



INTERPRETIVE PLANNING - TOOL #6

Costs for Panel Design, Fabrication, and Mounting

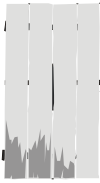
PLANNING AND DESIGN COSTS

The cost of designing your interpretive panel can vary greatly. Factors that affect the cost include the following:

- *Themes.* Do you have a theme established for your sign(s)? Can you articulate the interpretive objectives (what you want people to know, feel, or do as a result of viewing your panel)?
- *Reference Material.* How much time can forest staff devote to providing reference materials for the text and graphics?
- *Graphics.* How many photographs, illustrations, and/or graphics are currently available? How many will CDI need to hunt down, create, or purchase?
- *Template.* Do you have a forest “corporate image” already established for your signs, or will our designers be starting from scratch? Is there a “template” (template would include colors, font styles, graphic look of sign panels) already established? Will there be multiple signs done from the same “template”?
- *Maps.* Are you going to need a map? If so, who will provide it?
- *Review Process.* Who will be the reviewers? Will their comments be compiled and approved prior to submittal?

Given these variables, design costs can range from \$2,500 – 3,500 per sign. Costs include salary for:

- Template development
- Text research and development
- Image acquisition (finding photos, illustrations, etc. If images need to be purchased, plan on another \$50-100/image)
- Graphic layout and design
- File preparation for fabrication, development of specifications and COR services
- Project management



Costs do NOT include:

- Contract preparation and administration
- Compilation of map data into a format useable by graphic designers
- Panel fabrication
- Mounting structure
- Delivery or installation

INTERPRETIVE PANEL MATERIALS

There are a wide variety of sign materials available for both indoor and outdoor interpretive panels. Choosing the right one is a matter of matching your needs and desires with your setting and available budget. (And don't forget to consider how the sign will be mounted!). These are some of the most common; technology will continue to rapidly change and new materials may become available.

Type	Advantages	Disadvantages	Approximate Cost for 2' x 3' panel
Printed vinyl	Can be made very large (up to 36" wide with various lengths). Is thin and lightweight, and can be mounted on plywood, metal, acrylic, drywall, or other substrates.	Not durable for long-term exterior uses. Best for temporary or interior exhibits. May bubble in very hot climates. Works very well for interior wall murals. Recommend professional installation.	Between \$10-\$20 per square foot; can be purchased by the roll.
Treated Fabric (with adhesive backing)	Can be made very large (up to 52" wide x over 100 feet long. Is thin and lightweight, and then mounted on plywood, metal, acrylic, drywall, or other substrates.	Not durable for long-term exterior uses. Best for temporary or interior exhibits. Works very well for interior wall murals. Recommend professional installation.	Between \$10-\$20 per square foot; can be purchased by the roll.
Fiberglass Embedment (digital output encapsulated in clear fiberglass)	Resistant to shattering, weathering, fading, and graffiti. Excellent colors and resolution. Warranties are generally for 10 years.	May need to occasionally buff with sandpaper or car polish. Edges not as attractive as high pressure laminate.	\$350-400 (1/8" - 1/2" thick)



Type	Advantages	Disadvantages	Approximate Cost for 2' x 3' panel
High Pressure Laminate (digital output encapsulated in clear plastic resin)	Resistant to shattering, weathering, fading, and graffiti. Excellent colors and resolution. Warranties come anywhere from 10-20 years.	Can be scratched or damaged, but takes a lot of effort. Panels 1/2" thick can be mounted without frames.	\$300-450 (1/8" - 1/2" thick)
Anodized Aluminum (full color is available)	Very durable, low maintenance, impervious to harsh weather. Attractive for recognition plaques and designs with line drawings. Often lifetime warranty.	Can be scratched. Color spectrum is not as vibrant as other applications, and is more costly.	\$400-650 for half-tone; color is more expensive. (.125" thick, matte and satin finishes available)
Engraved Stone	Very durable and impervious to harsh weather. Can incorporate inlaid metal or photos, often used for monuments (has a long life).	Can be broken with heavy objects. Engraved details can collect dirt and debris so require periodic washing. Smallest font 1/2". Needs to be resealed every 5 years or so. Expensive shipping.	\$800-\$1,500 (\$125-\$250 per sq. ft.)
Porcelain Enamel (ceramic coating on metal.)	Outstanding color and resolution. Often guaranteed for 25 years. Extremely weather and vandal resistant. Requires very little maintenance.	Can be chipped or shattered by bullets, tire irons, or other heavy objects. Blowing sand can mar the surface.	\$1,500 for black and white; \$2,500 for 4-color; \$3,700 for full color.
Fused Polycarbonate	Durable. Outdoor/indoor use, takes high humidity well, routine maintenance is easy. Maximum size 42" x 90"	Can be scratched. Thicker panels can be mounted without backing or frame.	\$250-300
Cast metal	Typically used for historical and memorial signs. Extremely durable. Raised or routed lettering.	Typically black and white or gold and black, limited color options.	\$800-\$1,000 for a 12" x 18" at (1/2" to 3/4" thick")

DISCLAIMER: Costs are shown as fabrication estimates only. Actual costs can vary widely depending on the quantity of signs ordered, freight charges, size and thickness of signs, industry innovations, and market competition. Most estimates were based on 1/8" thickness—keep in mind that these signs would need a full backing in the mounting system for installation. Thicker material may not need extra structure backing. Cost estimates are as of 2014. Costs do not include design, mounting structures, shipping or installation.



Mounting Structures and Exhibit Bases

Mounting structures and exhibit bases vary widely, depending on site characteristics, the ROS class, maintenance level desired, budget, accessibility, and other factors. Costs can range from several thousand dollars for a custom design, to a few hundred for a simple frame base.



Graphic is an example of a simple exhibit base, the style shown at the left is a base that is easy to install and relatively inexpensive. A standard 3' x 2' frame costs approximately \$375 – \$600 or more depending on level of custom work and quantity ordered.

COST ESTIMATE WORKSHEET

Item	Material	Size	Quantity	Cost
Planning and Design				
Fabrication				
Exhibit Base/Frame & Mounting Structure				
Shipping				
Installation				
TOTAL				