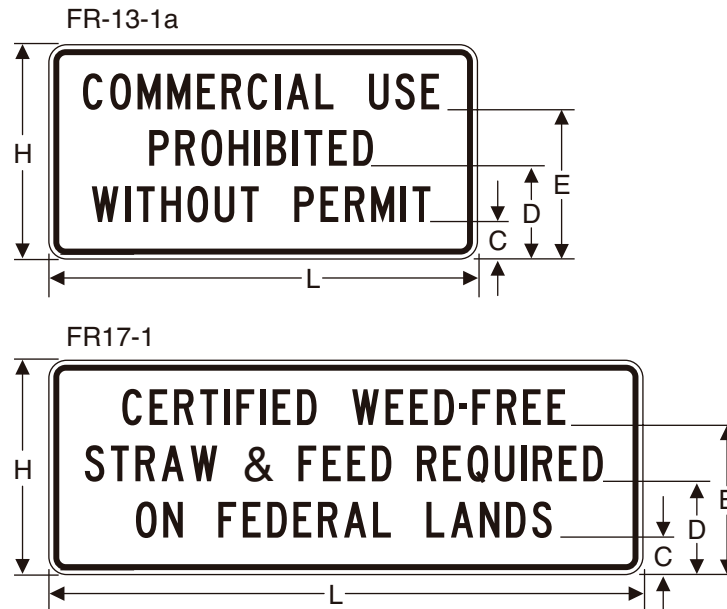


3D.1 Regulatory Signs

Text layout—Regulatory signs (FR13-1a and FR17-1)



Dimensions (inches)

Sign number	H	L	C	D	E	Text height ASA Series C (upper case)	Border width	Inset width	Traffic speed (mph)
FR13-1a	18	36	3	7 ³ / ₄	12 ¹ / ₂	3	¹ / ₂	³ / ₈	Up to 35
	30	60	4	12 ¹ / ₂	21	5	⁵ / ₈	¹ / ₂	40 and higher
FR17-1	18	48	3	7 ³ / ₄	12 ¹ / ₂	3	¹ / ₂	³ / ₈	Up to 35
	30	84	4	12 ¹ / ₂	21	5	⁵ / ₈	¹ / ₂	40 and higher

Notes

Last line on FR17-1 may be modified to reflect appropriate jurisdiction such as:
ON NATIONAL FOREST LANDS or **ON PUBLIC LANDS**.

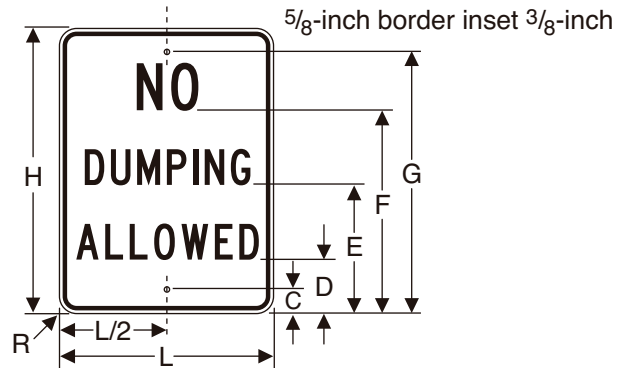
Center each line of text on vertical centerline.

Colors

Legend and border are black.
Background is retroreflective white.

References

For sign guidelines, see Chapter 3.
For panel construction, see Chapter 14.

Text layout—Regulatory sign (FR16-1-18x24)**Dimensions (inches)**

Sign number	H	L	C	D	E	F	G	R	Text height	Text height
									ASA Series C line 1	ASA Series C line 2 and 3
FR16-1-18x24	24	18	2	4 1/2	10 3/4	16 3/4	22	1 1/2	4	3

Notes

Center each line of text and mounting holes on vertical centerline.
All mounting holes are 3/8-inch diameter.

Colors

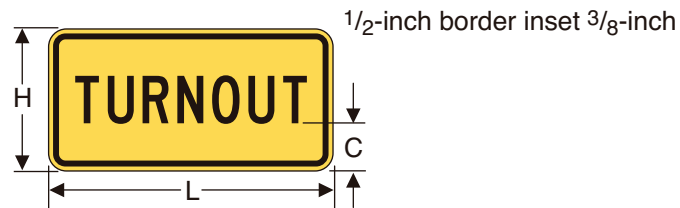
Legend and border are black.
Background is retroreflective white.

References

For sign guidelines, see Chapter 3.

3D.2 Warning Signs

Text layout—Warning sign (FW4-2b)



Dimensions (inches)

Sign number	H	L	C	Text height ASA Series C (upper case)
FW4-2b	12	24	4	4

Notes

Center text on vertical centerline.

Colors

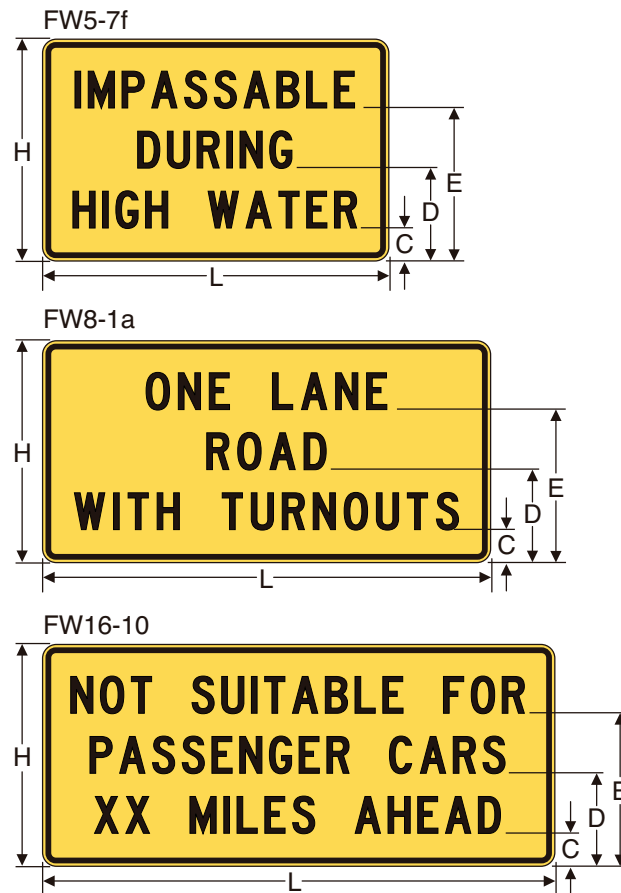
Legend and border are black.

Background is retroreflective yellow.

References

For sign guidelines, see Chapter 3.

For panel construction, see Chapter 14.

Text layout—Warning sign (FW8-1a and FW16-10)**Dimensions (inches)**

Sign number	H	L	C	D	E	Text height ASA Series D (upper case)	Border width	Inset width	Traffic speed (mph)
FW5-7f	24	36	3 1/2	10	16 1/2	4	5/8	1/2	-
FW8-1a	24	48	3 1/2	10	16 1/2	4	5/8	1/2	-
FW16-10	18 30	36 60	3 4	7 3/4 12 1/2	12 1/2 21	3 5	1/2 5/8	3/8 1/2	Up to 35 40 and higher

Notes

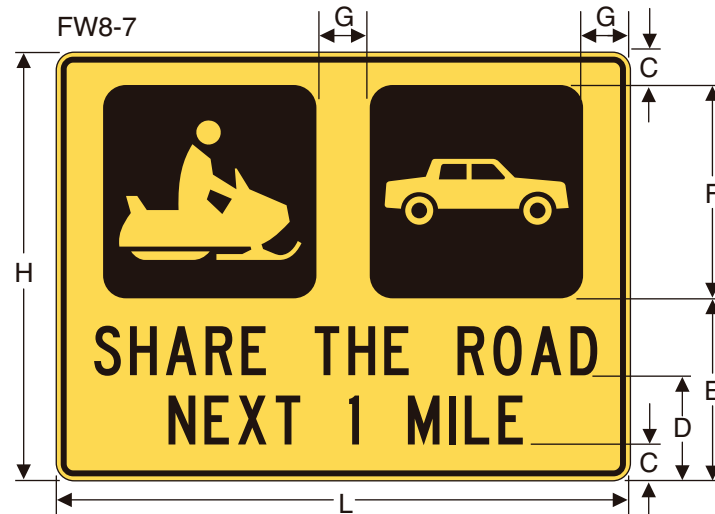
Center each line of text on vertical centerline.

Colors

Legend and border are black.
Background is retroreflective yellow.

References

For sign guidelines, see Chapter 3.
For panel construction, see Chapter 14.

Text layout—Warning sign (FW8-7)**Dimensions (inches)**

Sign number	H	L	C	D	E	F symbol size	G	Text height ASA Series D (upper case)	Border width	Inset width	Traffic speed (<i>mph</i>)
FW8-7	36	48	3	9	15	18	4	4D	$\frac{5}{8}$	$\frac{1}{2}$	30 and under
	48	60	4	12	20	24	4	5D	$\frac{5}{8}$	$\frac{1}{2}$	35 to 45
	54	72	5	15	25	24	4	6D	$\frac{5}{8}$	$\frac{1}{2}$	50 and higher

Notes

Center each line of text on vertical centerline.

Colors

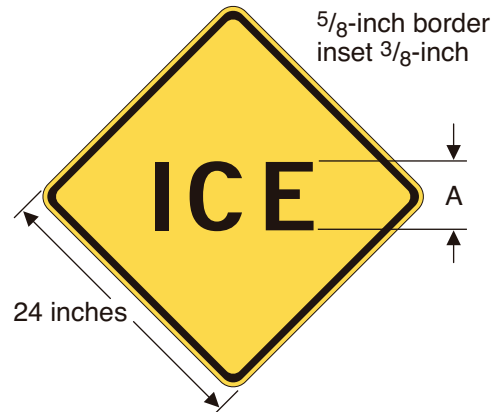
Legend and border are black.

Background is retroreflective yellow.

References

For sign guidelines, see Chapter 3.

For panel construction, see Chapter 14.

Text layout—Warning sign (FW) (one-line warning signs)**Dimensions (inches)**

Sign number	Message	Text height
		ASA Series D or E A
FW8-13a-24	ICE	6E
FW5-1e-24	FORD	6D

Notes

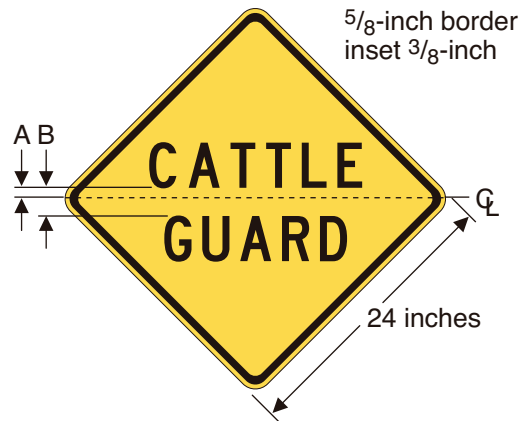
Center text on panel.

Colors

Legend and border are black.
Background is retroreflective yellow.

References

For sign guidelines, see Chapter 3.
For panel construction, see Chapter 14.

Text layout—Warning sign (FW) (two-line warning signs)**Dimensions (inches)**

Sign number	Message	Measurements from centerline of sign		Text height ASA Series C or D
		A	B	
FW3-1a-24	STOP AHEAD	2	1/2	4D
FW3-2a-24	YIELD AHEAD	2	1/2	4D
FW3-2b-24	GATE AHEAD	2	1/2	4D
FW5-1-24	ROAD NARROWS	2 1/2	0	4C
FW5-3-24	ONE LANE BRIDGE	0	2	4C
FW8-7a-24	HIGH WATER	2	1/2	4D
FW14-6-24	CATTLE GUARD	1	1 1/2	4D
FW5-1d-24	STREAM CROSSING	2 1/2	0	4D
FW8-7a-24	FALLING ROCK	0	2 1/2	4C
FW21-4a-24*	LOGGING OPERATIONS	2 1/2	0	4D
FW21-4b-24*	LOG TRUCKS	2 1/2	0	4D

Notes

Center each line of text on vertical centerline.

Colors

Legend and border are black.

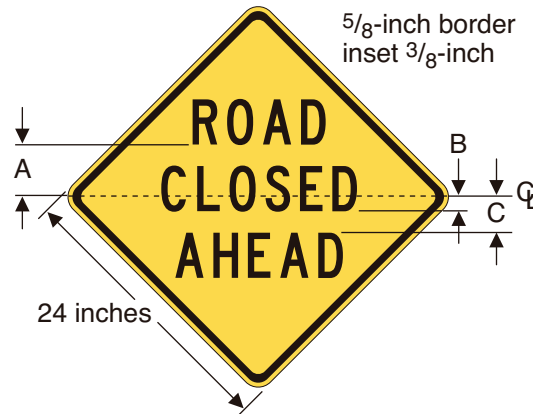
Background is retroreflective yellow or orange*.

References

For sign guidelines, see Chapter 3.

For panel construction, see Chapter 14.

Text layout—Warning sign (FW) (three-line warning signs)



Dimensions (inches)

Sign number	Message	Measurements from centerline of sign			Text height ASA Series C or D
		A	B	C	
FW3-5a-24	CLOSED GATE AHEAD	2	3 1/2	5	4C
FW3-5b-24	CLOSED GATE XX FT	2	3 1/2	5	4C
FW3-6a-24	CATTLEGUARD AHEAD	2	3 1/2	5	4C
FW3-6b-24	CATTLEGUARD XX FT	2	3 1/2	5	4C
FW5-1a-24	NARROW ROUGH ROAD	2	3 1/2	5	4C
FW5-1b-24	NARROW STEEP ROAD	2	3 1/2	5	4C
FW5-1c-24	NARROW WINDING ROAD	2	3 1/2	5	4C
FW5-1e-24	FLASH FLOOD AREA	2	3 1/2	5	4C
FW5-2c-24	ROAD CLOSED AHEAD	5	1	3	4C
FW8-9b-24	ONE LANE ROAD	5	1	3	4D
FW8-6a-24	HEAVY TRUCK TRAFFIC	4	1	3	3D

Notes

Center each line of text on vertical centerline.

Colors

Legend and border are black.

Background is retroreflective yellow or orange.

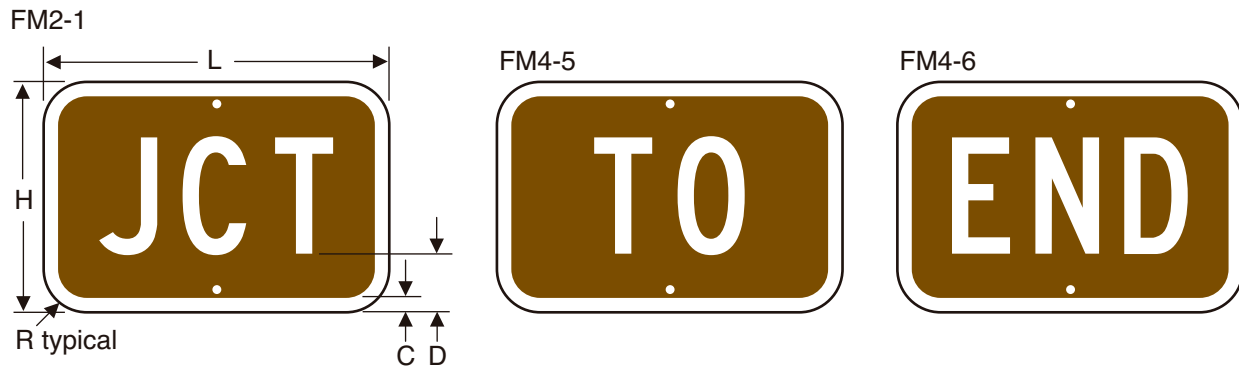
References

For sign guidelines, see Chapter 3.

For panel construction, see Chapter 14.

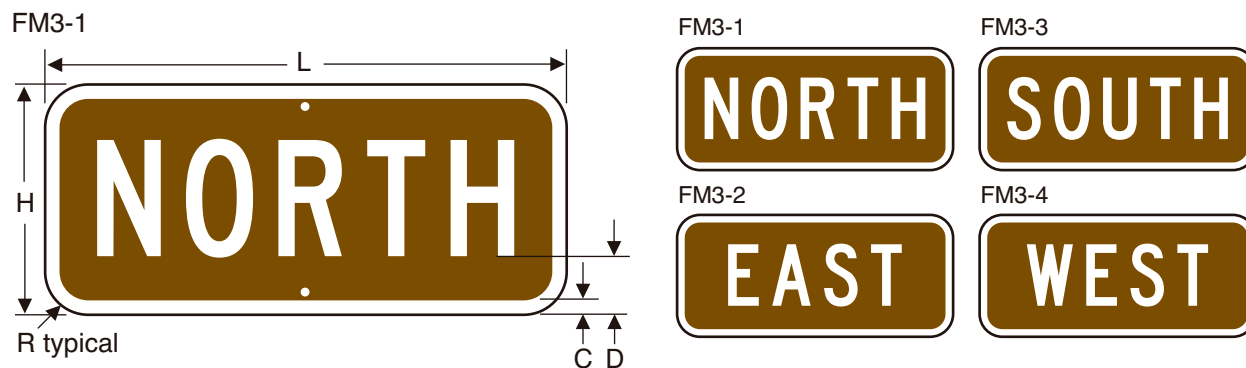
3D.3 Auxiliary Route Markers

Text layout—Auxiliary route markers (FM2, FM3, and FM4)



Dimensions (inches)

Sign number	H	L	Border C	D	R	Text height ASA Series C
FM2-1, FM4-5, FM4-6	8	12	1/2	2	1 1/2	4



Dimensions (inches)

Sign number	H	L	Border C	D	R	Text height ASA Series C
FM3-1, FM3-2, FM3-3, FM3-4	8	18	1/2	2	1 1/2	4

Notes

Center each line of text on vertical centerline.
All mounting holes are 3/8-inch diameter.

Colors

Fully retroreflective: White legend and border on brown background.

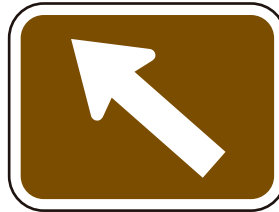
References

For sign guidelines, see Chapter 3.

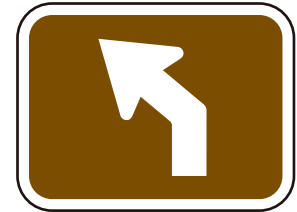
Supplemental and auxiliary route markers (FM) for use with recreation symbols



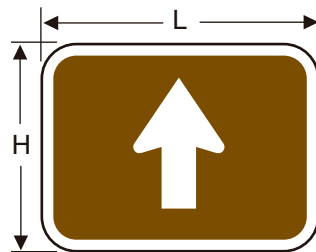
FM5-1L (shown)
FM5-1R



FM6-2L (shown)
FM6-2R



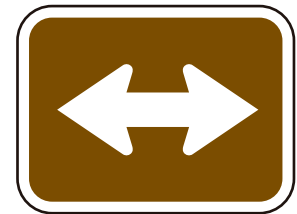
FM5-2L (shown)
FM5-2R



FM6-3L (shown)
FM6-3R



FM6-1L (shown)
FM6-1R



FM6-4

Dimensions (inches)

Auxiliary marker		Recreation symbol size
H	L	
9	12	12
12	16	18
15	21*	24*
15	21*	30*

Colors

Fully retroreflective: White legend and border on brown background.

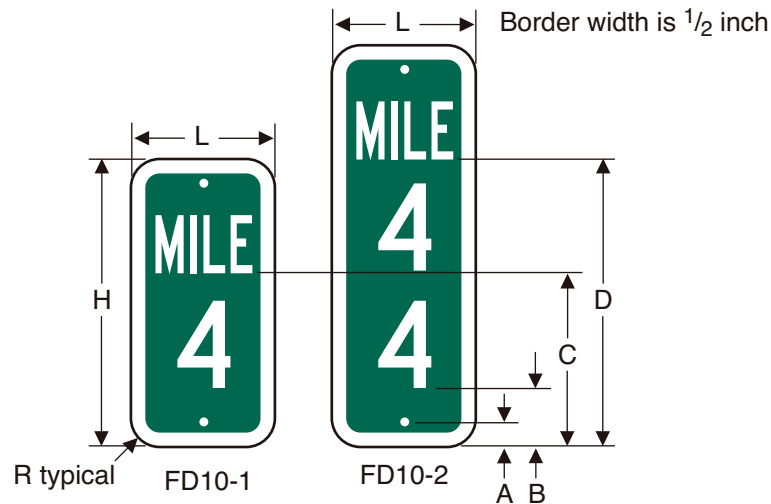
References

These are smaller sizes for use with the smaller Forest Service signs.

*See M series in *Standard Highway Signs*, Chapter 3 for larger sizes.

3D.4 Reference Location Signs

Text layout—Reference location signs (FD10)



Dimensions (inches)

Sign number	H	L	A	B	C	D	R	MILE ASA SERIES B	Number height ASA Series D	Road speed (mph)
FD10-1a	10	5	1	2	6	N/A	1 1/2	2	3	Up to 35
FD10-2a	14	5	1	2	6	10	1 1/2	2	3	Up to 35
FD10-1b	10	6	1	1 1/2	6 1/2	N/A	1 1/2	2	4	40+
FD10-2b	16	6	1	2	7	12	1 1/2	2	4	40+

Notes

Center each line of text and mounting holes on vertical centerline.
All mounting holes are 3/8-inch diameter.

Colors

Fully retroreflective: White legend and border on green background.

References

For sign guidelines, see Chapter 3.

3D.5 Forest Route Markers

Text layout—Forest route marker (M1-7) (distinctive route marker)



Dimensions (inches)

Sign number	H & L	Text height ASA Series D	Road speed (<i>mph</i>)	M series arrow plaque to use below sign
M1-7-18	18	6	Up to 40	FM6-1-16
M1-7-24	24	8	45+	M6-1-21

When arrows are needed with distinctive route markers, use the auxiliary route marker FM series arrows on page 3D-10 of these Guidelines. Arrow colors are fully retroreflective white border and arrow on brown background. Arrow plaque should be the same length as the bottom length of the route marker or the next length shorter.



Notes

Center each line of text on vertical centerline.

Colors

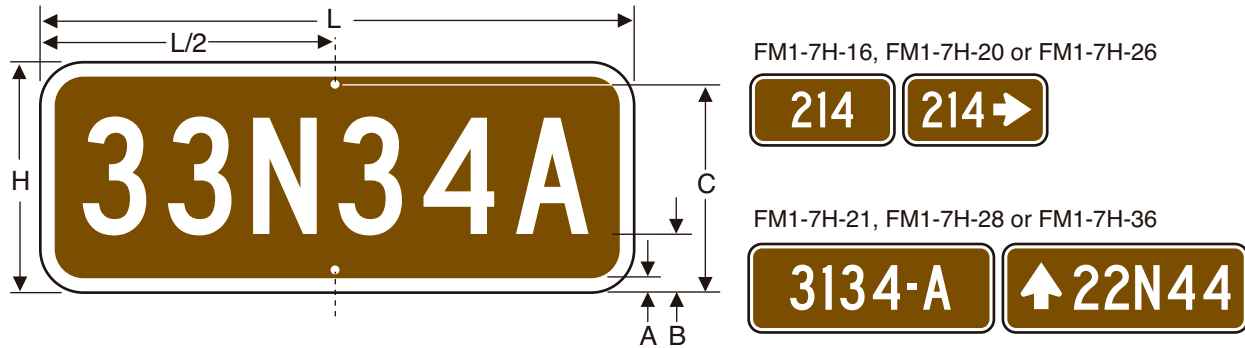
Fully retroreflective: White legend on brown background.

References

For sign guidelines, see Chapter 3.

For panel construction, see Chapter 14.

For text layout, FHWA, see *Standard Highway Signs*, Chapter 3.

Text layout—Forest route marker – horizontal (FM1-7H)**Dimensions (inches)**

Sign number	Number of characters	H	L	A	B	C	Text height* ASA Series C	Traffic speed (mph)
FM1-7H-16	Up to 4	8	16	1/2	2	6 1/2	4	Up to 30
FM1-7H-21	5 or 6	8	21	1/2	2	6 1/2	4	Up to 30
FM1-7H-20	Up to 4	10	20	1/2	2 1/2	8 1/2	5	35 to 50
FM1-7H-28	5 or 6	10	28	1/2	2 1/2	8 1/2	5	35 to 50
FM1-7H-26	Up to 4	12	26	5/8	3	10 1/2	6	55+
FM1-7H-36	5 or 6	12	36	5/8	3	10 1/2	6	55+

*Arrow on route marker is same size as text and counts as one character.

When separate plaques are used for arrows, plaques should be 8 x 16 inches with 4-inch text arrow. Extend arrow length to within 2 inches of edges.

**Notes**

Center each line of text and mounting holes on vertical centerline.
All mounting holes are 3/8-inch diameter.
Specify arrow direction.

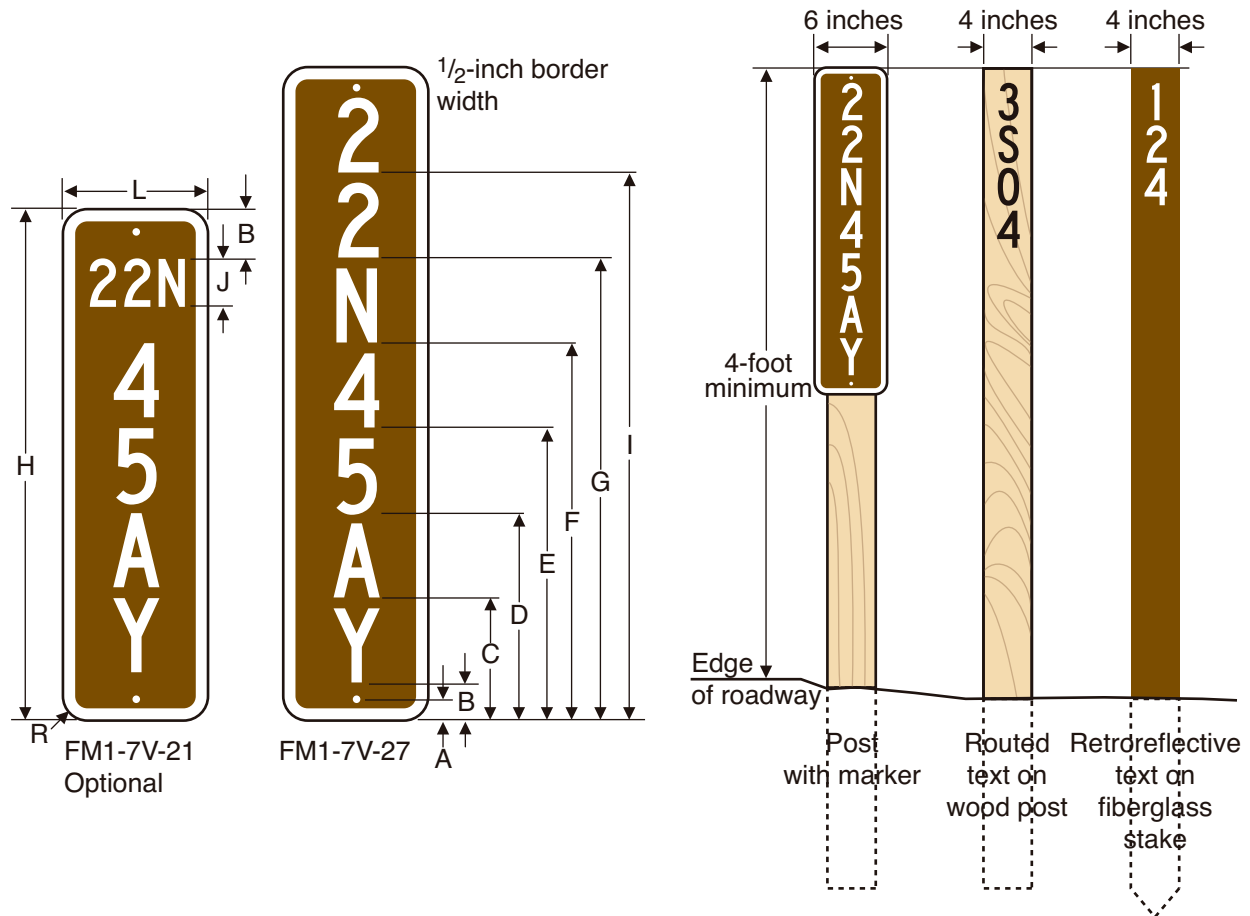
Colors

Fully retroreflective: White legend on brown background.

References

For sign guidelines, see Chapter 3.
For panel construction, see Chapter 14.

Text layout—Forest route marker –Vertical (FM1-7V) (vertical route marker to be used for ML 1 and 2 roads)



Dimensions (inches)

Sign number	H	L	Number of characters	A	B	C	D	E	F	G	H	J	R
FM1-7V-18	18	6	Up to 4	1	2 1/4	5 3/4	9 1/4	12 3/4	N/A	N/A	N/A	2	1 1/2
FM1-7V-21	21	6	5	1	2	5 1/2	9	12 1/2	16	N/A	N/A	2	1 1/2
FM1-7V-24	24	6	6	1	1 3/4	5 1/4	8 3/4	12 1/4	15 3/4	19 1/4	N/A	N/A	1 1/2
FM1-7V-27	27	6	7	1	1 1/2	5	8 1/2	12	15 1/2	19	22 1/2	N/A	1 1/2

Notes

Center each line of text on vertical centerline.
 All mounting holes are 3/8-inch diameter.
 Vertical text height is 3 inches minimum.

Colors

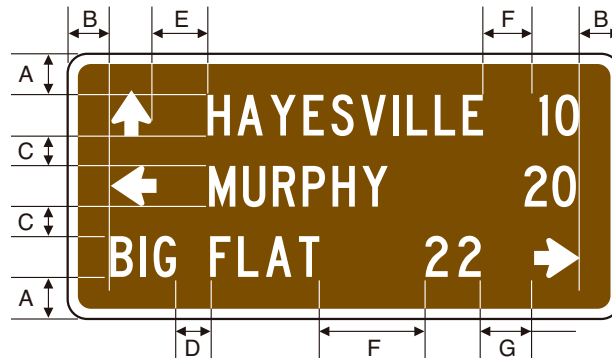
Fully retroreflective: White legend on brown background.

References

For sign guidelines, see Chapter 3.

3D.6 Forest Road Destination Sign

Text layout—Forest road destination sign (FRD)



Design guidelines listed below shall be consistent on each individual sign or each group of signs manufactured from this guide.

- A Edge of panel to top and bottom of text – $\frac{3}{4}$ of the capital letter height.
- B Edge of panel to beginning and end of lines – $\frac{3}{4}$ of the capital letter height.
- C Between lines – $\frac{3}{4}$ of the capital letter height.
- D Between words – $\frac{3}{4}$ to the whole height of a capital letter.
- E Between words and arrows – 1 to $1\frac{1}{2}$ the height of a capital letter.
- F Between words and mileage – minimum 1 to $1\frac{1}{2}$ the height of a capital letter.
- G Between mileage and arrows – 1 to $1\frac{1}{2}$ the height of a capital letter.

Requirements for spacing between letters shall conform to the Standard Alphabets for Traffic Control Devices in the FHWA *Standard Highway Signs*.

Note: Spacing may be reduced 25 percent on C and D Series text, 3 inches and smaller when necessary to fit the message on the sign. Increasing spacing to 125 percent makes signs easier to read.

Border standard

Borders should be of similar proportions but should not exceed the stroke width of the major lettering on the sign.

C or D Series letter size (inches)	Minimum border and separation line width (inches)
1 to $1\frac{1}{2}$	$\frac{3}{8}$
2	$\frac{3}{8}$
3	$\frac{1}{2}$
4	$\frac{5}{8}$
5	$\frac{5}{8}$ or $\frac{3}{4}$
6	$\frac{3}{4}$ or 1

Colors

Fully retroreflective: White legend and border on brown background.

References

For sign guidelines, see Chapter 3.
 For arrow (typical), see pp. 3D-19 through 22.
 For panel construction, see Chapter 14.

Text layout—Forest road destination sign with line (FRD)

Design guidelines listed below shall be consistent on each individual sign or each group of signs manufactured from this guide.

A-G See page 3D-1

H Between text and center of separation line - $\frac{1}{2}$ to $\frac{3}{4}$ of the capital letter height.

I Between lines and route shields - $1\frac{1}{4}$ to $1\frac{1}{2}$ the capital letter height.

Requirements for spacing between letters shall conform to the Standard Alphabets for Traffic Control Devices in the FHWA *Standard Highway Signs*.

Note: Spacing may be reduced 25 percent on C and D Series text, 3 inches and smaller when necessary to fit the message on the sign. Increasing spacing to 125 percent makes signs easier to read.

Border and separation-line standard

Borders and separation lines should be of similar proportions but should not exceed the stroke width of the major lettering on the sign. See dimensions on page 3D-16.

Symbol

Other agencies route signs may be incorporated as part of a directional sign. When possible, use the same shape and colors used by the agency. Examples of agency route signs are found in MUTCD, page 2D-5. If colored route signs of appropriate size are not available, a brown on white version in the same shape may be used.

Colors

Fully retroreflective: White legend and border on brown background.

References

For sign guidelines, see Chapter 3.

For arrow (typical), see pp. 3D-19 through 22.

For panel construction, see Chapter 14.

3D.7 Site Approach Signs

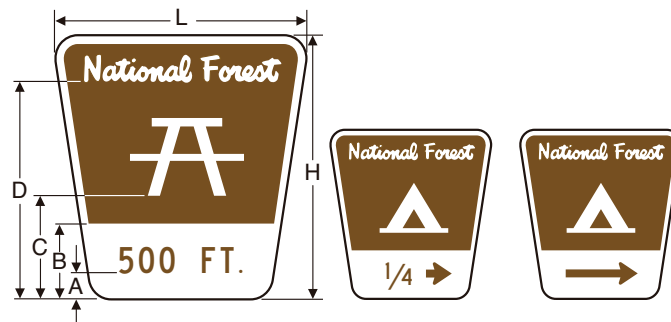
Text layout—Site approach with symbol (SA)



*Symbol size specifications are average. Some symbols may need to be proportioned in size to fit sign. Use only one symbol per sign.

Dimensions (inches) two-line facility type

Sign number	H	L	A	B	C	D	E	Border width	Legend			Road speed (mph)
									ASA Series C (upper case)	Symbol size*	Logo height	
SA-1	40	38	3	8 3/4	15	17 1/2	33	3/4	4	12	4	Up to 40
SA-2	52	48	4	11 1/2	19 1/2	24	43	1	5	15	5	45+



Dimensions (inches) one-line facility type

Sign number	H	L	A	B	C	D	Border width	Legend			Road speed (mph)
								ASA Series D (upper case)	Symbol size*	Logo height	
SA-1	40	38	4	11 1/2	15 3/4	33	3/4	4	12	4	Up to 40
SA-2	52	48	7	16 1/2	22	43	1	5	15	5	45+

Notes

Specify symbol, distance, message, or arrow direction (left or right only).

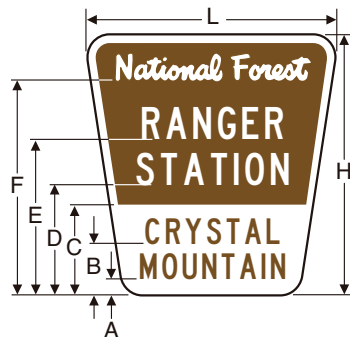
Arrows and arrow plaques: Arrows on the sign with the legend are one size larger than the text. Arrows alone on the sign are extended to within 1 letter height of sign edge. Arrow plaques, if used below the sign, are M6-1, white on brown, fully retroreflective.

Fully Retroreflective Colors

Top – White legend on brown background. Bottom – Brown on white background

References

- For sign guidelines, see Chapter 3.
- For panel construction, see Chapter 14.
- For horizontal text placement, see page 8C-1.

Text layout—Site approach with two-line facility type (SA)

Dimensions (inches) two-line facility name

Sign number	H	L	A	B	C	D	E	F	Border width	Legend ASA Series C (upper case)	Symbol size* (upper case)	Logo height	Road speed (mph)
SA-1	40	38	2 1/2	8	14	17	24 1/2	33	3/4	4	12	4	0 to 40
SA-2	52	48	3 1/2	10 1/2	18	22 1/2	32	43	1	5	15	5	45+



Dimensions (inches) Two-line facility type and one-line facility name

Sign number	H	L	A	B	C	D	E	Border width	Facility type ASA Series C (upper case)	Facility name ASA Series C (upper case)	Logo height	Road speed (mph)
SA-1	40	38	4	11 1/2	16	23 1/2	33	3/4	5C	4C	4	0 to 40
SA-2	52	48	7	16 1/2	22	31 1/2	43	1	7C	5C	5	45+

Notes

Specify symbol, distance, message, or arrow direction (left or right only).

Arrows and arrow plaques: Arrows on the sign with the legend are one size larger than the text. Arrows alone on the sign are extended to within 1 letter height of sign edge. Arrow plaques, if used below the sign, are M6-1, white on brown, fully retroreflective.

Fully Retroreflective Colors

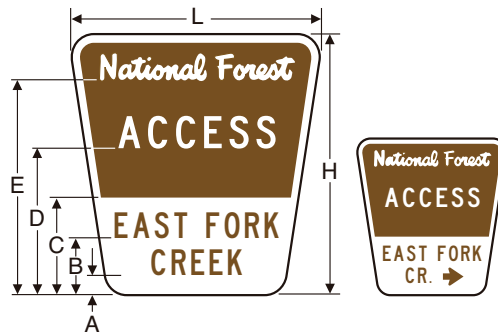
Top – White legend on brown background. Bottom – Brown on white background

References

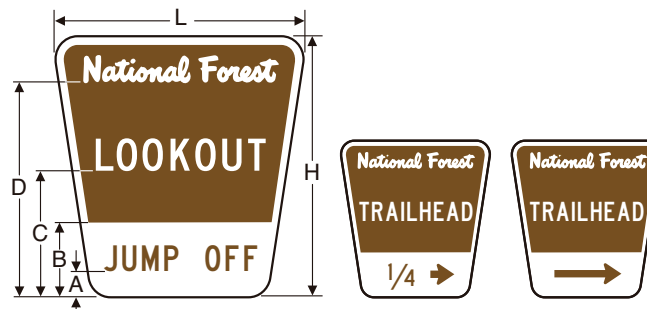
For sign guidelines, see Chapter 5.

For panel construction, see Chapter 14.

For horizontal text placement, see page 8C-1.

Text layout—Site approach with one-line facility type (SA)**Dimensions (inches) two-line facility name**

Sign number	H	L	A	B	C	D	E	Border width	Facility type ASA Series C or D (upper case)	Facility name ASA Series C (upper case)	Logo height	Road speed (mph)
SA-1	40	38	3	8 ³ / ₄	15	22 ¹ / ₂	33	³ / ₄	5D	4	4	0 to 40
SA-2	52	48	4	11 ¹ / ₂	19 ¹ / ₂	28	43	1	7C	5	5	45+

**Dimensions (inches) one-line facility name**

Sign number	H	L	A	B	C	D	Border width	Facility type ASA Series C or D (upper case)	Facility name ASA Series C (upper case)	Logo height	Road speed (mph)
SA-1	40	38	4	11 ¹ / ₂	19 ¹ / ₂	33	³ / ₄	5D	4	4	0 to 40
SA-2	52	48	7	18 ¹ / ₂	27	43	1	7C	5	5	45+

Notes

Specify symbol, distance, message, or arrow direction (left or right only).

Arrows and arrow plaques: Arrows on the sign with the legend are one size larger than the text. Arrows alone on the sign are extended to within 1 letter height of sign edge. Arrow plaques, if used below the sign, are M6-1, white on brown, fully retroreflective.

Fully Retroreflective Colors

Top – White legend on brown background. Bottom – Brown on white background

References

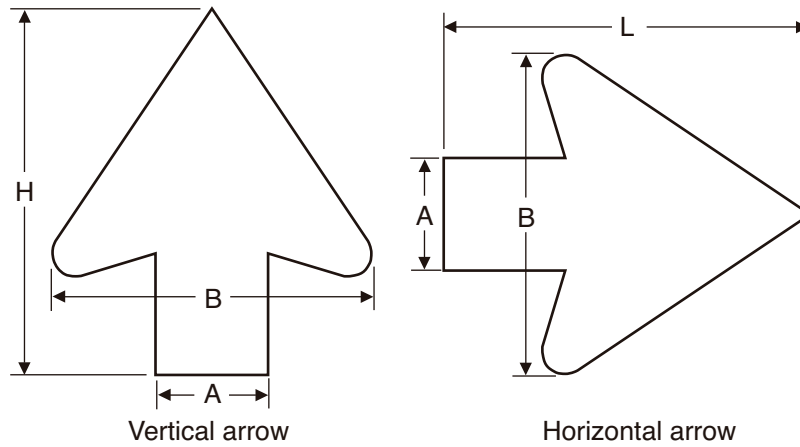
For sign guidelines, see Chapter 5.

For panel construction, see Chapter 14.

For horizontal text placement, see page 8C-1.

3D.8 Horizontal and Vertical Arrows

Layout of horizontal and vertical arrows



Dimensions (*inches*) horizontal and vertical arrows

Arrow	H & L	A	B	Text size to be used with
2	3	$15/16$	$2\ 5/8$	2
3	4	$1\ 1/4$	$3\ 1/2$	3
4	5	$1\ 5/8$	$4\ 1/2$	4
5	6	$1\ 15/16$	$5\ 3/8$	5
6	7	$2\ 1/4$	$6\ 1/4$	6