INDEX OF SHEETS

1. TITLE SHEET
2. LOCATION MAPS SHEET
3. GENERAL NOTES SHEET
4. BRIDGE INFORMATION SHEET
5. QUANTITY SHEET

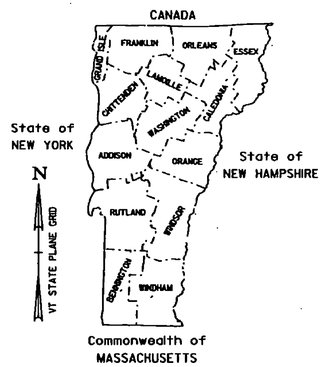
VAOT STANDARD SHEETS

E - 100A	01-06-97
E - 102	08-08-95
E - 102A	08-08-95
E - 107	08-08-95
E - 107A	08-08-95

STATE OF VERMONT
AGENCY OF TRANSPORTATION

CONTRACT PLANS

THESE PLANS DO NOT REFLECT CHANGES MADE ON THE PROJECT.



PROPOSED IMPROVEMENT
BRIDGE PROJECT
STATEWIDE - WEST REGION BHO HBRP(10)

PROJECT DESCRIPTION

REMOVE EXISTING METAL ROOF AND REPLACE WITH STANDING SEAM METAL ROOF FOR 5 COVERED BRIDGES.

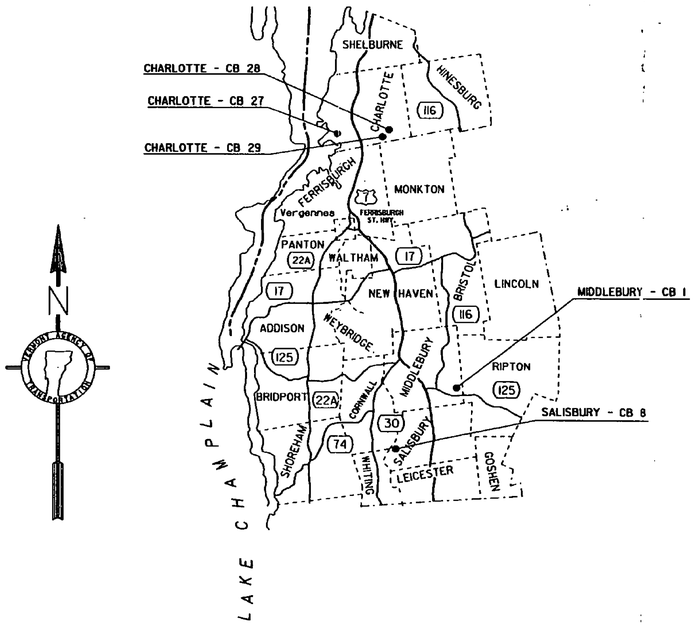
R.T.D. Enterprises
Contractor

Signature

President
Title

Director of Finance and Administration or Duly Authorized Agent

7-15-02
Date



CONVENTIONAL SYMBOLS

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
CONTROL OF ACCESS
PROPERTY LINE
R.O.W. TAKING LINE
SLOPE RIGHTS
TOP OF CUT
TOE OF SLOPE

SR SR SR

SURVEYED BY : N/A
SURVEYED DATE : N/A

DATUM
VERTICAL N/A
HORIZONTAL N/A

THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE FEDERAL HIGHWAY ADMINISTRATION OR THE DIRECTOR OF PROJECT DEVELOPMENT.

CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 4, 2001 FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

/01J250/str/sJ250t1t.dgn sJ250t1t-10.1

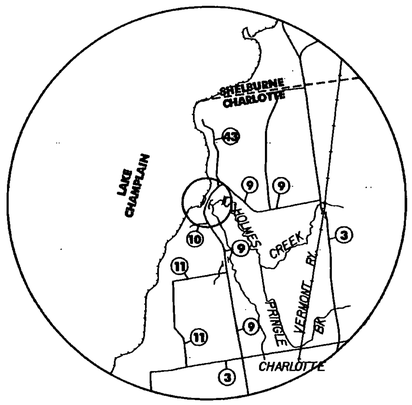
DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATOR
APPROVED _____ DATE May 3, 2002

DIRECTOR OF PROJECT DEVELOPMENT
APPROVED _____ DATE 4/16/02

PROJECT MANAGER : SUE SCRIBNER

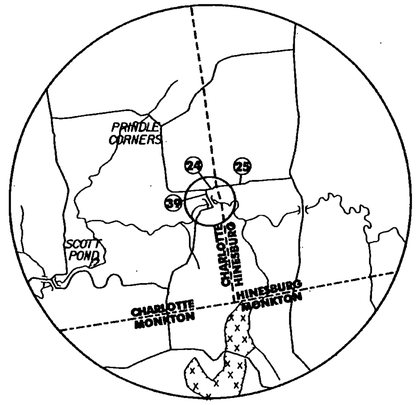
PROJECT NAME : STATEWIDE - WEST REGION
PROJECT NUMBER : BHO HBRP(10)

SHEET 1 OF 5 SHEETS



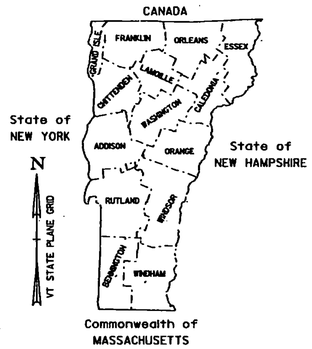
CHARLOTTE
HOLMES CREEK COVERED BRIDGE
CB 27

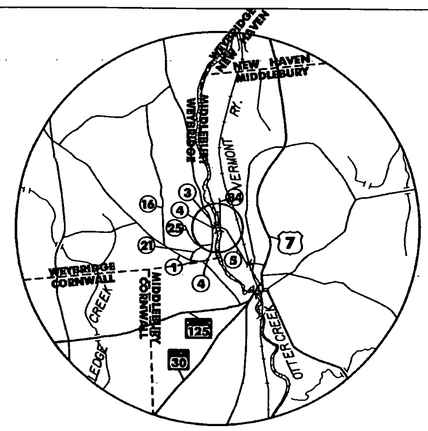
1 0 1 MILE



CHARLOTTE
SEGUIN COX COVERED BRIDGE
CB 28

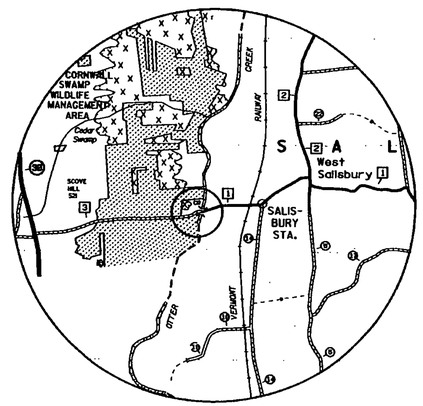
1 0 1 MILE





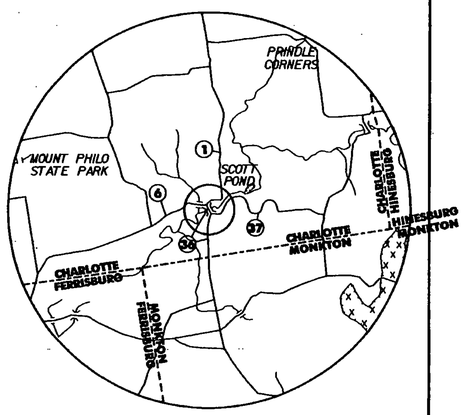
MIDDLEBURY
PULPMILL COVERED BRIDGE
CB 1

1 0 1 MILE



SALISBURY
CEDAR SWAMP (STATION) COVERED BRIDGE
CB 8

1 0 1 MILE



CHARLOTTE
QUINLAN COVERED BRIDGE
CB 29

1 0 1 MILE

PROJECT NAME:	STATEWIDE - WEST REGION
PROJECT NUMBER:	BHO HBRP(10)
FILE NAME: /00J250/str/sJ250map.dgn	PLOT DATE: 09-MAY-2002
PROJECT LEADER: SUE SCRIBNER	DRAWN BY: R. PELLETT
DESIGNED BY: M. GAGULIC	CHECKED BY: M. GAGULIC
sJ250map-10.1	SHEET 2 OF 5

STATE OF VERMONT
AGENCY OF TRANSPORTATION

GENERAL NOTES

1. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM TO THE STATE OF VERMONT AGENCY OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION DATED 2001 ITS LATEST REVISIONS AND THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES DATED 1996 AND ITS LATEST REVISIONS.

2. ALL INFORMATION PROVIDED IN THE PLANS SHALL BE CHECKED AND VERIFIED PRIOR TO COMMENCING THE WORK.

3. THE ITEM NON-STRUCTURAL LUMBER - UNTREATED (522.30) SHALL BE USED TO REPLACE ROTTEN OR DAMAGED ROOF SHEATHING. THE QUANTITIES SHOWN ON SHEET 5 ARE ESTIMATES BASED ON VISUAL INSPECTION. THE LUMBER USED SHALL BE SPECIES = EASTERN SPRUCE, GRADE NO. 1 OR BETTER. THE MATERIAL USED SHALL BE ROUGH SAWN AND CLOSELY RESEMBLE THE DIMENSIONS (WIDTH AND THICKNESS) OF MATERIAL BEING REPLACED. GALVANIZED WOOD SCREWS SHALL BE USED; PAYMENT TO BE SUBSIDIARY TO ITEM 522.30.

4. THE ITEM 665.15 "REMOVE EXISTING ROOFING" INCLUDES THE COST OF REMOVING THE METAL ROOF AS WELL AS ANY UNSUITABLE SHEATHING, OR OTHER DECAYED ROOF MEMBERS AS ORDERED BY THE ENGINEER.

5. THE ROOFING COLOR FOR EACH SPECIFIED BRIDGE IS SHOWN ON SHEET 4.

6. THE REQUIREMENTS FOR WHETHER OR NOT EACH BRIDGE CAN BE CLOSED TO TRAFFIC ARE DETAILED ON SHEET 4. BRIDGES THAT WILL BE CLOSED DURING CONSTRUCTION WORK MAY BE CLOSED TO ALL PEDESTRIAN AND VEHICULAR TRAFFIC. THE CONTRACTOR WILL PROVIDE THE TOWNS WRITTEN NOTICE A MINIMUM OF 3 WEEKS PRIOR TO THE ANTICIPATED BRIDGE CLOSURE AND START OF WORK. THE CONTACT INFORMATION FOR EACH TOWN AND OTHER PERTINENT INFORMATION ARE PROVIDED ON SHEET 4.

7. ALL WORK IS TO BE COMPLETED WITHIN THE AVAILABLE TOWN-OWNED RIGHT-OF-WAY AS DETAILED ON SHEET 4. THE R.O.W IS ASSUMED TO BE CENTERED ABOUT THE CENTER LINE OF THE BRIDGE. NO PROVISIONS HAVE BEEN MADE TO GO OUTSIDE THE EXISTING RIGHT-OF-WAY. SHOULD THE CONTRACTOR REQUIRE ANY ADDITIONAL R.O.W. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL EASEMENTS.

8. IT IS ANTICIPATED THAT NO WORK WILL TAKE PLACE WITHIN THE AFFECTED STREAMBEDS. SHOULD THE CONTRACTORS REQUIRE ANY WORK IN THE STREAM, SUCH AS ERECTING STAGING, IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ALL PERMITS.

9. GREAT CARE SHALL BE TAKEN BY THE CONTRACTOR TO PREVENT ANY MATERIAL FROM ENTERING THE AFFECTED STREAMBEDS PER SECTION 105 OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. ANY MATERIAL THAT DOES ESCAPE THE CONTRACTORS CONTAINMENT SYSTEM WILL BE RECOVERED IMMEDIATELY

10. IT IS NOT ANTICIPATED THAT ANY UTILITIES WILL REQUIRE ADJUSTMENT. THE CONTRACTOR IS CAUTIONED TO PROTECT THESE FACILITIES FROM DAMAGE. ALL DAMAGE TO UTILITIES AS RESULT OF THE CONTRACTORS OPERATIONS WILL BE REPAIRED AT NO COST TO THE STATE. SHOULD THE CONTRACTOR DESIRE UTILITY RELOCATIONS FOR THEIR OWN BENEFIT, ALL COSTS WILL BE THE CONTRACTORS RESPONSIBILITY

11. ALL WORK SHALL PROCEED IN A CAREFUL, ORDERLY MANNER SO THAT AFFECTED HISTORIC STRUCTURES ARE NOT DAMAGED IN ANY WAY. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL DAMAGE TO THE STRUCTURE AS A RESULT OF THEIR OPERATIONS AT NO COST TO THE STATE. ALL DAMAGE WILL BE REPORTED TO THE PROJECT MANAGER IMMEDIATELY AND NO REPAIRS WILL BE MADE UNTIL APPROVED BY THE STATE.

12. ALL TRAFFIC CONTROL DEVICES, INCLUDING BUT NOT LIMITED TO SIGNS, BARRELS, BARRICADES, CONES, BARRIERS, NECESSARY FOR MAINTENANCE OF TRAFFIC DURING CONSTRUCTION WILL BE PAID UNDER ITEM 641.10 TRAFFIC CONTROL AS DETAILED IN STANDARDS 107 AND 107A. WHILE DETOURS AS DETAILED IN STANDARD 107 WILL NOT BE ENCOUNTERED , GENERAL PLACEMENT OF APPROACH SIGNING AND "ROAD CLOSED" SIGNS WILL BE AS SHOWN ON STANDARD 107. AS CONDITIONS AT EACH SITE VARY, THE CONTRACTOR MAY CHOOSE TO SUBMIT INDIVIDUAL TRAFFIC CONTROL PLANS FOR REVIEW.

13. ALL REMOVED MATERIAL WILL BECOME PROPERTY OF CONTRACTOR.

14. ALL WORK SHALL BE DONE BRIDGE BY BRIDGE. ONCE A BRIDGE IS CLOSED, ALL WORK WILL BE DONE CONTINUOUSLY, WITH THE INTENT ON MINIMIZING HOW LONG A BRIDGE IS CLOSED TO TRAFFIC AND UNDER CONSTRUCTION. THIS MEANS THE REMOVAL OF ROOF, REPAIR OF SHEATHING AND PLACEMENT OF THE NEW ROOF WILL PROGRESS ON A CONTINUOUS BASIS. ONCE THE CONTRACTOR STARTS ON A BRIDGE, THE CONTRACTOR IS REQUIRED TO CONTINUE WORKING (A MINIMUM OF 5, EIGHT HOUR DAYS PER WEEK) ON EACH BRIDGE UNTIL THE WORK IS COMPLETED. THE BRIDGE WILL BE PROTECTED AGAINST THE ELEMENTS AT ALL TIME. ONCE THE ROOF REMOVAL BEGINS, THE CONTRACTOR WILL KEEP THE ROOF COVERED WITH WATERPROOF TARPS UNTIL SUCH TIME AS THE NEW ROOF IS INSTALLED. PAYMENT FOR THE PROTECTIVE COVERING IS INCLUDED IN THE ITEM665.18 METAL ROOFING.

15. THE INTENT OF THE PROJECT IS TO REPLACE DEFICIENT ROOFS. THIS WORK SHOULD BE ACCOMPLISHED WITHOUT HAVING TO PERFORM STRUCTURAL REPAIRS TO THE ROOF SYSTEM. IN THE EVENT THAT THE CONTRACTOR ENCOUNTERS A ROOF RAFTER OR OTHER ELEMENT THAT MUST BE REPLACED, THE ITEM 522.20 STRUCTURAL LUMBER TIMBER - UNTREATED WILL BE USED. SPECIES TO BE EASTERN SPRUCE, GRADE 1 OR BETTER A NOMINAL QUANTITY HAS BEEN SUPPLIED AS AN ESTIMATE ONLY. THIS WORK REQUIRES APPROVAL FROM THE PROJECT MANAGER PRIOR TO ITS USE.

PROJECT NAME:	STATEWIDE- WEST REGION		
PROJECT NUMBER:	BHO HBRP(10)		
FILE NAME:	sj250note-10.xls	PLOT DATE:	2/28/02
PROJECT LEADER:	SUE SCRIBNER	DRAWN BY:	R. PELLETT
DESIGNED BY:	M. GAGULIC	CHECKED BY:	M. GAGULIC
GENERAL NOTES SHEET #1		SHEET 3	OF 5

PROJECT INFORMATION

	TOWN	COUNTY	BRIDGE NAME	BRIDGE NUMBER	ROUTE NUMBER	BRIDGE LENGTH	ESTIMATED ROOF AREA	AVAILABLE ROW	COLOR OF NEW ROOF	CAN BRIDGE BE CLOSED DURING CONSTR. WORK *	MUNICIPAL CONTACT FOR NOTIFICATION
1.	CHARLOTTE	CHITTENDEN	HOLMES CREEK COVERED BRIDGE	CB 27	TH 9	41'	960 SQ.FT.	3 ROD	BLACK	YES	HUGH LEWIS JR. ROAD COMMISIONER 1863 FERRY RD. CHARLOTTE, VT 05445 TEL (802) 425 - 2223
2.	CHARLOTTE	CHITTENDEN	SEGUIN COVERED BRIDGE	CB 28	TH 39	72'	1910 SQ.FT.	4 ROD	BLACK	YES	HUGH LEWIS JR. ROAD COMMISSIONER 1863 FERRY RD. CHARLOTTE, VT 05445 TEL (802) 425 - 2223
3.	CHARLOTTE	CHITTENDEN	QUINLAN COVERED BRIDGE	CB 29	TH 36	88'	2190 SQ.FT.	4 ROD	BLACK	YES	HUGH LEWIS JR. ROAD COMMISIONER 1863 FERRY RD. CHARLOTTE, VT 05445 TEL (802) 425 - 2223
4.	MIDDLEBURY	ADDISON	PULPMILL COVERED BRIDGE	CB 1	SEYMORE STREET	204'	6870 SQ.FT.	66 FEET	BLACK	YES	DAN WERNER, DIRECTOR OF OPERATIONS 94 MAIN ST. MIDDLEBURY, VT 05753 TEL: (802) 388 - 4045
5.	SALISBURY	ADDISON	CEDAR SWAMP (STATION) COVERED BRIDGE	CB 8	TH 1	156'	4170 SQ.FT.	50 FEET	GREEN	YES	NORBERT CONANT, ROAD FOREMAN PO BOX 66, SALISBURY, VT 05769 TEL: (802) 352 - 1017

* - SEE GENERAL NOTE 6

PROJECT NAME: STATEWIDE - WEST REGION
PROJECT NUMBER: BHO HBRP (10)

FILE NAME: /01J250/str/sJ250info.dgn
PROJECT LEADER: SUE SCRIBNER
DESIGNED BY: M. GAGULIC
sJ250info-10.1

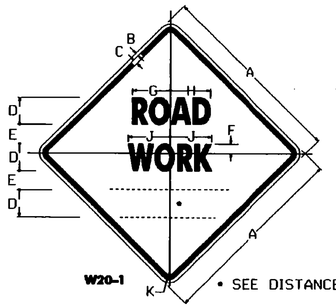
PLOT DATE: 28-FEB-2002
DRAWN BY: M.GAGULIC
CHECKED BY: M.GAGULIC
SHEET 4 OF 5

STATE OF VERMONT
AGENCY OF TRANSPORTATION

QUANTITY SHEET

SUMMARY OF ESTIMATED QUANTITIES															TOTALS				DESCRIPTIONS			DETAILED SUMMARY OF QUANTITIES		
LOCATION NO. 1		LOCATION NO. 2		LOCATION NO. 3		LOCATION NO. 4		LOCATION NO. 5							BRIDGE QUANTITY	ROUND	GRAND TOTAL	FINAL	UNIT	ITEMS	ITEM NUMBER	QUANTITIES	UNIT	ITEMS
0.01		0.02		0.02		0.07		0.04							0.16	EST.	0.16		MFBM	STRUCTURAL LUMBER AND TIMBER - UNTREATED	522.20			
0.37		0.29		0.33		0.14		1.46							2.59	EST.	2.59		MFBM	NON - STRUCTURAL LUMBER-UNTREATED	522.30			
0.08		0.13		0.15		0.39		0.25							1		1		LS	MOBILIZATION	635.10			
1															1		1		LS	TRAFFIC CONTROL (CHARLOTTE, CB 27, LOCATION NO. 1)	641.10			
		1													1		1		LS	TRAFFIC CONTROL (CHARLOTTE, CB 28, LOCATION NO. 2)	641.10			
				1											1		1		LS	TRAFFIC CONTROL (CHARLOTTE, CB 29, LOCATION NO. 3)	641.10			
						1									1		1		LS	TRAFFIC CONTROL (MIDDLEBURY, CB 1, LOCATION NO. 4)	641.10			
								1							1		1		LS	TRAFFIC CONTROL (SALISBURY, CB 8, LOCATION NO. 5)	641.10			
960		1910		2190		6870		4170							16100	-	16100		SF	REMOVING EXISTING ROOF	665.15			
960		1910		2190		6870		4170							16100	-	16100		SF	METAL ROOFING	665.18			

PROJECT NAME:	STATEWIDE -WEST REGION
PROJECT NUMBER:	BH0 HBRP(10)
FILE NAME:	ej250qty-10.xls
PROJECT LEADER:	SUE SCRIBNER
DESIGNED BY:	M. GAGULIC
QUANTITY SHEET #1	
PLOT DATE:	2/28/02
DRAWN BY:	R. PELLETT
CHECKED BY:	M. GAGULIC
SHEET	5 OF 5

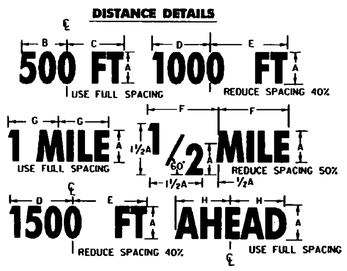


• SEE DISTANCE DETAILS

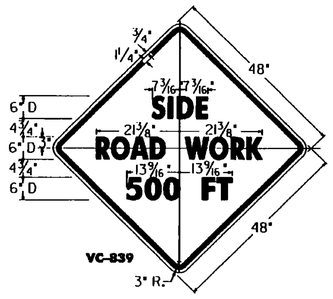
COLORS
TEXT AND BORDER - BLACK (NON-REFL.)
BACKGROUND - ORANGE (REFL.)

SIGN	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K
MIN.	30	½	¾	4D	2⅜	2⅝	6¾	7	7⅜	1⅞
STD.	36	⅝	⅞	5D	3½	3½	8⅜	8⅞	9	2¼
SPECIAL	48	¾	1¼	7D	4¾	4½	11⅝	12⅞	12⅜	3

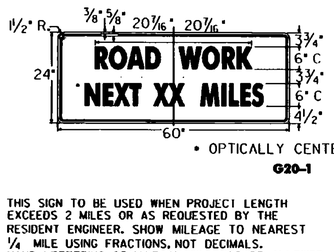
DISTANCE DETAILS



DIMENSIONS (INCHES)							
A	B	C	D	E	F	G	H
4D	8⅛	8⅝	8½	9	9	7⅛	8⅛
5D	10⅜	10⅜	11⅜	11¼	11¼	9½	10⅛
7D	14¼	15⅛	14⅞	15¾	15¾	13⅛	15½

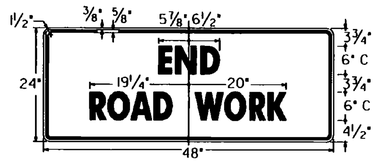


OR **LEFT** - 17¾"
RIGHT - 22"
500 - 14¾"
FT - 8⅛"



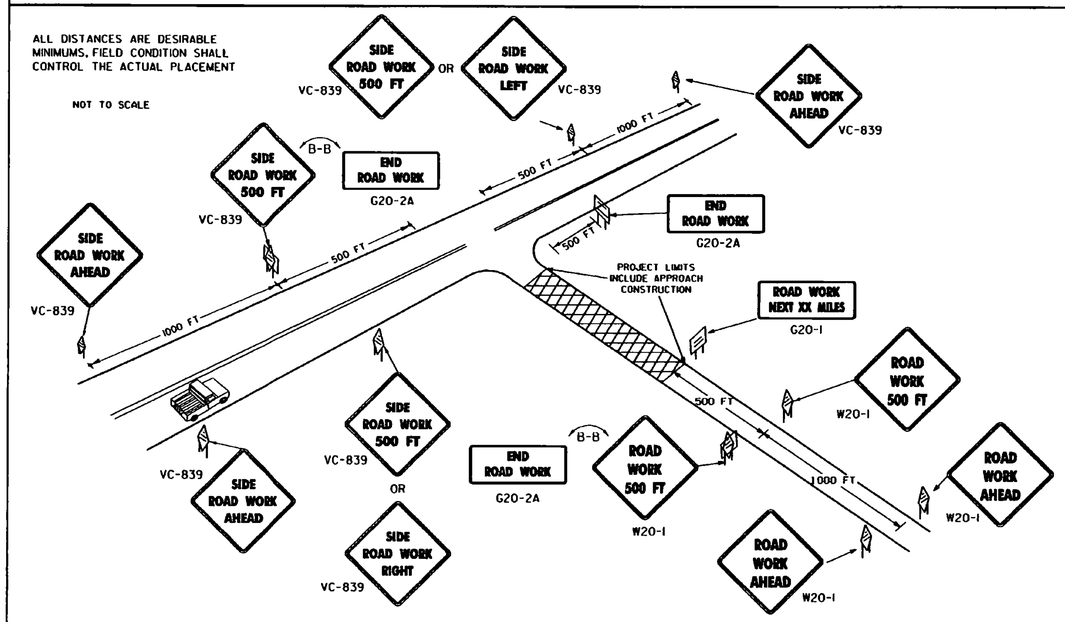
• OPTICALLY CENTER

THIS SIGN TO BE USED WHEN PROJECT LENGTH EXCEEDS 2 MILES OR AS REQUESTED BY THE RESIDENT ENGINEER. SHOW MILEAGE TO NEAREST ¼ MILE USING FRACTIONS, NOT DECIMALS. HAND LETTERING OF MILEAGE WILL NOT BE ALLOWED.



ALL DISTANCES ARE DESIRABLE MINIMUMS, FIELD CONDITION SHALL CONTROL THE ACTUAL PLACEMENT

NOT TO SCALE



SIDE ROAD CONSTRUCTION APPROACH SIGNING (TO BE USED WHEN CONSTRUCTION IS UP TO 1000' FROM THE INTERSECTION)

NOTES

THE 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. FOR ON-PROJECT CONSTRUCTION SIGNS, REFER TO APPROPRIATE STANDARD SHEETS.

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 SHALL BE MADE TO THE ''MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES'', FOR THE PRINCIPLES, PROCEDURES, AND STANDARDS THAT WILL BE REQUIRED IN CONNECTION WITH ADVANCED WARNING AND ON-PROJECT CONSTRUCTION SIGNS AND BARRICADES. THE SIGNS SHOWN IN E-101 AND E-102 REPRESENT A SAMPLE OF THOSE MORE COMMONLY USED.

LOCATION

THE SIGNS SHALL BE LOCATED AS DETAILED ON THIS SHEET OR AS 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 INTENDED TO INDICATE THE SEQUENCE TO BE FOLLOWED, AND THE APPROXIMATE SPACING TO BE OBSERVED. THE ENGINEER SHALL DETERMINE THE EXACT LOCATIONS.

DESIGN

LETTERS, DIGITS, ARROWS SPACING AND TEXT DIMENSIONS SHALL CONFORM WITH THE 'STANDARD ALPHABET FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS' AND DESIGNS PRESCRIBED IN THE STANDARD HIGHWAY SIGNS AS SPECIFIED IN THE MANUAL ON UNIFORM TRAFIC CONTROL DEVICES ADOPTED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMIN..

MATERIALS

THE SIGN BASE MATERIAL USED FOR THE SIGNS ON THIS SHEET MAY BE ANY OF THE FOLLOWING, WITH MINIMUM THICKNESS AS NOTED.

FLAT SHEET ALUMINUM	0.125 INCHES
HIGH DENSITY OVERLAYED PLYWOOD	5/8 INCHES
GALVANIZED SHEET STEEL	12 GAGE

REFLECTORIZATION

ALL REFLECTORIZED MATERIAL SHALL CONSIST OF TYPE IIB OR TYPE III SHEETING.

COLORS

THE COLORS SHALL CONFORM WITH THE STANDARD COLORS ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICALS AND APPROVED BY THE U.S. DEEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION. COLORS SHOWN ON THIS SHEET CONSIST OF BLACK TEXT AND BORDER ON A REFLECTORIZED ORANGE BACKGROUND.

INSTALLATION

THE SIGNS SHALL BE ERECTED BEFORE THE START OF ANY WORK AND SHALL BE COVERED UNTIL WORK COMMENCES. DURING PERIODS OF INACTIVITY, OR UPON COMPLETION OF THE WORK. SIGNS MAY BE REMOVED UPON COMPLETION OF THE WORK AT THE DISCRETION OF THE ENGINEER. EACH SIGN SHALL BE ERECTED IN A NEAT AND WORKMANLIKE MANNER ON POSTS SET SECURELY IN THE GROUND. THE BOTTOM OF A SIGN SHALL BE AT LEAST 7 FEET ABOVE THE EDGE OF PAVEMENT, AND THE NEAREST EDGE OF A SIGN SHALL BE AT LEAST 6 FEET OUTSIDE THE SHOULDER POINT, 4 FEET OUTSIDE GUARD RAIL, OR 2 FEET OUTSIDE CURBING, OR SIDEWALK. THE INSTALLATION OF SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER. IN URBAN AREAS, THE BOTTOM OF THE SIGN SHALL BE AT LEAST 7 FEET ABOVE THE SIDEWALK.

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, INSTALLING, MAINTAINING AND REMOVING ALL CONSTRUCTION APPROACH SIGNS WILL BE CONSIDERED 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. DURING ALL PHASES OF CONSTRUCTION THE REQUIREMENTS SET FORTH IN THE ''MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES'' SHALL BE MET. WHEN THE PROJECT IS CLOSED DOWN FOR TEMPORARY PERIODS THE SIGNS SHALL BE COVERED IN A WORKMANLIKE MANNER.

SIGN COVERS

SIGN COVERS SHALL CONSIST OF A PANEL PAINTED FLAT BLACK. THE SAME SIZE AS THE SIGN IT COVERS. THE PANEL SHALL BE OF WOOD, PLYWOOD, HARDBOARD OR ANY MATERIAL SATISFACTORY TO THE ENGINEER. NO MATERIAL WILL BE APPROVED THAT WILL DETERIORATE BY EXPOSURE TO THE WEATHER DURING THE PROJECT. MOUNTING OF THE PANEL SHALL BE DONE IN SUCH A WAY AS NOT TO DAMAGE THE SIGN FACE MATERIAL.

CONTRACTORS SHALL COORDINATE THEIR SIGNING ACTIVITIES WITH OTHER CONTRACTORS WITHIN THE PROJECT LIMITS, AS DIRECTED BY THE REGIONAL CONSTRUCTION ENGINEER.

SIGN POSTS

WHERE CONSTRUCTION SIGN INSTALLATIONS ARE NOT PROTECTED BY GUARD RAIL OR OTHER APPROVED TRAFFIC BARRIERS, THE POSTS ON WHICH THE SIGNS ARE MOUNTED SHALL BE YIELDING METAL POSTS AS DESIGNATED IN THE E SERIES OF STANDARD DRAWINGS OR YIELDING WOODEN POSTS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

WOODEN POSTS ARE ACCEPTABLE FOR USE WITH CONSTRUCTION SIGNS, THESE POSTS SHALL HAVE A UNIFORM CROSS-SECTION AND SHALL BE MADE FROM GRADE 2, AIR-DRIED SOUTHERN YELLOW PINE OR ANOTHER EQUIVELANT SOFTWOOD. AN ACCEPTABLE EQUIVELANT SOFTWOOD SHALL HAVE AN EXTREME FIBER IN BENDING "Fb" DESIGN VALUE NOT TO EXCEED 1400 psi AND HORIZONTAL SHEAR "Fv" DESIGN VALUE NOT TO EXCEED 90 psi SPECIFICATION; "DESIGN VALUES FOR WOOD CONSTRUCTION" AND RELATED SUPPLEMENT, DATED 1986.

AS ESTABLISHED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION IN THEIR NATIONAL DESIGN THE FOLLOWING ARE CONSIDERED TO BE ACCEPTABLE WOODEN POSTS:

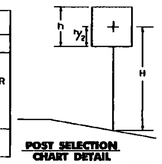
1. 4'' X 4'' (ACTUAL DIMENSIONS ARE 3.5'' X 3.5'')
   A) ACCEPTABLE FOR SINGLE OR DUAL POSTS INSTALLATION WITH NO MODIFICATIONS.
2. 4'' X 6'' (ACTUAL DIMENSIONS ARE 3.5'' X 5.5'')
   A) ACCEPTABLE FOR SINGLE POST INSTALLATIONS ONLY WHEN MODIFIED BY DRILLING TWO 1 1/2'' DIAMETER HOLES, ONE AT 4'' AND THE OTHER 18'' ABOVE THE GROUND LINE AND PERPENDICULAR TO THE ROADWAY CENTERLINE.
3. 6'' X 6'' (ACTUAL DIMENSIONS ARE 5.5'' X 5.5'')
   A) ACCEPTABLE FOR SINGLE POST INSTALLATIONS ONLY WHEN MODIFIED BY DRILLING TWO 2'' DIAMETER HOLES, ONE AT 4'' AND THE OTHER AT 18'' ABOVE THE GROUND LINE AND PERPENDICULAR TO ROADWAY CENTERLINE.
4. 6'' X 8'' (ACTUAL DIMENSIONS ARE 5.5'' X 7.5'')
   A) ACCEPTABLE FOR SINGLE POST INSTALLATIONS ONLY WHEN MODIFIED BY DRILLING TWO 3'' DIAMETER HOLES, ONE AT 4'' AND THE OTHER AT 18'' ABOVE THE GROUND LINE AND PERPENDICULAR TO THE ROADWAY CENTERLINE.

ADDITIONAL DESIGN CRITERIA:

THE LONGER DIMENSION OF THE POST(S), SUCH AS THE 6'' DIMENSION OF THE 4'' X 6'' POST, SHALL BE PLACED PARALLEL TO THE ROADWAY CENTERLINE.
ALL WOODEN POSTS SHALL HAVE AN EMBEDMENT DEPTH OF 4 FEET.
NO CROSS-BRACING OR BACK-BRACING TO KEEP THE POSTS PLUMB WILL BE ALLOWED.
CONCRETE FOUNDATIONS COLLARS OR SOIL BEARING PLATES ARE NOT PERMITTED.
CONSTRUCTION SIGNS SHALL BE PLACED ON TWO OR MORE POSTS WHEN ANY OF THE FOLLOWING CONDITIONS GOVERN:

A) THE SIGN WIDTH (HORIZONTAL DIMENSIONS FOR DIAMOND SHAPED SIGNS) EXCEEDS 3 1/2 FEET.
B) THE EXPOSED SIGN AREA OF ANY SINGLE SIGN OR ASSEMBLY EXCEEDS 12 ½ SQ. FEET.
C) THE Sv OF A SINGLE POST IS EXCEEDED. (SEE THE POST SELECTION CHART BELOW).

WOOD POST SELECTION CHART		
SIGN AREA (FT^2) X HEIGHT (FT) < Sv (SELECTION VALUE)		
POST SIZE	Sv	DESIGN CRITERIA:
4'' X 4''	64	WIND SPEED = 60 MPH (10-YEAR
4'' X 6''	147	MEAN OCCURENCE INTERVAL)
6'' X 6''	216	WIND PRESSURE = 13 psf
6'' X 8''	389	ALLOWABLE BENDING STRESS



POST SELECTION CHART DETAIL

OTHER STDS. REQUIRED:

REVISIONS AND CORRECTIONS
JAN. 06. 1997 - DATE OF ORIGINAL ISSUE.

APPROVED

DIRECTOR OF ENGINEERING

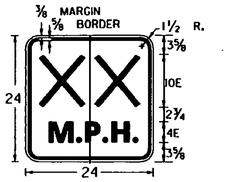
DIRECTOR OF CONSTRUCTION AND MAINTENANCE

SIDE ROAD CONSTRUCTION APPROACH SIGNS

/traf/std/stde100A.dgn : stde100A.I

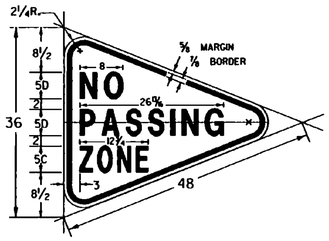
VERMONT AGENCY OF TRANSPORTATION

STANDARD E-100A

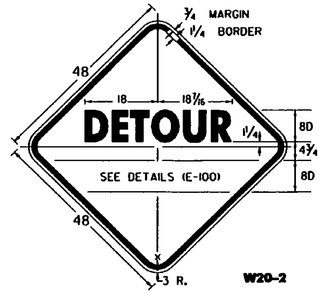


"XX" DENOTES ADVISORY SPEED AS SHOWN ON THE PLANS

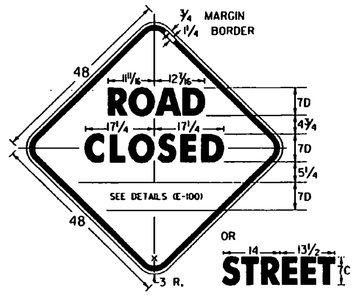
W13-1



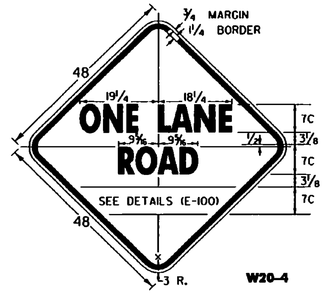
W14-3



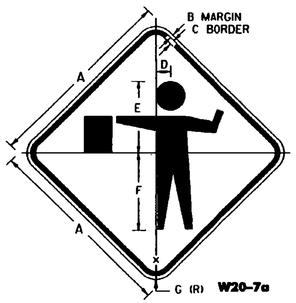
W20-2



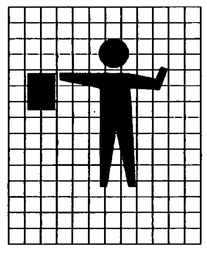
W20-3

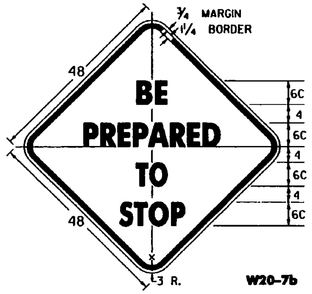


W20-4

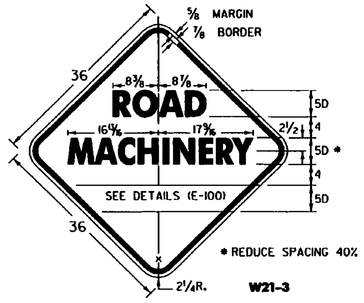


W20-7a



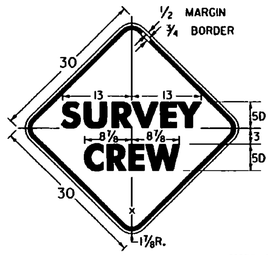


W20-7b

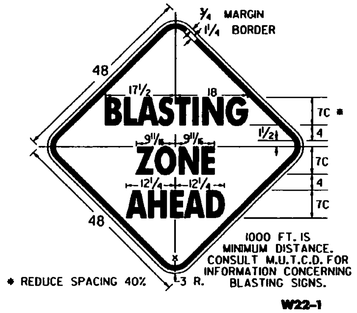


* REDUCE SPACING 40%

W21-3



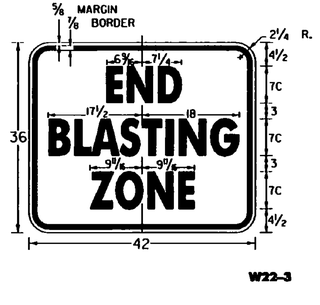
W21-6



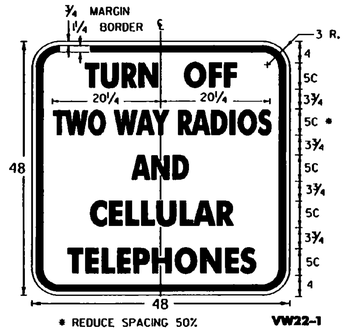
1000 FT. IS MINIMUM DISTANCE. CONSULT M.U.T.C.D. FOR INFORMATION CONCERNING BLASTING SIGNS.

* REDUCE SPACING 40%

W22-1

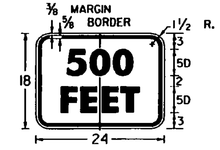


W22-3



* REDUCE SPACING 50%

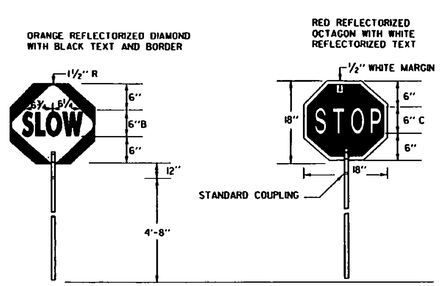
VW22-1



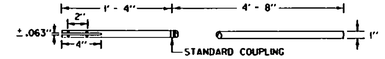
SIGN	DIMENSIONS(INCHES)						
	A	B	C	D	E	F	G
STD.	36	5/8	1/8	2 1/4	13 1/2	14 3/8	2 1/4
FWY.	48	3/4	1 1/4	3 3/4	18	19 1/2	3

ORANGE REFLECTORIZED DIAMOND WITH BLACK TEXT AND BORDER

RED REFLECTORIZED OCTAGON WITH WHITE REFLECTORIZED TEXT



SIGN DETAIL



STAFF DETAIL

MATERIALS
THE SIGN MATERIALS SHALL BE 0.063" ALUMINUM WITH COLORS AS INDICATED ON DETAILS.
THE STAFF SHALL BE 3/4" TO 1 1/4" DIAMETER RIGID ALUMINUM CONDUIT/TUBING WITH A WALL THICKNESS OF 0.125", OR 1" TO 1 1/2" DIAMETER RIGID PVC CONDUIT/TUBING WITH 0.125" WALL THICKNESS

MOUNTING
THE STAFF SHALL BE MOUNTED WITH EITHER TWO 1/4" DIAMETER ALUMINUM BOLTS OR TWO 1/4" DIAMETER ALUMINUM RIVETS.

SIGN PADDLE FOR FLAGPERSON

NOTES

SEE STANDARD SHEET E-100 FOR NOTES AND TEXT DETAILS

COLORS FOR SIGNS SHOWN ON THIS SHEET SHALL BE BLACK TEXT, BORDER AND SYMBOLS SHALL BE ON A REFLECTORIZED ORANGE BACKGROUND OF TYPE IIB OR TYPE III REFLECTIVE SHEETING, UNLESS OTHERWISE NOTED. THE EXCEPTION IS THE PADDLE SIGN.

SIGN DETAILS INDICATE THE APPROPRIATE COLOR.

SIGNS USED ONLY FOR DAYTIME MAINTENANCE OPERATIONS DO NOT NEED TO BE REFLECTORIZED, HOWEVER, THESE SIGNS SHALL BE LABELED "DAYTIME USE ONLY" ON THE BACK OF THE SIGN PANEL WITH 3" SERIES C LETTERS.

(ALL DIMENSIONS SHOWN IN INCHES)

OTHER STDS. REQUIRED: E-100

REVISIONS AND CORRECTIONS

OCT. 30, 1987 - DATE OF ORIGINAL ISSUE
JAN. 23, 1989 - DELETE MOTORCYCLE SYMBOL SIGN AND SPEED SIGN, ADDED TWO SIGNS
OCT. 21, 1992 - ADDED A SIGN, REVISED A SIGN DIMENSION & TYPE ERROR & REVISED TITLE BLOCK
AUG. 08, 1995 - ADDED FLAGGER GRID

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

APPROVED

Gordon S. MacArthur
DIRECTOR OF ENGINEERING

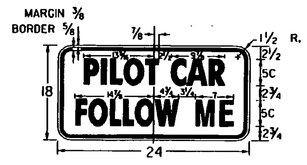
David A. Ross
TRAFFIC AND SAFETY ENGINEER

CONSTRUCTION SIGN DETAILS

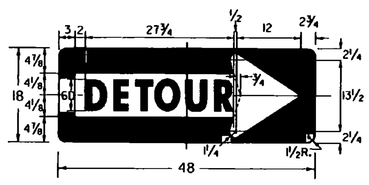
/traf/std/stde102.dgn : stde102.l

VERMONT AGENCY OF TRANSPORTATION

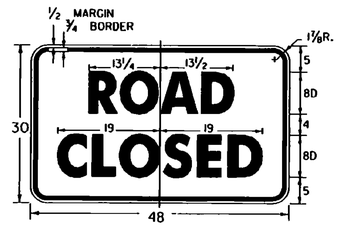
STANDARD
E-102



G20-4

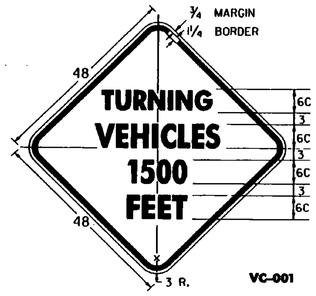


M4-10(R)

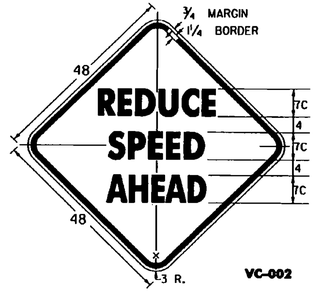


R11-2

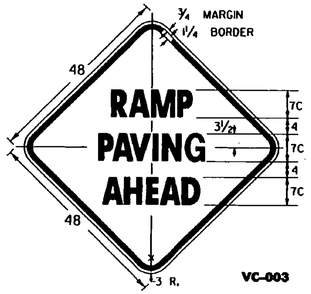
COLORS:
BLACK TEXT AND BORDER
WHITE REFLECTORIZED BACKGROUND



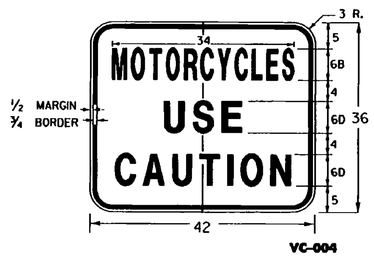
VC-001



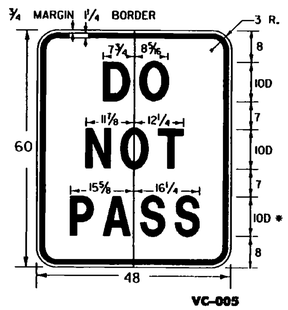
VC-002



VC-003

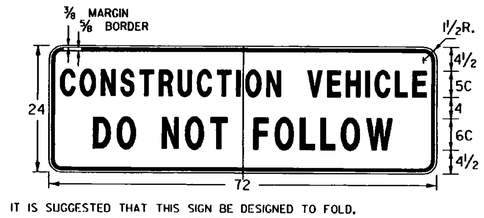


VC-004



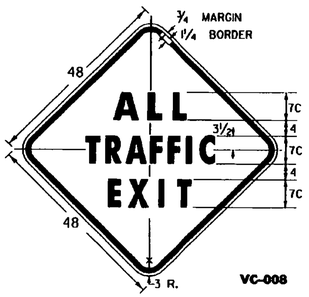
VC-005

* REDUCE SPACING BY 40%

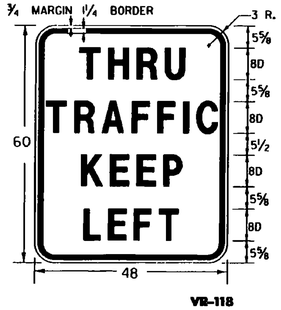


VC-007

IT IS SUGGESTED THAT THIS SIGN BE DESIGNED TO FOLD, (DOWN OR ACROSS), OR BE COVERED, OR BE REMOVED WHEN NOT IN USE. THE SIGN SHOULD ALSO BE MOUNTED AS TO NOT INTERFERE WITH THE VISIBILITY OF DIRECTIONAL OR TAIL LIGHTS AS REQUIRED BY LAW.

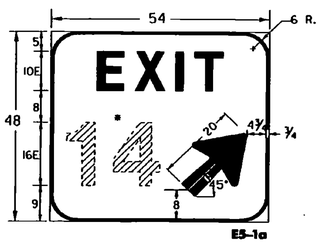


VC-008



VR-118

COLORS: BLACK BORDER & TEXT
WHITE (REFL.) BACKGROUND



E5-1a

* EXIT NUMBER AS PER PLANS
OPTICALLY SPACED

COLORS:
BACKGROUND - GREEN (REFL.)
BORDER, ARROW AND LEGEND - WHITE (REFL.)

NOTES

SEE STANDARD SHEET E-100 FOR NOTES AND TEXT DETAILS

COLORS FOR SIGNS SHOWN ON THIS SHEET SHALL BE BLACK TEXT, BORDER AND SYMBOLS SHALL BE ON A REFLECTORIZED ORANGE BACKGROUND OF TYPE IIB OR TYPE III REFLECTIVE SHEETING, UNLESS OTHERWISE NOTED.

SIGN DETAILS INDICATE THE APPROPRIATE COLOR.

SIGNS USED ONLY FOR DAYTIME MAINTENANCE OPERATIONS DO NOT NEED TO BE REFLECTORIZED, HOWEVER, THESE SIGNS SHALL BE LABELED "DAYTIME USE ONLY" ON THE BACK OF THE SIGN PANEL WITH 3" SERIES C LETTERS.

(ALL DIMENSIONS SHOWN IN INCHES)

OTHER STDS. REQUIRED: E-100

REVISIONS AND CORRECTIONS

AUG 08, 1995 - DATE OF ORIGINAL ISSUE

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

APPROVED

Standish O. MacAskill
DIRECTOR OF ENGINEERING

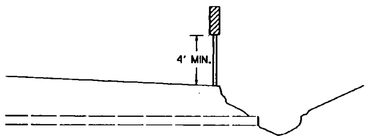
David A. Roar
TRAFFIC AND SAFETY ENGINEER

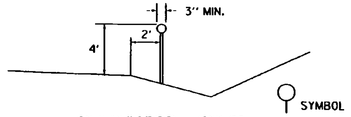
CONSTRUCTION SIGN DETAILS

/traf/std/stde102.dgn : stde102A.i

VERMONT AGENCY OF TRANSPORTATION

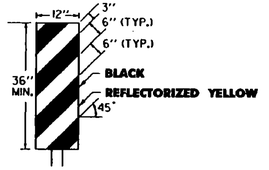
STANDARD
E-102A





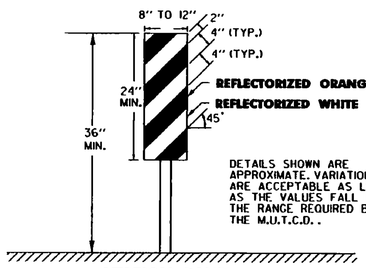
DELINEATOR TYPICAL

DELINEATORS SHALL BE REFLECTORIZED WHITE IN COLOR. THEY SHALL HAVE A MINIMUM OF 7 SQUARE INCHES. THEY MAY BE ROUND, SQUARE, OR OBLONG.



OBJECT MARKER TYPICAL

OBJECTS MARKERS ARE USED TO MARK OBSTRUCTIONS WITHIN OR ADJACENT TO THE ROADWAY. IN SOME CASES THERE MAY NOT BE A PHYSICAL OBJECT INVOLVED, BUT OTHER ROADSIDE CONDITIONS SUCH AS NARROW SHOULDER DROP-OFFS, GORES, D.I. EXCAVATIONS, AND ABRUPT CHANGES IN THE ROADWAY ALIGNMENT MAY MAKE IT UNDESIRABLE FOR A DRIVER TO LEAVE THE ROADWAY. THE INSIDE EDGE OF THE OBJECT MARKER SHALL BE IN LINE WITH THE INNER EDGE OF THE OBSTRUCTION, WHENEVER POSSIBLE.
OBJECT MARKERS SHALL HAVE ALTERNATING BLACK AND REFLECTORIZED YELLOW STRIPES. (SLOPING DOWNWARD IN THE DIRECTION TRAFFIC IS TO PASS).

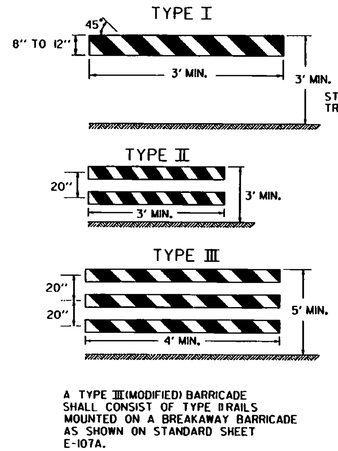


DETAILS SHOWN ARE APPROXIMATE. VARIATIONS ARE ACCEPTABLE AS LONG AS THE VALUES FALL IN THE RANGE REQUIRED BY THE M.U.T.C.D..

VERTICAL PANEL

VERTICAL PANELS SHALL HAVE ALTERNATING ORANGE AND WHITE REFLECTORIZED STRIPES (SLOPING DOWNWARD IN THE DIRECTION TRAFFIC IS TO PASS). THESE DEVICES MAY BE USED FOR TRAFFIC SEPARATION, CHANNELIZING OR BARRICADING WHERE SPACE IS AT A MINIMUM.

DELINEATOR, VERTICAL PANEL AND OBJECT MARKER DETAILS FOR CONSTRUCTION AREAS WHERE TRAFFIC IS MAINTAINED



A TYPE III(MODIFIED) BARRICADE SHALL CONSIST OF TYPE II RAILS MOUNTED ON A BREAKAWAY BARRICADE AS SHOWN ON STANDARD SHEET E-107A.

BARRICADE CHARACTERISTICS	I	II	III
WIDTH OF RAIL	8" MIN. 12" MAX.	8" MIN. 12" MAX.	8" MIN. 12" MAX.
LENGTH OF RAIL	3' MIN.	3' MIN.	4' MIN.
WIDTH OF STRIPES	6"	6"	6"
HEIGHT	3' MIN.	3' MIN.	5' MIN.
TYPE OF FRAME	SEE E-107A	SEE E-107A	SEE E-107A
FLEXIBILITY	PORTABLE	PORTABLE	PORTABLE
ANGLE OF STRIPE	45°	45°	45°
COLOR OF STRIPES	ORANGE AND WHITE	ORANGE AND WHITE	ORANGE AND WHITE

BARRICADE CHARACTERISTICS

BARRICADES

APPLICATION NOTES

TYPE I BARRICADES SHALL BE USED ON CONVENTIONAL ROADS OR URBAN STREETS AND ARTERIALS TO MARK A SPECIFIC HAZARD.

TYPE II BARRICADES SHALL BE USED ON EXPRESSWAYS AND FREEWAYS, SERVING THE SAME FUNCTIONS AS TYPE I BARRICADES.

TYPE III BARRICADES (SEE STD. E-107A) SHALL ONLY BE USED WHEN A ROAD SECTION OR LANE IS CLOSED TO TRAFFIC AND ARE TO BE ERECTED AT THE POINT OF CLOSURE.

MATERIALS

THE BARRICADES SHOWN ON THIS SHEET SHOULD BE OF LIGHTWEIGHT MATERIAL. IF WOOD IS USED THE FOLLOWING CONDITIONS SHALL APPLY:

1. WOODEN BARRICADES (TYPE I AND II)
   - A) SHALL NOT BE USED TO CHANNELIZE OR DELINEATE WORK AREAS WITHIN THE CLEAR ZONE OF ANY HIGHWAY WHERE OPERATING SPEEDS IN EXCESS OF 20 M.P.H. ARE EXPECTED UNLESS INSTALLED FOR PEDESTRIAN CONTROL BEHIND APPROVED POSITIVE BARRIERS.
   - B) MAY BE USED WHERE OPERATING SPEEDS OF 20 M.P.H. OR LESS ARE EXPECTED.
2. TYPE III WOODEN BARRICADES SHALL NOT BE USED.

COLORS

THE BARRICADE PANELS SHOWN ON THIS SHEET SHALL HAVE AN ALTERNATING REFLECTORIZED WHITE AND ORANGE STRIPES. THE ORANGE SHALL CONFORM WITH THE STANDARD COLORS ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS AND APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION. THE BARRICADE COMPONENTS SHALL BE WHITE UNLESS UNPAINTED METAL OR ALUMINUM IS USED.

REFLECTORIZATION

THE REFLECTIVE SHEETING ON BARRICADE PANELS SHALL BE TYPE □□.

LOCATION

THE BARRICADES SHOWN ON THIS SHEET WILL BE LOCATED BY THE RESIDENT ENGINEER IN THE FIELD OR AS SHOWN ON THE PLANS. THE LOCATION OF THE BARRICADES SHALL FOLLOW THE PROCEDURES SET FORTH IN THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", OR AS OTHERWISE NOTED.

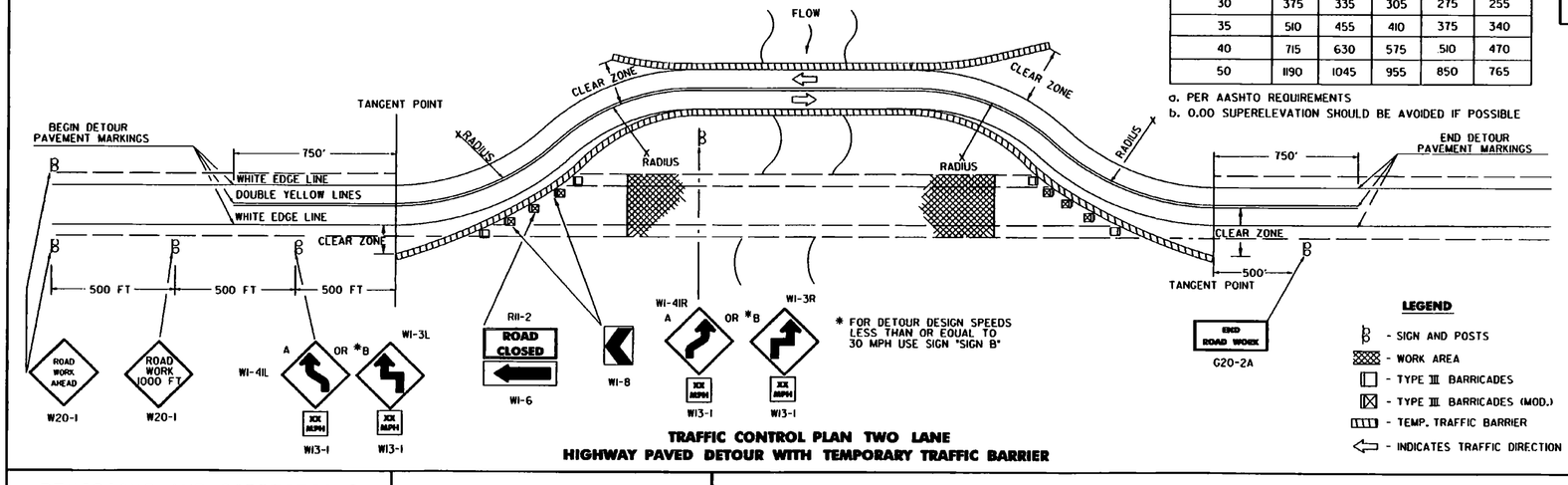
MAINTENANCE

BARRICADES SHALL BE MAINTAINED IN CLEAN CONDITION, SATISFACTORY TO THE RESIDENT ENGINEER. THEY SHALL BE COMPLETELY VISIBLE TO THE APPROACHING TRAFFIC AT ALL TIMES. DAMAGED, DEFACED, OR DIRTY BARRICADES SHALL BE REPAIRED, CLEANED, OR REPLACED AS ORDERED BY THE RESIDENT ENGINEER.

ALL SIGN PLACEMENT DISTANCES ARE DESIRABLE SPECIFICATIONS. FIELD CONDITIONS SHALL CONTROL THE ACTUAL PLACEMENT. PROJECT CONSTRUCTION APPROACH SIGNING PLACEMENT SHALL TAKE INTO CONSIDERATION SPACING REQUIREMENTS FOR THE DETOUR SIGN LAYOUT REQUIREMENTS.

DETOUR DESIGN SPEED	MINIMUM RADIUS (FT.)[a] SUPERELEVATION (FT./FT.)				
(M.P.H.)	0.00[b]	0.02	0.04	0.06	0.08
20	160	140	130	120	110
25	245	220	200	185	170
30	375	335	305	275	255
35	510	455	410	375	340
40	715	630	575	510	470
50	1190	1045	955	850	765

a. PER AASHTO REQUIREMENTS
b. 0.00 SUPERELEVATION SHOULD BE AVOIDED IF POSSIBLE



* FOR DETOUR DESIGN SPEEDS LESS THAN OR EQUAL TO 30 MPH USE SIGN "SIGN B"

LEGEND

- SIGN AND POSTS
- WORK AREA
- TYPE III BARRICADES
- TYPE III BARRICADES (MOD.)
- TEMP. TRAFFIC BARRIER
- INDICATES TRAFFIC DIRECTION

TRAFFIC CONTROL PLAN TWO LANE HIGHWAY PAVED DETOUR WITH TEMPORARY TRAFFIC BARRIER

DETOUR NOTES

1.) SIGNS AND DELINEATION SHOWN FOR ONE DIRECTION OF TRAFFIC ONLY.

2.) THE CONTRACTOR IS RESPONSIBLE FOR PAVEMENT MARKING AND SHALL REMOVE ANY CONFLICTING OR CONFUSING EXISTING MARKINGS.

3.) ADDITIONAL SIGNING MAY BE REQUIRED AT THE DISCRETION OF THE RESIDENT ENGINEER.

4.) UNPAVED DETOURS REQUIRE PAVEMENT MARKINGS FOR TRANSITIONS FROM EXISTING PAVEMENT.

5.) THE NUMBER OF CHANNELIZING DEVICES, BARRICADES AND OTHER TRAFFIC CONTROL DEVICES SHOWN ON THIS SHEET ARE FOR ILLUSTRATIVE PURPOSES ONLY. THE ACTUAL NUMBER REQUIRED SHALL BE DETERMINED BASED ON INDIVIDUAL DETOUR CONDITIONS (TAPERS, SPEED LIMITS, LENGTH OF DETOUR CURVE, ETC.).

6.) AASHTO CLEAR ZONE REQUIREMENTS SHOULD BE MET. IF NOT THEN AN APPROVED ENERGY ABSORPTION ATTENUATOR SUITABLE FOR THE TEMPORARY TRAFFIC BARRIER USED AND FOR THE DESIGN SPEED SHALL BE INSTALLED PER THE CURRENT AASHTO ROADSIDE DESIGN GUIDE.

7.) THE DETOUR DESIGN SPEED SHOULD BE NO LESS THAN 10 M.P.H. BELOW THE POSTED SPEED LIMIT, UNLESS PHYSICAL RESTRICTIONS PREVENT THIS.

8.) SEE STANDARD SHEETS E-100, E-101 AND E-102 FOR SIGN DETAIL AND MATERIAL REQUIREMENTS.

9.) IF THE USE OF TEMPORARY TRAFFIC BARRIER IS NOT REQUIRED, THEN REFLECTORIZED PLASTIC DRUMS SHALL BE USED.

OTHER STDS. REQUIRED: E-100, E-101, E-102, E-102a, E-107a

REVISIONS AND CORRECTIONS

SEPT. 10, 1987 - DATE OF ORIGINAL ISSUE
APRIL 29, 1988 - FHWA REVIEW COMMENTS
SEPT. 20, 1993 - NEW RADIUS CHART, BARRICADE ALIGNMENT AND USE OF TEMPORARY TRAFFIC BARRIER
AUG. 08, 1995 - REVISED SIGNING PER MUTCD

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION, FHWA FINAL APPROVAL PENDING.

APPROVED

DIRECTOR OF ENGINEERING

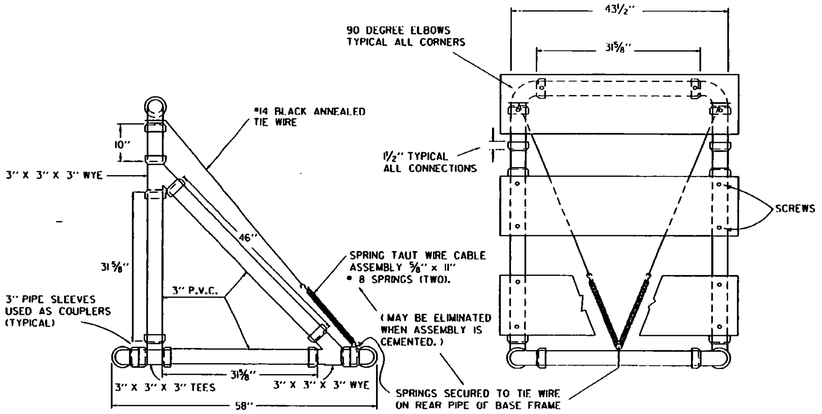
TRAFFIC AND SAFETY ENGINEER

DELINEATION, BARRICADES AND DETOURS FOR CONSTRUCTION AREAS

/traf/std/stdel07.dgn : stdel07.1

VERMONT AGENCY OF TRANSPORTATION

STANDARD E-107



SIDE VIEW
TYPE III BARRICADE

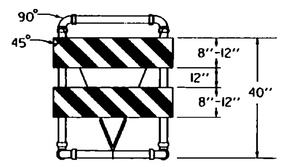
FRONT VIEW
TYPE III BARRICADE

MATERIALS FOR TYPE I AND II BARRICADES

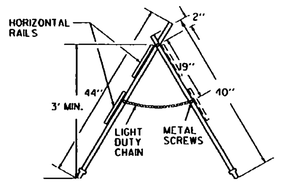
20' - 1" PVC
4 - 1" PVC 90° ELBOWS
30" -½" ID THINWALL PVC CONDUIT
36" -¼" STEEL ROD
4 - 1" WASHERS
24" - LIGHT DUTY CHAIN
½" - #14 PAN HEAD METAL SCREWS (AS REQUIRED)
2 -⅜" COTTER PINS
2 OR 4 - 8" OR 12" X 36" X 0.025 " BARRICADE RAILS (AS REQUIRED)

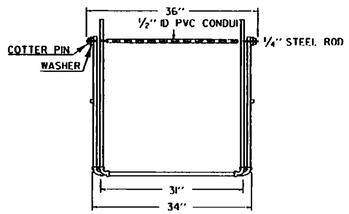
MATERIALS FOR TYPE III BARRICADES

30 LF - 3" I.D. PVC PIPE
6 - 3" 90° ELBOWS
2 - 3" TEES
4 - 3" WYES
3 - 8", OR 12" X 48" X 0.025" BARRICADE RAILS
2 - 5/8" X 11" #8 SPRING (IF ASSEMBLY IS NOT CEMENTED)
12 - 1" #14 PAN HEAD METAL SCREWS
15 LF - #14 BALCK ANNEALED TIE WIRE (IF ASSEMBLY IS NOT CEMENTED)



TYPE III (MODIFIED) BARRICADE
(STRIPING IS SHOWN WITH TRAFFIC PASSING TO THE RIGHT).





TYPE I AND TYPE II BARRICADE

MATERIALS

THE PIPE, WYES, TEES AND ELBOWS USED TO CONSTRUCT BARRICADES SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 2241 FOR P.V.C. 1120 OR 1220 SDR-21, PRESSURE RATING 200 PSI. THE WYES, TEES AND ELBOWS SHALL CONFORM TO THE REQUIREMENTS OF ASTM DESIGNATION D 2466, TYPE II, GRADE 1. ALL JOINTS SHALL BE SLIP-FIT AND MAY BE LIGHTLY CEMENTED. THE BARRICADE RAILS SHALL BE FABRICATED FROM 0.025" ANODIZED, ALUMINUM AND SHALL HAVE REFLECTORIZED ALTERNATING ORANGE AND WHITE STRIPES (SLOPING DOWNWARD AT AN

MAINTENANCE

BARRICADES SHALL BE MAINTAINED IN CLEAN AND LEGIBLE CONDITIONS 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. THE P.V.C. PIPE AND FITTINGS SHALL BE WHITE IN COLOR. AT LEAST TWO (2) HOLES SHALL BE DRILLED (⅜" DIAM.) IN EACH SECTION OF PIPE AND FITTINGS IF THE ASSEMBLY IS NOT CEMENTED.

WHICH WILL NOT CONSTITUTE A HAZARD IF THE BARRICADE IS HIT. THESE SHALL BE PLACED ONLY ON THE FRONT AND REAR PIPES OF THE BASE FRAME

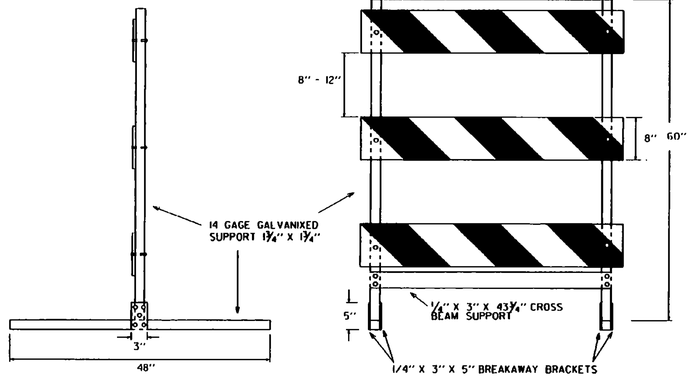
BE A HAZARD TO VEHICLES PASSING ON EITHER SIDE. GLUED JOINTS MAY PROVIDE ADDITIONAL STABILITY TO THE INSTALLATION.

TYPE I BARRICADES SHALL UTILIZE ONE HORIZONTAL RAIL IN EACH DIRECTION.

TYPE II BARRICADES SHALL BE A TYPE I BARRICADE WITH AN ADDITIONAL HORIZONTAL RAIL MOUNTED BELOW THE OTHER IN EACH DIRECTION.

TYPE III BARRICADES (MODIFIED) SHALL CONSIST OF THE BREAKAWAY 3" PVC DESIGN SHOWN ON THIS SHEET WITH THE TWO RAIL LAYOUT DETAILED ABOVE LEFT.

SEE STD E-107 FOR ADDITIONAL INFORMATION.



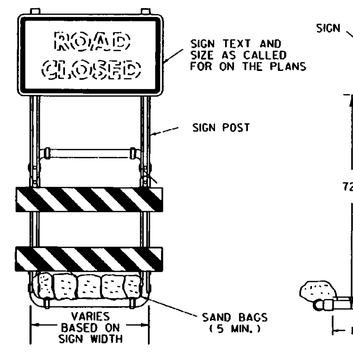
SIDE AND FRONT VIEW OF TYPE III METAL BARRICADE

MATERIALS FOR METAL TYPE III BARRICADES

PANELS (3):
8" X 48" GALVANIZED STEEL... COVERED 1 OR 2 SIDES WITH WHITE/ORANGE. DIAGONALLY STRIPED REFLECTIVE SHEETING

VERTICAL SUPPORTS (2): 14 GAGE GALVANIZED TUBING 1 3/4" X 1 3/4" X 60"
HORIZONTAL SUPPORTS (2): 14 GAGE GALVANIZED TUBING 1 3/4" X 1 3/4" X 48"
CROSS BEAM SUPPORT (1): COLD GALVANIZED STEEL 1/4" X 3" X 43 3/4"
BREAKAWAY BRACKETS (4): COLD GALVANIZED STEEL 1/4" X 3" X 5"

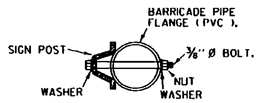
FASTENERS:
6 - SHEAR BOLTS WITH LOCK NUTS 1/4"D X 2 3/4"
4 - FULCRUM BOLTS WITH LOCK NUTS 3/8"D X 2 3/4"
4 - FASTENER BOLTS WITH LOCK NUTS 3/8"D X 2 3/4"
6 - PANEL BOLTS WITH LOCK NUTS AND WASHERS 1/4"D X 2"
ALL FASTENERS GALVANIZED STEEL.
ALL BOLTS HEX HEAD.



SIGN MOUNTING ON TYPE III BARRICADE (MODIFIED)

NOTES:

1) REFER TO STANDARD TYPE III BARRICADE (ABOVE LEFT)
2) ALL BARRICADE JOINTS SHALL BE GLUED.
3) FIVE SAND BAGS ARE REQUIRED BOTH FRONT AND BACK, 50 LB. MINIMUM EACH.



CONNECTION DETAIL

OTHER STDS. REQUIRED: E-107

REVISIONS AND CORRECTIONS

SEPT. 10, 1987 - ADDED METAL TYPE III BARRICADE
SEPT. 20, 1993 - REVISED NOTES AND TYPE III (MOD.) BARRICADE DETAIL
AUG. 08, 1995 - ADDED METAL TYPE III BARRICADE

APPROVED FOR THIS PROJECT AND/OR DESIGN IMPLEMENTATION. FHWA FINAL APPROVAL PENDING.

APPROVED

Standish D. MacArthur
DIRECTOR OF ENGINEERING

David Q. Ross
TRAFFIC AND SAFETY ENGINEER

BREAKAWAY BARRICADE DETAILS

/traf/std/stdel07a.dgn : stdel07a.i

VERMONT AGENCY OF TRANSPORTATION

STANDARD
E-107 A