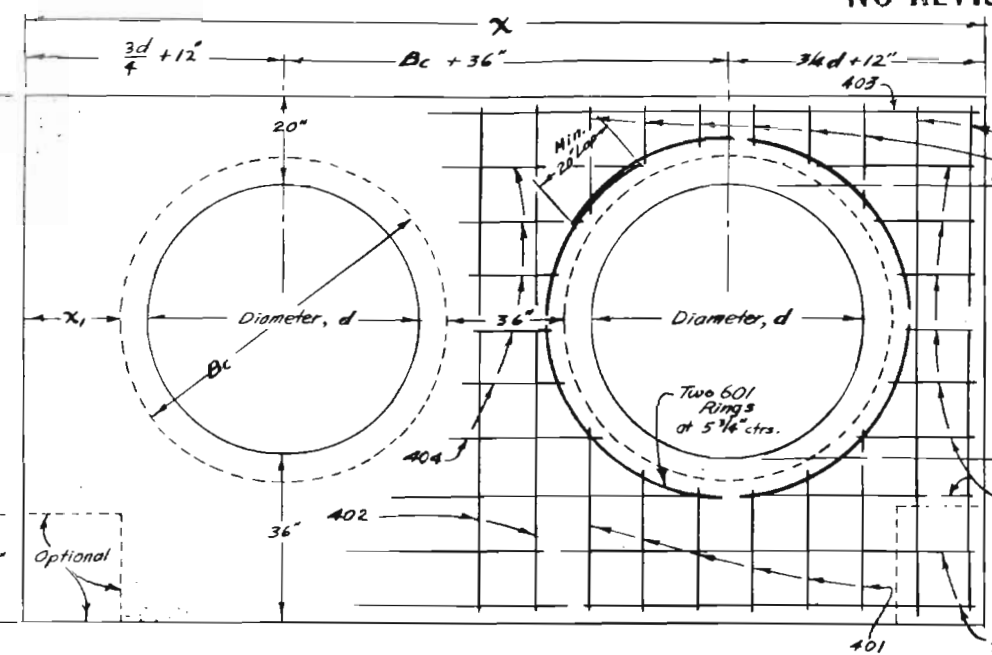
AS CONSTRUCTED
NO REVISIONS DATE 6/22/76

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VII	COLORADO	RS 0069(5)	15	47

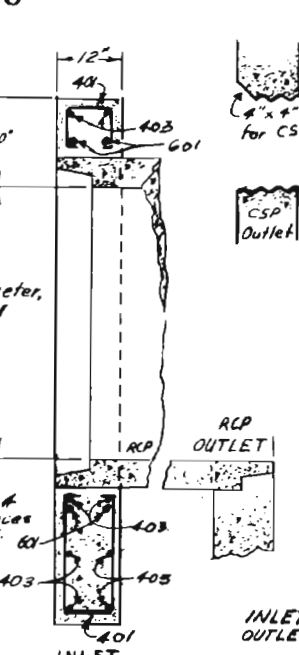
REVISIONS	



CULVERT HEADWALL FOR SINGLE PIPE



CULVERT HEADWALL FOR DOUBLE PIPE



INLET & OUTLET

4" x 4" Bevel,
for CSP Inlets.

CSP
Outlet

RCP
OUTLET

INLET
OUTLET

RCP ROUND

in.	Feet & Inches			cu. yds.		lbs.		sq.
	* X		Y	CONCRETE	STEEL	X ₁		
	SINGLE	DOUBLE					SGL. DBL.	
60	9-6	18-6	9-8	2.35	4.53	244	444	21
66	10-3	19-10	10-2	2.60	4.95	262	481	22
72	11-0	21-2	10-8	2.85	5.37	290	535	23
78	11-9	22-6	11-2	3.11	5.81	299	581	24
84	12-6	23-10	11-8	3.38	6.26	316	584	25
90	13-3	25-2	12-2	3.66	6.72	338	625	26
96	14-0	26-6	12-8	3.94	7.18	364	654	27
102	14-9	27-10	13-2	4.24	7.66	374	693	28
108	15-6	29-2	13-8	4.54	8.14	395	734	29

CSP ROUND

		TRIPLE							
in.	feet & inches	feet & inches	cu. yds.	sq. ft.	lbs.	sq. ft.	lbs.	sq. ft.	lbs.
60	9-6	18-6	9-8	2.35	4.53	244	444	21	444
66	10-3	19-10	10-2	2.60	4.98	251	462	22	462
72	11-0	21-2	10-8	2.78	5.17	257	473	23	473
78	11-9	22-6	11-2	2.98	5.66	278	517	24	517
84	12-6	23-10	11-4	3.21	6.17	294	544	25	544
90	13-3	25-2	12-0	3.46	6.73	308	582	26	582
96	14-0	26-6	12-4	3.73	7.31	328	619	27	619
102	14-9	27-10	12-8	3.98	7.81	342	644	28	644
108	15-6	29-2	13-4	4.24	8.33	357	668	29	668

CSP ARCH

in.	in.		feet & inches		cu yds		lbs.		
	S	R	* X		Y	CONCRETE		STEEL	
			SGL.	DBL.		SGL.	DBL.	SGL.	DBL.
EQUITY	SPAN	RISE							
72	81	X 59	10-9	20-6	9-3	2.72	5.10	264	492
78	87	X 63	11-3	21-6	9-7	2.85	5.34	283	527
84	95	X 67	11-9	22-10	9-11	3.08	5.79	293	546
90	103	X 71	12-7	24-2	10-3	3.50	6.21	340	638
96	112	X 75	13-4	25-8	10-7	3.52	6.45	369	674
102	117	X 79	13-9	26-6	10-11	3.63	6.86	371	697
108	128	X 83	14-8	28-4	11-8	3.96	7.91	415	782

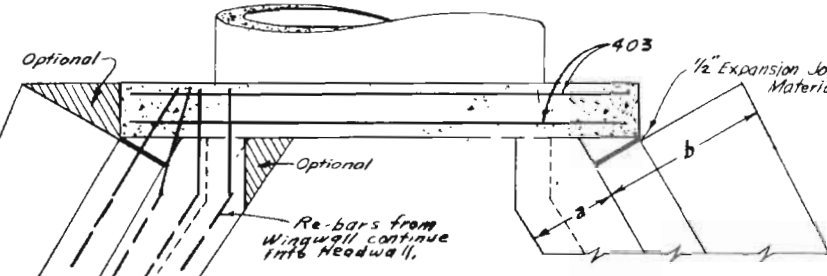
STR. PLATE ARCH

ft & in									
in.	ft X in	ft	in	ft	in	cu. yds.	sq. ft.	cu. yds.	sq. ft.
66	6-1 X 4-7	10-1	19-2	8-11	2.52	4.70	246	456	
72	7-0 X 5-1	11-0	21-0	9-5	2.80	5.25	263	501	
78	7-4 X 5-7	11-11	22-10	9-11	3.08	5.79	307	574	
84	8-10 X 6-1	12-10	24-8	10-5	3.36	6.33	329	617	
90	9-9 X 6-7	13-9	26-6	10-11	3.63	6.86	350	657	
96	10-11 X 7-1	14-8	28-10	11-5	4.05	7.67	388	731	
102	11-10 X 7-7	15-10	30-8	11-11	4.36	8.28	419	791	
108	12-10 X 8-4	16-10	32-8	12-8	4.75	9.03	444	879	
114	13-1 X 8-9	18-1	35-2	13-1	5.17	9.84	491	931	
120	14-4 X 9-3	19-4	37-8	13-7	5.69	10.88	520	988	
126	15-10 X 9-10	19-10	38-8	14-2	5.89	11.25	538	1028	

Multiply dim. X
and all quant.
by factor if
culvert skew
is less than 90°
and headwall
remains parallel
to roadway E.

GENERAL NOTES

All work shall be done in accordance with the Standard Specifications applicable to the project.
Concrete shall be Class A, B or D.
Headwall shall be parallel to the roadway centerline unless otherwise shown on the plans.



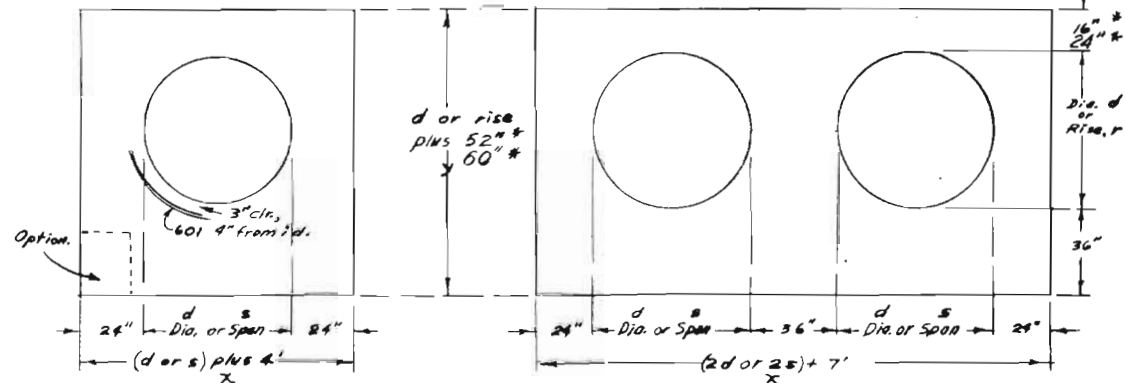
TOP VIEW - WINGWALL CONNECTION

BAR DIAGRAM

BAR No.	401	402	403	404	601
Bending	2'-2"	Var.	Var.	Var.	20"
Ctrs.	12"	8"	6"	18"	4 1/4"
No. BARS REQ'D.	Var.	8	6	Var.	2
Double	Var.	12	6	Var.	4

TYPICAL HEADWALL FOR CSP, CSP ARCH & STR. PL. ARCH

SINGLE DOUBLE



NOTE: Reinforcing bars to be as shown above for RCP.

* 52" 16" at Inlet Rt.
60" 24" at Outlet Lt.

DEPARTMENT OF HIGHWAYS
STATE OF COLORADO
DIVISION OF HIGHWAYS

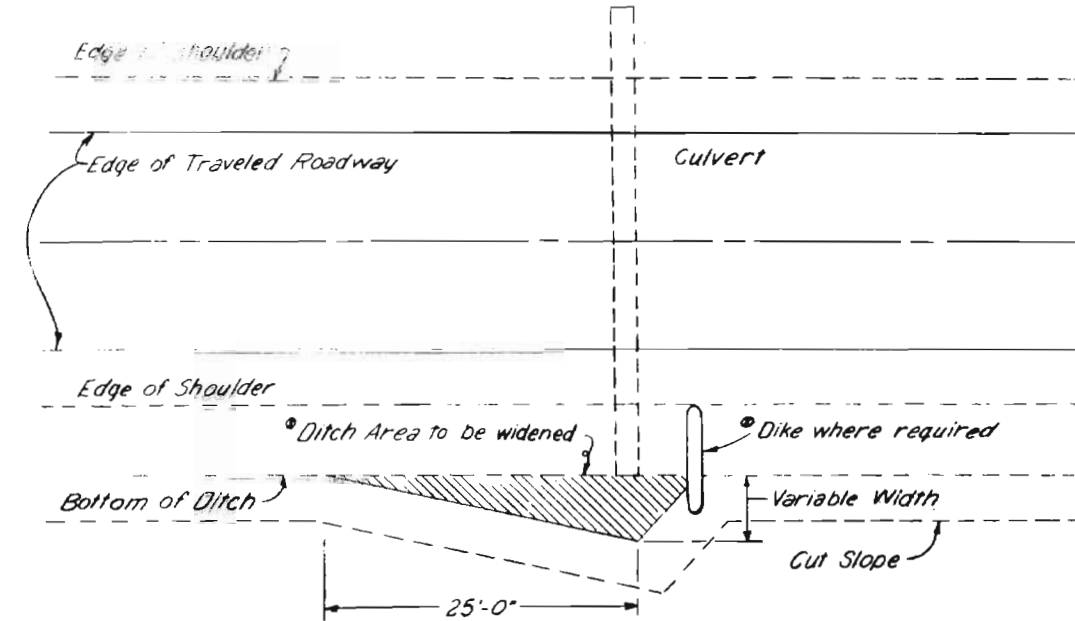
CULVERT HEADWALLS
Sta. 891+40

Designed by JRB
Made by Staff Design Engr.
Checked by Date:

AS CONSTRUCTED
NO REVISIONS DATE 6/22/76

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(5)	16	47

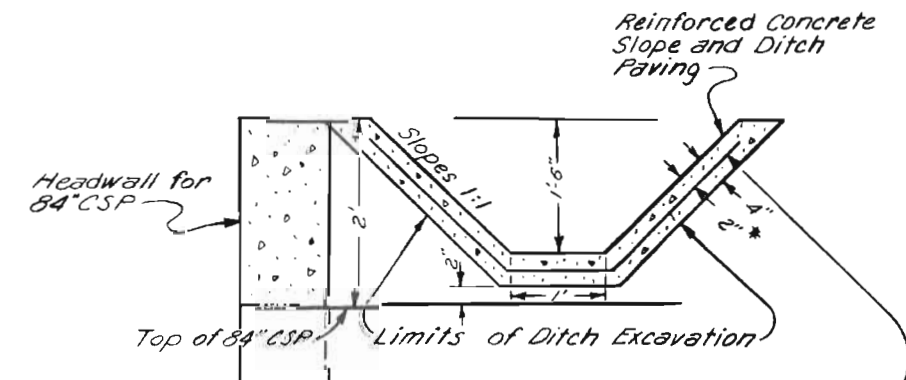
Detail Of Inlet Basin



* To be paid for as unclassified excavation

Detail Of Concrete Lined Irrigation Ditch

STA. 891+20 to 891+70 Lt.



* Reinforcement for concrete slope paving shall be WWF 4x4 - W1.4xW1.4 or WWF 6x6 - W2.1xW2.1.

AS CONSTRUCTED

Sec 5, T27S, R68W. REVISED DATE 4/22/76

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(15)	17	47

STA. 830+00.0 BEGIN RS 0069(5) =
STA. 3+92.7 on PROJ. S 0038(11)

STA. 831+15.6 BEGIN R.O.W. RS 0069(5)

$\theta_s = 4^\circ 30'$
 $L_s = 150'$
 $L.T. = 100.04'$
 $S.T. = 50.04'$
 $e = 0.0771/ft.$
 $M.D.S. = 50 mph$

$\Delta = 26^\circ 00' Lt.$
 $T_s = 295.7'$
 $\Delta_c = 17^\circ 00'$
 $D_c = 6^\circ 00'$
 $T_c = 142.7'$
 $L_c = 283.3'$
 $R_c = 954.9'$

$\Delta = 15^\circ 06' Rt.$
 $T_s = 227.0'$
 $\Delta_c = 7^\circ 36'$
 $D_c = 5^\circ 00'$
 $T_c = 76.1'$
 $L_c = 152.0'$
 $S.T. = 50.02'$
 $e = 0.0711/ft.$
 $M.D.S. = 50 mph$

$\Delta = 22^\circ 30' Rt.$
 $T_s = 288.3'$
 $\Delta_c = 5^\circ 00'$
 $D_c = 7^\circ 00'$
 $T_c = 35.7'$
 $L_c = 71.4'$
 $R_c = 818.6'$
 $e = 0.0791/ft.$
 $M.D.S. = 45 mph$

$\theta_s = 8^\circ 45'$
 $L_s = 250'$
 $L.T. = 166.85'$
 $S.T. = 83.52'$

B.M. #1 40' Rt. Sta. 842+40
H. & G. Elev. 6474.67

827+
829+50 to 830+00 - Required approach to project.

880
829+00 to 848+00 - Remove 740 lin ft. of fence, Rt. Required: 1600 lin ft. of barbed wire fence, Met. Posts, (one barbed wire gate), 2 end posts, 7 corner and line brace posts.

B.M. Brass Cap on wheel Guard Str. No. N 16 C

See Soils Survey Report
No. 2/36 on RS 0069(5)

Test No. 1A A-6 (3)
L.L. 27
P.I. 11
% - 200 55
R Value 20
Test No. 1B Sandstone
No Sample
Test # 1
A-1-b (6)
200 - 19
P.I. - 3
R Value - 75

Test # 2
A-1-b (6)
200 - 17
P.I. - NP
R Value - 75

Test No. 2A O/I Mat
No Sample
Test No. 2B A-6 (1)
L.L. 27
P.I. 12
% - 200 40
R Value 18
Test No. 2C A-2-4(1)
L.L. NP
P.I. NP
% - 200 19
R Value 71
Test No. 2D Sandstone
No Sample

Test # 3
A-1-a (6)
200 - 12
P.I. - NP
R Value - 80

- * 115 Cu. Yds. for Shoulder Mat'l. Sta. 851+00 to 860+00
- * 595 Cu. Yds. for flattening slopes Sta. 855+00 to 864+00
- * 300 Cu. Yds. for Rock Fill in Ditch Rt. Sta. 915+ to 920+

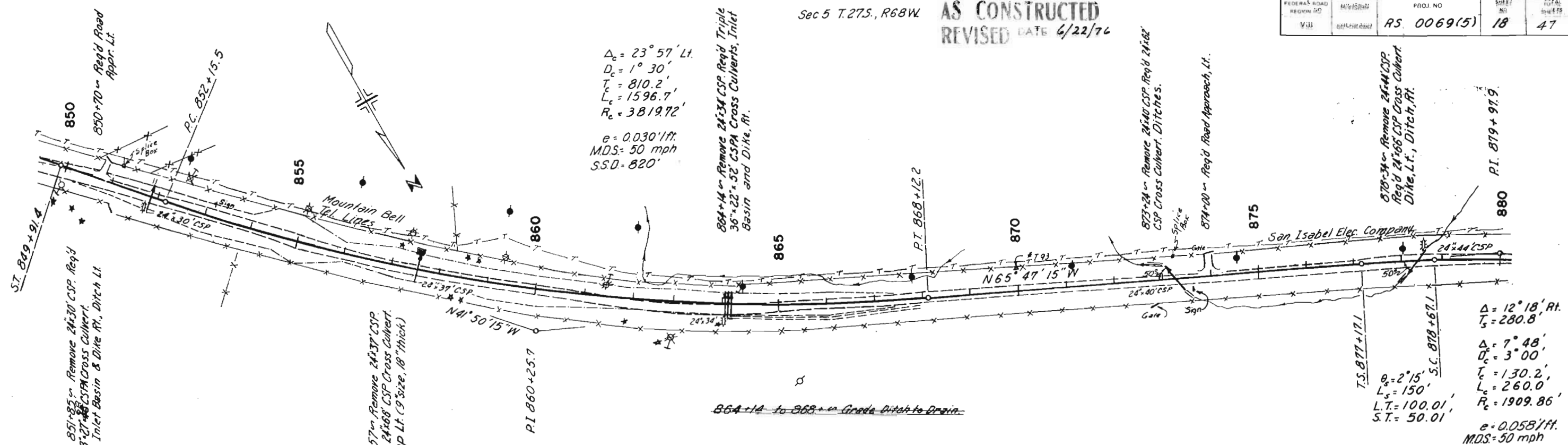
Note: Haul quantities shown do not include haul for flattening slopes and for Shoulder Material (See Earthwork Summary)

Excavation
Emb. Net & Fact. (1)
Yd. Mi. Haul

Sec 5 T.27S., R.68W

AS CONSTRUCTED
REVISED DATE 6/22/76

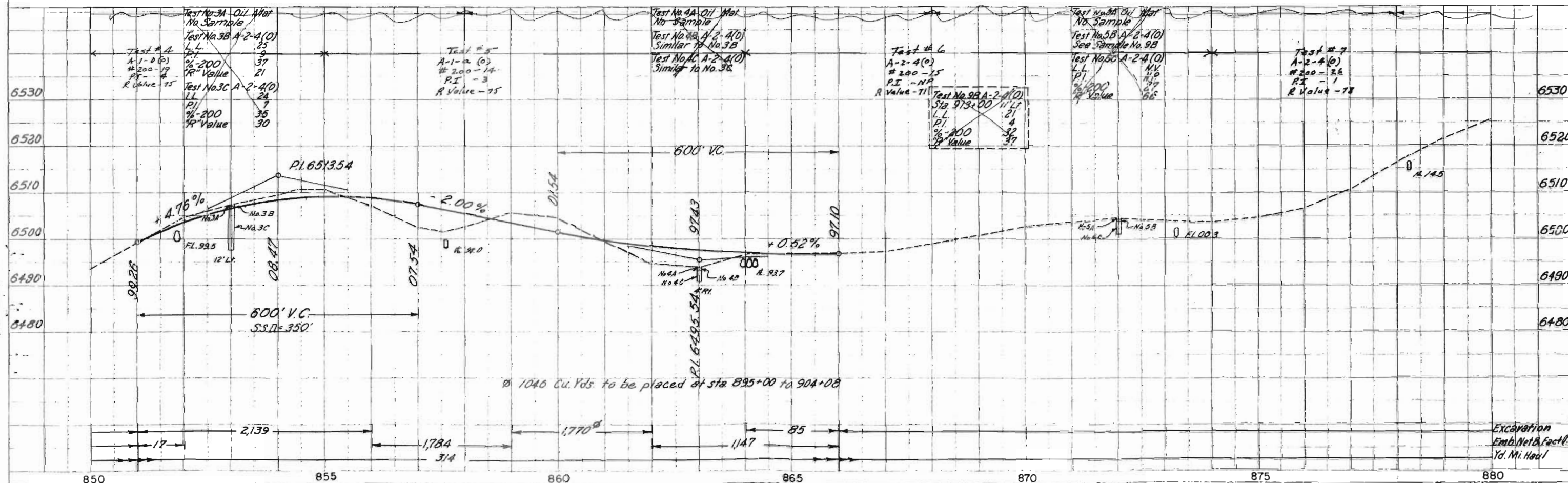
FEDERAL ROAD DISTRICT NO.	SECTION NO.	PROJECT NO.	SHEET NO.	TOTAL SHEETS
VII	68	AS 0069(5)	18	47



B.M. #2 40' Lt. Sta. 850+50
H & G Elev. 6493.50

B.M. #3 50' Lt. Sta. 870+00 Elev. 6500.81
USGS Marker #T 93 Elev. 6503.08

B.M. #4 45' Lt. Sta. 877+80
H & G Elev. 6517.20



1046 Cu. Yds. to be placed at sta 895+00 to 904+08

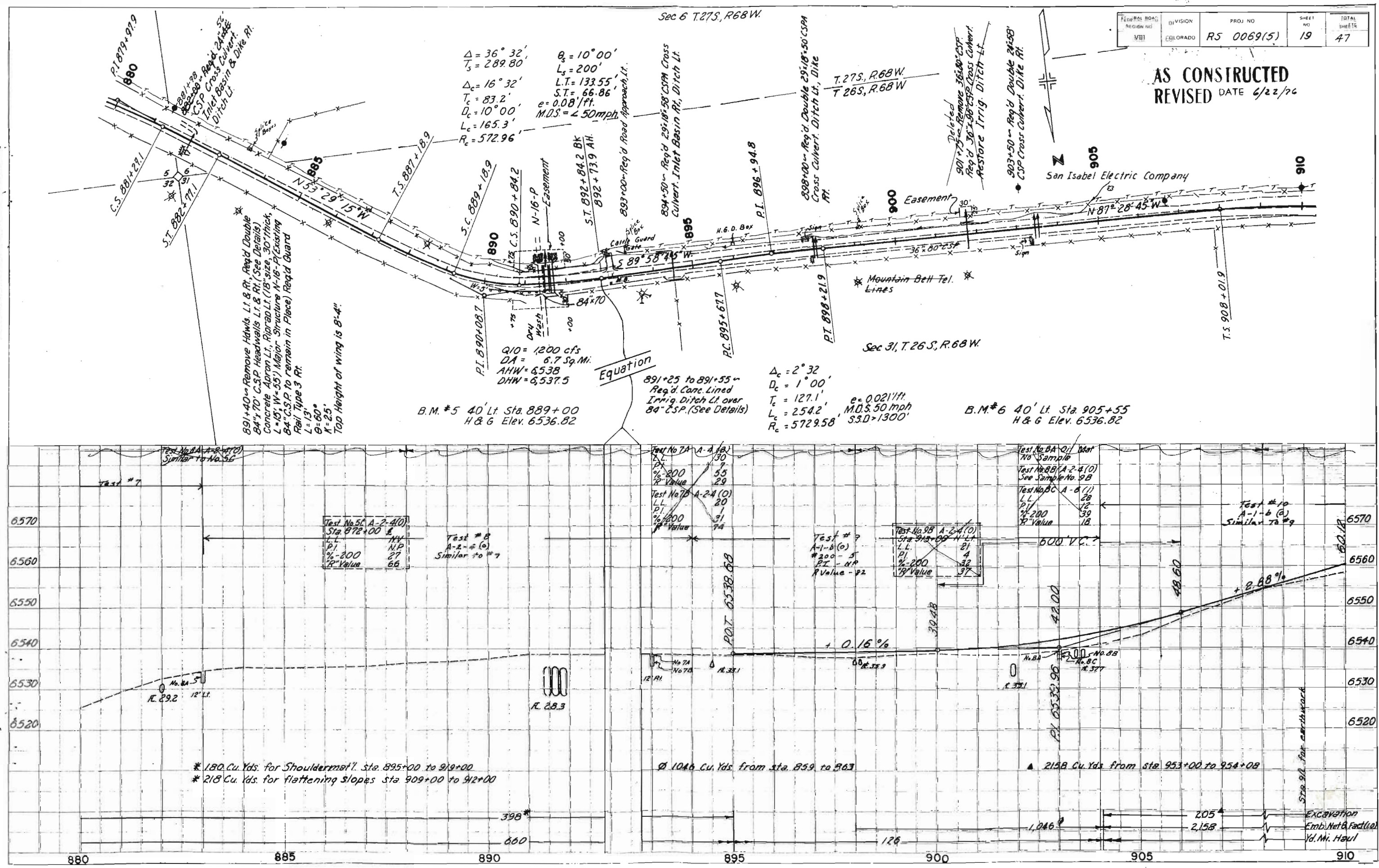
Excavation
Emb. Net & Fac. 1/2
Id. Mt. Haul

PLAN	DATE	BY	CHECKED
NOTE BOOK			
BY SP. WAY CHECKED			

PROFILE	DATE	BY	CHECKED
NOTE BOOK			
BY SP. WAY CHECKED			

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	R5 0069(5)	19	47

AS CONSTRUCTED
REVISED DATE 6/22/76

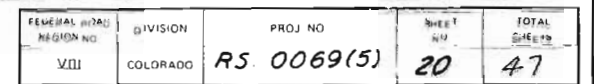


* 180 Cu. Yds. for Shoulders mat'l. Sta. 895+00 to 919+00.
* 218 Cu. Yds. for flattening slopes Sta. 909+00 to 912+00

1046 Cu. Yds. from Sta. 859 to 863

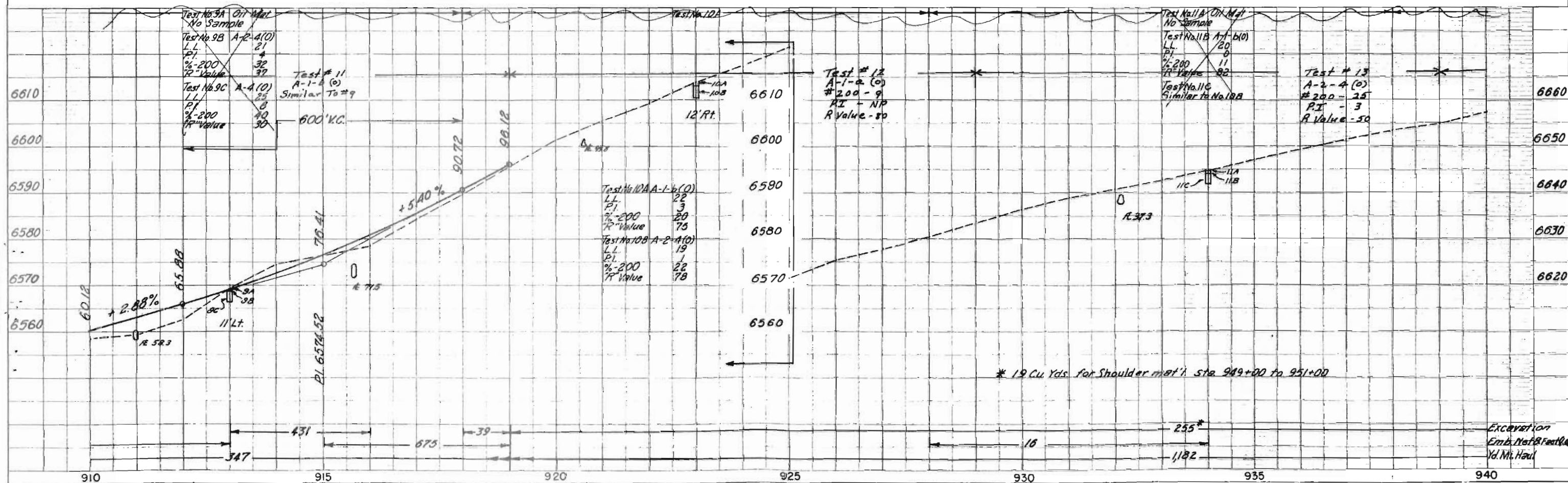
2158 Cu. Yds. from Sta. 953+00 to 954+08

Excavation
Emb. Net & Fac. (see)
Yd. Mi. Haul



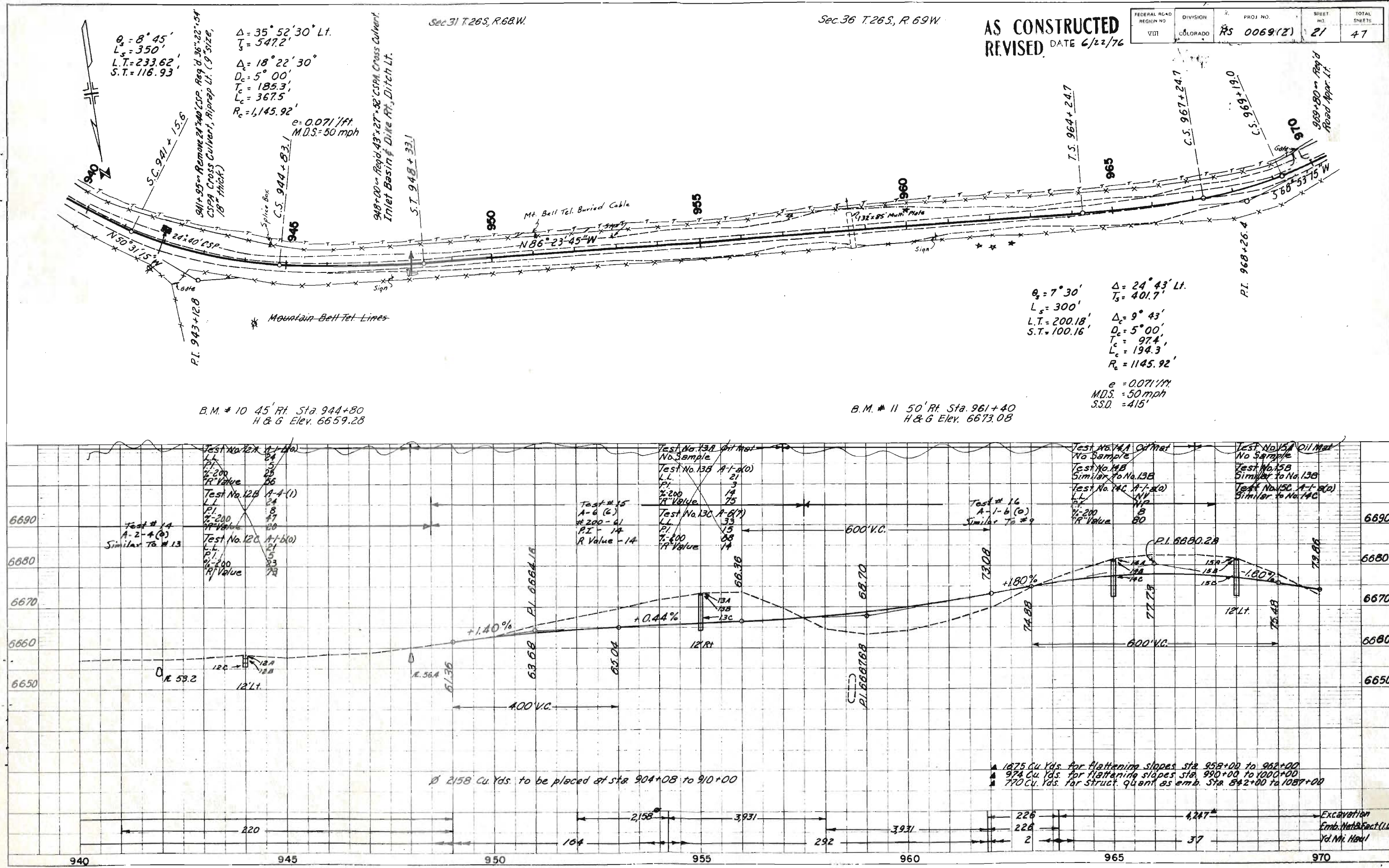
AS CONSTRUCTED
REVISED DATE 6/22/76

B.M. #9 47' Lt. Sta. 937+00
H & G Elev. 6648.42



PLAN
NOTE BOOK
DATE
BY
CHECKED
BY
DATE

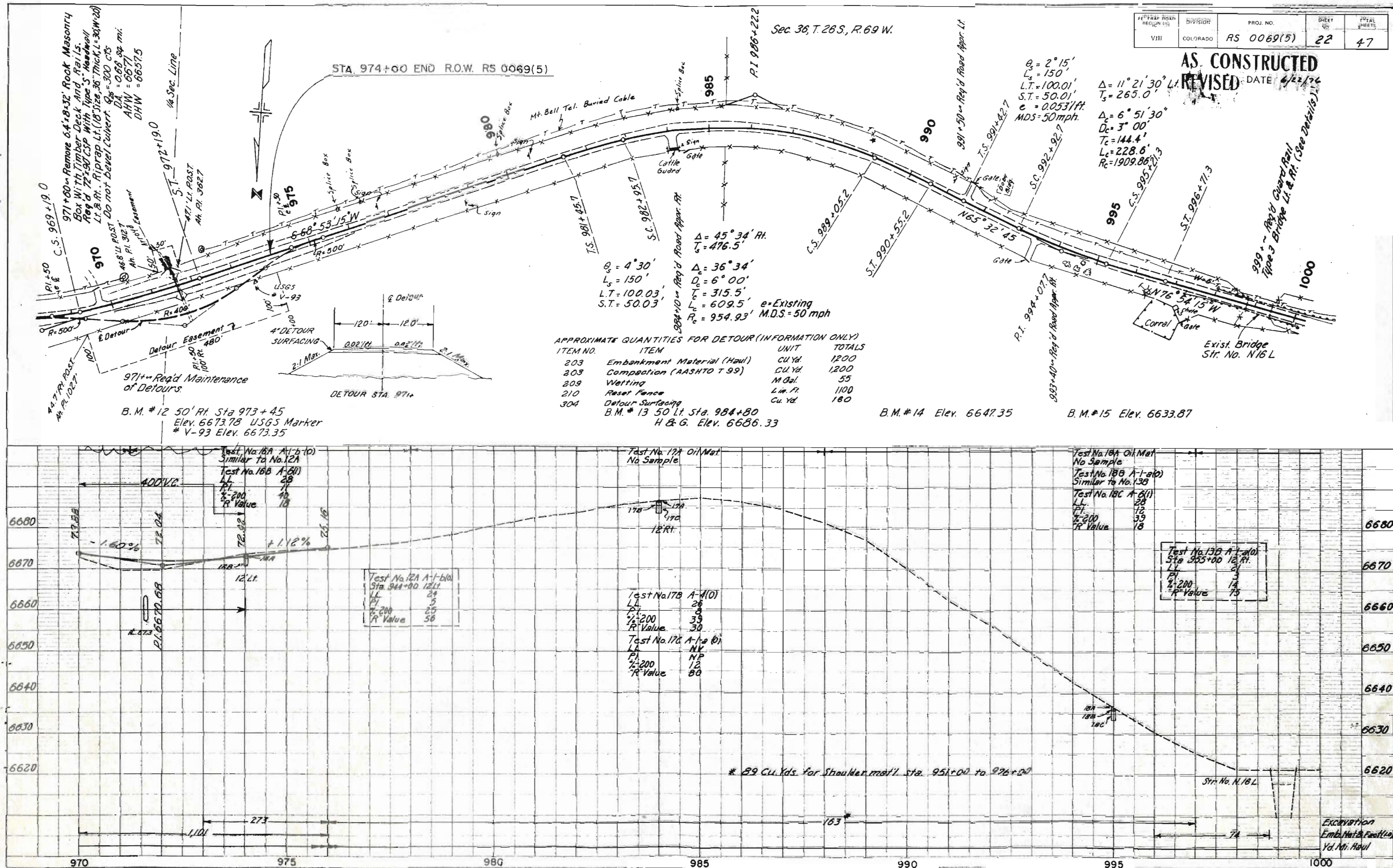
PROFILE
NOTE BOOK
DATE
BY
CHECKED
BY
DATE



2158 Cu. Yds. to be placed at Sta. 904+08 to 910+00

1875 Cu. Yds. for flattening slopes Sta. 958+00 to 962+00
974 Cu. Yds. for flattening slopes Sta. 990+00 to 1000+00
770 Cu. Yds. for struct. quant. as emb. Sta. 842+00 to 1087+00

Excavation
Emb. Mat. Sect. (1.0)
Yd. Mi. Haul

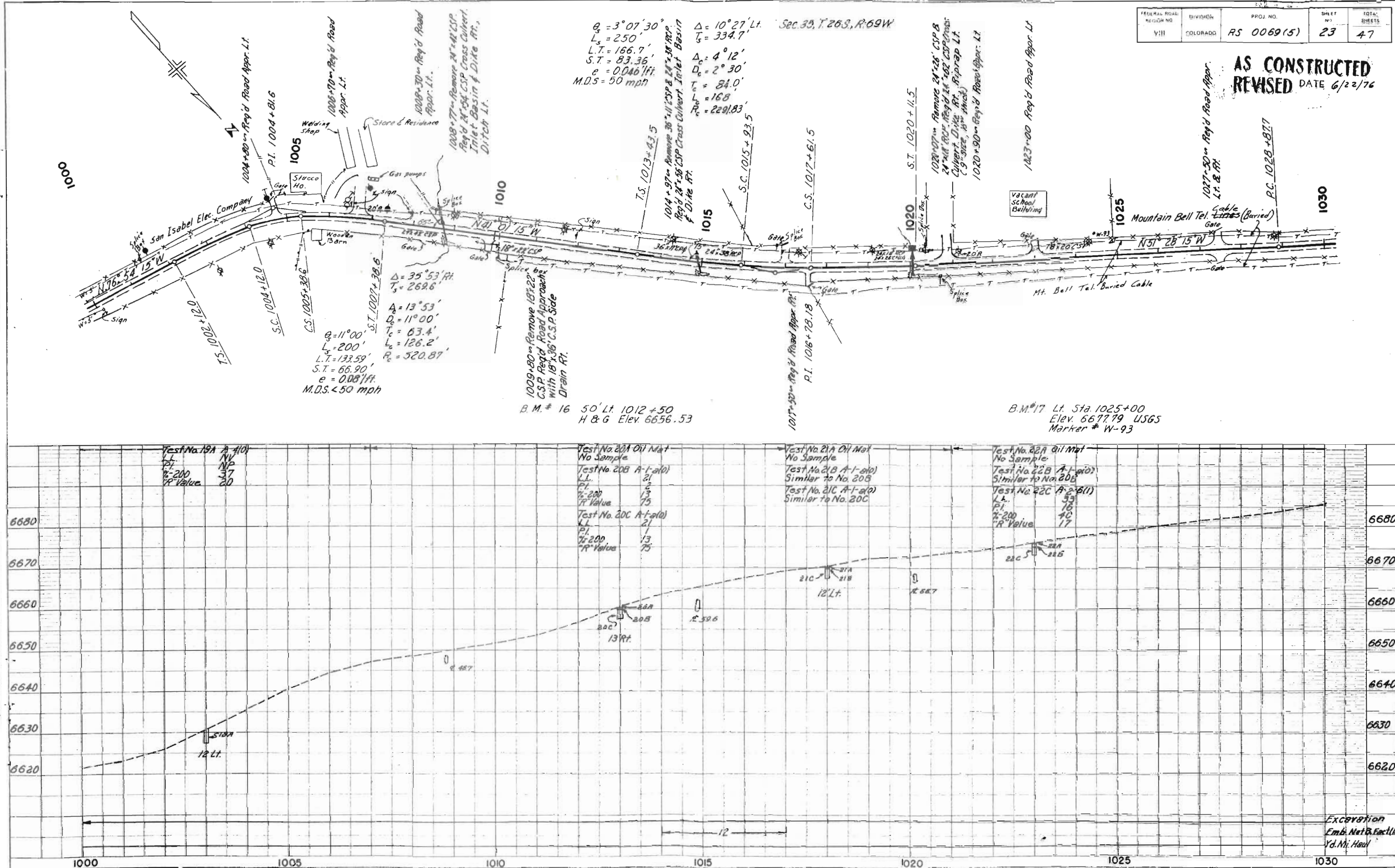


PLAN
NOTE BOOK
No.

PROFILE
NOTE BOOK
No.

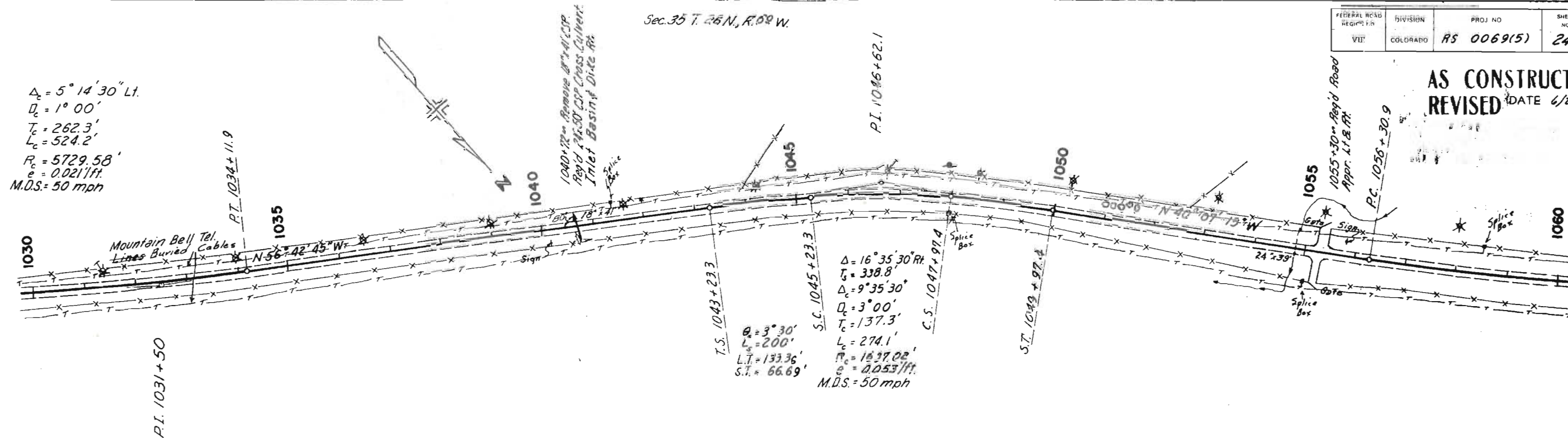
FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(5)	23	47

AS CONSTRUCTED
REVISED DATE 6/22/76



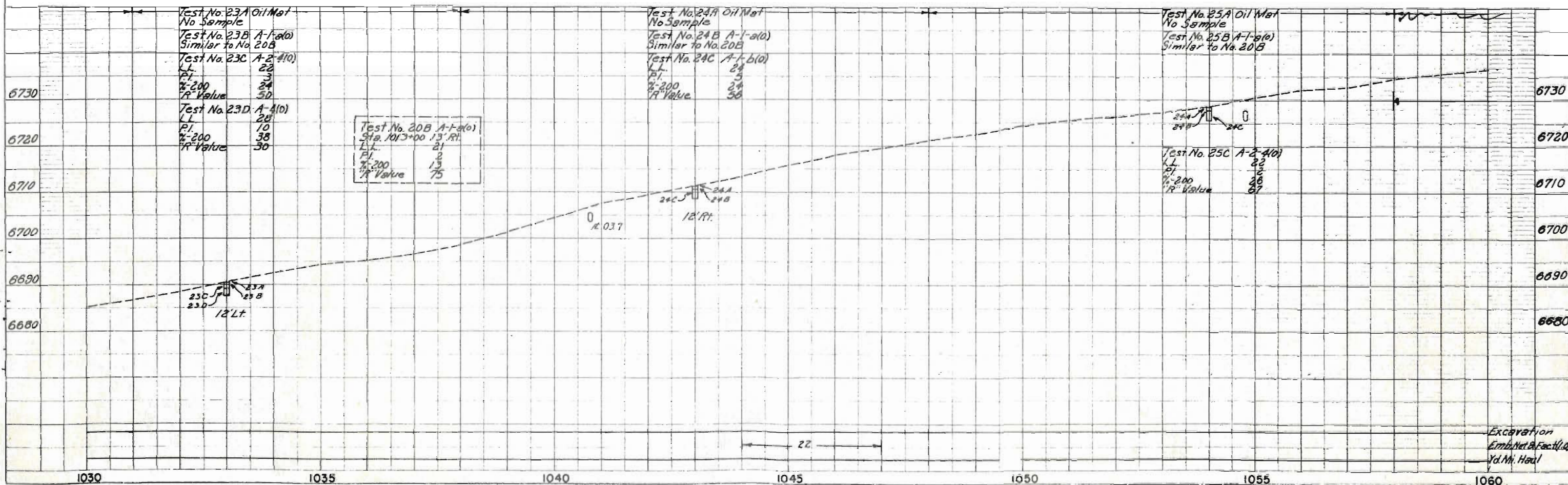
FEDERAL ROAD DISTRICT	DIVISION	PROJ NO	SHEET NO	TOTAL SHEETS
VII	COLORADO	RS 0069(5)	24	47

AS CONSTRUCTED
REVISED DATE 6/22/76



B.M. # 18 35' Lt Sta 1038+50
H & G Elev. 6696.79

B.M. # 19 35' Lt Sta 1049+00
H & G Elev. 6722.54

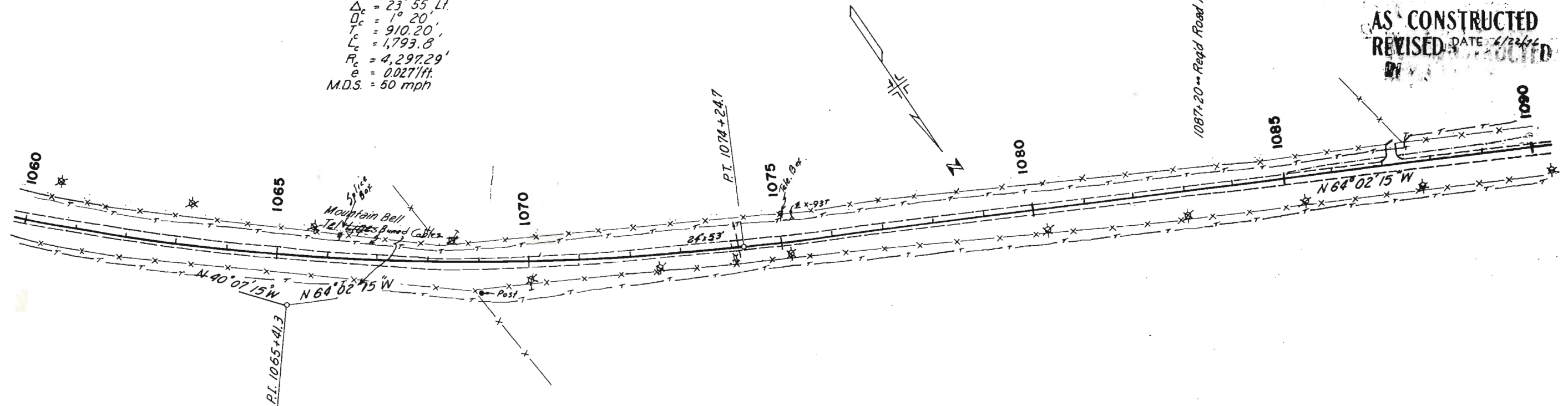


Sec. 27, T. 26S., R. 69W.

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(5)	25	47

AS CONSTRUCTED
REVISED DATE 6/22/74
BY [Signature]

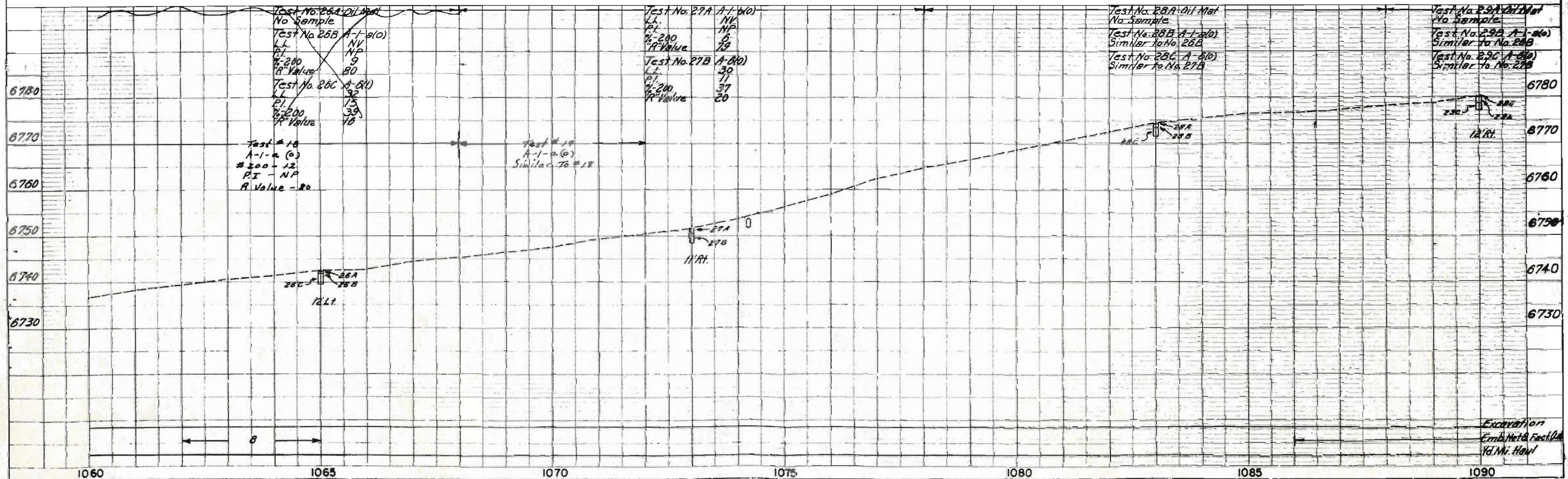
$\Delta_c = 23^\circ 55' \text{ L.I.}$
 $D_c = 1^\circ 20'$
 $T_c = 910.20'$
 $L_c = 1,793.8'$
 $R_c = 4,297.29'$
 $e = 0.027 \text{ ft.}$
M.D.S. = 50 mph



B.M. # 20 34' Rt. Sta. 1066+00
H & G Elev. 6742.16

B.M. # 21 30' Lt. Sta. 1075+30 Elev. 6754.94
USGS Marker # X-93

B.M. # 22 62' Rt. Sta. 1089+
Elev. 6780.08



PLAN
NOTE BOOK

PROFILE
NOTE BOOK

Excavation
Embankment
Yd. M. Haul

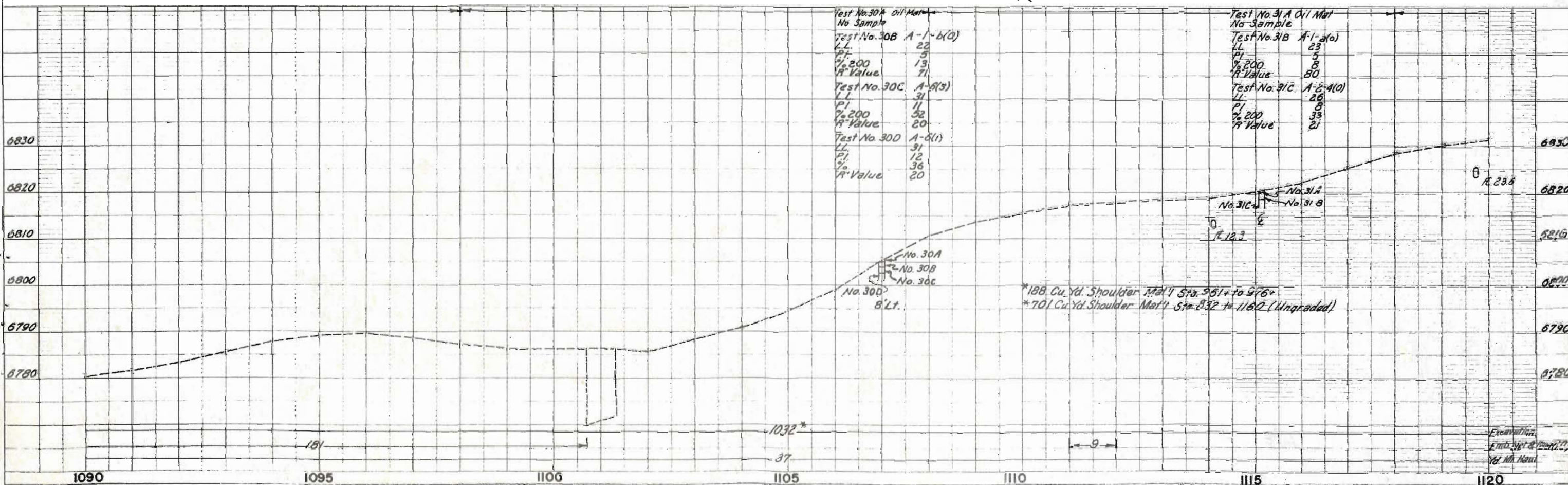
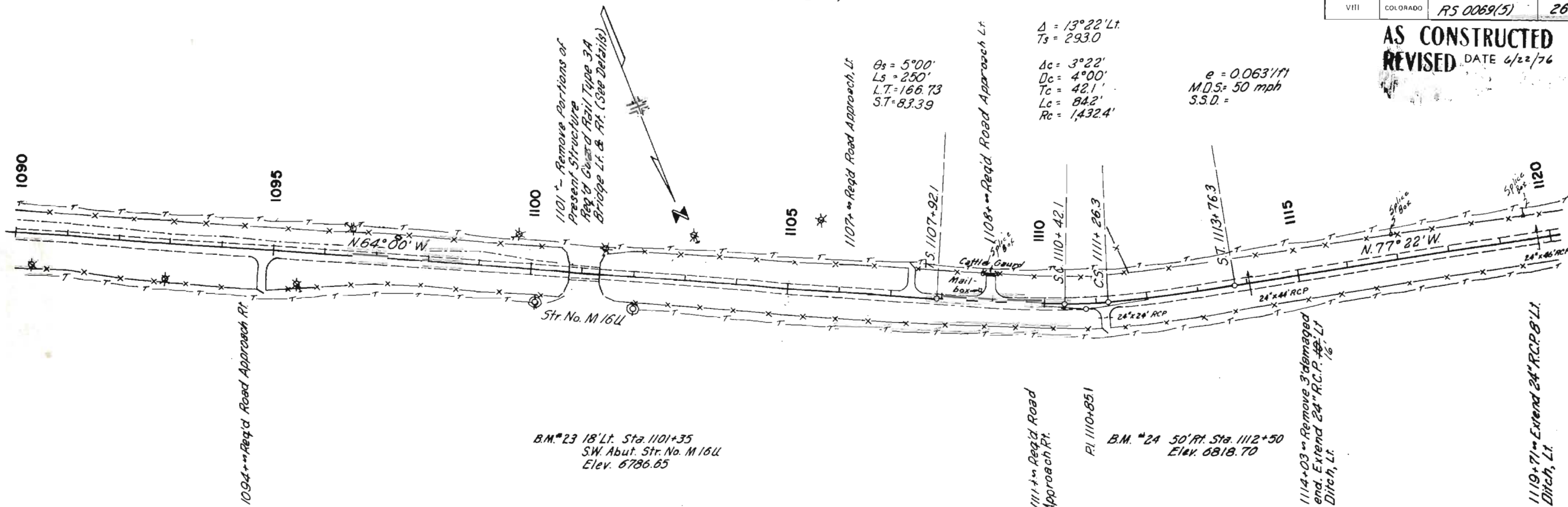
PLAN	DATE
NOTE BOOK	
NO.	

PROFILE	DATE
NOTE BOOK	
NO.	

Sec. 27 T. 26 S., R. 69 W.

FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(5)	26	47

AS CONSTRUCTED
REVISED DATE 6/22/76



Test No. 30A Oil Mat	
No Sample	
Test No. 30B A-1-b(0)	
LL	22
PI	5
% 200	13
A Value	71
Test No. 30C A-1-b(3)	
LL	31
PI	11
% 200	32
A Value	20
Test No. 30D A-1-b(1)	
LL	31
PI	12
% 200	36
A Value	20

Test No. 31A Oil Mat	
No Sample	
Test No. 31B A-1-a(0)	
LL	23
PI	5
% 200	8
A Value	80
Test No. 31C A-1-a(10)	
LL	26
PI	8
% 200	33
A Value	21

*188 Cu. Yd. Shoulder Mat'l Sta. 951+ to 976+
*701 Cu. Yd. Shoulder Mat'l Sta. 932+ to 1160 (Ungraded)

Excavation
Amb. Mat'l & Comp. Mat'l
Std. Mix. Mat'l

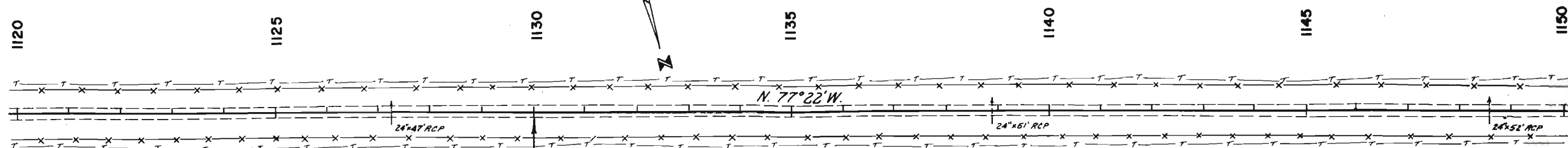
Sec. 27, T. 26 S., R. 69 W.

Sec. 28, T. 26 N., R. 69 W.

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEET
VIII	COLORADO	RS 0069(5)	27	47

AS CONSTRUCTED
REVISED DATE 6/22/76

PLAN
NOTE BOOK
No. 1



B.M. * 25 50' Ft. Sta. 1123+10
Elev. 6837.91

B.M. * 26 50' Ft. Sta. 1136+00
Elev. 6849.66

1200+00 - Extended by W.O. # 03366
1130+00.0 END RS0069(5)

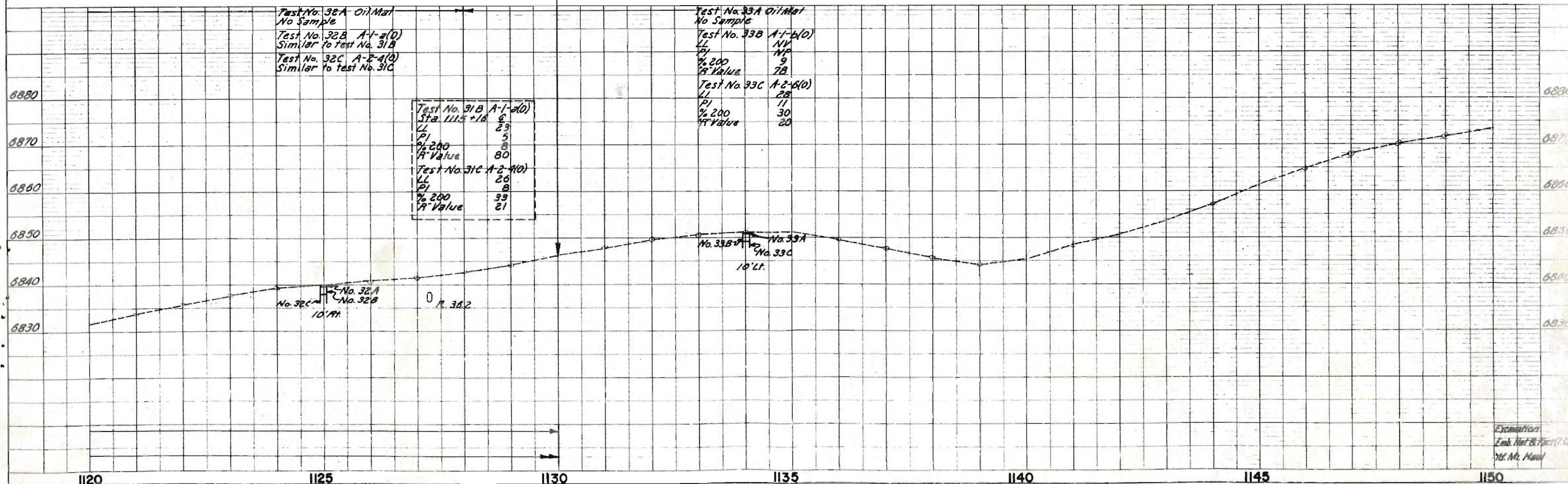
1127+23m Extended 24' x 52' RCP

1200
1130+00 Req'd Approach to Project

Test No. 32A Oil/Mat
No Sample
Test No. 32B A-1-a(0)
Similar to Test No. 31B
Test No. 32C A-2-a(0)
Similar to Test No. 31C

Test No. 31B A-1-a(0)
Sta. 1115+16
LL 23
PI 5
% 200 8
R Value 80
Test No. 31C A-2-a(0)
LL 26
PI 8
% 200 33
R Value 21

Test No. 33A Oil/Mat
No Sample
Test No. 33B A-1-b(0)
LL NV
PI NV
% 200 9
R Value 78
Test No. 33C A-2-b(0)
LL 28
PI 11
% 200 30
R Value 20



No. 32A
No. 32B
10' Ft.

No. 33B
No. 33A
No. 33C
10' Ft.

PROFILE
NOTE BOOK
No. 2

Exemption
Emb. Not B. P. 17.01
Vol. No. 1001

See Standard M-100-A for STANDARD SYMBOLS

R.O.W. Utilities P.E. on Proj. CS 16-0069-16
RS 0069 (5)

FEDERAL ROAD REGION NO	DIVISION	PROJECT NO	SHEET NO
VIII	COLORADO	RS 0069(5)	1

INDEX OF SHEETS

AS CONSTRUCTED
REVISED DATE 6/22/76

PLAN AND PROFILE OF ~~PROPOSED~~
FEDERAL AID PROJECT NO. RS 0069(5)
STATE HIGHWAY NO. 69
HUERFANO COUNTY

SCALES OF ORIGINAL DRAWINGS

ON PLAN. LIN = 100 FT
ON PROFILE { LIN = 100 FT HORIZONTAL
 LIN = 10 FT VERTICAL

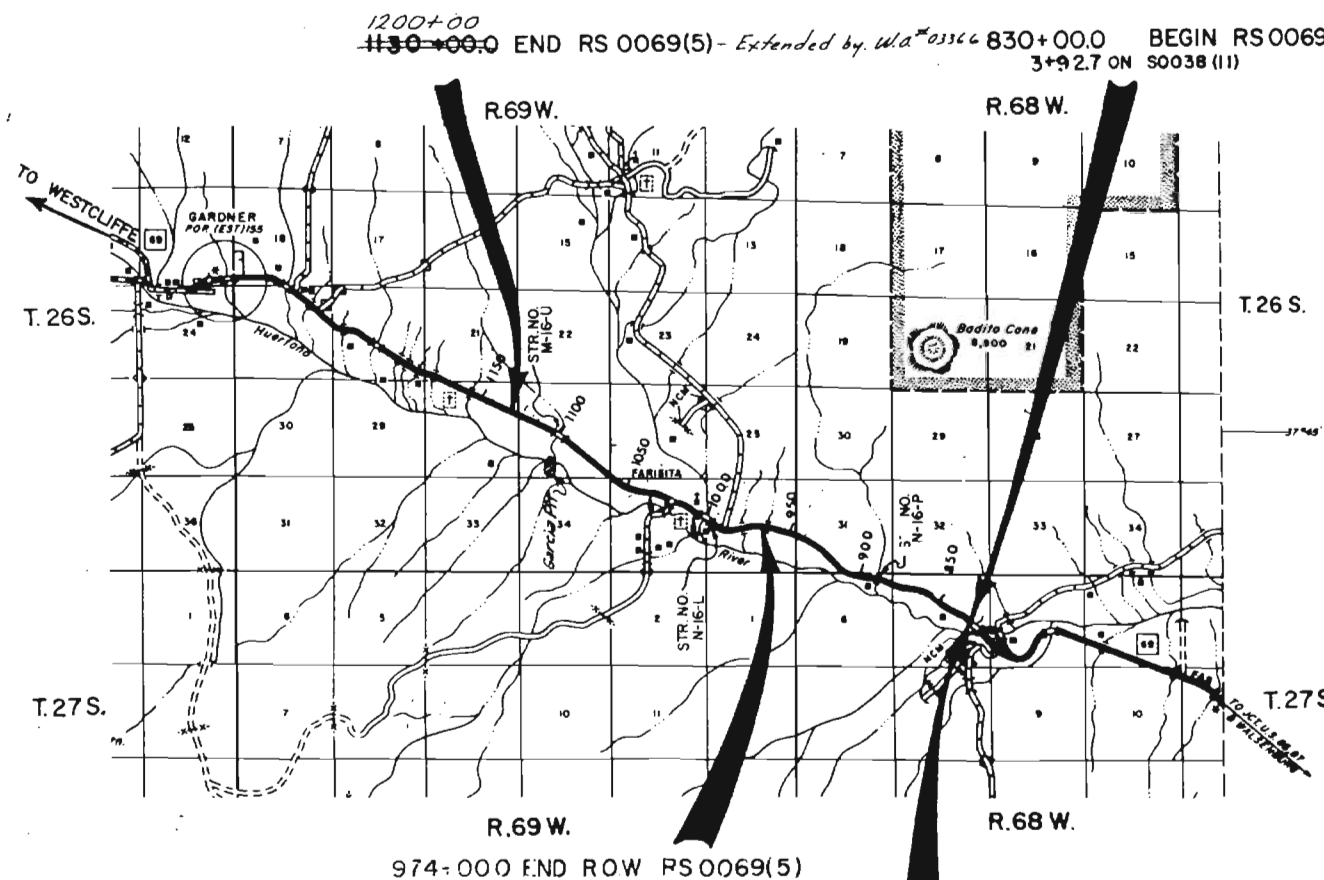
GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD

TAB OF LENGTH AND DESIGN DATA

	ROADWAY LIN. FT.	MAJOR STRUCTURES LIN. FT.	ROW LIN. FT.
830+00.0 BEGIN RS 0069(5) = 3+92.7 ON S 0038(11)	743.1		
831+15.6 BEGIN ROW RS 0069(5)			627.5
837+43.1 BK = EQUATION 837+50.5 AH.	5,386.0		
891+36.5 STRUCTURE NO. N-16-P 891+63.5	120.7	27.0	5,533.7
892+84.2 BK = EQUATION 892+73.9 AH			8,126.1
974+00.0 END ROW 0069(5)	10,606.1		
998+80.0 STRUCTURE NO. N-16-L 999+41.0	10,131.0	61.0	
1100+72.0 STRUCTURE NO. M-16-U 1101+33.4 1179.5 Signature No. M-16-N 1130+00.0 END RS 0069(5) 1200+00 W.P. # 03366	2,866.6	61.4 20.8	
TOTALS	35,853.5 35,853.5	149.4 170.2	14,287.3

	SUMMARY	LIN. FT.	MILES
TOTAL ROADWAY		60832.7 29055-5 1704 -149.4	6.4746 5.554 0.022 0.024
MAJOR STRUCTURE			
TOTAL ROADWAY (NET AND GROSS LENGTH)		60832.7 27022.7	6.4746 2.928
RIGHT OF WAY LENGTH		14,287.3	2.706

DESIGN DATA	
MAXIMUM DEGREE OF CURVE	11°
MAXIMUM GRADE	7.6%
MINIMUM S.S.D. HORIZONTAL	320'
MINIMUM S.S.D. VERTICAL	310'
MAXIMUM DESIGN SPEED	45 MPH
1995 DESIGN TRAFFIC VOLUMES	142 OHV 720 ADT



831+15.6 BEGIN ROW RS 0069(5)

SCALE OF MILES

SHEET NO.	DESCRIPTION	QUANTITY
1	TITLE SHEET, SKETCH MAP AND TABULATION OF LENGTH AND DESIGN	
2	TYPICAL SECTIONS	
3	GENERAL NOTES	
4 - 5	SUMMARY OF APPROXIMATE QUANTITIES	
6 - 8	STRUCTURE QUANTITIES	
9	SUMMARY OF EARTHWORK AND SETTING QUANTITIES	
10	GUARD RAIL TABULATION AND DELINEATORS	
11	SURFACING PLAN	
12	PIT SKETCH	
13	TYPE 3 GUARD RAIL CONNECTION TO EXISTING STRUCTURE	
14	GUARD RAIL (TYPE 3A) CONNECTION TO EXISTING STRUCTURE	
15	CULVERT HEADWALLS STATION 891+40	
16	DETAIL OF INLET BASIN AND CONCRETE LINED IRRIGATION DITCH	
17	ALIGNMENT PLAN AND PROFILE SHEETS	
18 - 41	Structures Cross Sections	
42 - 44	Striping - 60' to 100' Pk	
M-100-A	STANDARD SYMBOLS	
M-203-B	APPROACH ROADS, FLARING, CUT SLOPE TREATMENT, BRIDGE & CREST WIDENING	5-11-73
M-203-C	DITCH TYPES	12-11-72
M-203-SC	SUPERELEVATION OF CURVES-CROWNED HIGHWAYS	7-23-68
M-206-AA	EXCAVATION AND BACKFILL FOR STRUCTURES	3-24-75
M-500-A	LETTERS AND FIGURES FOR STRUCTURE NUMBERS	4-9-74
M-601-KA	TYPE "S" SADDLE HEADWALL FOR PIPE CULVERT	3-28-75
M-601-L	HEADWALL INTERCEPTING HEADWALL AND CULVERT OUTLET PAVING	7-3-75
M-601-WW	WINGWALLS FOR CONCRETE BOX CULVERTS	3-31-75
M-603-MA	METAL CULVERT PIPE - H-20 LOADING	3-24-75
M-603-RC	REINFORCED CONCRETE PIPE	8-20-75
M-606-AB	GUARD RAIL, TYPE 3	8-29-72
M-607-A	WIRE FENCE AND GATES	3-15-74
M-614-TB	TRAFFIC SIGNING FOR HIGHWAY CONSTRUCTION	8-19-71

S-612-51A	TYPICAL DELINEATOR INSTALLATIONS	(2 SHEETS)	10-26-72
S-614-52A	BARRICADES, DRUMS AND VERTICAL PANEL CHANNELIZING DEVICES		12-4-74

DIVISION OF HIGHWAYS

APPROVED

E. N. Haase by J. M. Cox 8/29/41

CHIEF ENGINEER DATE

AS CONSTRUCTED INFORMATION

CONTRACTOR Pioneer Const Co.

ENGINEER B.B. Warren

~~Geological~~ Resident

PROJECT STARTED Oct. 6, 1975

PROJECT COMPLETED June 22, 1976

AS CONSTRUCTED PLANS

APPROVED _____

TITLE _____

DATE _____

DEPARTMENT OF TRANSPORTATION	
FEDERAL HIGHWAY ADMINISTRATION	
APPROVED	DATE
DIVISION ENGINEER	

JLC

Andrew
TITLE SHEET

STATE DEPARTMENT OF HIGHWAYS DIVISION OF HIGHWAYS—STATE OF COLORADO

CONVENTIONAL SIGNS

County Line
Township or Range Line
Land Lines
Property or Tract Line
City Limits
Railroad
Existing Road
New Road

Control of Access
Access denied by Deed
Right of Way Line
Protected by Freeway (Virgin Location)
Top of Cuts
Toe of Fills
Barbed Wire Fence
Chain Link Fence
Woven Wire-Combination Fence
Snow Fence
Wood Fence
Deer Fence

Trees
Deciduous
Coniferous

Tel. & Teleg. Lines
Electric Lines
Elec. Trans. Tower
Buried Tel. Cable
Gas Main
Oil Main
Water Main
Sanitary Sewers
Storm Sewers

Road Approaches
Section Corner
Center of Section

Culverts & Drains
Proposed
Existing
Proposed (To be dashed)
Bridges
Existing (To be dashed)

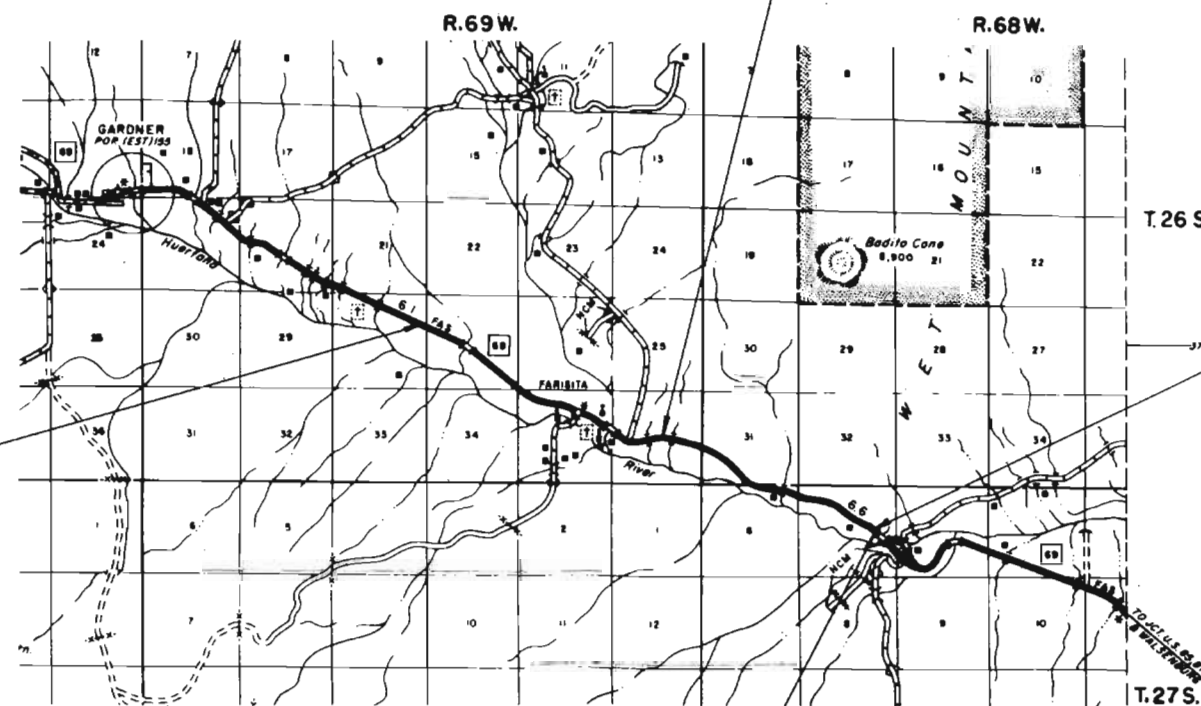
PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. RS 0069 (5) STATE HIGHWAY NO. 69 HUERFANO COUNTY

SCALES OF ORIGINAL DRAWINGS
ON PLAN, 1 IN. = 100 FT.

R.O.W. LENGTH OF PROJECT = 2.70 MILES

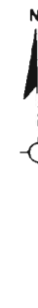
STA. 974+00 END R.O.W. RS 0069 (5)

STA. 1130+00.0 END CONST. RS 0069 (5)



STA. 830+00.0 BEGIN CONST. RS 0069 (5)
= STA. 3+92.7 on S 0038 (11)

STA. 831+15.6 BEGIN R.O.W. RS 0069 (5)



SCALE OF MILES

E.M.T. 7/75

FEDERAL ROAD DISTRICT NO.	STATE	PROJECT NO.	SHEET NO.
VIII	COLORADO	RS 0069(5)	I
REVISIONS			
9-17-75	Added Construction Stations	J.B.	

RIGHT OF WAY
GARDNER-EAST
INDEX OF SHEETS

TITLE SHEET
TABULATION OF PROPERTIES SHEET
LINE SHEETS

FILE COPY
DO NOT REMOVE

DIVISION OF HIGHWAYS	
APPROVED	DATE
<i>E.M.T. 7/75</i>	<i>8/2/75</i>
CHIEF ENGINEER	

DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION	
APPROVED	DATE
DIVISION ENGINEER	

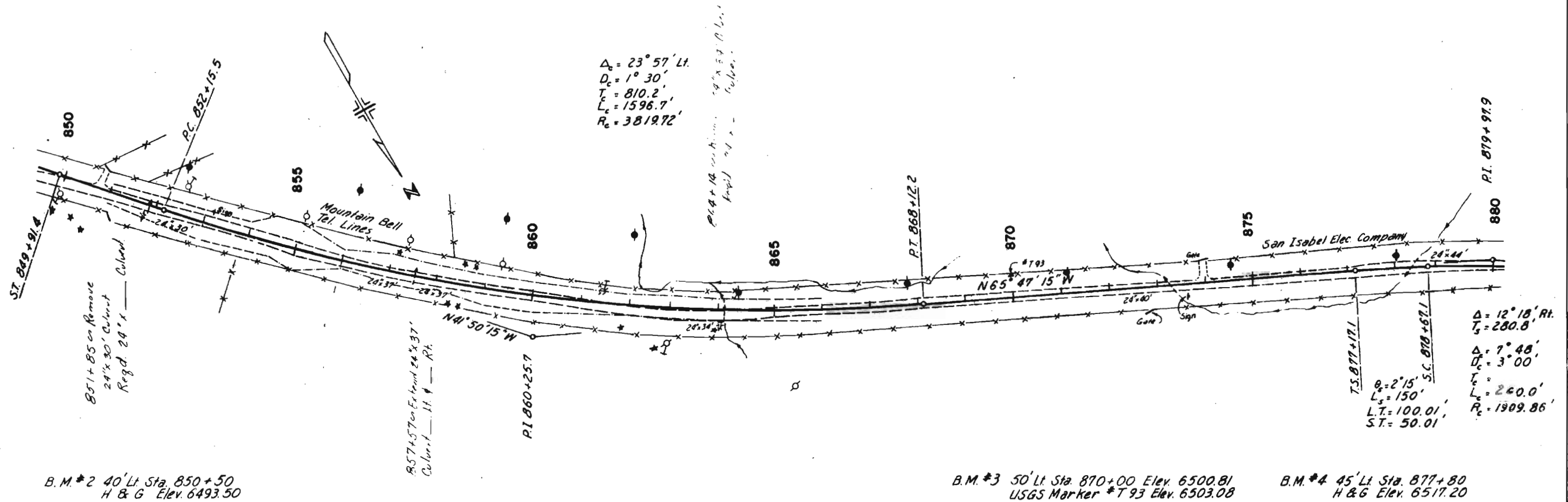
[Handwritten signature]

RIGHT OF WAY GARDNER EAST

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

REVISIONS		
9-17-75	Added Per. PE-1	J.B.
12-22-75	Name Change PE-2	D.J.F.

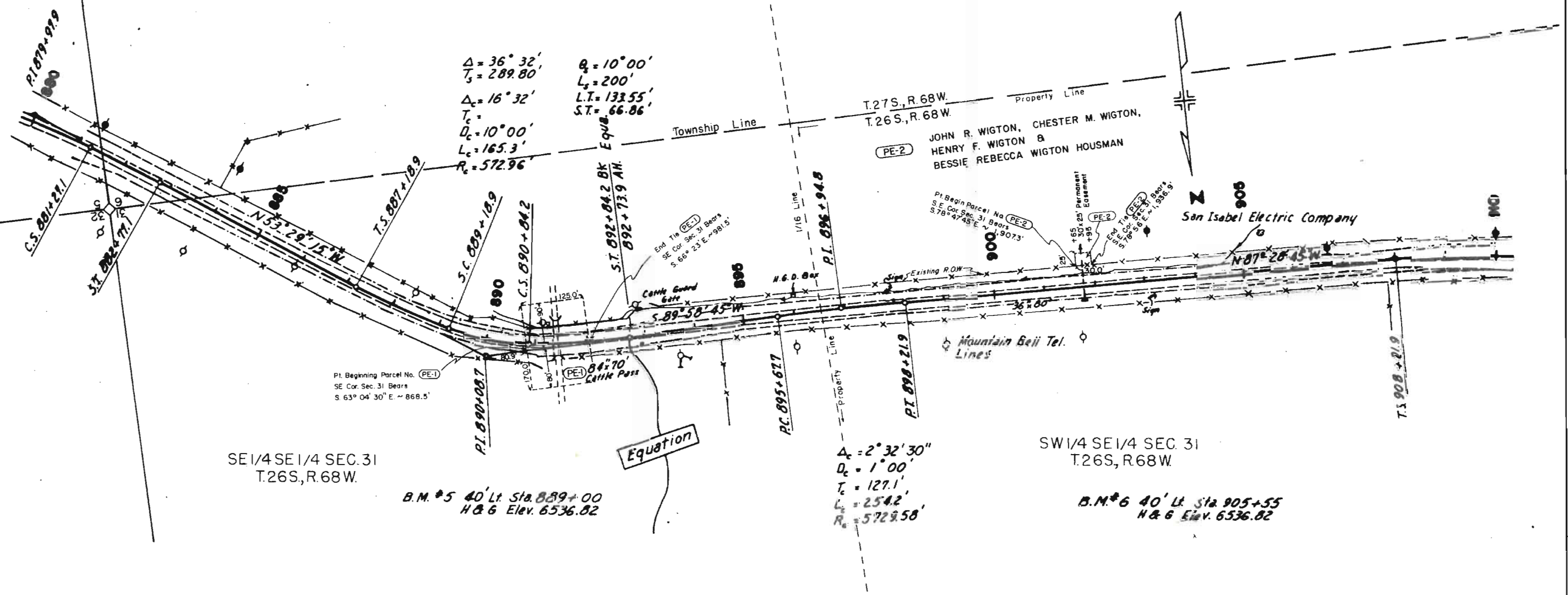
FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(5)	4	11
RIGHT OF WAY GARDNER-EAST				
REVISIONS				



FEDERAL ROAD DISTRICT NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(5)	5	11

REVISIONS		
9-17-75	Added Per. PE-1	J.B.
10-25-75	Change PE-2	M.J.P.

RIGHT OF WAY
 GARDNER - EAST

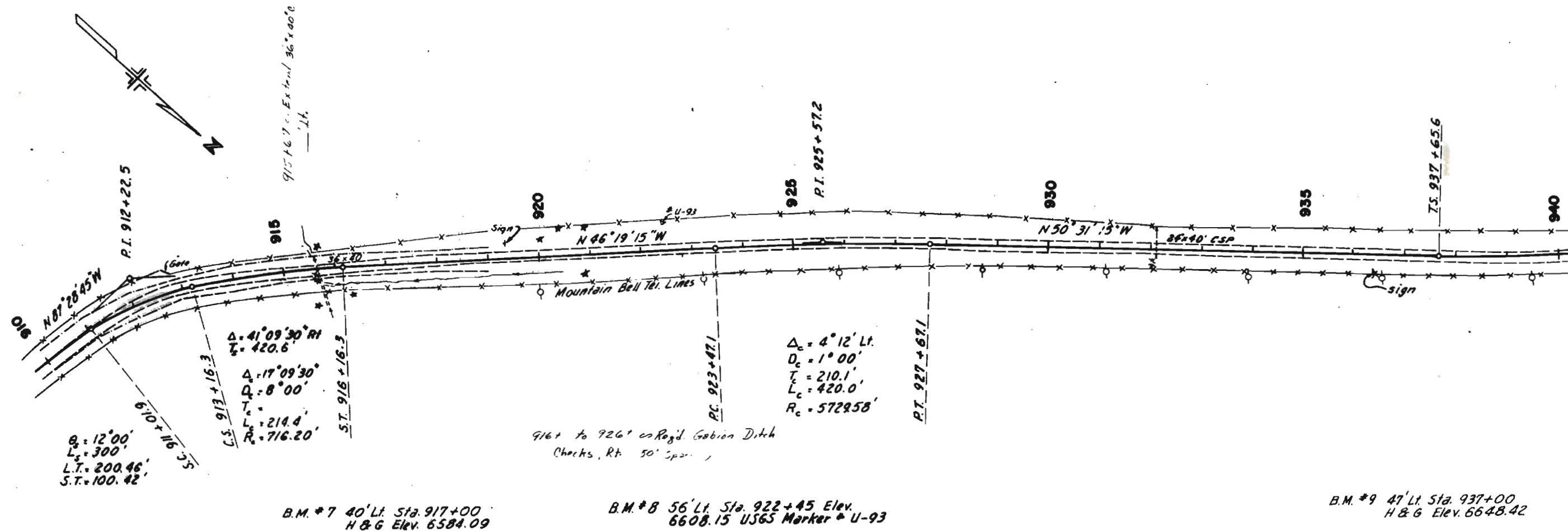


PE-1 CHESTER W. BARTLETT or
 MARTHA B. BARTLETT

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(5)	6	11

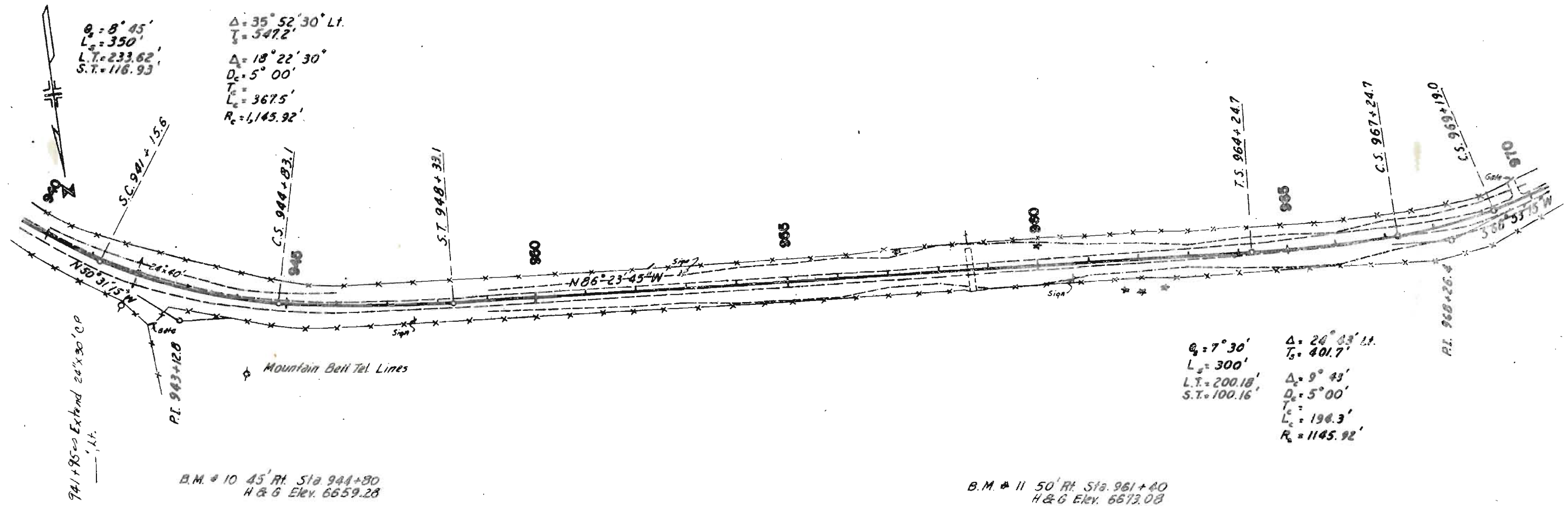
REVISIONS	

RIGHT OF WAY
GARDNER-EAST



FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(5)	7	11

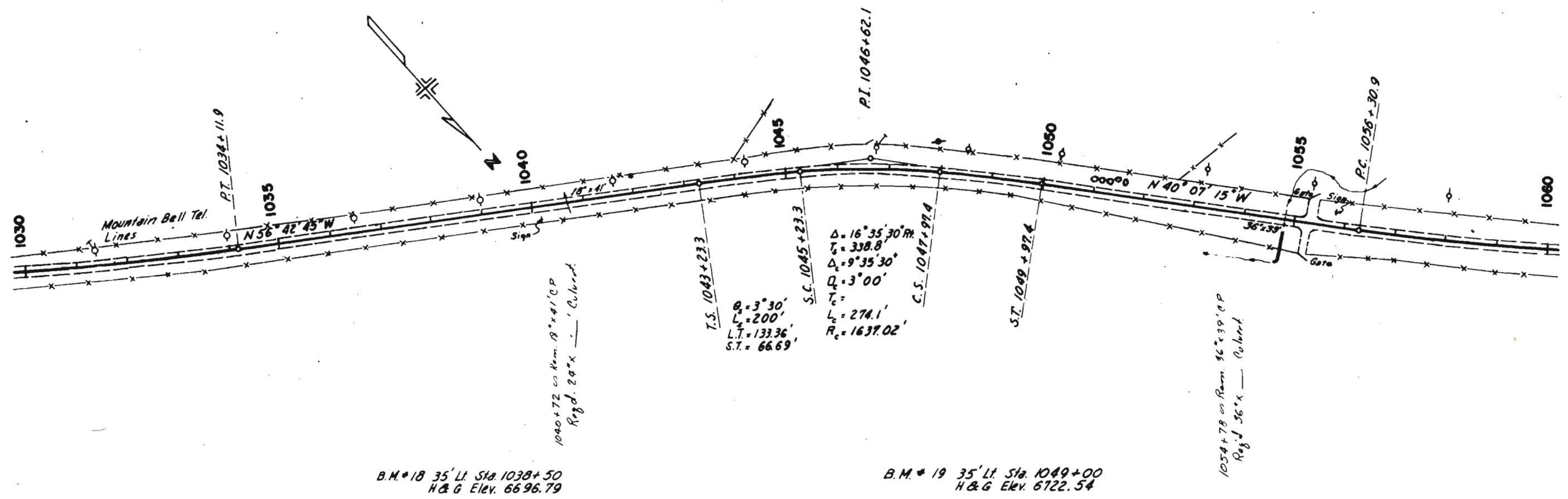
RIGHT OF WAY GARDNER-EAST		REVISIONS	



FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(5)	10	11

REVISIONS	

RIGHT OF WAY
GARDNER-EAST



FEDERAL ROAD RESEARCH NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
VIII	COLORADO	RS 0069(5)	11	11

REVISIONS	

RIGHT OF WAY
GARDNER-EAST

