



**ENGINEERING CONSTRUCTION CONTRACTING SECTION
MONTANA DEPARTMENT OF TRANSPORTATION**

Sign Design Calculations

SIGN DESIGN CALCS The requested files are only design files. The Department cannot guarantee the accuracy of the electronic data, particularly as it may be called up by your computer, nor does any data in these files supersede the data in the contract documents.

In addition, the Department will not make any revisions to the electronic files prior to award. Changes needed via change ordered work, or changes that are made during construction to fit field conditions, will be provided at that time. See the requirements of Subsection 619.03.2.

Diagram showing the vertical dimensions of the wall and window assembly. The wall height is 30 inches. The window height is 4.75 inches. The window opening height is 4.33 inches. The window frame height is 6.83 inches. The window sill height is 8.09 inches. The window head height is 6 inches EM. The window base height is 4.75 inches. The window frame height is 6 inches EM. The window sill height is 8.09 inches. The window head height is 6 inches EM. The window base height is 4.75 inches.

↑ City Center

NW By-pass →

8.04" 67.92" 8.04"

Panel Style: `guide_con_destination.ssi`
Dimensions are in inches hundredths

SIGN NUMBER	D1-2					
WIDTH x HEIGHT	84" x 30"			17.5" Sq.Ft.		
BORDER WIDTH	0.75"			MARGIN		
CORNER RADIUS	2.25"			<u>ALUMINUM TYPE</u>		
MOUNTING	Ground			INCREMENT		
BACKGROUND	TYPE: Reflective					
	COLOR: Green					
LEGEND/BORDER	TYPE: Reflective					
	COLOR: White/White					
STATION(S)						
SYMBOL		ROT	X	Y	WID	HT
AR_Type B			8.04"	18.84"	6"	6.83"
AR_Type B		270"	58.38"	4.75"	6"	6.83"

SDC 1

SIGN DESIGN CALCULATIONS

[illegible]

PROJECT NAME
BLACK EAGLE NHS ROUTES - GF

NAME
BLACK EAGLE NHS ROUTES - GF

CASCADE

NH 102-1(14)3

10316000

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REVIEWED BY	04/2026
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CHECKED BY

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MONTANA
Department of Transportation

SIGNING DI VANC

5/22/2026 1:40 PM

Diagram of a green rectangular street sign with white text. The sign is labeled "Montana Ave NE". Dimensions are provided for the sign and its mounting hardware:

- Overall width: 42"
- Overall height: 12"
- Sign width: 37.2"
- Sign height: 6" (with 3" margins above and below the text area)
- Mounting hardware dimensions (on both sides):
 - Top: 5"
 - Bottom: 5"
 - Left/Right: 4" (with 3" margins)
- Spacers: 2.4" (on both sides of the sign)

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SDC 2

SIGN DESIGN CALCULATIONS

REDUCTION: ☒ 10% ☐ 20% ☐ 30%

LENGTH SERIES/SIZE

[illegible]

CASCADE

NH 102-1(14)3

10316000

COUNTY

DESIGNED BY	L MOREY	01/2026
DESIGNED BY		

REVIEWED BY	
N THOLT	01/2026

CHECKED BY	N STYREN
	01/2026



MONTANA
Department of Transportation

SIGNING PLANS

5/22/2026 1:40 PM

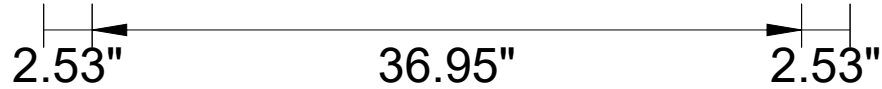
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SIGN DESIGN CALCULATIONS

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Panel Style: guide_con_street nam
Dimensions are in inches hundredths

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SDC 4

SIGN DESIGN CALCULATIONS

[illegible]

NAME
BLACK EAGLE NHS ROUTES - GF

CASCADE

NH 102-1(14)3

10316000

DESIGNED BY	L MOREY	01/2026
DESIGNED BY		

REVIEWED BY	
N THOLT	01/2026

CHECKED BY	N STYREN	01/2026

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SIGNING PLANS

5/22/2026 1:40 PM

Technical drawing of a green rectangular sign with white text and dimensions. The sign is oriented horizontally and features the text "ENTERING" in a smaller, bold, sans-serif font above the text "Great Falls" in a larger, bold, sans-serif font. The sign has a white border and rounded corners. Dimensions are provided for the sign's overall size and the placement of the text.

Overall dimensions:

- Width: 66"
- Height: 30"

Text placement dimensions (from the top and bottom edges):

- Top margin: 15"
- Text "ENTERING" height: 8"D
- Space between "ENTERING" and "Great Falls": 7"
- Text "Great Falls" height: 8"D
- Bottom margin: 7"

Horizontal text placement dimensions (from the left and right edges):

- Left margin: 6.28"
- Text width: 53.44"
- Right margin: 6.28"

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SDC 5

SIGN DESIGN CALCULATIONS

PROJECT NAME
BLACK EAGLE NHS ROUTES - GF

PROJECT /

CASCADE

NH 102-1(14)3

10316000

DESIGNED BY	01/2026
L MOREY	

REVIEWED BY

N THOLT	01/2026
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SIGNING PLANS

5/22/2026 1:40 PM

36"

12"

TD&H
ENGINEERING

7.34" 21.33" 7.34"

2"
3"C
2"
3"C
2"

[illegible]

SDC 6

SIGN DESIGN CALCULATIONS

REDUCTION: ☐ 10% ☐ 20% ☐ 30%

LENGTH SERIES/SIZE

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NAME
BLACK EAGLE NHS ROUTES - GF

CASCADE

NH 102-1(14)3

10316000

PROJECT
COUNTY

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DESIGNED BY	L MOREY	01/2026
DESIGNED BY		

REVIEWED BY

N THOLT	01/2026
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CHECKED BY	N STYREN	01/2026

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SIGNING PLANS

5/22/2026 1:40 PM

Technical drawing of a rectangular street sign. The sign is green with a white border and contains the text "19th St N" in white. Dimensions are provided in inches:

- Overall width: 30"
- Overall height: 12"
- Top margin: 3"
- Text height: 6"B
- Bottom margin: 3"
- Left margin: 3.22"
- Text width: 23.56"
- Right margin: 3.22"
- Top margin (right side): 5"
- Text height (right side): 4"B
- Bottom margin (right side): 3"

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SIGN DESIGN CALCULATIONS

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5/22/2026 1:40 PM

Technical drawing of a green rectangular street sign with rounded corners. The sign features the text "River Dr N" in white. Dimensions are provided in inches:

- Overall width: 36"
- Overall height: 12"
- Text "River Dr N" is centered horizontally with margins of 4.85" on the left and right.
- Vertical spacing on the left: 3" from the top to the text, 6"B (baseline) for the text height, and 3" from the text to the bottom.
- Vertical spacing on the right: 5" from the top to the text, 4"B (baseline) for the text height, and 3" from the text to the bottom.

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SIGN DESIGN CALCULATIONS

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5/22/2026 1:40 PM

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SDC 9

SIGN DESIGN CALCULATIONS

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PROJECT NAME
BLACK EAGLE NHS ROUTES - GF

COUNTY

CASCADE

NH 102-1(14)3

10316000

DESIGNED BY	01/2026
L MOREY	

REVIEWED BY

N THOLT	01/2026
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N STYREN	01/2026

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Department of Transportation

SIGNING PLANS

1/22/2026 1:40 PM

Technical drawing of a rectangular sign with rounded corners. The sign is white with a black border and the text "NO THRU TRUCKS" in bold, black, sans-serif capital letters. The overall dimensions are 66" wide by 12" high. The sign is mounted on a post, with a 5"D (5-inch diameter) hole centered vertically. The mounting holes are 3.5" from the top and bottom edges. The sign is 56.83" wide, with 4.59" of the total width being the border on each side.

Dimension	Value
Overall Width	66"
Overall Height	12"
Sign Width (excluding border)	56.83"
Sign Height (excluding mounting holes)	5"
Mounting Hole Diameter	5"D
Distance from Top Edge to Mounting Hole	3.5"
Distance from Bottom Edge to Mounting Hole	3.5"
Border Width (each side)	4.59"

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SIGN DESIGN CALCULATIONS

5/22/2026 1:40 PM

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SIGN DESIGN CALCULATIONS

[illegible]

SIGNING PLANS

Technical drawing of a rectangular street sign with dimensions and content. The sign is green with a white border and contains a white left-pointing arrow, the text "25th St N", and a small white "6\"/>

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SIGN DESIGN CALCULATIONS

5/22/2026 1:40 PM

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Panel Style: guide_con_recreational.ssi
Dimensions are in inches hundredths

SHEET NO.

DC 13

SIGN DESIGN CALCULATIONS

BLACK EAGLE NHS ROUTES - GP

CASCADE

10316000

COUNTY

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5/22/2026 1:40 PM

Technical drawing of a brown rectangular road sign with rounded corners. The sign contains the text "Giant Springs State Park" in large white serif font, and "1 MILE" in smaller white sans-serif font below it. Dimension lines indicate overall width of 72 inches and overall height of 36 inches. Spacing dimensions are provided for the text elements: 4.5 inches for the top margin, 6 inches for the line spacing between "Giant Springs" and "State Park", 5 inches for the line spacing between "State Park" and "1 MILE", 6 inches for the bottom margin, and 4.75 inches for the vertical spacing between the two lines of the main text. Horizontal spacing dimensions show 6 inches from the left edge to the start of the text, 60 inches for the main text area, and 6 inches from the end of the text to the right edge.

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SIGN DESIGN CALCULATIONS

[illegible]

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12"

2.75"
6"B
3.25"



2.75"
6"B
3.25"

4.75"
4"B
3.25"

3.28" 41.44" 3.28"

LETTER POSITIONS (X)

REDUCTION: ☒ 10% ☐ 20% ☐ 30%

LENGTH SERIES/SIZE

B 2000

41.44"	6"/4.5", 4"/3"
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SDC 16

SIGN DESIGN CALCULATIONS

NAME
BLACK EAGLE NHS ROUTES - GF

COUNTY

CASCADE

NH 102-1(14)3

10316000

DESIGNED BY	L MOREY	01/2026
DESIGNED BY		

REVIEWED BY	01/2026
N THOLT	

CHECKED BY	
N STYREN	01/2026

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SIGNING PLANS

5/22/2026 1:40 PM

Technical drawing of a green rectangular street sign with white text "18th Ave N". The drawing includes dimensions for the sign's overall size and the placement of the text.

Overall Dimensions:

- Width: 36"
- Height: 12"

Text Dimensions and Placement:

- "18th": 6" high, 12" wide
- "Ave": 4" high, 12" wide
- "N": 3" high, 6" wide

Sign Dimensions:

- Width: 26.1"
- Height: 12"

Mounting Plate Dimensions:

- Width: 36"
- Height: 12"

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SDC 17

SIGN DESIGN CALCULATIONS

REDUCTION: ☐ 10% ☐ 20% ☐ 30%

LENGTH SERIES/SIZE

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BLACK EAGLE NHS ROUTES - GF

CASCADE

NH 102-1(14)3

10316000

DESIGNED BY	L MOREY	01/2026
DESIGNED BY		

REVIEWED BY	
N THOLT	01/2026

CHECKED BY	
N STYREN	01/2026

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MONTANA
Department of Transportation

SIGNING PLANS

1/22/2026 1:40 PM

Technical drawing of a 30" x 30" sign. The sign features a large upward arrow on the left and a right-turn arrow on the right, with the word "ONLY" below the right-turn arrow. Dimensions for mounting and sign content are provided:

- Overall Dimensions:** 30" x 30"
- Mounting Dimensions (Left Side):**
 - Top to center of sign: 14.75"
 - Center of sign to bottom: 14"
 - Bottom to mounting hole center: 1.2"
- Mounting Dimensions (Right Side):**
 - Top to center of sign: 7.15"
 - Center of sign to bottom: 12.84"
 - Bottom to mounting hole center: 3"
- Mounting Dimensions (Bottom):**
 - Left to center of sign: 4.25"
 - Center of sign to right: 23.25"
 - Right to mounting hole center: 2.5"
- Sign Content Dimensions:**
 - Top to center of sign: 3.64"
 - Center of sign to bottom: 18.86"
 - Bottom to mounting hole center: 7.5"

SIGN NUMBER		R3-8TOR				
WIDTH x HEIGHT		30" x 30"		6.25" Sq.Ft.		
BORDER WIDTH		0.75"		MARGIN 0.5"		
CORNER RADIUS		1.88"		ALUMINUM TYPE		
MOUNTING		Ground		SHEET		
BACKGROUND		TYPE: Reflective				
		COLOR: White				
LEGEND/BORDER		TYPE: Non-reflective				
		COLOR: Black/Black				
STATION(S)						
SYMBOL		ROT	X	Y	WID	HT
AR_RIGHT_ONLY			16.71'	10"	10.35'	12.84'
AR_THRU			4.25"	7.5"	6"	18.86'

SDC 18

SIGN DESIGN CALCULATIONS

CASCADE

NH 102-1(14)3

10316000

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N STYREN	01/2026

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