

FED. ROAD DIST. NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 005-4(I)		

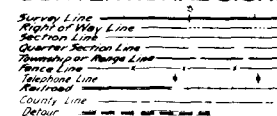
COLORADO STATE HIGHWAY DEPARTMENT

PLAN AND PROFILE OF PROPOSED FEDERAL AID PROJECT NO. F 005-4(I) STATE HIGHWAY NO. 8 ADAMS COUNTY

INDEX OF SHEETS

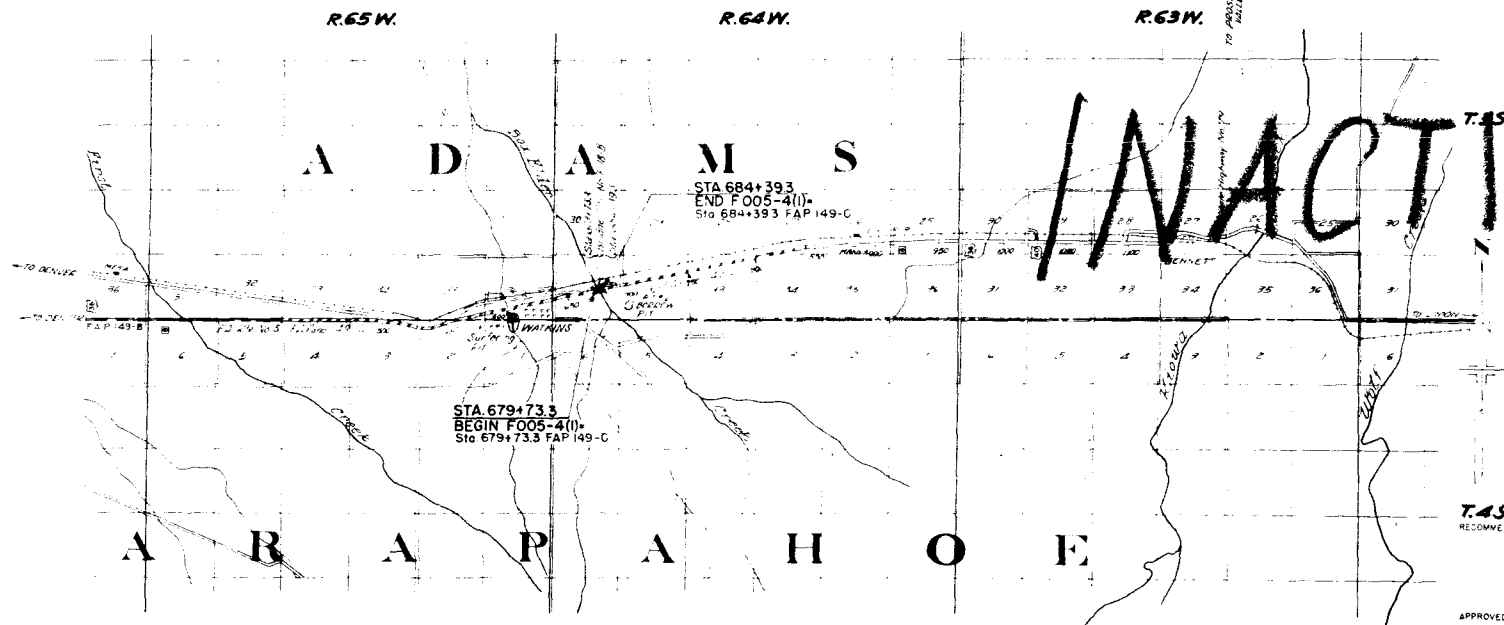
SHEET NO. 1	SKETCH MAP & TITLE PAGE	
2	TYPICAL SECTION OF DETOUR, GENERAL NOTES, SUMMARY OF APPROXIMATE QUANTITIES & LIST OF STRUCTURES	
3-5	DETAILS OF BRIDGE STA. 681+	
6	STANDARD LETTERS & FIGURES FOR YEAR NUMBERS & STRUCTURE NUMBERS	M-10-B
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CONVENTIONAL SIGNS



NOTE:
It is recommended that bidders on this Project go over the plan details with one of the following field representatives of this Department.
W.F. Miller, Construction Engineer, Denver, Colo.
E.E. Montgomery, Resident Engineer, Denver, Colo.

SCALE 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 4660 FT. = 0.088 MI.
NET LENGTH OF PROJECT



SCALE IN MILES

T.A.S.
RECOMMENDED FOR APPROVAL
Jas. B. Bell
STATE ENGINEER
12-20-49
APPROVED
M. J. McIntosh
STATE HIGHWAY ENGINEER
Dec. 21 -

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

DIVISION ENGINEER
BUREAU OF PUBLIC ROADS
DEPARTMENT OF COMMERCE

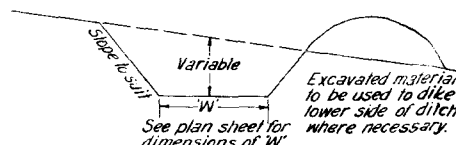


Detour Surfacing is to be placed in two courses:
Approximate 2" Top Course to be placed at the rate
of 17 cu. yds. per 100 lin. ft. of roadway.
Approximate 4" Bottom Course to be placed at the
rate of 37 cu. yds. per 100 lin. ft. of roadway.

GENERAL NOTES

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

TYPICAL SECTION OF
CHANNEL IMPROVEMENT



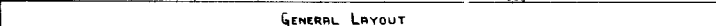
SUMMARY OF APPROXIMATE QUANTITIES

ITEM NO.	ITEM	UNIT	DETOUR	BRIDGE	PROJECT TOTALS
11a	Removal of 6 Structures	L.S.	•		•
11b	Remove Portions of Bridge	L.S.		•	•
11c	Replacing Timber Caps	L.S.		•	•
12b	Removing & Rebuilding Fence	Lin. Ft.	2000		2000
13c	Unclassified Excavation	Cu. Yd.	15500		15500
14b	Dry Common Excavation (Str.)	Cu. Yd.	35	20	35
14d	Wet Common Excavation (Str.)	Cu. Yd.	5		5
16a	Structure Backfill (Class 1)	Cu. Yd.	110	10	120
16d	Mechanical Tamping	Hour	10	2	12
17ax	Rolling with Tamping Roller (2 unit)	Hour	40		40
17c	Rolling with Rubber Tired Roller	Hour	10		10
17dx	Furnishing Tamping Roller (2 unit)	Each	1		1
17f	Furnishing Rubber Tired Roller	Each	1		1
17g	Wetting	M. Gal.	275		275
18a	Station Yard Overhaul	Sls. Yd.	55,000		55,000
18b	Yard Mile Overhaul	Yd. Mi.	800		800
26x	Detour Surfacing	Cu. Yd.	1050		1050
30j	Asphaltic Road Material MC-3	Gal.	5500		5500
30x	Asphaltic Road Material MC	Gal.	2100		2100
31a	Road Mix Oil Processing	Sq. Yd.	4250		4250
42a	Untreated Bridge Timber	Mtl. bn		0.3	0.3
46a	Class 2 Concrete	Cu. Yd.		369	369
47	Reinforcing Steel	Lb.		60,000	60,000
49	Structural Steel	Lb.		240,300	240,300
53d	30" Corrugated Metal Culvert Pipe	Lin. Ft.	276		276
59a	Drain Pipe (Concrete Floor) (1" x 2'-0")	Each		32	32
51a	Project Markers (State Forces)	Each		2	2
FORCE ACCOUNT					
	Relocate Telephone Line (Work done by Tel. Forces)		•		•

LIST OF STRUCTURES

STATION	DESCRIPTION	REMOVE STRUCT	EXCAVATION		STRUCT EXCAV	CLASS I FILL CLASS II	DETOUR SURFACE	REMOVE & REBUILD FENCE	CORRUGATED METAL CULVERT PIPE	MISCELLANEOUS	
			CU YD								LIN FT
			UNCL EMBANK	UNCL DITCH							
668+ to 690+ 673+20 to 678+56 679+98	Detour Lt. & Remove Detour Lt. Remove & Rebuild Fence Lt. for Detour. 6-30"x46" Cross Culverts under Detour Lt. & Ditches (W=25') Remove 6 Cross Culverts under Detour Lt. Repair Bridge (Details on Sheets 3-4-5)	6	7522	7604	16	108	1015	1252	6@ 46'	83642 Sta. Yds. ✓ 576 Yd. Mi. ✓ Mechanical Tamping 10 hours ✓ 1358 Sta. Yds. ✓ 210 Yd. Mi. ✓	
679+73.3 to 684+39.3 679+73.3 to 684+39.3 685+19 to 688+04	Project Markers Remove & Rebuild Fence for Detour Lt.		Quantities in Summary ✓					720		2 Project Markers (State Forces).	
TOTALS		6	7547	7604	16	108	1015	1972	276		

* To be disposed of within R.O.W. as designated by the Engineer when bridge is open for traffic.



No		SUPERSTRUCTURE						
Mark	Size	Reqs	Length	Type	ℓ	m	n	rit
E1	2 1/2"	536	30' 0"	I	14' 3"			2.2
E2	2 1/2"	536	24' 6"	II				2.8
E3	2 1/2"	559	31' 7 1/2"	III				2.8
D1	2 1/2"	153	29' 6"	51"				
D2	2 1/2"	153	29' 9"					
D3	2 1/2"	153	33' 5"					
D4	2 1/2"	153	32' 1"					
S1	2 1/2"	24	35' 8"					
S2	2 1/2"	24	39' 9"					
S3	2 1/2"	24	33' 5"					
S4	2 1/2"	24	29' 11"					
S5	2 1/2"	208	3' 10"	IV		7	12	
Total					= 56,530 lbs			

83760 Lin Ft $\frac{1}{2}$ @ 0.668" / Ft = 55,371 Lbs
 11% Overrun = 605
 Total = 56,530 Lbs

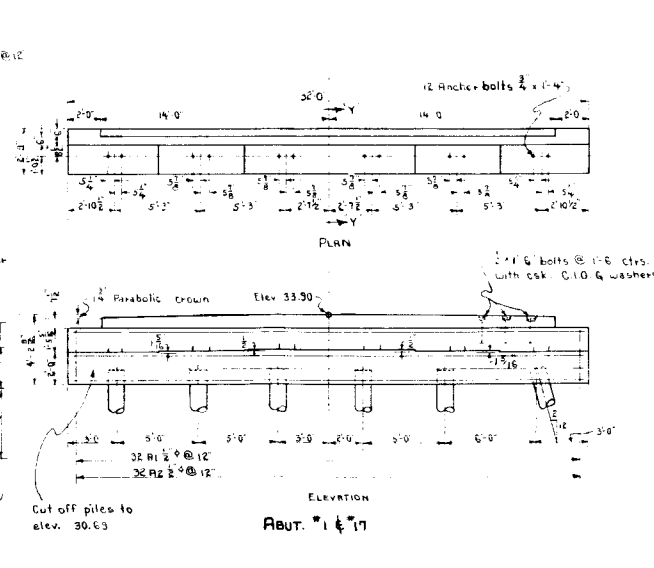
- * Include in bid price class "A" concrete
- * Includes 38,600 lbs handrail steel
- * Includes cutting off existing piles to grade

Select backfill & Mach. Tamped -

MECHANICAL TAMPING NOTE

Earth shall be placed in 6" layers sloping up to wall on a minimum slope of 4:1. Mechanical Tamping of each layer shall start along wall and continue away from wall.

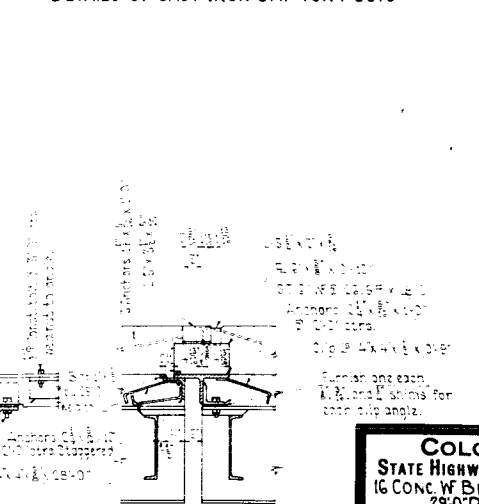
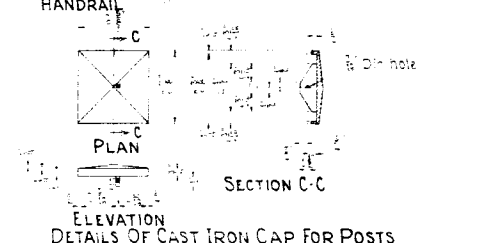
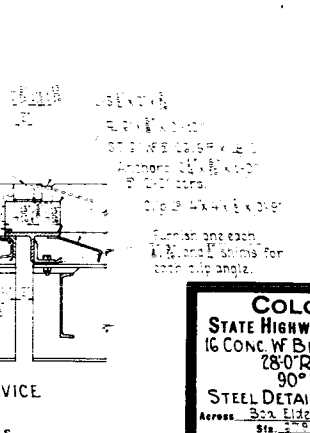
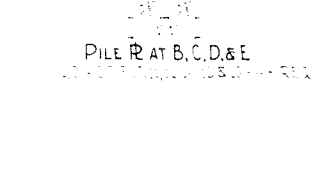
BACKFILL DIAGRAM

[illegible]

24x31 Buttress head, hex nut and lock washer 1/2" hole in frame and 1/2" x 1/2" slotted hole in outstanding leg of angle.

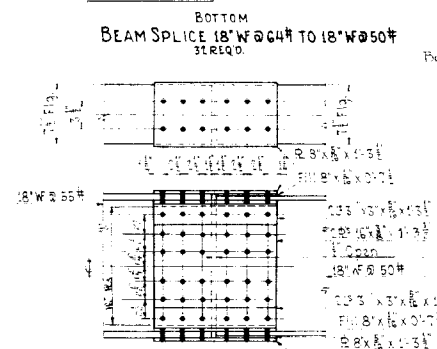
- 1/2" Clear

1/2" Weld on angle

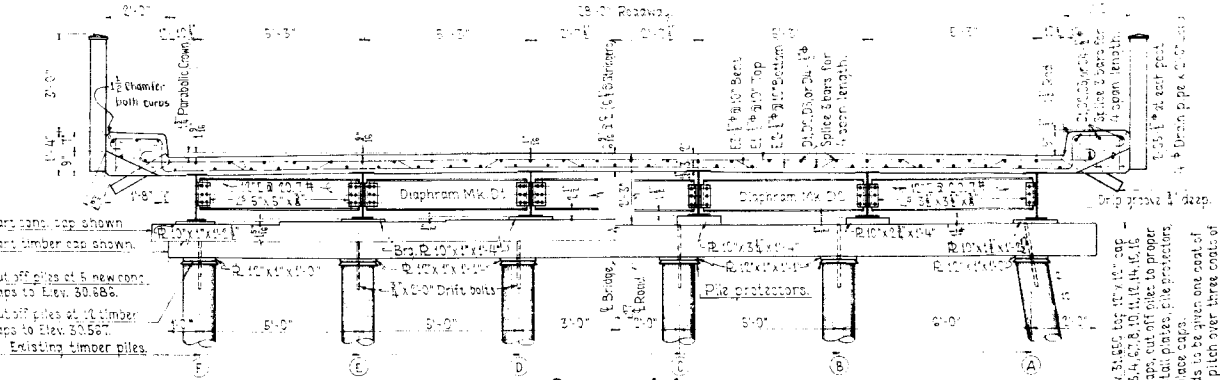
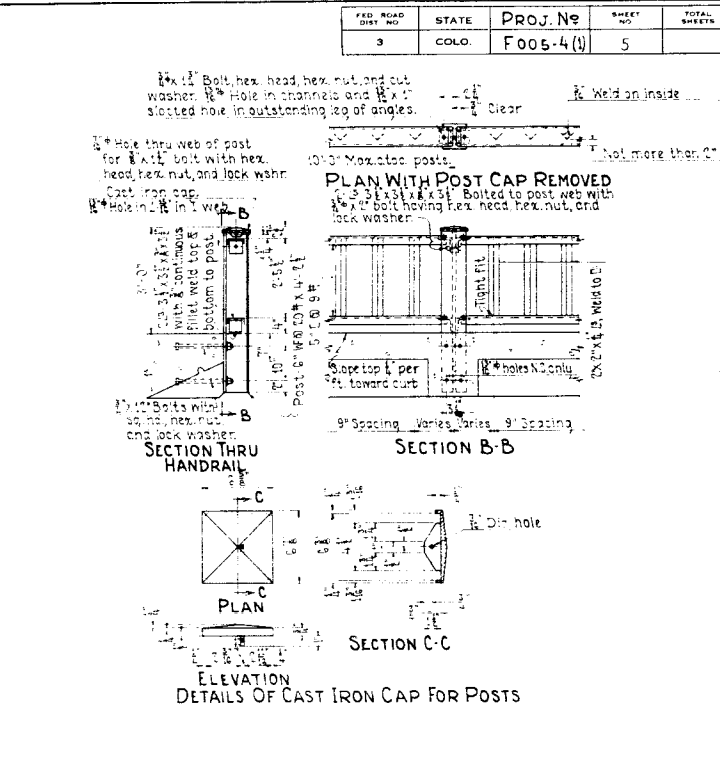
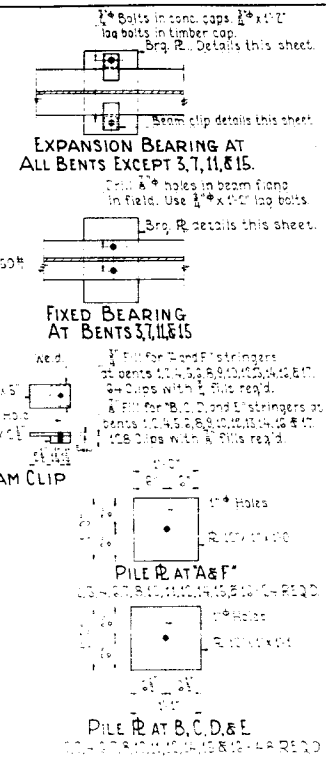
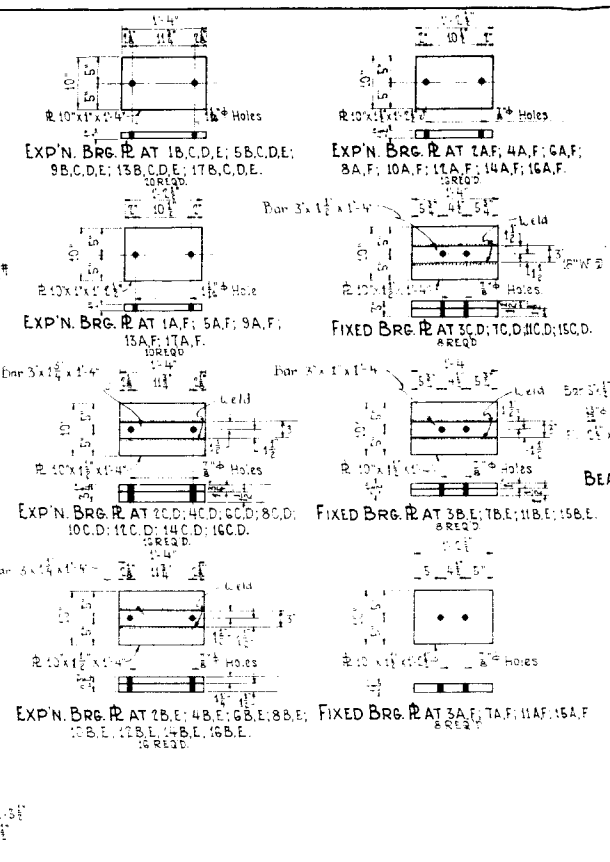


COLORADO
STATE HIGHWAY DEPARTMENT
16 CONC. W/ BEAM SPANS (19' x
28'0" ROADWAY
90° SKEW
STEEL DETAILS & SECTION-A-A
Across Box Elder Creek
Sta. 2+60.00 to 2+88.00
Near Wiggins Sec. 35 T.35 S.44W
Designed by CH&H Approved by Ed. Huby
Made by CH&H Bridge Engineer
Checked by _____ Date: Dec. 2, 1949.

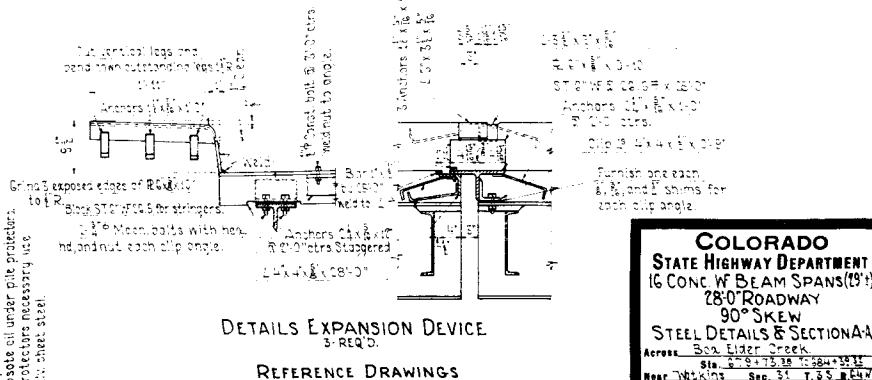
* Bolts in conc. caps. *
lag bolts in timber cap.
Brq R Details this sheet.



BEAM SPLICE 18" WF @ 55# TO 18" WF @ 50#
16 REQ'D.



Max. Bilt Load 33.4 Tons. Max. Br. & Pressure on Timber Caps 335 #/sq



See Sheet No. 4

Designed by	G.H.W.	Approved by	G.H.W.
Made by	G.H.W.	Bridge Engineer	
Checked by		Date	Dec. 2, 1945

1 2 3 4 5 6 7 8 9 0.
A B C D E F G H I J K L
M N O P Q R S T U V W
X Y Z

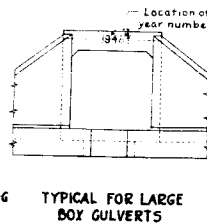
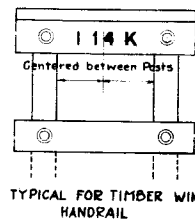
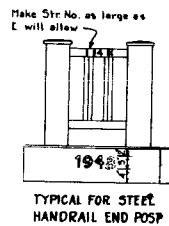
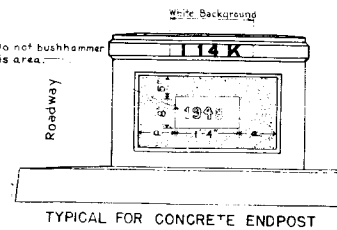
SAMPLE BRIDGE NUMBER

1 14 K 19 4 0

SAMPLE YEAR NUMBER

Scale in inches
1/2" 1" 2" 3"

SECTION



GENERAL NOTES

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS OF THE COLORADO STATE HIGHWAY DEPARTMENT, ADOPTED JANUARY 1ST 1948.

COMPENSATION FOR THIS WORK SHALL BE INCLUDED IN THE ORIGINAL CONTRACT ITEMS AND WILL NOT BE PAID FOR AS A SEPARATE ITEM.

THE SIZE, SHAPE AND SPACING OF THE LETTERS AND FIGURES SHALL BE IN ACCORDANCE WITH THE FULL SIZE SHOWN ON THIS SHEET.

ADDITIONAL COPIES OF THIS FULL SIZE SHEET CAN BE OBTAINED FROM THE DEPARTMENT WITHOUT CHARGE.

THE YEAR NUMBERS ARE RECESSED IN CONCRETE 3/8" MINIMUM AS SHOWN INTO THE PANEL OF THE ENDPOST ON THE RIGHT HAND SIDE OF EACH BRIDGE END AND INTO THE FACE OF THE DOWNSTREAM HEADWALL OF CULVERTS AS SHOWN ON PLAN DETAILS.

NUMBERS TO BE MADE OF WOOD METAL OR OTHER SUITABLE MATERIAL AND ATTACHED TO THE FORMS BEFORE CONCRETE IS POURED.

THE YEAR NUMBER OF EACH STRUCTURE SHALL CORRESPOND WITH THE YEAR IN WHICH THE CONCRETE IS POURED.

THE STRUCTURE NUMBER SHALL BE STENCILED ON THE RIGHT HAND SIDE OF EACH BRIDGE END AS SHOWN ON THIS STANDARD AND AS SPECIFIED.

THE CORRECT NUMBER FOR EACH BRIDGE IS SHOWN IN THE LOWER RIGHT HAND CORNER OF THE DETAIL SHEETS FOR THAT BRIDGE.

A PROPER WHITE BACKGROUND RECTANGULAR IN SHAPE AND EXTENDING THREE INCHES BEYOND THE LIMITS OF THE NUMBER SHALL BE PAINTED WITH TWO COATS OF ACCEPTABLE WHITE PAINT UNLESS AN APPROVED WHITE CONCRETE PAINT IS USED. BEFORE PAINTING THE SURFACE MUST BE THOROUGHLY DRIED, CLEANED AND PROPERLY SIZED. ON TIMBER HANDRAILS THE WHITE PAINT USED ON THE BRIDGE WILL BE SATISFACTORY.

AFTER THE WHITE BACKGROUND HAS DRIED SUFFICIENTLY THE CORRECT STRUCTURE NUMBER SHALL BE CAREFULLY STENCILED ON IT WITH TWO COATS OF SECOND FIELD COAT DARK OR EXTERIOR BLACK PAINT (QUANTITY AS SPECIFIED UNDER ITEM 38 PAINTS AND PAINTING) THE SPACES OF THE STENCILED LETTERS AND FIGURES SHALL BE CAREFULLY FILLED IN BY HAND TO MAKE SOLID FIGURES.

SUFFICIENT TIME BETWEEN SUCCESSIVE COATS SHALL BE ALLOWED TO PERMIT THOROUGH DRYING.

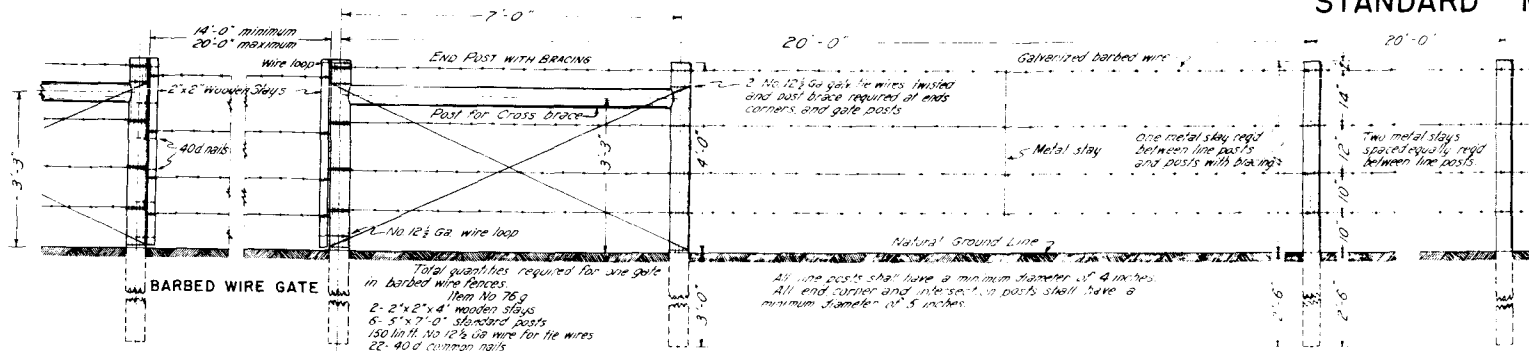
COLORADO
STATE HIGHWAY DEPARTMENT
STANDARD
LETTERS AND FIGURES
FOR
YEAR NUMBERS AND
STRUCTURE NUMBERS

Designed by GHD
Made by WPM
Checked by

Approved by *Chas. E. B. By*
Bridge Engineer
Date: June 1, 1948

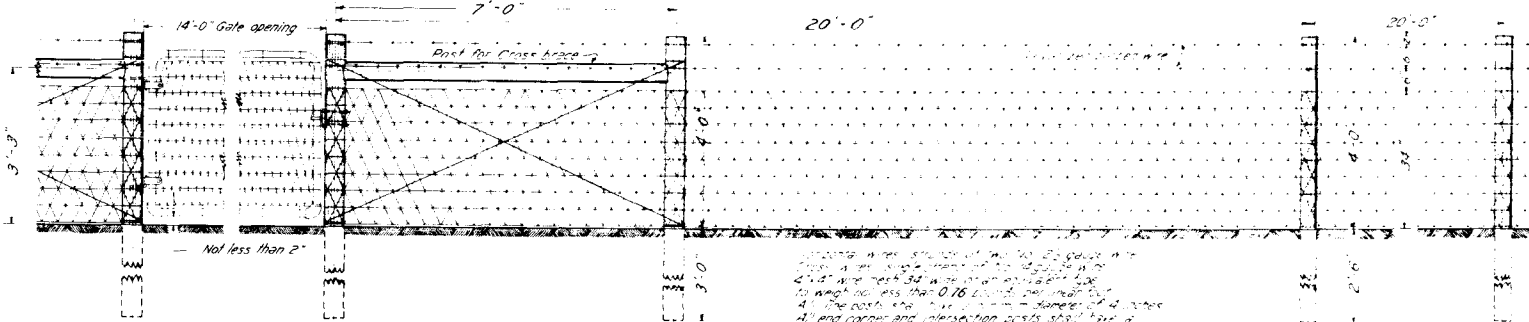
STANDARD M-24-G

RED ROAD
SECTION NO. 5
COUNT 5
COLO. 0005-4(1) 7
Rev. 6-20-43 - A-2 - 1940 Specs.
Rev. 5-30-47 - A-1 - Fire mesh finish in Drive & Walk gates
Rev. 2-25-49, C.G.M. - Comp Wire, Gen Note & Drive Gate
Rev. 3-2-49, C.G.M. - Gen Notes & Title Block
Rev. 5-25-49, C.G.M. - Wire Specs for Gates



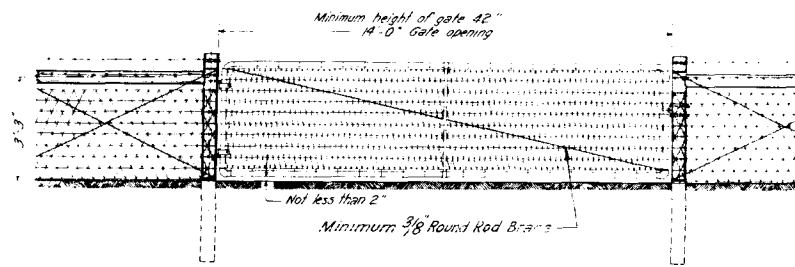
BARBED WIRE FENCE WITH WOODEN POSTS

Item No. 76 a



COMBINATION WIRE FENCE WITH WOODEN POSTS

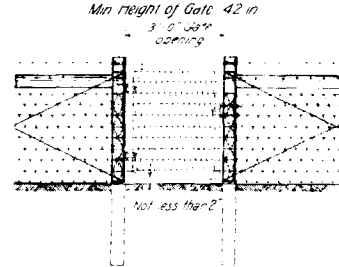
Item No. 76 d



DRIVEWAY GATE

Item No. 76 b

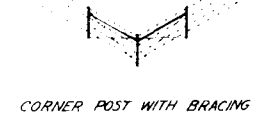
Gate complete with hinges and latch to weigh not less than 73 lbs.
2"x4" single strand wire mesh filler or an equivalent type.
Width of mesh approximately 40 inches.
Horizontal wires No. 14 gauge.
Cross wires No. 14 gauge.
Galvanized metal latch and hinges.
Minimum 1" dia. galv. pipe frame or an equivalent.
Minimum 1/2" dia. galv. pipe frame or an equivalent.
Minimum 1/2" dia. galv. pipe frame or an equivalent.
Minimum 1/2" dia. galv. pipe frame or an equivalent.



WALK GATE

Item No. 76 c

Gate complete with hinges and latch to weigh not less than 19 pounds.
2"x4" single strand wire mesh filler or an equivalent.
Width of mesh approximately 40 inches.
Horizontal wires No. 14 gauge.
Cross wires No. 14 gauge.
Galvanized metal latch and hinges.
Minimum 1/2" dia. galv. pipe frame or an equivalent.
Minimum 1/2" dia. galv. pipe frame or an equivalent.



CORNER POST WITH BRACING



FENCE INTERSECTION WITH BRACING

FENCE TREATMENT AT STRUCTURES
(TO BE USED AT STRUCTURES 4"x4" AND OVER)

GENERAL NOTES

All work shall be done in accordance with the Standard Specifications of the Colorado State Highway Department adopted January 1st 1948.
Barbed wire shall be of standard make not lighter than No. 12 1/2 gauge, galvanized with two point barb spaced not more than five inches apart.
Wire mesh must be galvanized and not lighter than shown and noted on this plan.
Wire mesh used in driveway and walk gates unless galvanized, shall be painted with an approved waterproof asphalt or mineral paint.
Staples shall be of at least 1/2" long made of No. 9 ga. wire base galvanized.
Staples required on post for barbed wire fence and 14 staples per post for combination wire fence.
Cross braces to be securely nailed with four 40d. nails at each post.
End post with bracing to be used at all gates and fence ends.
Corner post with bracing to be used at all corners and angles in fences.
Fence intersection with bracing to be used at all intersecting fences.
At all structures of 4"x4" or over the fence shall be ended at eye bolts in the wings of the structure. Where the type of construction prohibits the use of eye bolts, an end post with bracing shall be used.
Eye bolts are to be made from 1/2" round iron bars with a minimum of 6" of body length embedded in the concrete and a minimum of 1" inside eye diameter.
All wooden posts shall be made from seasoned, straight, sound Lodgepole Pine or Southern Yellow Pine, to be peeled and tops to be sawed off square before pressure treatment.
All posts shall be pressure treated with creosote in conformity with requirements given in the Specifications.

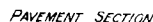
End post with bracing shall conform to details shown above.
Three posts required at all corners and angles in fences.
Corner post with bracing shall be used at all corners and angles in fences.
Fence intersection with bracing shall be used at all intersecting fences.
At all structures of 4"x4" or over the fence shall be ended at eye bolts in the wings of the structure. Where the type of construction prohibits the use of eye bolts, an end post with bracing shall be used.
Eye bolts are to be made from 1/2" round iron bars with a minimum of 6" of body length embedded in the concrete and a minimum of 1" inside eye diameter.

GENERAL NOTES (Cont'd)

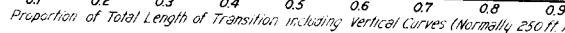
Fence wire to be nailed on either side of the post depending on local conditions. On curves the wire should be placed on side of post which would prevent tens on an staples. This will also apply where wind or tumble weeds or other conditions would exert unusual pressure against the wire.

COLORADO
STATE HIGHWAY DEPARTMENT
STANDARD
WIRE FENCES
TREATED
WOODEN POSTS

Designed by R.E. Made by C.E. Checked by R.E. Approved by C.E. Date: 1-1-48



SUPERELEVATION AND WIDENING TABLES										
DISTANCE FROM B.T. (FEET)	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°	0.00083	0.00338	0.00788	0.01400	0.02100	0.02800	0.03343	0.03650	0.04113	0.04300
5°	0.00109	0.00450	0.00984	0.01700	0.02625	0.03500	0.04266	0.04813	0.05161	0.05250
6°	0.00131	0.00539	0.01181	0.02100	0.03150	0.04200	0.05119	0.05775	0.06149	0.06300
7°	0.00153	0.00613	0.01378	0.02450	0.03675	0.04900	0.05572	0.06338	0.07197	0.07350
8°	0.00175	0.00700	0.01575	0.02800	0.04200	0.05600	0.06625	0.07700	0.08325	0.08450
9°	0.00197	0.00788	0.01772	0.03150	0.04725	0.06300	0.07618	0.08663	0.09523	0.09650
10° and Over	0.00208	0.00833	0.01875	0.03333	0.05000	0.06667	0.08125	0.09366	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

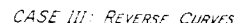


NOTE: CASE I
The transition in this case, from crowned section to super-elevated section, shall proceed uniformly by raising the outside shoulder, over a distance of 250 ft. as shown, beginning at a point on the tangent 150 ft. from the end of the curve and acquiring full super-elevation at a point 100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



Superelevation transition between the arcs of different radii shall be made by a spiral, except that the spiral shall not start within the width of the curve of the larger 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 super-elevated 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.



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.

a. b " " " " " " " "

" x " " " " transition tangent on 1st "

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 used, the transition shall be as shown on the drawings.

The total distance between the P.T. of the first curve and the P.C. of the succeeding curve shall be preceded by the fraction $\frac{1}{2}$ and followed by the fraction $\frac{1}{2}$.

ing 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.

FOUO-4(1) 2

Rev 11-2-38 PBB Widening Transition
Rev 12-13-41 m JPK

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 super-elevated 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 $1/4$ parabolic crown for curves of 10° and under, and a flat crown for wider 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 centerline 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 nominal 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 inside 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.

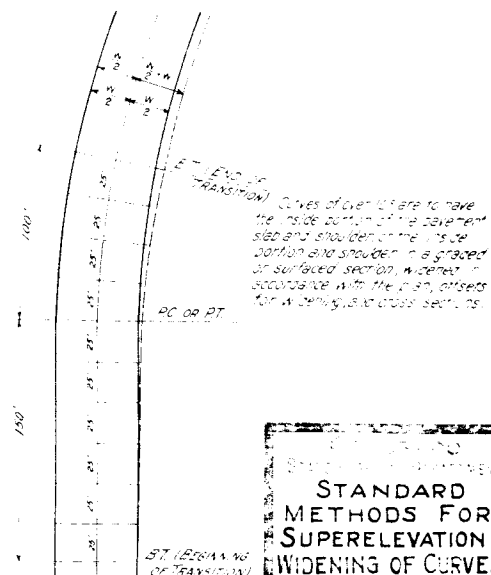
The rate of super-elevation per foot width of roadway to be applied at the outside shoulder of the roadway is computed as follows:

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

 $0.05 f \times \text{Degree of Curvature}$

The maximum side elevation of 0.10" per foot width, applying to all of the 10' sections, shall not be exceeded.

Surf data not covered by the standard sheet shall be covered by appropriate notes included with curve data on plans.



STANDARD METHODS FOR SUPERELEVATION & WIDENING OF CURVES

GENERAL PLAN OF
WIDENING

95
D.B.B. J. Marshall
1946

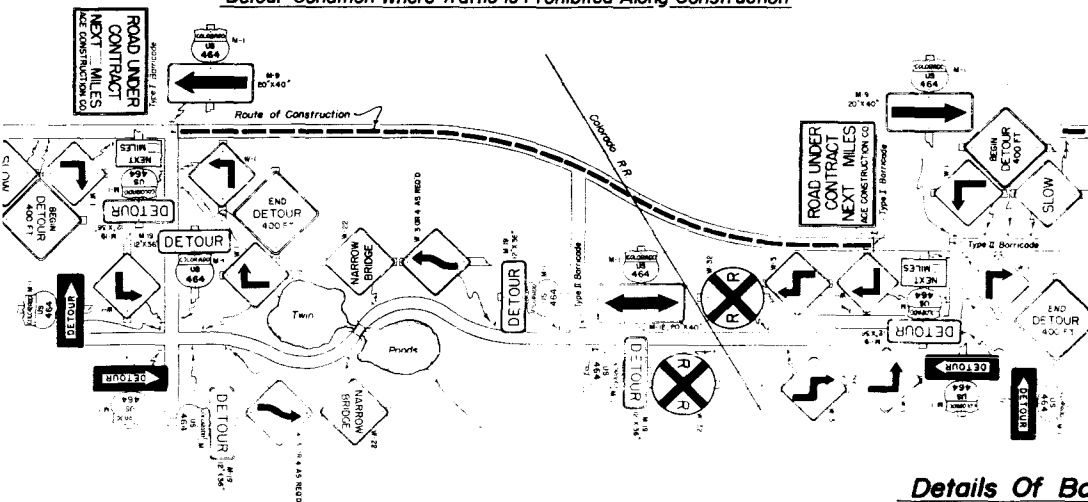
STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS

STANDARD M-2-DS

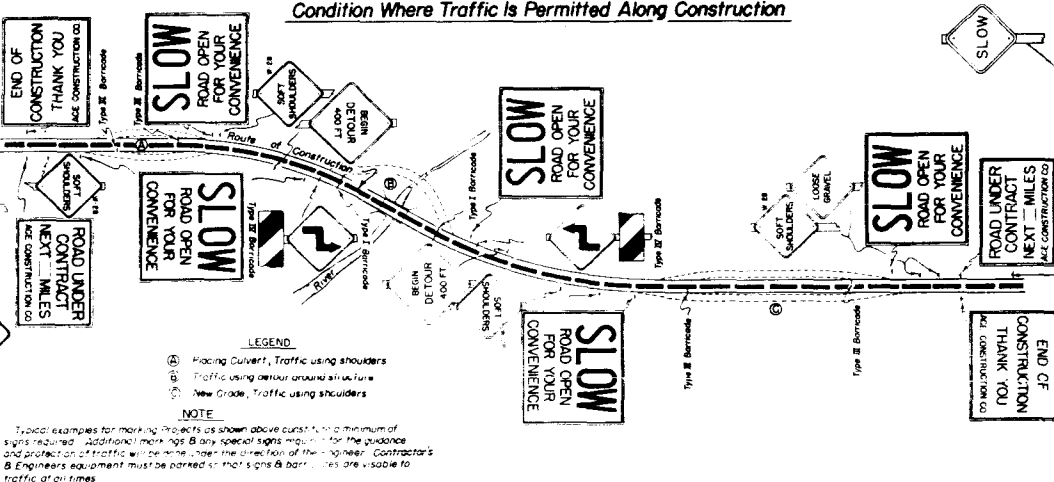
SECTION	DISTRICT	SHEET	TOTAL
9	COLD	FOOS-401-9	
REV - 8/16/49 - E.E.O.			

Typical Methods Of Marking Highways & Detours

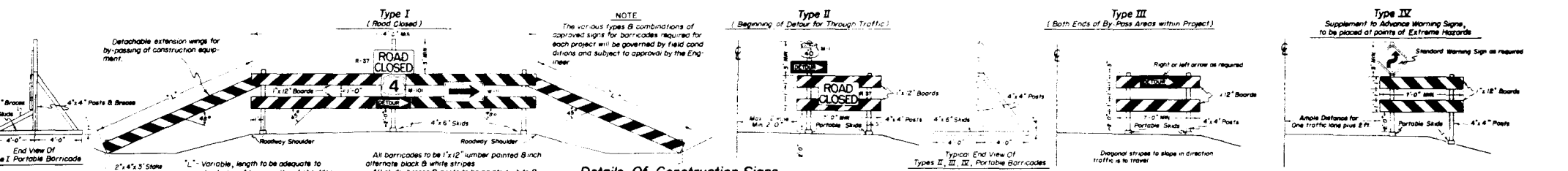
Detour Condition Where Traffic Is Prohibited Along Construction



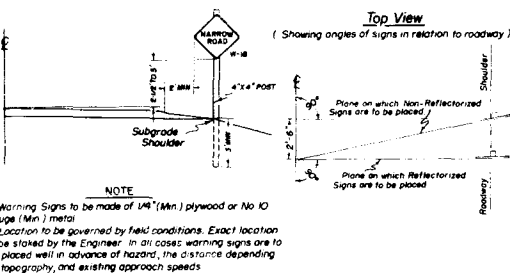
Condition Where Traffic Is Permitted Along Construction



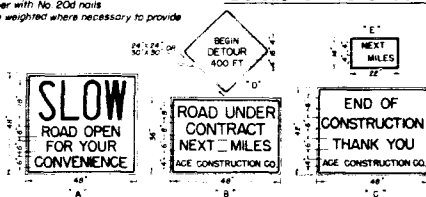
Details Of Barricades



Position Of Signs Relative To Roadbed & Hazards



Details Of Construction Signs



Details Of ReflectORIZED Arrows



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 maintained 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" issued 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
2. "SLOW, ROAD OPEN FOR YOUR CONVENIENCE" Signs
3. Standard Warning & Directional Signs
4. "ROAD UNDER CONTRACT, NEXT MILES, CONTRACTORS NAME" Signs
5. Approved Directional Arrows for Barricades
6. "END OF CONSTRUCTION, THANK YOU, CONTRACTORS NAME" Signs
7. Torches and Flores as follows:

Type I Barricades Minimum-2
Type II, III 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 under used shall be of sound durable material. Barricades, Signs, Symbols & Lettering conforming to styles noted hereon will be well painted & maintained. Unpainted or smeared lettering will not be accepted.

Flores and Torches shall be of the Oil Burning Type approved by the Department and shall be placed 3 ft to 5 ft 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 flores.

COLORADO
STATE HIGHWAY DEPARTMENT

Standard Roadway
Construction Traffic Signs

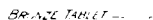
Designed by
Macy GCM
Checked by

Approved
Engineer
Date

ITEM N° 818



ITEM N° 816



All work shall be done in accordance with the Standard Specifications of the Colorado State Highway Department, adopted January 1st 1942.

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 simply protected from traffic in such a position that the sign will indicate properly the projects to which it refers.

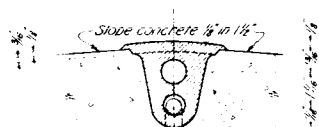
All work shall be done in accordance with the Standard Specifications of the Colorado State Highway Department, adopted January 1st, 1931.

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.

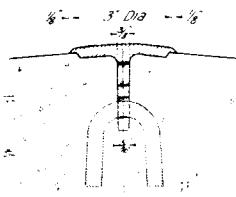
All exposed surfaces of the bronze tablet are to be ground to a smooth surface.

Small letters are to be recessed a minimum of $\frac{1}{16}$ inch. Information on the orange tablet indicated by pin lines is to be stamped in the field by the engineering party after test is placed. $\frac{3}{16}$ inch letters and figures to be used.

Project designations on labels shall be properly shown. The FAP No. for Federal Aid Projects, SP No. for State Projects, PWA No. for PWA Projects, etc.



SECTION B-B



SECTION A-A

FOR RIGHT OF WAY MARKER POST

Rev. 5 Jan 66 P.S.B. 1/2" x 1/2" P

Lev June 1946. W. M. Grande Labort
 Lev Year 2 - 1947. W. M. - Project Marker Post
 Rd. No. 1 - 1947. P. M. Metal Project Marker
 Rd. No. 1 - 1948. W. M. - Project Marker

FED. ROAD DIV. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	F 005-4(1)	11	3

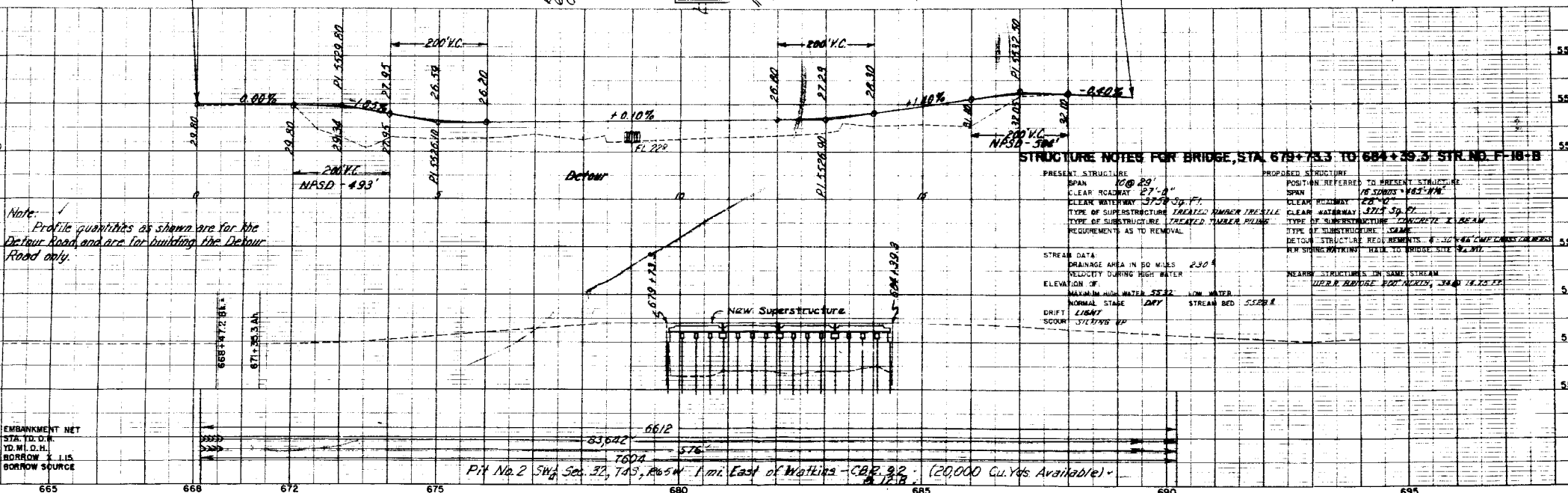
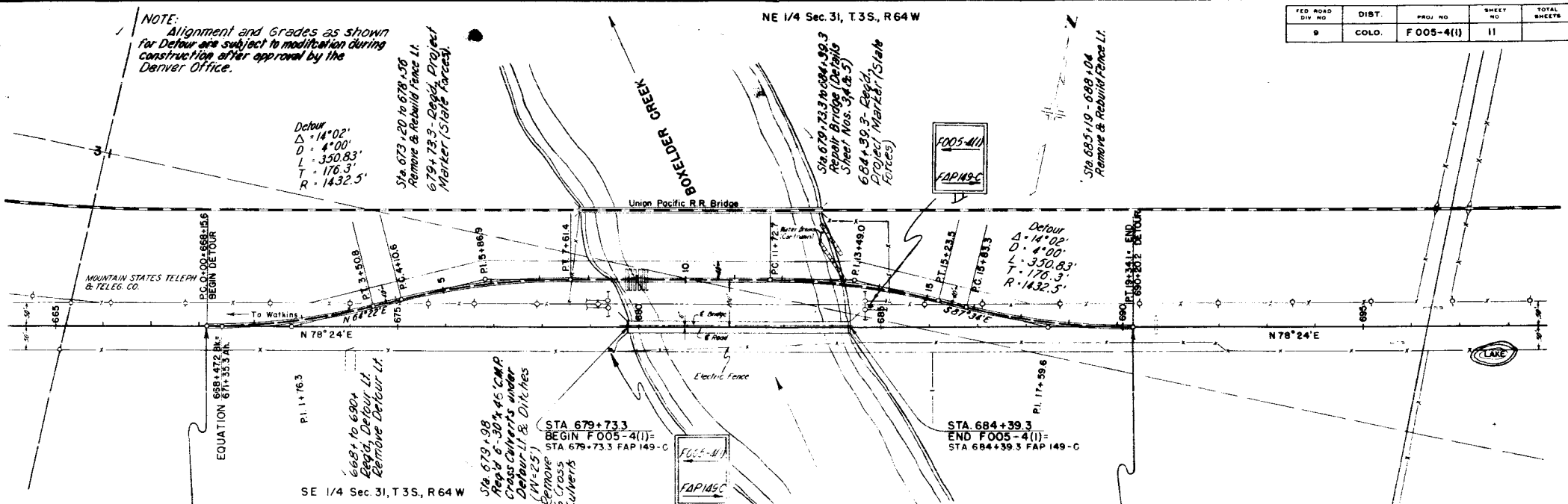
NOTE:
Alignment and Grades as shown
for Detour are subject to modification during
construction after approval by the
Denver Office.

Detour
 $\Delta = 14'02"$
 $D = 4'00"$
 $L = 350.83'$
 $T = 176.3'$
 $R = 1432.5'$

Sta. 673+20 to 678+50
Remove & Rebuild Fence Lt.
679+73.3 - Reg'd. Project
Marker (State Forces)

Sta. 679+73.3 to 684+39.3
Repair Bridge (Detour)
Sheet Nos. 54 & 55
684+39.3 - Reg'd.
Project Marker (State
Forces)

Sta. 685+10 - 688+104
Remove & Rebuild Fence Lt.



Note:
Profile quantities as shown are for the
Detour Road and are for building the Detour
Road only.

STRUCTURE NOTES FOR BRIDGE, STA. 679+73.3 TO 684+39.3, STR. NO. F-18-B

PRESENT STRUCTURE	PROPOSED STRUCTURE
SPAN 100' 29"	SPAN 100' 29"
CLEAR ROADWAY 27' 0"	CLEAR ROADWAY 27' 0"
CLEAR WATERWAY 37' 29" Sp. Ft.	CLEAR WATERWAY 37' 29" Sp. Ft.
TYPE OF SUPERSTRUCTURE TREATED TIMBER TRUSS	TYPE OF SUPERSTRUCTURE CONCRETE X BEAM
TYPE OF SUBSTRUCTURE TREATED TIMBER PILING	TYPE OF SUBSTRUCTURE SAME
REQUIREMENTS AS TO REMOVAL	DETOUR STRUCTURE REQUIREMENTS 8' 10" 1/4" CMP CROSS IN CROSS
STREAM DATA	NEARBY STRUCTURES ON SAME STREAM
DRAINAGE AREA IN SQ. MILES 2.304	UPPER BRIDGE 400' ACROSS, 3A 18' 25" SP.
VELOCITY DURING HIGH WATER	
ELEVATION OF MAXIMUM HIGH WATER 5252	
NORMAL STAGE LOW	
DRIFT LIGHT	
SCOUR STREAMS UP	

EMBANKMENT NET
STA. TO D.F.
YD. M. D. H.
BORROW X 1.15
BORROW SOURCE

Pit No. 2 SW 1/4 Sec. 32, T43, R65W 1 mi. East of Watkins - CBZ 92 - (20,000 Cu. Yds. Available) -