FED. ROAD DIV. NO.	DISTRICT	PROJ. NO.	SHEET NO.
9	COLO.	F002-2(12)	1

COLORADO
STATE HIGHWAY DEPARTMENT

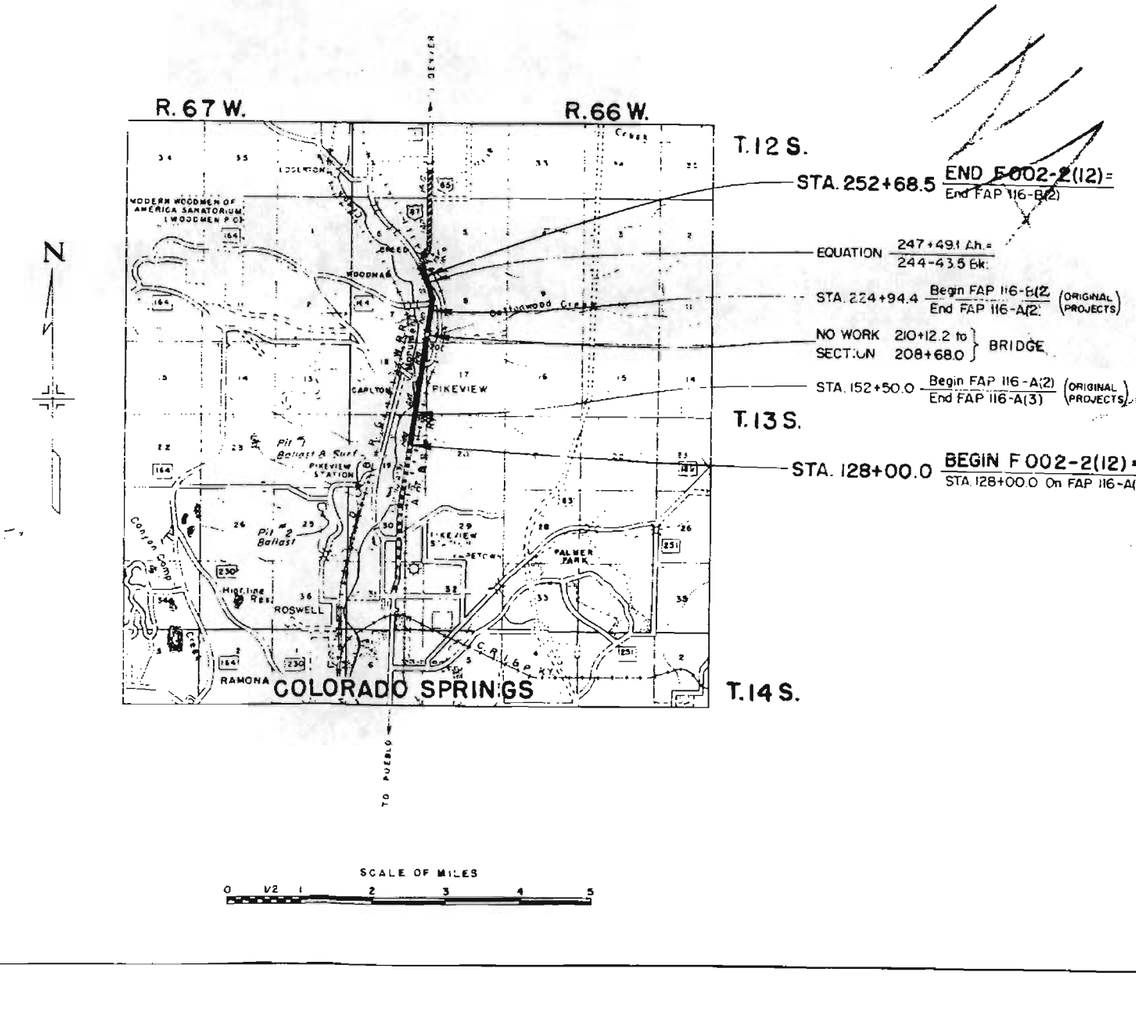
PLAN AND PROFILE OF PROPOSED
FEDERAL AID PROJECT NO. F002-2(12)
STATE HIGHWAY NO. 1
EL PASO COUNTY

INDEX OF SHEETS

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: 12,162.9 Ft. = 2.303 Miles
NET LENGTH OF PROJECT: 12,018.7 Ft. = 2.276 Miles

CONVENTIONAL SIGNS

CENTER LINE — 40 — TITLE SHEET
RIGHT OF WAY LINE
COUNTY LINE
TOWNSHIP OR RANGE LINE — T. 18 S., R. 64 W. / T. 19 S., R. 64 W.
SECTION LINE
QUARTER SECTION LINE
SIXTEENTH SECTION LINE
RAILROAD
BARBED WIRE FENCE
WOVEN WIRE-COMBINATION FENCE
SNOW FENCE
TELEPH. & TELEG. LINE
POWER LINE
PRESENT ROAD (PLAN SHEETS)
WATER MAIN



SCALE OF MILES
0 1/2 1 2 3 4 5

NOTE.
It is recommended that bidders on this project ... over the plan details with one of the following representatives of this department.

J.A. Skinner — Construction Engr. Pueblo, Colo.
E.E. Featherston — Resident Engr. Colo. Springs, Colo.

TABULATION OF LENGTH & DESIGN DATA

STATION	ROADWAY 54 FT. WIDE LIN. FT.	ROADWAY 48 FT. WIDE LIN. FT.	BRIDGES NO WORK LIN. FT.	LIN. FT.	LOADING
128+00.0 BEGIN F002-2(12) = 128+00 On FAP 116-A(3)					
152+50.0 End FAP 116-A(3) = Begin FAP 116-A(2) ORIGINAL PROJECTS	2,450				
208+68.0 BRIDGE	5,618				
210+12.2 BRIDGE			144.2		H-20
224+94.4 End FAP 116-A(2) = Begin FAP 116-B(2) ORIGINAL PROJECTS	1,482.2				
230+00.0	505.6				
244+43.5 BK. = 247+49.1 AH. Equation		1,443.5			
252+68.5 END F002-2(12) = END FAP 116-B(2)		519.4			
TOTALS	10,055.8	1,962.9	144.2		

SUMMARY	LIN. FT.	MILES
F002-2(12) ROADWAY - 54 FT. WIDE	10,055.8	1.904
F002-2(12) ROADWAY - 48 FT. WIDE	1,962.9	0.372
F002-2(12) ROADWAY - NET LENGTH	12,018.7	2.276
F002-2(12) BRIDGES - NO WORK	144.2	0.027
PROJECT TOTALS	12,162.9	2.303

DESIGN DATA	
Maximum Degree of Curve	1° 00'
Maximum Grade	5.0%
Minimum N.P.S.D. - Horizontal	1,300'
Minimum N.P.S.D. - Vertical	680'
Maximum Design Speed	60 M.P.H.

HIGHWAY DEPARTMENT
STATE OF COLORADO
RECOMMENDED FOR APPROVAL:
ASSISTANT ENGINEER 10
APPROVED:
STATE HIGHWAY ENGINEER 10

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS
RECOMMENDED FOR APPROVAL:
DISTRICT ENGINEER
APPROVED:
DIVISION ENGINEER

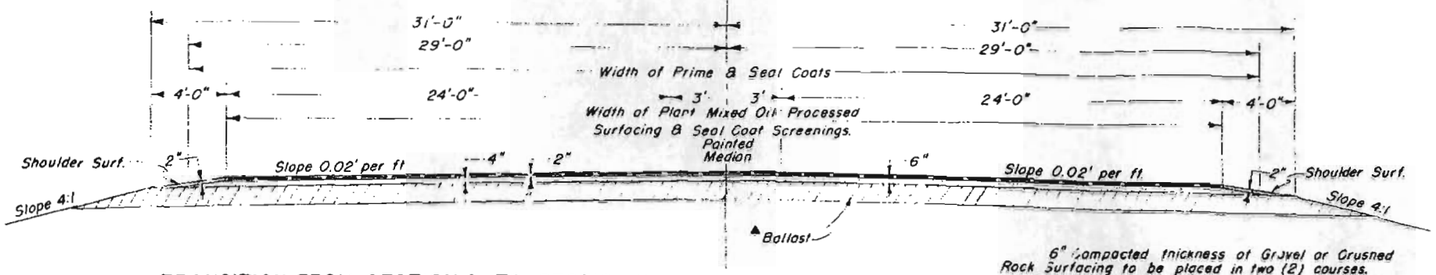
FED. ROAD DIV. NO.	DIST.	FED. AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 002-2(12)	2	

TYPICAL CROSS SECTIONS

SECTION A

STA.*128+00 TO STA. 230+00

* STA. 128+00 TO STA. 129+00
TRANSITION FROM 60FT. TO 54FT. ROADWAY

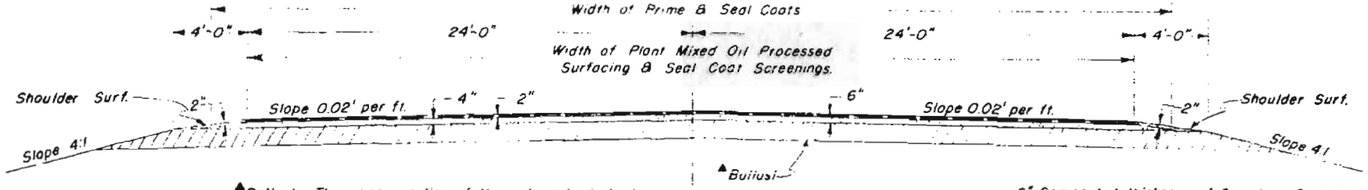


6" Compacted thickness of Gravel or Crushed Rock Surfacing to be placed in two (2) courses.
Approximate 2" top course to be Plant Mixed Oil Processed Surfacing.
Approximate 4" bottom course to be placed at the rate of 126 tons per 100 lin. ft. of roadway.
Approximate 2" bottom course surfacing for Shoulder Areas to be placed at the rate of 8 tons per 100 lin. ft. of roadway after placement of oil mat.

TRANSITION FROM SECTION A TO SECTION B
STA. 230+00 TO STA. 242+00

SECTION B

STA. 242+00 TO STA. 252+68.5



▲Ballast – The upper portion of the subgrade is to be constructed of Ballast Material at locations designated in Ballast material tabulation. Estimated quantities involved in this operation and thickness of material required are tabulated on sheet No. 3.

6" Compacted thickness of Gravel or Crushed Rock Surfacing to be placed in two (2) courses.
Approximate 2" top course to be Plant Mixed Oil Processed Surfacing.
Approximate 4" bottom course to be placed at the rate of 113 tons per 100 lin. ft. of roadway.
Approximate 2" bottom course surfacing for Shoulder Areas to be placed at the rate of 8 tons per 100 lin. ft. of roadway after placement of oil mat.

SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO.	ITEM	UNIT	54' ROADWAY	48' ROADWAY	PROJECT TOTALS
11b	Remove and Reset Guard Posts	Ea.		51	170
12x	Removing and Rebuilding Guard Fence	Lin Ft			
13c	Unclassified Excavation	Cu Yd			
17ax	Rolling with Tamping Roller (2 Unit)	Hr.			
17ay	Rolling with Tamping Roller (4 Unit)	Hr.			
17b	Rolling with Flat Wheeled Roller	Hr.			
17dx	Furnishing Tamping Roller (2 Unit)	Ea.			
17dy	Furnishing Tamping Roller (4 Unit)	Ea.			
17e	Furnishing Flat Wheeled Roller	Ea.			
17g	Wetting	M Gal			1.5
18c	Ton Mile Overhaul	Ton Mi.			
23a	Ballast (Class 1)	Ton			
23b	Ballast (Class 2)	Ton			
26c	Gravel or Crushed Rock Surfacing (Grad C)	Ton			
29d	Asphalt (150-200 Penetration)	Ton	22	52	
30x	Asphaltic Road Material MC-	Gal	12	3	31,500
30y	Asphaltic Road Material RC-	Gal	1	3	3,700
31c	Stone Screenings (Type 1)	Ton	66	2	140
32a	Plant Mixed Oil Processed Surfacing	Ton	1		340
119	Scarifying, Aerating & Shaping Roadbed	Mile	1.8	1.4	2.3
	STATE FORCES				
813	Project Markers	Ea.	1		1

GENERAL NOTES

This Project is to be constructed in conformity with the Standard Specifications of the Colorado State Highway Department adopted January 1, 1948.

All quantities on preliminary plans are to be considered approximate only.

All roadway excavation required to construct this Project shall be obtained and used as indicated on the plans. Quantities involved beyond the limits of the ditches shown on the Typical Cross Section, either noted as "Borrow" on the Plans or as "Embankments" in the List of Structures, are to be classified and paid for as "Unclassified Excavation." These quantities are to be staked as part of the original excavation at locations indicated on the Plans. Any slope stakes beyond the limits of the Typical Section as shown, are subject to change by the Engineer to fit conditions actually met in construction.

Except as otherwise noted on the Plans, payment for overhaul will be based on measurement along the centerline of the Project.

All curves are to be superelevated and widened as provided by the Standard Superelevation sheet included with the Plans, except as otherwise noted on Plans.

The Detour for this Project lies along the present traveled road. At all places on the Project where the new work lies along the present traveled road, the Contractor shall, at his own expense, prosecute construction in such manner that traffic may readily pass over the road. Also, the Contractor shall maintain in safe condition and at his own expense, all temporary approaches to and crossings of intersecting roads.

Paving Asphalt (150-200 penetration) is to be used on this Project.

Asphaltic Road Material MC- is to be used for Prime Coat over width shown on Typical Sections, previous to placing Plant Mixed Oil Processed Material. Grade of MC- Oil to be determined by the Engineer.

All side approach roads to the Project shall be primed and seal coated to approximately 50 feet out from the edge of the oil mat or to the Right of Way line, whichever is less, except Lt of Sta 172+ and Lt of Sta 229+ which, in addition, shall have Plant Mixed Oil Processed Mat.

Stone screenings shall conform to the requirements for Stone Screenings (Type 1) of the Specifications.

Asphaltic Road Material RC is to be used for Seal Coat over the entire Primed area. Grade of RC Oil to be determined by the Engineer.

FED. ROAD DIV. NO.	DIST.	FED. AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 002-2(1)	3	

BALLAST PLAN

It is estimated that Ballast Material for the Project is available in the vicinity of the Pits indicated in the following tabulation. Estimated quantities involved in this operation are shown below.

Alteration of the plan as here outlined will be allowed only on written permission from the Department.

	MATERIAL TO BE PLACED	SOURCE	QUANTITY & THICKNESS: AVAILABLE	TOTAL * THICKNESS	● CLASS 1: THICKNESS	● CLASS 1: TONS	▲ CLASS 2: THICKNESS	▲ CLASS 2: TONS	OVERHAUL TON MILES: CLASS 1	OVERHAUL TON MILES: CLASS 2
54' ROADWAY	123+00 – 143+00 [illegible] 143+[illegible] – 151+[illegible] 151+[illegible] – 153+[illegible] 153+00 – [illegible]	● [illegible] Dixon Farm [illegible]		[illegible]	[illegible] 4	3,2[illegible] 2,364 1,12[illegible] [illegible]	[illegible]	[illegible]	6,7[illegible] 4,[illegible] 1,343 [illegible]	4,[illegible]3 [illegible]
54' ROADWAY	1[illegible] – [illegible] 172+[illegible] – [illegible] 175+[illegible] – [illegible] 18[illegible] – [illegible]	[illegible]	54,[illegible] Tons	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
54' ROADWAY	19[illegible] – 193+[illegible] 193+[illegible] – 2[illegible] 2[illegible] – [illegible] Bridge 211+12.2 – 21[illegible]			[illegible]	[illegible]	[illegible] 2,[illegible]			[illegible] 5,[illegible]	
54' / 48' ROADWAY	219+[illegible] – 22[illegible] 22[illegible] – [illegible] 2[illegible] – [illegible] 242+0[illegible] – 24[illegible]	▲ [illegible]	3[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	
48' ROADWAY	247+4[illegible] – 253+[illegible]	[illegible]		[illegible]					[illegible]	
	TOTALS – 54' ROADWAY					[illegible]		[illegible]	[illegible]	[illegible]
	TOTALS – 48' ROADWAY					[illegible]			[illegible]	
	PROJECT TOTALS					[illegible]		[illegible]	[illegible]	[illegible]

* Based on Curve "D", S.H.D. Design 12
● All Class 1 Ballast from Pit No. 1 ▲ All Class 2 Ballast from Pit No. 2

SURFACING PLAN

It is estimated that Surfacing Material for the Project is available in the vicinity of the Pit indicated in the following tabulation. Estimated quantities involved in this operation are shown below.

Alteration of the plan as here outlined will be allowed only on written permission from the Department.

	MATERIAL TO BE PLACED	SOURCE	QUANTITY: AVAILABLE	QUANTITY	TONS: BASE COURSE GRADING "C"	TONS: SHOULDER SURFACING GRADING "C"	OVERHAUL TON MILES: BASE COURSE	OVERHAUL TON MILES: SHOULDER SURFACING
54' ROADWAY	1[illegible] – [illegible] 17[illegible] – [illegible] Bridge 210+12.2 – 23[illegible]	[illegible] Henry [illegible] Farm [illegible]	54,[illegible] Tons		[illegible] [illegible] [illegible]	[illegible] [illegible] 15[illegible]	[illegible] [illegible] [illegible]	[illegible]
54' / 48' ROADWAY	Est. for Road Approaches [illegible] 242+[illegible] – [illegible] E. Br.	2.[illegible] Sta. 17[illegible] N.[illegible] 34[illegible] T.[illegible] R.[illegible]			[illegible] [illegible] 27[illegible]	31 21	[illegible]14 [illegible]	[illegible]
48' ROADWAY	247+43.4[illegible] – 252+[illegible] 5 Est. for Road Approaches				[illegible] [illegible]	42	[illegible] [illegible]	[illegible]
	TOTALS – 54' ROADWAY				12,861	305	24,[illegible]4	1,52[illegible]
	TOTALS – 48' ROADWAY				2,34[illegible]	156	6,271	4[illegible]5
	PROJECT TOTALS				16,164		32,502	

SCARIFYING, AERATING & SHAPING ROADBED

	LOCATION	MILES
54' RDWY	131+00 – 207+[illegible]	1.44
54' RDWY	[illegible]	1.37
48' RDWY	[illegible] – 244+43.5 E. [illegible]	[illegible]
48' RDWY	[illegible] – 25[illegible]	[illegible]
	TOTAL – 54' ROADWAY	[illegible]
	TOTAL – 48' ROADWAY	[illegible]
	PROJECT TOTAL	[illegible]

LIST OF STRUCTURES

	LOCATION OF STRUCTURE	DESCRIPTION	UNCLASSIFIED EXCAVATION CU. YDS.: EXCAV.	UNCLASSIFIED EXCAVATION CU. YDS.: EMBANK.	GRAVEL OR CR. ROCK SURF.: TONS	MISCELLANEOUS
54' RDWY	123+[illegible] [illegible]	Project Marker [illegible]	[illegible]	15	21	1-Project Marker (See [illegible]) [illegible]
54' RDWY	[illegible]	[illegible]		15 15	[illegible]	
54' RDWY	[illegible]	[illegible]			42	
54' RDWY	[illegible]	[illegible]	[illegible]		7	
48' RDWY	[illegible]	[illegible]	[illegible]		[illegible] 21	
	TOTALS – 54' ROADWAY		[illegible]	45	[illegible]	
	TOTALS – 48' ROADWAY		[illegible]		7	
	PROJECT TOTALS		[illegible]	45	[illegible]	

REMOVING & REBUILDING GUARD FENCE

STATION	GUARD FENCE LINEAR FEET: LEFT	GUARD FENCE LINEAR FEET: RIGHT
[illegible]	5[illegible]	
[illegible]		5[illegible]
[illegible]	[illegible]	
21[illegible] – [illegible]		[illegible]
TOTALS – 54' ROADWAY	125	125
TOTALS – 48' ROADWAY		
PROJECT TOTALS	250	

REMOVE & RESET GUARD POSTS

	STATION	TIMBER GUARD POSTS: SPACING	NUMBER: LEFT	NUMBER: RIGHT
54' RDWY	[illegible]	[illegible]	[illegible]	[illegible]
54' RDWY	[illegible] [illegible] – 17[illegible]+5[illegible] [illegible] – [illegible] [illegible] – 1[illegible]5+56	[illegible]	[illegible]	[illegible]
54' RDWY	[illegible] – 1[illegible]5+5[illegible] [illegible] – 2[illegible] [illegible]3-[illegible]	[illegible]	[illegible]	[illegible]
48' RD	[illegible] [illegible] – 2[illegible]+5[illegible] [illegible] – 2[illegible]+16 [illegible] – [illegible]+6.5	[illegible]	[illegible]	[illegible]
	TOTALS – 54' ROADWAY		62	5[illegible]
	TOTALS – 48' ROADWAY		[illegible]	4[illegible]
	PROJECT TOTALS		[illegible]76	

REVISIONS

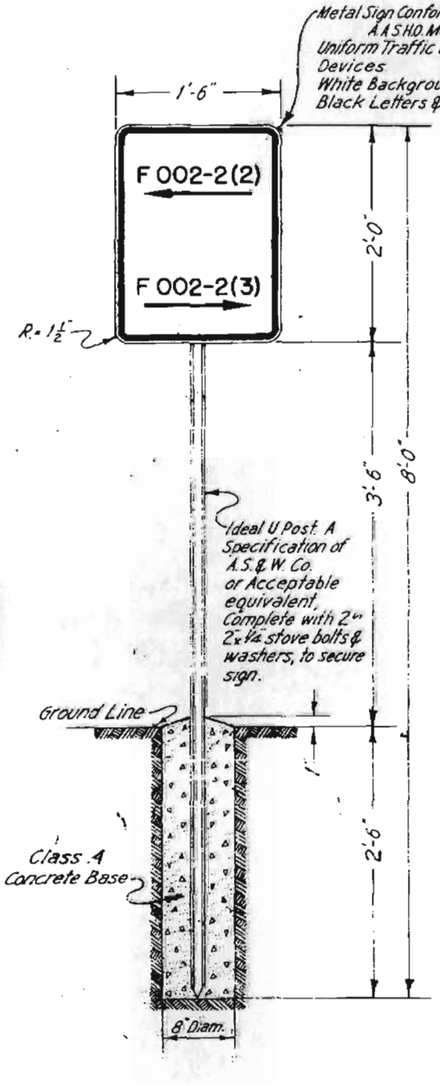
Rev. 6-28-40, A.Z. 1940 Specs.
Rev. 1-2-46, C.S.D. Item 818

STANDARD M-7-B

Rev. 8 Jan. 46 P.S.A. ½" to 1/2"ø
Rev. June 10 '46, W.E.M. Bronze Tablet
Rev. Mar. 21-1947, W.H.M. – Project Marker Post.
Rev. Nov. 20-1947, J.P.K. re Metal Project Marker
Rev. Dec. 15-1947, J.P.K. re Concrete Base for Metal Project Marker
Rev. July 5-1950, J.C.R. re Rev. Note Re Metal Sign for Project Marker, & R.O.W. Marker Markings.

FED. ROAD DIST. NO.	STATE	SHEET NO.	TOTAL SHEETS
3	COLO.	F 002-2(2)	4

PROJECT MARKER POST
ITEM Nº 818



NOTES FOR PROJECT MARKER POSTS

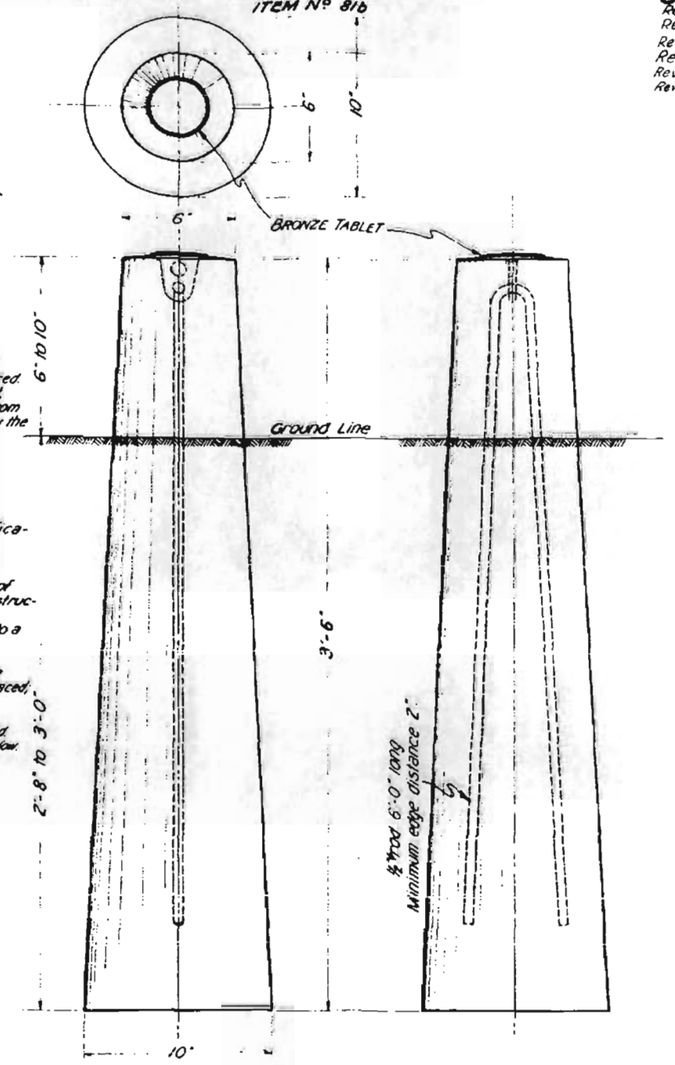
All work shall be done in accordance with the Standard specifications of the Colorado State Highway Department, adopted January 1st 1948

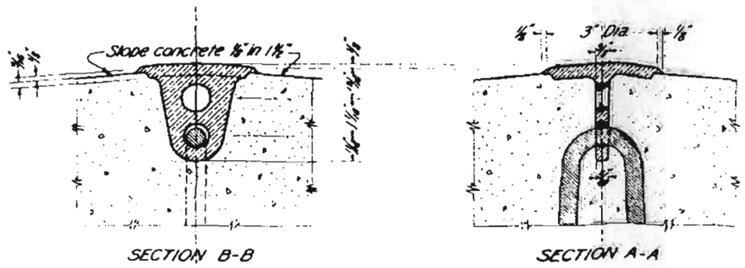
Numbers and arrows shall show the proper numbers and directions of the projects each way from where the post is placed. Post to be set with sign facing the road at the end of the project, two feet inside the R.O.W. line or at a point amply protected from traffic in such a position that the sign will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

NOTES FOR R.O.W. MARKER POSTS

All work shall be done in accordance with the Standard Specifications of the Colorado State Highway Department, adopted January 1st 1948.
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 dash lines is to be stamped in the field by the engineering party after post is placed.
½ inch letters and figures to be used.
Project designations on tablets shall be properly shown. I.E., F.I. for Fed. Aid Interstate, F. for Fed. Aid Primary, S. for Fed. Aid Secondary etc. & S.P. Nº for State Projects, See detail below.

RIGHT OF WAY MARKER POST
ITEM Nº 818





DETAIL OF BRONZE TABLET
FOR RIGHT OF WAY MARKER POST

COLORADO
STATE HIGHWAY DEPARTMENT
STANDARD
MARKER POSTS

Designed by R.E.L.
Made by F.F.S.
Checked by R.E.L.
Approved by [signature]
Date: January 1st 1948

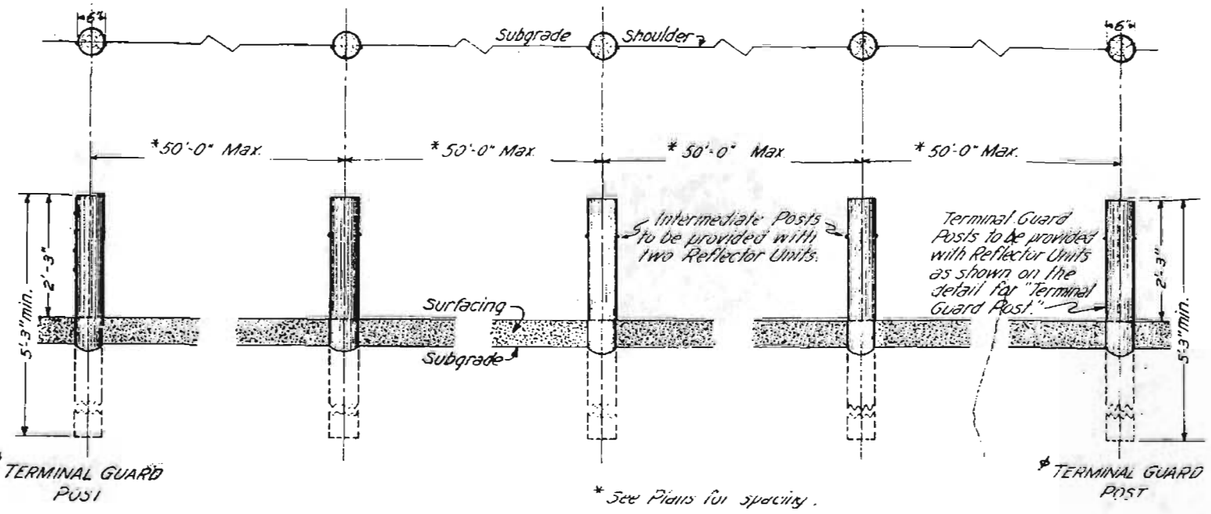
REVISIONS

Rev. 11 24-39-P.B.B. Reflector Units (Min. Strs)
Rev. 12-19-39-P.B.B. Length and treatment of posts.

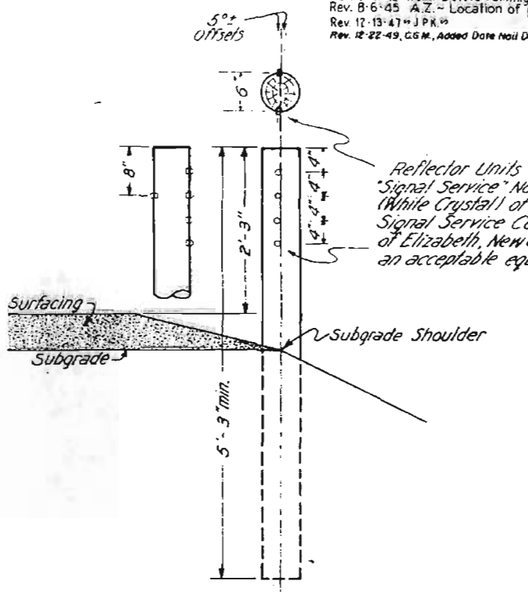
STANDARD M-19-B

Rev. 6-28-40-A.Z.-1940 Specs. & Location of posts.
Rev. 10-9-40-P.B.B.-Painting & Refl. Units.
Rev. 2-24-41-P.B.B.-Terminal Guard Post Placement.
Rev. 7-2-41-P.B.B.-White Paint.
Rev. 7-9-42 H.O.W. Delete Painting of Posts.
Rev. 8-6-45 A.Z.-Location of posts.
Rev. 12-13-47 "J.P.K."
Rev. 12-22-49, C.G.M., Added Date Nail Detail

FED. ROAD DIST. NO.	STATE	SHEET NO.	TOTAL SHEETS
3	COLO.	F002-2(2) 5	

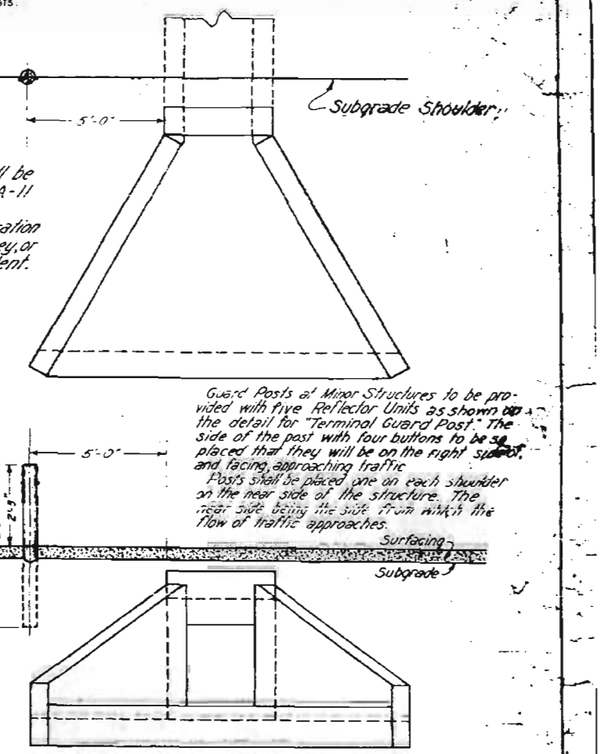


SHOWING PLACEMENT ON NORMAL ROADWAY FILLS



TERMINAL GUARD POST

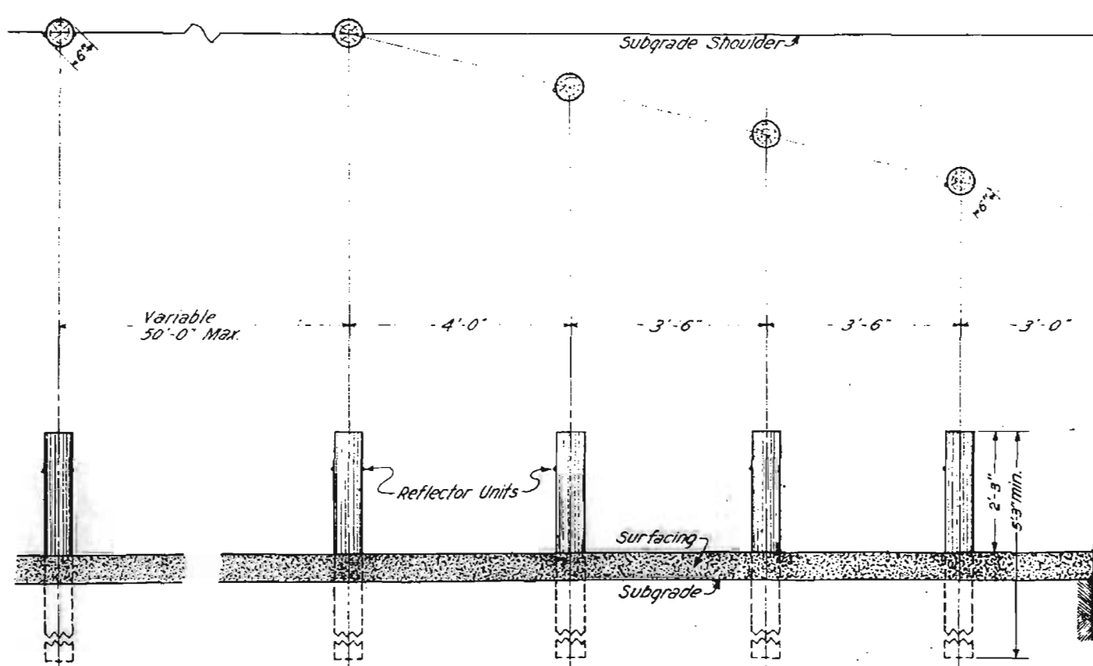
*NOTE: Terminal Guard Posts as detailed above to be used only for the near Post on the right side of, and facing, approaching traffic. All other Terminal Guard Posts to be identical with Intermediate Guard Posts.



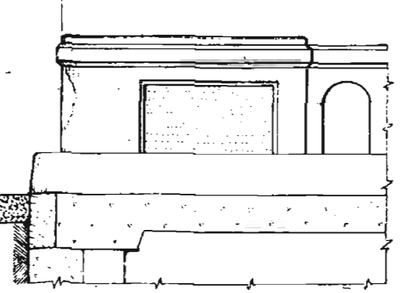
Guard Posts at Minor Structures to be provided with five Reflector Units as shown on the detail for "Terminal Guard Post". The side of the post with four buttons to be so placed that they will be on the right side of, and facing, approaching traffic.

Posts shall be placed one on each shoulder on the near side of the structure. The near side being the side from which the flow of traffic approaches.

SHOWING PLACEMENT AT MINOR STRUCTURES



SHOWING PLACEMENT AT BRIDGE APPROACHES



Intermediate Guard Posts at Bridges to be provided with Reflector Units as shown; that is, one Unit each on the three Posts nearest the bridge end and two Units on the fourth Post.

GENERAL NOTES

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

All wood posts shall be made from seasoned, straight, sound Lodgepole Pine, Southern Yellow Pine, or West Coast Douglas Fir.

No section of wood posts shall be less than 6" in diameter.

All wood posts shall be entirely peeled and shaved, thoroughly seasoned and dry, with square tops.

All wood posts shall be set and tamped in plumb and firm, to the lines and grades as directed by the Engineer.

Reflector Units in all posts shall be placed in such position that the units will function at a distance of 500 feet.

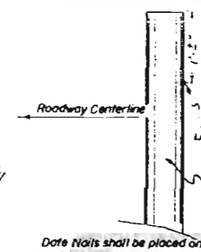
On tangents the Reflector Units shall be placed at an angle of approximately five degrees to a line parallel to the centerline of the highway.

In all instances a test shall be made to assure the position of the Reflector Units to be the most effective possible.

The diameter of holes drilled in the posts shall be drilled approximately one-sixteenth (1/16) inch less than the diameter of the signal button base. In all instances the hole shall be enough undersize that the button when driven into the post shall have complete bond with the post and be securely locked in correct position.

Posts shall be given a standard pressure Creosote treatment and then be thoroughly steam-cleaned in accordance with requirements of specifications.

Details for Placing Date Nails



Date Nails shall be placed on every post and shall be driven flush

Date Nails to be furnished and installed by State Forces as part of Engineering Costs.

COLORADO
STATE HIGHWAY DEPARTMENT

STANDARD TIMBER GUARD POSTS

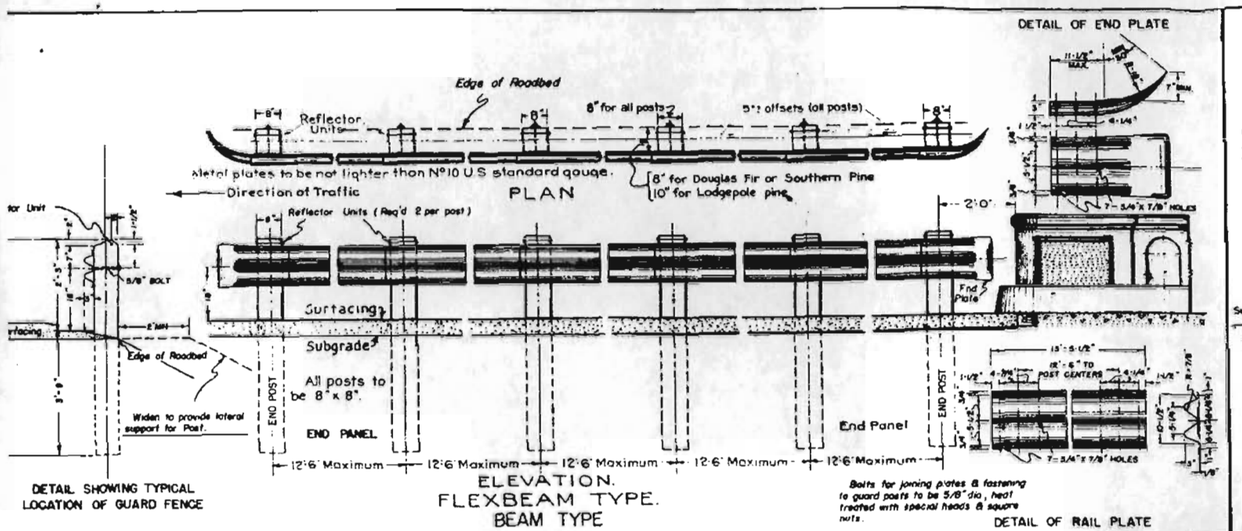
Designed by R.E.L.	Approved by [illegible]
Made by P.B.B.	Chief Draftsman
Checked by	Date: January 1st 1949

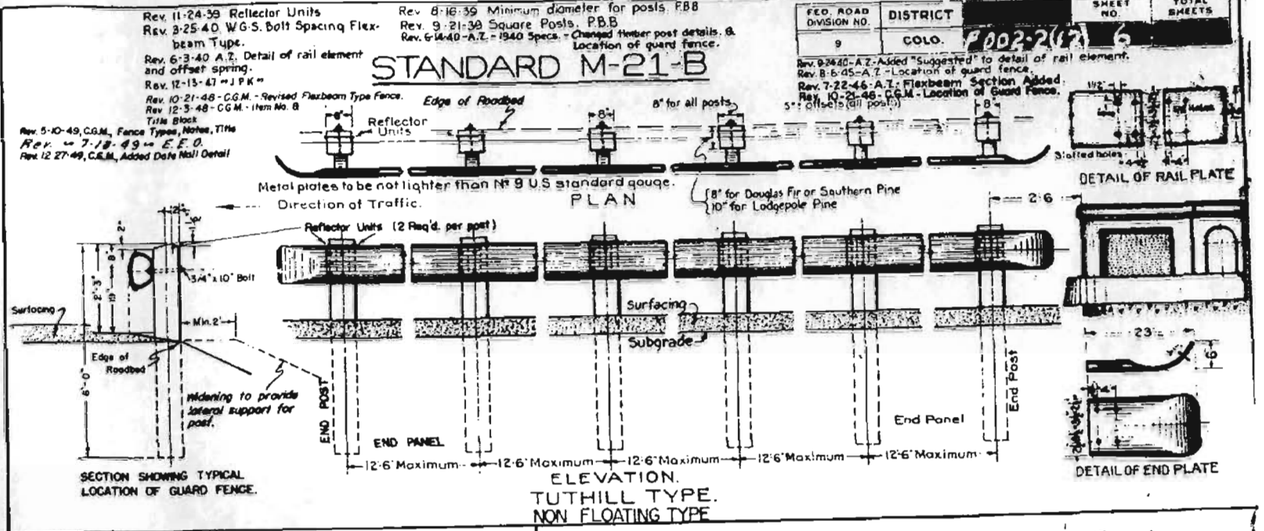
REVISIONS

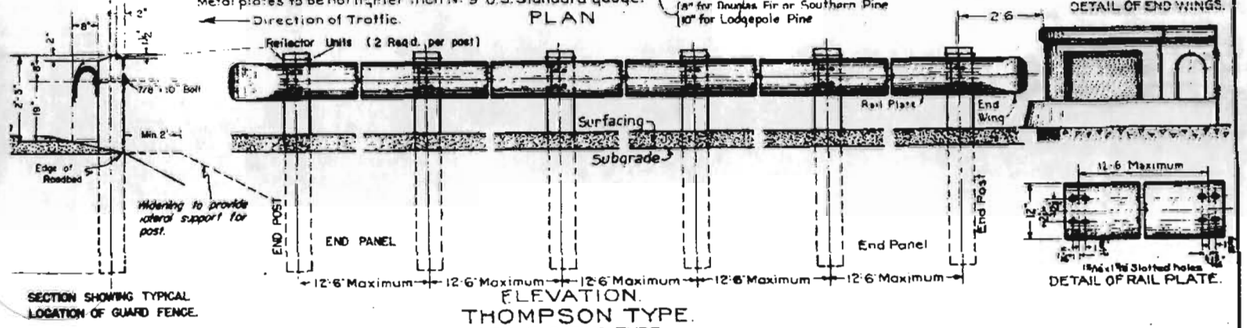
Rev. 11-24-38 Reflector Units
Rev. 3-25-40 W.G.S. Bolt Spacing Flex-beam Type.
Rev. 6-3-40 A.Z. Detail of rail element and offset spring.
Rev. 12-13-47 "J.P.K."
Rev. 10-21-48 - C.G.M. - Revised Flexbeam Type Fence.
Rev. 12-3-48 - C.G.M. - Item No. 8 Title Block
Rev. 5-10-49, C.G.M., Fence Types, Notes, Title
Rev. " 7-18-49 " C.E.O.
Rev. 12-27-49, C.G.M., Added Date Nail Detail
Rev. 8-16-39 Minimum diameter for posts, P.B.B.
Rev. 9-21-39 Square Posts, P.B.B.
Rev. 6-14-40 - A.Z. - 1940 Specs. - Changed timber post details, & Location of guard fence.
Rev. 8-26-40 - A.Z. - Added "Suggested" to detail of rail element.
Rev. 8-6-45 - A.Z. - Location of guard fence.
Rev. 7-22-46 - A.Z. - Flexbeam Section Added
Rev. 10-21-46 - C.G.M. - Location of Guard Fence.

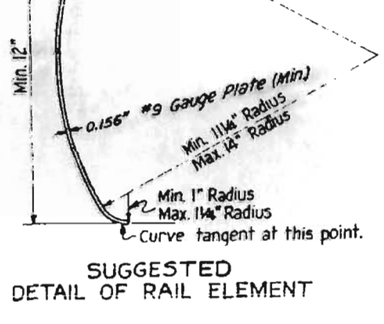
FED. ROAD DIVISION NO.	DISTRICT	SHEET NO.	TOTAL SHEETS
9	COLO. F 002-2(2)	6	

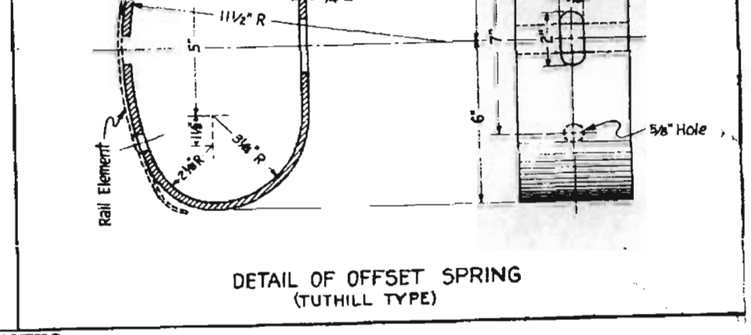
STANDARD M-21-B



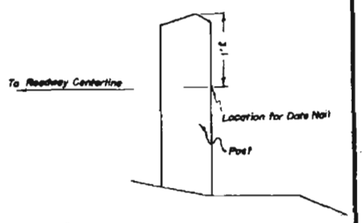








Detail for Placing Date Nails



NOTE:
Date Nails shall be placed on every post and shall be driven flush.
Date Nails to be furnished and installed by State Forces as part of Engineering Costs.

GENERAL NOTES

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

All wood posts shall be close grained Douglas Fir of the Coast Region, Dense Longleaf or Shortleaf Southern Pine, or Lodgepole Pine.

Only one type of metal plate guard fence or posts may be used on a project in lieu of the metal plate guard fence types as shown on this drawing, other equivalent types of metal plate guard fence approved by the department and complying with the specifications may be used.

All wood posts shall be square edged, full sawn, with tops beveled as shown. All bolt holes are to be drilled 1/16" larger than diameter of bolt before treatment is applied. All wood posts shall be pressure treated for the full length of the posts as provided for in the Specifications.

Timber posts fabricated from Douglas Fir or Southern Pine shall be 8"x8" square. Timber posts fabricated from Lodgepole Pine shall be 8"x10" and shall be installed with the 8" face parallel to the centerline of the roadway.

All wood posts shall be set and tamped in, plumb and firm, to the lines and grades as directed by the engineer.

All metal connecting devices, hardware and supports shall be hot dip galvanized, except that offset spring fittings may be electro-plated. Metal plates shall not be galvanized, but shall be painted as provided for in the specifications.

Metal plates shall not be lighter than that shown on this sheet for each type and in no case to be lighter than N° 10 U.S. standard gauge.

The length of guard fence to be paid for and designated on plans shall be measured from center to center of end posts.

Standard galvanized cast iron O.G. or galvanized malleable cast washers shall be used under all bolt heads and nuts coming in contact with wood posts.

Where sidewalks are constructed adjacent to the lane for traffic, guard fence shall be placed in such manner that the fence lies on the line between the sidewalk area and the normal roadway shoulder.

Where guard fences are constructed on the approaches to bridges with sidewalks, the fence at bridge shall be placed in line with the face of the curbing on the bridge.

Reflector Units shall be "Signal Service" No. ALA-11 (White Crystal) of the Signal Service Corporation, Elizabeth, New Jersey, or an acceptable equivalent.

GEN. NOTES (CONT.)

Reflector Units in all posts shall be placed in such position that the units will function at a distance of 500 feet.

On tangents the Reflector Units shall be placed at an angle of approximately five degrees to a line parallel to the centerline of the highway.

In all instances a test shall be made to assure the position of the Reflector Units to be the most effective possible.

The diameter of holes drilled in the posts shall be approximately one-sixteenth (1/16) inch less than the diameter of the signal button base. In all instances the hole shall be enough undersize that the button when driven into the post shall have complete bond with the post and be securely locked in correct position.

COLORADO
STATE HIGHWAY DEPARTMENT

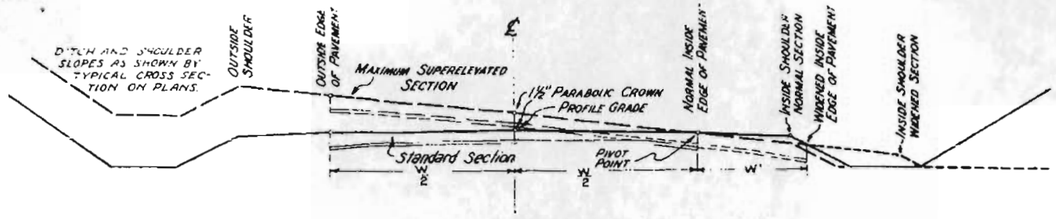
STANDARD
METAL PLATE GUARD FENCE
BEAM AND
NON FLOATING TYPES

Designed by A.G.K.	Approved by John Marshall
Made by A.G.K.	Date: January 1st 1948
Checked by	

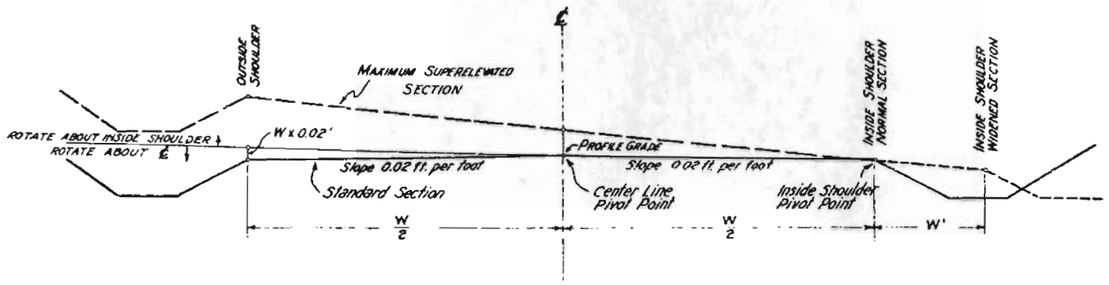
STANDARD M-I-B

F002-2(12) 7

Rev 11-2-38 P.B.B. Widening Transition.
Rev 12-13-47 " J.P.K. "



PAVEMENT SECTION

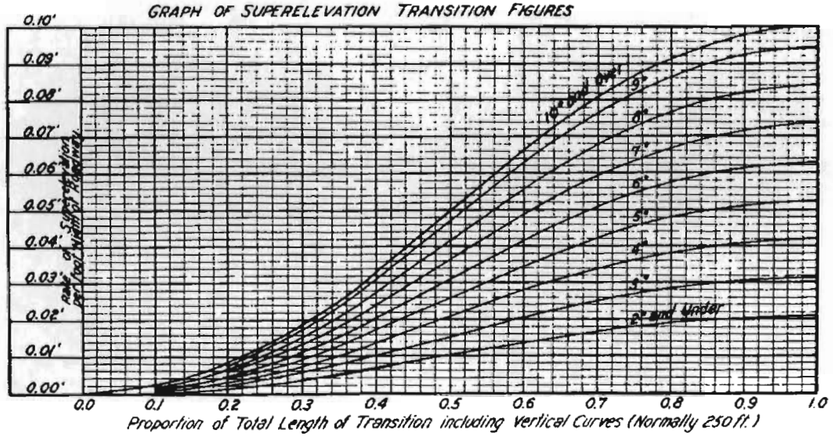


GRADED OR SURFACED SECTION

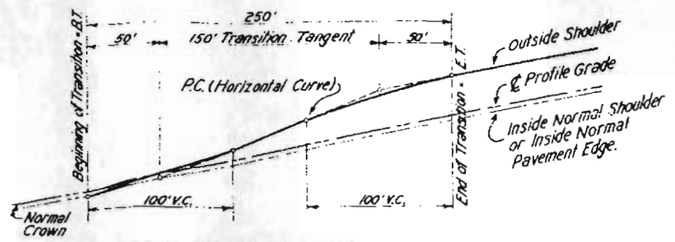
SUPERELEVATION AND WIDENING TABLES

DISTANCE FROM B.T. (PROPORTION)	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	MAX 1.0
Degree of Curvature	RATE OF SUPERELEVATION (IN FEET) PER FOOT WIDTH OF ROADWAY									
2° and Under	0.00044	0.00175	0.00394	0.00700	0.01050	0.01400	0.01706	0.01925	0.02056	0.02100
3°	0.00066	0.00263	0.00591	0.01050	0.01575	0.02100	0.02559	0.02888	0.03084	0.03150
4°	0.00088	0.00350	0.00788	0.01400	0.02100	0.02800	0.03413	0.03850	0.04113	0.04200
5°	0.00109	0.00438	0.00984	0.01750	0.02625	0.03500	0.04266	0.04813	0.05141	0.05250
6°	0.00131	0.00525	0.01181	0.02100	0.03150	0.04200	0.05119	0.05775	0.06169	0.06300
7°	0.00153	0.00613	0.01378	0.02450	0.03675	0.04900	0.05972	0.06738	0.07197	0.07350
8°	0.00175	0.00700	0.01575	0.02800	0.04200	0.05600	0.06825	0.07700	0.08225	0.08400
9°	0.00197	0.00788	0.01772	0.03150	0.04725	0.06300	0.07678	0.08663	0.09253	0.09450
10° and Over	0.00208	0.00833	0.01875	0.03333	0.05000	0.06667	0.08125	0.09166	0.09792	0.10000
	OFFSETS FOR WIDENING - W' - (IN FEET)									
Over 10° - Under 12°	0.03	0.12	0.27	0.48	0.75	1.08	1.47	1.92	2.43	3.00
12° - " 15°	0.04	0.16	0.36	0.64	1.00	1.44	1.96	2.56	3.24	4.00
15° - " 20°	0.05	0.20	0.45	0.80	1.25	1.80	2.45	3.20	4.05	5.00
20° and Over	0.06	0.24	0.54	0.96	1.50	2.16	2.94	3.84	4.86	6.00

GRAPH OF SUPERELEVATION TRANSITION FIGURES



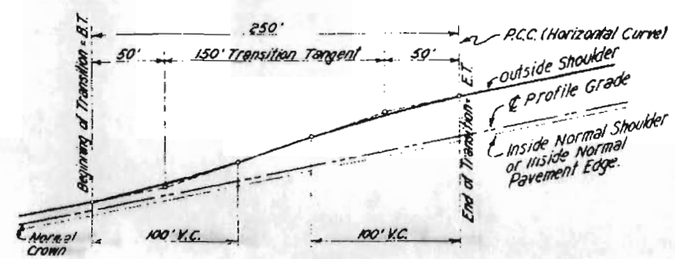
Proportion of Total Length of Transition including Vertical Curves (Normally 250 ft.)



CASE I: SIMPLE CURVE WITH UNLIMITED TANGENT APPROACH

NOTE: CASE I

The transition in this case, from crowned section to superelevated section, shall proceed uniformly 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 superelevation at a point 100 ft. inside the curve.



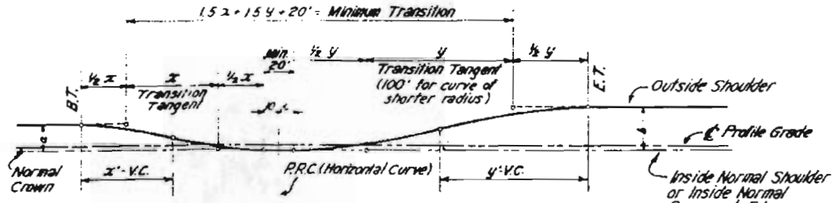
CASE II: COMPOUND CURVE

NOTE: CASE II

Superelevation transitions at the outside ends of compound curves shall be constructed in accordance with rules given under CASE I.

Superelevation transition between the arcs of different radii shall be made as in CASE I, except that the entire transition shall lie within the limits of the curve of the longer radius.

In cases where curves in the same direction have a tangent distance of less than 300 ft between points of curve, the intervening tangent shall be superelevated an amount equal to that of the curve of greater radius and the transition shall be made as in the case of a true compound curve.



CASE III: REVERSE CURVES

NOTE: CASE III

Transitions between true reverse curves shall be accomplished as shown on the above diagram.

Transition tangents shall be directly proportional to the amount of superelevation of the respective curves.

EXAMPLE: Let a represent the amount of superelevation on 1st curve;
" b " " " " " 2nd " ;
" x " " " " transition tangent on 1st " ;
" y " " " " " 2nd " ;
then, a : b = x : y.

The transition tangent of the curve having the shorter radius shall be set at 100 ft.

A normal crowned section 20 ft long, 10 ft on each side of the P.R.C. shall be used.

In cases where curves in opposite directions are in such proximity that a standard transition can not be had, the practice outlined for true reversing curves shall be used.

The total distance between the P.T. of the first curve and the P.C. of the succeeding curve shall be prorated into the transition distance of the respective curves until a maximum of 150 ft. of transition tangent for each curve is achieved.

GENERAL NOTES

Curves on projects using the Sections shown are to be superelevated and widened as indicated in the accompanying drawings and tables.

The normal inside edge of the Pavement slab is to remain at the standard elevation of 0.125 ft. below the profile grade, and the outside edge of the slab is to be superelevated at the rate per foot width of roadway given in the table. The Section is to be rotated about the normal inside edge of the Pavement, with a 1½" parabolic crown for curves of 10° and under, and a flat crown for widened Sections.

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. Also, the center-line pivot point is to be used until the superelevation equals 0.02 ft. per foot width of roadway, but 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 Pavement slab 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 of paved sections shall maintain the Typical Section slope until this slope is exceeded by the required superelevation slope.

The outside ditch on superelevated Sections is to be modified, where necessary to provide drainage. Otherwise, this ditch shall conform to normal ditch section shown for Project.

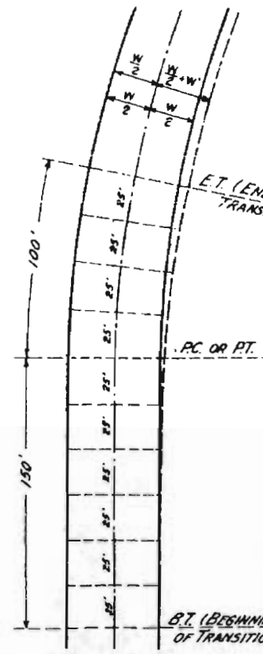
The rate of superelevation per foot width of roadway to be applied at the outside shoulder of the roadway is computed as follows:

The full superelevation per foot width of roadway rate for a given degree of curvature is

0.0105 ft. x Degree of Curvature.

The maximum superelevation of 0.10 ft per foot width, applying to curves of 10° and over, is not to be exceeded.

Special transition problems not covered by this standard sheet shall be covered by appropriate notes included with curve data on plans.



Curves of over 10° are to have the inside portion of the pavement slab and shoulder, or the inside portion and shoulder in a graded or surfaced section, widened in accordance with the plan, offsets for widening, and cross sections.

GENERAL PLAN OF WIDENING

COLORADO
STATE HIGHWAY DEPARTMENT
STANDARD
METHODS FOR
SUPERELEVATION &
WIDENING OF CURVES

Designed by R.E.L. Approved: [illegible]
Made by P.B.B.
Checked by E.F.S. & P.B.B. Date: January 1st 1948

REVISIONS

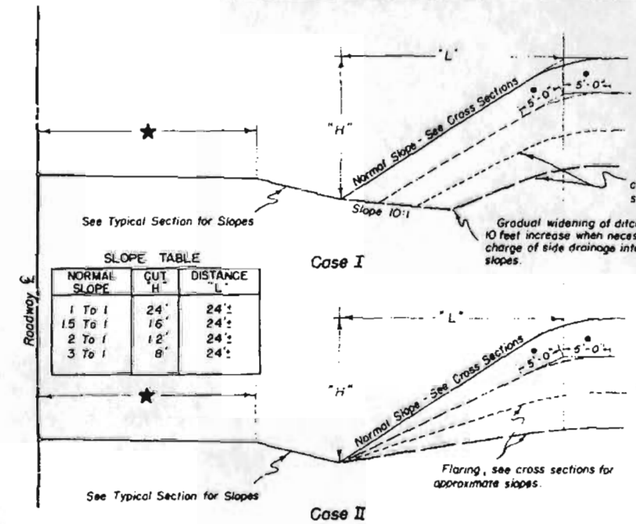
STANDARD SIDE APPROACH ROADS, FLARING, CUT SLOPE TREATMENT & WIDENING AT BRIDGES AND AT CREST OF GRADES

STANDARD M-2-DM

Rev. 7-12-49, C.G.M., Details for widening at Crest of Grades
Rev. 12-7-49, C.G.M., Rev. notes re Type I Rd. Apprs. & widen at Bridge Apprs., added note re accell & decell lanes

DIVISION NO.	DISTRICT	SHEET NO.	TOTAL SHEETS
9.	COLO.	F002-2(2)	8

GENERAL DETAILS FOR FLARING OF EARTH CUTS, CUT SLOPE TREATMENT & WIDENING AT BRIDGES



SLOPE TABLE

NORMAL SLOPE	CUT "H"	DISTANCE "L"
1 To 1	24'	24'
1.5 To 1	16'	24'
2 To 1	12'	24'
3 To 1	8'	24'

FLARING OF EARTH CUTS: The backslopes at ends of all earth cuts shall be flattened & where necessary the ditch shall be widened gradually to discharge side ditch drainage away from the base of adjacent fill slopes in order to avoid erosion & to improve appearance. The transition of flattened backslopes & widened ditch shall be constructed in such a manner that a uniform appearance of slope & ditch results. Backslopes shall be flared to the approximate "L" distance shown on Slope Table included with this detail. Rock cuts shall not be flared.

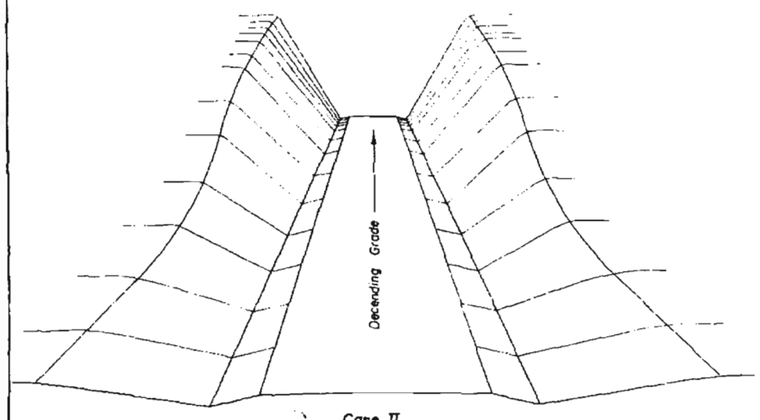
Flaring with widened ditch, see cross sections for approximate slopes.

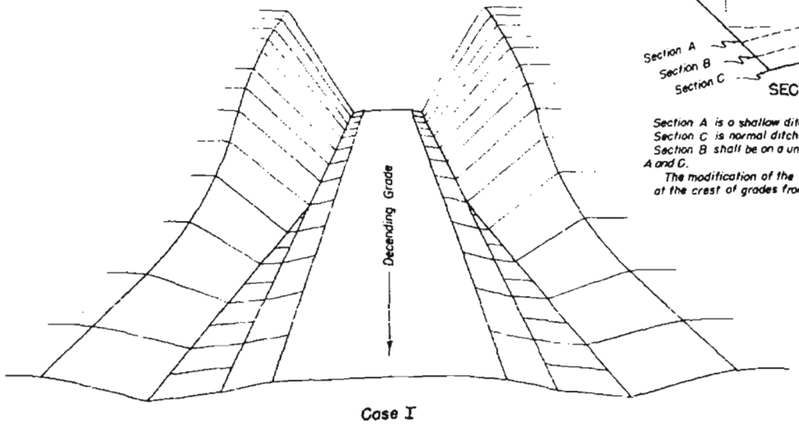
CUT SLOPE TREATMENT IN EARTH CUTS: The intersection of cut slopes with the existing ground shall be rounded in earth cuts, beginning 5 ft. outside the slope stake and extending 5 ft. down the cut slope. Where the cut slope is less than 5 ft. reduce each of the above widths of slope treatment to the actual slope distance. Quantities shall be included in "Unclassified Excavation"

★ WIDENING AT BRIDGE APPROACHES: Roadway embankment at bridge approaches shall be so constructed that the finish point of the subgrade shoulder is a Min. of 2 ft. beyond the outside edge of bridge deck. Where widening of the section is necessary to achieve this result it shall take place gradually over a distance of 300 ft. This is done to accomodate guard fence and/or guard or marker posts at bridge approaches. (See additional requirements for Guard Fences below)

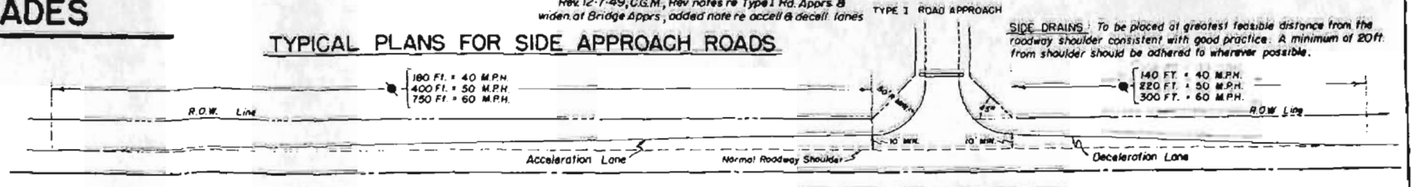
WIDENING TO ACCOMODATE GUARD FENCES. At all locations on the project (except as provided above for bridge approaches) where guard fence is to be constructed the shoulders shall be widened 2 ft to provide additional lateral support for guard fence posts.

PLAN OF FLARING IN EARTH CUTS





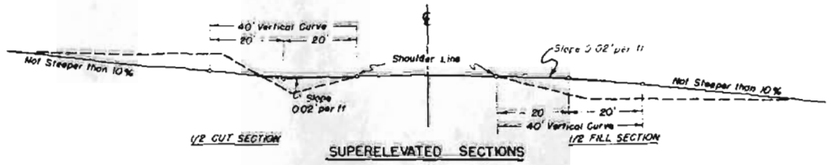
TYPICAL PLANS FOR SIDE APPROACH ROADS



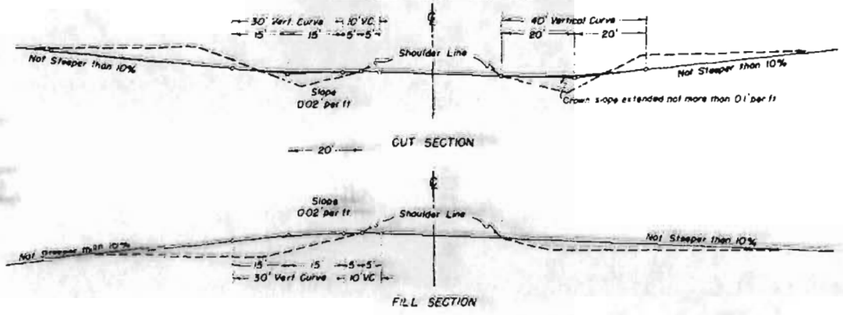
SIDE DRAINS: To be placed at greatest feasible distance from the roadway shoulder consistent with good practice. A minimum of 20 ft. from shoulder should be adhered to wherever possible.

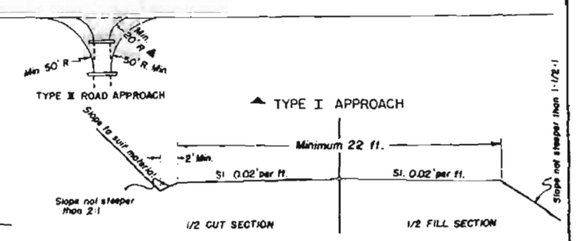
★ Values shown are general, see plans for specific requirements of each Type I Road Approach.

STANDARD CROWNED SECTION



SUPERELEVATED SECTIONS





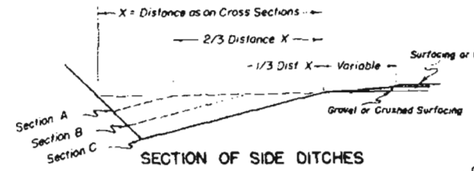
▲ TYPE I ROAD APPROACHES: To be used only when called for on plans. The width of crowned section shall not be less than the existing crowned width of the approaching road but in no case shall less than twenty two (22) feet.

♦ TYPE II ROAD APPROACHES: To be used at all places which are not indicated as "Type I Road Approaches" The width of crowned section shall not be less than the existing crowned width of the approaching road but in no case shall be less than sixteen (16) feet.

▲ 20 FT. RADII: To be used only on private road approaches.

DETAILS FOR DITCH & WIDENED SHOULDERS AT CREST OF GRADES

(TO BE USED ONLY WHERE SIGHT DISTANCE AT CREST OF GRADE IS 600 FT. OR LESS)

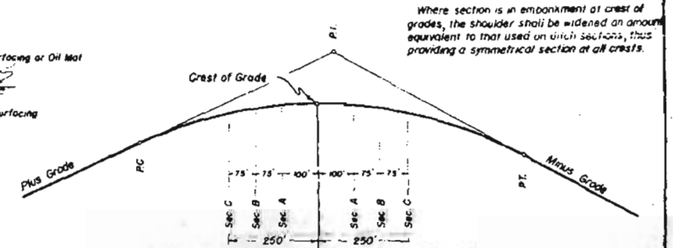


SECTION OF SIDE DITCHES

Section A is a shallow ditch section.
Section C is normal ditch section
Section B shall be on a uniform transition between Sections A and C.
The modification of the ditch indicated shall be used only at the crest of grades from which drainage breaks both ways.

NOTE

Where section is in embankment at crest of grades, the shoulder shall be widened an amount equivalent to that used on ditch sections, thus providing a symmetrical section at all crests.



PROFILE VIEW SHOWING DISTANCES AND RELATIVE POSITIONS OF DITCH-TREATMENT 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 side approach roads to the Project shall be Gravel Surfaced with a four (4) inch thickness of "Gravel or Crushed Rock Surfacing" extending approximately to the Right of Way Line. Estimated tonnage & type of material required for this operation are shown in the Surfacing Plan.

The maximum grades shown are to be the limiting grades for all road approaches. Modifications of grades will be permitted where adherence to the grades as shown would cause damage to property or create other unsatisfactory conditions. Grades less than the maximum shown are to be used wherever feasible.

COLORADO
STATE HIGHWAY DEPARTMENT

STANDARD
SIDE APPROACH ROADS, FLARING, CUT SLOPE TREATMENT, & WIDENING AT BRIDGES AND AT CREST OF GRADES

Designed by A.Z.
Made by C.G.M.
Checked by

Approved by
Engineer, Surveys &
Date: April 20

REVISIONS

STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS

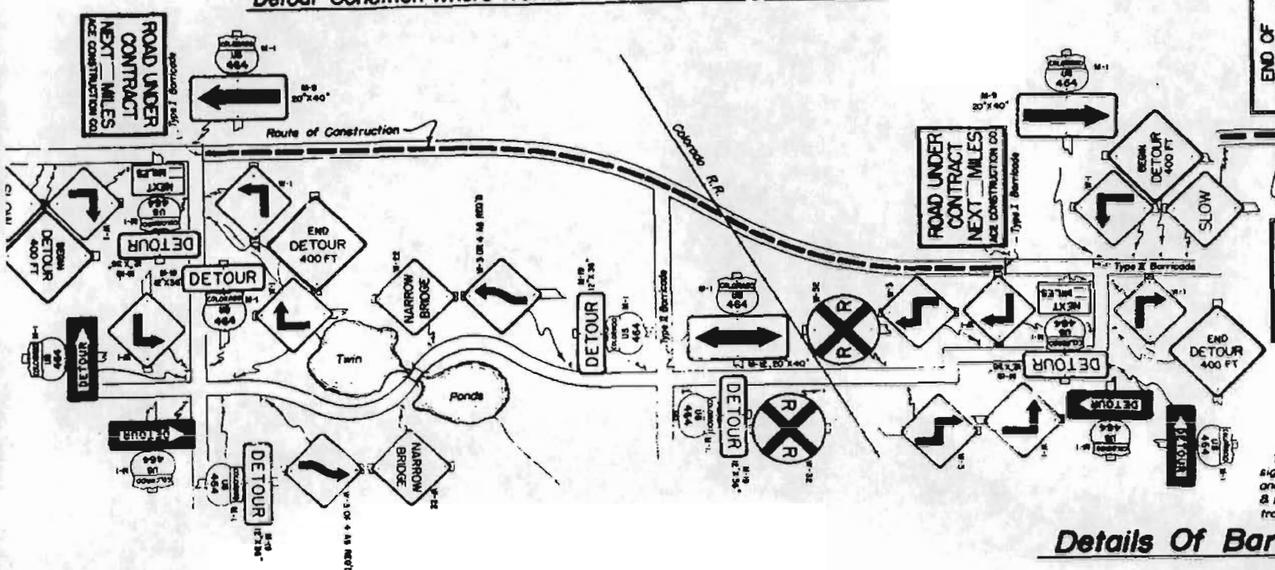
STANDARD M-2-DS

FED. ROAD DIVISION NO.	DISTRICT		SHEET NO.	TOTAL SHEETS
8	COLO.	F002-2(8)	9	

REV.-8/16/49-E.E.O.
REV.-2/3/50-E.A.R.

Typical Methods Of Marking Highways & Detours

Detour Condition Where Traffic Is Prohibited Along Construction



Condition Where Traffic Is Permitted Along Construction

LEGEND

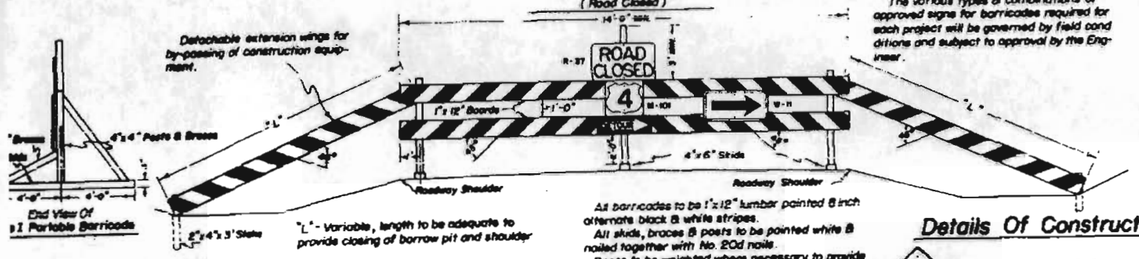
Ⓐ Placing Culvert, Traffic using shoulders.
Ⓑ Traffic using detour around structure.
Ⓒ New Grade, Traffic using shoulders.

NOTE

Typical examples for marking Projects as shown above constitute a minimum of signs required. Additional markings & any special signs required for the guidance and protection of traffic will be done under the direction of the Engineer. Contractor's & Engineers equipment must be parked so that signs & barricades are visable to traffic at all times.

Details Of Barricades

Type I
(Road Closed)

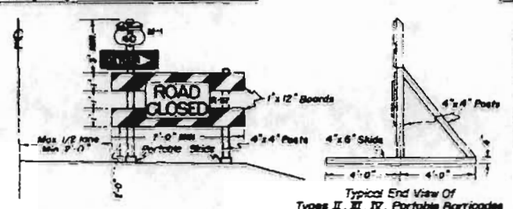


NOTE

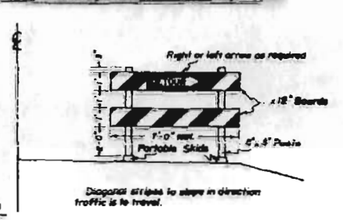
The various types & combinations of approved signs for barricades required for each project will be governed by field conditions and subject to approval by the Engineer.

All barricades to be 1"x12" lumber painted 8 inch alternate black & white stripes.
All skids, braces & posts to be painted white & nailed together with No. 20d nails.
Bases to be weighted where necessary to provide stability

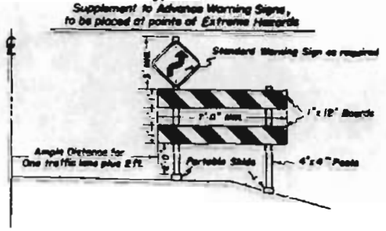
Type II
(Beginning of Detour for Through Traffic)



Type III
(Both Ends of By-Pass Ends within Project)

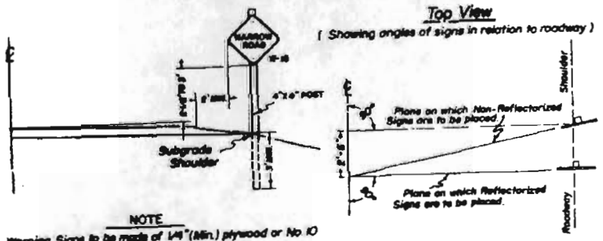


Type IV
Supplement to Advance Warning Signs, to be placed at points of Extreme Hazards



Position Of Signs Relative To Roadbed & Hazards

Top View
(Showing angles of signs in relation to roadway)



NOTE

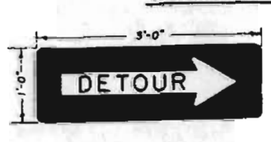
Warning Signs to be made of 1/4"(Min.) plywood or No 10 ga (Min.) metal.
Location to be governed by field conditions. Exact location be stated by the Engineer. In all cases warning signs are to placed well in advance of hazard, the distance depending topography, and existing approach speeds

Details Of Construction Signs

MARKINGS

Construction Sign "A" - to be of 1" material painted White, the word "SLOW" lettered in Red, balance of lettering to be Black.
Construction Signs "B", "C", "E" - to be of 1" material painted White, all lettering to be Black.
Detour Warning Sign "D" to be of 1/4"(min.) plywood or No. 10 (min.) gauge metal, painted Yellow, all lettering to be Black.
Construction Signs - "B", "E" - 3/4"x 9" metal slides to be placed between words "Next & Miles", spaced so as to accomodate appropriate size numerals. Required numerals to be furnished by the Department and to be installed by the Contractor.
Signs to be fastened to 2- 4"x4" posts set 4 ft. in the ground with a minimum of 3 cleats on the back.

Details Of Reflectorized Arrows



MARKINGS *A White Reflectorized Arrow of "Scotchlite" Reflective Sheeting or suitable equivalent to be placed on a Black background. Letters to be 4" in height.*

TYPES II, III, & IV

MARKINGS *A Black Arrow on a "Highway Yellow" background of "Scotchlite" Reflective Sheeting or suitable equivalent.*

GENERAL NOTES

All work shall be done in accordance with the Standard Specifications of the Colorado State Highway Department 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 painted, well mounted Barricades, Warning Signs and Directional Type Signs. All Barricades & Signs shall be moved added to, changed or removed as required during the progress of construction.

All Warning & Directional Type Signs will be "Reflectorized" with "Scotchlite" Reflective Sheeting or a suitable equivalent. Except for variations noted on this sheet all signs will be in conformity with the specifications outlined in "Manual on Uniform Traffic Control Devices for Streets & Highways" issue of August 1948 by the U.S. Public Roads Administration. U.S. or State Route Markers required for the Project will be furnished by the Department and installed by the Contractor. Numbers adjacent to signs refer to Standards in the Manual.

The Contractor shall furnish & install the following as required within the limits of the Project:

1.	All Barricades	As Required
2	"SLOW, ROAD OPEN FOR YOUR CONVENIENCE" Signs	Minimum-2
3.	Standard Warning & Directional Signs	As Required
4.	"ROAD UNDER CONTRACT, NEXT __ MILES, CONTRACTORS NAME" Signs	Minimum 2
5.	Approved Directional Arrows for Barricades	As Required
6.	"END OF CONSTRUCTION, THANK YOU, CONTRACTORS NAME" Signs	Minimum-2
7.	Torches and Flares as follows: Type I Barricades	Minimum-3
	Type II, IV Barricades	Minimum-1
	Standard Warning Signs	Minimum-1

Where traffic is prohibited from the Project, the Detour will be marked by the Department except for Barricades complete with approved Warning Signs & Arrows which will be provided, erected & maintained by the Contractor at ends of Project and intersecting roads

All lumber used shall be of sound durable material. Barricades, Signs, Symbols & Lettering conforming to styles noted hereon will be well painted & maintained. Uneven or smeared lettering will not be accepted.

Flares and Torches shall be of the Oil Burning Type approved by the Department and shall be placed 3 ft to 5ft ahead of the object to be illuminated. Particular care shall be taken to protect all signs and barricades from smoke and smudge arising from torches and flares.

COLORADO
STATE HIGHWAY DEPARTMENT

Standard Roadway Construction Traffic Signs

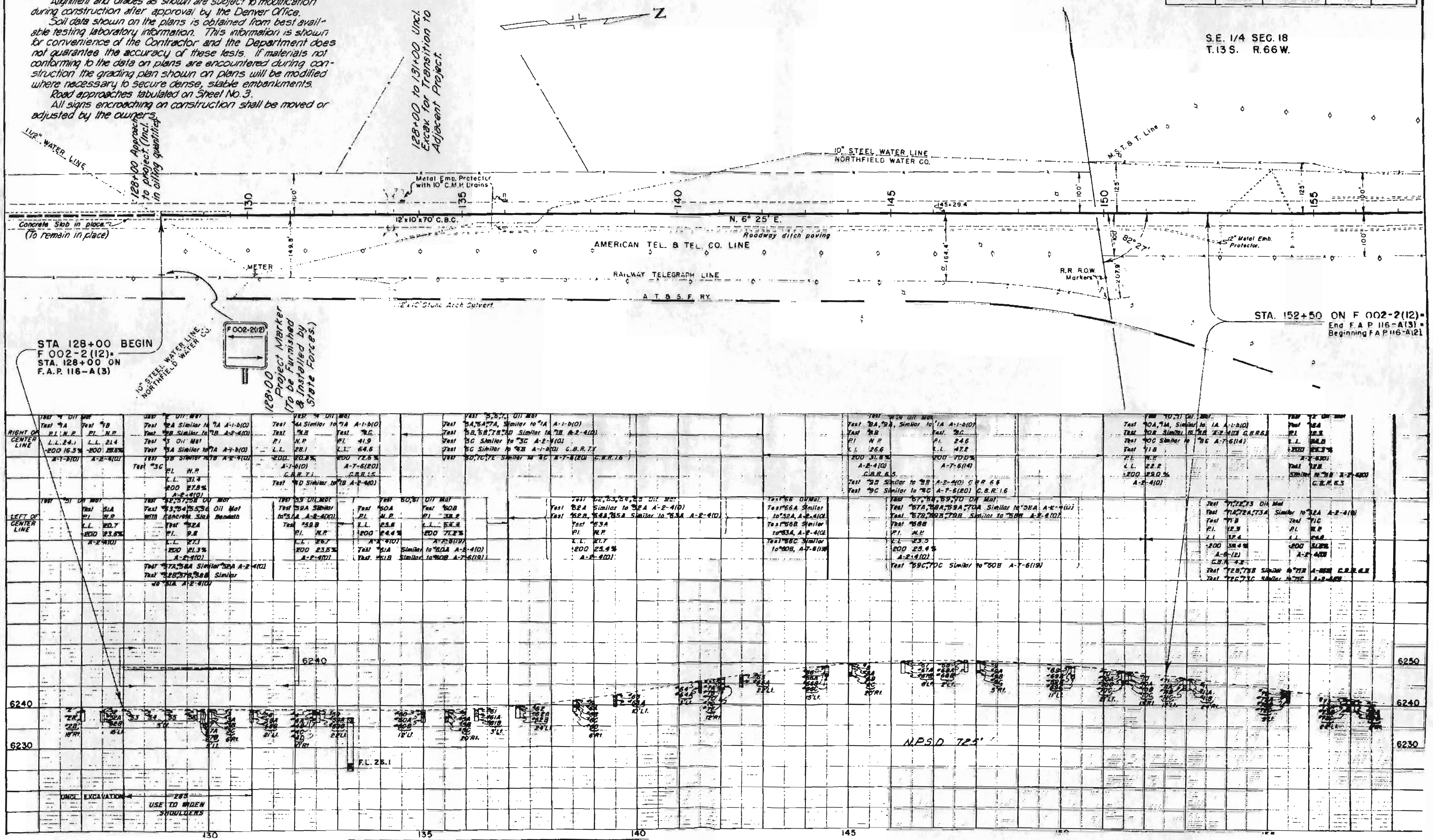
Designed by	Approved by:
Made by C.G.M.	Engineer, S. [illegible]
Checked by	Date: 7-26-1949

FED ROAD DIV. NO	DIST.	PROJ NO	SHEET NO	TOTAL SHEETS
9	COLO.	F 002-2(12)	10	

N. E. 1/4 SEC. 19
T. 13 S. R. 66 W.

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.
Road approaches tabulated on Sheet No. 3.
All signs encroaching on construction shall be moved or adjusted by the owners.

S.E. 1/4 SEC. 18
T. 13 S. R. 66 W.



FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 002-2(12)	11	

SE 1/4, SEC. 18
T 13 S, R 66 W.

NE 1/4, SEC. 18
T 13 S, R 66 W.

MONUMENT CREEK

160+80 Road Approach Lt.

MT. STATES TEL. & TEL. CO. LINE

B.W. Gate

6" C.I.P. WATER LINE

TO PIKEVIEW MINE

173+00 Road Approach Lt.

VALVES

VALVE

10" STEEL LOW PRESSURE WATER LINE

OLD CONCRETE PAVEMENT

N 6° 25' E

160 | 165 | 170 | 175 | 180 | 185

Roadway ditch paving

AMERICAN TEL. & TEL. CO. LINE

EARTH DYKE

A. T. & S. F. RY.

161+90 Road Approach Rt.

187+50 Road Approach Rt.

RIGHT OF CENTER LINE

LEFT OF CENTER LINE

Test "13, Oil Mat'l.
Test "13A, Similar to "12A, A-2-6(0).
Test "13B, Similar to "4C, A-7-6(20).
Test "13C, Similar to "8B, A-2-4(0).

Test "14, Oil Mat'l.
Test "14A, Similar to "12A, A-2-6(0).
Test "14B, Similar to "4B, A-1-b(0).
Test "14C, Similar to "8B, A-2-4(0).

Test "15, Oil Mat'l.
Test "15A, Similar to "4C, A-7-6(20).
Test "15B, Similar to "8B, A-2-4(0).

Test "16, Oil Mat'l.
Test "16A, Similar to "12A, A-2-6(0).
Test "16B, Similar to "4C, A-7-6(14).
Test "16C, Similar to "8B, A-2-4(0).

Test "17, Oil Mat'l.
Test "17A, Similar to "4C, A-7-6(20).
Test "17B, Similar to "8B, A-2-4(0).

Test "18, Oil Mat'l.
Test "18A, Similar to "4C, A-7-6(14).
Test "18B, Similar to "8B, A-2-4(0).
Test "18C, Similar to "8C, A-7-6(14).

Test "19, Oil Mat'l.
Test "19A, Similar to "12A, A-2-6(0).
Test "19B, Similar to "4C, A-7-6(20).

Test "20, Oil Mat'l.
Test "20A, Similar to "12A, A-2-6(0).
Test "20B, Similar to "4C, A-7-6(14).

Test "21, Oil Mat'l.
Test "21A, Similar to "12A, A-2-6(0).
Test "21B, Similar to "4B, A-1-b(0).
Test "21C, Similar to "8B, A-2-4(0).

Test "22, Oil Mat'l.
Test "22A, Similar to "12A, A-2-6(0).
Test "22B, Similar to "4C, A-7-6(14).

Test "23, Oil Mat'l.
Test "23A, Similar to "12A, A-2-6(0).
Test "23B, Similar to "12B A-2-6(0) C.B.R. 5.6
Test "23C, Similar to "8C A-7-6(14).

Test "24, Oil Mat'l.
Test "24A, Similar to "12A A-2-6(0).
Test "24B, Similar to "12B A-2-6(0) C.B.R. 5.6

Test "25, 25A, Oil Mat'l. Similar to "22A A-7-6(0) C.B.R. 12.5
Test "25B, Similar to "18C A-7-6(20).
Test "25C, Similar to "8B A-2-4(0).

Test "74, Oil Mat'l.
Test "74A, Similar to "52A, A-2-4(0).
Test "74B.
P.I. N.P.
L.L. 25.9
-200 32.8%
A-2-4(0)
Test "74C, Similar to "4C, A-2-4(0).

Test "75, Oil Mat'l.
Test "75A, Similar to "52A, A-2-4(0).
Test "75B, Similar to "71B, A-6(8) C.B.R. 4.2
Test "75C, Similar to "60B, A-7-6(19).

Test "75 Oil Mat'l.
Test "75 Similar to "52A, A-2-4(0).
Test "75B.
P.I. 19.2
L.L. 34.3
-200 30.5%
A-6(8).

Test "76, Oil Mat'l.
Test "76A, Similar to "52A, A-2-4(0).
Test "76B, Similar to "71B, A-6(8) C.B.R. 4.2
Test "76C, Similar to "60B, A-7-6(19).

Test "77, Oil Mat'l.
Test "77A, Similar to "52A, A-2-4(0).
Test "77B.
P.I. N.P.
L.L. 25.4
-200 31.1%
A-2-4(0).
Test "77C, Similar to "60B, A-7-6 (19).
Test "78A Similar to "77B, A-2-4 (0).
Test "78B Similar to "75B, A-6 (8).

Test "79, Oil Mat'l.
Test "79A, Similar to "52A, A-2-4(0).
Test "79B.
P.I. 11.7
L.L. 32.2
-200 29.2%
A-2-4(0).
Test "79C, Similar to "60B, A-7-6(19).

Test "80, Oil Mat'l.
Test "80A, Similar to "52A, A-2-4(0).
Test "80B, Similar to "77B, A-2-4 (0).
Test "80C, Similar to "60B, A-7-6(19).

Test "81, Oil Mat'l.
Test "81A
P.I. N.P.
L.L. 27.0
-200 11.1%
A-1-b(0).
Test "81B
P.I. 29.4
L.L. 62.5
-200 87.1%
A-7-6(20).

Test "82, Oil Mat'l.
Test "82A Similar to "81A A-1-b(0).
Test "82B, "82C
P.I. 25.1 25.8
L.L. 56.9 51.4
-200 47.8% 39.8%
"82B A-6(0)
"82C A-7-5(16)

Test "83, Oil Mat'l.
Test "83A Similar to "52A A-2-4(0).
Test "83B, "83C
P.I. 19.0
L.L. 48.2
-200 73.2%
A-7-6(12) C.B.R. 2.3

Test "84, 85 Oil Mat'l.
Test "84B Similar to "52A A-2-4(0).
Test "84C, "85B, Similar to "81B A-7-6(20).
Test "85A Similar to "81B A-1-b(0).

Test "86, Oil Mat'l.
Test "86A, "86B, "86C
P.I. 10.6 18.9
L.L. 30.7 44.2
-200 22.2% 25.7%
A-2-6(0) A-7-6(5)
Test "86B Similar to "84B A-1-b(0).
Test "86D Similar to "81B A-7-6(20).

Test "87, Oil Mat'l.
Test "87A Similar to "86A A-2-6(0).
Test "87B Similar to "81B A-7-6(20).
Test "87C Similar to "81B A-7-6(20).

Test "88, 89, Oil Mat'l.
Test "88A, "88B Similar to "52A A-2-4(0).
Test "88C Similar to "84B A-1-b(0).
Test "89A Similar to "85C A-7-6(18).
Test "89C Similar to "88C A-7-6(0) C.B.R. 6.5

6250 | 6240 | 6230 | 6220

6290 | 6280 | 6270 | 6260 | 6250

F.L. 24.0

F.L. 10.5

F.L. 06.4

M.P.S.D. 690'

165 | 170 | 175 | 180 | 185

FED ROAD DIV NO	DIST	PROJ NO	SHEET NO	TOTAL SHEETS
9	COLO.	F 002-2(12)	12	

N.E. 1/4 SEC. 18
T. 13 S. R. 66 W.

195+10 Road Approach Lt.

204+00 Road Approaches Lt. & Rt.

203+14.4

MONUMENT

CREEK

COTTONWOOD

208+68.0 BRIDGE

NO WORK SECTION

210+12.2

210+12.2 to 212+00 Uncl. Excav. for Transition to Bridge Approach Sec.

S.E. 1/4 SEC. 7
T. 13 S. R. 66 W.

Z

112° 07'

83° 07'

77° 43'

26° 25'

B.W. Gate

Roadway ditch paving

Rdwy. ditch paving

Rubble Slope Protection

12'x10'x158' C.B.C.

6'x7'x76' C.B.C.

MT. STATES TEL. & TEL. CO. LINE

Old Conc. Pavement

19" STEEL L.P. WATER LINE

12'x10'x70' C.S.C.

337.8'

N.W. 1/4 SEC. 17

S.W. 1/4 SEC. 8

207+00 to 208+68 Uncl. Excav. for Transition to Bridge Approach Sec.

CREEK

RIGHT OF CENTER LINE

LEFT OF CENTER LINE

Test "27 Oil Mod
Test "27A, Similar To "23A, A-2-6(1)
Test "27B
PI- 7.4
LL- 33.7
%- 200 - 27.6
A-2-4(0)

Test "28 Oil Mod
Test "28A Similar To "23A, A-2-6(1)
Test "28B
PI- 8.5
LL- 30.5
%- 200 - 20.1
A-2-4(0)

Test "29 Oil Mod
Test "29A, Similar To "23A, A-2-6(1)
Test "29B
PI- NP
LL- 27.3
%- 200 - 15.9
A-1-b(0)

Test "30 Oil Mod
Test "30A, Similar To "22B, A-2-6(2), CBR 5.6
Test "30B
PI- 8.5
LL- 30.1
%- 200 - 23.2
A-2-4(0), CBR - 9.1
Test "30C, Fair to Dry - Sandrock

Test "31, Oil Mod
Test "33A, Similar To "23A, A-2-6(1)
Test "31A, Similar To "23A, A-2-6(1)
Test "31B, Similar To "28B, A-2-4(0)

Test "35 Oil Mod
Test "35A Similar To "23A, A-2-6(1)
Test "35B
PI- 10.7
LL- 30.0
%- 200 - 12.4
A-2-6(0)

Test "36, 37, 38, Oil Mod
Test "36A, "37A, "38A Similar To "23A, A-2-6(1)
Test "36B
PI- NP
LL- 24.5
%- 200 - 10.1
A-2-4(0)
Test "37B, 38B Similar To "36B, A-2-4(0)

Test "90 Oil Mod
Test "90A, Similar To "86A, A-2-6(2)
Test "90B
PI- 7.5
LL- 32.5
%- 200 - 65.8
A-7-6(9)
Test "90C, Similar To "86B, A-1-b(0)

Test "91, Oil Mod
Test "91A, Similar To "86A, A-2-6(2)
Test "91B Similar To "79B, A-2-6(0)
Test "91C Similar To "86C, A-1(1)
CBR - 6.6

Test "92, 93, Oil Mod
Test "92A, "93A, Similar To "86A, A-2-6(0)
Test "92B
PI- 7.8
LL- 30.5
%- 200 - 27.3
A-2-4(0)
Test "92C, 93C Similar To "86C, A-1(1), CBR 6.6
Test "93B Similar To "92B, A-2-4(0)

Test "94, 95, Oil Mod
Test "94A
PI- NP
LL- 24.9
%- 200 - 22.2
A-2-4(0)
Test "95A, Similar To "86A, A-2-6(0)
Test "95B, Similar To "92B, A-2-4(0)
Test "95C, Similar To "94A, A-2-4(0)

Test "96, 97, Oil Mod
Test "96A, Similar To "86A, A-2-6(0)
Test "96B, 97A, Similar To "92B, A-2-4(0)
Test "96C
PI- 29.2
LL- 77.5
%- 200 - 53.0
A-7-6(16)

Test "98, Oil Mod
Test "98A Similar To "86A A-2-6(0)
Test "98B Similar To "92B, A-2-4(0)
PI- NP
LL- 23.7
%- 200 - 11.2
A-1-b(0)

Test "99, 100, Oil Mod
Test "99A, "100A Similar To "92B, A-2-4(0)
Test "99B Similar To "86B, A-1-b(0)

Test "101, Oil Mod
Test "101A
PI- NP
LL- 32.6
%- 200 - 33.0
A-2-4(0)
Test "101B Similar To "90B
A-7-5(9)

Test "102, 103 Oil Mod
Test "102A, Similar To "86A, A-2-6(0)
Test "102B
PI- NP
LL- 22.9
%- 200 - 29.1
A-2-4(0)
Test "103A Similar To "102B, A-2-4(0)

6300
6290
6280
6270
6260

BRIDGE APPROACHES

6270

UNCLASSIFIED EXCAVATION FOR STABILIZATION DEPTH REQUIREMENTS ON BRIDGE APPROACHES TO BE ADJUSTED TO FIT EXISTING VERTICAL CURVATURE.

F.L. 56.6

F.L. 54.0

UNCL. EXCAVATION

200
USE TO WIDEN SHOULDERS

245
USE TO WIDEN SHOULDERS

190 195 200 205 210 215 220

PLATE 1 - Plan Profile

FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 002-2(12)	13	

S.E. 1/4 SEC. 7

N.E. 1/4 SEC. 7
T. 13 S. R. 66 W.

229+40 Road Approaches Lt. & Rt.

233+00 Road Approach Lt.

POWDER HOUSE

251+00 to 252+68.5 Und. Excav. for Transition to Adjacent Project

P.T. 244+43.5 Bk. = 247+49.1 Ah.

N

8" CAST IRON PIPE HIGH PRESSURE WATER LINE

10" STEEL PIPE LOW PRESSURE WATER LINE

ELEV. TOP OF 10" PIPE
1. 6328.2 3. 6327.5
2. 6328.5 4. 6328.3

Δ 15°31' Lt.
D 1°00'
T 780.6'
L 1551.7'
R 5730'
HSD >1300'

P.C. 228+91.8 HIGHWAY NO. 164 P.O.S.T. 229+65.6

Roadway ditch paving

B.W. GATE

N 6° 25' E

18" X 30' C.M.P.

24" X 150' C.M.P.

15" X 20' C.M.P.

STATE

MOUNTAIN STATES TELEPHONE & TELEGRAPH CO. LINE

CITY OF COLORADO SPRINGS LIGHT & POWER LINE

ENGINE RM.

BOILER RM. STORE HO.

FAN HO.

HOUSE

A T & S.F. Ry.

CONC. ARCH BRIDGE

CREEK

PINE

N 9° 06' W

STA. 224+94.4 on F 002-2(12) End F.A.P. 116 A (2) = Beg. F.A.P. 116 B (2)

EQUATION

STA. 252+68.5 End F 002-2(12) = End F.A.P. 116-B (2)

S.W. 1/4 SEC. 8

N.W. 1/4 SEC. 8

RIGHT OF CENTER LINE

LEFT OF CENTER LINE

Test #39, #40, #41, Oil Mat
Test #39A
P.I. N.P.
L.L. 23.1
-200 50.0%
A-1-b(0)
Test #40A, #41A Similar to 39A A-1-b(0)

Test #42B
P.I. 9.7
L.L. 30.2
-200 40.0%
A-4(1)

Test #42, #43, #44, #45, Oil Mat
Test #42A Similar to #39A A-1-b(0)
Test #43A
P.I. N.P.
L.L. 21.4
-200 29.7%
A-2-4(0)
Test #44A, #45B, Similar to #43A A-2-4(0)
Test #45A Similar to #23A A-2-6(1)

Test #46 Oil Mat
Test #46A Similar to #23A A-2-6(1)
Test #46B
P.I. N.P.
L.L. 24.7
-200 30.6%
A-2-4(0)

Test #47 Oil Mat
Test #47A Similar to #23A A-2-6(1)
Test #47B
P.I. N.P.
L.L. 21.5
-200 12.2%
A-1-b(0)

Test #48 Oil Mat
Test #48A Similar to #23A A-2-6(1)
Test #48B Similar to #47B A-1-b(0)
P.I. N.P.
L.L. P.I. 18
-200 53.6%
A-4(4) C.B.R. 7.3

Test #49, #50, Oil Mat
Test #49A, #50A Similar to #23A A-2-6(1)
Test #49B
P.I. N.P.
L.L. 20.1
-200 24.3%
A-2-4(0)
Test #50B Similar to #49B A-2-4(0)

Test #104, #105, Oil Mat
Test #104A
P.I. N.P.
L.L. 22.7
-200 17.4%
A-2-4(0)
Test #105A Similar to #104A A-1-b(0)

Test #106, #107, Oil Mat
Test #106A Similar to #86A A-2-6(0)
Test #106B
P.I. N.P.
L.L. 21.3
-200 24.7%
A-2-4(0)
Test #107A Similar to #106B A-2-4(0)
Test #107B Similar to #106C A-1-b(0)
Test #106B
P.I. 39.2
L.L. 68.3
-200 77.6%
A-7-5(20)

Test #108 Oil Mat
Test #108A Similar to #86A A-2-6(0)
Test #108B, #108D, Similar to #106C A-1-b(0)
Test #108
P.I. N.P.
L.L. 30.6
-200 44.9%
A-4(2)

Test #109, #110 Oil Mat
Test #109A, #110A Similar to #86A A-2-6(0)
Test #110B Similar to #106B A-1-b(0)
Test #109C Similar to #106C A-1-b(0)

Test #111 Oil Mat
Test #111A Similar to #86A A-2-6(0)
Test #111B Similar to #106C A-1-b(0)

Test #112 Oil Mat
Test #112A Similar to #86A A-2-6(0)
Test #112B Similar to #106B A-2-4(0)

Test #113, #114 Oil Mat
Test #113A, #114A Similar to #86A A-2-6(0)
Test #113B, #114B Similar to #106C A-1-b(0)
Test #113C
P.I. N.P.
L.L. 30.5
-200 15.2%
A-1-b(0)
Test #114C Similar to #113C A-1-b(0)

Test #115, #116, #117 Oil Mat
Test #115A, #116A, Similar to #86A A-2-6(0)
Test #115B, Similar to #106B A-2-4(0)
Test #115C
P.I. 11.7
L.L. 30.0
-200 66.0%
A-6(7) C.B.R. 0.9
Test #116B, #117A, Similar to #106C A-1-b(0)
Test #117B Similar to #113C A-1-b(0)

N.P.S.D. 580'

N.P.S.D. >1300'

UNCL. EXCAVATION

EXCAVATION TO BE USED TO BUILD EMBANKMENTS

6330
6320
6310
6300
6290
6340

220 225 230 235 240 250

PLATE 1 - PLAN - PROFILE