FEDERAL AID REGION NO.	DIVISION	COMB. PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	1 (DENVER)	C 01-0002-23 & C 11-0121-30	1	

COLORADO
DEPARTMENT OF HIGHWAYS

PLAN AND PROFILE OF PROPOSED

COMB. STATE PROJ. NO. C 01-0002-23 & C 11-0121-30

STATE HIGHWAY NO. 2 & 121

DENVER & JEFFERSON COUNTIES

CONVENTIONAL SIGNS

CENTER LINE (PLAN SHEET / TITLE SHEET)
RIGHT OF WAY LINE (R.O.W. MARKER)
COUNTY LINE
TOWNSHIP OR RANGE LINE
LAND LINES (SECTION LINE / 1/4 SECTION LINE / 1/16 SECTION LINE)
RAILROAD (TITLE SHEET / PLAN SHEET)
BARBED WIRE FENCE
COMBINATION WIRE FENCE
SNOW FENCE
TELEPHONE & TELEGRAPH LINES
POWER LINE
DETOUR
PRESENT ROAD (Plan Sheets)

SCALES OF ORIGINAL DRAWINGS

ON PLAN	1 IN.	100 FT.
ON PROFILE	1 IN.	100 FT. HORIZONTAL
	1 IN.	10 FT. VERTICAL

GRADE LINE ON PROFILE IS SHOWN AS GRADE OF FINISHED ROAD.

		C 01-0002-23	C 11-0121-30
NET & GROSS LENGTH	LIN. FT.	565.0'	355.0'
	MI.	0.107	0.067

INDEX OF SHEETS

SHEET NO. C01-0002-23	SHEET NO. C11-0121-30	
1	1	Sketch Map; Title Page
2	2	Summary of Approximate Quantities
3	3	General Notes; Surfacing & Subbase Material Plans.
4		Alignment Plan; Tabulation of Concrete Curb & Gutter; Details of Transitions & Typical Sections; Earthwork Quantities
	5	Alignment Plan & Profile; Tabulation of Concrete Curb & Gutter; Structure Requirement; Typical Sections; Earthwork Quantities.

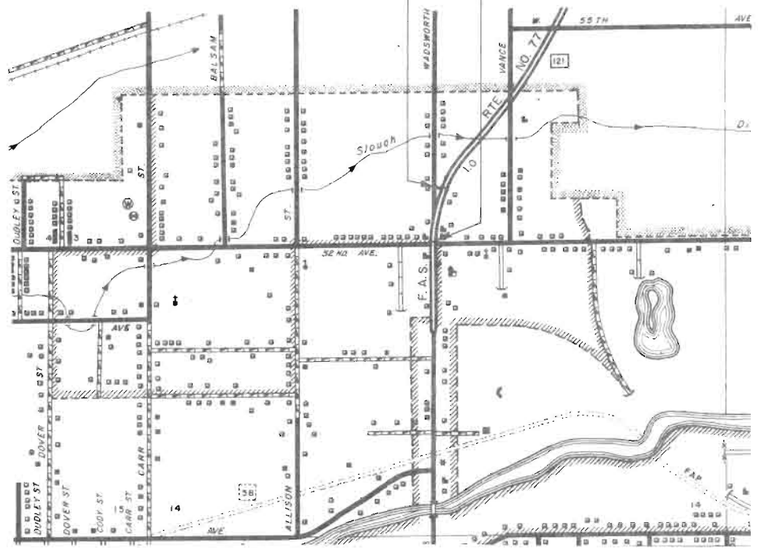
INACTIVE

Construction Traffic Signs (2 Sheets)	Jan. 14, 1963	M-6-B
Backfill Around Structures	May 1, 1962	M-16-A
Curbs & Gutters (Rev. for this project only)	April 5, 1963	M-84-A

C 11-0121-30

STA. 476+65 BEGIN C 11-0121-30=
STA. 476+65 ON S-SG 0077(2)

STA. 480+20 END C 11-0121-30=
STA. 480+20 ON S-SG 0077(2)



0 1/4 1/2 1

SCALE OF MILES

N

C 01-0002-23

STA. 1+20 BEGIN C 01-0002-23=
STA. 1+20 ON U 005-3 (15)

STA. 6+85 END C 01-0002-23=
STA. 6+85 ON U 005-3 (15)

0 1/4 1/2

SCALE OF MILES

SEE SPECIAL PROVISIONS FOR NOTICE TO BIDDERS

COLORADO DEPARTMENT OF HIGHWAYS

APPROVED: [signature] 4-23-63
STATE ENGINEER DATE

W.E.M.

SUMMARY OF APPROXIMATE QUANTITIES

FEDERAL ROAD REGION NO	DIVISION	COMB. PROJ NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	C01-0002-23 C11-0121-30	2	

SPECIFICATION ITEM NO.	ITEM	UNIT	C01-0002-23 COLFAX AVE. AND FEDERAL BLVD.	C11-0121-30 WADSWORTH AND 52nd AVE.	COMB. PROJECT TOTALS
11	RESET METAL APRONS	EACH		1	1
11	REMOVAL OF OBSTRUCTIONS	LUMP SUM	PRORATED	PRORATED	•
13	UNCLASSIFIED EXCAVATION	CU. YD.	405	345	750
17	WETTING	M GAL	33	22	55
23	SUBBASE MATERIAL (CLASS 1)	TON	505	495	1,000
26	GRAVEL OR CRUSHED ROCK SURFACING (GRADING C)	TON	360	140	500
29	ASPHALT (85-100 PENETRATION) (TACK COAT)	TON	0.6	0.4	1
30	ASPHALTIC ROAD MATERIAL M.C. (PRIME)	GAL	320	250	570
30	ASPHALTIC ROAD MATERIAL R.C. (SEAL)	GAL	120		120
31	STONE SCREENINGS (TYPE I) LIMESTONE	TON	5		5
32	PLANT MIXED ASPHALTIC SURFACING	TON	142	98	240
53	18" CORRUGATED METAL CULVERT PIPE	LIN FT.		9	19
84	CONCRETE CURB (TYPE I)	LIN FT.	155		155
84	CONCRETE CURB (TYPE II)	LIN FT.	440		440
84	CONCRETE COMB. CURB & GUTTER (TYPE I)	LIN FT.		345	345
84	CONCRETE COMB. CURB & GUTTER (TYPE II)	LIN FT.	665	660	1325
	STATE FORCES				
	SIGNING AND STRIPING ENTIRE PROJECT	LUMP SUM	•	•	•

FEDERAL ROAD REGION NO.	DISTRICT	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	C01-0002-23 C11-0121-30	3	

GENERAL NOTES

This Project is to be constructed in conformity with the Standard Specifications of the Colorado Department of Highways, adopted January 1, 1958.

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

For preliminary plan quantities of Asphaltic Road Materials the following Rates were used:

Prime Coat - MC . . . . . @ 0.4 Gals. per sq. yd.
Plant Mixed Asphaltic Pavement . . . . @ 110 Lbs. per Sq. Yd. per inch

Rate of application and grade of Asphaltic Material shall be as determined by the Engineer at time of application.

Thickness of Subbase, Surfacing and Asphaltic Pavement Materials, as shown on plans, is approximate only. These materials are to be placed to fit existing construction.

During construction of this project, traffic will be required to use the present traveled roadway and/or portions of new construction.

Application methods for liquid asphaltic material, which result in the discoloration of concrete pavement, curb or gutters, will not be permitted.

When ordered by the Engineer, a tack coat is to be applied between asphaltic courses to improve bond. Tack coat will be placed at the approximate rate of 0.10 gallon per square yard if required.

Guard Posts encroaching on Construction will be removed by State Maintenance Forces.

SURFACING PLAN

STATION	SOURCE AND AVAILABLE	QUANTITY TONS Plant Mixed Asphaltic Top Course	QUANTITY TONS Plant Mixed Asphaltic Bottom Course	QUANTITY TONS Base Course
1+20 to 3+15 Lt. 2+90 - 6+75 Lt. 1+36 - 2+26 Rt.	Undesignated	24 33 3	31 44 5	86 120 12
Backfill Median (2" Thick)				92
C01-0002-23 TOTALS		60	80	310
476+65 to 476+90 476+90 - 480+10 478+40 - 480+20		1 40 7	1 40 7	1 96 17
Backfill Medians (2" Thick)				9
C11-0121-30 TOTALS		48	48	123
Combined Totals		108	128	433

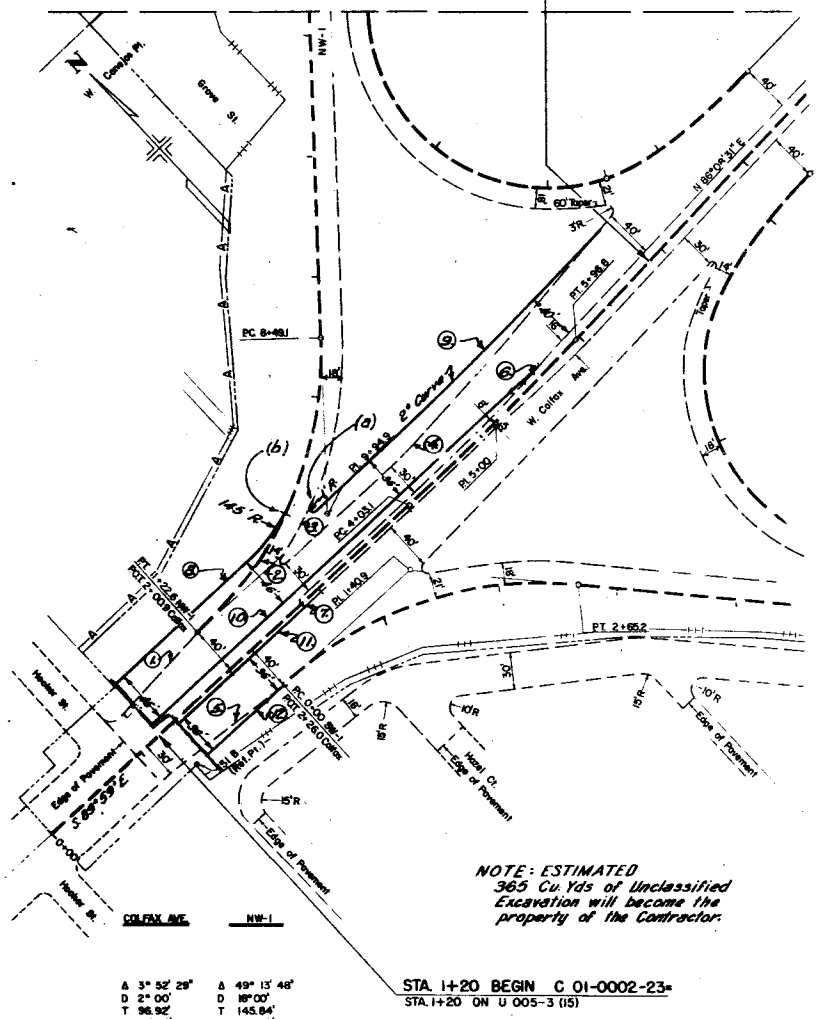
SUBBASE MATERIAL PLAN

STATION	SOURCE AND AVAILABLE	THICKNESS Inches	QUANTITY TONS Class 1
1+20 to 3+15 2+90 - 6+75 1+36 - 2+26	Undesignated	12 12 12	171 239 24
Estimated For: Correcting Irregularities			43
C01-0002-23 TOTALS			477
476+65 to 476+90 476+90 - 480+10 478+40 - 480+20		15 15 15	3 359 63
Estimated For: Correcting Irregularities			43
C11-0121-30 TOTALS			468
Combined Totals			945

FEDERAL ROAD REGION NO.	DIVISION	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLORADO	C 01-0002-23	4	

PLAN

STA. 6+85 END C 01-0002-23
STA. 6+85 ON U 005-3 (15)



NOTE: ESTIMATED
365 Cu. Yds of Unclassified Excavation will become the property of the Contractor.

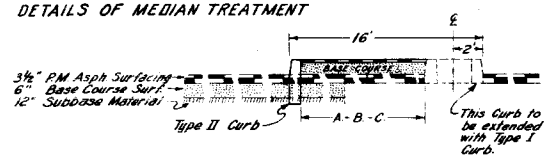
STA. 1+20 BEGIN C 01-0002-23
STA. 1+20 ON U 005-3 (15)

Δ	3° 32' 29"	Δ	49° 13' 48"
D	2° 00'	D	19° 00'
T	96.92'	T	145.84'
L	193.74'	L	273.50'
R	2865.00'	R	348.33'

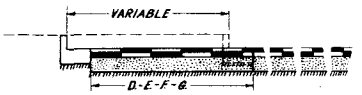
TABULATION OF CONCRETE CURB AND GUTTER

NOTE NO.	STATION	SIDE	# REMOVE LIN. FT. Curb & Gutter	# REMOVE LIN. FT. Gutter	# REMOVE LIN. FT. Curb	BUILD LIN. FT. Curb & Gutter Type II	BUILD LIN. FT. Barrier Curb Type I	BUILD LIN. FT. Barrier Curb Type II
1.	1+20 to 2+60	Lt.	140					
2.	2+60 - 3+25	Lt.		70				
3.	2+90 - 3+45	Lt.			50			
4.	2+90 - 6+75	Lt.	390					
5.	1+36 - 2+26	Rt.	90					
6.	5+40 - 5+60	Lt.			20			
7.	2+80 - 2+90	Rt.		10				
8.	1+20 - 3+25	Lt.				210		
9.	3+35 - 6+75	Lt.				340		
10.	1+20 - 5+60	Lt.						440
11.	1+35 - 2+90	Rt.					155	
12.	1+35 - 2+50	Rt.				115		
	# Quantities are approximate only and shall be paid for under Item 11, Removal of Obstructions.							
	TOTALS		#620	#80	#70	665	155	440

DETAILS OF MEDIAN TREATMENT



DETAILS OF WIDENING

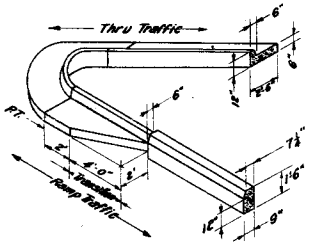


A.	= Plant Mixed Asphaltic Surfacing (1" Thick)	0.055	Tons per Sq. Yd.
B.	= Seal Coat R.C.	0.30	Gal. per Sq. Yd.
C.	= Stone Screenings (Type I)	22	Lbs. per Sq. Yd.
* D.	= Plant Mixed Asphaltic Surfacing (Two Courses)	0.195	Tons per Sq. Yd.
E.	= Prime Coat M.C.	0.40	Gal. per Sq. Yd.
F.	= Base Course (6" thick)	0.30	Tons per Sq. Yd.
G.	= Subbase Material (12" thick)	0.60	Tons per Sq. Yd.

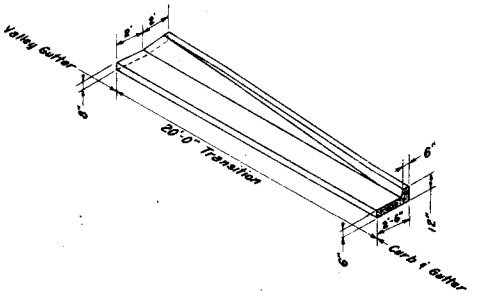
* 1½" Top Course ..... 0.084 Tons per Sq. Yd.
2" Bottom Course.. 0.111 Tons per Sq. Yd.

DETAILS OF TRANSITIONS

(a) FROM CURB & GUTTER (TYPE II) TO BARRIER CURB



(b) FROM VALLEY GUTTER TO CURB & GUTTER (TYPE II)



FED. ROAD DIST. NO.	DIST.	PROJ. NO.	SHEET NO.	TOTAL SHEETS
9	COLO.	C11-0121-30	5	

TABULATION OF CONCRETE CURB & GUTTER

Note No.	STATION	SIDE	*REMOVE Lin. Ft.	BUILD Type I	LIN. FT. Type II
1.	476+65 - 476+90	Rt.	30		25
2.	476+90 - 477+35	Rt.	60		
3.	477+48 - 480+05	Rt.	375		
4.	478+40 - 480+10	Lt & Rt.	350	345	
5.	476+90 - 477+50	Rt.			110
6.	477+30 - 480+30	Rt.			345
7.	477+70 - 479+40	Rt.			180
	TOTALS		* 815	345	660

* Quantities are approximate only and shall be paid for under Item 11, Removal of Obstructions.

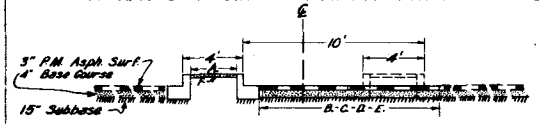
STRUCTURE REQUIREMENTS

477+07 - Extend 18" Cross Culvert 18' Rt.

Req'd: 18 Lin. Ft. 18" Corrugated Metal Culvert Pipe
1 Lin. Ft. 18" C.M.P. Allowance for External Connecting Band.

1 Ea. Reset 18" Metal Apron

DETAILS OF MEDIAN TREATMENT STA. 478+ to 480+



DETAILS OF WIDENING STA. 477+ to 480+ Rt.

DETAILS OF RAMP STA. 477+ Rt.

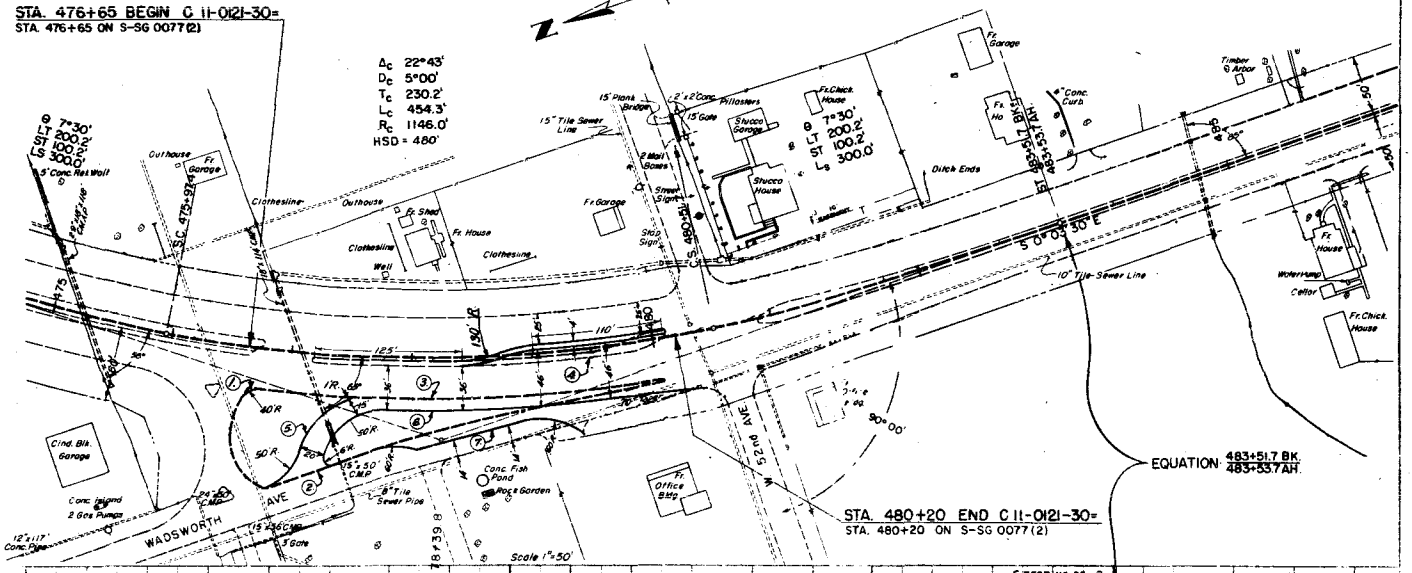
A.	= Prime Coat MC	0.20 Gal per Sq. Yd.
B.	= Prime Coat MC	0.40 Gal per Sq. Yd.
C.	= Plant Mixed Asphaltic Surfacing (Two 1½" Courses)*	0.165 Ton per Sq. Yd.
D.	= Base Course Surfacing (6" thick)	0.20 Ton per Sq. Yd.
E.	= Subbase Material (15" thick)	0.75 Ton per Sq. Yd.
F.	= 2" Base Course Surfacing	0.10 Ton per Sq. Yd.

*0.0825 Ton per Sq. Yd. each course.

Δ 37°43' Lt.
T_s 542.4'

STA. 476+65 BEGIN C 11-0121-30=
STA. 476+65 ON S-SG 0077(2)

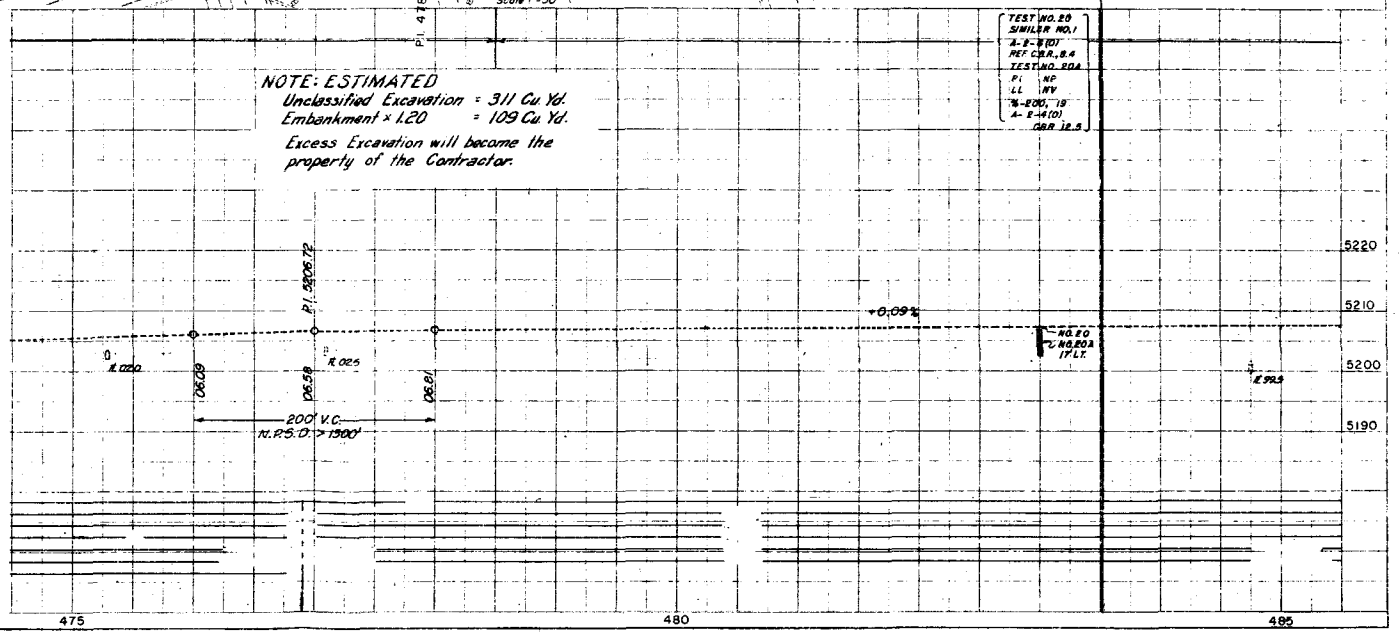
Δ_c 22°43'
D_c 5°00'
T_c 230.2'
L_c 454.3'
R_c 1146.0'
HSD = 480'



EQUATION 483+51.7 BK.
483+33.7 AH.

STA. 480+20 END C 11-0121-30=
STA. 480+20 ON S-SG 0077(2)

NOTE: ESTIMATED
Unclassified Excavation = 311 Cu. Yd.
Embankment × 1.20 = 109 Cu. Yd.
Excess Excavation will become the property of the Contractor.



STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS

STANDARD M-6-B

(SHEET 1 OF 2 SHEETS)

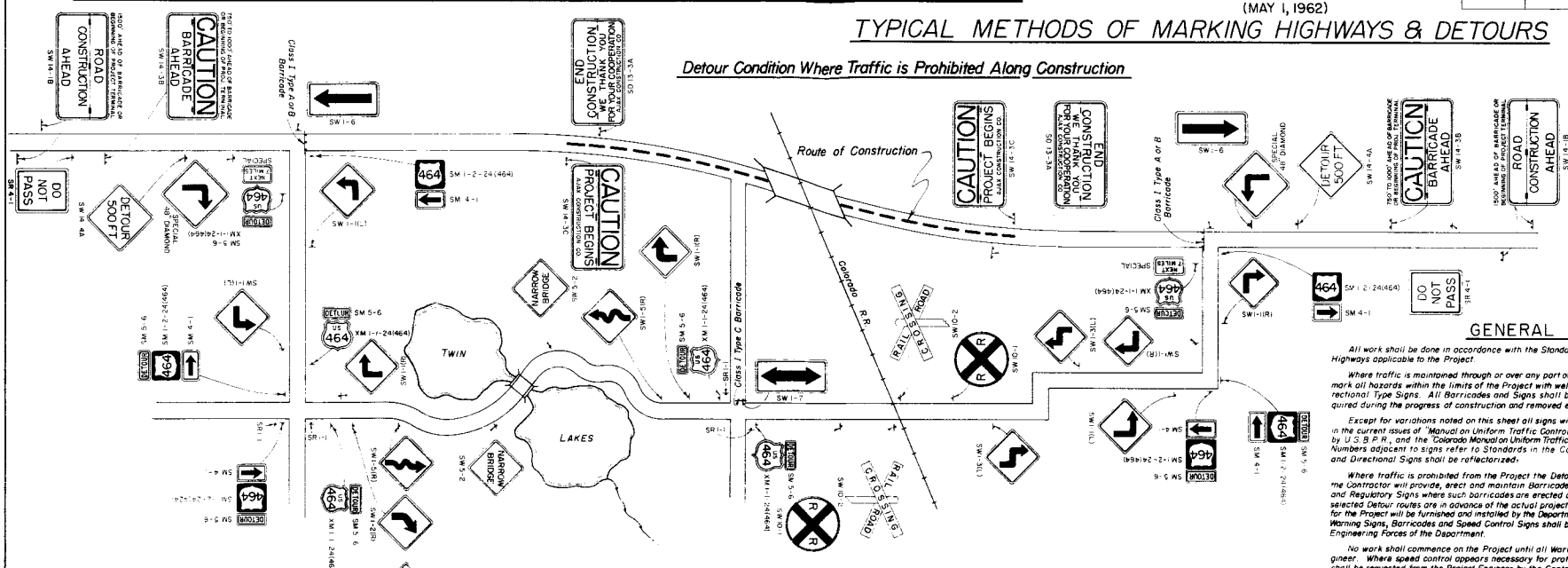
(MAY 1, 1962)

FED. ROAD REG. NO.	DIVISION	PROJECT NO.	SHEET NO.
9	COLO.	[redacted]	[redacted]

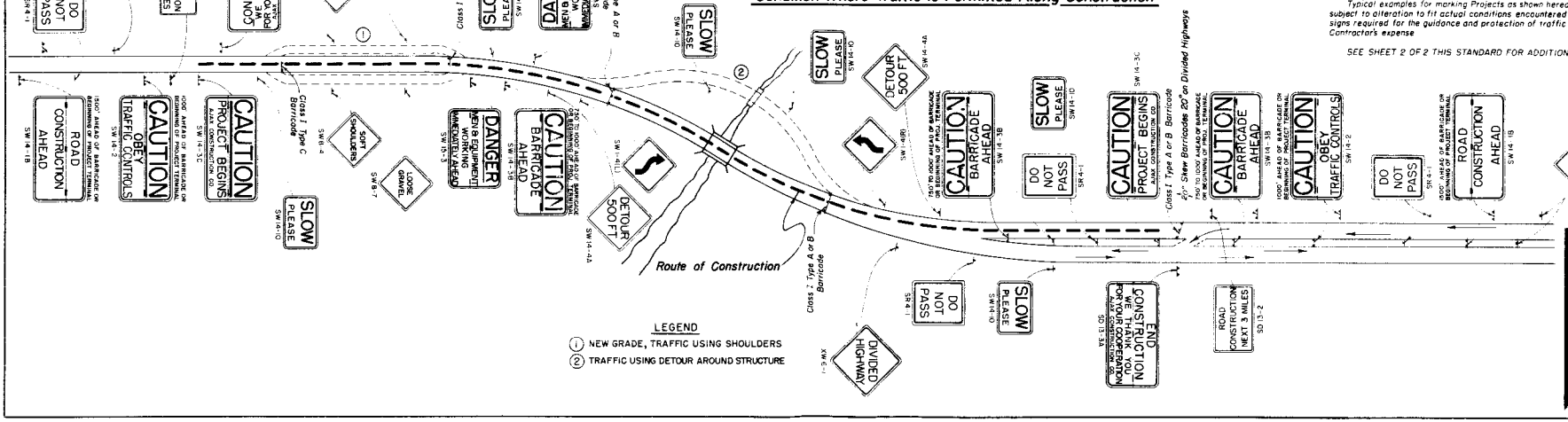
TYPICAL METHODS OF MARKING HIGHWAYS & DETOURS

REVISIONS		
1-1-63	GENERAL REV.	L.E.D.

Detour Condition Where Traffic is Prohibited Along Construction



Condition Where Traffic is Permitted Along Construction



LEGEND

(1) NEW GRADE, TRAFFIC USING SHOULDERS

(2) TRAFFIC USING DETOUR AROUND STRUCTURE

GENERAL NOTES

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

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

Except for variations noted on this sheet all signs will be in conformity with the specification outlined in the current issues of "Manual on Uniform Traffic Control Devices for Streets & Highways," issued by U.S.B.P.R., and the "Colorado Manual on Uniform Traffic Control Devices for Streets & Highways." Numbers adjacent to signs refer to Standards in the Colorado manual. Standard Warning, Regulatory and Directional Signs shall be reflectorized.

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

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

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

Where two identical type signs are used for dual posting they are to be staggered on the two sides of the Highway for at least a distance of 75' to avoid a funneling effect.

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

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

COLORADO
DEPARTMENT OF HIGHWAYS

Construction Traffic Signs

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

STANDARD ROADWAY CONSTRUCTION TRAFFIC SIGNS

STANDARD M-6-B

(SHEET 2 OF 2 SHEETS)

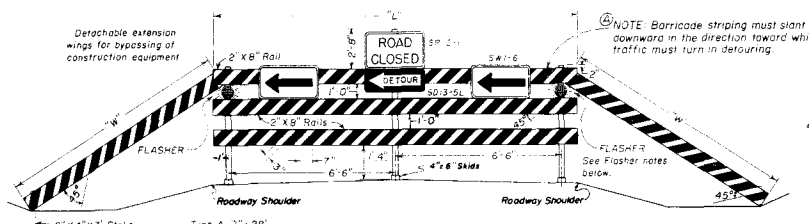
(MAY 1, 1962)

FEDERAL ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.
9	COLORADO	[redacted]	[redacted]

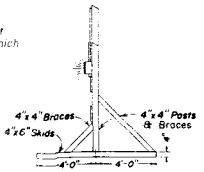
REVISIONS		
5-16-62	Rev. Margin & Border Color	L.E.O.
1-14-63	General Rev.	L.E.O.

DETAILS OF BARRICADES

Class I
Type A or B
(Road Closed)

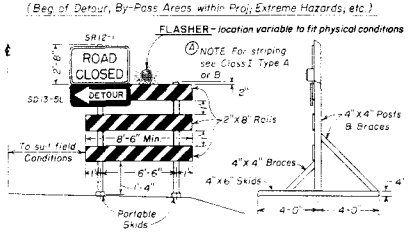


(A) NOTE: Barricade striping must slant downward in the direction toward which traffic must turn in detouring.



End View

Class I
Type C
(Beg. of Detour, By-Pass Areas within Proj; Extreme Hazards, etc.)



End View

NOTE

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

NOTE: Alternate materials or other reflective elements on Construction Traffic Signs and Barricades will be permitted only after approval of such material by the Department.

SPECIFICATIONS

PAINT - All paint and methods of painting shall be in conformity with Item 38 of the Standard Specifications

STRIPING - Planking and Wings on all Barricades shall be painted with Maintenance Flat Black on both sides before adding Reflective Strips.
Reflective Strips shall be "Cutout Smooth Surface Yellow," of a type approved by the Department, 3" wide and spaced 7" apart, as shown in the detail.

Diversion of traffic will be accomplished as follows:
1- Stripes for Barricades diverting traffic to the left shall start on the left hand side of the lower plank and progress up to the right with the stripes making an angle of 45 degrees with the horizontal axis of the board as shown in the detail. Traffic diversion to the right will be just the opposite.
2 - Stripes on Barricades diverting traffic in both directions shall begin at the center of the lower plank and progress down in both directions.

TIMBER - All Timber used shall conform to the Standard Specifications for Miscellaneous Untreated Timber.

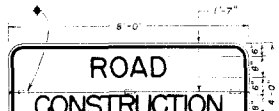
Planking	2" x 6"	S4S
Posts (Barricades)	4" x 4"	S4S
Posts (Signs)	4"x4" or 6" x 6"	S4S

Barricades may be either portable as shown or fixed with posts set into the ground.

All skids, braces and posts to be painted yellow and nailed together with No 20d nails.

Bases to be weighted where necessary to provide stability

DETAILS OF CONSTRUCTION SIGNS



"A" (SW14-1B)

"B" (SW14-2)

"C" (SW14-3B)

SEE DETAIL

MARGIN AND BORDER COLOR

Signs "A" through "F"
Upper Portion - Margin - Same as Background
Border - Same as Legend
Lower Portion - Margin - Same as Background
Border - Same as Legend

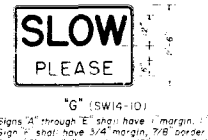
Signs "G" and "K"
Margin - Reflectorized "Smooth Surface Yellow"
Border - Painted Black

Signs "I" and "J"
Margin - Reflectorized White
Border - Painted Black

"D" (SW14-3C)

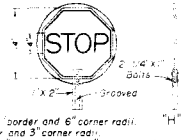
"E" (SW16-3)

"F" (SD3-3A)

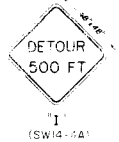


"G" (SW14-1D)

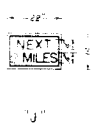
Signs "A" through "E" shall have 1" margin, 1" border and 6" corner radii.
Sign "F" shall have 3/4" margin, 7/8" border and 3" corner radii.
Signs "G" and "K" shall have 1/2" margin, 3/4" border and 1 1/8" corner radii.
Sign "J" shall have 3/4" margin, 1 1/4" border and 3" corner radii.



"H"



"I" (SW14-4A)

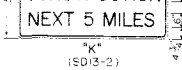


"J"

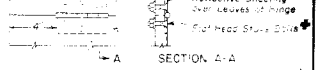
NOTES

1. Signs "A" through "E" shall be of the hinge and tote type to facilitate the [illegible] sign when the need is not prevalent. These signs shall be hinged with 3-4" Butt Hinges (typ. on)
2. The reflective sheeting used on the sign background shall be placed over the leaves of the hinges.
3. Hinges shall be fastened to the sign with flat head stove bolts having a flat washer between the nut on back of sign.
4. All hinges, bolts, nuts and washers to be rust resistant.
5. Sign panels to be held in the open position with hooks and eyes or other approved locking devices.
6. 90° Countersunk Steel or Aluminum Lock Bolt Fasteners with Collars suitable for use in wood may be used in lieu of stove bolts.

DETAIL I



"K" (SD13-2)



DETAILS OF SIGN AND BEACON FABRICATION AND USAGE

Construction Signs "A" through "G" and "K" shall be made of 5/8" Plywood or other material approved by the Department and as per details above.

Signs having reflectorized Yellow or Red surfaces shall be fabricated from "Flexible Reflective Sheeting of the "Non-Exposed Lens" type approved by the Department. Signs having reflectorized White surfaces shall be fabricated from "Flexible Reflective Sheeting of the "Exposed Lens" type approved by the Department.

Construction Sign "A" - Reflectorized Yellow background with painted Black lettering.

Construction Signs "B" through "D" Top background to be reflectorized "Smooth Surface Red" with the legend and 1" underline to be a White process paint. Balance of lettering to be painted Black over a reflectorized Yellow background.

Construction Sign "E" - The word "DANGER" and the 1" underline only are to be of a White process paint over a reflectorized "Smooth Surface Red." Balance of lettering to be painted Black over a reflectorized Yellow background.

Construction Sign "F" - The words "End Construction" and "Contractors name" shall be painted Black over a reflectorized White background. Balance of lettering to be applied with a White process paint over a reflectorized "Smooth Surface Red" background.

Construction Sign "G" - The legend to be painted Black over a reflectorized "Smooth Surface Yellow" background.

Flagman Warning Sign "H" - This sign shall be made of Plastic or other lightweight material, approved by the Department, having a painted Red background with White lettering on the "Stop" side and a painted Green background with White lettering on the "Go" side. Handle to be grooved on one side to indicate reading of sign to Flagman. This sign will be used whenever Flagmen are necessary. Sign to be reflectorized if used to stop traffic at night.

Detour Warning Sign "I" - This sign shall be made of 3/8" (Min.) Plywood or other material suitable to the Department. Legend to be painted Black on a reflectorized "Smooth Surface Yellow" background.

Construction Sign "J" - This sign shall be made of 3/8" (Min.) Plywood or other suitable material. Legend to be painted Black on a reflectorized White background 3/4" x 9" metal sides to be placed between "NEXT ... MILES," spaced so as to accommodate appropriate sized numerals. Numerals calculated to the nearest Mile.

Construction Sign "K" - Reflectorized White background with painted Black lettering.

Signs "A" through "E" and "G" shall be painted on the backside with one coat of white primer and one coat of yellow enamel.

Signs "F", "J" and "K" shall be given 2 coats of white paint on the backside.

Construction Signs shall be placed as follows:

Sign "A" - This is the first advance warning sign and shall be placed 1,500 feet ahead of barricade or beginning of project terminal and on both sides of the traveled way in all cases.

Sign "B" - This is the second advance warning sign and shall be placed 1,000 feet ahead of barricade or beginning of project terminal and on both sides of the traveled way on divided highways and singly on two-lane highways.

Sign "C" - This is the third advance warning sign in cases where barricades are used and shall be placed 750 to 1,000 feet ahead of barricade or beginning of project terminal and on both sides of the traveled way on divided highways and singly on two-lane highways.

Sign "D" - This sign shall be placed to mark the beginning of the Project. It shall be placed singly and may be placed opposite barricade if desirable.

Sign "E" - This sign shall be placed 500 feet ahead of the situation being advised of.

Sign "F" - This sign shall be placed to mark the end of the Project. It shall be placed singly and may be placed opposite barricade if desirable.

Sign "G" - This sign shall be used frequently within the limits of the Project.

Sign "K" - This sign shall be erected at the limits of any project more than 2 miles in extent, where traffic is maintained through the job.

Flares and Torches shall be either of the oil burning or electrical type approved by the Department and shall be placed 3 to 5 feet ahead of the object to be illuminated. Particular care shall be taken to protect all signs and barricades from smoke and smudge arising from the use thereof.

Flashers used on the Barricades shall be of the Battery or Electrical Type and shall have no less than a 4" diameter lens. The illuminating element in a flashing yellow beacon or signal shall be flashed continuously at a rate between 50 to 70 flashes per minute with the "on" time being at least 25% of the cycle and which will be clearly distinguishable to traffic. The duration in which Flashers will be left in operation will be governed by field conditions and subject to approval by the Engineer.

All material shall be sound and suitable. Both faces, signs, symbols and lettering shown hereon will be of good workmanship and well maintained. Uneven lettering will not be accepted.

Alternate methods of processing signs or the substitution of symbols or other reflecting elements for painted symbols will be permitted only after approval of such methods or materials by the Department.

The Department shall furnish and install the following as required OUTSIDE THE LIMITS of the Project:

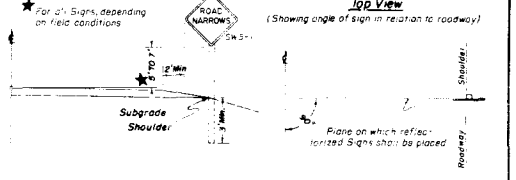
1.	"ROAD CONSTRUCTION AHEAD"	Minimum 4
2.	"CAUTION OBEY TRAFFIC CONTROLS"	Minimum 2
3.	"CAUTION BARRICADE AHEAD"	As Required
4.	Standard Warning, Guide & Directional Signs	As Required
5.	"ROAD CONSTRUCTION NEXT 5 MILES"	As Required

The Contractor shall furnish and install the following as required WITHIN THE LIMITS of the Project:

	All Barricades	As Required
2.	"CAUTION PROJECT BEGINS"	Minimum 2
3.	"DANGER MEN & EQUIPMENT WORKING IMMEDIATELY AHEAD"	As Required
4.	"END CONSTRUCTION WE THANK YOU FOR YOUR COOPERATION"	Minimum 2
5.	"SLOW PLEASE"	As Required
6.	Standard Warning & Directional Signs	As Required
7.	Approved Directional Arrows & Regulatory Signs for Barricades	As Required
8.	Torches and Flares as follows: Class I Type A or B Barricade	Minimum 3
	Class I Type C Barricade	Minimum 1
9.	Flashers - Class I Type A or B Barricade	2 Required
	Class I Type C Barricade	As Required

At the request of the Contractor layouts of signs will be furnished by the Traffic Operations Section changing the details as to letter size, symbols, spacing, etc. which are required for these signs.

Position of Signs Relative to Roadbed & Hazards



NOTE

Warning Signs to be made of 3/8" (Min.) plywood or other material suitable to the Department and shall be reflectorized.

Location to be governed by field conditions. Exact location to be staked by the Engineer in all cases warning signs are to be placed well in advance of hazard, the distance depending on topography, and existing approach speeds.

For all signs prefixed with the letters "R" "M" or "W" refer to the "Colorado Manual on Uniform Traffic Control Devices for Streets and Highways" in current issue.

COLORADO
DEPARTMENT OF HIGHWAYS

Construction Traffic Signs

Designed by J.C.R.	Approved by [illegible]
Made by J.C.R.	Engineer, Surveys & Plans
Checked by	Date: July 22, 1955

REVISIONS

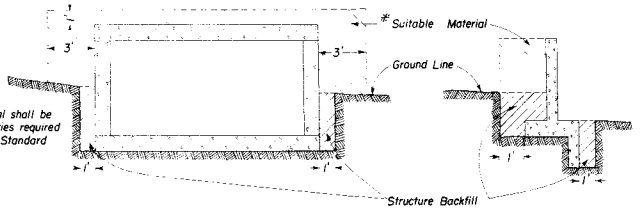
STANDARD M-16-A

(MAY 1, 1962)

FED. ROAD REGION NO.	DIVISION	PROJECT NO.	SHEET NO.
9	COLO.	[redacted]	[redacted]

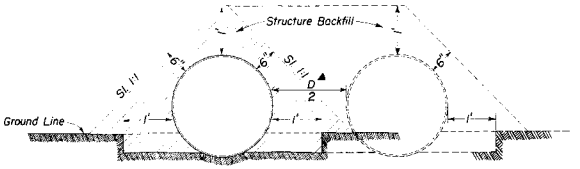
REVISION

CONCRETE BOX CULVERTS & WINGWALLS



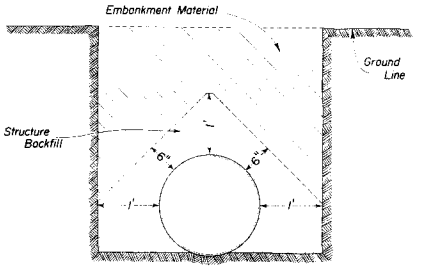
* Suitable Material shall be compacted to densities required for Item 17 of the Standard Specifications.

CIRCULAR CONDUIT



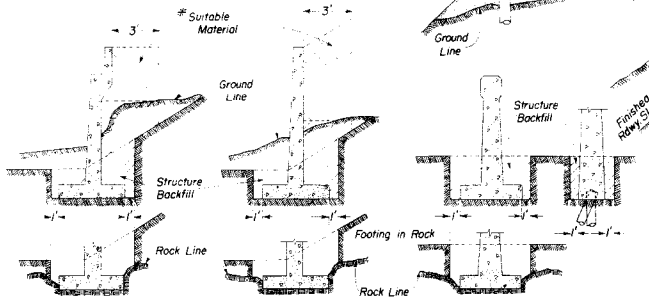
▲ When two or more conduits are layed side by side, the distance between conduits shall be 1/2 the conduit diameter but not less than 1'-0"

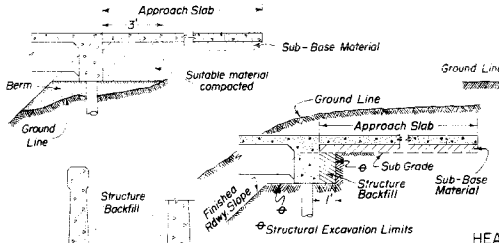
SIPHONS OR CONDUIT IN TRENCH



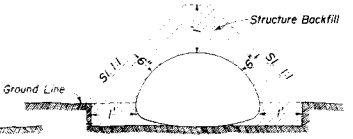
PIERS, ABUTMENTS, RETAINING WALLS ETC.

All material that is to be compacted shall be placed in horizontal layers not more than 6" inches in depth and compacted before the next layer is placed. For Arches, Rigid Frames and Box Culverts the fill shall be brought up uniformly on both sides of the center of structure to avoid stresses in the structure caused by unsymmetrical loading.

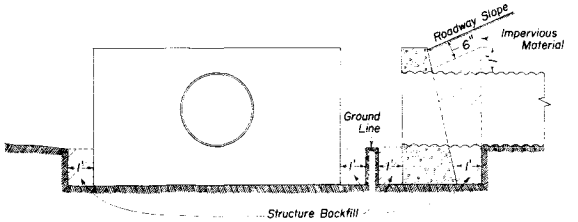




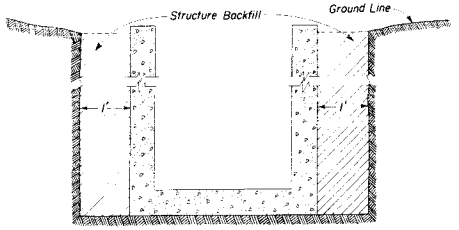
ELLIPTICAL OR ARCH CONDUIT

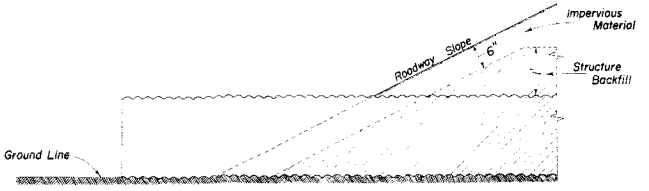


HEADWALLS AND END OF CULVERTS

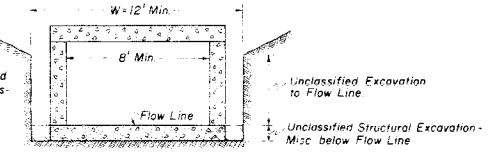


DROP INLETS, DIVISION BOXES, INTERCEPTING HEADWALLS ETC.





On all structures of 8' span or over, including extensions of old structures, excavation for structures shall be classified and paid for as "Unclassified Excavation" to Flow Line and "Unclassified Structural Excavation - Misc." below the Flow Line of box.



GENERAL NOTES

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

If, in the opinion of the Engineer, the material beneath the Structure is of such character as to cause unequal settlement along the length of the Structure, the material shall be removed to such a depth ordered, and backfilled with gravel or other suitable material and compacted in accordance with Item 16 of the Standard Specifications.

Suitable Material shall be any "Unclassified Excavation" material developed on the project except large rock, boulders or other materials considered by the Engineer to be undesirable for backfill around culverts, boxes etc.

For concrete box culverts located where roadway cross section is in Fill, embankment shall be built up and compacted to a point one (1) ft. above flow line of box. The trench shall then be excavated as shown to accommodate construction of the box.

COLORADO
DEPARTMENT OF HIGHWAYS

BACKFILL AROUND STRUCTURES

Designed by H.E.P.	Approved by [signature]
Made by D.M.E.	Bridge Engineer
Checked by L.E.O.	Date: May 2, 1958

STANDARD CURBS AND GUTTERS

STANDARD M-84-A

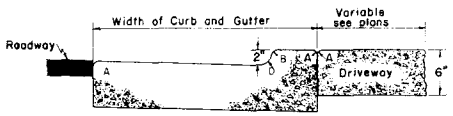
(MAY 1, 1962)

FED. ROAD REG. NO.	DIVISION	COMB. PROJECT NO.	SHEET NO.
9	COLO.	C 01-0002 - 23 C 11-0121 - 30	

REVISIONS		
3-25-63	Added Approach Slab Curbs.	C.R.S.
4-5-63	Rev. Barrier Curb	W.E.M.

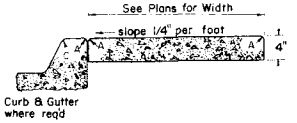
For this Project only →

CONCRETE PAVEMENT (DRIVEWAYS)

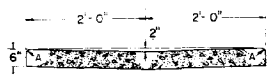


CONCRETE SIDEWALKS

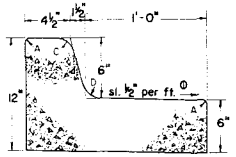
See Plans for Width



CONCRETE GUTTER

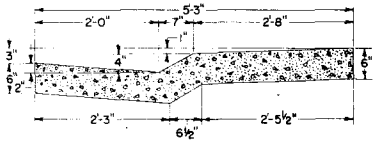


CONCRETE COMBINATION CURB AND GUTTER (6" Barrier-1' Gutter) (Type I)

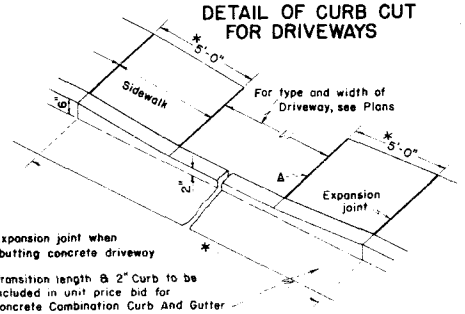


LEGEND FOR RADII	
A	= ⅛"
B	= 1"
C	= 1½"
D	= 1½" to 2"

CONCRETE COMBINATION CURB, GUTTER AND SIDEWALK (TYPE II-M)



DETAIL OF CURB CUT FOR DRIVEWAYS

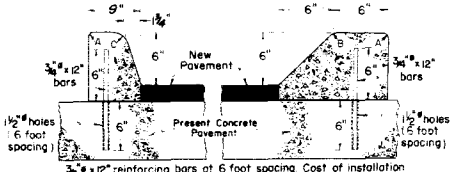


Δ Expansion joint when abutting concrete driveway

* Transition length & 2" Curb to be included in unit price bid for Concrete Combination Curb And Gutter

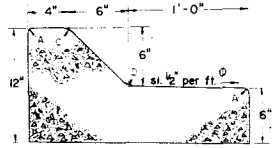
CONCRETE CURB (6" Barrier-Doweled) (Type I)

CONCRETE CURB (6" Mountable-Doweled) (Type I-M)



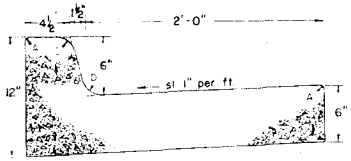
¾"ø x 12" reinforcing bars at 6 foot spacing. Cost of installation to be included in unit price bid for Curb. Bars to be grouted in 1½"ø holes in present concrete. Grout to consist of 2 parts clean sand and 1 part cement.

CONCRETE COMBINATION CURB AND GUTTER (6" Mountable-1' Gutter) (Type I-M)



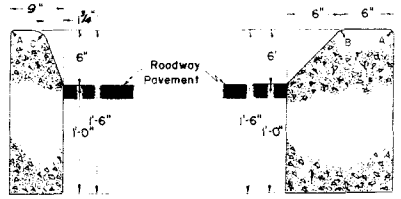
◊ Slope in opposite direction when required for curves or warped pavement sections.

CONCRETE COMBINATION CURB AND GUTTER (6" Barrier-2' Gutter) (Type II)

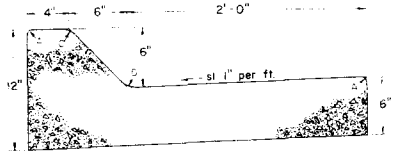


CONCRETE CURB (6" Barrier) (Type II)

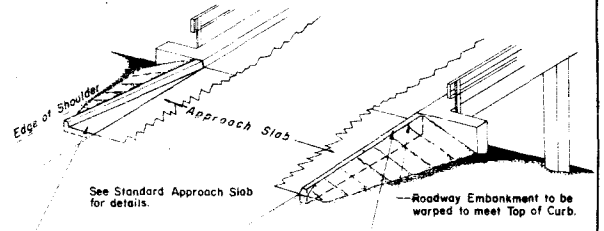
CONCRETE CURB (6" Mountable) (Type II-M)



CONCRETE COMBINATION CURB AND GUTTER (6" Mountable-2' Gutter) (Type II-M)

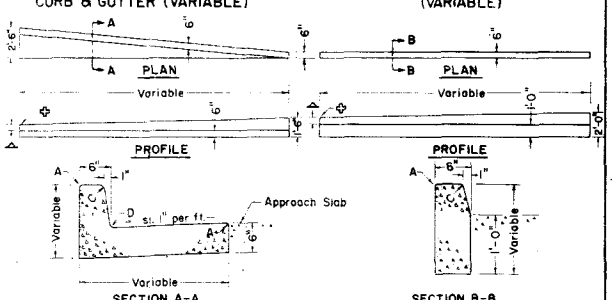


DETAILS OF CONCRETE COMBINATION CURB & GUTTER (VARIABLE) AND CONCRETE CURB (VARIABLE)



CONCRETE COMBINATION CURB & GUTTER (VARIABLE)

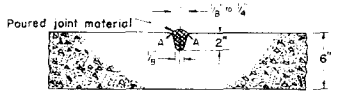
CONCRETE CURB (VARIABLE)



Δ 4" (To meet Asphaltic Shoulder Roll)
6" (To meet Concrete Combination Curb & Gutter)

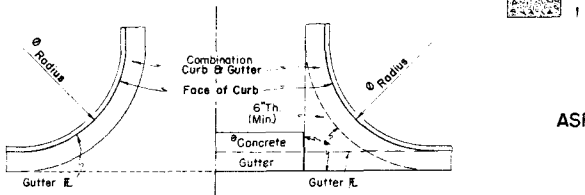
✣ Use 1½" R when no asphaltic or concrete curb is to be met. No radius required when meeting asphaltic or concrete curb.

TRANSVERSE WEAKENED PLANE JOINT FOR CONCRETE PAVEMENT (DRIVEWAYS)



This joint required where length of slab exceeds 15 feet.

CONSTRUCTION OF CONCRETE GUTTERS AT INTERSECTIONS



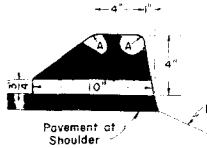
ø Length of Radius as shown elsewhere on Plans.

This section to be built when Concrete Gutter is not required.

This section to be built when øConcrete Gutter is required.

* This area shall be poured monolithically with curb and gutter and will be paid for as Concrete Pavement of specified thickness.

ASPHALTIC SHOULDER ROLL



NOTE:
0.647 x Specific Gravity of Asphalt = Tons per Station.

GENERAL NOTES

All work shall be done in accordance with the Specifications of the Colorado Department of Highways.

On Curves 3 degrees and sharper, Curbs and/or Gutters are to be placed on the Arc of the Curve unless otherwise noted on plans. A maximum chord length of 10 feet may be used when the degree of curve is less than 3 degrees.

COLORADO
DEPARTMENT OF HIGHWAYS

CURBS AND GUTTERS

Designed by	Approved by
Made by	
Checked by C.R.S.	Date: Dec. 29 19 58

STANDARD M-84-A