Wayside Exhibits, Signs, and Frames

Presented by
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Center for Design and Interpretation

www.fs.fed.us/r2/cdi

Center for Design and Interpretation (CDI)

US Forest Service Rocky Mountain Regional Team

Work on recreation, roads, visitors centers and facility projects across the country providing services in:

- Architecture
- Landscape Architecture
- Interpretive Planning
- Graphic Design
- Engineering

Workshop Objectives

- Review common sign materials, and their strengths and weaknesses
- Discuss framing and mounting materials
- Review costs of various materials
- Address planning sign locations for safety and accessibility

Exterior Sign Materials

- Fiberglass Embedded
- High Pressure Laminate
- Porcelain Enamel
- Engraved Stone
- Anodized Aluminum
- Cast Aluminum and Steel

Fiberglass in earlier days....

Fiberglass Embedded

Process: Special treated paper is printed with UV resistant inks, and sandwiched between fiberglass sheets; given a resin bath and then cured. Once cured, a solid panel is formed.

Thickness can be .040 -.250" thick. (1/16” – ¼”)

Has a long track record with ten year warranty.

Fibers eventually wear to surface

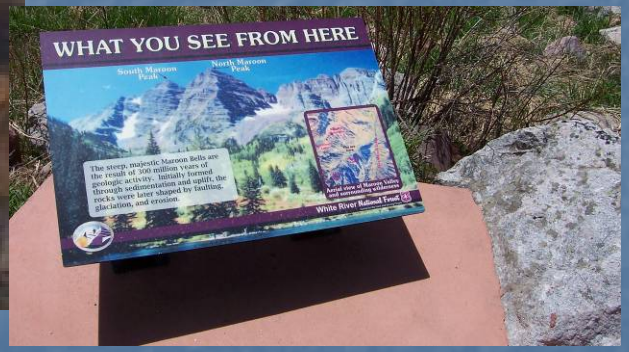
Fiberglass today.....

Significant cost reduction from 1980's.

Cost: $350 for 24" x 36" panel for first panel.

Varied thickness

Custom cuts



Brighter color use

High Pressure Laminate Materials

Process: Paper prints, melamine sheets and phenolic resin sheets are layered and compressed with high pressure and temperature As the melamine resin melts, it absorbs the print and all materials are consolidated into one single piece of solid plastic.

Thickness can be 1/8” – 1” thick panels

Cost: $300 - $700 for 24” x 36” panel (thickness dependent)

Generally offers a ten year warranty

- Can be framed or frameless
- Decorative edging

Porcelain Enamel

Process: Uses 4 color processing combined with glass that is melted and fused to a steel backing. (Similar oven surfaces)

Produces visually striking and durable signage

Available in 1/8” flat panel, or rolled surface edge

Cost: $2500 for 24” x 36” panel (standard size)

25-year warranty

Durable in harsh environments, such as Death Valley

Difficult to vandalize with spray-paint or markers, can be scratched, chipped or gunshot.

Replacements at only a portion of the original cost.

Other sign materials to consider

Engraved Stone

- Simplicity with tactile factor
- Limited in color use
- Average cost $125

to $250 per square foot.

Anodized Aluminum

- Wear well in corrosive environments
- Limited in color use
- Average cost $125 to $250 per square foot.

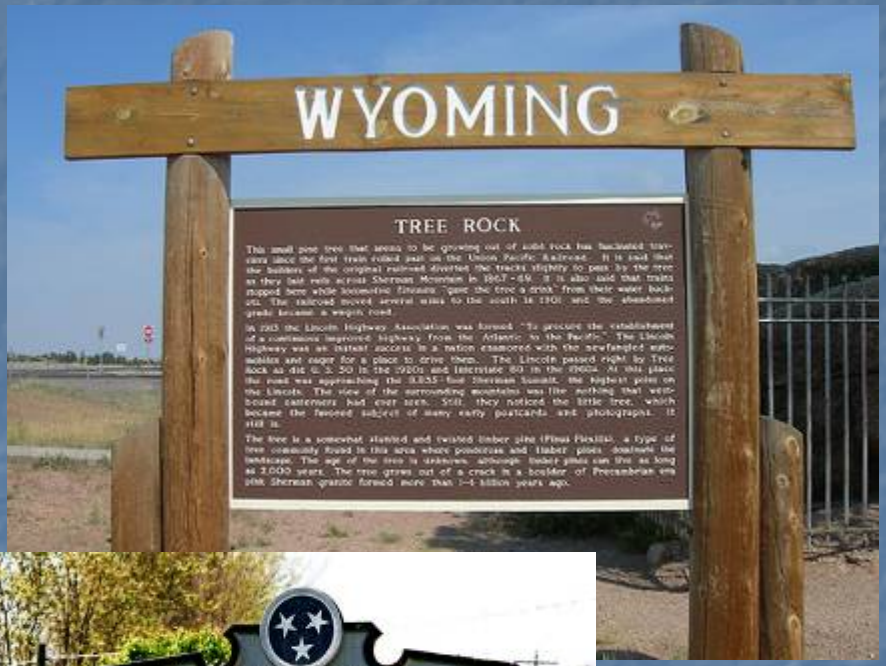
Cast aluminum and steel

- Provides tactile factor
- Limited in color
- Extremely durable
- Visually unobtrusive
- Requires heavy mounting

And support structures

Average cost, $425 per square foot

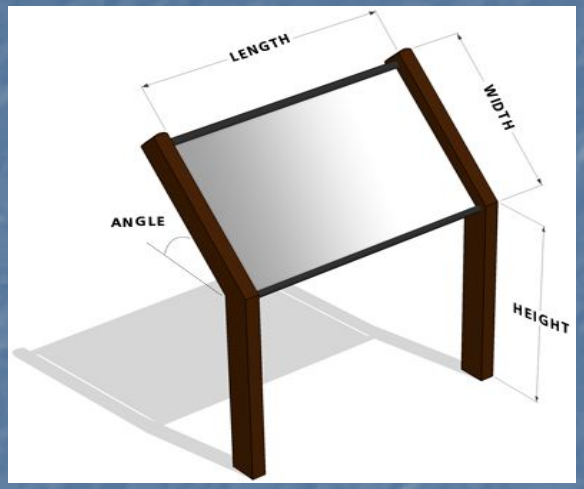
- 2’ x 2’ $1732
- 3’ x 5’, $3000



Highly effective sign shows entire river corridor and dam systems.

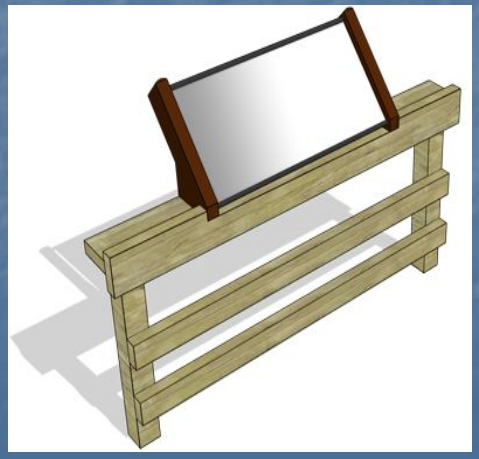
Framing and mounting materials

Standard frames available to order:

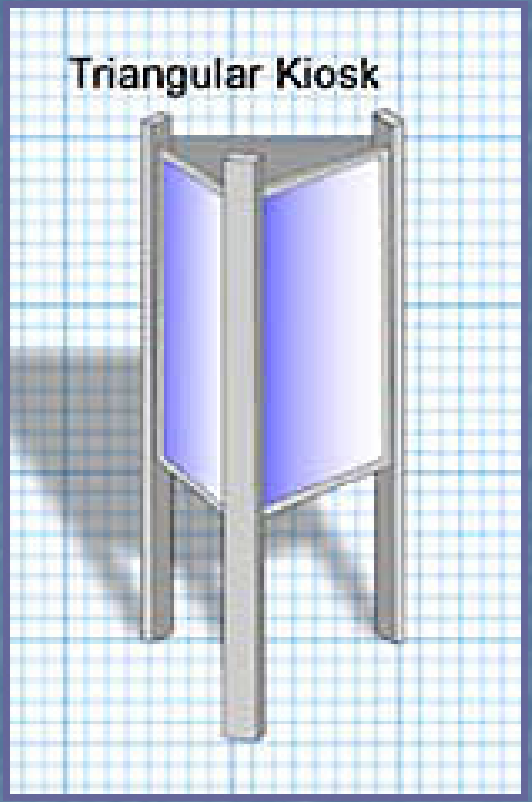


Cantilevered Base, low profile or oblique

Custom Masonry with frame inset into concrete



Estimate $600 per frame



Larger systems run around $1000 - $1500

Moisture damage is a possibility, not always a probability.

Vandalism issues and sign materials

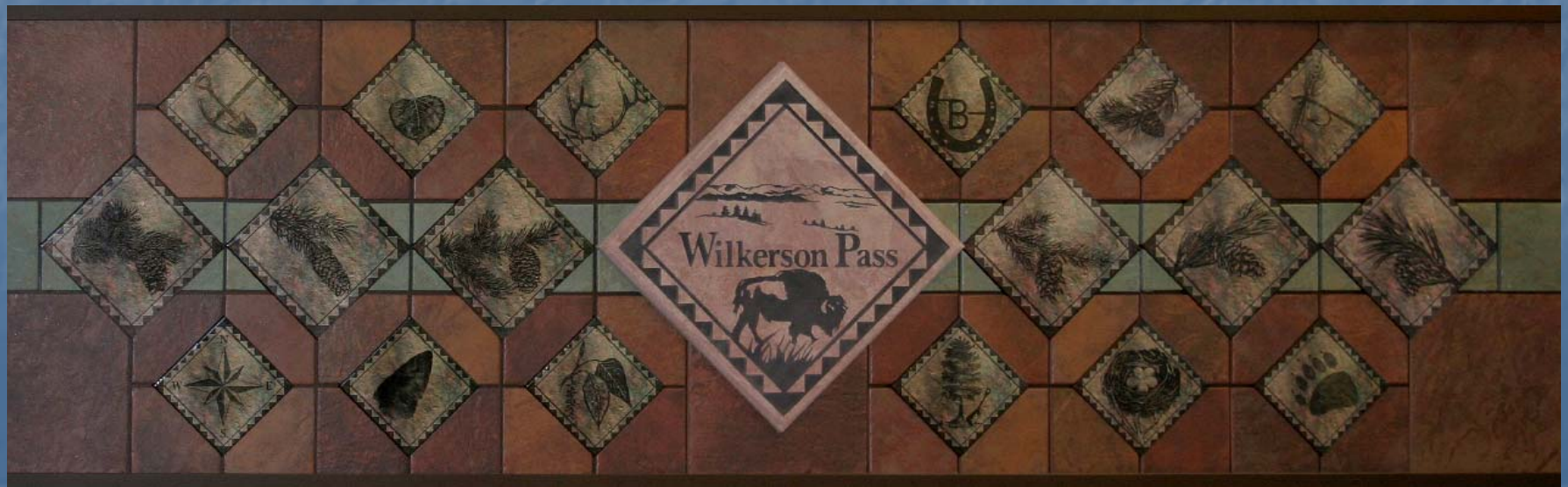
Frameless panel mounts

Costs for leg mounts are minimal

Other Ways to Mount Signs that Frame a Sense of Place

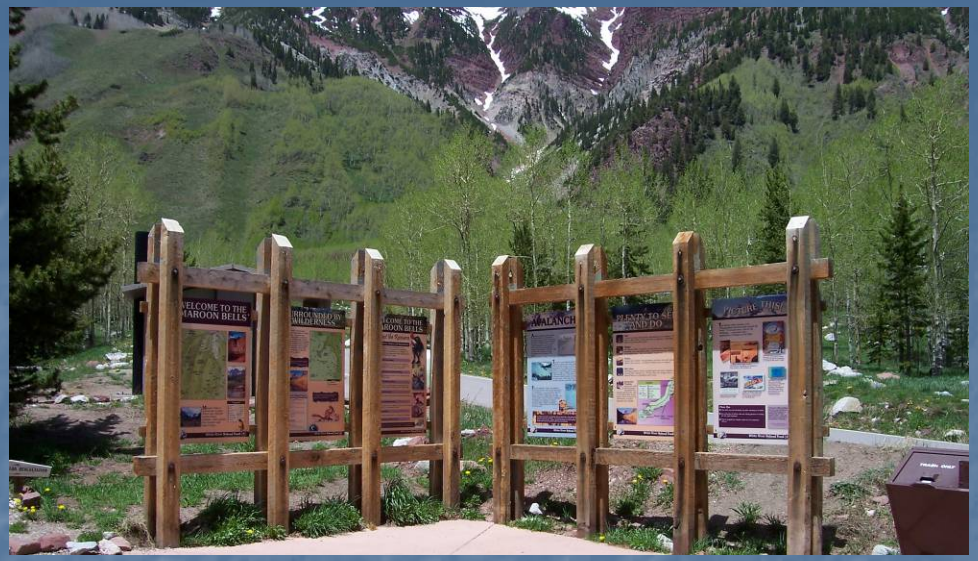
Bas relief from brick

Mural from tile



Location and Placement of Signs

Location:
Consider distance from parking and restrooms, and sign accessibility.



Features:
Consider the relationship of the sign to the point of interest, which should be fully visible and obvious.

Viewing: What is the viewers perspective? How will the view be maintained after construction?

Conditions: What about sun glare, wind, heat, cold, shadows, orientation, protective shelter needs, traffic, and topographical hazards?

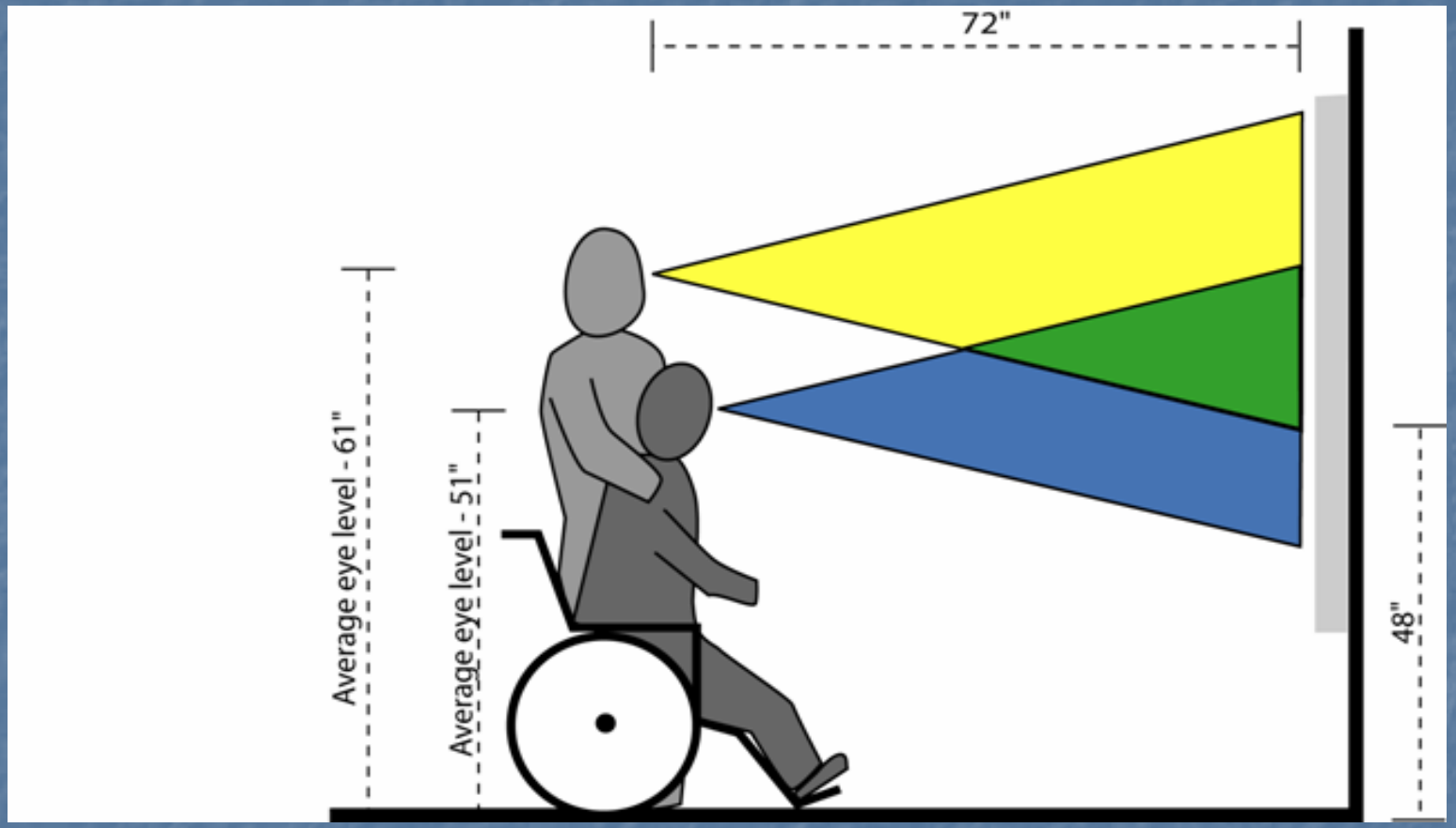
-- Scenic Byway Design Guide

2002

Accessibility in signage

A mounting height of 24 to 30” with a 30 to 45 degree angle toward the viewers will be accessible to most visitors. The front edge height of low profile exhibits should be 32”.

Sightlines for Viewing Graphics



Cone of Vision

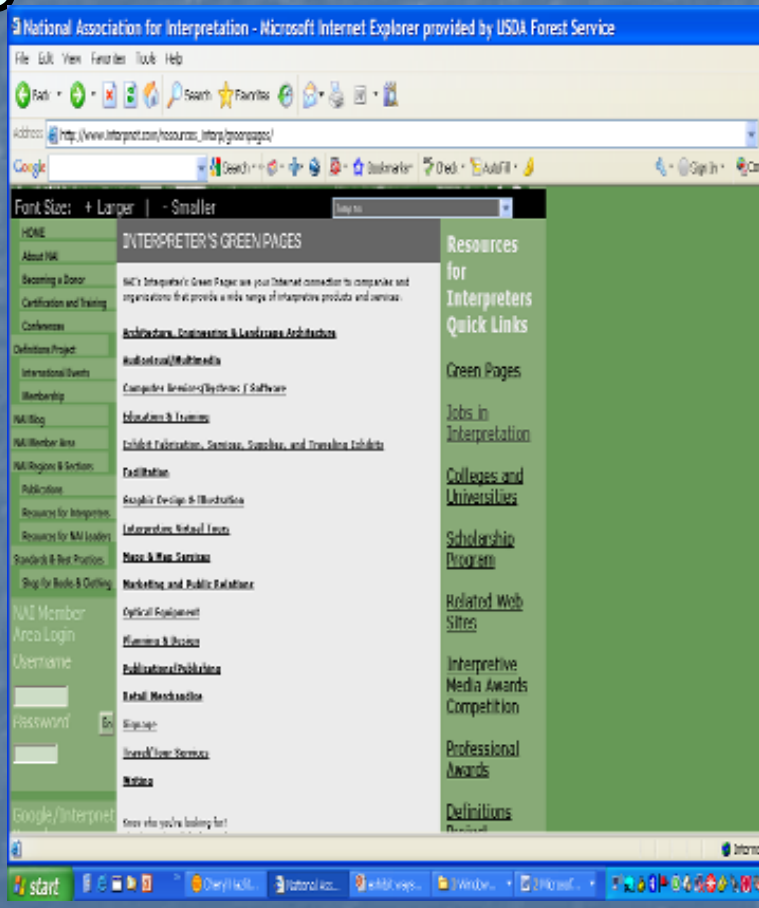
Cost Estimating

- **Estimating Rule of Thumb -** $5000 per sign from ground zero to final sign in the ground.
- Additional costs for site prep work, or custom framing.
- Remember to factor in 7-10% for contract administration
- Add appropriate installation costs (5%)

Fabrication Vendors and Sources

Check out:

- Green pages on interpnet.com
- Local small businesses that specialize in low cost fabrication
- Word of mouth from other designers and interpretive professionals



In summary .... ask yourself

Do we have an accurate **cost estimate**?

Are panel and base **materials** appropriate for the site?

Is there a **level, hard-surfaced exhibit pad** of adequate size?

Is the site **accessible** to visitors, including the mobility - impaired?

Are there other **site planning** considerations?

Take Home Resources

- Contract specifications for fiberglass embedment, high pressure laminate, porcelain enamel signs, and standard frame systems.
- Sign materials comparison chart, 2001
- Wayside Exhibit Checklist

Any interpretation that does not not somehow relate what is being being displayed or described to to something within the personality personality or experience of the the visitor will be sterile.

(Freeman Tilden)