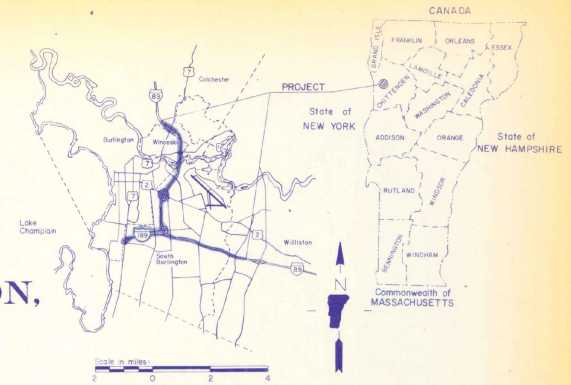
INDEX OF SHEETS

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

PAVEMENT OVERLAY

PROPOSED IMPROVEMENT
TOWNS OF WILLISTON, SOUTH BURLINGTON, BURLINGTON, WINOOSKI, & COLCHESTER
COUNTY OF CHITTENDEN
INTERSTATE ROUTES I-89 & I-189

MONTPELIER – ST. ALBANS ROAD



I 89-3 (51)

BEGINNING AT A POINT APPROXIMATELY 0.633 MILES EASTERLY OF THE WILLISTON – SOUTH BURLINGTON TOWN LINE AND EXTENDING IN A NORTHERLY DIRECTION 7.442 MILES.

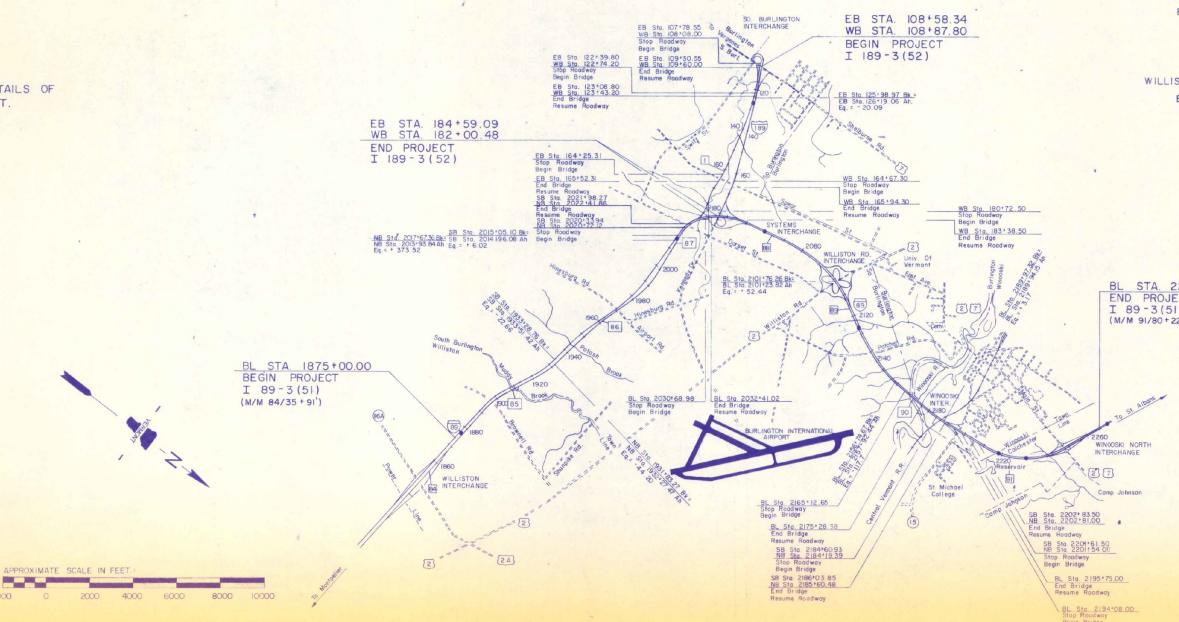
LENGTH OF ROADWAY	37,505.94	FEET	7.103 MILES
LENGTH OF BRIDGES	1,788.31	FEET	0.339 MILES
LENGTH OF PROJECT	39,294.25	FEET	7.442 MILES

I 189-3 (52)

BEGINNING AT A POINT APPROXIMATELY 72.21 FEET WESTERLY OF THE BURLINGTON – SOUTH BURLINGTON TOWN LINE AND EXTENDING IN A EASTERLY DIRECTION 1.410 MILES.

LENGTH OF ROADWAY	7,114.47	FEET	1.347 MILES
LENGTH OF BRIDGES	332.20	FEET	0.063 MILES
LENGTH OF PROJECT	7,446.67	FEET	1.410 MILES

NOTE: REFER TO SHEET 3 FOR DETAILS OF AREAS OF SPECIAL TREATMENT.



TRAFFIC DATA I 89-3(51)

WILLISTON – SYSTEMS INTERCHANGE
EST. 1982 ADT 16,250 VPD
EST. 1982 DHV 2,250 VPH
D 55 %
T 9 %

SYSTEMS – WILLISTON RD. INTERCHANGE
EST. 1981 ADT 25,350 VPD
EST. 1981 DHV 2,800 VPH
D 52 %
T 10 %

WILLISTON RD. – WINOOSKI INTERCHANGE
EST. 1981 ADT 26,350 VPD
EST. 1981 DHV 2,820 VPH
D 52 %
T 10 %

WINOOSKI – WINOOSKI NO. INTERCHANGE
EST. 1981 ADT 10,700 VPD
EST. 1981 DHV 1,650 VPH
D 59 %
T 10 %

TRAFFIC DATA I 89-3(52)

SO. BURLINGTON – SYSTEMS INTERCHANGE
EST. 1981 ADT 25,150 VPD
EST. 1981 DHV 2,800 VPH
D 57 %
T 8 %

CONVENTIONAL SIGNS

COUNTY LINE
TOWN LINE
LIMITS OF ACCESS
POINT OF ACCESS
FENCE LINE
STONE WALL
TRAVELED WAY
GUARD RAIL
RAILROAD
SURVEY LINE
CULVERT
POWER POLE
TELEPHONE POLE
TREES
PROPERTY LINE
R.O.W. TAKING LINE
SLOPE RIGHTS
TOP OF CUT
TOE OF SLOPE
MILE MARKER

These plans are subject to such engineering changes as may be required by the Federal Highway Administration or the Chief Engineer.

Construction is to be carried on in accordance with these plans and the Standard Specifications for Highway and Bridge Construction dated January 3, 1972 as approved by the Federal Highway Administration on December 28, 1971 for use on this project, including all subsequent revisions and such revised specification and special provisions as are incorporated in these plans.

SUBMITTED BY ORDER OF THE STATE HIGHWAY BOARD

APPROVED E. H. Stickney DATE 5/9/74
CHIEF ENGINEER

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____ DATE _____
DIVISION ENGINEER

PROJECT I 189-3(52) I № 89-3(51)

SHEET 1 OF 25 SHEETS

SRS 10/17/70

987-B I 89-3(51) & I 189-3(52)

TYPICAL SECTIONS

NOTE: REFER TO SHEET 3 FOR DETAILS OF AREAS OF SPECIAL TREATMENT.

2" BITUMINOUS CONCRETE PAVEMENT OVERLAY, ITEM 406.25, WEARING COURSE TYPE III (±1/4" FOR TOTAL THICKNESS) W/ TRUING COURSE - 1/2" AVERAGE DEPTH, ITEM 406.25.
FOR SHOULDER COMPOSITION, SEE SKETCH LOWER RIGHT.

BITUMINOUS SURFACE TREATMENT TYPE VI, 404.40.

3/4" OPEN GRADED ASPHALT FRICTION COURSE, ITEM 409.25
1 1/4" BITUMINOUS CONCRETE PAVEMENT, ITEM 406.25 } SEE NOTE AT UPPER LEFT

RUBBERIZED SLURRY SEAL (SEE SCHEDULE AT UPPER LEFT FOR AREAS OF THIS TREATMENT).
ASPHALT EMULSION FOR SLURRY SEAL, ITEM 405.10
AGGREGATE FOR SLURRY SEAL, ITEM 405.15, (26' WIDTH)
VULCANIZED RUBBER SHREDS, ITEM 405.20

EMULSIFIED ASPHALT, ITEM 404.65

REGULAR SLURRY SEAL (BRIDGES ONLY - ALL BRIDGES EXCEPT WINOOSKI RIVER BRIDGE AT M/M 90)
ASPHALT EMULSION FOR SLURRY SEAL, ITEM 403.10
AGGREGATE FOR SLURRY SEAL, GENERAL, ITEM 403.12

(PERMISSABLE TOLERANCES APPLY TO THICKNESS ONLY)

SPECIAL TREATMENT ON WINOOSKI RIVER BRIDGES AT M/M 90

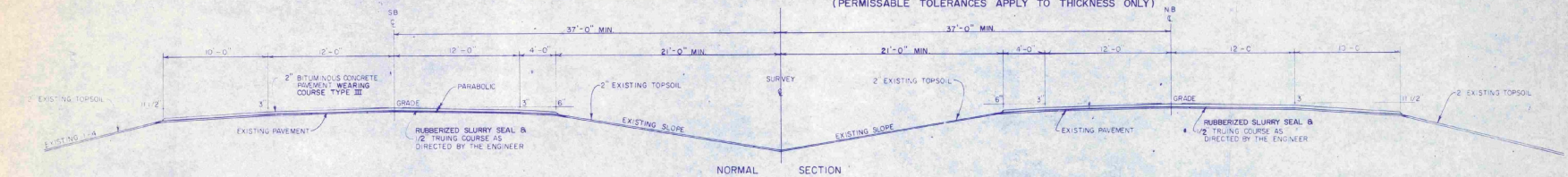
1/2" BITUMINOUS CONCRETE PAVEMENT (SPECIAL TYPE V MIX - SEE SPECIAL PROVISIONS)

EMULSIFIED ASPHALT

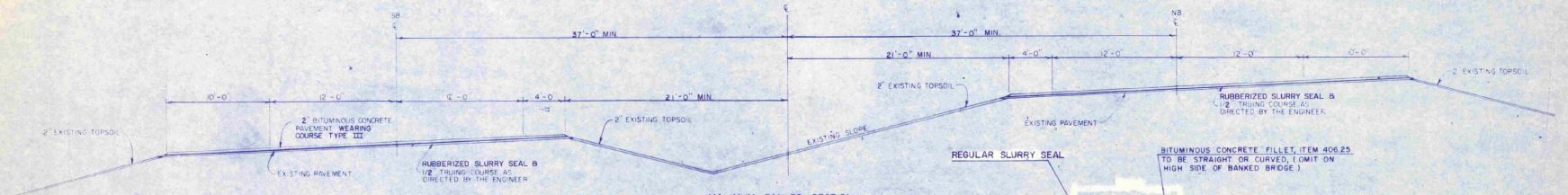
SEEDING, ITEM 651.10

%WT	LBS/ACRE	NAME	PURITY%	GERM%
41.67	25	CREEPING RED FESCUE	98	85
25.00	15	ALFALFA	99	85
8.33	5	RED TOP	92	85
16.67	10	PERENNIAL RYE GRASS	95	90
8.33	5	BIRDSFOOT TREFOIL (VAR EMPIRE)	98	80
100.00	60 LBS PER ACRE			

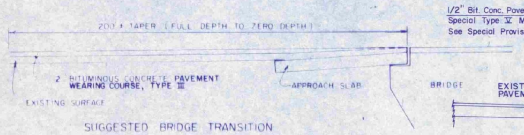
THE SEED MIXTURE SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE FROM ALL NOXIOUS WEED SEED.



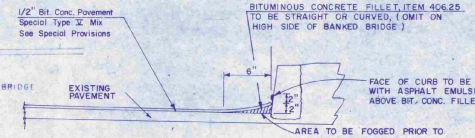
NORMAL SECTION



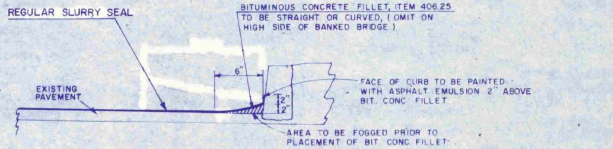
MAXIMUM BANKED SECTION



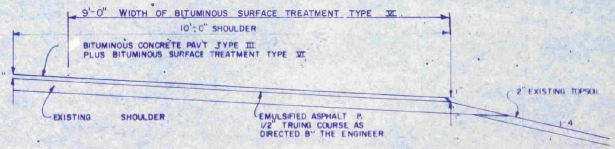
SUGGESTED BRIDGE TRANSITION

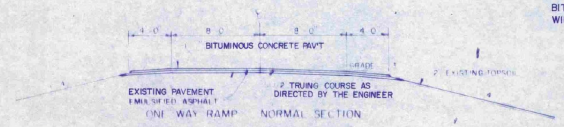


BITUMINOUS CONCRETE FILLET ON WINOOSKI RIVER BRIDGES AT M/M 90

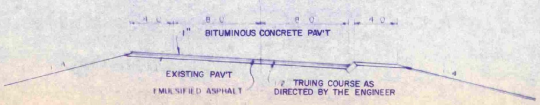


BITUMINOUS CONCRETE FILLET ON STRUCTURES (EXCEPT WINOOSKI RIVER BRIDGES AT M/M 90)

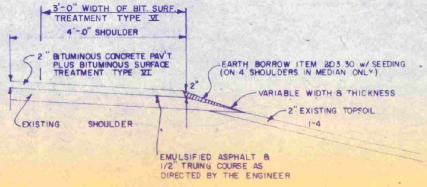




ONE WAY RAMP NORMAL SECTION



ONE WAY RAMP BANKED SECTION WITH SLOPE EDGING

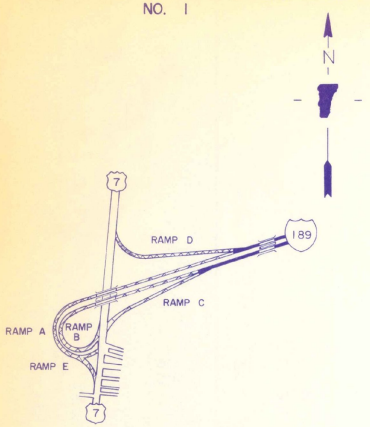


BURLINGTON - SO. BURLINGTON
WILLISTON - COLCHESTER

SURVEYED BY _____ DATE _____
DRAWN BY _____ DATE _____
TRACED BY _____ DATE _____

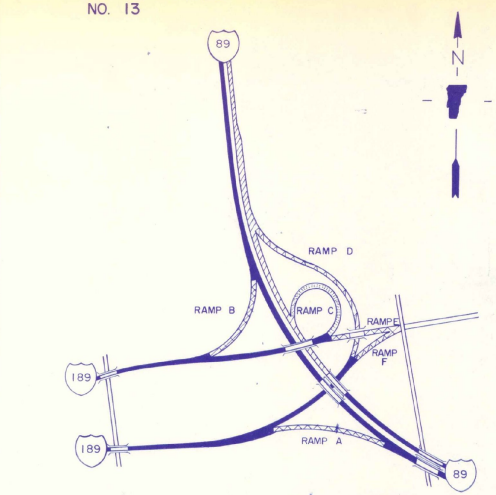
OVERLAY
PROJ. I-189-3(52)
NO. 89-3(51)
SHEET 2 OF 25

SOUTH BURLINGTON INTERCHANGE NO. 1



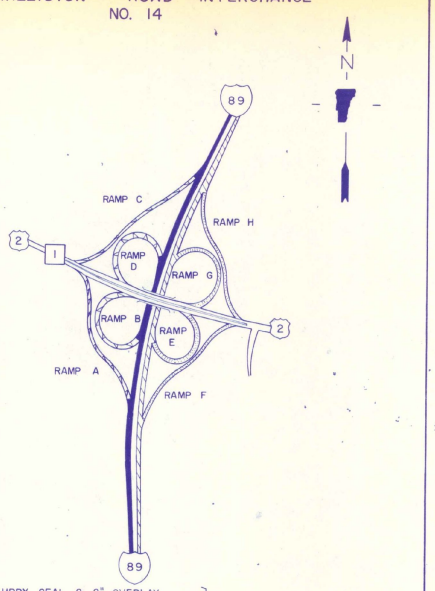
SLURRY SEAL & 2" OVERLAY
EMULSIFIED ASPHALT & 1" OVERLAY
} See typical sheet 2

SYSTEMS INTERCHANGE NO. 13

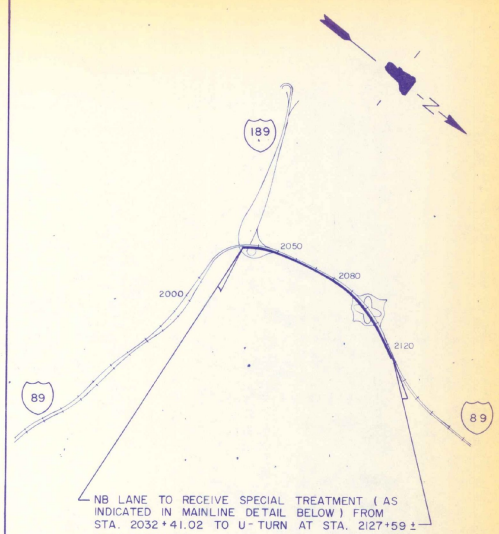


SLURRY SEAL & 2" OVERLAY
EMULSIFIED ASPHALT & 1" OVERLAY
} See typical sheet 2
SLURRY SEAL & 2" OVERLAY (See Mainline typical below)
EMULSIFIED ASPHALT & 1" OVERLAY (See Ramp typical below)

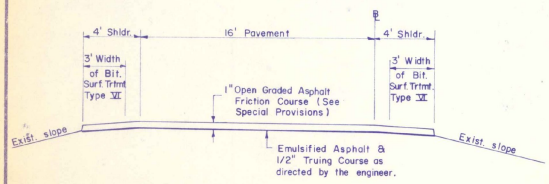
WILLISTON ROAD INTERCHANGE NO. 14



SLURRY SEAL & 2" OVERLAY
EMULSIFIED ASPHALT & 1" OVERLAY
} See typical sheet 2
SLURRY SEAL & 2" OVERLAY (See Mainline typical below)
EMULSIFIED ASPHALT & 1" OVERLAY (See Ramp typical below)



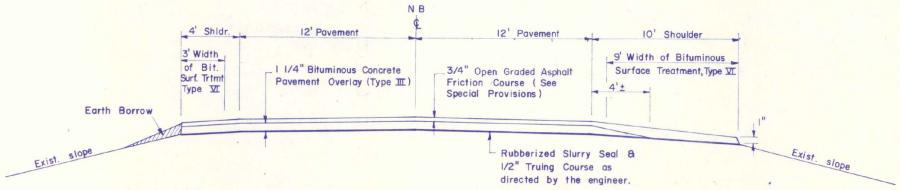
NB LANE TO RECEIVE SPECIAL TREATMENT (AS INDICATED IN MAINLINE DETAIL BELOW) FROM STA. 2032+41.02 TO U-TURN AT STA. 2127+59 ±
(M/M 87/40+157') (M/M 89/20+117')



TYPICAL RAMP SECTION
SPECIAL TREATMENT AREA

Ramps E,F,G,& H Interchange 14
Ramp C Interchange 13

Note: Truing course for all ramps will be Bituminous Concrete Pavement, Type III.



TYPICAL MAINLINE SECTION
SPECIAL TREATMENT AREA

NOTES:

1) Portions of mainline and ramps not shown above are to be treated in accordance with details on sheet 2.
2) See Sheet 2 for seeding and general notes.

DETAILS OF SPECIAL TREATMENT AREAS

SURVEYED BY _____ DATE _____
DRAWN BY R.M.M. DATE 4/74
TRACED BY S.R.S. DATE 4/74

BURLINGTON - SO. BURLINGTON
WILLISTON - COLCHESTER
PROJ. I NO. 189-3(52)
I 89-3(51)
SHEET 3 OF 25

D-7

QUANTITY SHEET

STATE OF VERMONT DEPARTMENT OF HIGHWAYS

Burlington-So. Burlington
Williston-Colchester

PROJECT NO. I 189-3 (52)
I 189-3 (51)

SUMMARY SHEET NO. _____ OF _____ 19 _____

APPROXIMATE SUMMARY OF QUANTITIES

		I 189-3(52)	I 89-3(51)	QUANTITIES GRAND TOTAL	UNIT	ITEMS	RMKS.	ITEM NO.
		100	1,400	1,500	CY	Earth Borrow	Est.	203.30
		100	400	500	CY	Granular Borrow	Est.	203.32
		114	395	509	CWT	Asphalt Emulsion for Slurry Seal		403.10
		22	74	96	TON	Aggregate for Slurry Seal, General		403.12
		5,650	30,550	36,200	CAL	Bituminous Surface Treatment, Type VI	83	404.40
		3,200	15,500	18,700	CAL	Emulsified Asphalt	85	409.65
		1,750	10,650	12,400	CWT	Asphalt Emulsion for Slurry Seal	36	605.10
		170	1,040	1,210	TON	Aggregate for Slurry Seal	5	605.15
		66	404	470	TON	Vulcanized Rubber Shreds	1	605.20
		8,010	44,210	52,220	TON	Bituminous Concrete Pavement	3	606.25
			2,150	2,150	TON	Open Graded Asphalt Friction Course	3	609.25
		3	15	18	EA	Changing Elevations of Drop Inlets, Catch Basins or Manholes	Est.	609.40
			1	1	LS	Structural Steel (31,340 lbs.)		506.94
		5	30	35	MR	All-Purpose Excavator Rental	Est.	608.25
		5	20	25	MR	Power Broom Rental	Est.	608.30
			1	1	TON	Dust & Ice Control w/Calcium Chloride	Est.	609.15
		100	600	700	MR	Uniformed Traffic Officers	Est.	630.10
			1	1	EA	Employee Traineeship		634.10
		0.15	0.85	1	LS	Mobilization		635.10
			1	1	LS	Traffic Control (I 89-3(51))		641.10
		1		1	LS	Traffic Control (I 189-3(52))		641.10
		25	130	155	LB	Spad	Est.	651.10
		100	100	200	SF	Traffic Signs, Type A		675.20
		100	100	200	SF	Traffic Signs, Type B		675.25

I 189-3 (52)

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		Bituminous Concrete Pavement
5,477	TON	Overlay - Mainline (incl. speed change lanes & tapers)
600	TON	Overlay - Ramps
1,615	TON	Leveling Course - Mainline
312	TON	Leveling Course - Ramps
0	TON	Rounding
8,010	TON	Total
		Emulsified Asphalt
2,056	CAL	Mainline (Including Speed Change Lanes & Tapers)
1,119	GAL	Ramps
25	GAL	Rounding
3,200	CAL	Total
		Bituminous Surface Treatment, Type VI
5,048	CAL	Mainline (Including Speed Change Lanes & Tapers)
569	GAL	Ramps
33	GAL	Rounding
5,650	CAL	Total

I 89-3 (51)

DETAILED SUMMARY OF QUANTITIES

QUANTITIES	UNIT	ITEMS
		Bituminous Concrete Pavement
31,012	TON	Overlay-Mainline (incl. speed change lanes & tapers) *
2,706	TON	Overlay - Ramps
8,902	TON	Leveling Course - Mainline
1,588	TON	Leveling Course - Ramps
3	TON	Rounding
44,210	TON	Total
		Open Graded Asphalt Friction Course
1,881	TON	Mainline
666	TON	Ramps
3	TON	Rounding
2,150	TON	Total
		Emulsified Asphalt
2,814	GAL	Mainline (Including Speed Change Lanes & Tapers) **
5,626	GAL	Ramps
60	GAL	Rounding
15,500	CAL	Total
		Bituminous Surface Treatment, Type VI
27,369	CAL	Mainline (Including Speed Change Lanes & Tapers)
3,131	GAL	Ramps
50	GAL	Rounding
30,550	GAL	Total

* Includes quantities for Winooski River Bridges
** Includes Bridge quantities

TYPE OF CONSTRUCTION

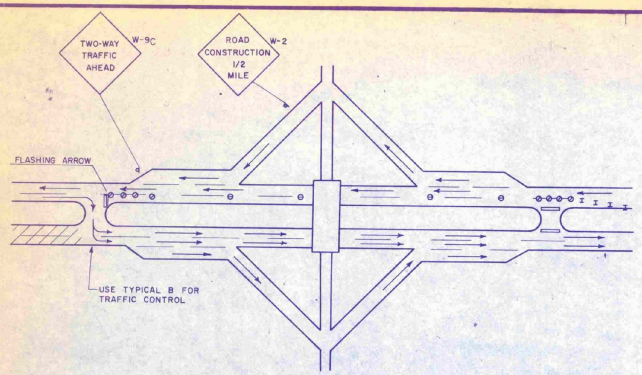
STATIONS FROM	STATIONS TO	PAVEMENT WIDTHS 16' Roadway	24' Roadway	Bridges	EQUATIONS +	EQUATIONS −
I 89-3 (51)						
Northbound						
1275+00	2030+72.12		14901.44		373.52	44.20
2020+72.12	2022+41.86			169.74		
2022+41.86	2030+68.98		827.12			
2030+68.98	2032+41.02			172.04		
2032+41.02	2165+12.65		13206.37		57.44	117.7
2165+12.65	2175+28.38			1015.73		
2175+28.38	2186+19.39		891.01			
2186+19.39	2187+60.48			141.09		
2185+00.48	2194+08.00		850.69		3.17	
2194+08.00	2195+75.00			167.00		
2195+75.00	2201+58.00		579.00			
2201+58.00	2202+81.00			127.00		
2202+81.00	2267+00		6419.00			
	NB Totals		37674.63	1792.60		
Southbound						
1275+00	2020+33.94		19517.30		6.02	22.66
2020+33.94	2021+98.27			164.33		
2021+98.27	2030+68.98		870.71			
2030+68.98	2032+41.02			172.04		
2032+41.02	2165+12.65		13206.37		52.44	117.7
2165+12.65	2175+28.38			1015.73		
2175+28.38	2184+60.93		932.55			
2184+60.93	2186+03.85			142.92		
2186+03.85	2194+08.00		807.32		5.17	
2194+08.00	2195+75.00			167.00		
2195+75.00	2201+61.50		586.50			
2201+61.50	2202+83.50			122.00		
2202+83.50	2267+00		6416.50			
	SB Totals		52337.25	1784.02		
	I 89 Average Lengths		2750.91	1786.91		
I 189-3 (52)						
Eastbound						
108+58.31	109+30.55			72.21		
109+30.55	118+53	922.45				
118+53	122+39.80		386.80			
122+39.80	123+08.80			69.00		
123+08.80	164+25.31		4096.42			20.09
164+25.31	165+52.31			127.00		
165+52.31	184+58.09		1906.78			
	EB Totals	922.45	6390.00	268.21		
Westbound						
108+87.80	109+60.00			72.20		
109+60.00	122+04	1249.00				
122+04	122+74.20		70.20			
122+74.20	123+43.20			69.00		
123+43.20	164+67.30		4124.10			
164+67.30	165+94.30			127.00		
165+94.30	180+72.50		1478.20			
180+72.50	182+00.48			127.98		
	WB Totals	1249.00	9677.00	396.18		
	I 189 Average Lengths	1083.22	6071.25	332.20		
TOTALS						

LENGTH OF PROJECT

STATIONS		FEET	MILES	REMARKS
I 89-3 (51)				
1275+00	2267+00	39294.25	7.442	Average Length - NB & SB Lanes
I 189-3 (52)				
108+73.07	18+29.785	7486.67	1.410	Average Length - EB & WB Lanes

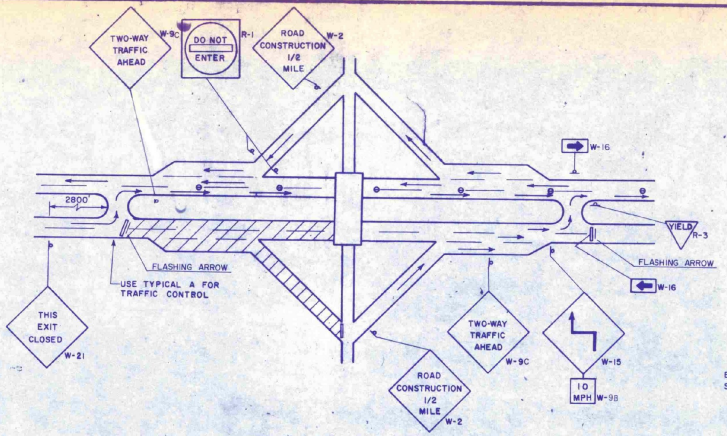
BURLINGTON-SO. BURLINGTON I 189-3 (52)
WILLISTON-COLCHESTER I 89-3 (51)

Filed No. _____
Sheet 8 of 25 Sheets



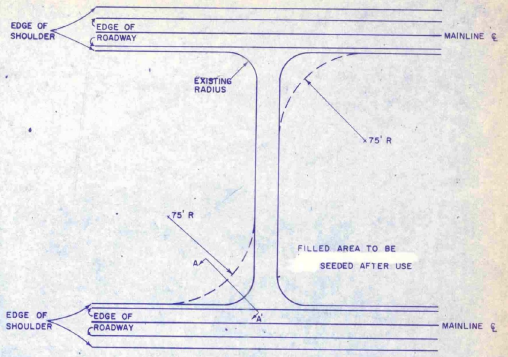
TYPICAL TRAFFIC PATTERN (1)

DURING WORK APPROACHING INTERCHANGE

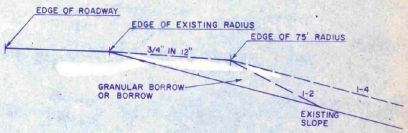


TYPICAL TRAFFIC PATTERN (2)

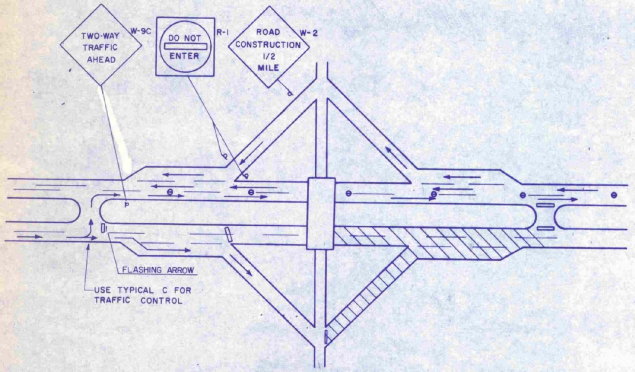
DURING WORK ON EXIT RAMP
(NO EXIT FOR TRAFFIC ON LANE UNDER CONSTRUCTION)



MODIFICATION OF EXISTING U-TURN

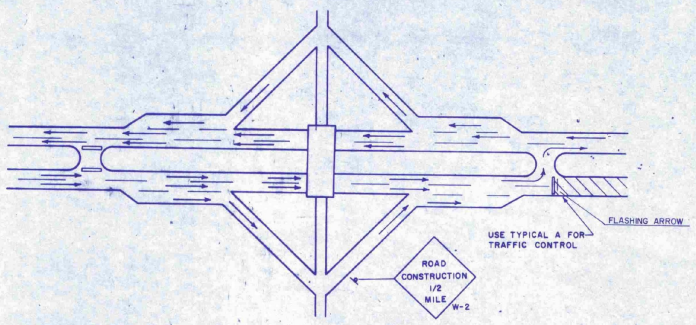


SECTION A'-A



TYPICAL TRAFFIC PATTERN (3)

DURING WORK ON ENTRANCE RAMP
(NO ENTRANCE TO LANE UNDER CONSTRUCTION)



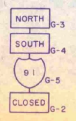
TYPICAL TRAFFIC PATTERN (4)

FOR WORK BEYOND INTERCHANGE

NOTES:

1. The traffic signs called for are the mihimum required for proper traffic control. Additional signs or modifications in placement may be necessary because of unusual conditions at certain locations.
2. Refer to Std. Sheets E 4 8 7 for design information of signs, and barricades.
3. Diagrams are for work on N.B. lane. Invert for work on S.B.
4. U turns to be used or modified shall be designated by the paving engineer.

THIS SIGN IS TO BE PLACED ON THE POST SUPPORTING THE EXISTING SIGN READING "NEXT EXIT ( ) MILES", APPROXIMATELY ONE MILE IN ADVANCE OF THE INTERCHANGE BEFORE THE INTERCHANGE UNDER CONSTRUCTION, WHEN TYPICAL TRAFFIC PATTERN (2) IS IN EFFECT.



THIS ASSEMBLY, DISPLAYING NORTH OR SOUTH AS APPLICABLE, SHALL BE USED WHEN TYPICAL TRAFFIC PATTERN 3 IS IN EFFECT. IT SHALL BE ERECTED ON THE APPROPRIATE ACCESS ROAD, NEAR A JUNCTION WITH A STATE HIGHWAY OR OTHER LOCATION DIRECTED BY THE ENGINEER.

- CONES AT 350 FOOT SPACING
- CONES AT 100 FOOT SPACING
- CONES AT 10 FOOT SPACING
- TYPE I BARRICADE
- TYPE III BARRICADE
- FLAGMAN
- CURRENT WORK AREA

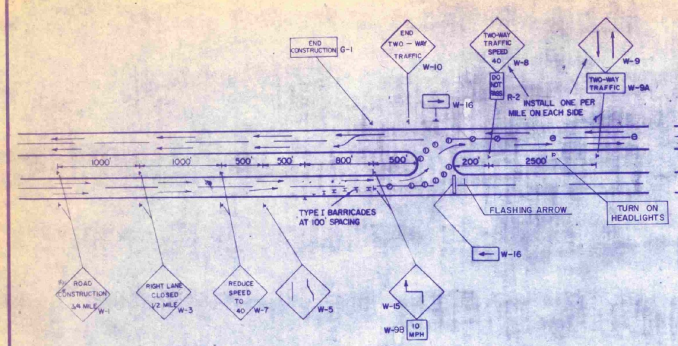
TRAFFIC CONTROL FOR INTERCHANGE AREAS

REFER TO SHEET 6 OF 25 FOR TYPICALS A, B, & C

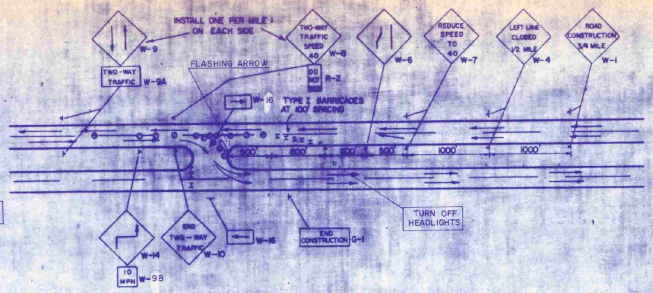
TRAFFIC PLAN LOCATION SHEET

BURLINGTON - SO. BURLINGTON
WILLISTON - COLCHESTER

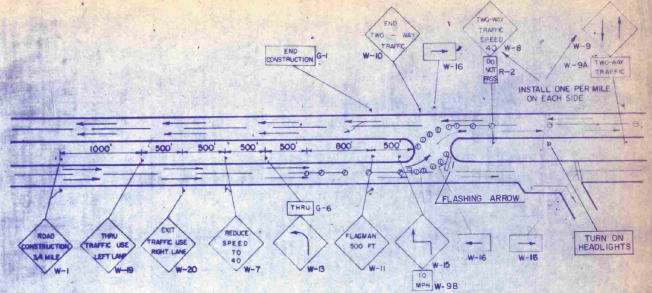
SURVEYED BY _____ DATE _____
DRAWN BY _____ DATE _____
TRACED BY DZG DATE 3/73
OVERLAY I
PROJ. 1 NO. 89-3(52) 89-3(51)
SHEET 5 OF 25



TYPICAL A
TRAFFIC CONTROL FOR TRAFFIC LEAVING ITS NORMAL LANES

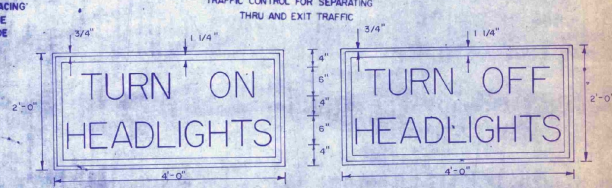


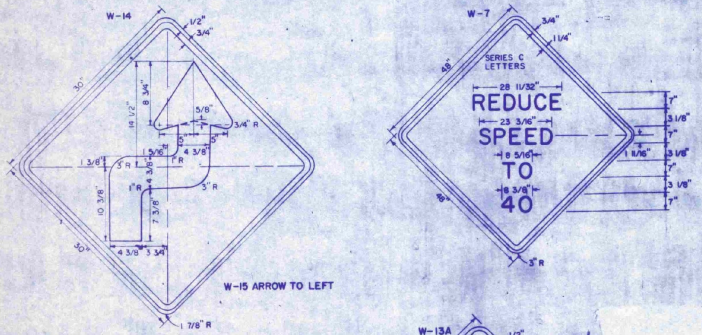
TYPICAL B
TRAFFIC CONTROL FOR TRAFFIC RETURNING TO IT'S NORMAL LANE



TYPICAL C
TRAFFIC CONTROL FOR SEPARATING THRU AND EXIT TRAFFIC

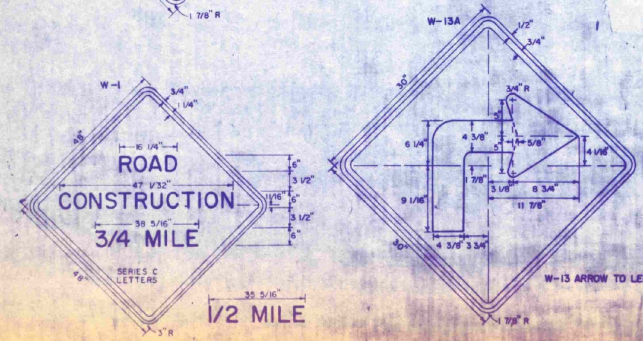
LEGEND
- CONES AT 350' SPACING
- CONES AT 100' SPACING
- CONES AT 10' SPACING
- TYPE I BARRICADE
- TYPE III BARRICADE
- FLAGMAN



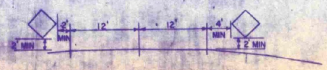


GENERAL NOTES

1. Sign H-3 and H-5 on Standard Sheet E 2 shall be used at the beginning and end of the project.
2. The traffic signs indicated on this sheet are to be placed as shown above of all work areas where the normal flow of traffic is interrupted or changed.
3. Standard Type I Barricades (Standard E-7) are to be placed at 100 foot intervals through lane tapers.
4. Standard Type III Barricades (Standard E-7) are to be placed at all locations where traffic would have access into the work area and at that location at the end of a two-way zone where traffic is being directed back into its normal lane.
5. Cones are to be placed, at varying spacing, throughout the construction zone as shown in Typical Traffic Control Diagrams. The cones shall be stabilized to withstand air currents generated by traffic and natural causes.
6. For additional information regarding materials, design, lettering, etc for traffic signs and barricades see Standard Sheets ,E-2,E-4,E-6,E-7,E-8,E-9,E-11,E-17,E-21.
7. Cones will be Orange in color and shall be a minimum of 28 inches in height. Those used for night-time traffic control shall be reflectorized.
8. Traffic will be diverted from one roadway to the other via existing crossovers or new crossovers constructed by the contractor with the approval of the Engineer.
9. The contractor will be responsible for furnishing the necessary mounting supports for the display of all signs.
10. Signs not called for on the plans may be ordered by the Engineer and paid for as Item 675.20, Traffic Signs, Type A, or as Item 675.25, Traffic Signs, Type B.
11. Refer to Specification 641 Traffic Control for flashing arrows.
12. Headlight control signs are to be removed one hour before sunset and erected one hour after sunrise when 2way traffic is maintained 24 hours a day.



THESE SIGNS SAME FORMAT AS SIGN W-1
- W-18 NEXT EXIT CLOSED
- W-19 THRU TRAFFIC USE LEFT LANE
- W-20 EXIT TRAFFIC USE RIGHT LANE
- W-21 THIS EXIT CLOSED
- W-9B TWO-WAY TRAFFIC AHEAD

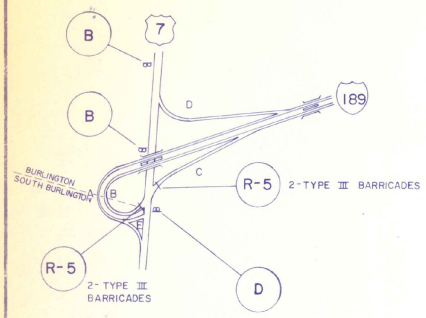


TYPICAL DISPLAY FOR TRAFFIC SIGNS
NOT TO SCALE

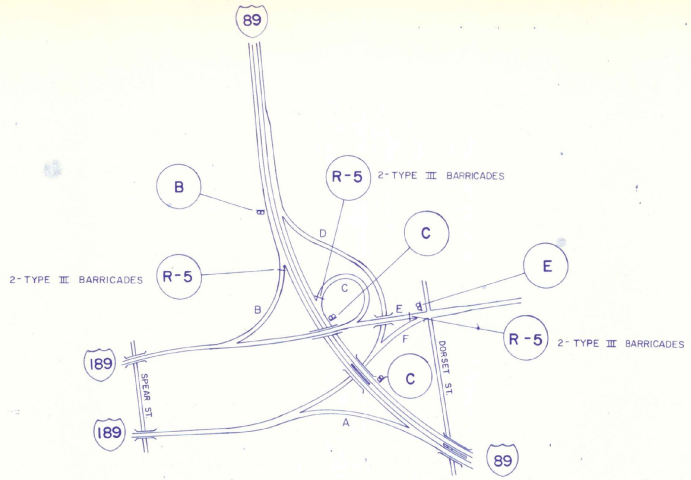
BURLINGTON-SO. BURLINGTON
WILLISTON-COLCHESTER

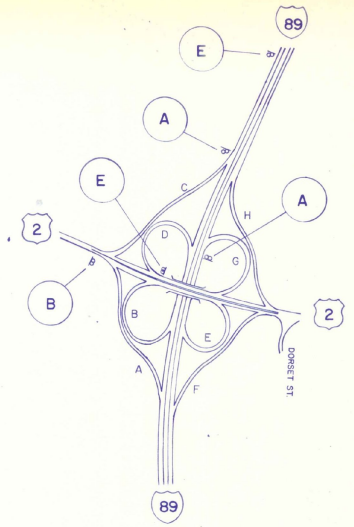
TRAFFIC PLAN LOCATION AND DESIGN SHEET

PREPARED BY AER DATE 2/73
DRAWN BY DATE
TRACED BY RAB DATE 3/73
OVERLAY
PROJ. NO. 189-3(52) 189-3(51)
SHEET 6 OF 25
D-7



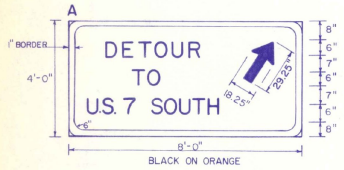
EASTBOUND LANE CLOSED TYPICAL





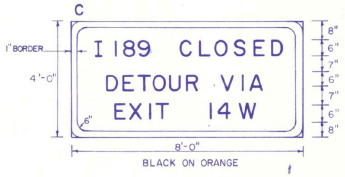
WESTBOUND LANE CLOSED TYPICAL

A



BLACK ON ORANGE

C

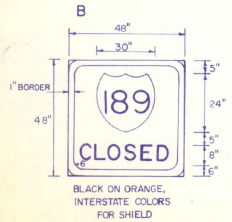


BLACK ON ORANGE

E

BLACK ON ORANGE

B



BLACK ON ORANGE,
INTERSTATE COLORS
FOR SHIELD

D

BLACK ON ORANGE

GENERAL NOTES

(1) Sign H-3 and H-5 on Standard Sheet E2 shall be used at beginning and end of projects.

(2) The location of these signs may be adjusted in the field to fit conditions at each location where the normal flow of traffic is interrupted or changed.

(3) Standard Type III Barricades (Standard E7) are to be placed at all locations where traffic would have access into the work area.

(4) Traffic will be detoured through the cities of Burlington and South Burlington 24 hours a day while the paving is in progress. One roadway at a time will be closed; traffic will be maintained on the opposite roadway.

(5) Each sign shall be erected in a neat and workmanlike manner on wood or metal posts set securely in the ground or attached to a barricade. The bottoms of signs on posts shall be at least 5 feet above road level and the nearest edge of each sign shall be located so as to not interfere with traffic, or with pedestrians on sidewalks. The posts and signs shall be braced or reinforced in the back if necessary. The installation of the signs shall be subject to the approval of the engineer.

(6) The contractor shall be responsible for furnishing the necessary mounting supports for the display of signs.

(7) All guide signs on Routes I-89, US-7 and US-2 directing traffic to I-189 when the pertinent roadway is closed to traffic shall be covered and periodically checked to insure that the message is not visible to motorists while the pertinent roadway is being paved.

(8) Signs not called for on the plans may be ordered by the engineer and paid as Item 675.20 Traffic Signs Type A or as Item 675.25 Traffic Signs Type B.

(9) Signs R-1 (ROAD CLOSED) shall be mounted on each Type III Barricade.

(10) These signs shall have an orange encapsolated lens reflective sheeting background with black lettering film or painted text except Interstate shields which shall be Interstate colors.

BURLINGTON – SOUTH BURLINGTON

TRAFFIC PLAN LOCATION

AND

DESIGN SHEET

SURVEYED BY _____ DATE _____
DRAWN BY _____ DATE _____
TRACED BY _____ DATE _____

PROJ. I NO. 189-3(52)
SHEET 7 OF 25

TRAFFIC CONTROL SIGNS SUMMARY SHEET

IDENTIFICATION	NUMBER OF SIGNS	SIZE WIDTH	SIZE HEIGHT	TEXT	SIGN COLOR TEXT	SIGN COLOR BACKGROUND	TOTAL SIGN AREA
W-1	4	48"	48"	ROAD CONSTRUCTION 3/4 MILE	BLACK	ORANGE	64 ☐
W-2	2	48"	48"	ROAD CONSTRUCTION 1/2 MILE	BLACK	ORANGE	32 ☐
W-3	2	48"	48"	RIGHT LANE CLOSED 1/2 MILE	BLACK	ORANGE	32 ☐
W-4	2	48"	48"	LEFT LANE CLOSED 1/2 MILE	BLACK	ORANGE	32 ☐
W-5	1	48"	48"		BLACK	ORANGE	16 ☐
W-6	1	48"	48"		BLACK	ORANGE	16 ☐
W-7	4	48"	48"	REDUCE SPEED TO 40	BLACK	ORANGE	64 ☐
W-8	14	48"	48"	TWO-WAY TRAFFIC SPEED 40	BLACK	ORANGE	224 ☐
W-9	14	48"	48"		BLACK	ORANGE	224 ☐
W-9A	8	24"	18"	TWO WAY TRAFFIC	BLACK	ORANGE	24
W-9B	5	24"	24"	10 MPH	BLACK	ORANGE	20
W-9B	1	48"	48"	TWO WAY TRAFFIC AHEAD	BLACK	ORANGE	16 ☐

COLUMN TOTAL = 1,572 ☐

IDENTIFICATION	NUMBER OF SIGNS	SIZE WIDTH	SIZE HEIGHT	TEXT	SIGN COLOR TEXT	SIGN COLOR BACKGROUND	TOTAL SIGN AREA
W-10	2	48"	48"	END TWO WAY TRAFFIC	BLACK	ORANGE	32 ☐
W-11	2	48"	48"	FLAGMAN 500 FT.	BLACK	ORANGE	32 ☐
W-12	2	48"	24"	TURN OFF HEADLIGHTS	BLACK	ORANGE	16 ☐
W-13	1	30"	30"		BLACK	ORANGE	6.3 ☐
W-14	1	30"	30"		BLACK	ORANGE	6.3 ☐
W-15	2	30"	30"		BLACK	ORANGE	12.5 ☐
W-16	3	48"	24"		BLACK	ORANGE	24 ☐
W-17	2	48"	24"	TURN ON HEADLIGHTS	BLACK	ORANGE	16 ☐
W-18	1	48"	48"	NEXT EXIT CLOSED	BLACK	ORANGE	16 ☐
W-19	1	48"	48"	THRU TRAFFIC USE LEFT LANE	BLACK	ORANGE	16 ☐
W-20	1	48	48	EXIT TRAFFIC USE RIGHT LANE	BLACK	ORANGE	16 ☐

COLUMN TOTAL = 217.1 ☐

SHEET TOTAL = 879.6 ☐

IDENTIFICATION	NUMBER OF SIGNS	SIZE WIDTH	SIZE HEIGHT	TEXT	SIGN COLOR TEXT	SIGN COLOR BACKGROUND	TOTAL SIGN AREA
W-21	1	48"	48"	THIS EXIT CLOSED	BLACK	ORANGE	16 ☐
R-1*	2	30"	30"	DO NOT ENTER	WHITE	RED	—
R-2*	14	24"	30"	DO NOT PASS	BLACK	WHITE	40
G-1	2	60"	24"	END CONSTRUCTION	BLACK	ORANGE	20 ☐
G-2	4	30"	15"	CLOSED	BLACK	ORANGE	12.5 ☐
G-3*	4	24"	12"	NORTH	WHITE	BLUE	—
G-4*	4	24"	12"	SOUTH	WHITE	BLUE	—
G-5*	4	24"	24"	91	WHITE	BLUE	—
G-6	1	21"	15"	THRU	BLACK	ORANGE	2 ☐
R-3*	2	36"	29"	YIELD	RED	WHITE	—

COLUMN TOTAL = 90.5 ☐

* These signs will be furnished by the Vermont Highway Department. The necessary mounting supports for display of these signs will be furnished by the Contractor.

IDENTIFICATION OF TRAFFIC SIGNS

Traffic signs are identified on these plans by a number prefixed by a letter which indicates the following general classifications:

G - Other guide signs
R - Regulatory signs
W - Warning signs

Traffic signs may be mounted on a portable support. They will be positioned in accordance with plan sheets 4 & 5. (Typical display for traffic signs.)

The background and text on all traffic signs may be of non-reflectorized character except those signs to be used for night-time traffic control shall be reflectorized.

Traffic Control signs to be furnished and installed (unless otherwise indicated) as Section 641, Traffic Control.

All black & orange signs shall have an orange encapsolated lens reflective sheeting background.

BURLINGTON - SO. BURLINGTON
WILLISTON - COLCHESTER

SECTION 641
TRAFFIC CONTROL SIGNS
SUMMARY SHEET

PREPARED BY AER DATE 2/26/73
CHECKED BY DATE
TRACED BY DZG DATE 3/73
OVERLAY
PROJ. I 189-3(52)
NO. 89-3(51)
SHEET 8 OF 25

TRAFFIC CONTROL SIGNS SUMMARY SHEET

IDENTIFICATION	NUMBER OF SIGNS	SIZE WIDTH	SIZE HEIGHT	TEXT	SIGN COLOR	TOTAL SIGN AREA
"A"	2	8'-0"	4'-0"	DETOUR TO U.S. 7 SOUTH	BLACK ON ORANGE	64 Φ
"B"	2	4'-0"	4'-0"	189 CLOSED	INTERSTATE COLORS FOR SHIELD BLACK TEXT ON ORANGE BACKGROUND	32 Φ
"C"	2	8'-0"	4'-0"	I 189 CLOSED DETOUR VIA EXIT 14W	BLACK ON ORANGE	64 Φ
"D"	1	8'-0"	4'-0"	I 189 CLOSED DETOUR VIA US 7 AND US 2	BLACK ON ORANGE	32 Φ
"E"*	3	8'-0"	4'-0"	I 189 CLOSED DETOUR VIA US 2 AND US 7	BLACK ON ORANGE	96 Φ
R-5	6	48"	30"	ROAD CLOSED	BLACK ON WHITE	60 Φ

COLUMN TOTAL = 348 Φ

IDENTIFICATION	NUMBER OF SIGNS	SIZE WIDTH	SIZE HEIGHT	TEXT	SIGN POSTS SIZE	SIGN POSTS NO. PER SIGN	SIGN POSTS SIZE OF FOUNDATION	SIGN POSTS TYPE	TOTAL SIGN AREA

COLUMN TOTAL =

IDENTIFICATION	NUMBER OF SIGNS	SIZE WIDTH	SIZE HEIGHT	TEXT	SIGN POSTS SIZE	SIGN POSTS NO. PER SIGN	SIGN POSTS SIZE OF FOUNDATION	SIGN POSTS TYPE	TOTAL SIGN AREA

COLUMN TOTAL =

IDENTIFICATION OF TRAFFIC SIGNS

Traffic signs are identified on these plans by a number prefixed by a letter which indicates the following general classifications:

G - Guide signs
R - Regulatory signs
W - Warning signs

Traffic signs may be mounted on a portable support. They will be positioned in accordance with plan sheets (Typical display for traffic signs)

The background and text on all traffic signs may be of non-reflectorized character except those signs to be used for night-time traffic control shall be reflectorized.

Traffic Control signs to be furnished and installed (unless otherwise indicated) as Section 641, Traffic Control.

All signs shall have a reflectorized background.

All black and orange signs shall have an orange encapsolated lens reflective sheeting background.

* These signs will be furnished by the Vermont Highway Department. The necessary mounting supports for display of these signs will be furnished by the Contractor.

WILLISTON – COLCHESTER
BURLINGTON – SO. BURLINGTON

SECTION 641
TRAFFIC CONTROL SIGNS
SUMMARY SHEET

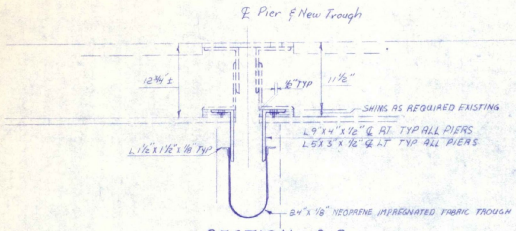
PREPARED BY _____ DATE _____
CHECKED BY _____ DATE _____
TRACED BY _____ DATE _____

PROJ. I 89-3(51)
I NO. 189-3(52)
SHEET 9 OF 25

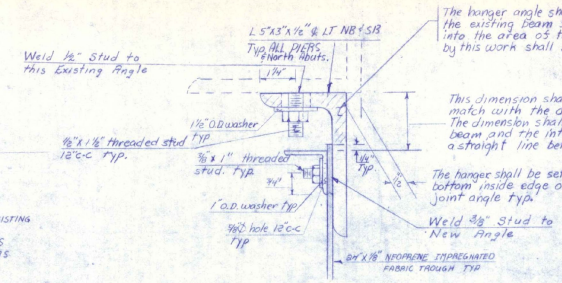
D-TR 5

NOTES

1. All work shall be paid for as Structural Steel Item 506.94. Fabric Troughs shall be paid for under Structural Steel.
2. Total Units Required : Pier Trough Assemblies - 12
   Abut. Trough Assemblies - 2
   Pier Hopper Assemblies - 24
   RT. Abut Hopper Assemblies - 2
   LT. Abut Hopper Assemblies - 2
3. All details shall be field checked prior to fabrication.
4. All field welds made after galvanizing shall be painted with Zinc-Rich Paint one coat after cleaning. The paint shall meet the requirements of Section 708.07(e). Cuts shall be treated likewise.
5. Materials for Fabric Trough shall conform to Spec. 731.01
6. All steel shall be ASTM-A36 and painted as per Vt. Spec. Sect. 513 unless otherwise noted on these plans, payment included in Item 506.94.
7. All areas in contact with the new work shall be cleaned and painted as per Section 513, contractor's option on method, payment included in Item 506.94.



SECTION A-A
ELEVATION PIER TYP.
Scale 1"=10"

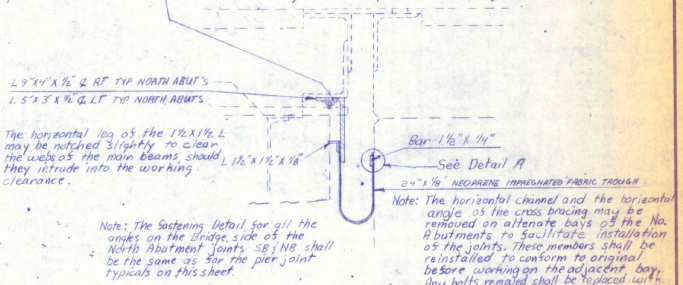


The hanger angle shall be coped only as necessary to clear the existing beam flange and joint shims where they extend into the area of the new trough hanger. The joints created by this work shall be plug welded to attain a watertight joint.

This dimension shall be 2 inches at the ℄ beam to match with the dimension on the larger angle ℄ RT. The dimension shall also be 2 inches at the fascia beam and the intermediate dimensions shall lie on a straight line between these two points. See Trough Profile Sheet BR4.

The hanger shall be set back ⅛" from the bottom inside edge of the existing joint angle typ.

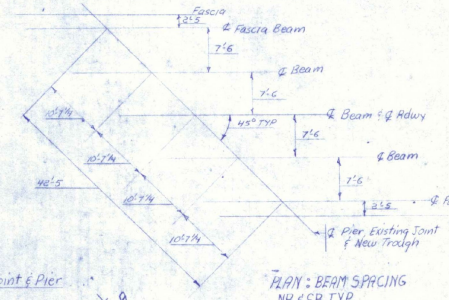
ELEVATION: TROUGH HANGER
TYP. PIER & NORTH ABUT ℄ LT NB & SB
Scale 1"=2"



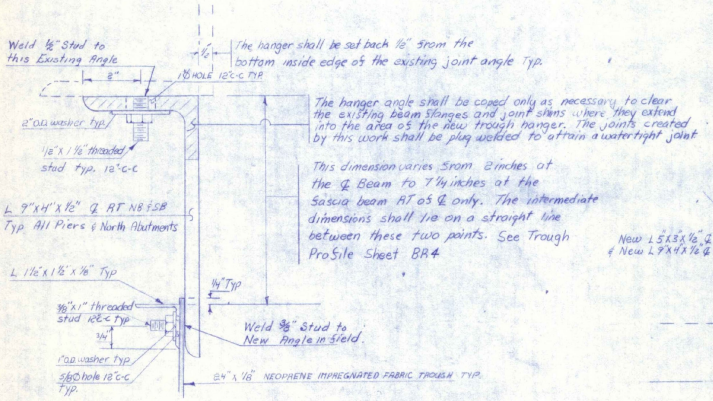
Note: The horizontal channel and the horizontal angle of the cross bracing may be removed on alternate bays of the No. 4 abutments to facilitate installation of the joints. These members shall be reinstalled to conform to original before working on the adjacent bay. Any bolts removed shall be replaced with new ¾"ø A-325 High-Strength bolts as per Vt. Spec. Section 506.

Note: The fastening detail for all the angles on the bridge side of the North Abutment joints SB & NB shall be the same as for the pier joint typicals on this sheet.

ELEVATION NB & SB NORTH ABUTMENTS
Scale 1½"=1'



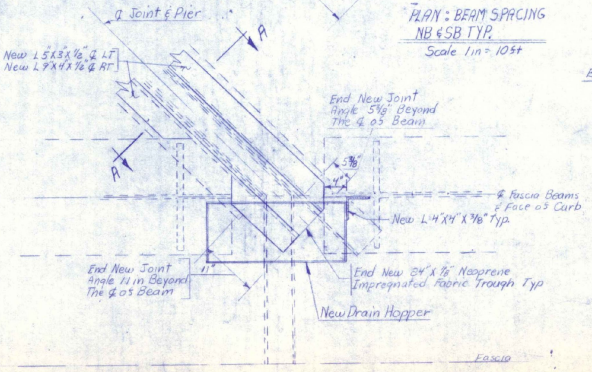
PLAN: BEAM SPACING
NB & SB TYP.
Scale 1in=10ft



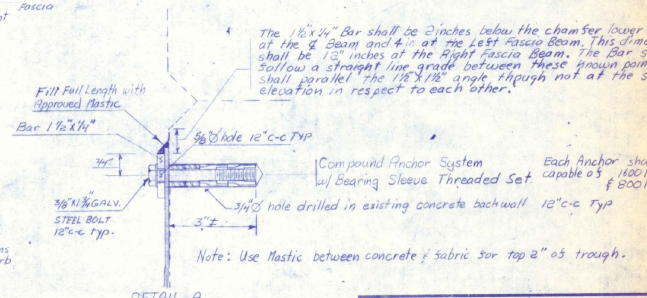
The hanger angle shall be coped only as necessary to clear the existing beam flanges and joint shims where they extend into the area of the new trough hanger. The joints created by this work shall be plug welded to attain a watertight joint

This dimension varies from 2 inches at the ℄ Beam to 7¼ inches at the Fascia beam RT of ℄ only. The intermediate dimensions shall lie on a straight line between these two points. See Trough Profile Sheet BR4

ELEVATION: TROUGH HANGER
TYP PIER ℄ RT. NB & SB & NORTH ABUTS. ℄ RT.
Scale 1"=2"



PLAN: JOINT & HOPPER DETAIL
@ PIER FASCIA BEAMS TYP.
Scale 1"=10"



The 1½"x¼" Bar shall be 2 inches below the chamfer lower edge at the ℄ Beam and 4 in at the Left Fascia Beam. This dimension shall be 12" inches at the Right Fascia Beam. The Bar shall follow a straight line grade between these known points and shall parallel the 1½"x1½" angle though not at the same elevation in respect to each other.

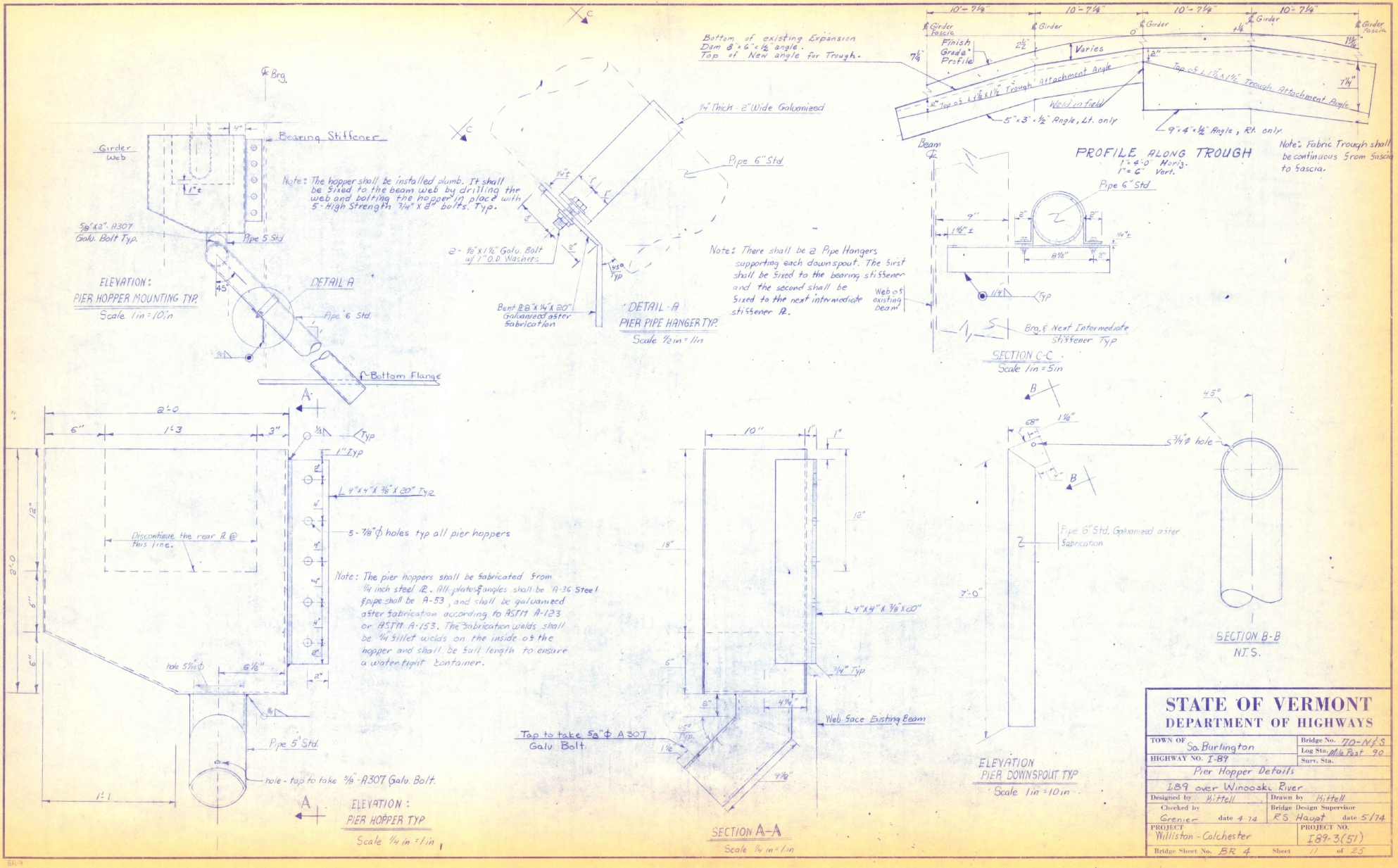
Note: Use Mastic between concrete & fabric for top 2" of trough.

DETAIL A
Scale 1"=2"

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF So. Burlington	Bridge No. 70-N&S
HIGHWAY NO. I 89	Log Sta. Mile Post 90
	Surv. Sta.
Joint Trough Details	
I 89 over WINOOSKI RIVER	
Designed by Wittell	Drawn by Wittell
Checked by C.J. Grenier date 5-74	Bridge Design Supervisor R.S. Haupt date 5-74
PROJECT Williston-Colchester	PROJECT NO. I 89-3(51)
Bridge Sheet No. BR 3	Sheet 10 of 25

BR3



STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

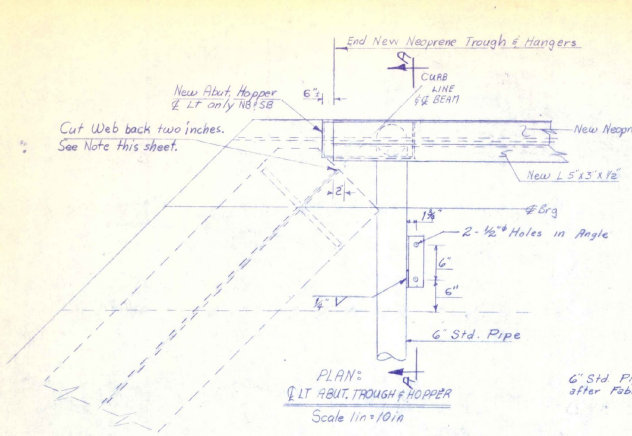
TOWN OF So. Burlington	Bridge No. 170-N & S
HIGHWAY NO. I-89	Log Sta. Mile Post 90
	Surv. Sta.

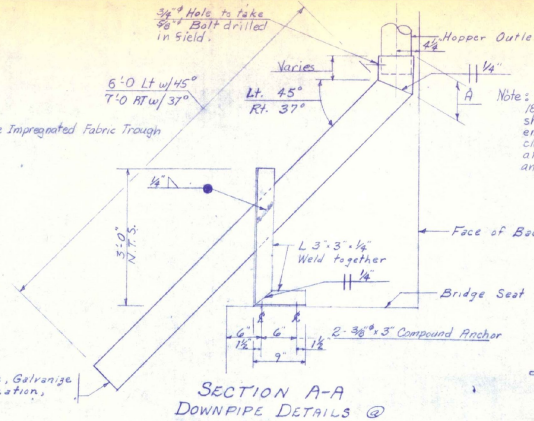
Pier Hopper Details

I89 over Winooski River

Designed by Hittell	Drawn by Hittell
Checked by Grenier date 4-74	Bridge Design Supervisor R.S. Haupt date 5/74
PROJECT Williston - Colchester	PROJECT NO. I89-3(51)
Bridge Sheet No. BR 4	Sheet 11 of 25

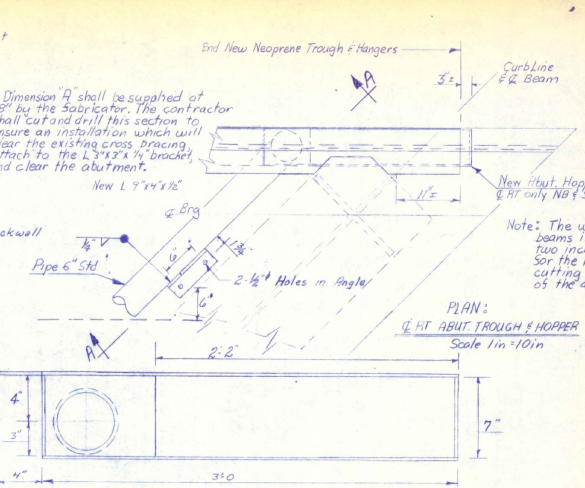
BR-4





SECTION A-A
DOWNPIPE DETAILS @
NORTH ABUTMENTS
1" = 10"

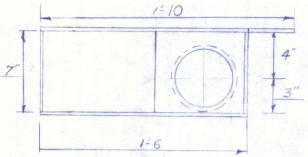
Note: Dimension "A" shall be supplied at 18" by the fabricator. The contractor shall cut and drill this section to ensure an installation which will clear the existing cross bracing, attach to the L 3"x3"x 1/4" bracket, and clear the abutment.



Note: The web of the main beams is to be cut back two inches to obtain clearance for the new hoppers. No cutting shall be done on any of the adjacent stiffeners.

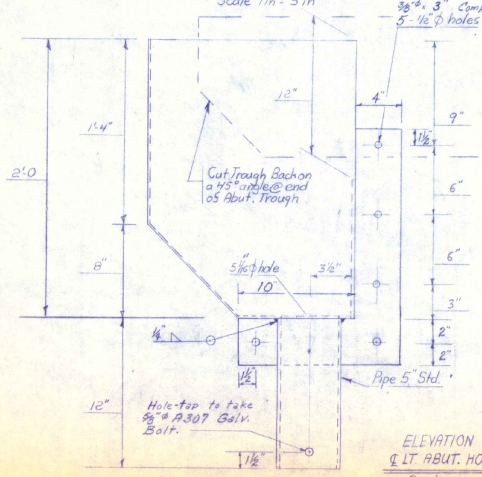
PLAN:
℄ HT ABUT. TROUGH & HOPPER
Scale 1in = 10in

PLAN:
℄ HT ABUT. HOPPER
Scale 1in = 5in



PLAN:
℄ LT ABUT HOPPER
Scale 1in = 5in

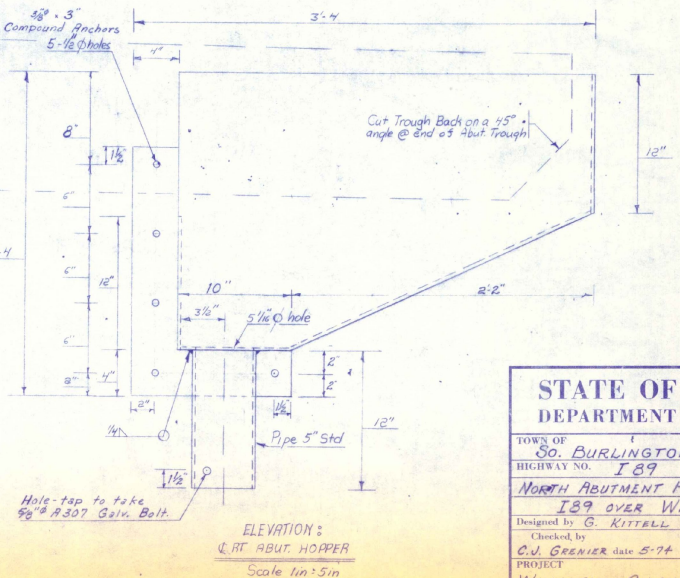
ERECTION Note: The hoppers shall be placed as shown on this sheet. This will require that the hopper be forced as far as possible up under the trough. The trough should be enclosed as much as possible by the hopper but should not be bent or buckled to restrict the flow of water. The hopper shall be held in place with the same 3/8 x 3" Compound Anchor System w/ Bearing Sleeve Threaded Set as is used and detailed for the backwall side of the abutment trough. Attach hoppers to Backwall.



ELEVATION
℄ LT. ABUT. HOPPER
Scale 1in = 5in

Note: The Abut. hoppers shall be fabricated from 1/4 inch steel Pl. All plates shall be A-36 & all pipes shall be ASTM A-53 Steel, and shall be galvanized after fabrication according to ASTM A-123 or ASTM A-153. The fabrication welds shall be 1/4" fillet welds on the inside of the hopper and shall be full length to ensure a watertight container.

NOTE: Ultimate load of each Compound Anchor
Tension: 1600 pounds
Shear: 800 pounds



ELEVATION:
℄ RT. ABUT. HOPPER
Scale 1in = 5in

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS

TOWN OF So. BURLINGTON	Bridge No. 70-N&S
HIGHWAY NO. I 89	Log Sta. Mile Post 90
	Surv. Sta.

NORTH ABUTMENT HOPPER DETAILS
I 89 OVER WINOOSKI RIVER

Designed by G. KITTELL	Drawn by G. KITTELL
Checked by C.J. GRENIER date 5-74	Bridge Design Supervisor R.S. HAUPT date 5-74
PROJECT WILLISTON - COLCHESTER	PROJECT NO. I89-3(51)
Bridge Sheet No. BR 5	Sheet 12 of 25

BR-9

EARTHWORK

V.C.	% GRD	STATION	GRADES ELEVATION ON TAN.	GRADES ELEVATION ON V.C.	CORR. V.C.	DIST.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.

INDEX OF BRIDGE SHEETS

BR 1	QUANTITY SHEET	I89-3 (51)
BR 2	QUANTITY SHEET	I89-3 (52)
BR 3	JOINT TRENCH DETAILS	I-89 over
BR 4	PIER HOPPER DETAILS	WINOOSKI
BR 5	NO. ABUT. HOPPER DETAILS	RIVER

LIST OF STANDARD SHEETS

E-9	12/19-92R	BRIDGE MAINTENANCE APPROACH, SIGNS

1

BRIDGE QUANTITY SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
BRIDGE DIVISION

NO.	ITEM	UNIT	QUANTITY BREAKDOWN I89 Over Muddy Brk	I89 Over Dorset St	I89 Over I89 EB	** I89 WB Over I89	I89 Over Winooski Riv	I89 Over CVRR	I89 Over Vt. Rte. 15	I89 Over Fountain St	I89 Over US Rte 7	I89 Over Interchange Ramp E (Ramp D)	TOTAL	FINAL
* 403.10	Asphalt Emulsion for Slurry Seal (ONE COURSE)	GAL	28	59	50	38	0	60	49	48	45	18	395	
* 403.12	Aggregate for Slurry Seal, General	TON	5	11	10	7	0	11	9	9	9	3	74	
506.94	Structural Steel (31,340 LBS) SEE NOTE	L.S.					1						1	
406.25	Bituminous Concrete Pavement	TON					192						192	
409.65	Emulsified Asphalt	GAL					691						691	

NOTE:
THE TOTAL POUNDAGE WEIGHT OF STRUCTURAL STEEL SHOWN ON THE ESTIMATE UNDER ITEM 506.94 STRUCTURAL STEEL (LUMP SUM) INCLUDES ALL STEEL COMPONENTS OF THE TROUGHS, HOPPERS, DOWNPIPES, WEIGHT OF FABRIC TROUGHS, WELDED STUDS, ANCHOR BOLTS, NUTS AND WASHERS. THE WEIGHT OF WELDS HAS NOT BEEN INCLUDED IN THE TOTAL POUNDAGE.

* Quantities allow for treatment of approach slabs for a width of 10'-0" along ℄ from deck joint

** Entire quantities for this structure included in this contract for I89

BRIDGE (S) AT STATION (S) _____
LOCATION (S) WILLISTON - COLCHESTER

Prepared by: A. Elwood | Checked by: R. P. Gendron
SUPERVISOR: R.S. Haupt

PROJECT NO. I89-3(51)
BR 1 OF _____ SHEET NO. 13 OF 25

BR-1

EARTHWORK

V.C.	% GRD	STATION	GRADES ELEVATION ON TAN.	GRADES ELEVATION ON V.C.	CORR. V.C.	DIST.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.	AREA	CU. YDS.

BRIDGE QUANTITY SHEET

STATE OF VERMONT
DEPARTMENT OF HIGHWAYS
BRIDGE DIVISION

NO.	ITEM	UNIT	QUANTITY BREAKDOWN I 189 Over Spaan St	I 189 Over Farrell St	I 189 Over US Rte. 7	TOTAL	FINAL
*403.10	Asphalt Emulsion for Slurry Seal (ONE COURSE)	Gal.	48	30	36	114	
*403.12	Aggregate for Slurry Seal, General	TON	9	6	7	22	

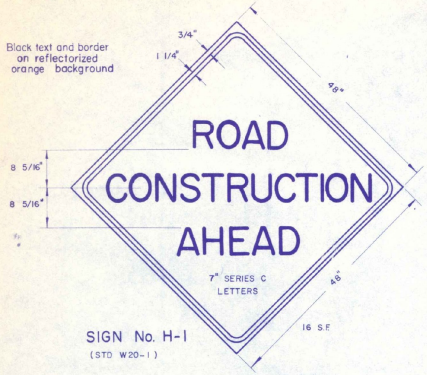
*Quantities allow for treatment at approach slabs for a width of 10'-0" along ℄ from deck joint

BRIDGE (S) AT STATION (S) _____
LOCATION (S) BURLINGTON - SO. BURLINGTON

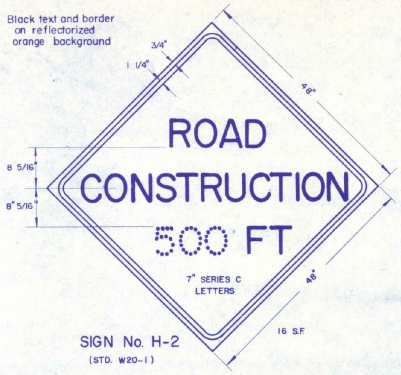
Prepared by: B. Elwood
Checked by: E. F. Gendron
SUPERVISOR: R.S. Haupt

BR 2 OF _____

PROJECT NO. I 189-3(52)
SHEET NO. 14 OF 25

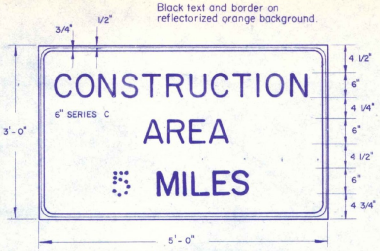


SIGN No. H-1
(STD. W20-1)

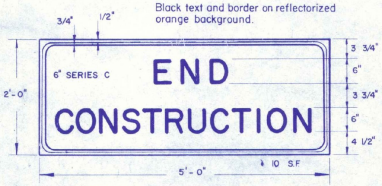


SIGN No. H-2
(STD. W20-1)

Show mileage to nearest 1/4 mile

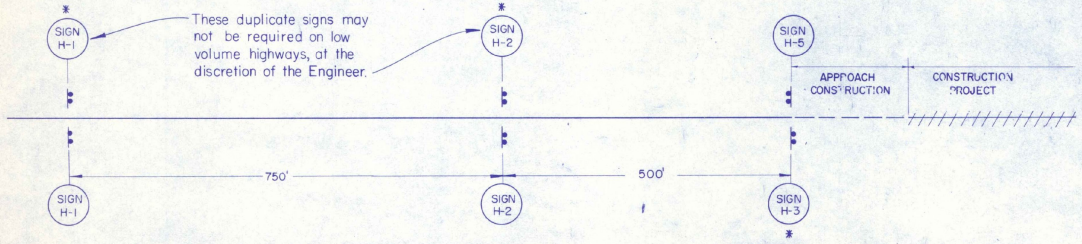


SIGN No. H-3 (STD. G20-1)



SIGN No. H-5 (STD. G20-2)

The road construction approach signs shown on this sheet are intended for use in providing advance warning and information on construction projects over which traffic will be maintained. When additional approach signs or other types of advance signing or control are necessary, the Plans and/or the Specifications for that project will give the details of the signs and devices required.



* THESE SIGNS WILL NOT BE REQUIRED ON INTERSECTING HIGHWAYS.

NOTES

LOCATION

Construction approach signs shall be located as detailed on this sheet or otherwise shown on the Plans. They shall appear at each end of the highway under construction, and on all intersecting public highways. The exact placement of any sign will depend upon the alignment of the highway and the character of the roadsides. The location measurements on this sheet are intended to indicate the sequence to be followed, and the minimum spacing to be observed by the Engineer in determining exact locations.

DESIGN

The designs of the signs shall conform with the details shown on this sheet and with the standards prescribed in the Manual on Uniform Traffic Control Devices prepared by National Joint Committee on Uniform Traffic Control Devices.

MATERIALS

The signs shall be of metal, wood, plywood, hardboard or any other material satisfactory to the Engineer. No material shall be approved that will deteriorate by exposure to the weather during the required life of the sign.

REFLECTORIZATION

All new signs requiring an orange background shall have encapsolated lens reflective sheeting material as of January 1, 1975.

ILLUMINATION

If desired by the contractor, and approved by the Engineer, a sign may be illuminated instead of reflectorized. The illumination may be provided by incandescent or flourescent lamps, or by spotlights. Lamps shall be properly shielded to protect drivers from glare. Torches, lanterns or existing street lighting are not acceptable for sign illumination. If the Engineer considers that a reflectorized sign is not adequate, he may order that it be illuminated.

INSTALLATION

The signs shall be in place at the time the project officially commences. Each sign shall be erected in a neat and workmanlike manner on wood or metal posts set securely in the ground. The bottom of a sign shall be at least 5 feet above road level, and the nearest edge of a sign shall be at least 6 feet outside the shoulder point or 2 feet outside guard rail, curbing or sidewalk. Posts and signs shall be braced or reinforced in back as necessary. The installation of signs shall be subject to approval of the Engineer.

MAINTENANCE

Signs shall be maintained in a clean and legible condition satisfactory to the Engineer. They shall be completely visible to approaching traffic at all times. They shall be kept plumb and level, and always present a neat appearance. Damaged, defaced or dirty signs shall be repaired, cleaned or replaced as ordered by the Engineer.

GENERAL

The cost of furnishing, erecting, maintaining and removing all construction approach signs shall be considered as subsidiary work pertaining to the project as a whole and shall be included in the contract unit price bid for various items involved in the contract. In all phases of construction of approach signing, the requirements set forth in the Manual on Uniform Traffic Control devices shall be met (See Standard Specifications, Section 107, Article 107.09 Barricades, Warning and Detour Signs).

When project is closed down for temporary periods the signs shall be covered in a workmanlike manner.

REVISIONS AND CORRECTIONS

SEPT. 11, 1973 - REVISED PER ORDER OF FHWA, SEPT. 11, 1973
OCT. 19, 1973 - SIGN H-4 REMOVED.
MAY 14, 1974 - REFLECTIVE MATERIAL CHANGE

APPROVED Dec. 14, 1971 DATE

R. H. Arnold
CHIEF ENGINEER

E. W. Stickney
ASST. CHIEF ENGINEER

G. M. Lane
HIGHWAY ENGINEER

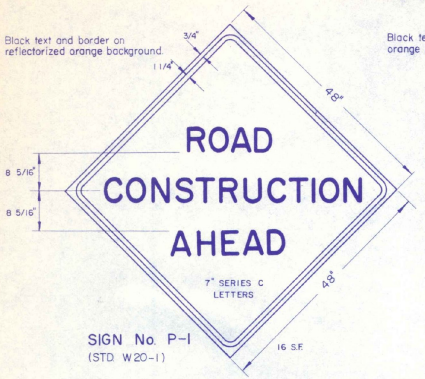
TRAFFIC SIGNS

ROAD CONSTRUCTION APPROACH SIGNS

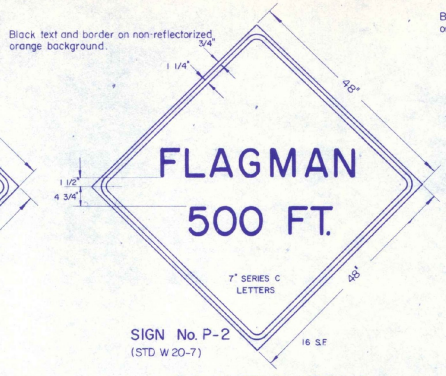
VERMONT DEPARTMENT OF HIGHWAYS STANDARD

E-2

D-9



SIGN No. P-1
(STD. W20-1)



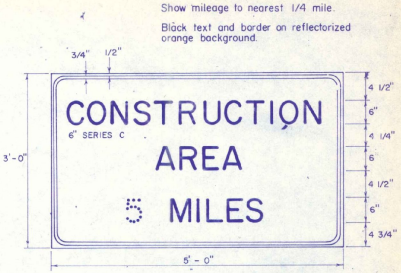
SIGN No. P-2
(STD W 20-7)

TO BE MOUNTED ON A PORTABLE SUPPORT AND DISPLAYED IN ADVANCE OF A FLAGMAN WHEN ON DUTY.

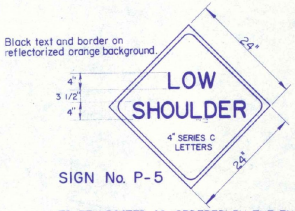
SIGN No. P-3
(STD W 20-4)

TO BE MOUNTED ON A PORTABLE SUPPORT AND DISPLAYED IN ADVANCE OF THE WORK AREA WHEN REQUIRED

Show mileage to nearest 1/4 mile.



SIGN P-4



SIGN No. P-5

TO BE LOCATED AS ORDERED BY THE ENGINEER ON POSTS SET SECURELY IN THE GROUND. NEAR EDGE OF SIGN TO BE AT LEAST 2 FT FROM EDGE OF PAVEMENT, WITH BOTTOM AT LEAST 3 FT ABOVE ROAD LEVEL.

The signs shown on this sheet are intended for use in connection with contract paving projects on two-lane highways over which traffic will be maintained. When additional signs or other types of signing or control are necessary, the plans and/or special provisions for that project will give the details of the signs and devices required.

NOTES

LOCATION

Construction paving signs shall be located as detailed on this sheet or ordered by the Engineer. They shall appear at each end of the highway under construction, and on all intersecting public highways.

The exact placement of any sign will depend upon the alignment of the highway and the character of the roadsides. The location measurements on this sheet are intended to indicate the sequence to be followed, and the minimum spacing to be observed by the Engineer in determining exact locations.

DESIGN

The designs of the signs shall conform with the details shown on this sheet and with the standards prescribed in the Manual on Uniformed Traffic Control Devices prepared by National Joint Committee on Uniform Traffic Control Devices.

MATERIALS

The signs shall be of metal, wood, plywood, hardboard or any other material satisfactory to the Engineer. No material shall be approved that will deteriorate by exposure to the weather during the required life of the sign.

REFLECTORIZATION

All new signs requiring an orange background shall have encapsolated lens reflective sheeting material as of January 1, 1975.

INSTALLATION

The signs shall be in place at the time the project commences. Each sign shall be erected in a neat and workmanlike manner on wood or metal posts set securely in the ground, unless otherwise noted on this sheet. The bottom of a sign, unless otherwise noted shall be at least 5 feet above road level, and the nearest edge of a sign shall be at least 6 feet outside the shoulder point or 2 feet outside guard rail, curbing or sidewalk. Posts and signs shall be braced or reinforced in back as necessary. The installation of all signs shall be subject to the approval of the Engineer.

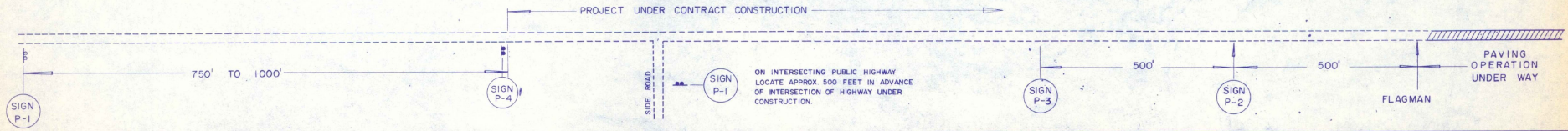
MAINTENANCE

Signs shall be maintained in a clean and legible condition satisfactory to the Engineer. They shall be completely visible to approaching traffic at all times. They shall be kept plumb and level, and always present a neat appearance. Damaged, defaced or dirty signs shall be repaired, cleaned or replaced as ordered by the Engineer.

GENERAL

The cost of furnishing, erecting, maintaining and removing all construction approach signs shall be considered as subsidiary work pertaining to the project as a whole and shall be included in the contract unit price bid for various items involved in the contract. In all phases of construction of approach signing, the requirements set forth in the Manual on Uniform Traffic Control devices shall be met (see Standard Specifications, Section 107, Article 107.09 Barricades, Warning and Detour Signs).

When project is closed down for temporary periods the signs shall be covered in a workmanlike manner.



REVISIONS AND CORRECTIONS

SEPT. 11, 1973 – REVISED PER ORDER OF FHWA., SEPT. 11, 1973
NOV. 6, 1973 – REVISED PER ORDER OF FHWA.
MAY 14, 1974 – REFLECTIVE MATERIAL CHANGE.

APPROVED Dec. 14, 1971
DATE

R. H. Arnold
CHIEF ENGINEER

E. H. Stickney
ASST. CHIEF ENGINEER

G. M. Lane
HIGHWAY ENGINEER

TRAFFIC SIGNS

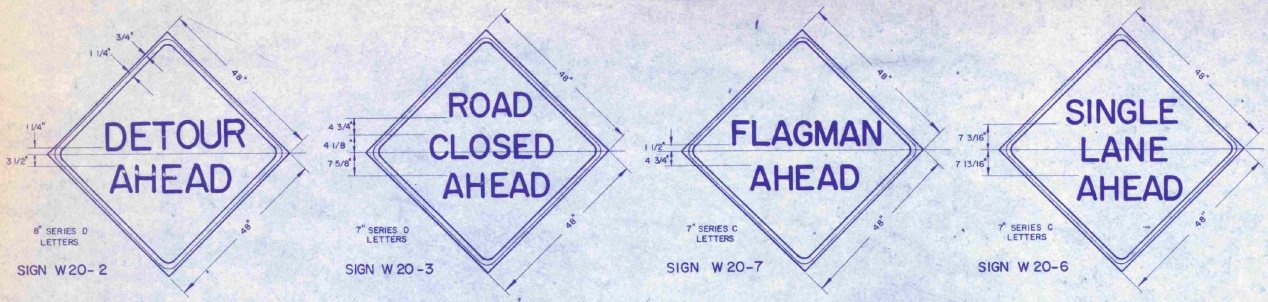
ROAD CONSTRUCTION SIGNS

—PAVING—

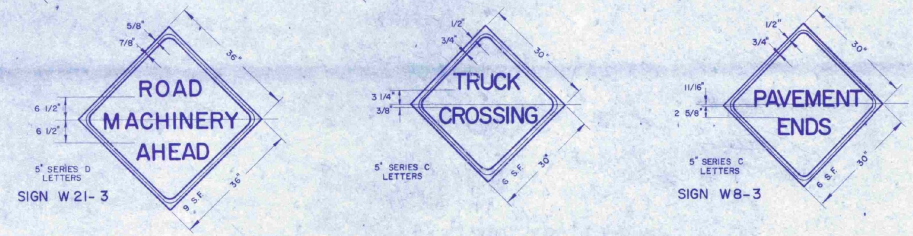
VERMONT
DEPARTMENT OF HIGHWAYS
STANDARD

E-4

ALL DIAMOND SHAPED SIGNS SHALL HAVE BLACK TEXTS AND BORDERS ON AN ORANGE BACKGROUND. IF A MESSAGE IS TO BE CONVEYED DURING THE HOURS OF DARKNESS, THE BACK-GROUND SHALL BE REFLECTORIZED OR THE ENTIRE SIGN SHALL BE ILLUMINATED.



SEE NATIONAL MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR ADDITIONAL SIGNS RELATED TO SPECIFIC CONSTRUCTION SITUATIONS.



NOTES

APPLICATION OF STANDARDS
Since it is not possible to prescribe detailed standards of application for all of the situations that may conceivably arise on a construction project, reference must be made to the National Manual on Uniform Traffic Control Devices for the principles, procedures and and standards that will be required in connection with on-project construction signs and barricades. The signs here shown represent a sample of those that probably will be most used.

DESIGN
The designs of the signs and barricades shall conform with the details shown on this sheet and with the standards prescribed in the Manual. Deviations will not be permitted. Signs and barricades that are to convey their messages during the hours of darkness shall be reflectorized or illuminated.

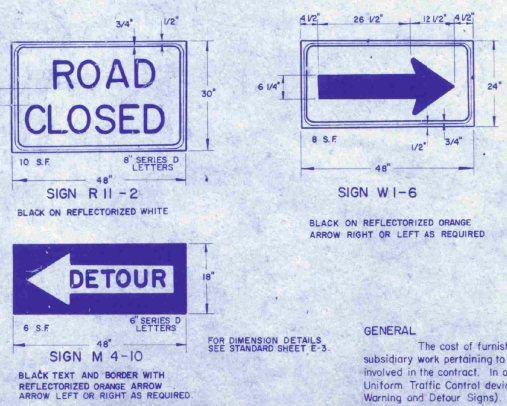
MATERIALS
The signs shall be of metal, wood, plywood, hardwood or any other material satisfactory to the Engineer. No material shall be approved that will deteriorate by exposure to the weather during the required life of the sign.

REFLECTORIZATION
All new signs requiring an orange background shall have encapsolated lens reflective sheeting material as of January 1, 1975.

ILLUMINATION
If desired by the contractor and approved by the Engineer, a sign or barricade may be illuminated instead of reflectorized. The illumination may be provided by incandescent or flourescent lamps, or by spotlights. Lamps shall be properly shielded to protect drivers from glare. Torches, lanterns, or existing street lighting are not acceptable for illumination.

INSTALLATION
Signs and barricades shall be in place prior to the start of the construction operation to which they apply, and shall be removed promptly when the need no longer exists. Each sign shall be erected in a neat and workmanlike manner on wood or metal posts set securely in the ground, or on portable supports for temporary use, or on barricades when appropriate. As a general rule, roadside signs shall be 5 feet above road level with the nearest edge at least 6 feet outside the shoulder point. The installation of all signs and barricades shall be subject to the approval of the Engineer.

MAINTENANCE
Signs shall be kept in a clean and legible condition at all times with the reflective quality completely unimpaired. Signs, sign supports, and barricades shall be repaired, cleaned, repainted or replaced whenever necessary. Torches, lanterns and fires shall not be placed so close to signs and barricades as scorch them or deposit soot on them. Weeds, shrubbery, construction materials, equipment, and snow shall not be allowed to obscure any sign or barricade. The maintenance of all traffic control devices shall be subject to the orders of the Engineer.



FOR DIMENSION DETAILS SEE STANDARD SHEET E-3.

GENERAL
The cost of furnishing, erecting, maintaining and removing all construction approach signs shall be considered as subsidiary work pertaining to the project as a whole and shall be included in the contract unit price bid for various items involved in the contract. In all phases of construction of approach signing, the requirements set forth in the Manual on Uniform Traffic Control devices shall be met (see Standard Specifications, Section 107, Article 107.09 Barricades, Warning and Detour Signs).

The on-project construction signs covered by this sheet are intended to be used as the situations apply within normal two-lane highway construction areas, for the protection of the public and workmen and for the guidance of traffic through or around construction operations. When messages other than those shown here are needed, the signs and their applications shall conform with the standards set forth in the Manual on Uniform Traffic Control Devices, prepared by the National Joint Committee on Traffic Control Devices. Special signing or control devices required within a construction area will be included in the Plans and/or the Special Provisions.

REVISIONS AND CORRECTIONS
DEC. 14, 1973 – BEADS ON PAINT FOR BACKGROUND MATERIAL REMOVED.
MAY 14, 1974 – REFLECTIVE MATERIAL CHANGE

APPROVED
Dec. 14, 1971 DATE
R. H. Arnold CHIEF ENGINEER
E. J. Stickney ASST. CHIEF ENGINEER
G. M. Lane HIGHWAY ENGINEER

TRAFFIC SIGNS

ON-PROJECT CONSTRUCTION SIGNS

VERMONT DEPARTMENT OF HIGHWAYS STANDARD

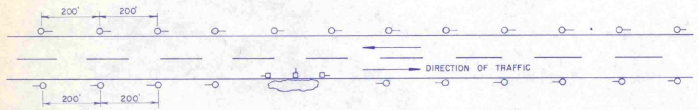
E-6

D-8

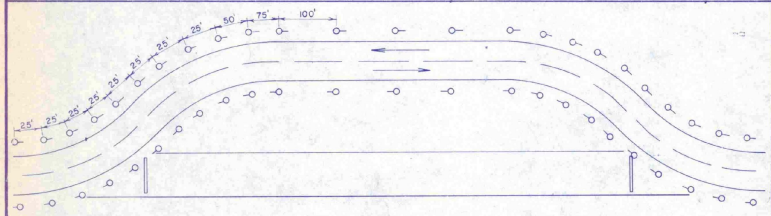
DELINEATOR AND HAZARD MARKER DETAILS FOR CONSTRUCTION AREAS WHERE TRAFFIC IS MAINTAINED

HAZARD MARKER TYPICAL

DELINEATOR TYPICAL

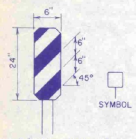


DELINEATOR AND HAZARD MARKER LOCATION DETAIL FOR TWO WAY TRAFFIC
(FOR INTERSTATE TYPE HIGHWAYS
200' SPACING ON RT.
AND 400' SPACING ON MEDIAN EDGE)



DELINEATOR LOCATION DETAIL FOR CONSTRUCTION DETOUR

HAZARD MARKER
TO BE USED AROUND EXCAVATION DURING NON-WORKING HOURS OR WHEN AN OPERATION IS NOT BEING CARRIED ON



HAZARD MARKER

HAZARD MARKERS SHALL HAVE ALTERNATING ORANGE AND WHITE REFLECTORIZED STRIPES (SLOPING DOWNWARD IN THE DIRECTION TRAFFIC IS TO PASS)

POSTS

POSTS SHALL BE OF SUITABLE MATERIAL TO SUPPORT DELINEATORS OR HAZARD MARKERS, SHARPENED TO DRIVE.

SYMBOL

DELINEATORS SHALL BE OF A REFLECTORIZED SILVER OR WHITE COLOR. THEY SHALL HAVE A MINIMUM OF 7 SQUARE INCHES. THEY MAY BE ROUND, SQUARE, OR OBLONG. THEY SHALL BE OF THE FOLLOWING:
1 - REFLECTORIZED TAPE WITH METAL BACKING.
2 - REFLECTIVE TAPE APPLIED DIRECTLY TO POSTS.
3 - REFLECTORIZED PAINT APPLIED DIRECTLY TO POSTS. WHEN PAINT OR TAPE IS APPLIED DIRECTLY TO POST, A SURFACE OF 3" MINIMUM WIDTH FACING TRAFFIC IS REQUIRED.

MATERIALS

The barricades shown on this sheet normally will be of wood or wood and metal construction and Type II barricades may be of metal construction.

DESIGN

The design of the barricades shall conform with the details shown on this sheet and the markings on the barricades shall be alternate orange and white stripes (sloping downward at an angle of 45 degrees in the direction traffic is to pass).

COLORS

The barricades shown on this sheet shall have alternating reflectorized white and orange stripes. The orange shall conform with the standard color adopted by the American Association of State Highway Officials and approved by the U.S. Department of Transportation Federal Highway Administration.

REFLECTORIZATION

The barricades shall be reflectorized with reflective sheeting.

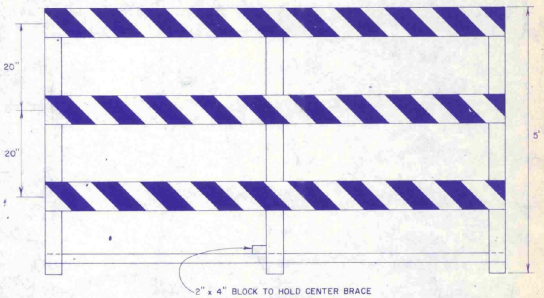
LOCATION

The barricades shown on this sheet will be located by the Engineer in the field or as shown on the plans. The locations of the barricades shall follow the procedures set forth in the Manual on Uniform Traffic Control Devices.

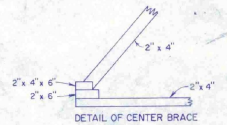
MAINTENANCE

Barricades shall be maintained in a clean and legible condition satisfactory to the Engineer. They shall be completely visible to approaching traffic at all times. Damaged, defaced, or dirty barricades shall be repaired, cleaned, or replaced as ordered by the Engineer.

TYPE III

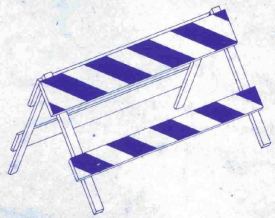


TYPE I

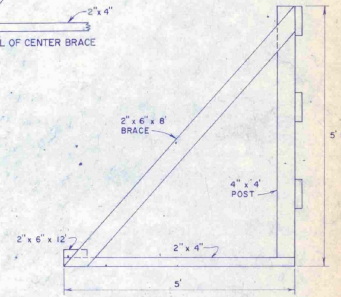


DETAIL OF CENTER BRACE

TYPE II



	I	II	III
WIDTH OF RAIL	8" min. 12" max.	8" min. 12" max.	8" min. 12" max.
LENGTH OF RAIL	6' - 8'	3' min. 4' max.	12'
WIDTH OF STRIPES	6"	6"	6"
HEIGHT	3' min.	3' min.	5' min.
TYPE OF FRAME	Demountable or Heavy 'A' Frame	Light 'A' Frame	Skids or Posts
FLEXIBILITY	Essentially Moveable	Portable	Essentially Permanent
ANGLE OF STRIPE	45°	45°	45°
COLOR OF STRIPES	Orange and White	Orange and White	Orange and White



DETAIL OF END BRACE

REVISIONS AND CORRECTIONS
MAR 12 1973 - DELINEATOR SPACING REVISED
SEPT 19, 1973 - DELINEATOR SPACING REVISED

APPROVED
Feb. 15, 1973
DATE

R O Morse
CHIEF ENGINEER

E H Stickney by L
ASST. CHIEF ENGINEER

G M Lane
HIGHWAY ENGINEER

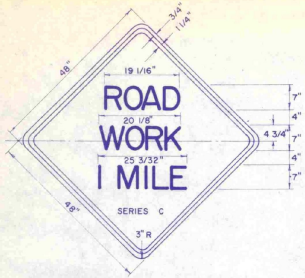
TRAFFIC SIGNS

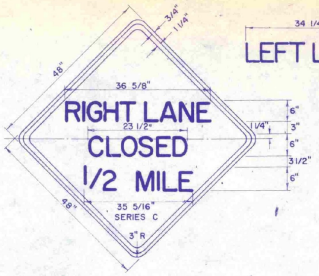
DELINEATION AND BARRICADES FOR CONSTRUCTION AREAS

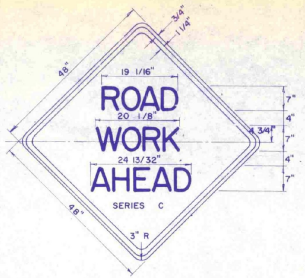
VERMONT DEPARTMENT OF HIGHWAYS STANDARD

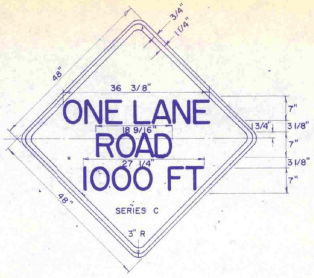
E-7

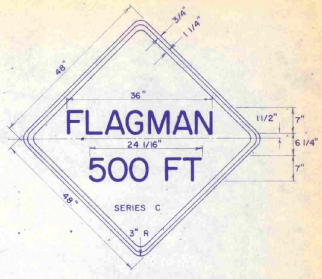
D-7

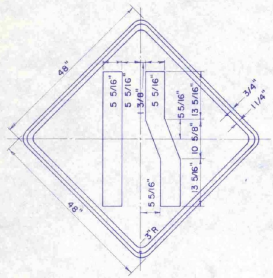


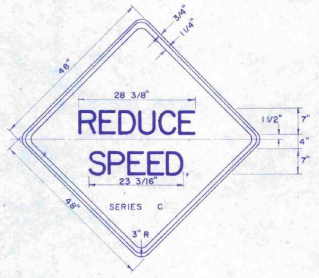


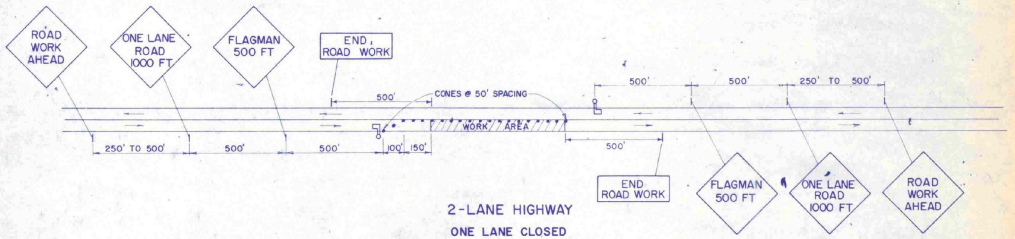




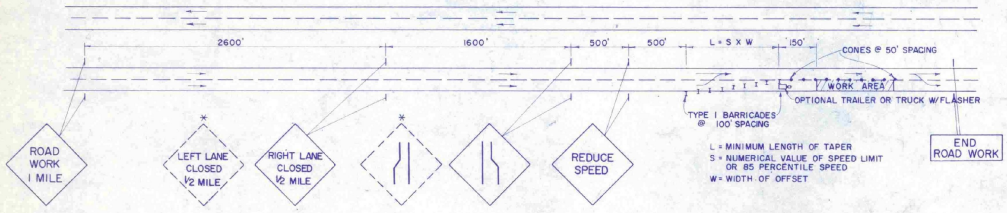








2-LANE HIGHWAY
ONE LANE CLOSED



* DISPLAY FOR LEFT LANE CLOSED CONDITION

4-LANE DIVIDED HIGHWAY
ONE LANE CLOSED

Reflectorization
All new signs requiring an orange background shall have encapsolated lens reflective sheeting material, as of January 1, 1975. The text and borders may be screened, lettering film, or hand painted.

Colors
The warning signs shown on this sheet shall have black text, border, and symbols on a reflectorized orange background. The orange shall conform with the standard colors adopted by the American Association of State Highway Officials and approved by the U.S. Department of Transportation, Federal Highway Administration.

Text Design
Letters, digits, spacing, and text dimensions shall conform with the standard alphabets and design prescribed in the manual on Uniform Traffic Control Devices.

Specifications
Warning signs shall meet the standard state specifications for traffic signs.

Sign Base Material
The sign base material used for the warning signs on this sheet may be of any of the following, with minimum thickness as noted:

Flat sheet aluminum	0.125	Inches
High density overlayed plywood	3/4	Inches
Galvanized sheet steel	12	Gage

REVISIONS & CORRECTIONS
FEB. 29, 1972: SIGN ADDED UNDER DIRECTION OF FEDERAL HIGHWAY ADMINISTRATION
MAY 14, 1974 REFLECTIVE MATERIAL CHANGE

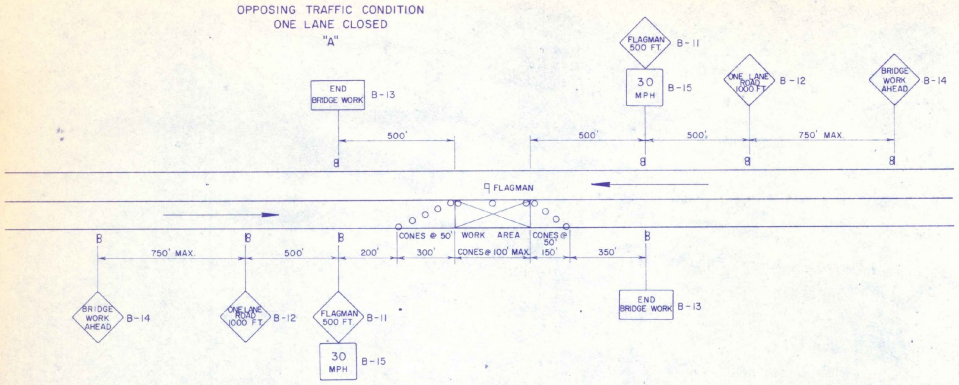
APPROVED: Jan. 26, 1972
DATE
R. A. Crook
CHIEF ENGINEER
E. H. Otchmey
ASST. CHIEF ENGINEER
G. M. Lane
HIGHWAY ENGINEER

TRAFFIC SIGNS
TYPICAL MAJOR MAINTENANCE OPERATION
APPROACH SIGNS

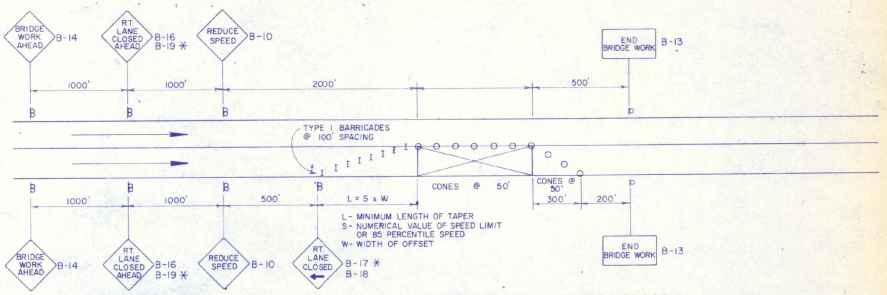
VERMONT DEPARTMENT OF HIGHWAYS STANDARD

E-8

OPPOSING TRAFFIC CONDITION
ONE LANE CLOSED
"A"

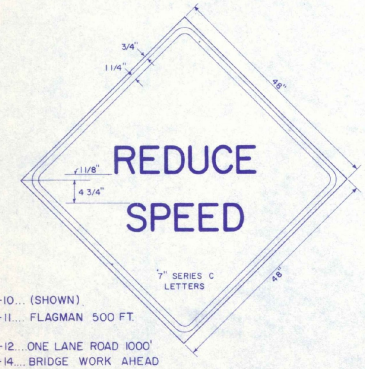


DIVIDED HIGHWAY CONDITION
ONE LANE CLOSED
"B"



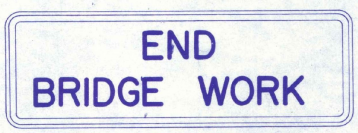
* FOR LEFT LANE CLOSED CONDITION B-17 AND B-19 SIGNS SHALL BE USED IN LIEU OF THE B-16 AND B-18 SIGNS, AND THE B-17 SIGN SHALL BE PLACED ON THE OPPOSITE SHOULDER.

SIGNS B-10, B-11, B-12, B-14

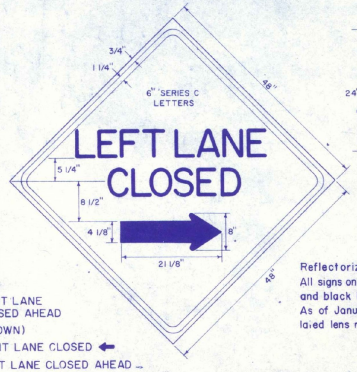


B-10... (SHOWN)
B-11... FLAGMAN 500 FT.
B-12... ONE LANE ROAD 1000'
B-14... BRIDGE WORK AHEAD

SIGN B-13

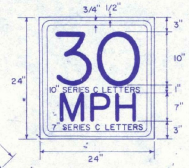


SIGNS B-16, B-17, B-18, B-19



B-16... RIGHT LANE CLOSED AHEAD
B-17... (SHOWN)
B-18... RIGHT LANE CLOSED ←
B-19... LEFT LANE CLOSED AHEAD ←

SIGN B-15



Reflectorization
All signs on this sheet shall have an orange background and black legend and borders.
As of January 1, 1975, these signs shall have encapsulated lens reflective sheeting material.

NOTES:

1. Signing to remain the same for "all lanes open condition," except signs B-11, B-15, B-16, B-17, B-18, & B-19 are to be covered or removed.
2. All signs shall be covered or removed at the end of the working day unless required for the protection and safety of the traveling public.
3. If vertical clearance has been reduced below 14 ft. and lane is open to traffic, a vertical clearance sign is required with clearance shown. If clearance is reduced below 12 ft. the lane must be closed. The signs shall be located next to the restriction. Existing clearance warning signs shall be covered when not applicable.
4. When any personnel or equipment is temporarily working, or physically placed within the work zone shoulder limits, a flagman shall be placed on duty to direct traffic for condition "A" only. Flagmen use shall be as directed by the Engineer.
5. Signs on all intersecting public highways shall be as shown on the plans or as directed by the Engineer.
6. The design of the signs shall conform with the details shown on this sheet and with the standards in the Manual on Uniform Traffic Control Devices prepared by the National Joint Committee on Uniform Traffic Control Devices.
7. Installation. Signs and barricades shall be in place prior to the start of the maintenance operation to which they apply, and shall be removed promptly when the need no longer exists. Each sign shall be erected in a neat and workmanlike manner on wood or metal posts set securely in the ground, or on portable supports for temporary use, or on barricades when appropriate. As a general rule, roadside signs shall be 5 feet above road level with the nearest edge at least 6 feet outside the shoulder point. The installation of all signs and barricades shall be subject to the approval of the Engr.
8. The cost of furnishing, erecting, maintaining, and removing all signs shall be borne by the Contractor without additional compensation.

REVISIONS AND CORRECTIONS
FEB. 29, 1972 - REVISED PER DIRECTION OF FEDERAL HIGHWAY ADMINISTRATION.
DEC. 19, 1972 - REVISED PER DIRECTION OF FEDERAL HIGHWAY ADMINISTRATION.
MAY 14, 1974 REFLECTIVE MATERIAL CHANGE.

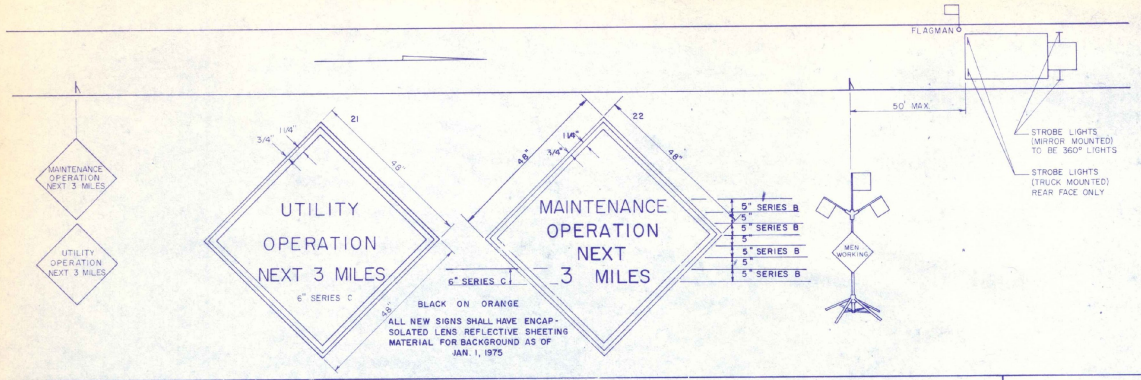
APPROVED
Dec. 29, 1971
DATE
R. H. Conrad
CHIEF ENGINEER
E. W. Hickey
ASST. CHIEF ENGINEER
L. M. Lane
HIGHWAY ENGINEER

TRAFFIC SIGNS

BRIDGE MAINTENANCE APPROACH SIGNS

VERMONT DEPARTMENT OF HIGHWAYS STANDARD E- 9

D-8



BLACK ON ORANGE

ALL NEW SIGNS SHALL HAVE ENCAPSOLATED LENS REFLECTIVE SHEETING MATERIAL FOR BACKGROUND AS OF JAN. 1, 1975

LOCATION

THE APPROACH SIGNS SHALL BE LOCATED AS DETAILED ON THIS SHEET. THE ERECTION PLACEMENT OF ANY OF THESE SIGNS SHALL DEPEND UPON THE ALIGNMENT OF THE HIGHWAY AND CHARACTER OF THE ROADSIDE. THE LOCATION MEASUREMENTS ON THIS SHEET ARE TO INDICATE THE SEQUENCE TO BE FOLLOWED, AND NOT EXCEEDED.

DESIGN

THE DESIGN OF THE SIGNS SHALL CONFORM WITH THE DETAILS SHOWN ON THIS SHEET AND WITH THE STANDARDS PRESCRIBED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES PREPARED BY THE NATIONAL JOINT COMMITTEE ON UNIFORM TRAFFIC CONTROL DEVICES.

MATERIALS

THE 4'x 4' MAY BE OF EITHER 3/4" HIGH DENSITY PLYWOOD, 0.125" ALUMINUM WITH A REFLECTIVE SHEETING BACKGROUND. HEAVY DUTY NYLON VINYL WITH REFLECTORIZED BACKGROUND MAY BE USED FOR ROLL-UP SIGN WITH A REFLECTORIZED BACKGROUND ON FLAG SCOPE ONLY.

INSTALLATION

THE SIGNS SHALL BE IN PLACE BEFORE ANY WORK COMMENCES. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER ON WOOD OR METAL TRIPODS. IF GROUND MOUNTED, OR IF MOUNTED ON REAR OF MAINTENANCE VEHICLE IN A MANNER TO BE PLAINLY VISIBLE TO THE TRAVELING PUBLIC.

MAINTENANCE

SIGNS SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION. THEY SHALL BE COMPLETELY VISIBLE TO APPROACHING TRAFFIC AT ALL TIMES. DAMAGED, DEFACED, OR DIRTY SIGNS SHALL BE EITHER CLEANED OR REFURBISHED PERIODICALLY.

FLAGMAN

THE FLAGMAN IS PROVIDED AT WORK SITES TO STOP TRAFFIC INTERMITTENTLY AS NECESSITATED BY WORK PROGRESS OR TO MAINTAIN CONTINUOUS TRAFFIC PAST A WORK SITE AT A REDUCED SPEED TO HELP PROTECT THE WORK CREW. THE FLAGMAN MUST HAVE AT ALL TIMES A NEAT APPEARANCE AND WEAR AN ORANGE VEST WHICH SHALL BE REFLECTORIZED. HE SHOULD BE COURTEOUS AT ALL TIMES AND BE CLEARLY VISIBLE TO APPROACHING TRAFFIC FOR A DISTANCE SUFFICIENT TO PERMIT PROPER RESPONSE BY THE MOTORIST TO FLAGGING INSTRUCTIONS.

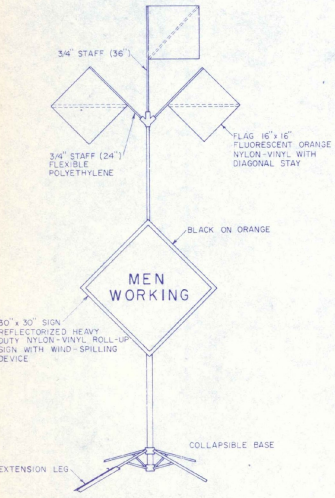
STROBE LIGHTS

THE STROBE LIGHTS TO BE USED WITH THIS STANDARD SHALL BE AS INDICATED BELOW OR AS RECOMMENDED BY THE VERMONT HIGHWAY DEPARTMENT'S HIGHWAY SAFETY ENGINEER.

	REAR FACE (TRUCK MOUNTED)	360° (MIRROR MOUNTED)
BRILLIANCE –	5,000,000 CANDLE POWER	1,000,000 CANDLE POWER
COLOR –	AMBER	AMBER
FLASH RATE –	80 FLASHES PER MINUTE PER SIDE, TOTAL 160 FLASHES PER MINUTE	80 FLASHES PER MINUTE PER SIDE, TOTAL 160 FLASHES PER MINUTE

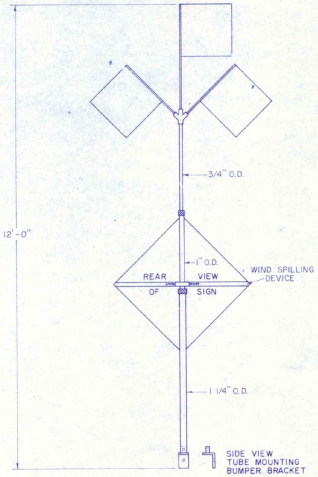
COLORS

THE SIGNS AND FLAGS SHALL BE AN ORANGE WHICH CONFORMS WITH THE STANDARD COLOR ADOPTED BY THE ASSOCIATION OF STATE HIGHWAY OFFICIALS AND APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.



GROUND MOUNTED

GROUND MOUNTED BASE MAY BE WEIGHTED TO PREVENT TIPPING.



VEHICLE MOUNTED

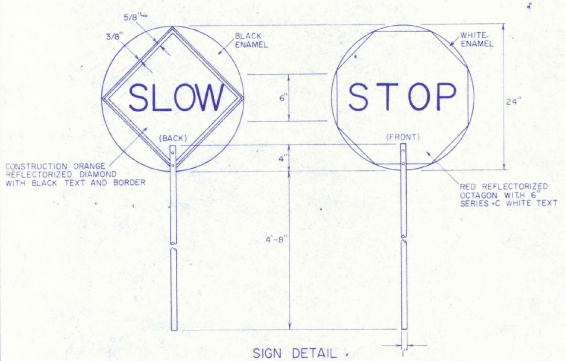
VEHICLE MOUNTED STORAGE BRACKET MAY BE SUBSTITUTED FOR BUMPER BRACKET.

ALL TUBES SHALL BE ALUMINUM ALLOY 6063-T832 OR 6061-T6 WITH A NOMINAL WALL THICKNESS OF 0.065".

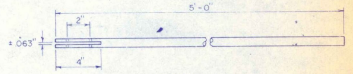
LOCKING FINGERS COMPRESSED BY TIGHTENING KNURLED NUTS HOLD THE TUBES IN EXTENDED POSITION.

MIDDLE TUBE TO INCORPORATE AN ANTI-ROTATING DEVICE WHICH ENGAGES THE BOTTOM OF THE LOCKING FINGER MECHANISM.

SAFETY SCOPE



SIGN DETAIL



STAFF DETAIL

MATERIALS

THE SIGN MATERIALS SHALL BE 0.063 ALUMINUM WITH COLORS AS INDICATED ON DETAILS.
THE STAFF SHALL BE 1" RIDGED ALUMINUM CONDUIT OR TUBING, WITH A WALL THICKNESS OF 1/8 INCH.

COLORS

THE COLORS SHALL CONFORM WITH THE STANDARD COLORS ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS AND APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.

MOUNTING

THE STAFF SHALL BE MOUNTED WITH EITHER 2 - 1/4" ALUMINUM BOLTS OR 2 - 1/4" ALUMINUM RIVETS.

SIGN PADDLE FOR FLAGMAN

REVISIONS AND CORRECTIONS

AUG. 3, 1973 STROBE LIGHT SPECIFICATIONS ADDED.
NOV. 19, 1973 SAFETY SCOPE ADDED.
MAY 14, 1974 MAINTENANCE SIGN TEXT REVAMPED, AND REFLECTIVE MATERIAL CHANGED ON SIGNS 21 AND 22.

APPROVED

DATE Nov. 19, 1973

E W Stickney
CHIEF ENGINEER

R O Mann
ASST. CHIEF ENGINEER

G. W. Lane
HIGHWAY ENGINEER

TRAFFIC SIGNS

TYPICAL MOVING MAINTENANCE OPERATION

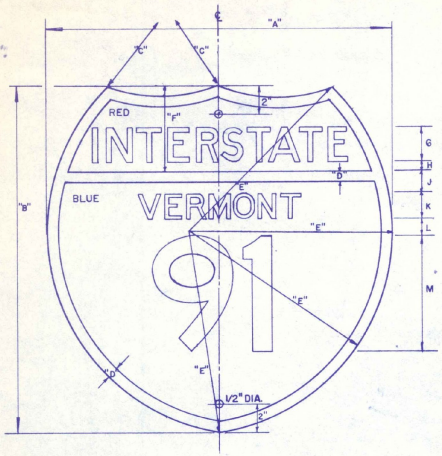
APPROACH SIGNS

VERMONT DEPARTMENT OF HIGHWAYS STANDARD

E-10A

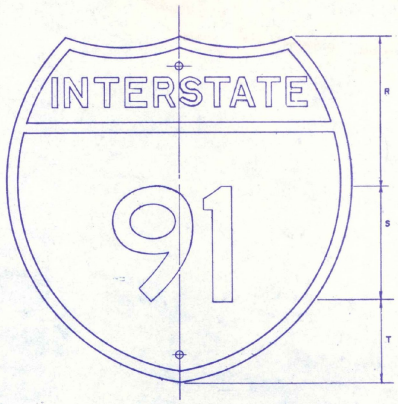
D-8

INTERSTATE ROUTE MARKER
FOR INDEPENDENT USE



SHIELD SIZE	A	B	C	D	E	F	G	H	J	K	L	M	SQ.FT.
24"x 24"	24"	24"	15"	1/2"	15"	8"	2 1/2"	1/2"	1"	1 1/2"	1/2"	10"	4.0
30"x 24"	30"	24"	24"	1/2"	17"	8"	2 1/2"	1/2"	1"	1 1/2"	1/2"	10"	5.0
36"x 36"	36"	36"	22 1/2"	3/4"	22 1/2"	7 1/2"	3 3/4"	3/4"	1 1/2"	2 1/4"	3/4"	15"	9.0
45"x36"	45"	36"	36"	3/4"	25 1/2"	7 1/2"	3 3/4"	3/4"	1 1/2"	2 1/4"	3/4"	15"	11.25

INTERSTATE ROUTE MARKER
FOR USE ON GUIDE SIGNS



SHIELD SIZE	R	S	T	SQ. FT.
24"x24"	6 1/2"	12"	5 1/2"	4.0
30"x24"	6 1/2"	12"	5 1/2"	5.0
36"x36"	9 3/4"	18"	8 1/4"	9.0
45"x36"	9 3/4"	18"	8 1/4"	11.25
48"x48"	13"	24"	11"	16.0

MATERIALS

The Sign Base Material May Be Any Of The Following, Of The Minimum Thickness Noted:

FLAT SHEET ALUMINUM

Less Than 24"x24"	0.060"
24"x 24"	0.080"
36"x 36"	0.100"
When used on guide signs	0.060"

HIGH DENSITY OVERLAID PLYWOOD

Less Than 24"x24"	3/8"
24"x 24"	1/2"
36"x 36"	5/8"
	3/8"

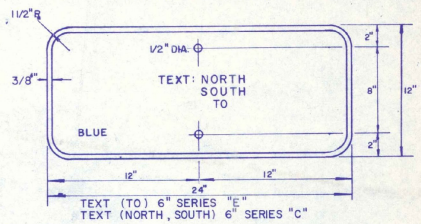
GALVANIZED FLAT SHEET STEEL

Less Than 24"x24"	18 Gage
24"x24"	16 Gage
36"x 36"	14 Gage

The Reflective Material Shall Be Encapsulated Lens Silver Reflective Sheeting Applied To The Entire Background Of The Marker.

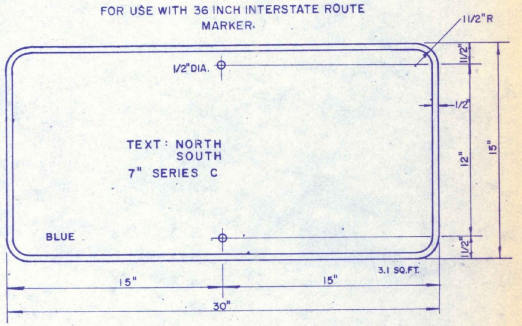
The Texts Of The Interstate Route Markers, And Of The Auxiliary Markers Except Trailblazer Auxiliaries, Shall Be Reverse Screened.

CARDINAL DIRECTION MARKERS
FOR USE WITH 24 INCH
INTERSTATE ROUTE MARKERS

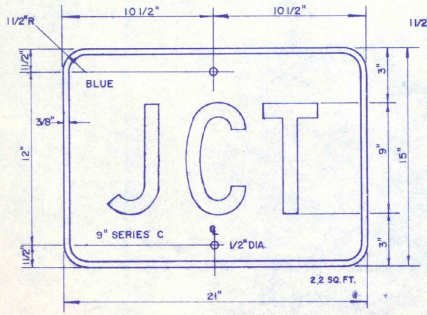


TEXT (TO) 6" SERIES "E"
TEXT (NORTH, SOUTH) 6" SERIES "C"

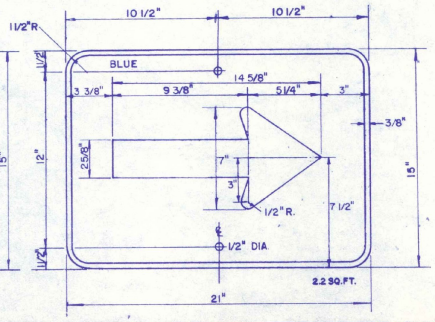
FOR USE WITH 36 INCH INTERSTATE ROUTE MARKER.



JUNCTION MARKER



DIRECTIONAL ARROW



LETTERING

Letters And Digits Shall Conform With The Standard Alphabets For Highway Signs Approved By The National Joint Committee On Uniform Traffic Control Devices.

SPECIFICATIONS

Interstate Route Markers And Auxiliary Route Markers Shall Meet The Standard State Specifications For "Traffic Signs".

DESIGNS

The Designs of Interstate Route Markers and Auxiliary Markers Shall Conform With the Requirements Set Forth in The Manual on Uniform Traffic Control Devices Adopted by the American Association of State Highway Officials.

COLORS

The Official Interstate Route Marker Shall Have A Reflectorized White Or Silver Text On A Reflectorized Red And Blue Background.

Auxiliary Markers Used With Interstate Route Markers Shall Have A Reflectorized White Or Silver Text On A Reflectorized Blue Background, Except When Used As Part Of A Trailblazer Assembly.

The Red And Blue Shall Conform With The Standard Colors Adopted By The American Association Of State Highway Officials And Approved By The U.S. Department Of Transportation, Federal Highway Administration.

REVISIONS AND CORRECTIONS

APR. 11, 1973 - REVISED ACCORDING TO FEDERAL HIGHWAY ADMINISTRATION INSTRUCTIONS

MAY 9, 1974 - ADDITION OF AUXILIARY MARKER (TO)

APPROVED Dec 17 1971

R.H. Cunsolo
CHIEF ENGINEER

E.H. Stickney
ASST. CHIEF ENGINEER

G.M. Lane
HIGHWAY ENGINEER

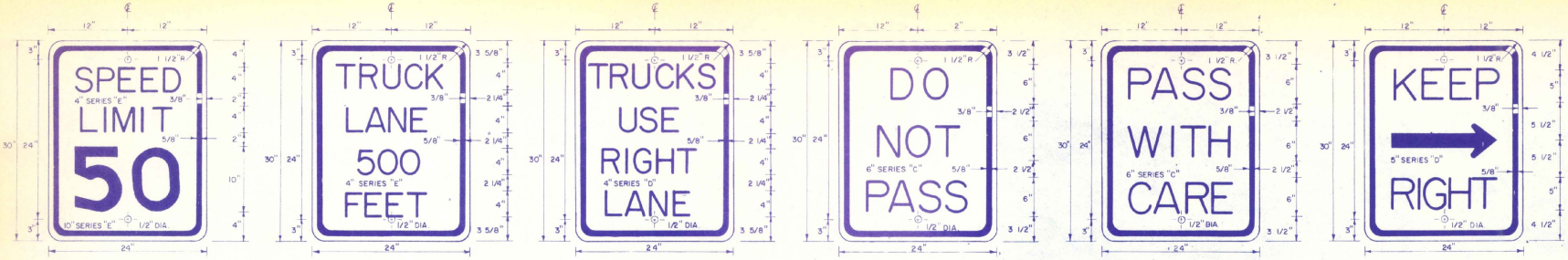
DRAWN A.W.C.
TRACED R.L.E.

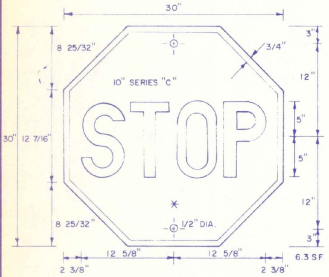
TRAFFIC SIGNS (GUIDE SIGNS)

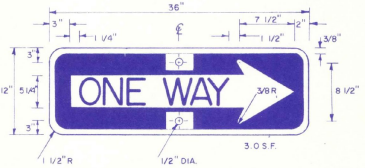
INTERSTATE ROUTE MARKERS AND AUXILIARY MARKERS

VERMONT
DEPARTMENT
OF HIGHWAYS
STANDARD

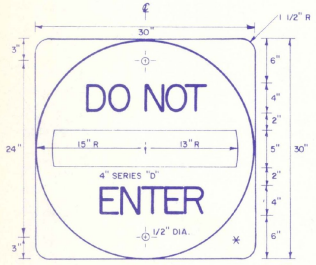
E-11



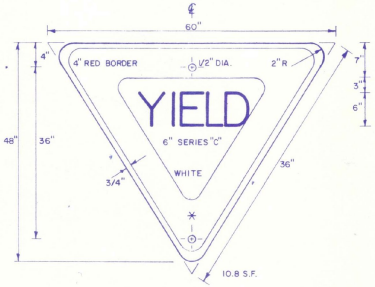




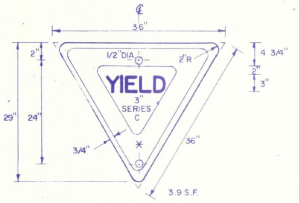
DIMENSIONS						
A	B	C	D	E	F	G
30"	24"	6"C	3"	4 1/2"	5/8"	5/8"
36"	24"	6"D	3 1/2"	4 1/2"	3/4"	3/4"
48"	30"	8"D	4 1/2"	4 3/4"	1"	1"



RED REFLECTORIZED CIRCLE ON A REFLECTORIZED WHITE BACKROUND WITH WHITE STRIPE AND TEXT, REVERSE SCREENED.



RED REFLECTORIZED BORDER ON A REFLECTORIZED WHITE BACKROUND WITH RED PAINTED TEXT, REVERSE SCREENED METHOD.



RED REFLECTORIZED BORDER ON A REFLECTORIZED WHITE BACKROUND WITH RED PAINTED TEXT, REVERSE SCREENED METHOD.

MATERIALS:

The sign base materials used for the regulatory signs shown on this sheet may be any of the following, of the minimum thickness noted:

	24"x30"	30"x30" 36" Δ 36"x12" 36"x24"	48"x30" 60" Δ
FLAT SHEET ALUMINUM	0.008"	0.100"	0.125"
HIGH DENSITY OVERLAID PLYWOOD	1/2"	5/8"	5/8"
GALVANIZED FLAT SHEET STEEL	16gage	14gage	12gage

The reflective material for the black and white signs shall be flat top silver reflective sheeting applied to the entire backround of the sign.

* The reflective material for the red and white signs shall have high intensity encapsulated lens reflective sheeting applied to the entire backround of the sign.

The text of the STOP, DO NOT ENTER, WRONG WAY, and border of YIELD signs shall be reversed screened; the text of the other signs may be leftering film, silk screened or hand painted.

COLORS:

The regulatory signs shown on this sheet, except the STOP, DO NOT ENTER, WRONG WAY, and YIELD signs, shall have black text on reflectorized white or silver backround.

The STOP, DO NOT ENTER, and WRONG WAY signs shall have a reflectorized white or silver text on a reflectorized red backround.

The YIELD sign shall have a red text on a reflectorized white backround with a red border reversed screened.

The red, white, and black shall conform with the standard colors adopted by the American Association of State Highway Officials and approved by the Department of Transportation, Federal Highway Administration.

TEXT DESIGN:

Letters, digits, arrows, spacings, and text dimensions shall conform with the standard alphabets and designs prescribed in the Manual on Uniform Traffic Control Devices prepared by the National Joint Committe on Uniform Traffic Control Devices.

SPECIFICATIONS:

Regulatory signs shall meet the standard state specifications for traffic signs.

REVISIONS AND CORRECTIONS

Jan. 8, 1974 Revised to include encapsulated lens reflective sheeting.

APPROVED: DATE Jan. 4, 1972

R. H. Arnold, CHIEF ENGINEER

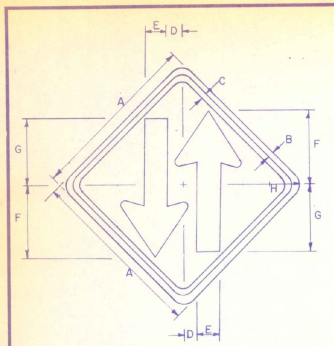
E. W. Stickney, ASST. CHIEF ENGINEER

G. M. Lane, HIGHWAY ENGINEER

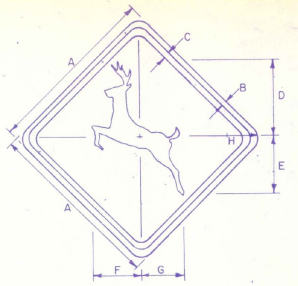
REGULATORY SIGNS

VERMONT DEPARTMENT OF HIGHWAYS STANDARD

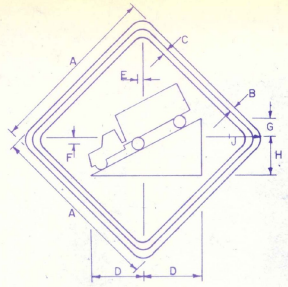
E-17



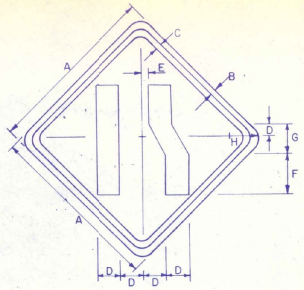
SIGN	DIMENSIONS (INCHES)							
	A	B	C	D	E	F	G	H
MINIMUM	24	3/8	5/8	2	3	9	8 1/2	1 1/2
STANDARD	30	1/2	3/4	2 1/2	4	12 1/2	11 1/2	1 7/8
EXPRESSWAY	36	5/8	7/8	3	5	14	13	2 1/4
FREEWAY	48	3/4	1 1/4	4	6	18	17	3



SIGN	DIMENSIONS (INCHES)							
	A	B	C	D	E	F	G	H
MINIMUM	24	3/8	5/8	10 5/8	7 7/8	6 1/2	5 7/8	1 1/2
STANDARD	30	1/2	3/4	13 1/2	10	8 1/4	7 1/2	1 7/8
EXPRESSWAY	36	5/8	7/8	16 1/4	12	9 7/8	9	2 1/4
FREEWAY	48	3/4	1 1/4	21 1/4	15 3/4	13	11 3/4	3

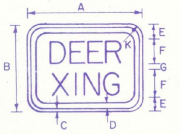


SIGN	DIMENSIONS (INCHES)								
	A	B	C	D	E	F	G	H	J
MINIMUM	24	3/8	5/8	7 1/2	7/8	7/8	2 3/8	5 1/8	1 1/2
STANDARD	30	1/2	3/4	9 1/2	1 1/8	1 1/8	3	6 1/2	1 7/8
EXPRESSWAY	36	5/8	7/8	11 1/4	1 5/16	1 5/16	3 3/16	7 11/16	2 1/4
FREEWAY	48	3/4	1 1/4	15	1 3/4	1 3/4	4 3/4	10 1/4	3

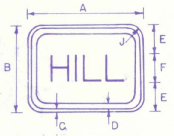


SIGN	DIMENSIONS (INCHES)							
	A	B	C	D	E	F	G	H
MINIMUM	30	1/2	3/4	3 3/8	13/16	8 7/16	6 3/4	1 7/8
STD. & EXPWY.	36	5/8	7/8	4	J	10	8	2 1/4
FREEWAY	48	3/4	1 1/4	5 5/16	1 3/8	13 5/16	10 5/8	3

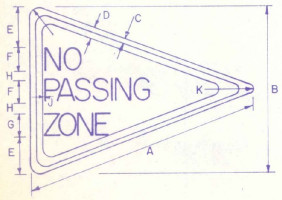
SIGN	DIMENSIONS (INCHES)							
	A	B	C	D	E	F	G	J
STD. & MIN.	24	18	3/8	5/8	4	4 C	2	1 1/2



SIGN	DIMENSIONS (INCHES)							
	A	B	C	D	E	F	G	K
STD. & MIN.	24	18	3/8	5/8	3	5 D	2	1 1/2



SIGN	DIMENSIONS (INCHES)							
	A	B	C	D	E	F	J	
STD. & MIN.	24	18	3/8	5/8	6	6 D	1 1/2	



SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K
MINIMUM	40	30	3/8	5/8	7 1/4	4 D	4 C	1 3/4	2 1/2	1 1/2
STANDARD	48	36	1/2	3/4	8 1/2	5 D	5 C	2	3	1 7/8
SPECIAL	64	48	5/8	7/8	12	6 D	6 C	3	4	2 1/4

The sign material used for the warning signs shown on this sheet may be any of the following minimum thicknesses noted:

	24 x 18	24 x 24	24 x 30	36 x 36	48 x 48	
(1) Flat sheet aluminum	0.080	0.080	0.100	0.100	0.125	(inches)
(2) High density overlayed plywood	1/2	1/2	5/8	5/8	3/4	(inches)
(3) Galvanized sheet steel	16	16	14	14	12	(gages)

The reflective material shall be of reflective sheeting applied to the entire backround of the sign. The arrows, text, symbols, and borders may be screened, lettering film, or hand painted.

COLORS:
The warning signs shown on this sheet shall have a black text, border, arrows, and symbols on a reflectorized yellow backround. The yellow shall conform with the standard colors adopted by the American Association of State Officials and approved by the U.S. Department of Transportation, Federal Highway Administration.

TEXT DESIGN:
Letters, digits, arrows, spacing, and text dimensions shall conform with the standard alphabets and design prescribed in the manual on Uniform Traffic Control Devices.

SPECIFICATIONS:
Warning signs shall meet the standard state specifications for traffic signs.

REVISIONS AND CORRECTIONS

APPROVED: DATE: Jan 31, 1972

R J Arnold
CHIEF ENGINEER

E B Stickney
ASST. CHIEF ENGINEER

G. M. Lane
HIGHWAY ENGINEER

WARNING SIGNS

VERMONT DEPARTMENT OF HIGHWAYS STANDARD

E-21