

Colorado
STATE HIGHWAY DEPARTMENT
PLAN AND PROFILE OF PROPOSED
FEDERAL AID SECONDARY PROJECT NO. S 0095 (1)
STATE HIGHWAY NO. 119
GILPIN COUNTY

SCALES OF 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 5,715.0 FT. = 1.082 MILES
NET LENGTH OF PROJECT

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0095 (1)	1.	

Rev. 3-16-48 - C.G.M., Extended Project West to Sta. 10+13

CONVENTIONAL SIGNS

CENTER LINE	LINE SHEET	TITLE PAGE
RIGHT OF WAY LINE		
COUNTY LINE		
TOWNSHIP OR RANGE LINE	T. 6 S.	R. 89 W.
SECTION LINE	T. 7 S.	R. 89 W.
QUARTER SECTION LINE	LINE SHEET	TITLE PAGE
CITY LIMITS		
BARBED WIRE FENCE		
WOVEN WIRE COMBINATION FENCE		
TELEPHONE & TELEGRAPH LINE		
POWER LINE		
PRESENT ROAD		

NOTE

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, Colo.
W.A. Gray Resident Engineer Idaho Springs, Colo.

RECOMMENDED FOR APPROVAL DATE

Jas. F. Bell.
ASSISTANT ENGINEER
2-6-48

APPROVED DATE

Mark L. Watson
STATE HIGHWAY ENGINEER
2-7-48

RECOMMENDED FOR APPROVAL DATE

DISTRICT ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

APPROVED DATE

DIVISION ENGINEER
PUBLIC ROADS ADMINISTRATION
FEDERAL WORKS AGENCY

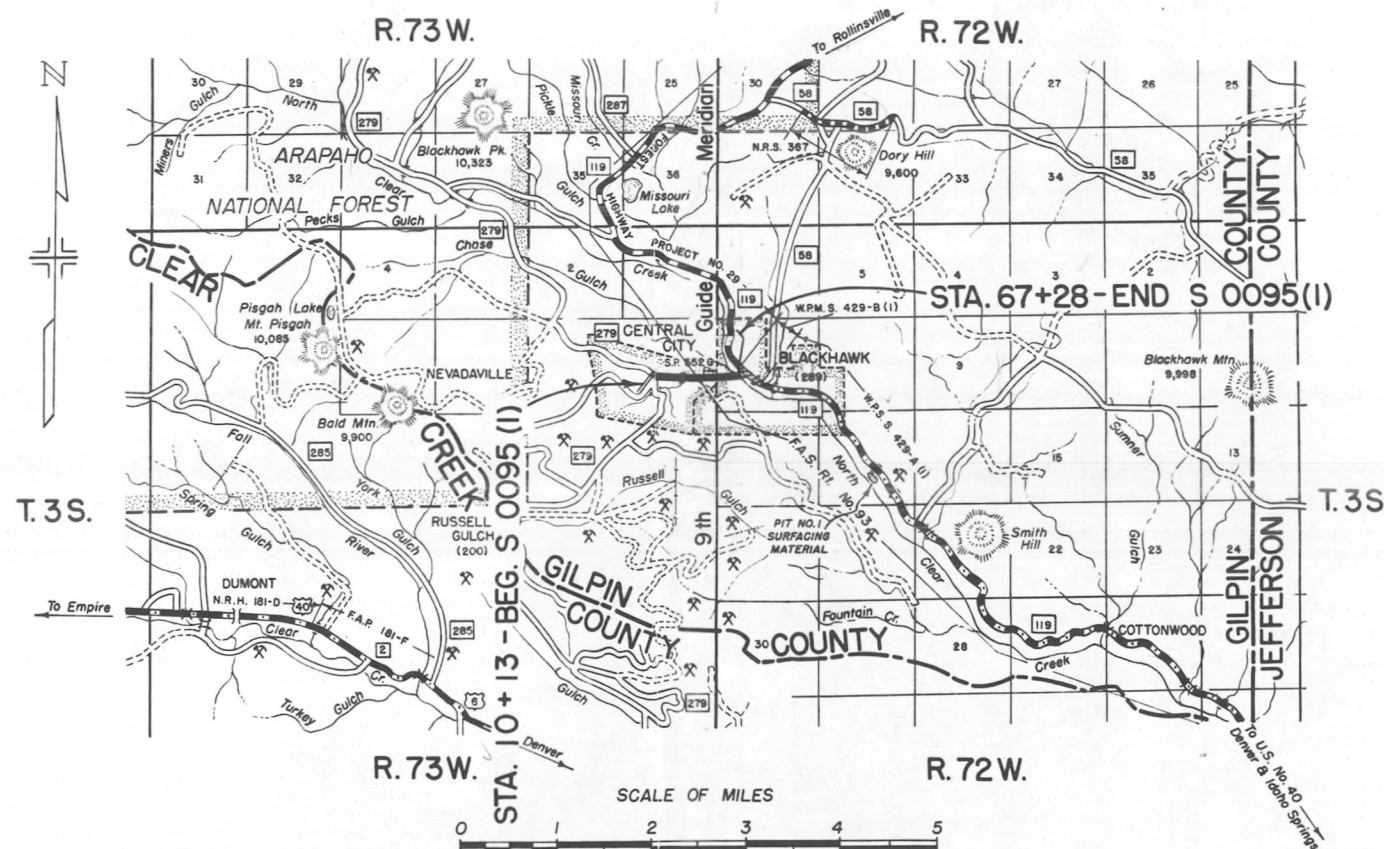
INDEX OF SHEETS

- SHEET NO. 1 - SKETCH MAP, TITLE PAGE & TABULATION OF LENGTH & DESIGN.
2. TYPICAL SECTION & SUMMARY OF QUANTITIES.
3. SURFACING PLAN, LIST OF STRUCTURES & TYPICAL SECTION FOR DITCHES.
4. DETAILS FOR REINFORCED CONCRETE DITCH COVER STA. 64+ TO STA. 66+.
5. STANDARD LETTERS & FIGURES FOR YEAR & STRUCTURE NUMBERS.
6. STANDARD MARKER POSTS.
7. STANDARD HEADWALLS & APRONS FOR C.M.P. CULVERTS
8. STANDARD TIMBER GUARD POSTS
9. STANDARD METHODS FOR SUPERELEVATION & WIDENING OF CURVES
10. TYPICAL SIDE APPROACH ROADS, FLARING, CUT SLOPE TREATMENT & WIDENING AT BRIDGES.
11. STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS
12-14. ALIGNMENT PLAN & PROFILE

M-10-B
M-7-B
M-102-G
M-19-B
M-1-B
M-2-C
M-2-D

TABULATION OF LENGTH & DESIGN

STATION	ROADWAY		
	LINEAR FEET		
	CENTRAL CITY	BLACKHAWK	
10+13 - BEG. S 0095 (1)	3,903.1 ✓	1,811.9 ✓	
49+16.1 ✓			
City Limits (Mid-point)			
49+16.1 ✓			
67+28 - END S 0095 (1)			
TOTALS	3,903.1 ✓	1,811.9	
SUMMARY			
S 0095 (1) Roadway , Central City S 0095 (1) Roadway , Blackhawk Totals S 0095 (1)	LIN. FT.	MILES	
	3,903.1 ✓ 1,811.9 ✓ 5,715.0 ✓	0.739 0.343 1.082	
DESIGN DATA			
Maximum Degree Of Curve	42° ✓		
Maximum Grade	10.00% ✓		
Minimum N.P.S.D. Horizontal	140' ✓		
Minimum N.P.S.D. Vertical	260' ✓		
Maximum Design Speed	25 M.P.H.		



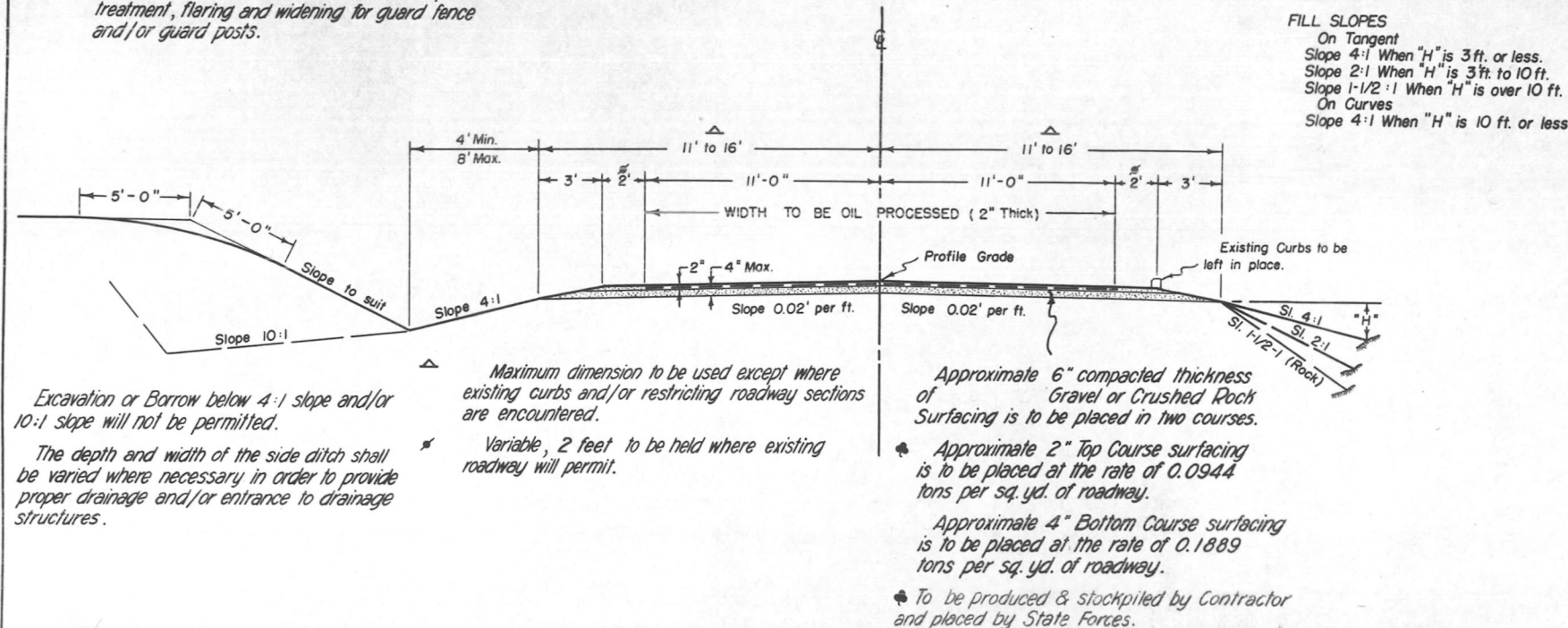
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0095 (1)	2.	

TYPICAL CROSS SECTION OF IMPROVEMENT AND SUMMARY OF QUANTITIES

Rev. 2-13-48 - W.H.M. - Summary.
Rev. 3-16-48 - C.G.M., Extended Project West to Sta. 10+13

NOTE:
See Standard M-2-C for details of cut slope treatment, flaring and widening for guard fence and/or guard posts.

TYPICAL SECTION



GENERAL NOTES

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

All quantities on preliminary plans are to be 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 the ditch as shown on the Typical Section, either noted on the profile as "Borrow" or on the List of Structures as "Embankment", are to be classified and paid for as "Unclassified Excavation." These quantities are to be stated as part of the original excavation at locations indicated on the plans. 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 Super-elevation sheet included with the plans.

Curves on this project over 5 degrees shall be provided with the super-elevation shown on the Standard Super-elevation sheet for a 5 degree curve.

All concrete used on this Project shall be "Air-entrained" concrete.

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.

All side approach roads to the Project shall be Oil Processed approximately to the right of way line.

Asphaltic Road Material MC is to be used for Prime Coat over a 26 ft. width of roadway, where Roadway Section will permit, previous to placing of Oil Processed Material. The Grade of Oil required to be determined by the Engineer.

Asphaltic Road Material MC-3 is to be used for Processing.

Asphaltic Road Material RC-3 is to be used for Seal Coat over the entire Oil Processed Area.

Stone screenings for this Project shall conform to requirements for Type 4 aggregate specified in Item 31 of the Standard Specifications, and will be produced and Stockpiled by the Contractor left of Sta. 853+ on Proj. W.P.M.S 429 B (1) approximately 0.3 Miles from Sta. 67+28.

SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO.	ITEM	UNIT	INSIDE CENTRAL CITY		INSIDE BLACKHAWK		PROJECT TOTALS
			ROADWAY		ROADWAY	CONCRETE DITCH COVER STA. 64+	
11a.	Remove Headwall Sta. 65+	Lump Sum					
11b.	Remove Guardwall Sta. 65+ to Sta. 66+.	Lump Sum					
13c.	Unclassified Excavation	Cu. Yd.	200		300		500
13d.	Unclassified Ditch Excavation	Cu. Yd.			10		10
14a.	Dry Rock Excavation (Structural)	Cu. Yd.			20		20
14b.	Dry Common Excavation (Structural)	Cu. Yd.			20	5	25
14c.	Wet Rock Excavation (Structural)	Cu. Yd.			10		10
14d.	Wet Common Excavation (Structural)	Cu. Yd.			10	5	15
16a.	Structure Backfill (Class "I")	Cu. Yd.			40		40
* 17b.	Rolling with Flat Wheeled Roller	Hr.	5		5		10
17c.	Rolling with Rubber Tired Roller	Hr.	15		10		25
* 17d.	Rolling with Rubber Tired Roller	Hr.	10		10		20
* 17e.	Furnishing Flat Wheeled Roller	Lump Sum	Prorated		Prorated		
17f.	Furnishing Rubber Tired Roller	Lump Sum	Prorated		Prorated		
* 17f.	Furnishing Rubber Tired Roller	Lump Sum	Prorated		Prorated		
17g.	Wetting	M-Gal.	40		20		60
18c.	Ton Mile Overhaul	Ton Mile	5,700		2,100		7,800
* 18c.	Ton Mile Overhaul	Ton Mile	100				100
26d.	Gravel or Crushed Rock Surfacing (Grading "D")	Ton	2,600		1,200		3,800
26e.	Stockpile Surfacing	Ton	1,200		600		1,800
* 26f.	Placing Stockpiled Surfacing	Ton	1,200		600		1,800
* 30d.	Asphaltic Road Material RC-3	Gal.	2,700		1,300		4,000
* 30j.	Asphaltic Road Material MC-3	Gal.	11,600		5,500		17,100
* 30x.	Asphaltic Road Material MC	Gal.	5,000		2,400		7,400
* 31a.	Road Mix Oil Processing	Sq. Yd.	11,120		5,250		16,370
31f.	Stone Screenings (Type 4) (Stockpile)	Ton	110		60		170
* 31y.	Stone Screenings (Distribute)	Ton	110		60		170
42a.	Untreated Bridge Timber (Native)	M ft. bm				0.4	0.4
46a.	Class "A" Concrete	Cu. Yd.				76	76
46b.	Class "B" Concrete	Cu. Yd.			4		4
47.	Reinforcing Steel	Lb.				5,100	5,100
53c.	24" Corrugated Metal Culvert Pipe	Lin. Ft.			64		64
* 81a	Project Markers (To be furnished & installed by State Forces)	Each	1		1		2
92.	Timber Guard Posts	Each			2		2
97a.	Structural Clay Tile (6"x12"x12")	Each				385	385
119.	Shaping Roadbed	Mile	0.8		0.4		1.2
FORCE ACCOUNT							
	Raise board walk to meet concrete walk. Sta. 64+(State Forces)	Lump Sum					

* Oil Processing work and Item 81a to be done by State Forces.

LIST OF STRUCTURES

FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	S 0095 (1)	3.	

Rev. 3-16-48-C.G.M., Extended Project West to Sta. 10+13

		EXCAVATION		STRUCTURAL EXCAVATION		STRUCTURE BACKFILL CL. "I"		GRAVEL SURFACING		CONCRETE		CORRUGATED METAL CULVERT PIPE			TIMBER GUARD POSTS		MISCELLANEOUS			
STATION		DESCRIPTION		UNCLASSIFIED	UNCLASS. DITCH															
				CU. YD.		CUBIC YARDS				CUBIC	YARDS	LIN. FT.								
				EXCAV.	CU. YD.			CU. YD.	TONS	CL. "A"	CL. "B"	24"				EACH				
↑ Inside Central City	10+13 ✓ 10+13 to 49+16.1 ✓ 10+34 ✓ 15+90 ✓ 20+90 ✓	Project Marker Shaping Roadbed Road Approach Rt. Road Approach Lt. Road Approach Lt.		200				(To be furnished & installed by State Forces)												1 - Project Marker ✓
	31+25 ✓ 36+40 ✓ 38+40 ✓ 39+25 ✓	Road Approach Rt. Road Approach Lt. Road Approach Rt. Road Approach Rt.							25 ✓ 10 ✓ 10 ✓ 25 ✓											
TOTALS INSIDE CENTRAL CITY				200					115 ✓											
↑ Inside Blackhawk	48+50 ✓ 49+16.1 to 67+28 ✓ 58+40 ✓ 59+40 ✓ 59+50 ✓	Road Approach Rt. Shaping Roadbed Road Approach Lt. Timber Guard Post Rt. Cross Culvert with Intercepting Hdw'l at Inlet & Inlet ditch (W=1').		300					15 15											
	61+90 ✓ 62+00 ✓	Timber Guard Post Rt. Cross Culvert with Intercepting Hdw'l at Inlet & Inlet ditch (W=1')			5	23		16				1.99 ✓		34 ✓		1				
	62+75 ✓ 62+80 ✓ 64+ to 66+ ✓	Road Approach Lt. Road Approach Rt. Reinforced Concrete Ditch Cover							15 15			1.99		30						
	QUANTITIES IN SUMMARY																			
	66+88 ✓ 67+28 ✓	Road Approach Rt. Project Marker							25								1 - Project Marker			
TOTALS INSIDE BLACKHAWK				300	10	45		31	85 ✓			3.98 ✓		64		2				
TOTALS S 0095 (1)				500	10	45		31	200 ✓			3.98 ✓		64		2				

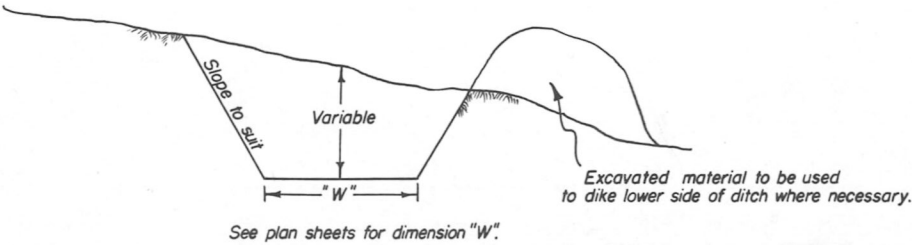
- It is estimated that the Structural Excavation on this Project is 50% Common & 50% Rock of which 10% is Wet and 90% is Dry.
- ⊘ Estimated for Shaping Roadbed.

SURFACING PLAN

It is estimated that material for Gravel Surfacing 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 Surfacing Plan as here outlined will be allowed only on written permission from the Department.

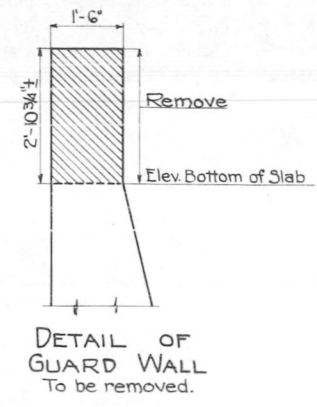
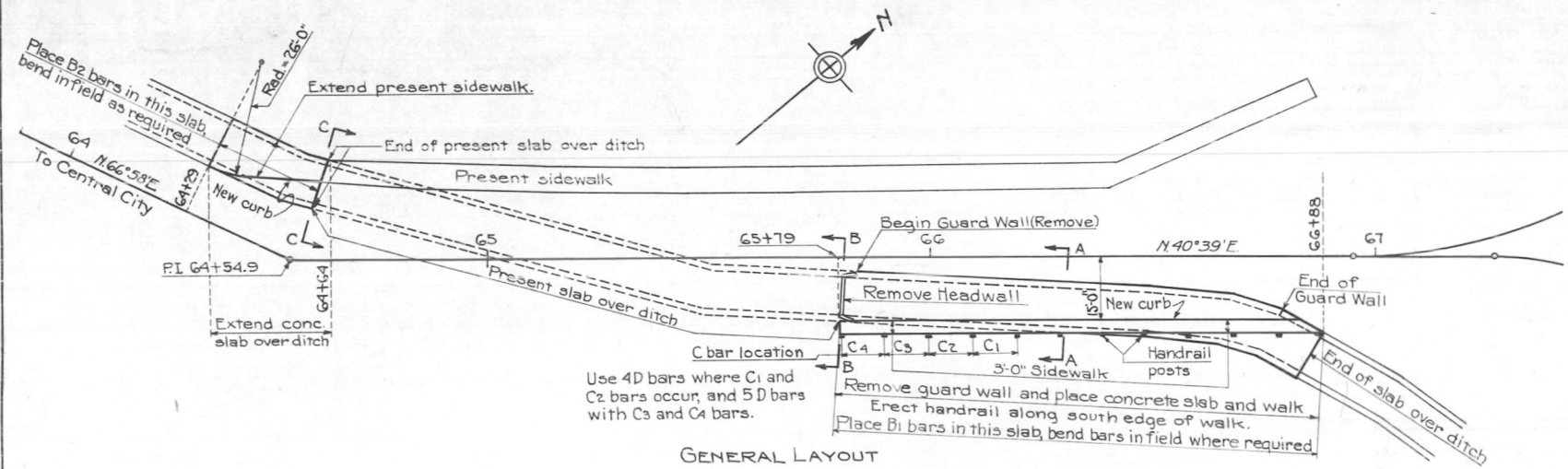
TYPICAL SECTION FOR DITCHES



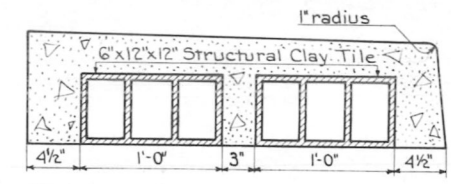
MATERIAL TO BE PLACED	SOURCE	AVAILABLE	QUANTITY TONS USED		OVERHAUL			
			BY CONTRACTOR		BY CONTRACTOR		BY STATE FORCES	
			GRADING "D"		TON MILES		TON MILES	
			TOP COURSE	BOT COURSE	TOP COURSE	BOT COURSE	TOP COURSE	BOT COURSE
10+13 to 27+35.7 Estimated for Road Approaches (3)	Pit No.1 Located approximately 200' lt. of Sta. 754+00 on Proj. W.P.S. S 429 A(1) in	5,000 Cubic Yards	488 ✓ 22 ✓	1,085 ✓ 23 ✓	497 ✓ 23 ✓	2,160 ✓ 46 ✓	80 ✓ 4 ✓	
27+35.7 to 49+16.1 Estimated for Road Approaches (4)	N.W. 1/4 of S.E. 1/4 Sec.17 T.3S., R.72W. 2.07 Mi. from Sta. 67+28		618 ✓ 35 ✓	1,373 ✓ 35 ✓	629 ✓ 36 ✓	2,226 ✓ 57 ✓	F.H. F.H.	
TOTALS INSIDE CENTRAL CITY			1,163 ✓	2,516 ✓	1,185 ✓	4,489 ✓	84 ✓	
49+16.1 to 67+28 Estimated for Road Approaches (5)	Pit No.1		514 ✓ 42 ✓	1,141 ✓ 43 ✓	523 ✓ 43 ✓	1,419 ✓ 54 ✓	F.H. F.H.	
TOTALS INSIDE BLACKHAWK			556 ✓	1,184 ✓	566 ✓	1,473 ✓	F.H.	
TOTALS S 0095 (1)			1,719 ✓	3,700 ✓	1,751 ✓	5,962 ✓	84 ✓	

■ To be produced & stockpiled by Contractor at left of Sta. 853± on Proj. W.P.M. S 429 B (1) approximately 0.25 Miles from Sta. 67+28.

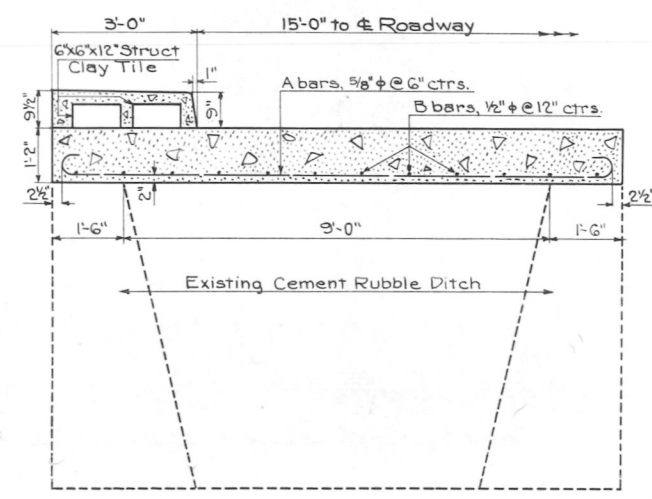
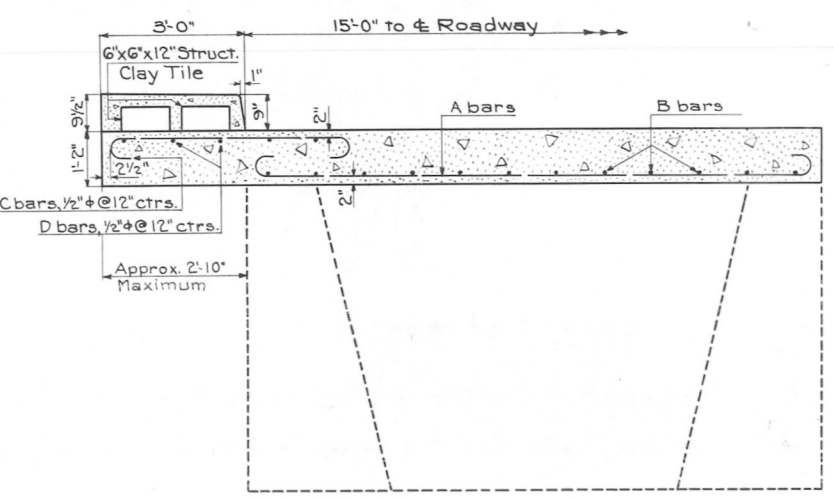
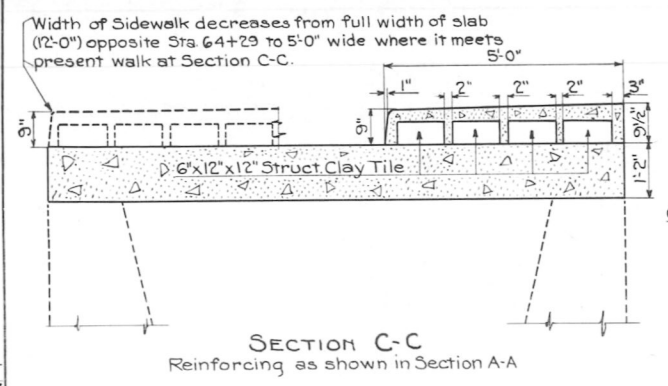
FED. ROAD DIST. NO.	STATE	PROJECT	SHEET NO.	TOTAL SHEETS
3	COLO.	3 0095 (1)	4.	



SUMMARY OF QUANTITIES				
Item No.	Description	Unit	Quan.	
11a	Remove Headwall Sta. 65+19	L. Sum	L S	
11b	Remove Guard Wall Sta. 65+80 to Sta. 66+19	L. Sum	L S	
14b	Dry Com. Excav. (Struct.)	Cu. Yd.	5	
14d	Wet Com. Excav. (Struct.)	Cu. Yd.	5	
42a	Untreated Bridge Timber (Native)	M.B.Ft.	0.352	
46a	Class A Concrete	Cu. Yd.	76	
47	Reinforcing Steel	Lb.	5030	
97a	Structural Clay Tile 6"x12"x12"	Each	385	
Force Account Item: Raise board walk to meet concrete walk, opposite Sta. 64+29.				
*Cost of Hardware to be included in bid price for Untr. Bridge Timber (Native).				

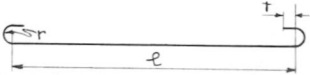


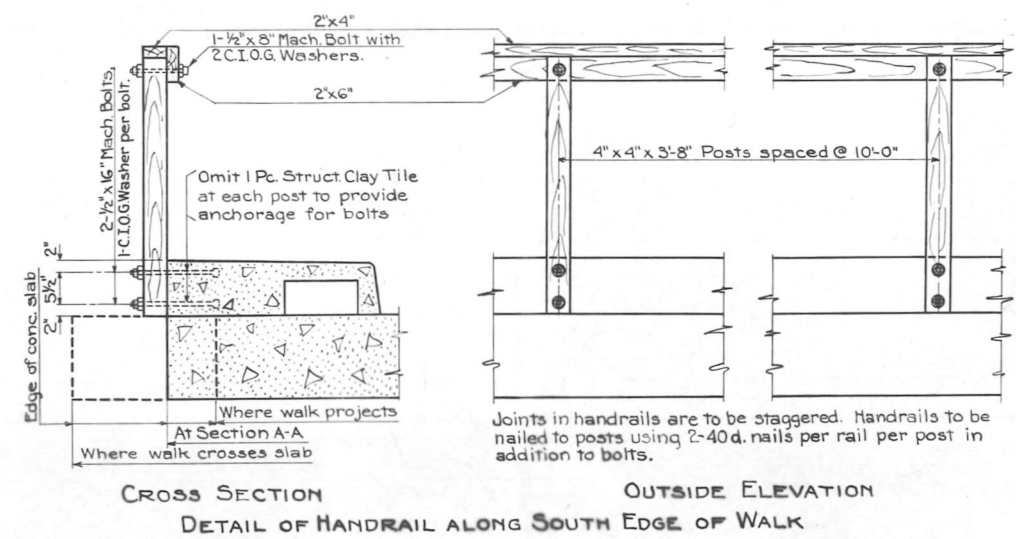
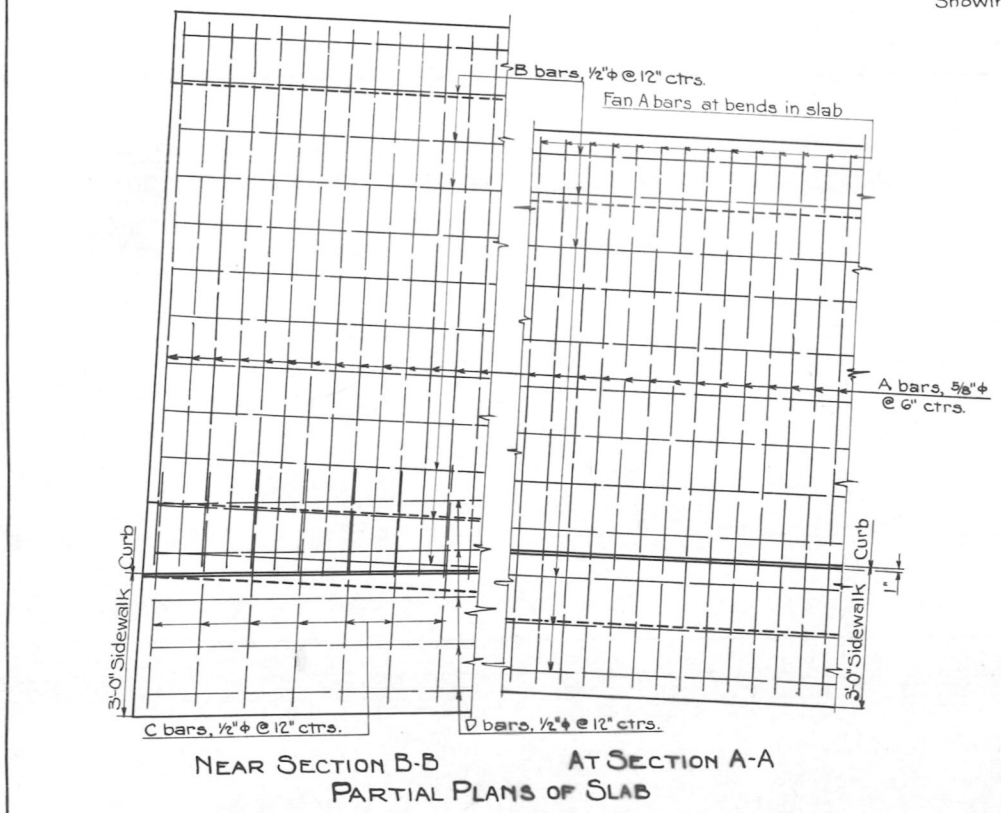
TYPICAL SECTION OF SIDEWALK Showing detail of Structural Clay Tile



LISTS OF MATERIALS IN HANDRAIL				
LUMBER (S4S)				
Item	No.	Size	Length	Bd. Ft.
Rails	1	2"x4"	10'-0"	73
Rails	5	2"x4"	20'-0"	
Rails	1	2"x6"	10'-0"	220
Rails	5	2"x6"	20'-0"	
Posts	12	4"x4"	3'-8"	59
Total				352

HARDWARE				
Description	Item	No.	Size	Lbs.
Rails to Posts	Bolts	1	1/2"x8"	6.5
Anchor Posts to Walk	Bolts	2	1/2"x16"	23.0
Cast Iron O.G. Washers		4	1/2"	9.5
Total Bolts and Washers				39.0
Rails to Posts	Nails	40d.		4

REINFORCING BARS								T.M.R. 19/6/47	
Mark	Size	No.	Length	Type	l	r	t	TYPE I 	
A	5/8"φ	270	12'-10"	I	11'-2"	2 1/2"	2"		
B1	1/2"φ	48	28'-6"	Str.	Field bend				
B2	1/2"φ	12	24'-6"	Str.	Field bend				
C1	1/2"φ	10	4'-1"	I	2'-9"	2"	2"	SUMMARY 2049 Lin.Ft.of 1/2"φ@0.668 Lb.per.ft. = 1369 Lb. 3465 Lin.Ft.of 5/8"φ@1.043 Lb.per.ft. = 3614 Lb. Overrun @1% = 47 Lb. Total Weight = 5030 Lb.	
C2	1/2"φ	10	4'-6"	I	3'-4"	2"	2"		
C3	1/2"φ	10	5'-2"	I	3'-10"	2"	2"		
C4	1/2"φ	10	5'-10"	I	4'-6"	2"	2"		
D	1/2"φ	9	21'-0	Str.					



GENERAL NOTES

ALL WORK SHALL BE DONE ACCORDING TO THE STANDARD SPECIFICATIONS OF THE COLORADO STATE HIGHWAY DEPARTMENT, ADOPTED JAN. 1, 1948

ALL CONCRETE SHALL BE CLASS "A."

FORMS FOR CONCRETE SURFACES EXPOSED IN THE FINISHED WORK SHALL BE CONSTRUCTED OF SHIPLAP OR TONGUE AND GROOVE LUMBER S3S UNLESS FACED WITH PANEL BOARD.

CONCRETE GIRDERS, FLOOR SLABS AND CURB SHALL BE POURED MONOLITHICALLY. FOOTINGS IN ROCK SHALL BE POURED OUT TO THE ROCK AND NOT FORMED.

ALL REINFORCING BARS SHALL BE DEFORMED AND TAGGED WITH THE STATION NUMBER AND LETTER DESIGNATION. MAIN BARS SHALL NOT BE SPLICED.

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

ALL RIVETS TO BE 3/4" DIA. ALL RIVETS TO BE POWER DRIVEN.

ALL REINFORCING STEEL SHALL BE INTERMEDIATE GRADE.

LOADING DATA.

LIVE LOAD A. A. S. H. O. H-20-44

DEAD LOAD - CONC. 150 LB./CU. FT.

DESIGNING DATA.

$f_c = 18,000$, $f_s = 833$; $n = 12$

COLORADO STATE HIGHWAY DEPARTMENT

REINFORCED CONCRETE SLAB COVER OVER CEMENT RUBBLE LINED DITCH

Across Sta. 64+29 to 66+88

In Blackhawk Sec. 7 T. 35 S. R. 12 W.

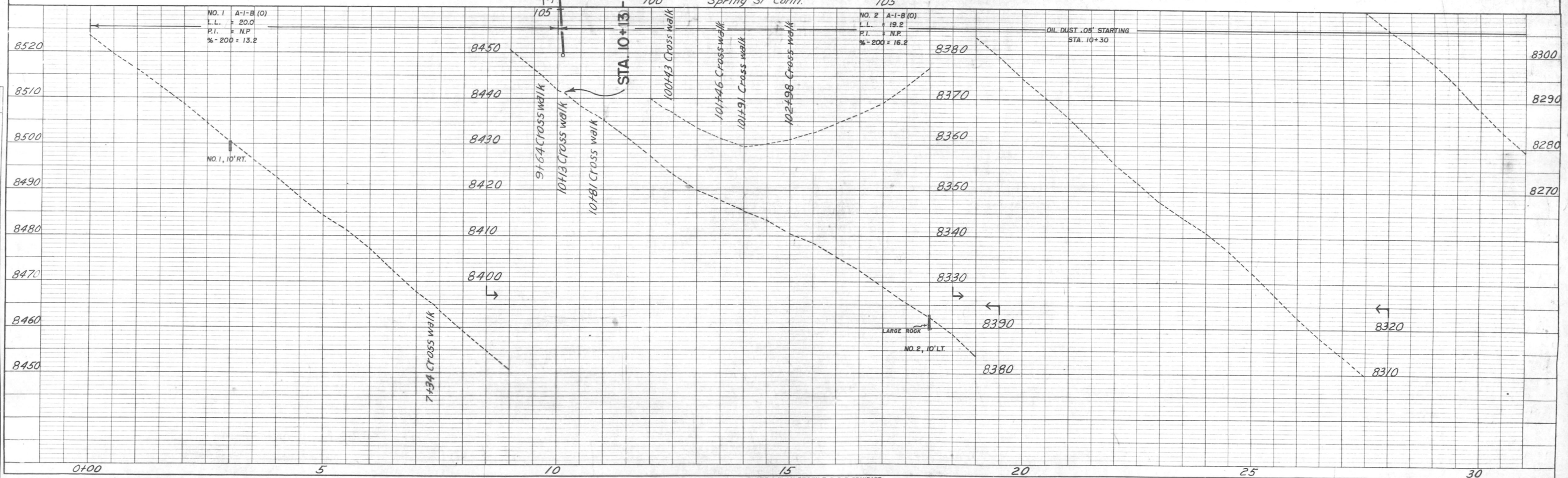
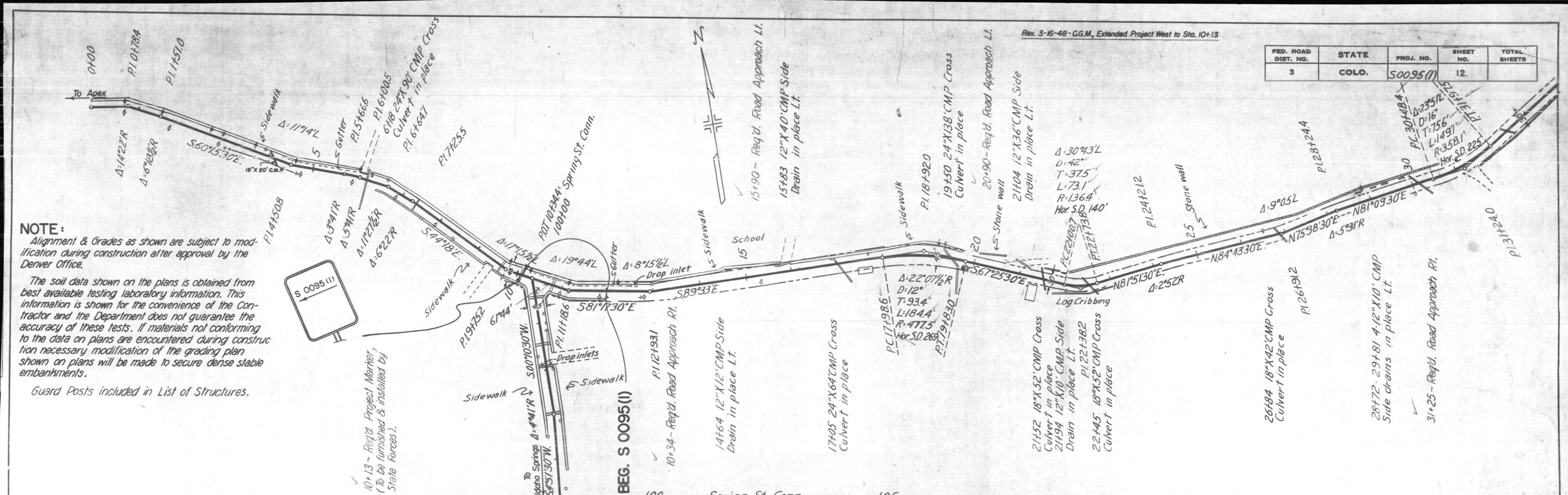
Designed by A.L.P. Approved by *[Signature]*

Made by A.L.P. Bridge Engineer

Checked by *[Signature]* Date: Oct. 1, 1947.

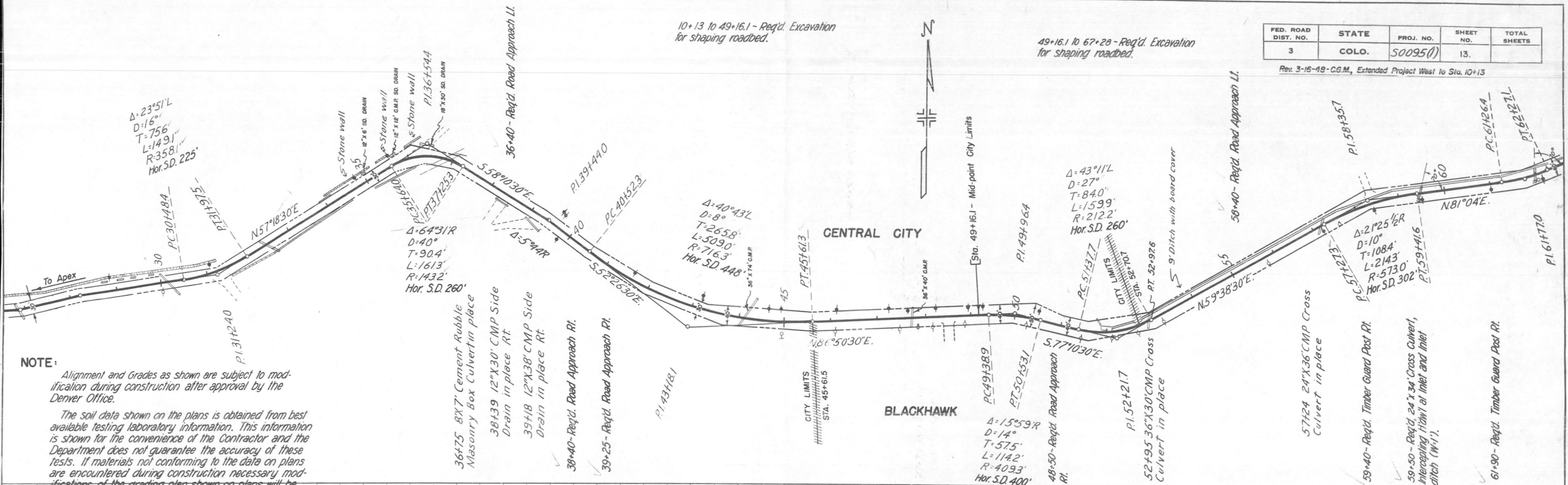
FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	50095(1)	12.	

Rev. 3-16-48 - C.G.M., Extended Project West to Sta. 10+13



FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	50095(1)	13.	

Rev. 3-16-48-C.G.M., Extended Project West to Sta. 10+13



NOTE:

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

The soil data shown on the plans is obtained from best available testing laboratory information. This information is shown for the 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 necessary modifications of the grading plan shown on plans will be made to secure dense stable embankments.

Guard Posts included in List of Structures.



FED. ROAD DIST. NO.	STATE	PROJ. NO.	SHEET NO.	TOTAL SHEETS
3	COLO.	50095(1)	14.	

[illegible]