

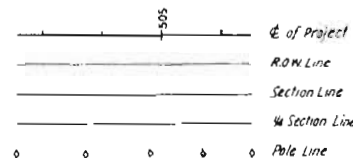
COLORADO STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED U. S. P. W. HIGHWAY PROJECT NO. N. R. S. 351-C (1935) STATE HIGHWAY NO. 102 ADAMS AND ARAPAHOE COUNTIES

INDEX OF SHEETS

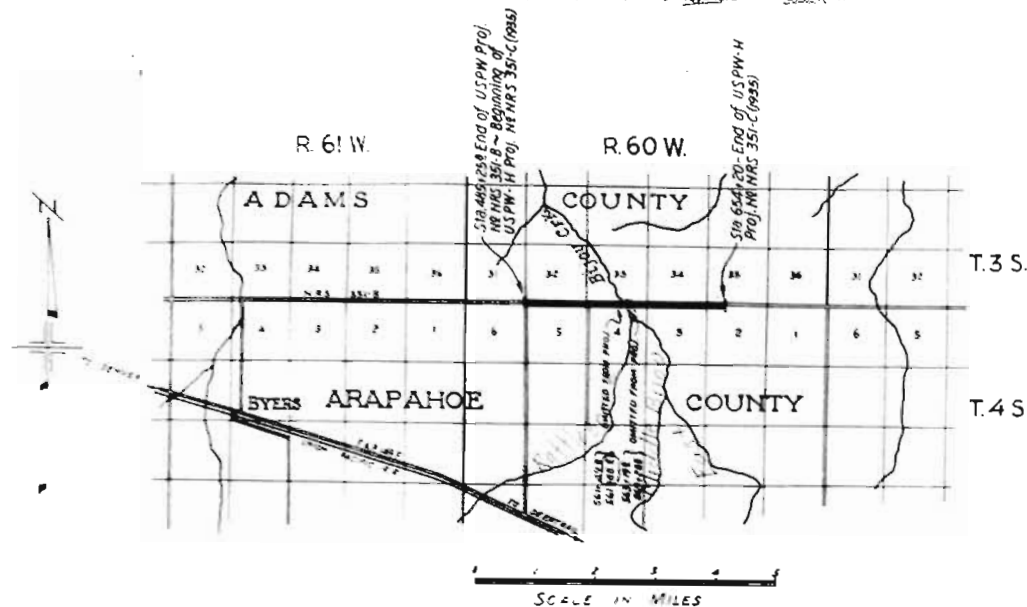
- Sheet No. 1 Title Page
- 2 Typical Section & Summary
- 3 Standard Super-elevation Sheet
- 4 " Guard Fence
- 5 " Fences & Marker Posts
- 6-11 Plan & Profile

CONVENTIONAL SIGNS



SCALES ON ORIGINAL TRACINGS

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 } 16,897.0 FT. = 3.200 MI.
 NET LENGTH OF PROJECT } 16,248.2 " = 3.077 "



It is recommended that bidders on this project go over the plan details with one of the following field representatives of this department:
 E. E. Montgomery Division Engineer Denver, Colorado
 C. E. Greene Resident " " "

2/11/35
 E. E. Montgomery
 C. E. Greene
 Division Engineer
 Resident " " "

Excavation or Borrow below
4:1 ditch slope not allowed.



The intersection of cut slopes with the existing ground shall be rounded in north cut, beginning 5 ft. outside the slope stake and extending 5 ft. down the cut slope. Where the cut slope is less than 5 ft., reduce each of the above widths of slope treatment to the actual slope distance. Quantities involved in slope treatment shall not be included in "Excavation."

This Project is to be constructed in conformity with the Standard Specifications of the Colorado State Highway Department, adopted January 1, 1930.

quantities at preliminary plans are considered approximate only. All roadway excavation required to construct this project is to be obtained as indicated on the Plans. Quantities involved beyond the limits of ditch, as shown on the Typical Section, either stated on the Plans as "borrow" or on the List of Structures, are to be classified and paid for as "undisclosed excavation". These quantities are to be stored as part of the original excavation at locations indicated on the Plans.

Any slope stakes beyond the limits of the typical ditches are subject to change by the Engineer to fit embankment requirements actually encountered in construction.

All curves are to be super-elevated and widened in accordance with the Standard Super-elevation sheet included with the Plans, unless otherwise noted on the Plans.

Except as limited by the Special Provisions power equipment may be used on this Project.

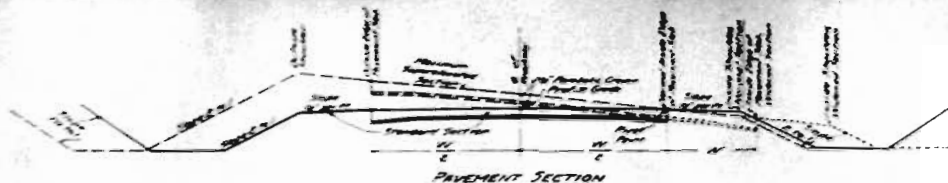
The detour for this project lies along the present travelled roadway. The contractor shall maintain in safe condition, at his own expense all temporary approaches to and crossings of intersecting roads.

NO	ITEM	UNIT	QUANTITIES	
				ROADWAY
104	Clearing & Grubbing Entire Proj.	Lumpsum		•
116	Remove 3 structures	" "		•
126	Removing Fence	Lin. FY	33,400	
136	Unexcused Excavation	CU Yd	49,000	
137	Gravel Road Treatment	Wt/Lb	5	
140	Dry Rock Escav. (Struct.)	CU Yd	20	
142	Dry Common Escav. (Struct.)	" "	330	
146	Wet Rock Exc. (Struct.)	" "	10	
147	Wet Common Exc. (Struct.)	" "	150	
150	30' to Overhaul	Sta. Yd	67,000	
160	Yd. Wt/Lb. Overhaul	" "	1,000	
30x	Gravel or Crushed Rock Surf.	Ton	10,000	
530	18" Corr. Metal Cui. Pipe	Lin. Ft.	260	
536	24" Corr. Metal Cui. Pipe	" "	600	
538	30" Corr. Metal Cui. Pipe	" "	80	
539	36" Corr. Metal Cui. Pipe	" "	112	
539	48" Corr. Metal Cui. Pipe	" "	84	
72	Wire Cable Guard Fence	" "	564	
75x	Wire Barbwire Fence	" "	31,100	
	Anchor Posts			
75x	Posts in B.T. Fence	Each	15	
78	Project Marker	" "	1	
85x	Comb. Wire Fence (After Posts)	Lin. FY	2,300	
85y	Ornament Gates	Each	2	

LOCATION	SIDE	REMOVE FENCE	BUILD BARBED W.	FENCE COWS.	GATES BL. WOOD
405+75-530+85	L R	5400	5280		
407+50-540+10	R	6120	6120		
501+00-551+00		1350		1325	
540+00-558+00		930		930	
531+00-583+10		1100	1120		
550+00-583+10		1500	1800		
508+00-654+00		17000	17000		
504+90	R				/
511+57	R				/
516+05	L				/
518+00	L				/
530+65	L				/
548+40	L				/
549+39	R				/
552+00	L & R			2	
558+05	R			1	
557+35	R			1	
579+00	L & R			2	
587+42	R			1	
590+15	R			1	
603+50	L			1	
610+00	L			1	
TOTALS		33550	34850	8855	78

[illegible]

Structural Condition is estimated to be 80% Good
to 50% Poor, most of which is estimated to be 75% dry & 25% wet



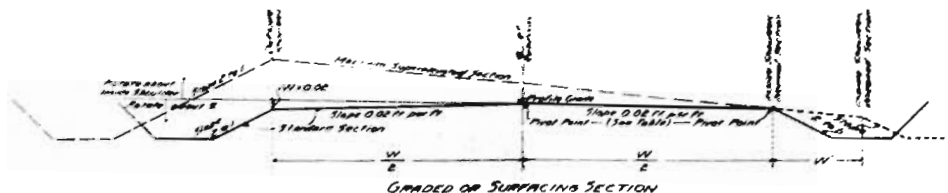
SUBMIT EXPLANATION AND A DENIAL NOTES FOR PAYMENT SECTION

Curves on subjects along the horizontal portion are to be superimposed and outlined as indicated in the accompanying drawings and text.

[illegible]

3. SUPERELEVATION FACTORS AND OFFSETS FOR WIDENING FOR PAVEMENT SECTION

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
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
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
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
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
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
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37</																																																															



SUPERELEVATION AND WIDENING NOTES FOR GRADED OR SURFACING SECTIONS

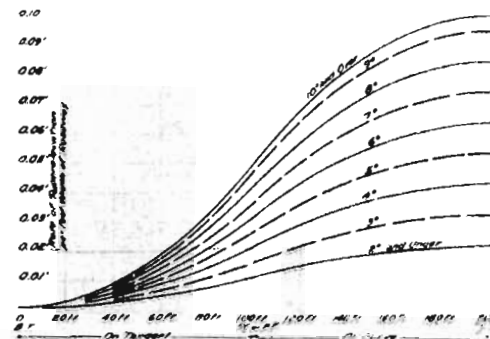
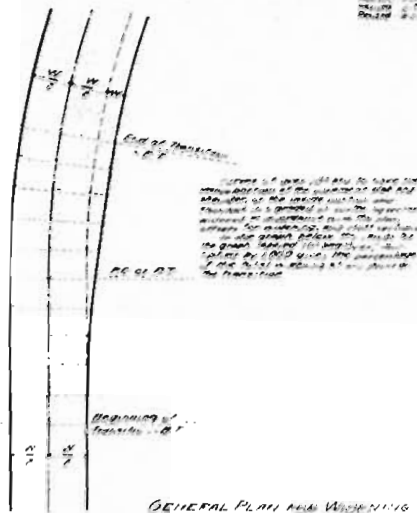
The center line point is to be used as long as the super-elevation does not exceed 0.02 feet per foot width of roadway. The normal inside shoulder must remain in horizontal alignment with the centerline.

The normal inside shoulder and ditch are to remain as shown in the typical section shown on sheet #8. The outside shoulder is to be the high part of the section.

The outside ditch along a super-elevated section is to be modified from the standard where a deeper ditch is required to provide drainage.

SURFELEVATION FACTORS AND OFFSETS FOR WIDENING FOR GRADED OR SURFACING SECTIONS

Distance from B3	20° F	40° F	60° F	80° F	100° F	120° F	140° F	160° F	180° F	200° F	On Curve	Length of Transition
Factor	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	1.00	in feet above
Degree of Curve												Center
1° and Under	0.0004	0.0007	0.0010	0.0013	0.0016	0.0019	0.0022	0.0025	0.0028	0.0031	0.0034	100 ft
2°	0.0008	0.0014	0.0020	0.0026	0.0032	0.0038	0.0044	0.0050	0.0056	0.0062	0.0068	150 ft
3°	0.0012	0.0021	0.0029	0.0037	0.0045	0.0053	0.0061	0.0069	0.0077	0.0085	0.0093	200 ft
4°	0.0016	0.0028	0.0039	0.0050	0.0061	0.0072	0.0083	0.0094	0.0105	0.0116	0.0127	250 ft
5°	0.0020	0.0036	0.0050	0.0064	0.0078	0.0092	0.0106	0.0120	0.0134	0.0148	0.0162	300 ft
6°	0.0024	0.0044	0.0060	0.0076	0.0092	0.0108	0.0124	0.0140	0.0156	0.0172	0.0188	350 ft
7°	0.0028	0.0052	0.0070	0.0088	0.0106	0.0124	0.0142	0.0160	0.0178	0.0196	0.0214	400 ft
8°	0.0032	0.0060	0.0080	0.0100	0.0120	0.0140	0.0160	0.0180	0.0200	0.0220	0.0240	450 ft
9°	0.0036	0.0068	0.0090	0.0112	0.0134	0.0156	0.0178	0.0200	0.0222	0.0244	0.0266	500 ft
10° and Over	0.0040	0.0080	0.0100	0.0120	0.0140	0.0160	0.0180	0.0200	0.0220	0.0240	0.0260	550 ft

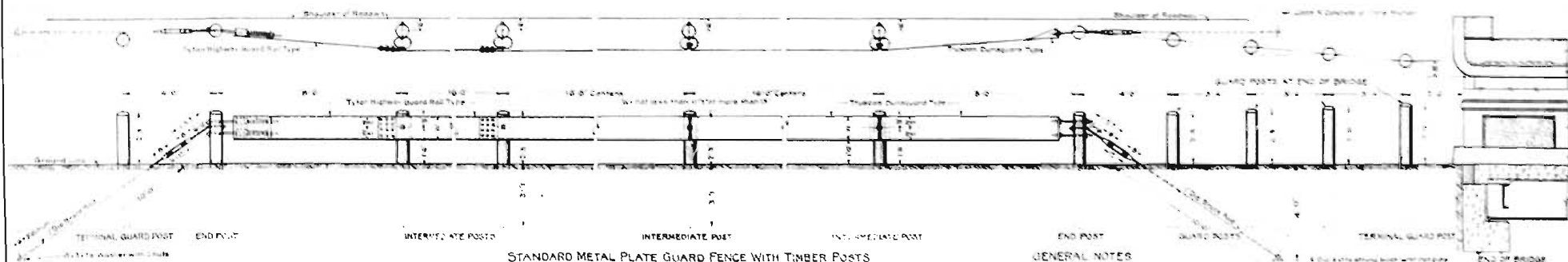
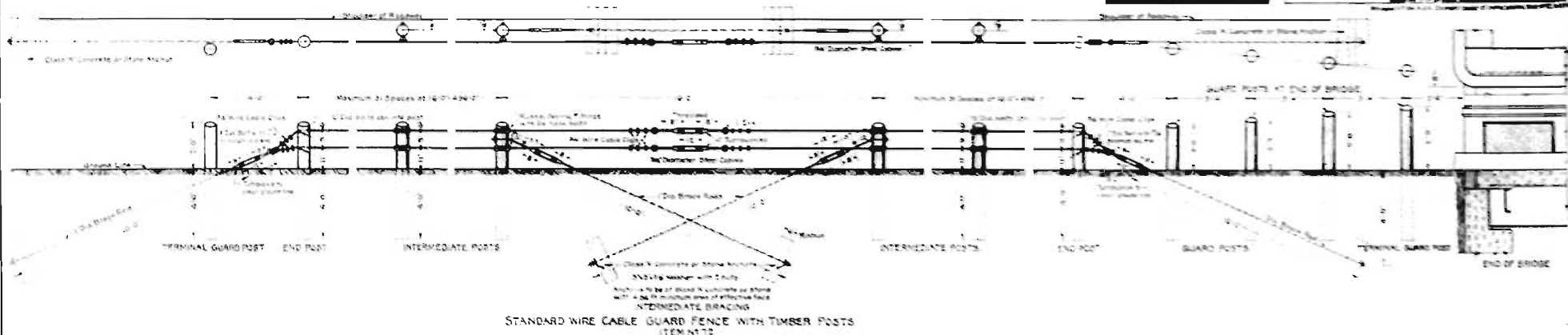


GRAPH OF SUPERELEVATION TRANSITION FACTORS

The full superlevation per foot width of roadway rate for a given amount of curvature is

The above graph has been prepared from the rates of supercritical fluid extraction.

SPECIAL CASES: When the roadway alignment does not require the use of the 600 ft transition lengths, the segment lengths may be proportionately shortened. A minimum distance of 600 ft between the ends of full super-elevation shall be used.



GENERAL NOTES

All work shall be done in accordance with the Standard Specifications of the Colorado State Highway Department, adopted January 1, 1934.
The weight of guard fence to be used for and designed on spans shall be determined from the guard post to terminal guard post.
When conditions are such as to require more than 100 ft. in length of spans having intermediate bracing along the wire fence.

No wood posts shall be made from excessive straight round pole stock, but from yellow pine or well seasoned Douglas fir.
No section of wood posts shall be less than 12" diameter.

All wood posts shall be properly spaced and secured, properly secured against, or to insure proper and efficient bracing, before treatment is applied.

All wood posts shall be provided with a brace for the full length of posts as provided for in the specifications.

No wood posts shall be set and secured in place and from the line and grade directed by the engineer.

All fittings, cables and hardware shall be hot dip galvanized steel with joints as noted and located as shown.

Eye bolts shall be welded on steel angles.

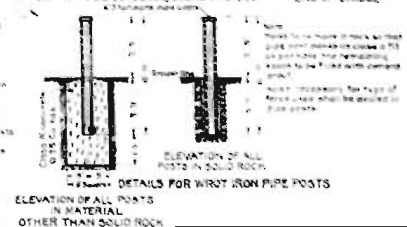
Standard post may, if weather, shall be used under all full spans and posts coming in contact with road surface.

In case of the Russell Spring fitting, the pin for may use the flange available after casting fitting, the flange of each offset fitting, the standard standard offset fitting, or other equipment through providing a standard offset of 7/8" from face of post to centerline of cable and approved by the engineer.

Only such fittings or other fittings equivalent to those shown on this sheet, and approved by the engineer may be used in lieu of the Russell Spring eye bolts and clips shown on this sheet.

Only one type of offset fittings, turnbuckles, eye bolts and clips may be used on a project.

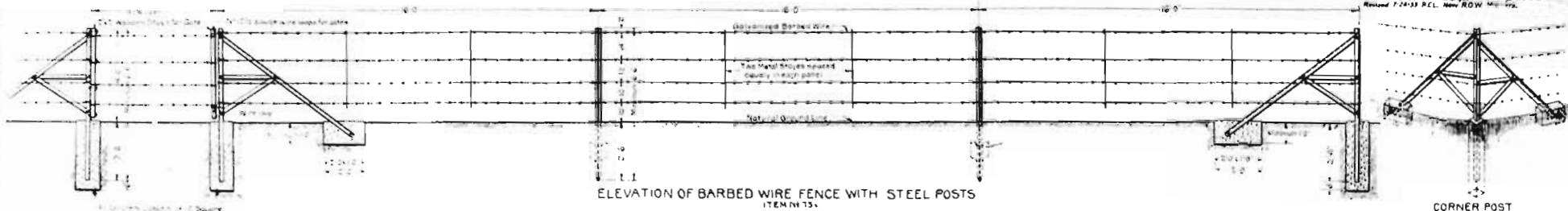
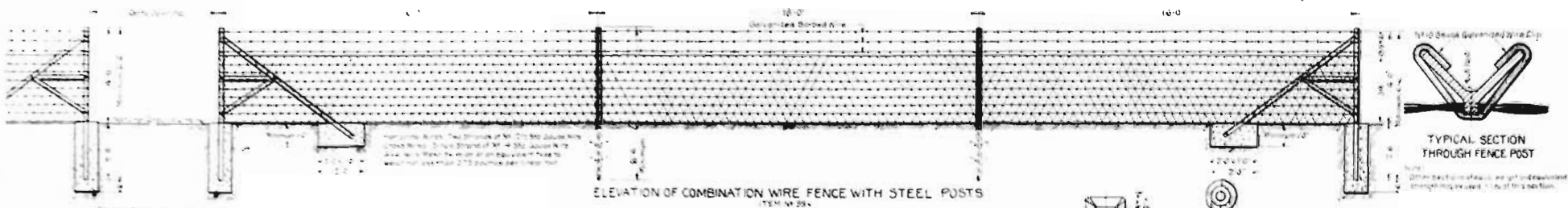
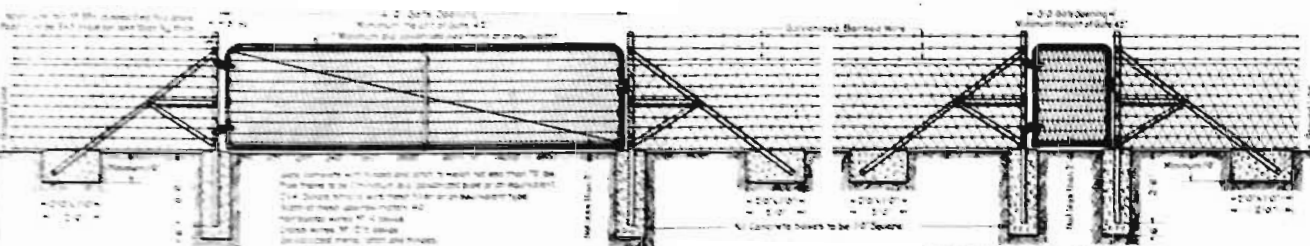
Material for metal plate guard fence shall be not lighter than 17 lb gauge. In case of the metal plate guard fence types shown on this sheet, other equivalent types of plate guard fence designed by the engineer and complying with the specifications may be used. Only one type of plate guard fence may be used on a project.



COLORADO
STATE HIGHWAY DEPARTMENT
STANDARD
WIRE CABLE & METAL PLATE
GUARD FENCE

Designed by A.G.K. Approved by J.D. Butler
Made by A.G.K. Bridge Engineer
Checked by Date May 1st, 1934

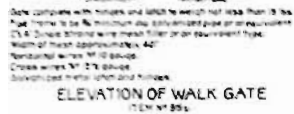
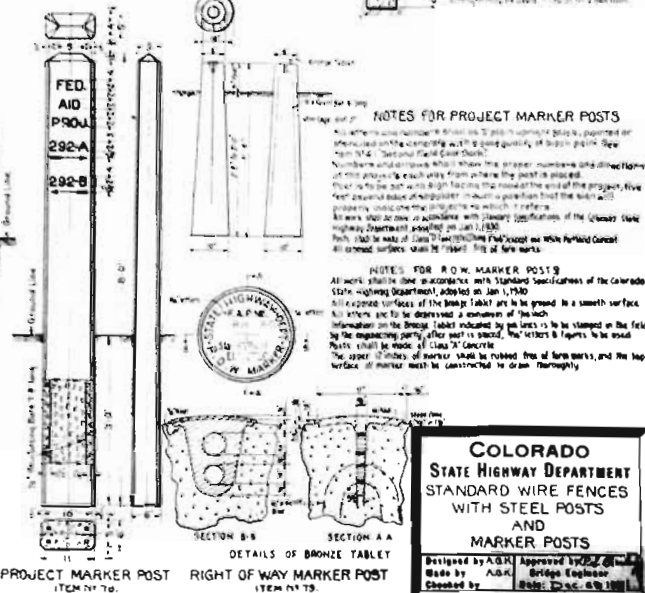
Revised 1-29-33 A.S.A. changed notes for gate and S. corner post.
Revised 7-24-33 P.C.L. New ROW markers.

ELEVATION OF BARBED WIRE FENCE WITH STEEL POSTS
ITEM IN 75.ELEVATION OF COMBINATION WIRE FENCE WITH STEEL POSTS
ITEM IN 29.ELEVATION OF DRIVEWAY GATE
ITEM IN 29.

GENERAL NOTES FOR WIRE FENCES

To wire which is to be galvanized, with the Standard Steel Posts of the Colorado State Highway Department, fabricated according to 1932 Standard Wire, shall be of galvanized steel, not less than No. 12 wire, and with the Standard Steel Posts of the Colorado State Highway Department, fabricated according to 1932 Standard Wire, shall be of galvanized steel, not less than No. 12 wire.

Wire used for the fence shall be galvanized steel, not less than No. 12 wire, and with the Standard Steel Posts of the Colorado State Highway Department, fabricated according to 1932 Standard Wire, shall be of galvanized steel, not less than No. 12 wire. The wire shall be galvanized steel, not less than No. 12 wire, and with the Standard Steel Posts of the Colorado State Highway Department, fabricated according to 1932 Standard Wire, shall be of galvanized steel, not less than No. 12 wire.

ELEVATION OF WALK GATE
ITEM IN 29.

NOTES FOR PROJECT MARKER POSTS

No. 12 wire shall be galvanized steel, not less than No. 12 wire, and with the Standard Steel Posts of the Colorado State Highway Department, fabricated according to 1932 Standard Wire, shall be of galvanized steel, not less than No. 12 wire. The wire shall be galvanized steel, not less than No. 12 wire, and with the Standard Steel Posts of the Colorado State Highway Department, fabricated according to 1932 Standard Wire, shall be of galvanized steel, not less than No. 12 wire.

NOTES FOR R.O.W. MARKER POSTS

All work shall be done according to the Standard Specifications of the Colorado State Highway Department, adopted on Jan. 1, 1930. The wire shall be galvanized steel, not less than No. 12 wire, and with the Standard Steel Posts of the Colorado State Highway Department, fabricated according to 1932 Standard Wire, shall be of galvanized steel, not less than No. 12 wire.

COLORADO
STATE HIGHWAY DEPARTMENT
STANDARD WIRE FENCES
WITH STEEL POSTS
AND
MARKER POSTS

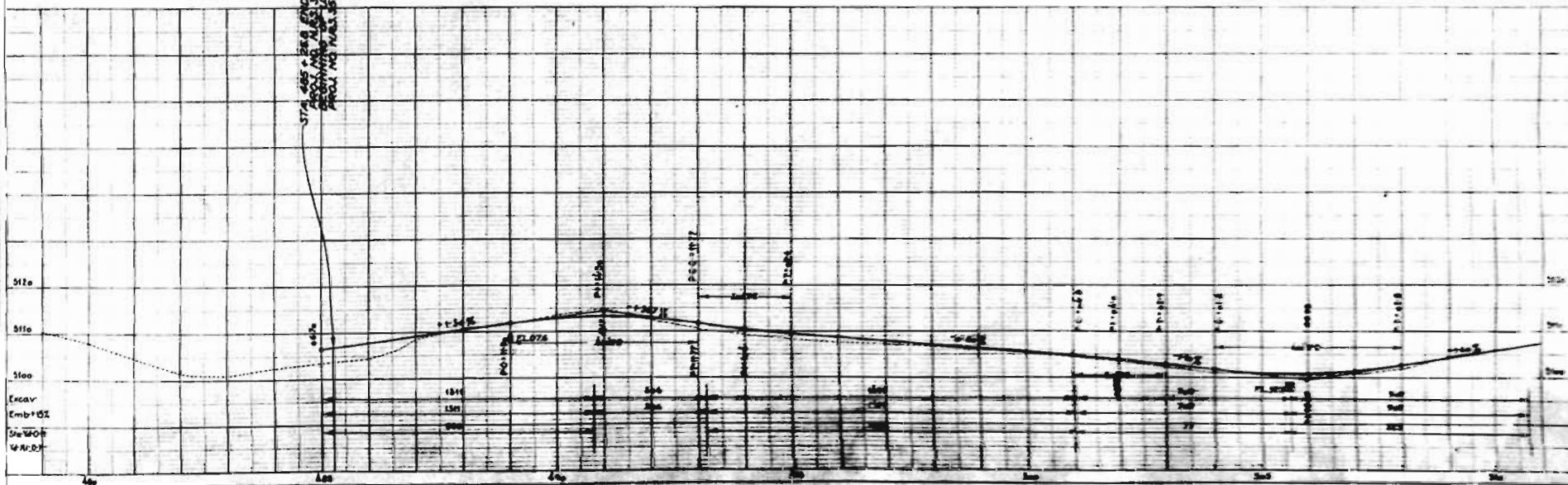
Designed by A.S.A. Approved by P.C.L.
Made by A.S.A. Bridge Engineer
Scribed by P.C.L. 6/10/33

NY 3-550-C 6
(1935)

30541. 36" x 26" C.B. in place (removed)
Per 2 Lins, 76" x 60" C.B.
to 5 y fac for Outlet

M-W 1 SEC-5
T & S R 60W

STA 485 + 28.8 END OF U.S.R.W.
 PROJ NO. N.R.3 351-B
 BEGINNING OF U.S.R.W.-N
 PROJ NO. N.R.3 351-C (7335)



ENGINEER
DATE
PROJECT

STA 538+00 TO 551+00
Req 15.15 Comb Wire Fence Lt

Sta 518+00 - 520+00
Req 15.15 Comb Wire Fence Rt

110' to 120' Long 8" x 12" J.I. Pole
10' up at Embankment
for Approach

557' to 558' Req 2 Wire Gate, Lt
558' to 559' Req 2 Wire Gate, Rt
559' to 560' Req 2 Wire Gate, Lt
560' to 561' Req 2 Wire Gate, Rt

561' to 562' Req 15.15 Comb Wire Fence
562' to 563' Req 15.15 Comb Wire Fence

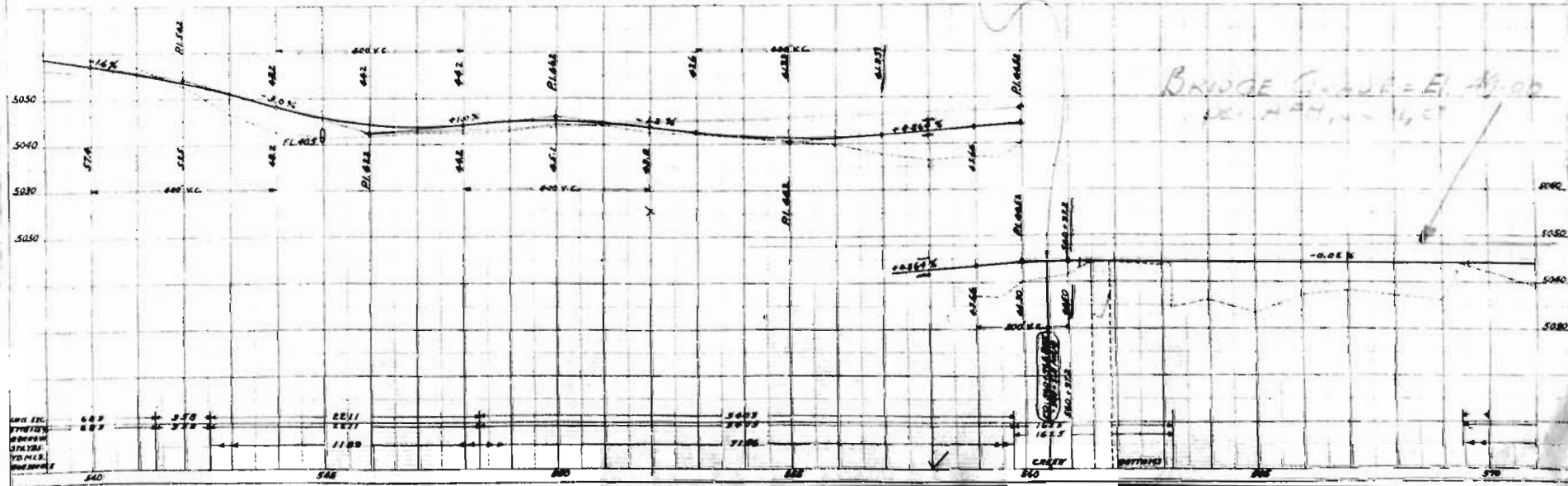
STA 563+00 TO 565+00
BRIDGE TO REMAIN IN PLACE
NOT INCLUDED IN PROJECT

STA 565+00 TO 56+00
BRIDGE TO REMAIN IN PLACE
NOT INCLUDED IN PROJECT

LOCATION: STA 560+00 BACK
-STA 560+00 AHEAD

N 327.4
-4.5 200 W

DARBY COUNTY
BARRETT RANCH



BRIDGE GRADE = EL. 43.00
DE. MAY, 1967

S-W 1/2 SEC-34
T 33 R 64W

M64-446

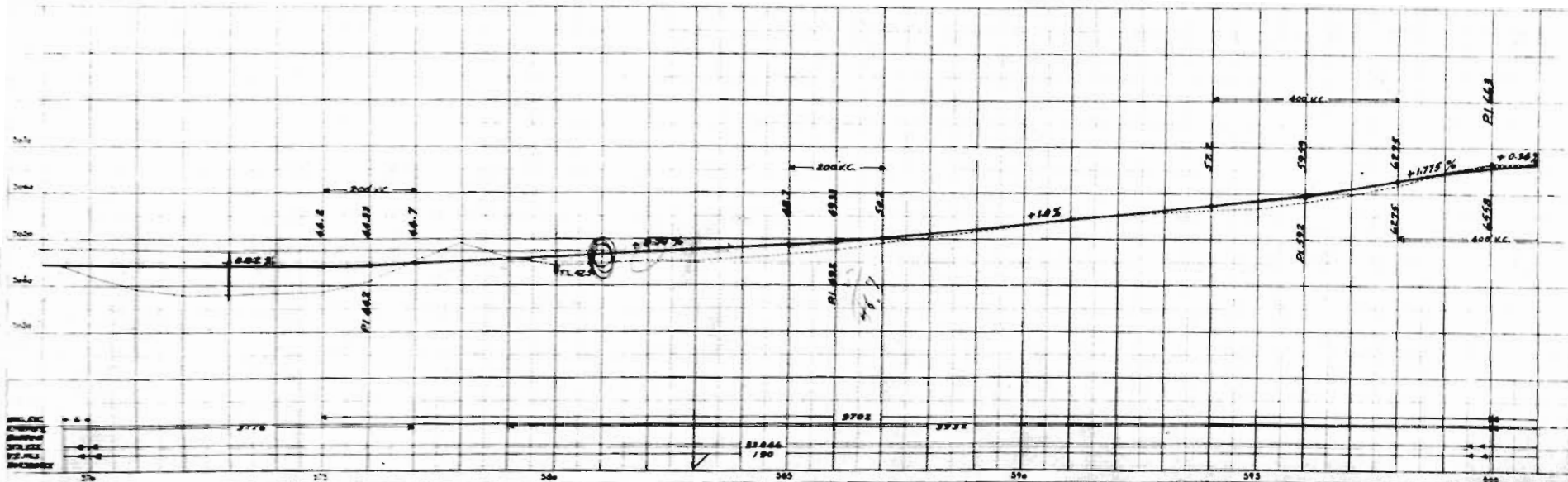
Convergence of
Sec. Ling

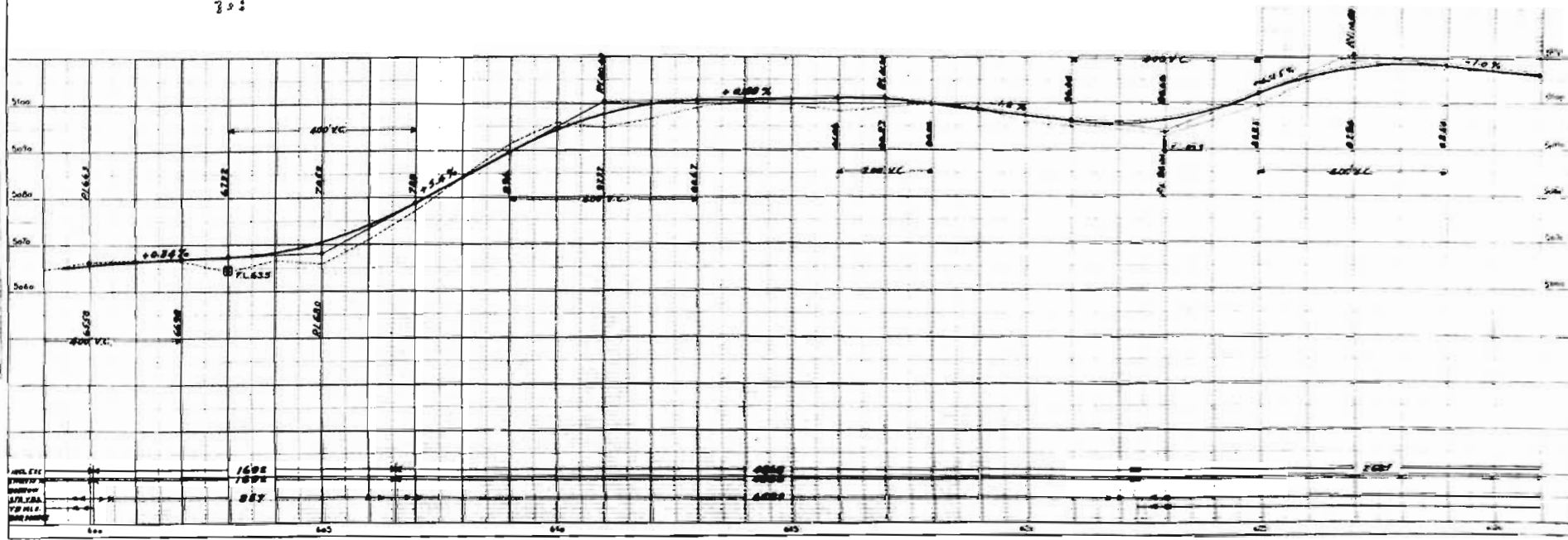
HW 1 SEC-3
T43 R40W

5500'00'-Reg. 14'-60" Cross Drain
Loc'y for Inlet and Outlet.

99762 Remove C.A.P.
ring 15" x 26" 3-48 Drain "2"
A 50 cu yd. of Embankment
for Approach

1/27/00
2000 04/04/97 51-065





SEC 14
 T3S R6W

SEC 35
 T3S R6W

Stationing Beg. 654+30 End of Project

Section Line

Stationing Beg. 654+30 End of Project

ADAMS COUNTY
 ARAPAHOE COUNTY

SEC 3
 T4S R6W

SEC 2
 T4S R6W

STA 654+30 END OF
 US D.M. PROJECT NO.
 NRS 391-C (1933)
 654+30 Beg. 800 cu yd
 of Excavation for Approach

