

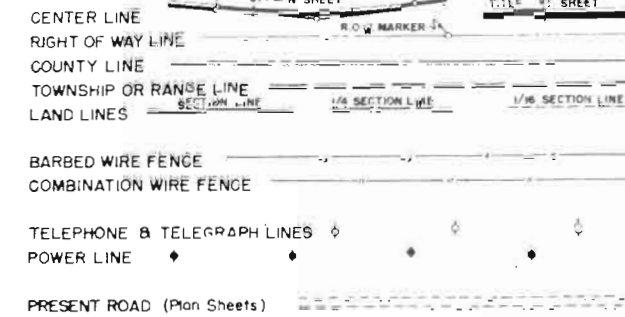
COLORADO DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. S 0002 (17) STATE HIGHWAY NO. 100 BACA & LAS ANIMAS COUNTIES

FEDERAL ROAD DISTRICT NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	S 0002 (17)	1	1

Rev 4-16-56, Ch. Engr. Signature & Bidders Notice, J.C.R.

CONVENTIONAL SIGNS



Inactive

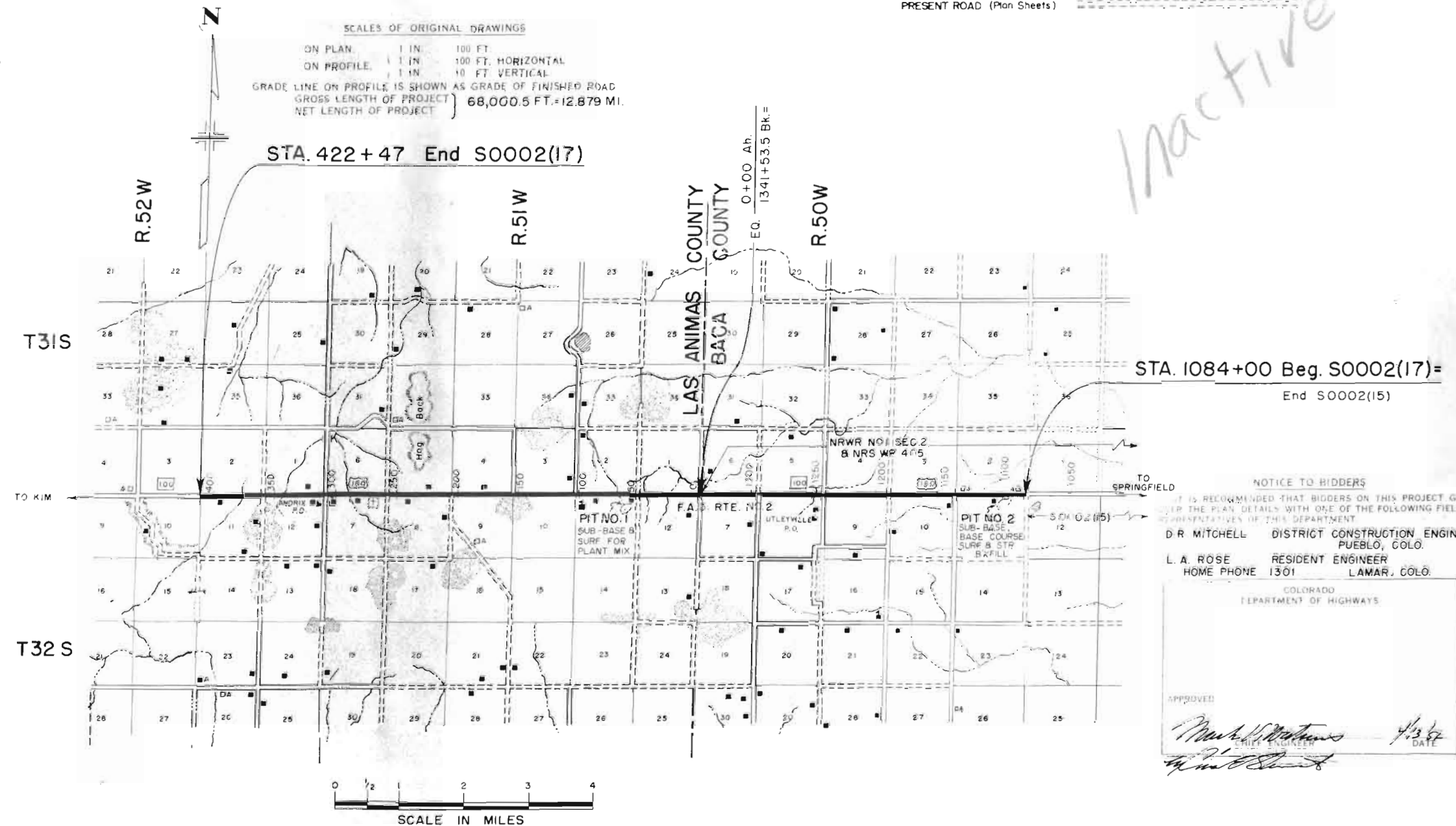
INDEX OF SHEETS

- SHEET NO. 1 TITLE PAGE, SKETCH MAP AND TABULATION OF LENGTH AND DESIGN DATA
- 2 TYPICAL SECTION, GENERAL NOTES AND SUMMARY OF APPROXIMATE QUANTITIES.
- 3-4 LIST OF STRUCTURES
- 5 SKETCH MAPS OF MATERIAL PITS AND DETAILS OF GROUTED RUBBLE SLOPE AND DITCH PAVING.
- 6 SURFACING PLAN, SUB-BASE MATERIAL PLAN, TABULATION OF TIMBER GUARD POSTS AND SHAPING ROADBED.
- 7 STANDARD METHODS FOR SUPERELEVATION & WIDENING OF CURVES. M-1-C
- 8 STANDARD SIDE APPROACH ROADS, FLARING, CUT SLOPE TREATMENT & WIDENING AT BRIDGES & CREST OF GRADES. M-2-EM
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- 14 STANDARD TYPES OF DITCHES AND CONSTRUCTION METHODS. M-107-C
- 15-32 ALIGNMENT PLAN AND PROFILE.
- 33 SUMMARY OF EARTHWORK QUANTITIES.
- 34-66 CROSS SECTIONS.

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
 GROSS LENGTH OF PROJECT } 68,000.5 FT. = 12.879 MI.
 NET LENGTH OF PROJECT }

TABULATION OF LENGTH & DESIGN DATA

STATION	ROADWAY	
	LIN. FT.	MILES
1084+00 Begin S0002 (17) = End S0002 (15)	25,753.5	
1341+53.5 Bk. = } 0+00 Ah } Equation =		
Sta. 1353+64.4 End NRWR No. 1 Sec. 2 And N.R.S. W.R. 405	42,247.0	
422+47 End S 0002 (17)		
TOTAL	68,000.5	
SUMMARY ROADWAY	68,000.5	12.879
PROJECT TOTAL	68,000.5	12.879
DESIGN DATA		
Maximum Degree of Curve	1° 00'	
Maximum Grade	4.61%	
Minimum N.P.S.D. Horizontal	> 1300 Ft.	
Minimum N.P.S.D. Vertical	485 Ft.	
Maximum Design Speed	60 M.P.H.	



NOTICE TO BIDDERS

IT IS RECOMMENDED THAT BIDDERS ON THIS PROJECT GO OVER THE PLAN DETAILS WITH ONE OF THE FOLLOWING FIELD REPRESENTATIVES OF THIS DEPARTMENT

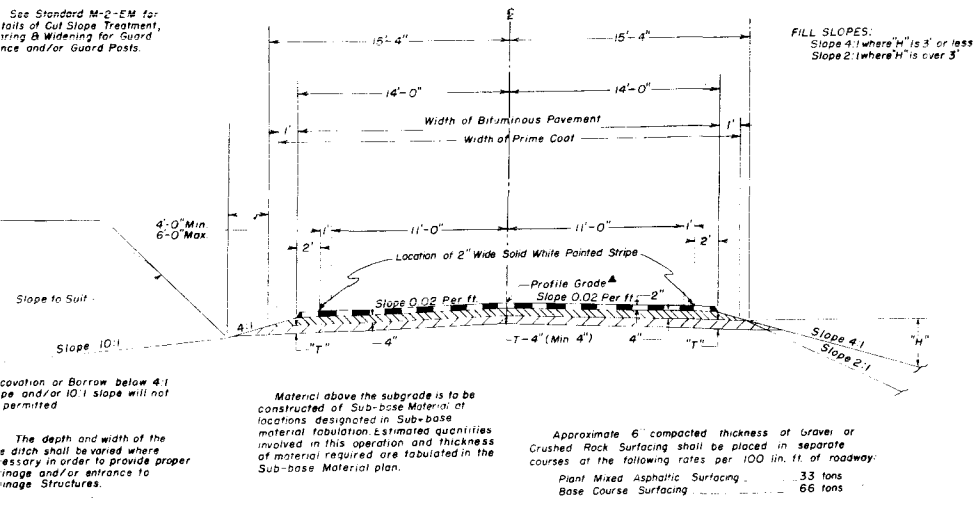
D. R. MITCHELL DISTRICT CONSTRUCTION ENGINEER
PUEBLO, COLO.

L. A. ROSE RESIDENT ENGINEER
HOME PHONE 1301 LAMAR, COLO.

COLORADO
DEPARTMENT OF HIGHWAYS

APPROVED: _____ DATE: 4/13/57

TYPICAL CROSS SECTION OF IMPROVEMENT



GENERAL NOTES

- This project is to be constructed in conformity with the Standard Specifications of the Colorado Department of Highways, adopted June 1, 1952.
- All quantities on preliminary plans are to be considered approximate only.
- For preliminary plan quantities of Asphaltic Road Materials, the following rates of application were used:
PRIME COAT MC of 0.40 Gal. per Sq. Yd.
PAVING ASPHALT (100-120 Penat) at 7.34 lbs. per Sq. Yd./1" th.
- Rate of application and grade of Asphaltic Material shall be as determined by the Engineer at the time of application.
- All side approach roads to the project shall be prime coated to approximately 50 feet out from edge of the Asphaltic Surfacing or to the Right of Way line whichever is less.

SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO.	ITEM	UNIT	PROJECT TOTALS
10a	Clearing & Grubbing Entire Project.	L.S.	•
11a	Removal of 8 Structures.	L.S.	•
11b	Removing & Resetting Mail Boxes.	L.S.	•
11c	Remove & Reset Guard Posts.	Each	48
11d	Remove Timber Guard Posts.	Each	2
13c	Unclassified Excavation.	Cu. Yd.	102,000
13d	Unclassified Ditch Excavation.	Cu. Yd.	100
13s	Stripping.	Cu. Yd.	10,000
14a	Dry Rock Excavation (Str.).	Cu. Yd.	20
14b	Dry Common Excavation (Str.).	Cu. Yd.	200
14c	Wet Rock Excavation (Str.).	Cu. Yd.	10
14d	Wet Common Excavation (Str.).	Cu. Yd.	20
16a	Structure Backfill (Class 1).	Cu. Yd.	320
16c	Mechanical Tamping.	Hour	50
17c	Rolling with Flat Wheeled Roller (Tandem).	Hour	450
17d	Rolling with Flat Wheeled Roller (Three (3) Wheel).	Hour	60
17e	Rolling with Rubber Tired Roller (One (1) Unit).	Hour	320
17ex	Rolling with Rubber Tired Roller (Two (2) Unit).	Hour	60
17h	Furnishing Flat Wheeled Roller (Tandem).	Each	2
17i	Furnishing Flat Wheeled Roller (Three (3) Wheel).	Each	1
17j	Furnishing Rubber Tired Roller (One (1) Unit).	Each	1
17x	Furnishing Rubber Tired Roller (Two (2) Unit).	Each	1
17k	Wetting.	M. Gal.	6,710
17w	Compaction.	Cu. Yd.	185,000
18a	Station Yard Overhaul.	Sta. Yd.	321,000
18b	Yard Mile Overhaul.	Yd. Mi.	4,100
18c	Ton Mile Overhaul.	Ton Mi.	517,500
23a	Sub-Base Material (Class 1).	Ton	14,400
23c	Sub-Base Material (Class 3).	Ton	38,300
26c	Gravel or Crushed Rock Surfacing (Grading C).	Ton	46,300
29c	Asphalt (100-120 Penetration).	Ton	1,710
30x	Asphaltic Road Material MC (Prime).	Gal	92,800
32a	Plant Mixed Asphaltic Surfacing.	Ton	22,460
51e	Relaying 36" Pipe.	Lin. Ft.	52
53c	24" Corrugated Metal Culvert Pipe.	Lin. Ft.	358
53d	30" Corrugated Metal Culvert Pipe.	Lin. Ft.	138
53e	36" Corrugated Metal Culvert Pipe.	Lin. Ft.	209
53g	48" Corrugated Metal Culvert Pipe.	Lin. Ft.	59
63	Grouted Rubble Slope & Ditch Paving.	Cu. Yd.	10
76g	Barbed Wire Gates.	Each	1
92	Timber Guard Posts.	Each	28
119	Shaping Roadbed.	Mile	2.1
81a	STATE FORCES Project Markers.	Each	1
11e	NON-FEDERAL AID Cleaning Culverts. Signing & Striping Entire Project, (Work by State Forces).	Each L.S.	• 1

LIST OF STRUCTURES

COLORADO STATE HIGHWAY DEPARTMENT
 1400 E. 17th
 DENVER, CO.

LOCATION	DESCRIPTION	REMOVE STRUCTURE NO.	EXCAVATION			STRUCTURAL EXCAVATION CUBIC YARDS	STRUCTURE BACKFILL CUBIC YARDS CL 1	MECH. TAMMING HOURS	GRAVEL OR CRUSHED ROCK SURFACING TONS	CORRUGATED METAL CULVERT PIPE				MISCELLANEOUS
			CUBIC YARDS	LINEAL FEET	EMB.					LINEAL FEET	24"	30"	36"	
1096+00 - 1099+00	Fill Ditch, Lt.		200											
1097 + 91	Cross Culvert & Outlet Ditch.			2		19	26							
1105 + 30	Road Approach, Lt.		20											
1110 + 20	Road Approach, Rt.		15											
1111+50 - 1118+00	Fill Ditch, Lt.		400											
1113 + 67	Relay 36" x 52' Cross Culvert & extend 8'					14	28							
1136 + 34	Road Approach, Rt. & Lt.		100											Relaying 52' of 36" pipe.
1140 + 76	Extend 48" x 52' Cross Culvert 6' Lt. & 4' Rt. Inlet Ditch (W=2).			3		4	7							
1156 + 83	Extend 48" x 52' Cross Culvert 4' Lt. Inlet Ditch (W=2).			2		2	3							
1189 + 28	Road Approach, Rt. & Lt.													
1189 + 90	Cross Culvert & Ditches.			4		33	24							
1217 + 75	Remove 30" x 54' CMP.	1												
1242 + 30	Road Approach, Rt. & Lt.													
1248 + 83	Extend 48" x 56' Cross Culvert 4' Lt. & 10' Rt. Ditches (W=2).			2		6	9							
1277 + 83	Extend 48" x 54' Cross Culvert 8' Lt. & 6' Rt. Ditches (W=2).			3		6	9							
1282 + 31	Extend 48" x 54' Cross Culvert 4' Lt. & 4' Rt. Ditches (W=2).			2		3	5							
1326+50 - 1331+00	Fill Ditch, Lt.		500											
1329 + 00	Cross Culvert.					18	31							
1341+53.5 Bk=0+00 Ah	Road Approach, Rt. & Lt.													
3 + 00	Cross Culvert.					10	17							
28 + 18	Remove Headwalls & extend 36" x 34' Cross Culvert 14' Lt. & 20' Rt. Outlet Ditch. (W=2).	1		2		6	16							
51 + 26	Remove Headwall & extend 36" x 33' Cross Culvert 16' Rt. Outlet Ditch. (W=2).	1		2		2	8							
52 + 50	Road Approach, Rt.													
53 + 00	Road Approach, Lt.													
60 + 40	Road Approach, Lt.													
69 + 89	Remove Headwalls & extend 36" x 34' Cross Culvert 16' Lt. & 12' Rt. Outlet Ditch. (W=2).	1		2		5	13							
90 + 94	Road Approach, Lt.													
92 + 00	Cross Culvert & Ditches.			2		24	20							
104 + 38	Road Approach, Rt. & Lt.													
104 + 83	Remove 3' x 2' x 36' Cross Culvert.	1												
105 + 30	Cross Culvert & Inlet Ditch.			3		16	18							

LIST OF STRUCTURES

COLORADO STATE HIGHWAY DEPARTMENT
 V.M.D. Form 125
 JANUARY 1952

REG. ROAD DIVISION NO.	DISTRICT	PROJECT NO.	SHEET NO.	TOTAL SHEETS
9.	COLO.	S 0002 (17)	4	

LOCATION	DESCRIPTION	REMOVE STRUCTURE NO.	EXCAVATION CUBIC YARDS			STRUCTURAL EXCAVATION CUBIC YARDS	STRUCTURE BACKFILL CUBIC YARDS	MECH. FINISHING HOURS	GRAVEL OR CRUSHED ROCK SURFACING TONS	CORRUGATED METAL CULVERT PIPE LINEAR FEET				MISCELLANEOUS
			UNCL.	EMB.	UNCL. DRAIN					24"	30"	36"	48"	
157 + 70	Road Approach, Lt. Clean 3'x2'x34' Side Drain, Lt.			40				17						1-Cleaning Culverts.
182 + 60	Road Approach, Rt.			60				17						
182 + 75	Road Approach, Lt.			40				17						
210 + 09	Road Approach, Rt. & Lt.			80				92						
249 + 96	Remove Headwall Rt. & extend 36"x34' / Cross Culvert 20' Lt. Grouted Rubble Slope & Ditch Paving, Rt. (12" thick) (Details on Sheet No. 5).					4		8				▲21		9 Cu. Yds. Grouted Rubble Slope & Ditch Paving.
250 + 15	Road Approach, Lt.			60				17						
254 + 30	Remove Headwalls & extend double 36" x 1 3/8' Cross Culvert 20' Lt. & 26' Rt. Ditches. (W=4).				10	26		44				▲21 ▲27 ▲21 ▲27		
263 + 00	Road Approach, Lt.			35				46						
265 + 00	Remove Headwalls & extend 24" x 33' / Cross Culvert 26' Lt. & 30' Rt. Ditches.					4		3				▲27 ▲31		1-Barbed Wire Gate.
277 + 00	Road Approach, Lt. Barbed Wire Gate, Lt.			25				17						
287 + 24	Road Approach, Lt.			20				17						
311 + 30	Cross Culvert.					19		18					54	
316 + 50	Road Approach, Rt. & Lt.			40				92						
369 + 32	Road Approach, Lt.			30				46						
370 + 60	Road Approach, Rt.			90				17						
405 + 32	Road Approach, Lt.			90				17						
412 + 40	Road Approach, Rt.			▲10				17						
422 + 47	Project Marker, Rt.													Project Marker (State Forces)
422 + 47	Approach to Project.							*						
Entire Project	Mechanical Tamping.							45						
Entire Project	Removing & Resetting Mail Boxes.													Removing & Resetting Mail Boxes.
TOTALS		8	250	2,177	43	220		315	45	992				358,138,209,59

Structural Excavation is estimated to be 95% Common & 5% Rock, each of which is estimated to be 95% Dry & 5% Wet.
 Includes 1-Ft. allowance for Connecting Band.
 Included in Surfacing Plan.
 To be obtained within Right of Way as directed by the Engineer.

FEDERAL ROAD DIVISION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	S 0002 (17)	6	

TABULATION OF TIMBER GUARD POSTS

STATION	SIDE	SPACING	TIMBER GUARD POSTS	REMOVE & RESET GUARD POSTS	REMOVE TIMBER GUARD POSTS
			NO.	NO.	NO.
1097+91	LT & RT	CULVERT	2		
1113+67	LT & RT	CULVERT		2	
1140+76	LT & RT	CULVERT		2	
1156+83	LT & RT	CULVERT		2	
1189+90	LT & RT	CULVERT	2		
1217+75	LT & RT	CULVERT			2
1241+40	LT & RT	CULVERT		2	
1248+83	LT & RT	CULVERT		2	
1277+83	LT & RT	CULVERT		2	
1282+31	LT & RT	CULVERT		2	
1305+30	LT & RT	CULVERT		2	
1328+00 ~ 1330+00	LT & RT	100 FT.	6		
1341+10	LT & RT	CULVERT		2	
3+00	LT & RT	CULVERT	2		
15+50	LT & RT	CULVERT		2	
28+18	LT & RT	CULVERT		2	
51+26	LT & RT	CULVERT		2	
69+89	LT & RT	CULVERT		2	
77+18	LT & RT	CULVERT		2	
92+00	LT & RT	CULVERT	2		
105+00	LT & RT	CULVERT		2	
142+32	LT & RT	CULVERT		2	
203+68	LT & RT	CULVERT		2	
249+96	LT & RT	CULVERT		2	
253+00 ~ 255+00	LT & RT	100 FT.	4		
264+00 ~ 268+00	LT & RT	100 FT.	8		
294+25	LT & RT	CULVERT		2	
311+30	LT & RT	CULVERT	2		
318+41	LT & RT	CULVERT		2	
352+17	LT & RT	CULVERT		2	
386+96	LT & RT	CULVERT		2	
PROJECT TOTAL	TOTAL		28	48	2

SURFACING PLAN

It is estimated that Surfacing Material and Sub-Base Material for the Project is available in the vicinity of the pits indicated in the following tabulations. Estimated quantities involved in the operation are shown below.

Alteration of the Surfacing Plan or the Sub-Base Material Plan as here outlined will be allowed only on written permission from the Department.

MATERIAL TO BE PLACED	SOURCE AND QUANTITY AVAILABLE		QUANTITY IN TONS		OVERHAUL IN TON MILES	
	PLANT MIX	BASE COURSE	PLANT MIXED ASPHALTIC SURFACING	BASE COURSE SURFACING GRADING "C"	PLANT MIXED ASPHALTIC SURFACING	BASE COURSE SURFACING
1084+00 ~ 1100+00 1100+00 ~ 1341+53.5Bk.	PIT NO.1	PIT NO.2		1,056 15,942		240 37.672
1084+00 ~ 1341+53.5Bk. 0+00 Ah. ~ 60+40	NE 1/4 Sec.11 T.32S. R.51W.	NE 1/4 Sec.11 T.32S. R.50W.	8,499 1,994		31,521 1,392	
60+00 ~ 422+47 0+00 Ah. ~ 422+47	73,000 TONS	116,000 TONS	11,949	27,883	42,476	241,215
Approach to Project From List of Structures	665.6' to Sta. 60+45	400' to Sta. 1100+00 R=76	17	33 992	119	418 6,168
Estimated for Correcting Irregularities in Sub-Grade: 10+00 ~ 60+00				330		1,754
TOTALS			22,459	46,236	75,508	287,467

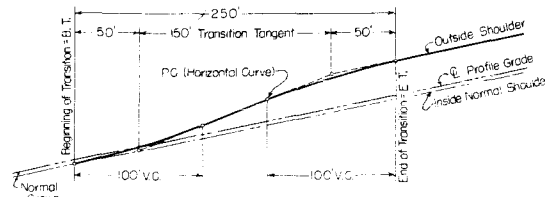
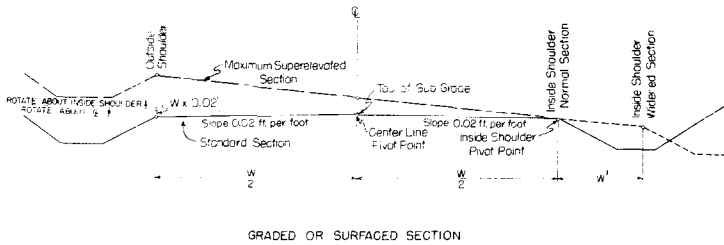
SUB-BASE MATERIAL PLAN

MATERIAL TO BE PLACED	SOURCE AND QUANTITY AVAILABLE	THICKNESS	QUANTITY IN TONS		OVERHAUL
			CLASS 1	CLASS 3	TON MILES
1084+00 ~ 1100+00 1100+00 ~ 1145+00 1145+00 ~ 1175+00	PIT NO. 2 NE 1/4 Sec.11 T.32S. R.50W.	4"	1,056 2,970 2,370		240 1,491 2,873
1175+00 ~ 1185+00 1185+00 ~ 1245+00 1245+00 ~ 1252+29.6	400' to Sta. 1100+00 116,000 TONS R=71	4" 6" 4"	660 5,520 482		1,050 12,441 1,394
10% for Correcting Irregularities in Sub-Grade			1,306		1,949
1252+29.6 ~ 1341+53.5 0+00 ~ 10+00 60+00 ~ 60+40	PIT NO. 1 NE 1/4 Sec.11 T.32S. R.51W.	4" 4" 5"		5,890 660 32	12,458 776 4
60+40 ~ 70+00 70+00 ~ 257+00 257+00 ~ 260+00	665.6' to Sta. 60+40 73,000 TONS R=65	5" 4" 12"		758 12,342 600	165 25,656 2,327
260+00 ~ 285+00 285+00 ~ 422+47		4" 6"		1,650 12,778	5,407 73,855
Approach to Project 10% for Correcting Irregularities in Sub-Grade				46 3,476	322 12,097
TOTALS			14,364	38,232	154,505

*Based on Curve "B"

SHAPING ROADBED

STATION TO STATION	LIN. FT.
1177+00 TO 1245+00	6800
1258+00 TO 1271+00	1300
1301+00 TO 1312+00	1100
408+00 TO 422+47	1447
TOTAL	10,647 FT. = 2.016 MILES



CASE I: SIMPLE CURVE WITH UNLIMITED TANGENT APPROACH

NOTE: CASE I
The transition in this case, from crowned section to super-elevated section, shall proceed by raising the outside shoulder, over a distance of 250 ft. as shown, beginning at a point on the tangent 150 ft. from the end of the curve and acquiring full super-elevation at a point 100 ft. inside the curve.

GENERAL NOTES

Curves on projects using this Section shown are to be super-elevated and widened as indicated in the accompanying drawings and tables.
The normal inside edge of the Graded or Surfaced Section is to remain at the standard elevation of 0.02 ft. per foot width of roadway below the profile grade, or as shown on the Typical Section for the Project. The centerline pivot point is to be used until the super-elevation equals 0.02 ft. per foot width of roadway. When this elevation is exceeded the normal inside shoulder pivot point is to be used.
When the degree of curvature exceeds 10°, the inside edge of the Asphaltic Mat or the inside shoulder of the Graded or Surfaced Section is to be widened from the normal inside edge or shoulder, respectively, as shown by the table and plan or by cross-sections. Curves of 10° or less are not to be widened.

The slope of the shoulders and widened sections shall conform to the rate per foot width of roadway required, except that the inside shoulder shall maintain the Typical Section slope until the slope is exceeded by the required super-elevation slope.
The outside ditch on super-elevated sections may be modified, where necessary to provide proper drainage. Centerline ditch shall conform to normal ditch section shown for Project.
The rate of super-elevation per foot width of roadway to be applied at the outside shoulder of the roadway is computed as follows:

The full super-elevation per foot width of roadway rate for a given degree of curvature is $0.0105 \times \text{Degree of Curvature}$.
The maximum super-elevation of 0.10 ft. per foot width, applying to curves of 10° and over, shall not be exceeded.
Where spiral curves are used, the transition from normal crowned section to full super-elevation and widening shall take place over the full length of spiral curve.
Special transition problems not covered by this standard sheet shall be covered by appropriate notes indicated with curve data on plans.

SUPERELEVATION AND WIDENING TABLES

Degree of Curvature	RATE OF SUPERELEVATION (IN FEET) PER FOOT WIDTH OF ROADWAY									
	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	Max. 1.0	
1	0.0044	0.0057	0.0070	0.0083	0.0096	0.0109	0.0122	0.0135	0.0148	0.0161
2	0.0088	0.0114	0.0140	0.0166	0.0192	0.0218	0.0244	0.0270	0.0296	0.0322
3	0.0132	0.0171	0.0210	0.0249	0.0288	0.0327	0.0366	0.0405	0.0444	0.0483
4	0.0176	0.0235	0.0294	0.0353	0.0412	0.0471	0.0530	0.0589	0.0648	0.0707
5	0.0220	0.0296	0.0372	0.0448	0.0524	0.0600	0.0676	0.0752	0.0828	0.0904
6	0.0264	0.0358	0.0452	0.0546	0.0640	0.0734	0.0828	0.0922	0.1016	0.1110
7	0.0308	0.0420	0.0532	0.0644	0.0756	0.0868	0.0980	0.1092	0.1204	0.1316
8	0.0352	0.0480	0.0608	0.0736	0.0864	0.0992	0.1120	0.1248	0.1376	0.1504
9	0.0396	0.0540	0.0684	0.0828	0.0972	0.1116	0.1260	0.1404	0.1548	0.1692
10	0.0440	0.0600	0.0760	0.0920	0.1080	0.1240	0.1400	0.1560	0.1720	0.1880
11	0.0484	0.0660	0.0840	0.1020	0.1200	0.1380	0.1560	0.1740	0.1920	0.2100
12	0.0528	0.0720	0.0920	0.1120	0.1320	0.1520	0.1720	0.1920	0.2120	0.2320
13	0.0572	0.0780	0.1000	0.1220	0.1440	0.1660	0.1880	0.2100	0.2320	0.2540
14	0.0616	0.0840	0.1080	0.1320	0.1560	0.1800	0.2040	0.2280	0.2520	0.2760
15	0.0660	0.0900	0.1160	0.1420	0.1680	0.1940	0.2200	0.2460	0.2720	0.2980
16	0.0704	0.0960	0.1240	0.1520	0.1800	0.2080	0.2360	0.2640	0.2920	0.3200
17	0.0748	0.1020	0.1320	0.1620	0.1920	0.2220	0.2520	0.2820	0.3120	0.3420
18	0.0792	0.1080	0.1400	0.1720	0.2040	0.2360	0.2680	0.3000	0.3320	0.3640
19	0.0836	0.1140	0.1480	0.1820	0.2160	0.2500	0.2840	0.3180	0.3520	0.3860
20	0.0880	0.1200	0.1560	0.1920	0.2280	0.2640	0.3000	0.3360	0.3720	0.4080
21	0.0924	0.1260	0.1640	0.2020	0.2400	0.2780	0.3160	0.3540	0.3920	0.4300
22	0.0968	0.1320	0.1720	0.2120	0.2520	0.2920	0.3320	0.3720	0.4120	0.4520
23	0.1012	0.1380	0.1800	0.2220	0.2640	0.3040	0.3440	0.3840	0.4240	0.4640
24	0.1056	0.1440	0.1880	0.2320	0.2760	0.3160	0.3560	0.3960	0.4360	0.4760
25	0.1100	0.1500	0.1960	0.2420	0.2880	0.3280	0.3680	0.4080	0.4480	0.4880
26	0.1144	0.1560	0.2040	0.2520	0.2960	0.3360	0.3760	0.4160	0.4560	0.4960
27	0.1188	0.1620	0.2120	0.2620	0.3040	0.3440	0.3840	0.4240	0.4640	0.5040
28	0.1232	0.1680	0.2200	0.2720	0.3120	0.3520	0.3920	0.4320	0.4720	0.5120
29	0.1276	0.1740	0.2280	0.2820	0.3200	0.3600	0.4000	0.4400	0.4800	0.5200
30	0.1320	0.1800	0.2360	0.2920	0.3280	0.3680	0.4080	0.4480	0.4880	0.5280
31	0.1364	0.1860	0.2440	0.3020	0.3360	0.3760	0.4160	0.4560	0.4960	0.5360
32	0.1408	0.1920	0.2520	0.3120	0.3440	0.3840	0.4240	0.4640	0.5040	0.5440
33	0.1452	0.1980	0.2600	0.3220	0.3520	0.3920	0.4320	0.4720	0.5120	0.5520
34	0.1496	0.2040	0.2680	0.3320	0.3600	0.4000	0.4400	0.4800	0.5200	0.5600
35	0.1540	0.2100	0.2760	0.3420	0.3680	0.4080	0.4480	0.4880	0.5280	0.5680
36	0.1584	0.2160	0.2840	0.3520	0.3760	0.4160	0.4560	0.4960	0.5360	0.5760
37	0.1628	0.2220	0.2920	0.3620	0.3840	0.4240	0.4640	0.5040	0.5440	0.5840
38	0.1672	0.2280	0.3000	0.3720	0.3920	0.4320	0.4720	0.5120	0.5520	0.5920
39	0.1716	0.2340	0.3080	0.3820	0.4000	0.4400	0.4800	0.5200	0.5600	0.6000
40	0.1760	0.2400	0.3160	0.3920	0.4080	0.4480	0.4880	0.5280	0.5680	0.6080
41	0.1804	0.2460	0.3240	0.4020	0.4160	0.4560	0.4960	0.5360	0.5760	0.6160
42	0.1848	0.2520	0.3320	0.4120	0.4240	0.4640	0.5040	0.5440	0.5840	0.6240
43	0.1892	0.2580	0.3400	0.4220	0.4320	0.4720	0.5120	0.5520	0.5920	0.6320
44	0.1936	0.2640	0.3480	0.4320	0.4400	0.4800	0.5200	0.5600	0.6000	0.6400
45	0.1980	0.2700	0.3560	0.4420	0.4480	0.4880	0.5280	0.5680	0.6080	0.6480
46	0.2024	0.2760	0.3640	0.4520	0.4560	0.4960	0.5360	0.5760	0.6160	0.6560
47	0.2068	0.2820	0.3720	0.4620	0.4640	0.5040	0.5440	0.5840	0.6240	0.6640
48	0.2112	0.2880	0.3800	0.4720	0.4720	0.5120	0.5520	0.5920	0.6320	0.6720
49	0.2156	0.2940	0.3880	0.4820	0.4800	0.5200	0.5600	0.6000	0.6400	0.6800
50	0.2200	0.3000	0.3960	0.4920	0.4880	0.5280	0.5680	0.6080	0.6480	0.6880
51	0.2244	0.3060	0.4040	0.5020	0.4960	0.5360	0.5760	0.6160	0.6560	0.6960
52	0.2288	0.3120	0.4120	0.5120	0.5040	0.5440	0.5840	0.6240	0.6640	0.7040
53	0.2332	0.3180	0.4200	0.5220	0.5120	0.5520	0.5920	0.6320	0.6720	0.7120
54	0.2376	0.3240	0.4280	0.5320	0.5200	0.5600	0.6000	0.6400	0.6800	0.7200
55	0.2420	0.3300	0.4360	0.5420	0.5280	0.5680	0.6080	0.6480	0.6880	0.7280
56	0.2464	0.3360	0.4440	0.5520	0.5360	0.5760	0.6160	0.6560	0.6960	0.7360
57	0.2508	0.3420	0.4520	0.5620	0.5440	0.5840	0.6240	0.6640	0.7040	0.7440
58	0.2552	0.3480	0.4600	0.5720	0.5520	0.5920	0.6320	0.6720	0.7120	0.7520
59	0.2596	0.3540	0.4680	0.5820	0.5600	0.6000	0.6400	0.6800	0.7200	0.7600
60	0.2640	0.3600	0.4760	0.5920	0.5680	0.6080	0.6480	0.6880	0.7280	0.7680
61	0.2684	0.3660	0.4840	0.6020	0.5760	0.6160	0.6560	0.6960	0.7360	0.7760
62	0.2728	0.3720	0.4920	0.6120	0.5840	0.6240	0.6640	0.7040	0.7440	0.7840
63	0.2772	0.3780	0.5000	0.6220	0.5920	0.6320	0.6720	0.7120	0.7520	0.7920
64	0.2816	0.3840	0.5080	0.6320	0.6000	0.6400	0.6800	0.7200	0.7600	0.8000
65	0.2860	0.3900	0.5160	0.6420	0.6080	0.6480	0.6880	0.7280	0.7680	0.8080
66	0.2904	0.3960	0.5240	0.6520	0.6160	0.6560	0.6960	0.7360	0.7760	0.8160
67	0.2948	0.4020	0.5320	0.6620	0.6240	0.6640	0.7040	0.7440	0.7840	0.8240
68	0.2992	0.4080	0.5400	0.6720	0.6320	0.6720	0.7120	0.7520	0.7920	0.8320
69	0.3036	0.4140	0.5480	0.6820	0.6400	0.6800	0.7200	0.7600	0.8000	0.8400
70	0.3080	0.4200	0.5560	0.6920	0.6480	0.6880	0.7280	0.7680	0.8080	0.8480
71	0.3124	0.4260	0.5640	0.7020	0.6560	0.6960	0.7360	0.7760	0.8160	0.8560
72	0.3168	0.4320	0.5720	0.7120	0.6640	0.7040	0.7440	0.7840	0.8240	0.8640
73	0.3212	0.4380	0.5800	0.7220	0.6720	0.7120	0.7520	0.7920	0.8320	0.8720
74	0.3256	0.4440	0.5880	0.7320	0.6800	0.7200	0.7600	0.8000	0.8400	0.8800
75	0.3300	0.4500	0.5960	0.7420	0.6880	0.7280	0.7680	0.8080	0.8480	0.8880
76	0.3344	0.4560	0.6040	0.7520	0.6960	0.7360	0.7760	0.8160	0.8560	0.8960
77	0.3388	0.4620	0.6120	0.7620	0.7040	0.7440	0.7840	0.8240	0.8640	0.9040
78	0.3432	0.4680	0.6200	0.7720	0.7120	0.7520	0.7920	0.8320	0.8720	0.9120
79	0.3476	0.4740	0.6280	0.7820	0.7200	0.7600	0.8000	0.8400	0.8800	0.9200
80	0.3520	0.4800	0.6360	0.7920	0.7280	0.7680	0.8080	0.8480	0.8880	0.9280
81	0.3564	0.4860	0.6440	0.8020	0.7360	0.7760	0.8160	0.8560	0.8960	0.9360
82										

PROJECT MARKER POST

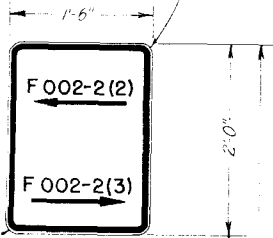
RIGHT OF WAY MARKER POST

STANDARD M-7-C

FEDERAL ROAD DIVISION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
5	COLORADO	5000 2(17)	7	

Rev. 4-4-56, Added Bridge Bench Mark, J.C.R.

Metal Sign conforming to A.A.S.H.O. Manual on Uniform Traffic Control Devices. White Background, Black Letters & Symbols.



NOTES FOR PROJECT MARKER POSTS

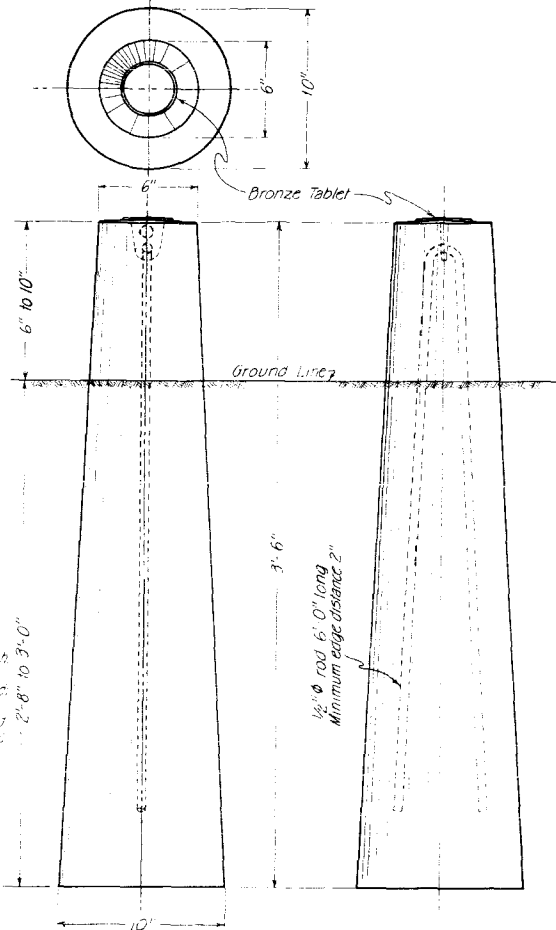
All work shall be done in accordance with the Standard Specifications of the Colorado Department of Highways applicable to this project.

Numbers and arrows shall show the proper numbers and directions of the projects each way from where the post is placed. Post is to be set with sign facing the road at the end of the project, two feet inside the R.O.W. line or at a point amply protected from traffic in such a position that the sign will indicate properly the projects to which it refers.

NOTES FOR ROW MARKER POSTS

All work shall be done in accordance with the Standard Specifications of the Colorado Department of Highways applicable to the project. Posts shall be made of Class A Concrete. The upper 12 inches of marker posts shall be rubbed free of form marks and the top surface of the post must be constructed to drain thoroughly.

All exposed surfaces of the bronze tablet are to be ground to a smooth surface. All letters are to be depressed a minimum of 1/16 inch. Information on the bronze tablet indicated by pin lines is to be stamped in field by the engineering party after marker is placed. 3/16 inch letters and figures to be used. Project designations on tablets shall be properly shown (i.e., I for Fed. Aid Interstate, P for Fed. Aid Primary, S for Fed. Aid Secondary, etc. A, C for State Projects see detail below.)



BENCH MARK

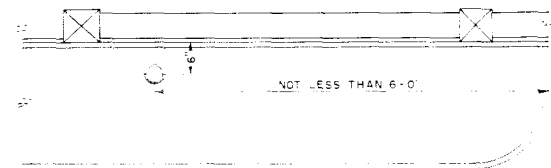
All work shall be done in accordance with Standard Specifications of the Colorado Department of Highways applicable to the project.

All exposed surfaces of the bronze tablet are to be ground to a smooth surface. All letters are to be depressed a minimum of 1/16 inch. Information on the bronze tablet indicated by pin lines is to be stamped in field by the engineering party after marker is placed. 3/16 inch letters and figures to be used. Project designation on tablets shall be properly shown (i.e., I for Fed. Aid Interstate, P for Fed. Aid Primary, S for Fed. Aid Secondary, etc. A, C for State Projects. See details below.)

Bronze Bench Mark Tablets will be furnished by the Department at no expense to the Contractor.

Installation of Bronze Bench Mark Tablets will not be paid for directly, but shall be included in the price bid for Concrete.

Note: Where 2'-0" safety curbs are not used place marker in center of curb



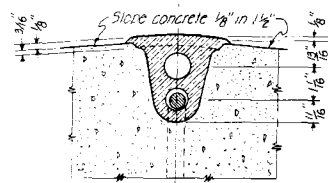
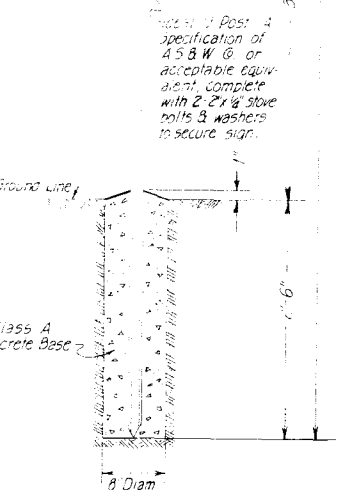
PLAN



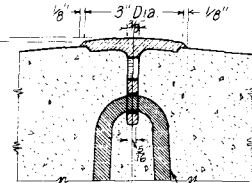
ELEVATION



One marker to be placed on all bridges as shown. The station shown on marker shall be the center-line stationing directly opposite the marker.



SECTION B-B



SECTION A-A

Omit and use 1/2" x 1/2" rod for Bench Mark Tablet

DETAIL OF BRONZE TABLET FOR RIGHT OF WAY MARKER POST AND BENCH MARK

COLORADO DEPARTMENT OF HIGHWAYS
STANDARD MARKER POSTS AND BENCH MARKS

DESIGNED BY C.D.H. APPROVED BY
MAY 1956

CHECKED BY C.D.H. DATE 5/1/56

STANDARD M-19-D SPECIFICATIONS (Work By Contractor)

ROAD DIVISION NO.	DISTRICT
9	10
PROJECT NO.	DATE
5000 2(7)	10

POSTS - Lodgepole Pine, Southern Yellow Pine or West Coast Douglas Fir, not less than six (6) inches in diameter. All posts shall be pressure treated with Pentachlorophenol as provided under paragraph 42.2.20 of the specifications, after being peeled and shaved in accordance with specifications.

PAINTING - Posts shall be painted with aluminum paint and a black band placed around each post as per details on this sheet. Number of coats and type of paint applied shall be in accordance with specifications.

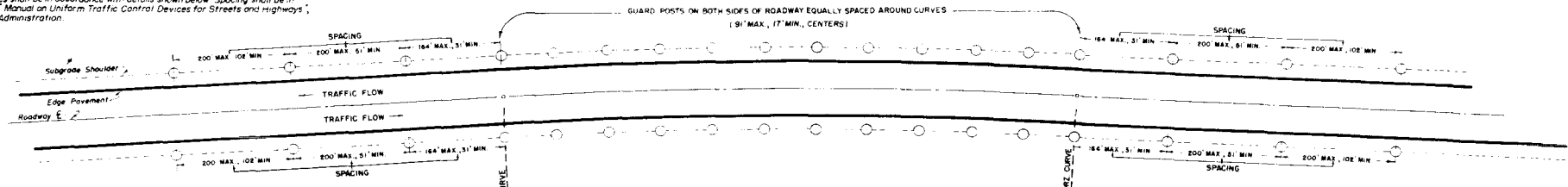
(Work By State Forces)

REFLECTIVE SHEETING - In accordance with the details hereon, State Forces will furnish and place the required 2" x 6" smooth surfaced reflective delineators fabricated from 3s-H14 aluminum alloy, minimum thickness 0.025, reflectorized by means of wide-angle flattop silver "Scotchite". Strips shall be suitable for placement around a curved surface.

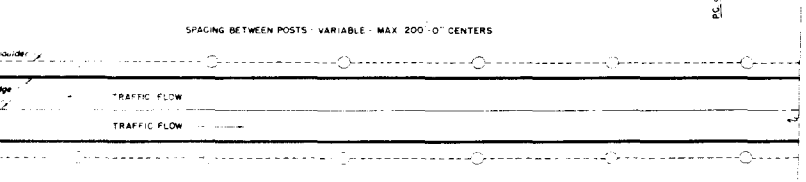
STANDARD TIMBER GUARD POSTS

Typical Installation on Curves

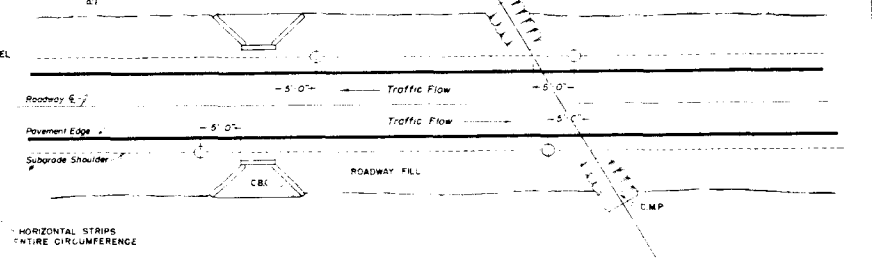
Installation of guard posts on curves shall be in accordance with details shown below. Spacing shall be in accordance with Section 157, Table 1 of "Manual on Uniform Traffic Control Devices for Streets and Highways", 4B by the Public Roads Administration.



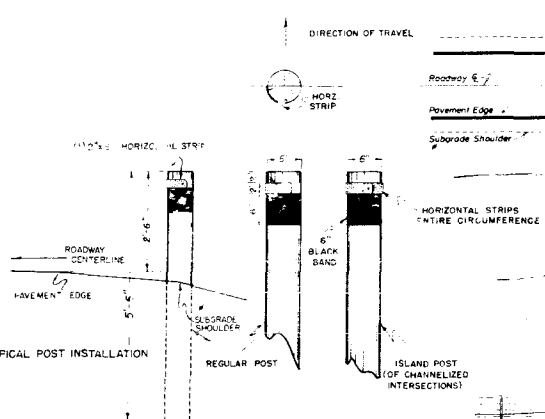
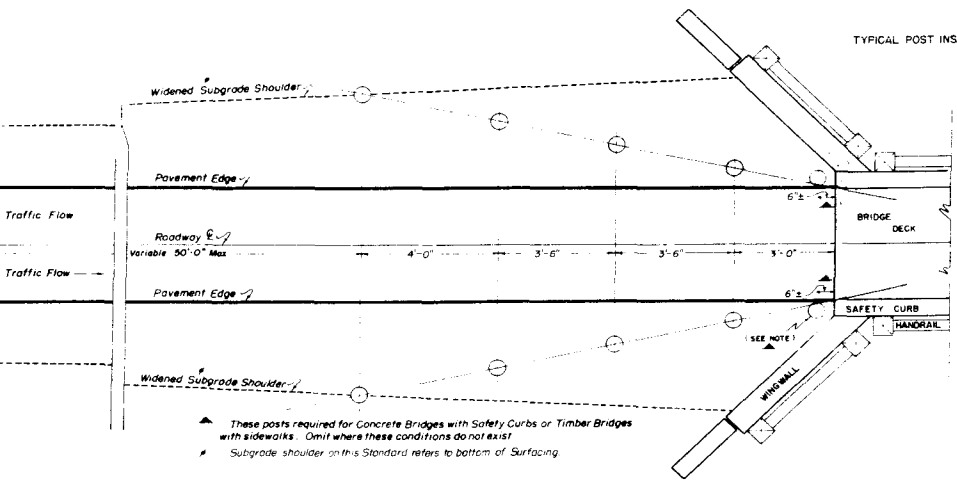
Method of Placement on Tangents



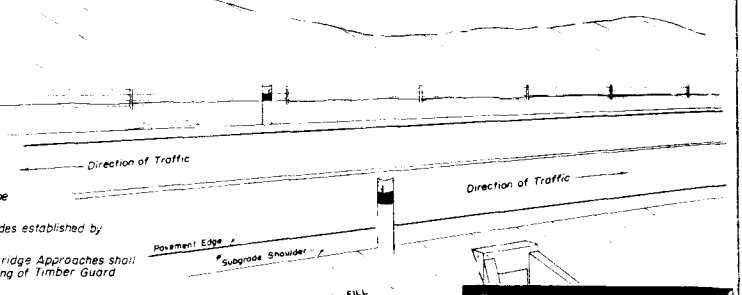
Plan View Showing Placement at Isolated Minor Structures



Typical Installation at Bridge Approaches



Pictorial View Showing Location at Isolated Minor Structures



(Work By State Forces)
INSTALLATION DETAILS OF REFLECTORIZED STRIPS

GENERAL NOTES (Work By Contractor)

All work shall be done in accordance with the Standard Specifications of the Colorado Department of Highways applicable to the project.
 All posts shall be set and tamped in, plumb and firm, to the line and grades established by the Engineer.
 INSTALLATION of Timber Guard Posts on Tangents, Curves and at Bridge Approaches shall be in conformity with details on this sheet. The number, location and spacing of Timber Guard Posts is shown on plans.

(Work By State Forces)

Reflective delineators shall be furnished and installed by State Forces after the Contractor has finished his operations.
 Installation of reflective delineators shall be in accordance with the following: Wrap Around Reflective Sheeting Strips shall be installed horizontally one (1) sheet on all posts. Island posts shall have Wrap Around Reflective Sheeting Strips placed horizontally to cover entire circumference of Post.
 On divided Highways and Islands, Reflective Sheeting Strips shall be placed in a manner to obtain maximum visibility for the primary direction of travel. In all instances tests shall be made to insure the maximum effectiveness of reflective delineators.
 All Traffic Islands shall be marked with island Posts as indicated hereon.

**COLORADO
 DEPARTMENT OF HIGHWAYS**

**STANDARD
 TIMBER GUARD POSTS**

Designed by	Approved by
Made by	Engineer, Surveys & Plans
Checked by	Date March 25, 1953

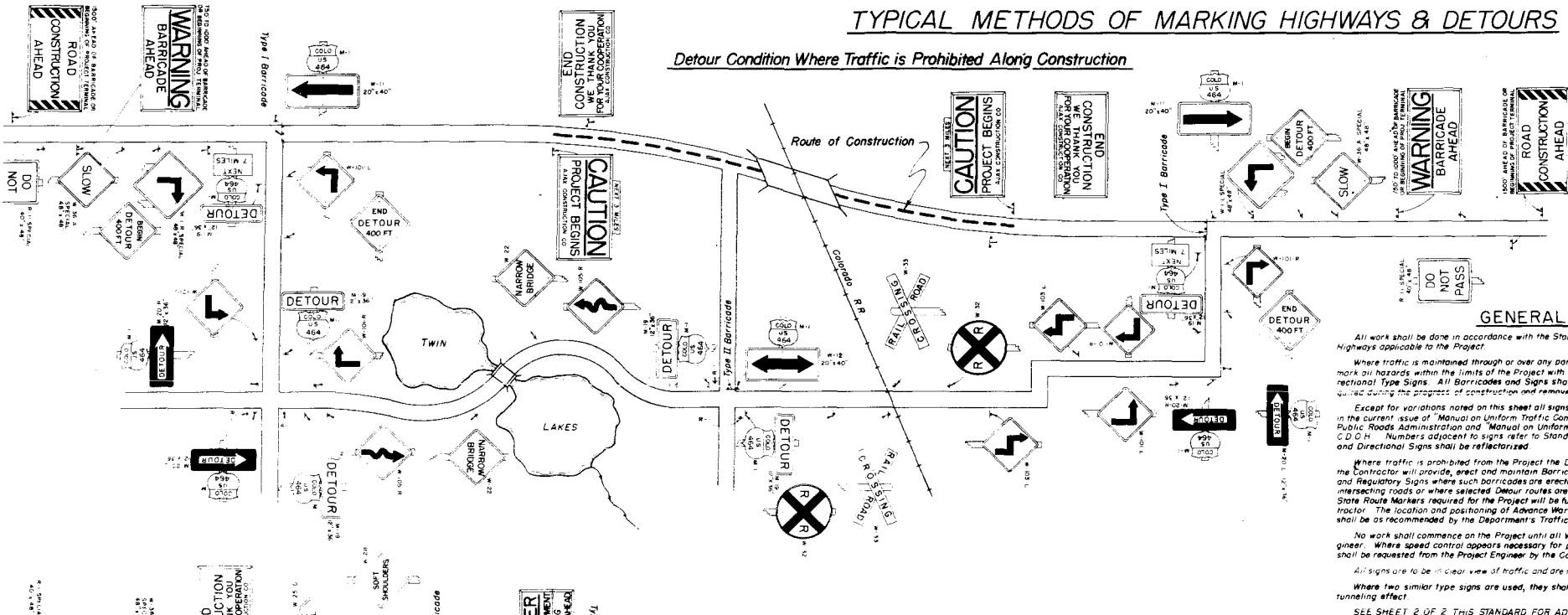
STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS

STANDARD M-29-B
(SHEET 1 OF 2 SHEETS)

FED. ROAD DISTRICT SHEET TOTAL
DIV. NO. NO. SHEETS
1 COLO. 50002(17) 12 1

TYPICAL METHODS OF MARKING HIGHWAYS & DETOURS

Detour Condition Where Traffic is Prohibited Along Construction



GENERAL NOTES

All work shall be done in accordance with the Standard Specifications of the Colorado Department of Highways applicable to the Project.

Where traffic is maintained through or over any part of the Project, the Contractor will be required to mark all hazards within the limits of the Project with well maintained Barricades, Warning Signs and Directional Type Signs. All Barricades and Signs shall be moved, added to, changed or removed as required during the progress of construction and removed entirely when project is completed.

Except for variations noted on the sheet all signs will be in conformity with the specification outlined in the current issue of "Manual on Uniform Traffic Control Devices for Streets & Highways" by the U. S. Public Roads Administration and "Manual on Uniform Traffic Control Devices for Streets and Highways," G. D. H. Numbers adjacent to signs refer to Standards in the manual. Standard Warning, Regulatory and Directional Signs shall be reflectorized.

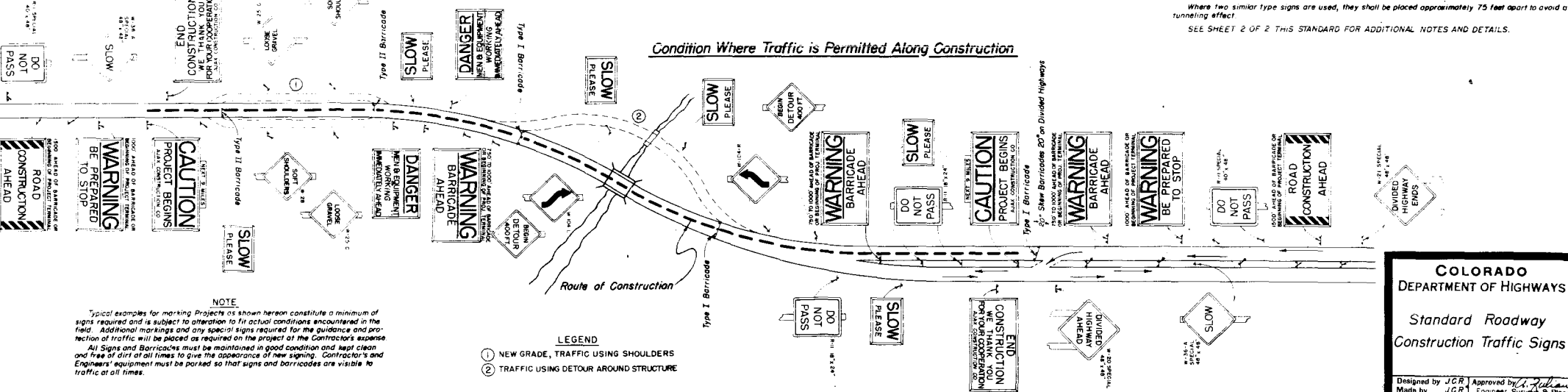
Where traffic is prohibited from the Project the Detour will be marked by the Department except that the Contractor will provide, erect and maintain Barricades complete with approved Directional Arrows and Regulatory Signs where such barricades are erected and maintained at the ends of the Project and intersecting roads or where selected Detour routes are in advance of the actual project terminal. U. S. or State Route Markers required for the Project will be furnished by the Department and installed by the Contractor. The location and positioning of Advance Warning Signs, Barricades and Speed Control Signs shall be as recommended by the Department's Traffic Operations Section.

No work shall commence on the Project until all Warning Signs are in place and approved by the Engineer. Where speed control appears necessary for protection of the travelling public, such speed control shall be requested from the Project Engineer by the Contractor.

All signs are to be in clear view of traffic and are not to be obstructed by equipment, weeds or otherwise within the sight triangle.

SEE SHEET 2 OF 2 THIS STANDARD FOR ADDITIONAL NOTES AND DETAILS.

Condition Where Traffic is Permitted Along Construction



NOTE

Typical examples for marking Projects as shown herein constitute a minimum of signs required and is subject to alteration to fit actual conditions encountered in the field. Additional markings and any special signs required for the guidance and protection of traffic will be placed as required on the project at the Contractor's expense.

All Signs and Barricades must be maintained in good condition and kept clean and free of dirt at all times to give the appearance of new signing. Contractor's and Engineer's equipment must be parked so that signs and barricades are visible to traffic at all times.

LEGEND

- ① NEW GRADE, TRAFFIC USING SHOULDERS
- ② TRAFFIC USING DETOUR AROUND STRUCTURE

COLORADO
DEPARTMENT OF HIGHWAYS

Standard Roadway
Construction Traffic Signs

Designed by J.C.R. Approved by J.C.R.
Made by J.C.R. Engineer, Survey & Plans
Checked by J.C.R. Date: July 22, 1955

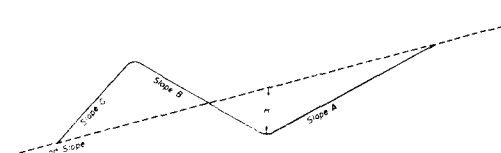
STANDARD TYPES *of* DITCHES *and* CONSTRUCTION METHODS

STANDARD M-107-C

DIVISION NO.	DISTRICT	PROJECT NO.	TOTAL SHEETS
9	C.C.O.	5000 217 14	

DETAILS *for* CONTOUR INTERCEPTING DITCHES

Typical Section for Contour Intercepting Ditches



PURPOSE & USE OF THE TABLE
 The primary purpose of the information for Contour and Intercepting Ditches shown on this sheet is to serve as a guide in construction and to readily arrive at yardages of excavation involved.
 Foremost consideration in constructing these ditches is given first to the natural ground line slope confronted in construction, thence to the other values shown on the Typical Section.
 By properly arriving at the combination of values shown on the Typical Section and in the Table for a specified condition, the number of cubic yards of excavation per 100 lin. ft. of ditch may be read under the appropriate column for this item.

Typical Construction Layouts

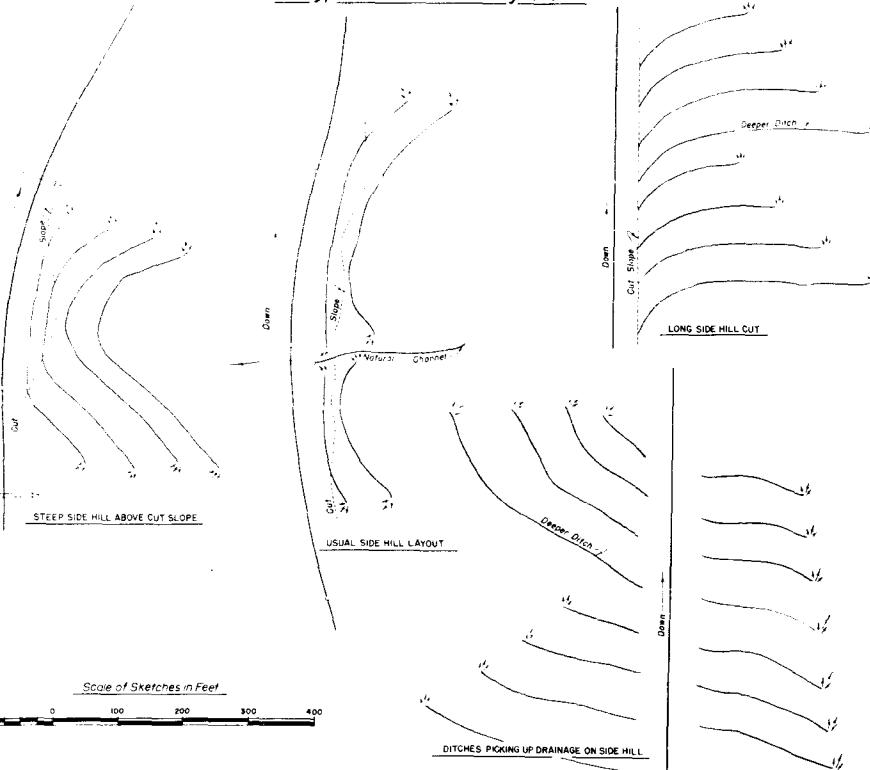
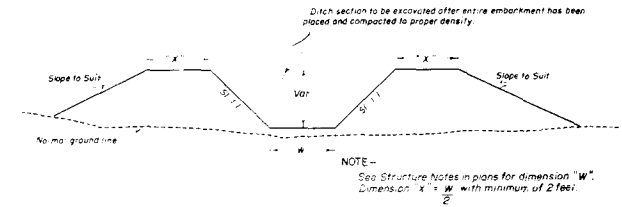


Table of Slopes and Yardages

Ground	SLOPES			H	Cubic Yards per 100 lin. ft. of Ditch
	A	B	C		
5:1 Or Flatter	2:1	4:1	2:1	15"	16
				18"	23
				21"	32
	2:1	3:1	2:1	15"	15
				18"	22
				21"	30
				15"	14
				18"	20
				21"	27
	1-1/2:1	4:1	1-1/2:1	15"	13
				18"	19
				21"	25
				15"	12
				18"	18
				21"	25
4:1	2:1	4:1	2:1	15"	12
				18"	17
				21"	23
	2:1	3:1	2:1	15"	10
				18"	15
				21"	20
				15"	10
				18"	14
				21"	19
	1-1/2:1	4:1	1-1/2:1	15"	17
				18"	25
				21"	34
				15"	17
				18"	24
				21"	32
3:1	2:1	3:1	2:1	15"	15
				18"	22
				21"	29
	2:1	3:1	2:1	15"	13
				18"	18
				21"	25
				15"	12
				18"	17
				21"	23
	1-1/2:1	4:1	1-1/2:1	15"	11
				18"	16
				21"	21
				15"	10
				18"	14
				21"	20
2:1	1-1/2:1	2:1	1-1/2:1	15"	22
				18"	31
				21"	43
	1-1/2:1	3:1	1-1/2:1	15"	21
				18"	28
				21"	39
				15"	21
				18"	29
				21"	40
	1:1	2:1	1:1	15"	13
				18"	19
				21"	26
				15"	12
				18"	17
				21"	24
1-1/2:1	1:1	1-1/2:1	1:1	15"	12
				18"	17
				21"	23
	1:1	2:1	1:1	15"	20
				18"	29
				21"	40
				15"	13
				18"	19
				21"	26
	1:1	2:1	1:1	15"	12
				18"	17
				21"	24
				15"	12
				18"	17
				21"	23

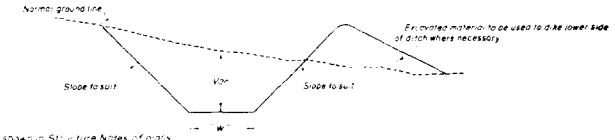
▲ Slopes are approximate and may be varied to suit conditions encountered during construction

TYPICAL SECTIONS *for* DRAINAGE, IRRIGATION DITCHES *and* CHANNEL CHANGES



For Embankment Sections

(Generally for use in Irrigation Ditches & Channel Changes)



For Cut Sections

GENERAL NOTES

All work shall be done in accordance with the Standard Specifications of the Colorado State Highway Department applicable to the Project.

All ditches are to be constructed to lines and grades as staked by the Engineer using the ditch section shown on plans or as ordered by the Engineer.

CONTOUR INTERCEPTING DITCHES: Ditches are to be laid out along the ground contour on a grade of not over 1% (Type of soil shall govern the grade).

Ends of ditches are to be lined up so that concentration of flow from a higher contour ditch into one of lower contour is, as far as possible avoided. The use of a deeper ditch is recommended where this condition is encountered.

The following horizontal spacing of ditches is recommended:
 4% to 6% Approximately 70' Centers
 8% to 10% Approximately 60' Centers
 20% to 4:1 Slope Approximately 55' Centers
 30% to 1-1/2:1 Slope Approximately 50' Centers

Where ditch checks are required the intervening ditch between one set of ditch checks shall not exceed a grade of .10%. Details of checks will be shown on plans when required.

COLORADO STATE HIGHWAY DEPARTMENT

Standard Types of Ditches and Construction Methods

Designed by GCM Approved by *W. H. ...*
 Made by GCM Engineer, State Highway Dept.
 Checked by Date: *July 18, 1950*

Note:

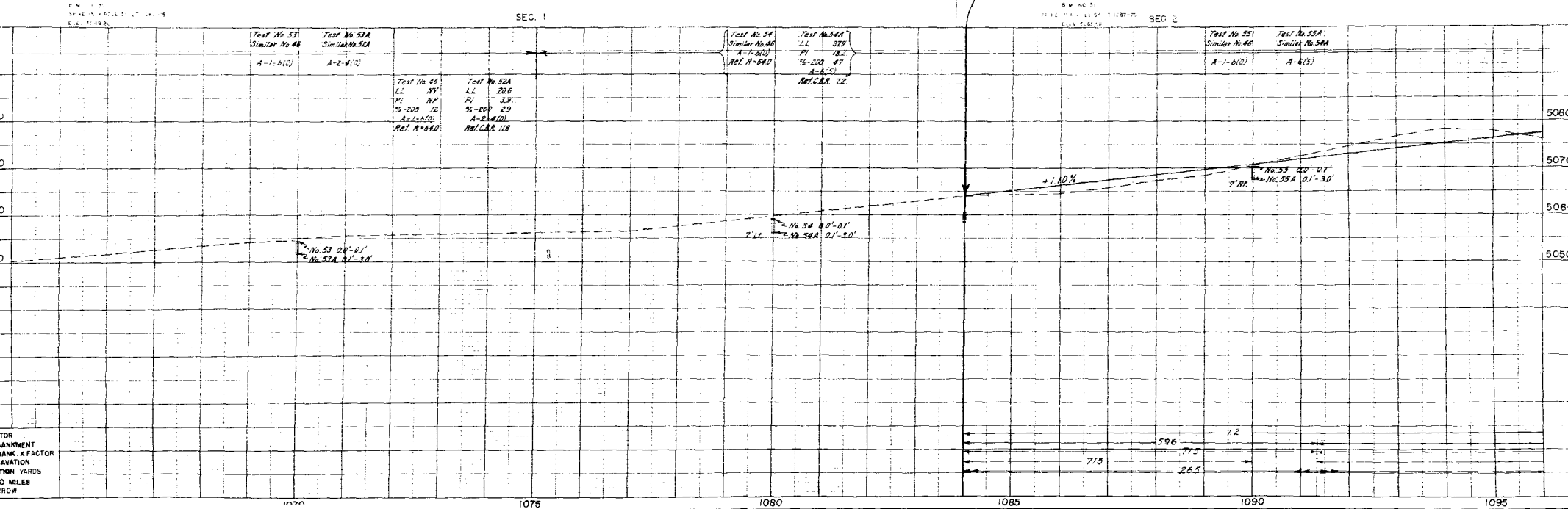
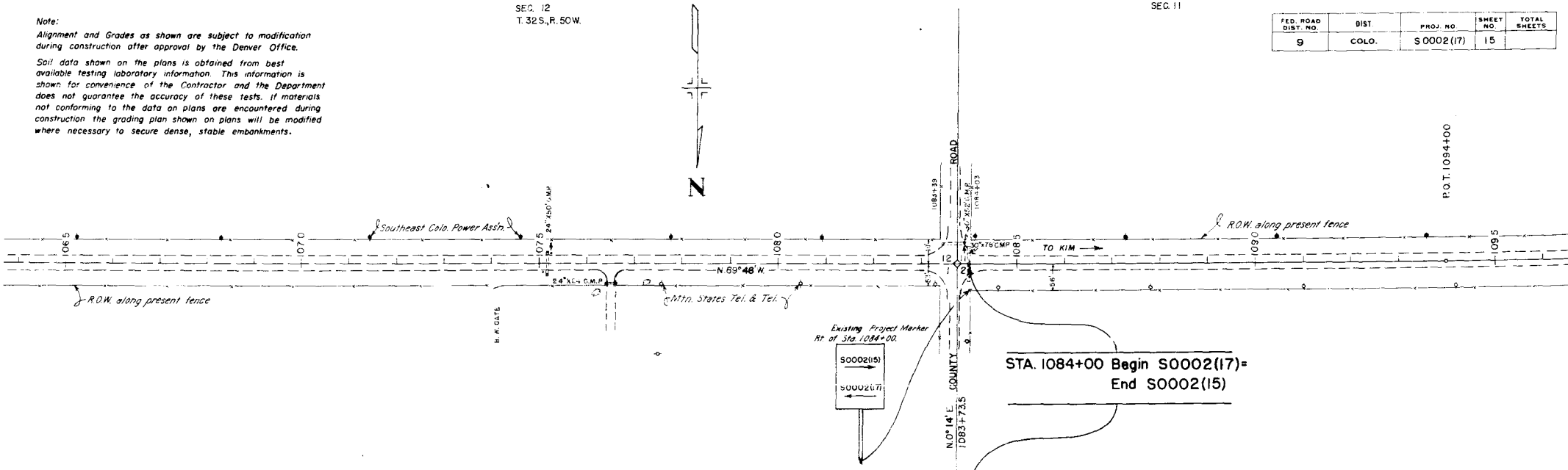
Alignment and Grades as shown are subject to modification during construction after approval by the Denver Office.

Soil data shown on the plans is obtained from best available testing laboratory information. This information is shown for convenience of the Contractor and the Department does not guarantee the accuracy of these tests. If materials not conforming to the data on plans are encountered during construction the grading plan shown on plans will be modified where necessary to secure dense, stable embankments.

SEC. 12
T. 32 S., R. 50 W.

SEC. 11

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0002 (17)	15	

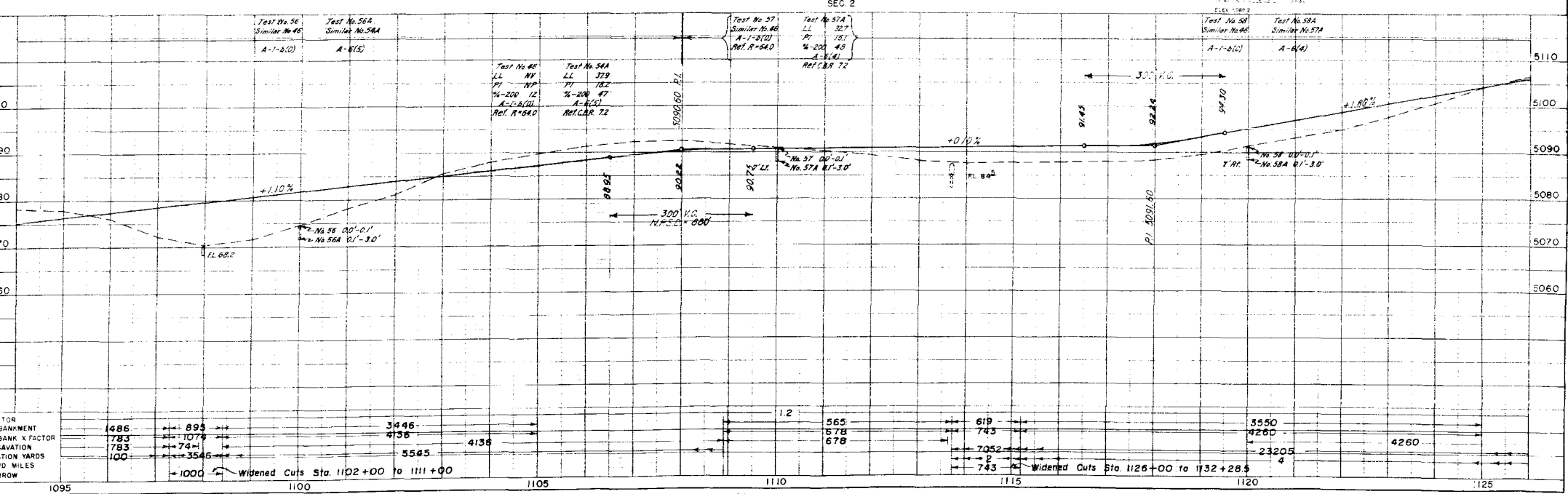
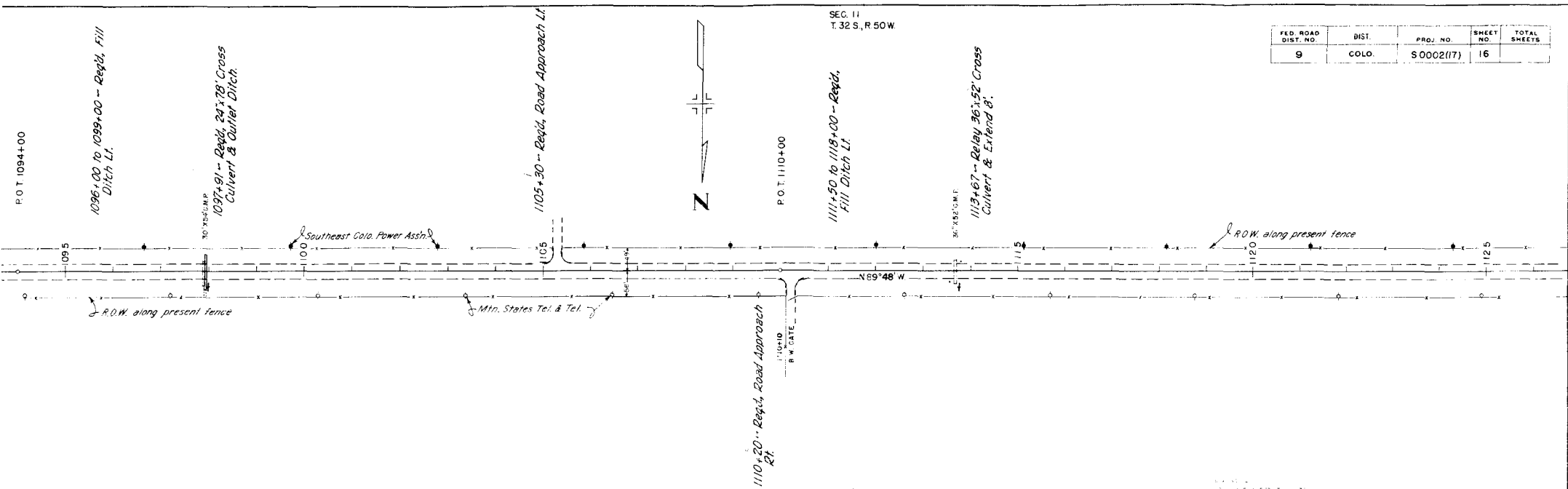


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FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS.
9	COLO.	50002(17)	16	

SEC. 11
T. 32 S., R. 50 W.

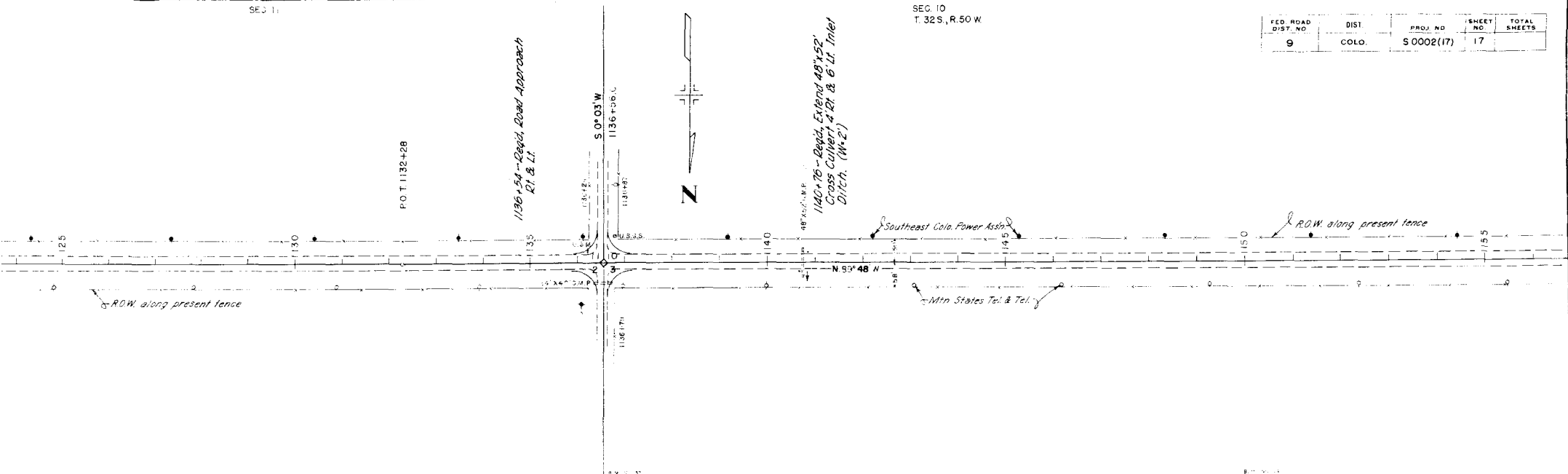
SEC. 2



SEC. 11

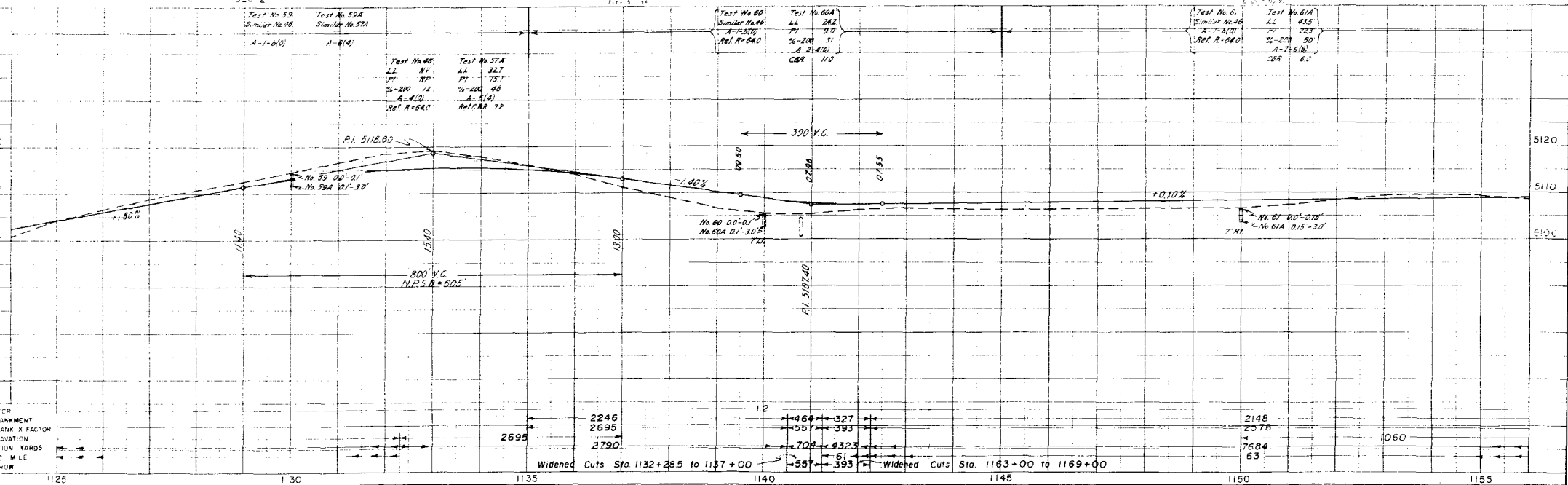
SEC. 10
T. 32 S., R. 50 W.

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0002 (17)	17	



SEC. 2

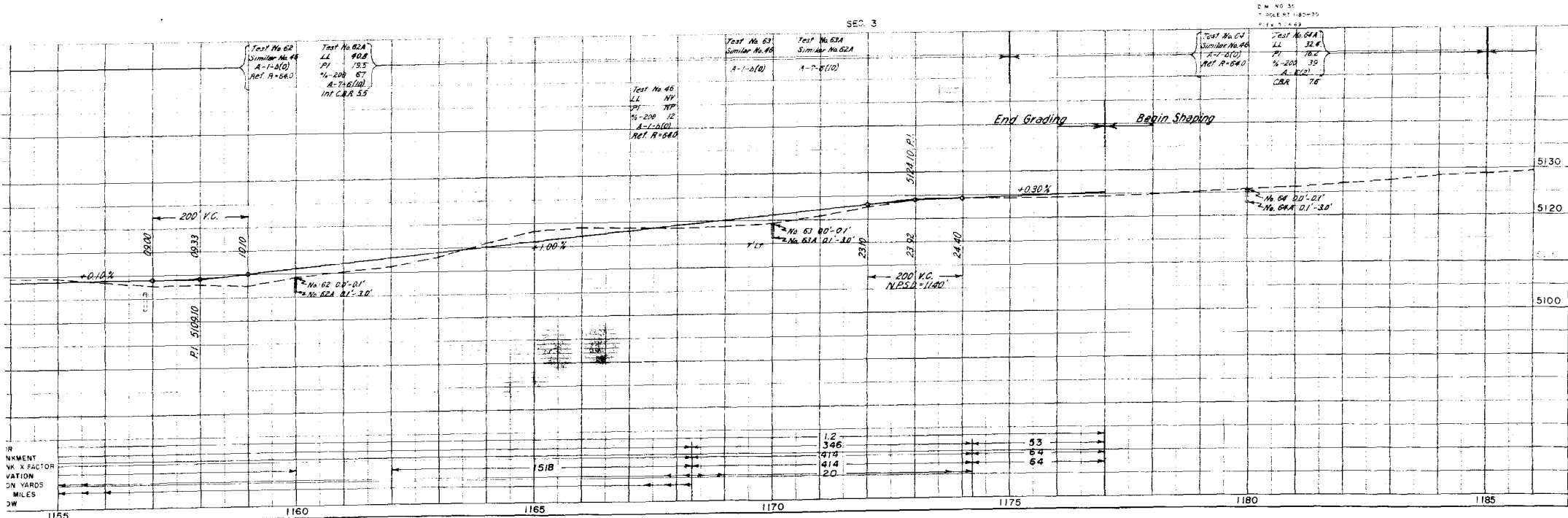
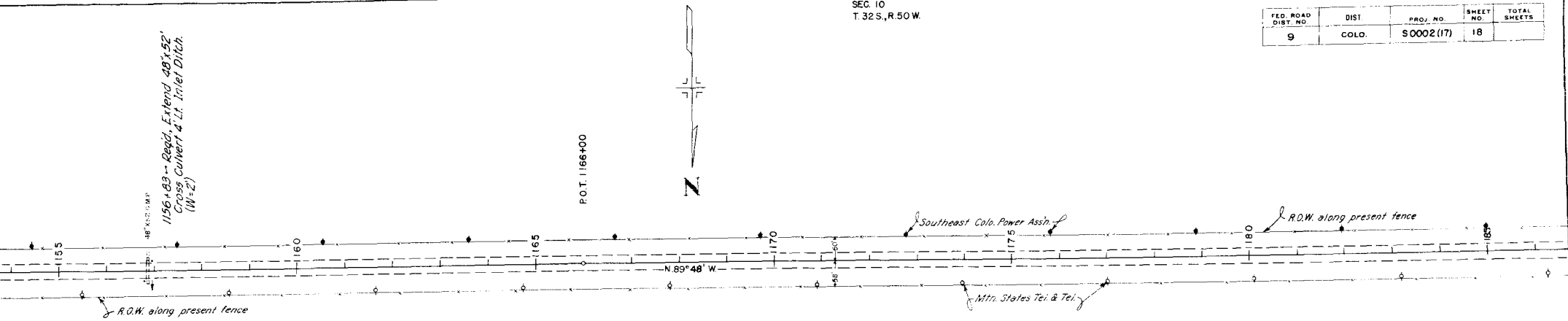
SEC. 3



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SEC. 10
T. 32 S., R. 50 W.

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S0002 (17)	18	



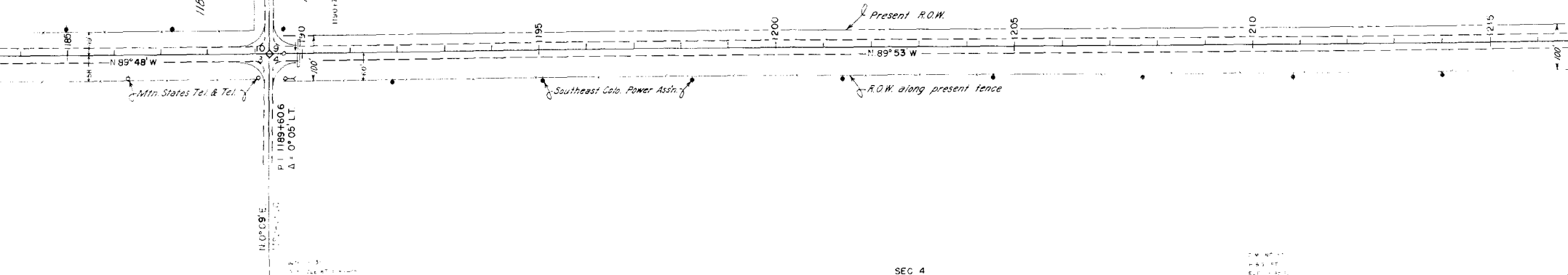
SEC 10

SEC 9
T 32 S, R 50 W

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0002(17)	19	

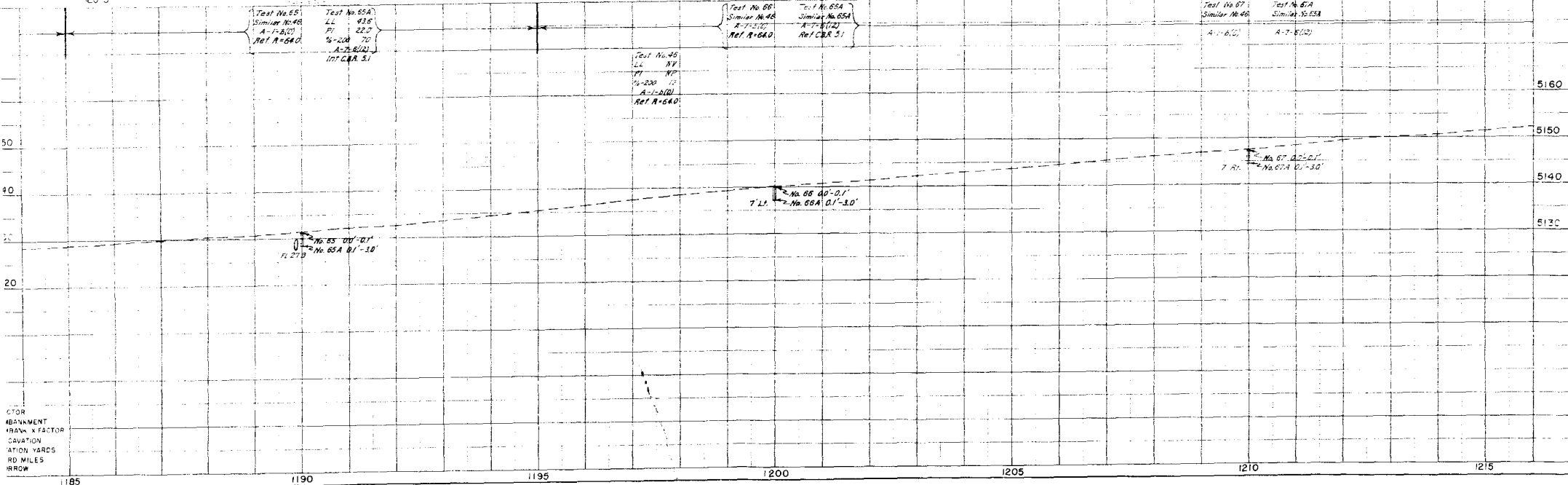
1189+28 -- Dept. Road Approach
RT & LT

1189+90 -- Dept. 30' x 60' Cross
Conduit & Ditches



SEC 3

SEC 4



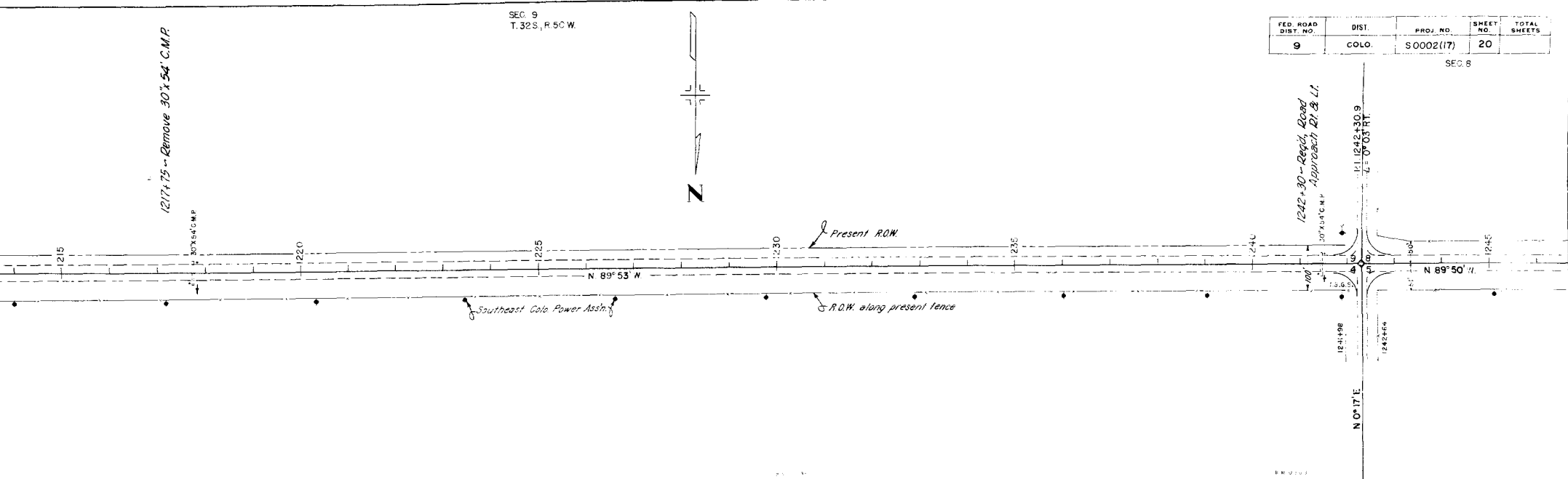
CTOR
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SEC 9
T. 32 S., R. 50 W.

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S 0002(17)	20	

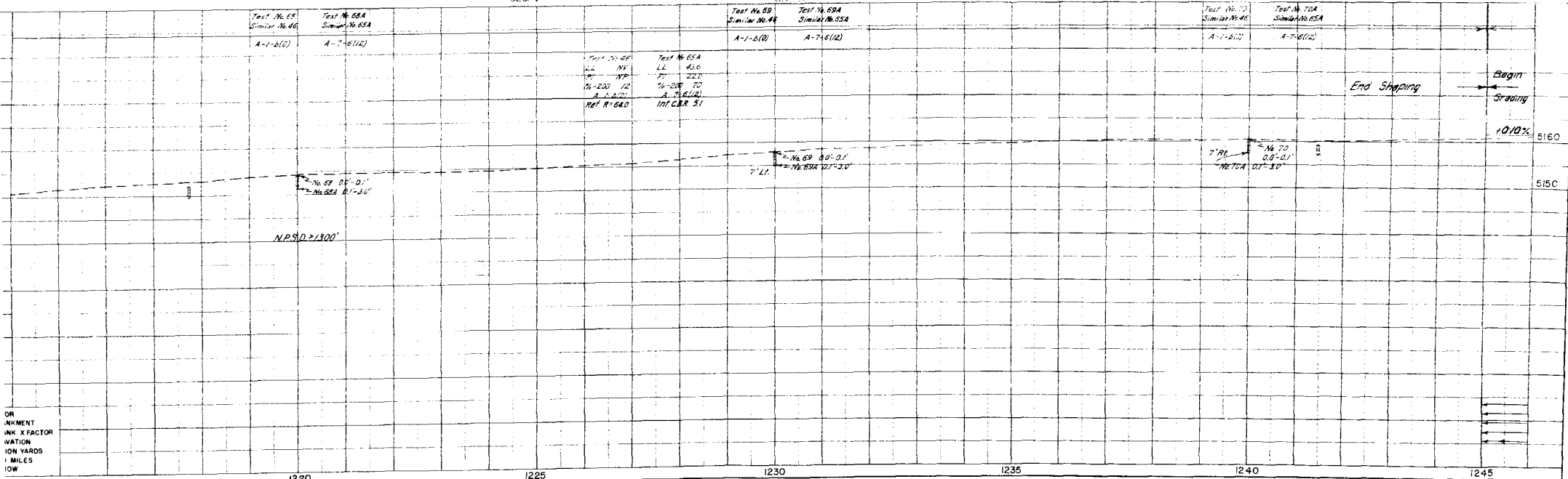
SEC 8

1217+75 -- Remove 30' x 54' C.M.P.



SEC 4

SEC 5

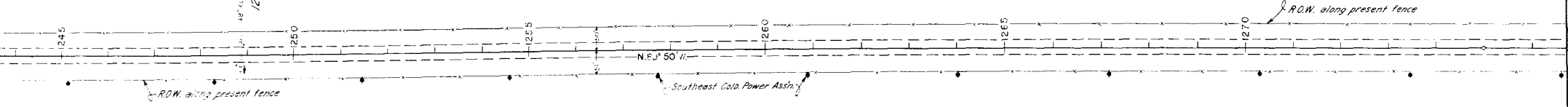
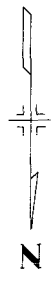


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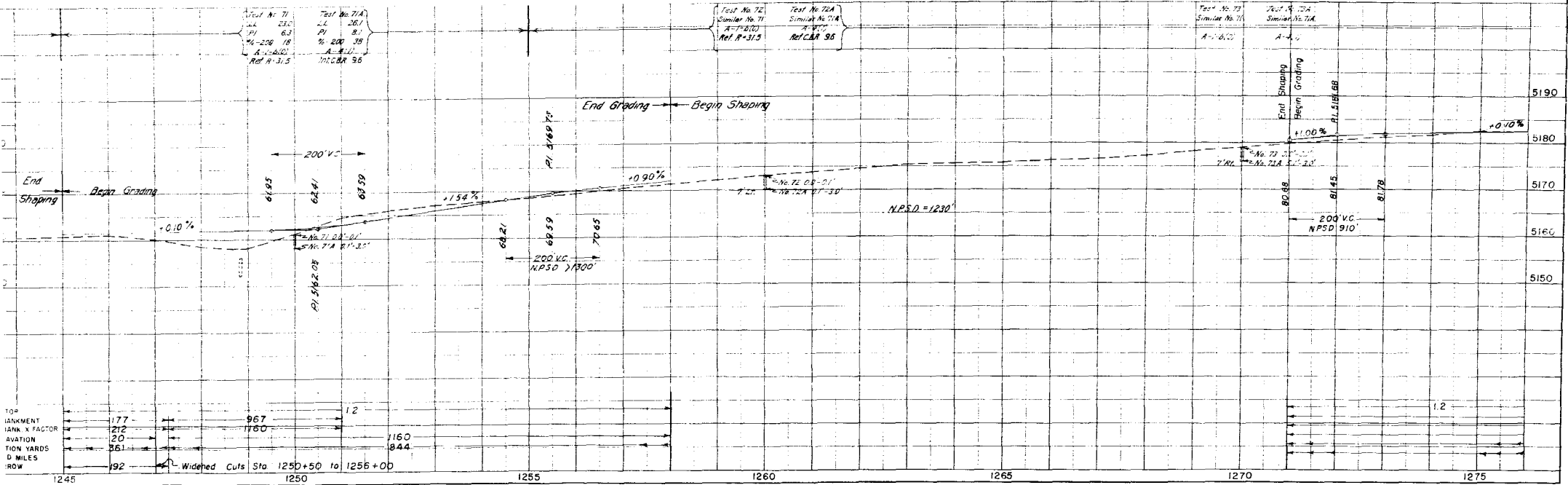
SEC. 8
T. 32 S., R. 50 W.

FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S0002(17)	21	

1248.89 - Bend, Extend 487.56'
 Cross Culvert 10 ft. & 4 ft.
 Ditches (W-2)



SEC. 5

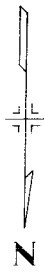
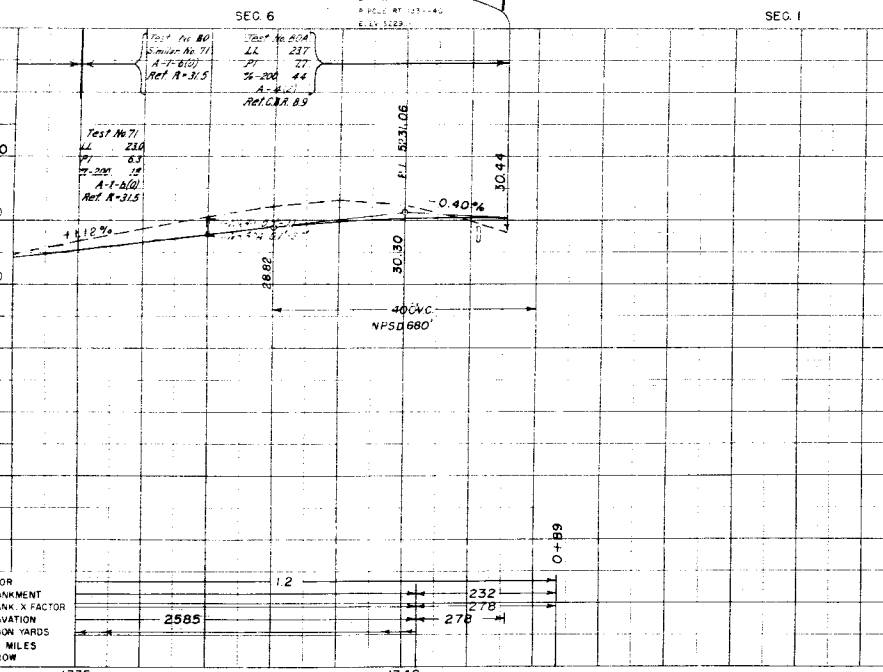
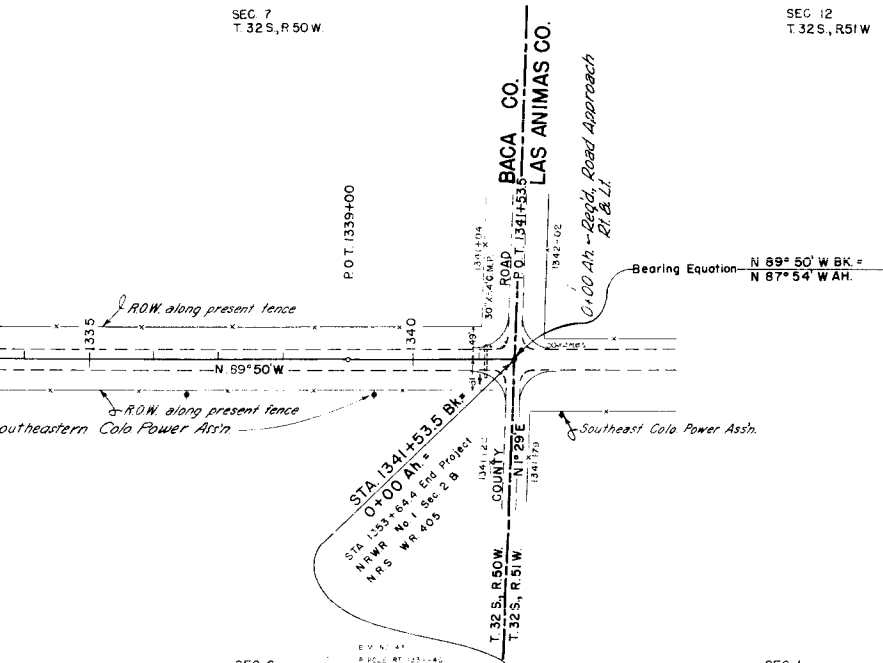


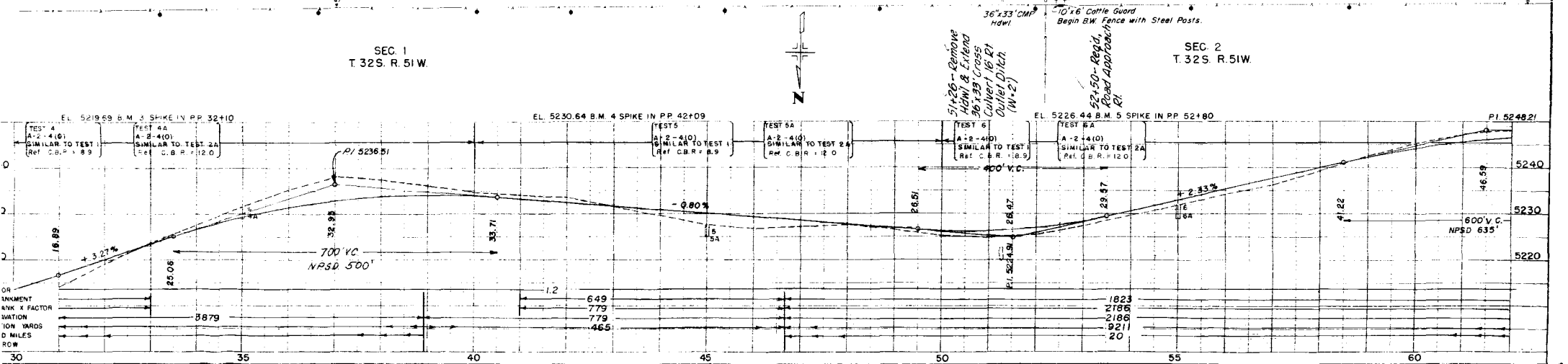
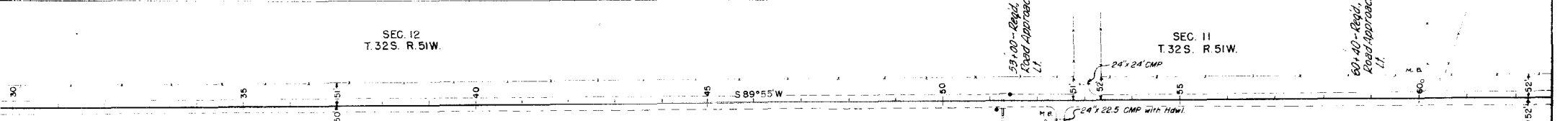
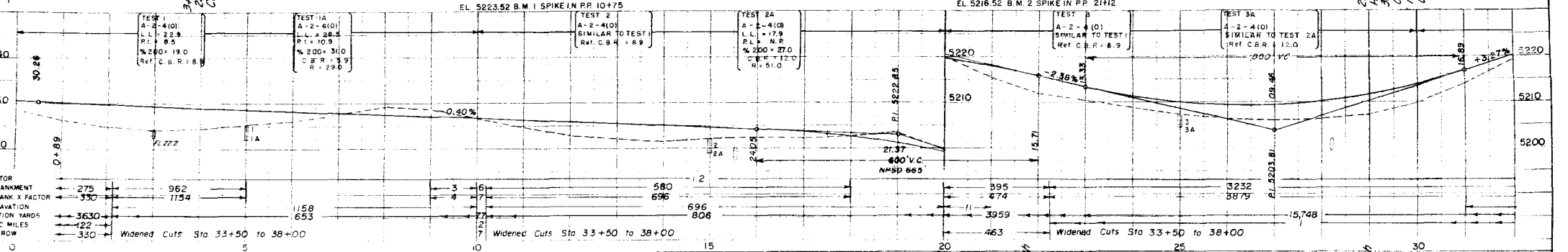
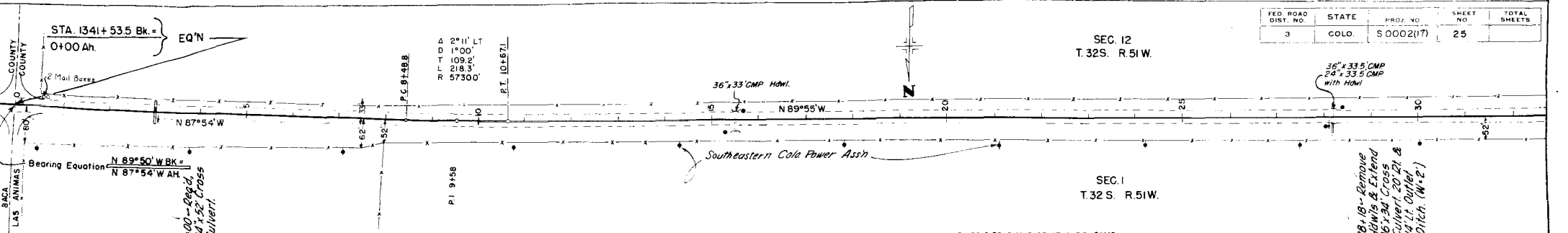
P.O.T. 1275+00

SEC. 7
T 32 S, R 50 W.

SEC. 12
T 32 S, R 51 W

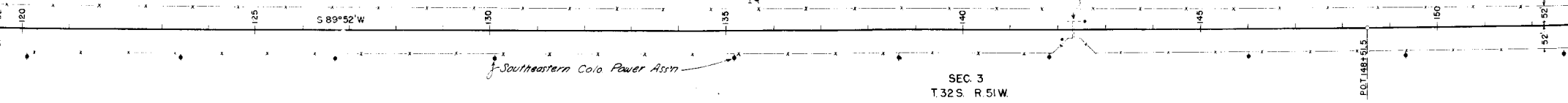
FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	S0002(17)	24	



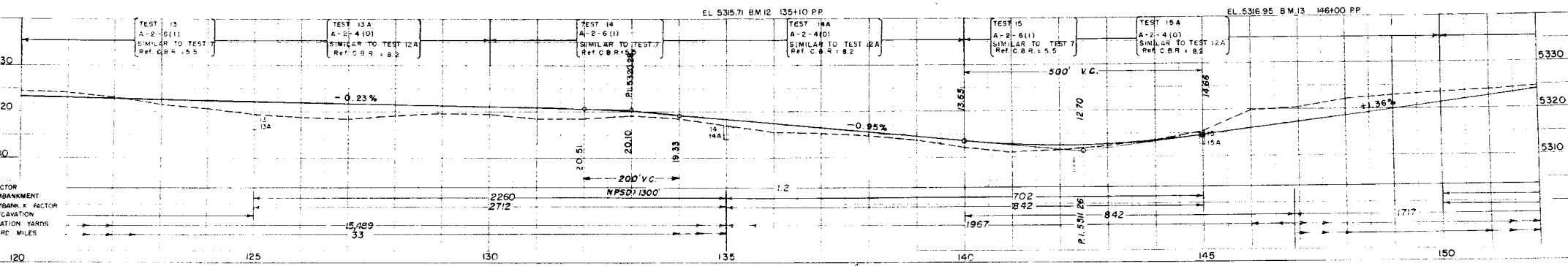


SEC. 10
T.32S. R.51W.

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S0002(17)	27	

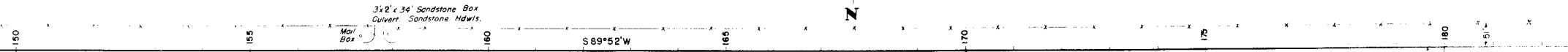


SEC. 3
T.32S. R.51W.



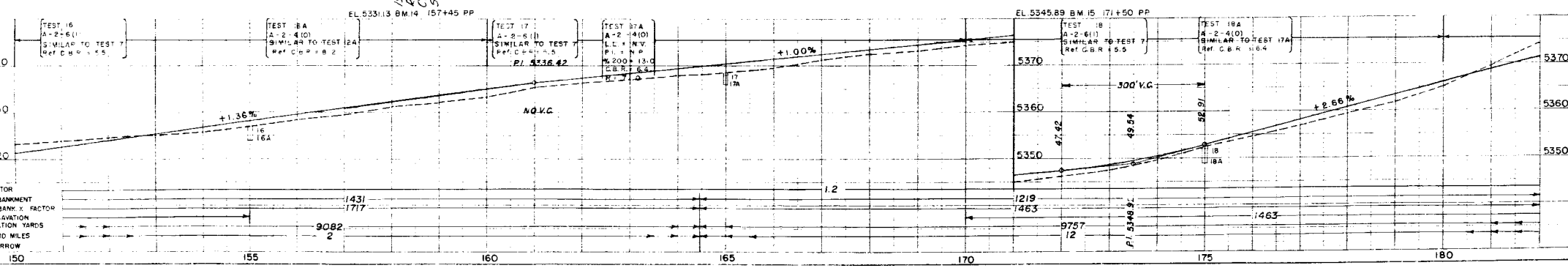
SEC 10
T.32S. R.51W.

SEC 9
T.32S. R.51W.



SEC 3
T.32S. R.51W.

SEC 4
T.32S. R.51W.

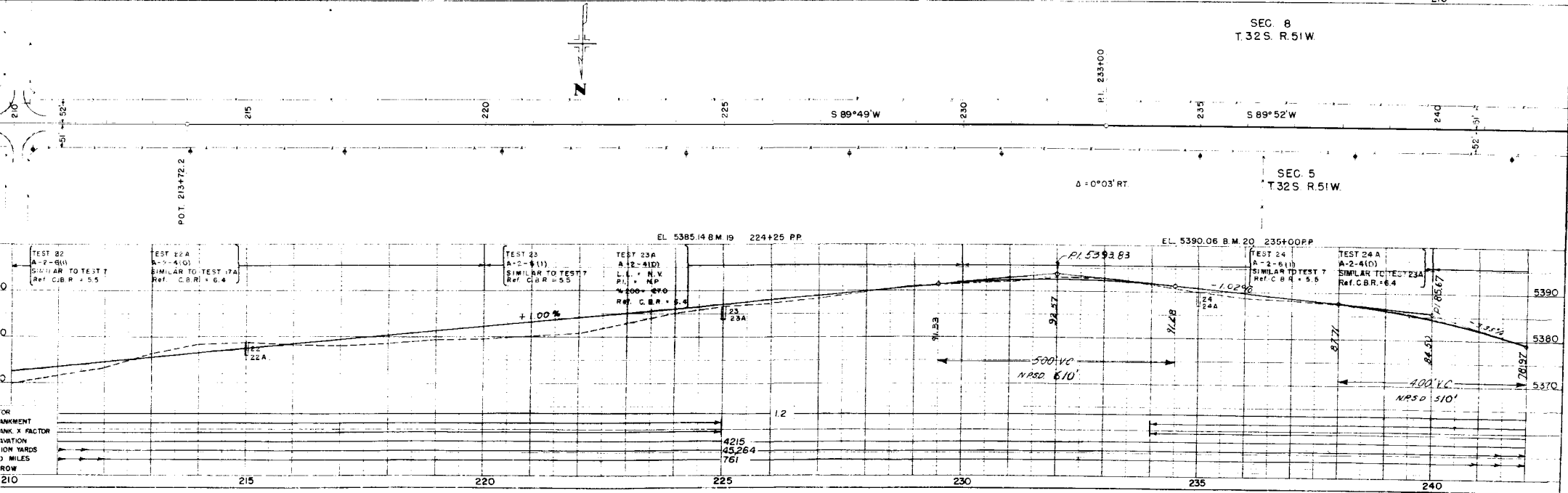
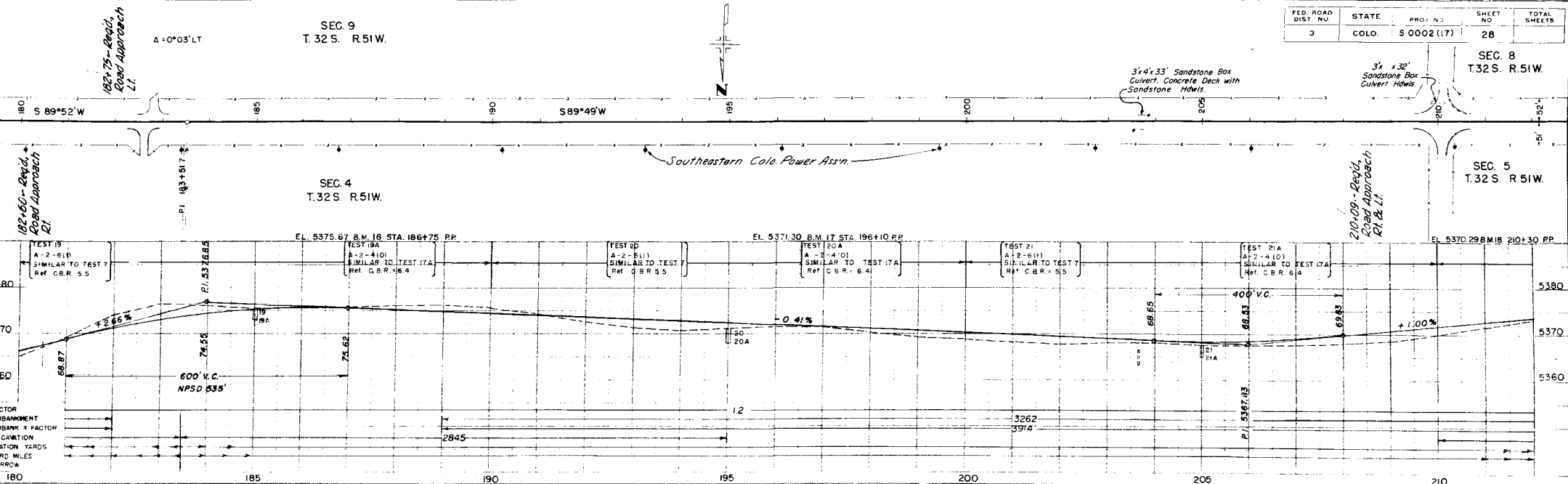


FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0002 (17)	28	

SEC. 9
T.32 S. R.51W.

SEC. 8
T.32 S. R.51W.

SEC. 5
T.32 S. R.51W.



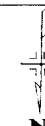
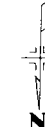
182+75 - Right, Road Approach Lt.

3'x4'x33' Sandstone Box Culvert. Concrete Deck with Sandstone Hdwis.

3' x 33' Sandstone Box Culvert Hdwis.

210+09 - Right, Road Approach Rt & Lt.

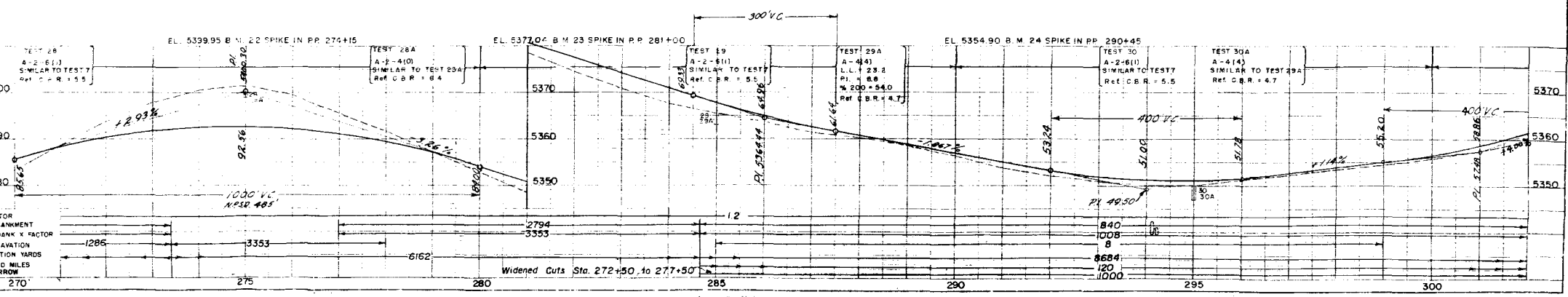
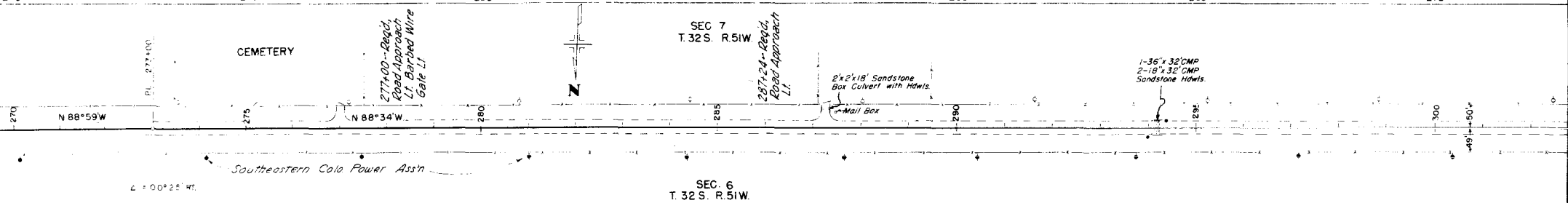
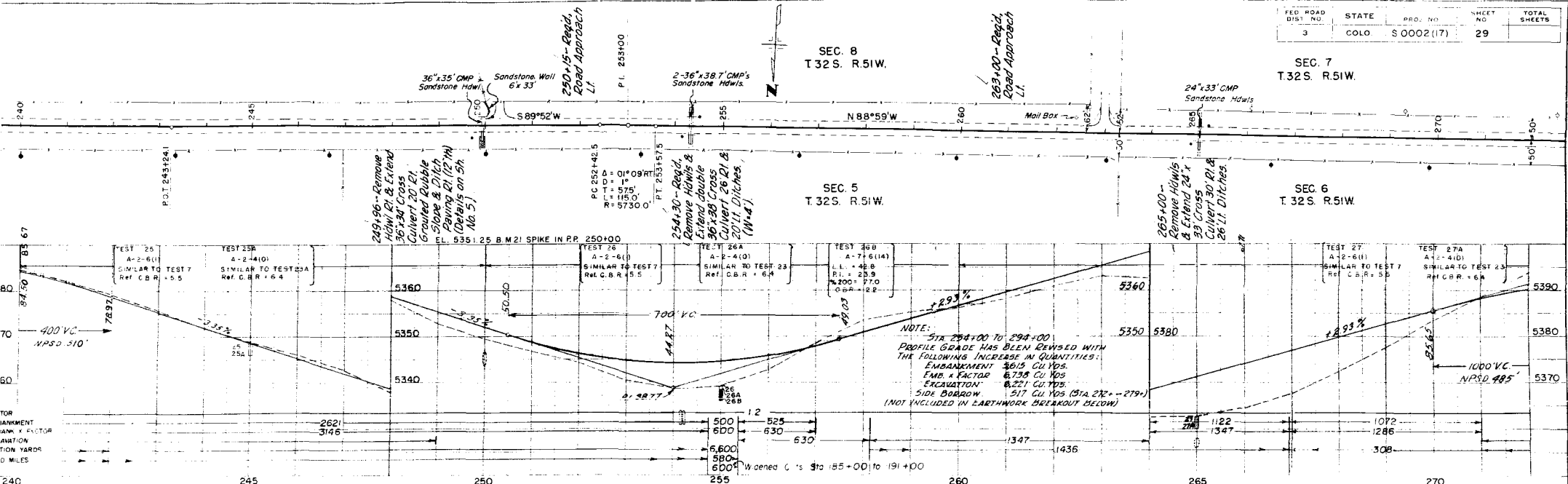
Southeastern Colo Power Assn.



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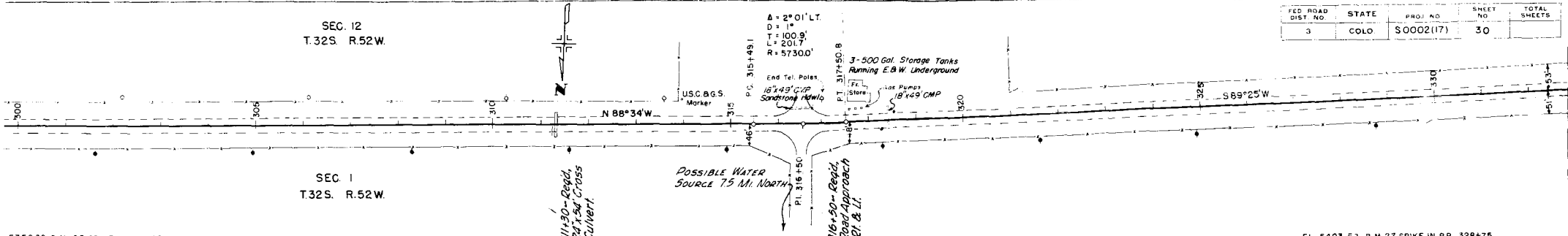
FOR
BANKMENT
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ROW

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLORADO	S 0002 (17)	29	

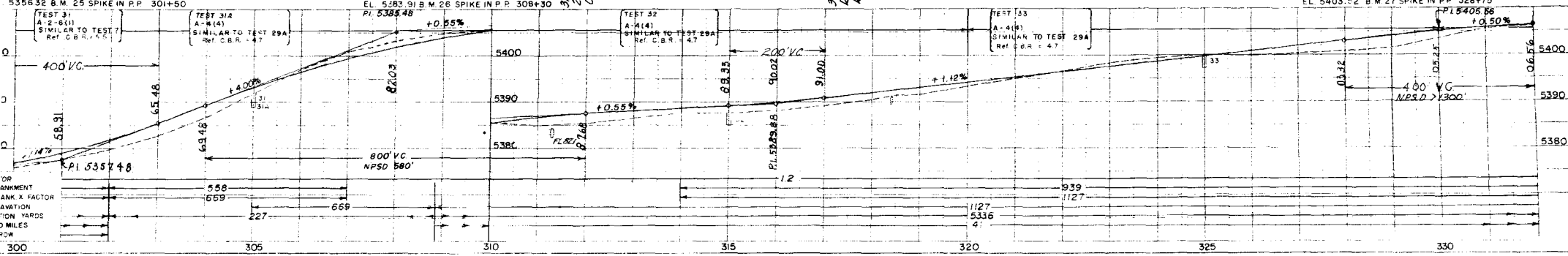


SEC. 12
T.32S. R.52W.

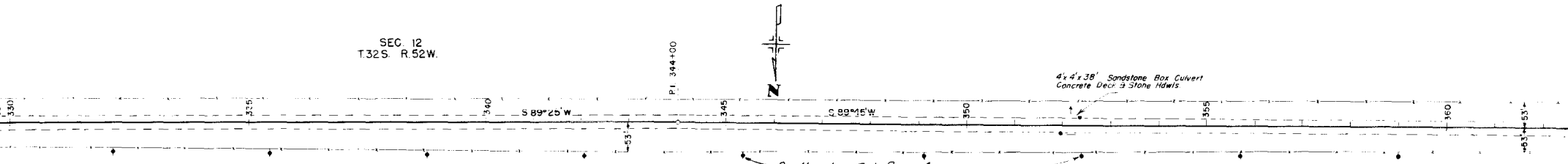
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S0002(17)	30	



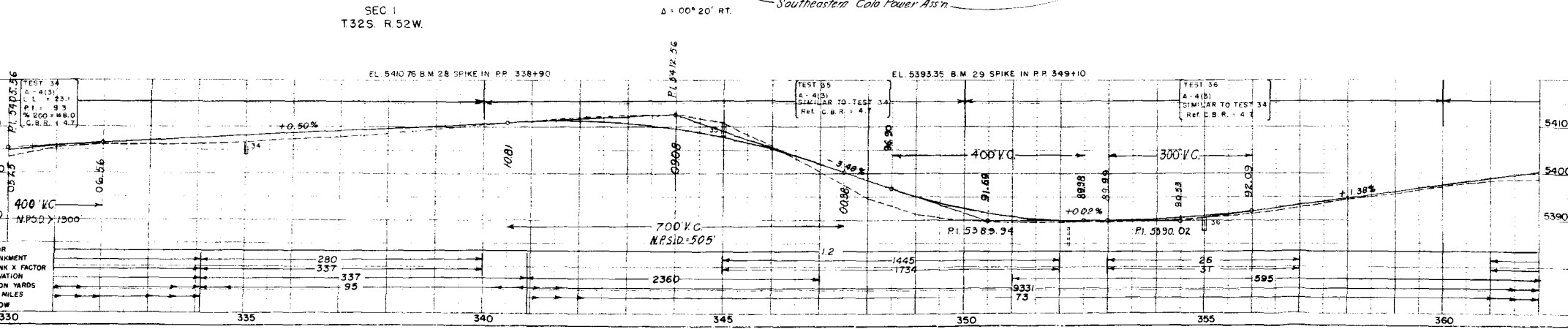
SEC. 1
T.32S. R.52W.



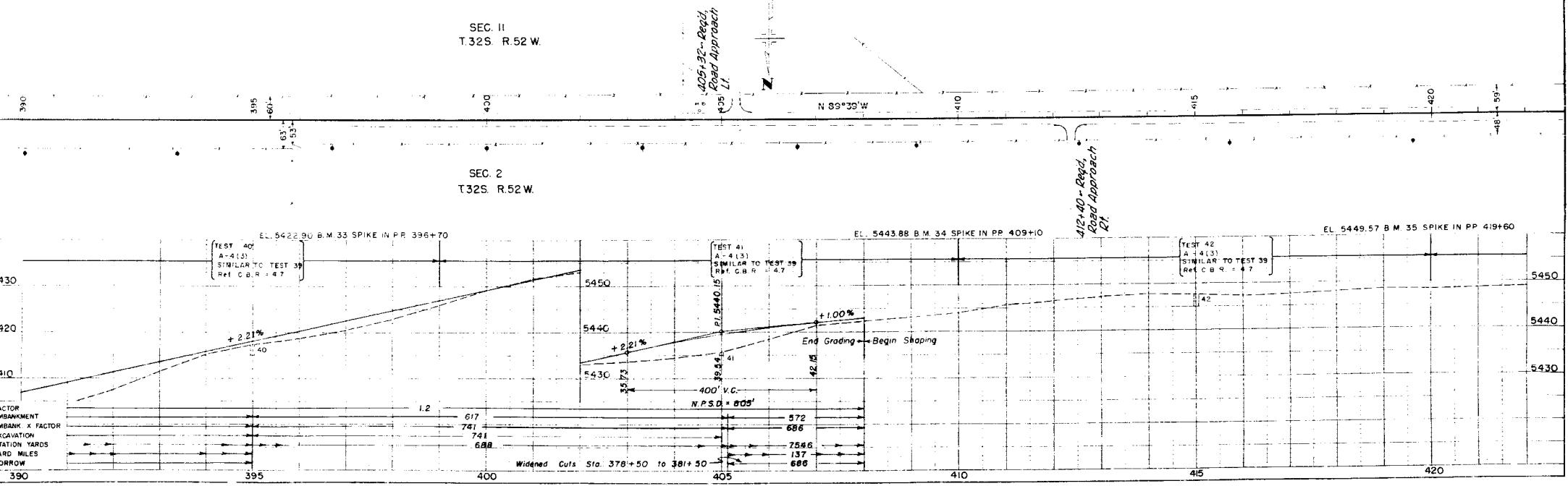
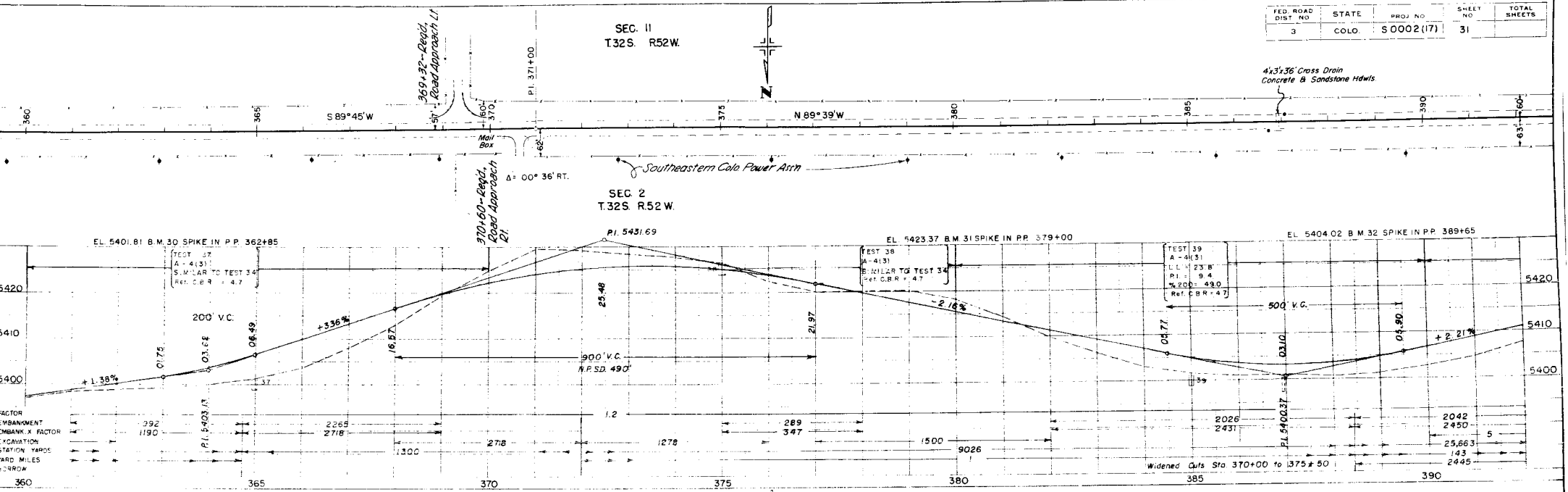
SEC. 12
T.32S. R.52W.



SEC. 1
T.32S. R.52W.



FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0002 (17)	31	



FED ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0002 (17)	32	

SEC. 11
T32S. R.52W.

SEC. 10
T.32S. R.52W.



420
N.89°39'W
425

SEC. 2
T32S. R.52W.

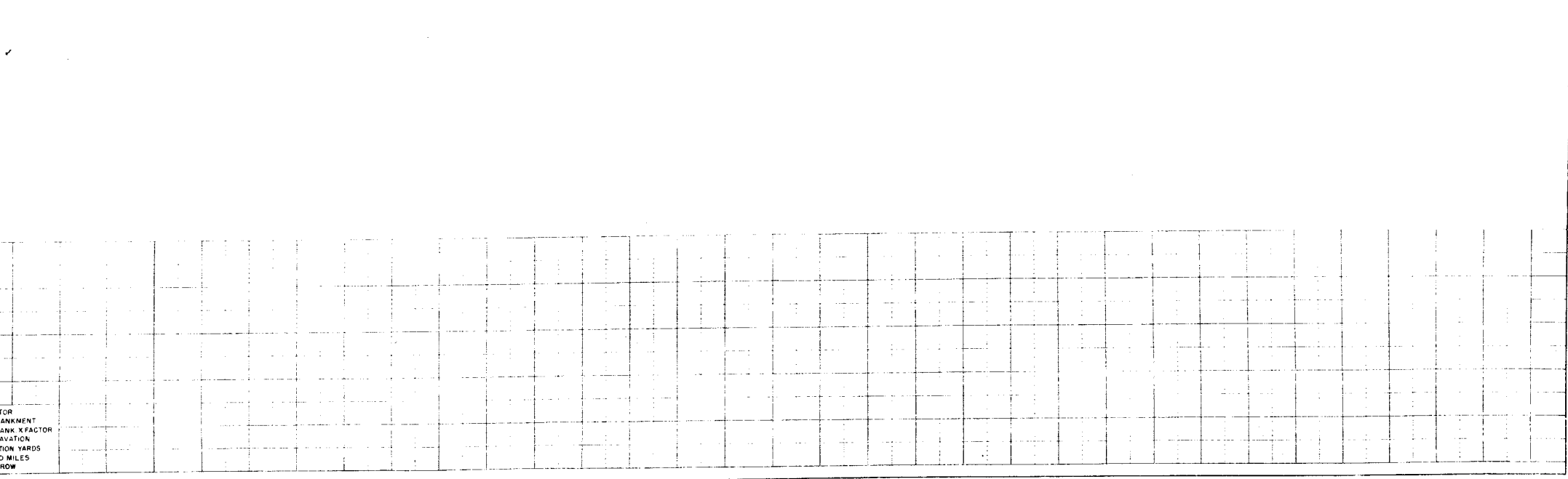
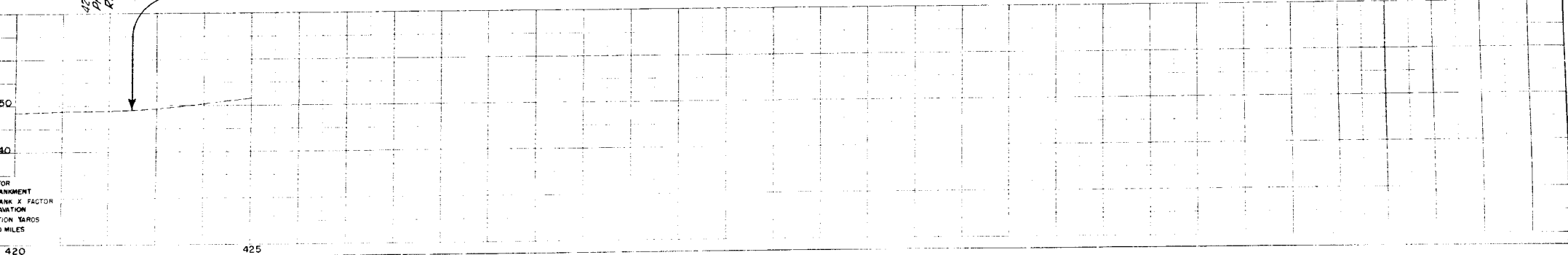
SEC. 3
T.32S. R.52W.

Southeastern Colo. Power Assn

S 0002(17)

STA. 422 + 47 End S0002(17) =

422+47 - Reqd. Project Marker Rt. (State Forces)



SUMMARY OF EARTHWORK QUANTITIES

S 0002 (17)

EXCAVATION

FROM CROSS SECTIONS	78,727 *
BORROW	9,533 *
ESTIMATED FOR SUBSIDENCE	8,826 *
LIST OF STRUCTURES AS EXCAVATION	250 *
LIST OF STRUCTURES AS EMBANKMENT	2,177 *
ESTIMATED FOR CUTSLOPE TREATMENT	1,609 *
ESTIMATED FOR COVERING ENDS OF CULVERTS	191 *

TOTAL 101,313 CU. YDS.

UNCLASSIFIED DITCH EXCAVATION

INTERCEPTING DITCHES	0
FROM LIST OF STRUCTURES	43
TOTAL	<u>43</u> CU. YDS.

Location of Intercepting Ditches may be designated by the Engineer during construction.

EMBANKMENT

FROM CROSS SECTIONS	73,300
TOTAL	<u>73,300</u> CU. YDS.

EMBANKMENT X FACTOR

EXCESS EXCAVATION	87,960
TOTAL	<u>300</u> [▲] CU. YDS.

COMPACTION

* TOTAL UNCLASSIFIED EXCAVATION	99,704	CU. YDS.
1 FT. BELOW BASE OF CUTS & FILLS	85,000	CU. YDS.
SUB-TOTAL	<u>184,704</u>	CU. YDS.

EXCAVATION

FROM CROSS SECTIONS	78,727
BORROW	8,826
TOTAL	<u>88,260</u> CU. YDS.

▲ LESS EXCESS EXCAVATION	300
TOTAL	<u>184,404</u> CU. YDS.

STATION YARD OVERHAUL

FROM MASS DIAGRAM	288,816
ESTIMATED FOR SUBSIDENCE	28,882
ESTIMATED FOR STRUCTURE BACKFILL	2,692
TOTAL	<u>320,390</u> STA. YDS.

YARD MILE OVERHAUL

FROM MASS DIAGRAM	2,234
ESTIMATED FOR SUBSIDENCE	223
ESTIMATED FOR STRUCTURE BACKFILL	1,556
TOTAL	<u>4,013</u> YD. MILE

