National Park Service
U.S. Department of the Interior

Wayside Exhibits

A GUIDE TO DEVELOPING OUTDOOR INTERPRETIVE EXHIBITS

NATIONAL PARK SERVICE | HARPERS FERRY CENTER | 1ST EDITION | OCTOBER 2009

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Wayside Guide

Divided into three main sections listed below, the Guide defines the medium, illustrates standards and stages of work, and lists webpages for more in-depth tools and information.

3-4 **Forward**
What it is, who it's for, and how to use it.

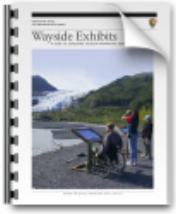
5–24 **Section A The Wayside Medium: An Overview**
A look at the strengths and limitations of the wayside medium, including tips for park managers

25–61 **Section B Wayside Development**
Planning, design, writing, and graphics acquisition

62–78 **Section C Wayside Production**
Production, installation, and maintenance

79–80 **Index**

81–84 **Appendix**
A list of webpages included throughout the Wayside Guide



What is the Wayside Guide?

The Wayside Guide is an overview of the National Park Service (NPS) wayside exhibit standards and work process. The Guide emphasizes best practices and good examples of site-specific outdoor interpretation based on visitor-use data. Waysides may appear simple in form and function, but their development can be complex.

This Guide is not a complete how-to manual. It is a supplement to professional-level knowledge and skills for graphic design, interpretive writing, research, and other disciplines.

Goal

The purpose of this Guide is to provide information and tools for preparation, participation, and management of a wayside project.

Who Benefits?

Parks
Park superintendents will be better able to scope a project when fully informed of the wayside process. Budgets and schedules are more accurate when based on a clear understanding of the work, the level of staff participation, and additional assistance needed. Park staff will be better prepared to participate in, communicate, and manage the additional workload.

Park Partners
Many park partners request NPS assistance in developing wayside exhibits. With the exception of the National Park Service brand, park partners and other non-NPS organizations are encouraged to use the Wayside Guide. Partners are encouraged to build on these standards and develop their own "Section D."

Harpers Ferry Center
Media specialists can work more efficiently and effectively when all team members have a good understanding of the process. Media specialists will use the Guide to orient new staff and project teams, and as course material for workshops and training on the wayside process.

Contractors
Contractors will understand the expectations of the NPS and benefit from improved efficiency when all team members have a good understanding of the process. Project delays can be costly. Waysides, unlike exhibits and films, are a relatively low-cost medium. A better informed project team will minimize contract modifications and delays.

Visitors
Visitors who experience poor-quality wayside exhibits may choose to avoid the medium entirely. Conversely, a visitor who has had an enriched experience from compelling, high-quality waysides, will come to expect the same in other locations. Improving all waysides will increase the active use and high level of visitor-expectation for the medium as a whole.

How Does It Work?

The Wayside Guide is designed to support teams of media specialists and park managers with wayside development and production. It is organized around two work process charts that outline major stages of work and supporting activities. Each activity is illustrated in a double-sided page, or pages. Not everyone on the team needs to read the entire document. Use the Guide a-page-at-a-time, or in its entirety.

Send comments and questions about the Guide to betsy_ehrlich@nps.gov or call 304-535-6200.

A Brief Look Use Section A and the Work Process Charts for basic information about waysides and the work process. Use this section to help the project team, and stakeholders, understand the nature of the wayside medium.

In-Depth Use select pages from Section B and C throughout a project for team meetings and new assignments, to help contractors understand expectations, and to prepare for the next steps in a project. Use these sections to help team members understand how their work contributes to the whole.

Web Links Some principles of wayside development are more timeless; technologies and tools are rapidly evolving. Links to more frequently-changing information are provided as webpages. Use these to download supporting PDF documents, or watch videos. Use the Appendix to find all the webpages listed in the Guide.

Navigation Use the Contents Pages and Index to navigate through the Guide.

Sidebars Look for sidebars highlighting the major roles of key project personnel, what to expect, and other notes of interest.

Printing the Guide The Guide is designed to be printed in color, double-sided, on 8½x11 paper with room for a binding or three-ring hole punch on the left side. The work process charts are designed to print on 11x17 paper.

The Harpers Ferry Center website offers downloadable tools and documents on all aspects of media development.
www.nps.gov/hfc

Wayside Guide

Section A The Wayside Medium

What is a wayside exhibit, who is the target audience, and what makes a good wayside opportunity? Section A answers these questions, provides foundation information for wayside developers, and includes advice for park managers.

Contents

7 Site-Specific Interpretation

11 Low-Profile Interpretive Waysides

17 Upright Orientation Waysides

23 Advice for Park Managers

Kenai Fjords National Park, low-profile

Erie Canalway National Heritage Corridor, upright

Site-Specific Interpretation

An effective wayside exhibit enhances a direct and meaningful connection between visitors and the landscape. The wayside audience is outside experiencing a place first-hand. They may be focused on any number of things. A wayside must attract and focus attention on the site, not on the wayside. If the first wayside they encounter is disappointing visitors may not stop at others.

Two Types of Waysides

Most national parks use two types of waysides, Low-profile exhibits (*above*) give site-specific interpretation about features that visitors can readily see. Upright waysides (*left*) typically inform visitors about an area or a trail. Both styles are described in greater detail beginning on page 11.

Four Key Factors

1 Significant Feature
2 Site-specific Graphic
3 Visitor Access
4 Regular Maintenance

What Makes a Good Wayside Opportunity?

Four key factors lead to successful wayside exhibits: a significant landscape feature with a well-documented story; at least one compelling, site-specific, reproducible-quality graphic that illuminates the story; a safe, accessible place for visitors; and routine maintenance of the site and the sign. There are many media options for reaching park visitors. If the right conditions do not exist for wayside exhibit experiences, consider another medium.

Western end of the 1825
Erie Canal in Buffalo

1 Significant Landscape Feature

What intangible meanings are associated with this specific terrain? What is the unique significance of this place and why should someone care? Within the first three-second glance at a wayside, visitors should see a connection to the landscape. Some landscapes have obvious features (*above*). More subtle landscapes (below) require graphics that direct viewers' attention to things less obvious.

Pea Ridge
National Military Park

2 Site-Specific Graphics

Finding or developing compelling, site-specific graphics that tell the story is key to a successful wayside exhibit. Historic images placed on the landscape where the original photographer stood make a powerful and immediate connection for visitors. When photos are lacking, illustrations like the one shown above can tell the story.

WWII Valor in the Pacific National Monument

Fort Donelson National Battlefield

3 Visitor Access and Safety

Place wayside exhibits in the "front-country" (not wilderness areas) along pathways, trails, and vehicle pull-outs. Consider landscape plans and the space needed to give visitors a comfortable, safe, and accessible area to gather without disrupting the flow of foot-traffic (*above right*) or spilling into automobile or bike traffic. Standard waysides provide little benefit to visitors with visual impairments. Plan to make the information available through alternative methods like audio programs (*above left*).

Harpers Ferry National Historic Park

Harpers Ferry National Historic Park

4 Regular Maintenance

Most waysides are designed to be permanent. Panel materials last 2–25 years averaging about 5 years before replacement is necessary. At a minimum, waysides require cleaning twice a year and regular inspections for vandalism or weathering. Vista clearing and trail maintenance may also be needed to keep the view open and the site safe. If waysides have tactile elements or Braille, they need more frequent inspections and cleaning.

When NOT To Use a Wayside

Even if the conditions outlined on the previous pages have been met, creating a wayside may still not be a good idea.

Intrusion on the Landscape
Waysides impact the landscape. In natural areas they are an artificial intrusion. In historic areas they are a modern intrusion. Using too many waysides creates clutter and overwhelms visitors.

Sensitive Sites
Waysides call attention to themselves and to the places they interpret. Using waysides to direct attention to sensitive areas (e.g., archaeological remains or nesting sites) may not be a good idea. Digging holes to install a wayside or hard-surfacing a trail may not be advisable in some areas.

Complex Stories
Waysides do not tell complex or dynamic stories well. Multiple geologic events, activities that cover vast expanses of terrain well beyond the view, and complex human interactions may best be addressed by other media.

Site-Specific Media

Visitors listen to an audio tour of Pickett's charge in Gettysburg National Military Park

Ranger-guided tours, trail brochures, audio tours, and other new technologies are options for site-specific interpretation and orientation. They offer features like multiple languages, audio description for visitors with visual impairments, longer narrative and quotations. They also require a different maintenance regime. What they do not offer is the large-format compelling graphic communication that is the strength of the wayside medium.

A word of caution about multiple media: it is difficult to read and listen at the same time. Visitors may choose to listen to an audio message, and also want to enjoy and read the wayside exhibits. Coordinate site-specific media to take advantage of the strengths of each medium and provide redundancy to give access to the widest range of people.

Viewing scopes can help visitors see distant landscapes.

Interpretive Media Selection
Selecting the right media is as much art as science. There is rarely one way to achieve a goal. Involving media specialists in key decisions is highly recommended. Each situation has its own mix of factors to consider.
http://www.nps.gov/hfc/products/ip-media-select.htm

Evaluations and Visitor Use Studies
Understand your audience. Consider interviews and/or focus groups of potential visitors to find out what information they need and want to know, and how to present it in a meaningful, interesting, and cost-effective way. Consider using temporary panel materials in portable bases for evaluation. Plan for persons with disabilities to ensure inclusion in the wayside program.
http://www.nps.gov/hfc/products/evaluate.htm

Foundations of Interpretation

This free on-line course provides an introduction to the foundations of interpretation. It answers the question "What is Interpretation?"
http://www.eppley.org/index.php?main_page=index&cPath=40

36 x24 in-ground mount, Dayton Aviation Heritage NHP

24 x 24, City of Rocks NR

6 x 12 plant ID wayside
Haleakala NP

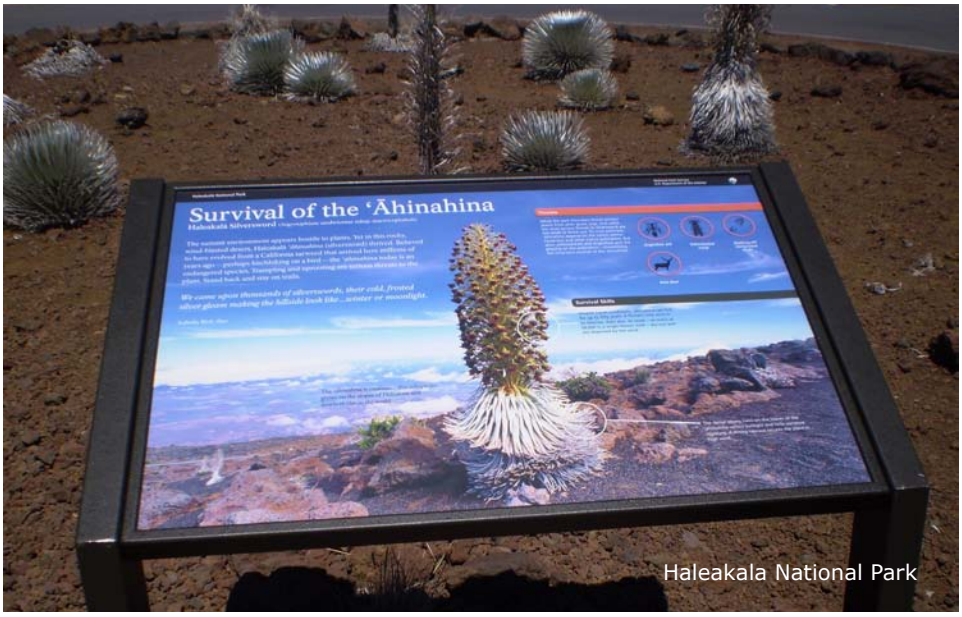
Captioning the Landscape

The low-profile wayside exhibit is a caption on the landscape. It is not designed to stand alone any more than a caption for a photograph is intended to be read by itself. It is incomplete until it is placed within the environment it is meant to interpret. The best low-profile wayside illuminates what visitors see.

What Makes an Effective Low-Profile Wayside?

A specific landscape feature should drive the content and focus. If done well, waysides, like lightning bolts on the landscape, cause thundering moments of "Aha!" in the visitor. The combination of compelling graphics, title, and text designed into the landscape illuminates and enhances what the visitor is seeing, experiencing, or passing by. This is what makes an effective interpretive wayside exhibit.

The next four pages show key elements of effective low-profile wayside exhibits.



Haleakala National Park

Compelling Graphics
Waysides are a graphic medium. The main image should tell the story. As shown above, the graphic can tell a story by singling out and highlighting a particular landscape feature. Wayside layouts differ from book or magazine layouts, which rely more on text. Primarily visual, wayside exhibits rely on bold graphics that, with the landscape, convey focus and meaning.

Fredericksburg and Spotsylvania National Military Park

Did You Know?

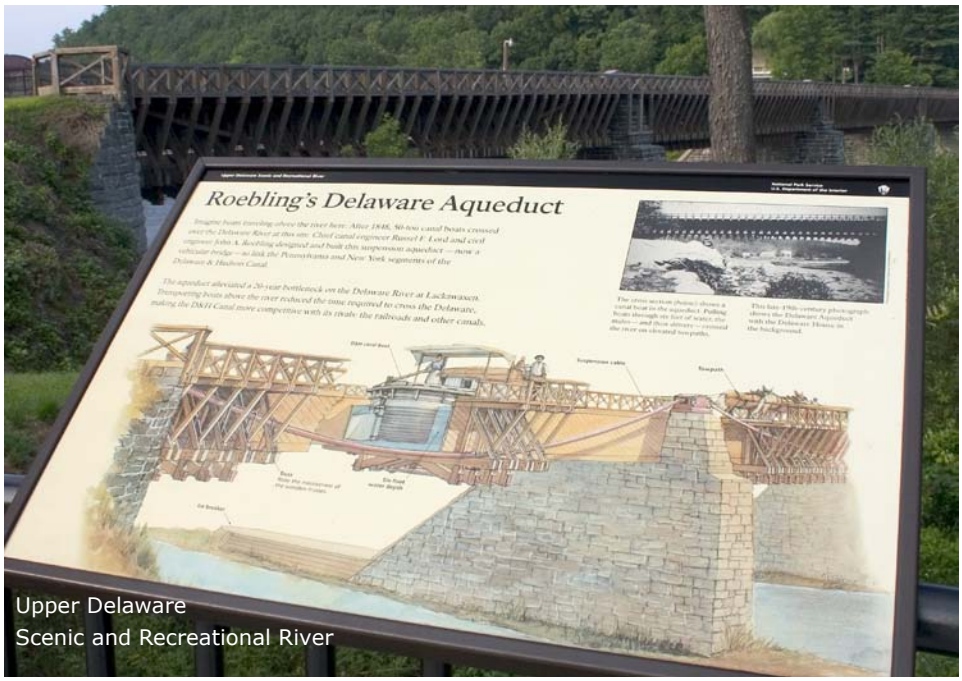
Attention span at a wayside is relatively short, 30–45 seconds on average.

Direction of View
The wayside's low angle and position channel visitors' attention in a specific direction. The low-profile wayside should align the intended direction of the visitors' attention, the wayside panel, and the landscape feature as shown above.

These two waysides show two different ideas about the significance of the last spike.

Golden Spike
National Historic Site

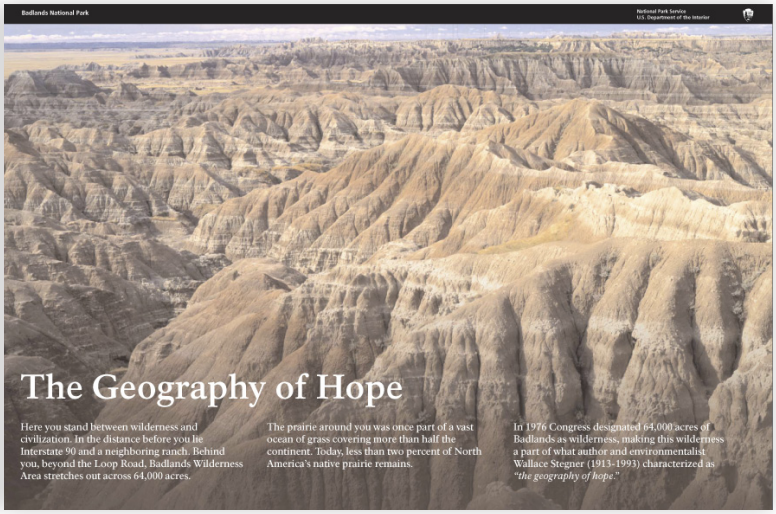
How Many?
How many waysides are appropriate? Trying to interpret everything significant could spawn a dense forest of waysides. Too many waysides can dilute each interpretive opportunity and compromise the experience. Too few might shortchange the visitor. The best waysides make one point and one point only and blend harmoniously with the setting.



Upper Delaware
Scenic and Recreational River

Illustrations and Diagrams
By using transparent or cutaway views, illustrations and diagrams peel back landscape surfaces, show how structures are built (*above*), or reveal how things work. A bird's-eye view enlarges the viewer's perspective. A micro-view brings the focus up close.

New Bedford Whaling NHP

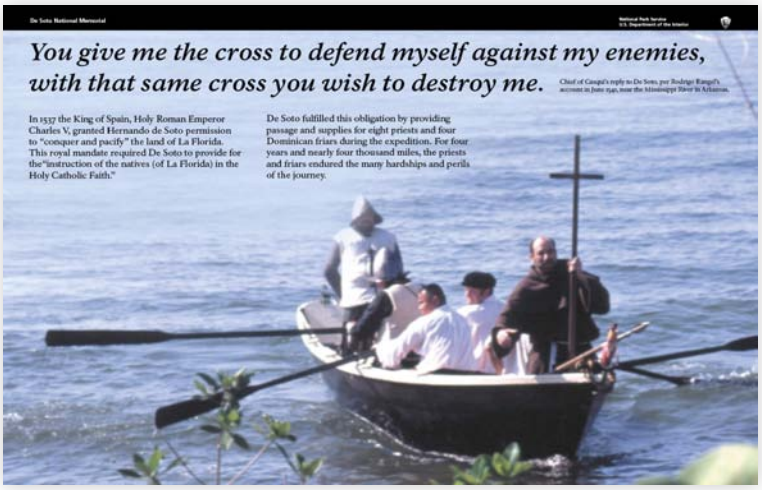


Badlands NP

Compelling Titles
A compelling title grabs the visitor. It is not a subject title. "Candle-Making in New Bedford" or "Geology of Badlands" are subject titles for the examples above. Compelling interpretive titles go beyond the subject matter at hand. They provide a hook into the meanings and significance of the subject. Titles may contrast with the landscape or main graphic to create tension, and interest, between the two as shown in the Badlands example.

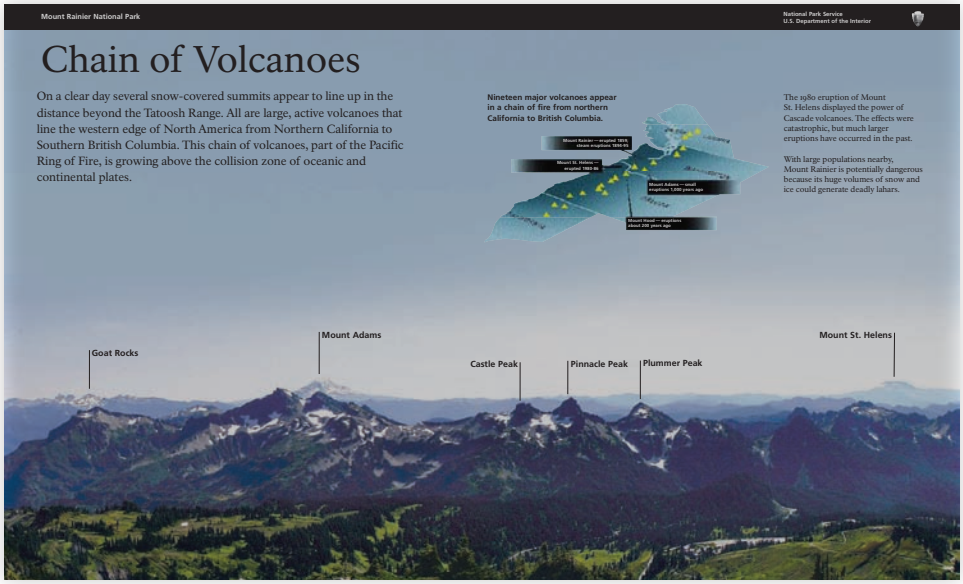
Interpretive Text
Few people come to parks for the express purpose of reading. Wayside text should succinctly illuminate the terrain with meaning and significance. Write the first sentence so the audience will want to know more. Focus on the physical feature first. Some of the subject matter may be fiendishly complex. That is where concise expression becomes an enjoyable challenge. Be active, not passive. Use first-person quotes. Use common language; avoid jargon. Do not use adjectives that tell visitors what to think. Avoid preaching. Answer the question, "So what?"

A wayside exhibit audience is not captive. If they read something predictable, academic, or jargon-ridden they may pass by.



De Soto NM

Quotations
First-person quotes spoken at, or about, a specific site, add credibility and power to the story. Quotes are presented differently than narrative text. They represent a different voice.



Mount Rainier NP

Label the Landscape

Waysides should identify significant features. They need to answer the question, "What am I looking at?" To give names can be useful, but to explain why features are relevant adds value. This example highlights the peaks visible on the horizon and their place in the larger Pacific ring of fire.

Tactile model, Timpanogos Cave NM

Tactile model, WWII Valor in the Pacific NM

Models and 3D Elements

Tactile models give visitors with visual impairments access to ideas and information. They also increase the range of an exhibit's appeal, engage people with different learning styles, and add emphasis to the story. Tactile elements can be mounted to a flat panel as shown above left, or they can be stand-alone or separate structures as shown above right.

Common Sizes

The low-profile angle is 45 degrees

The following examples are common panel sizes. Choose panel sizes based on graphic and written content, and location. Be consistent in size and shape throughout a site or park.

42 x 24 This size is appropriate for high-quality panoramic images, main text of no more than 100 words, stories with side-bar or secondary graphics and captions or longer quotes, and for bilingual waysides.

36 x 24 This is the most common size. It has room for a large graphic, 75-100 words of main text, small inset graphics, and short captions or labels.

24 x 24 This size works well when there is a single simple graphic with 75 words of text and one or two short captions or labels.

6 x 12

Trailside exhibits are low to the ground and most often used as identification panels for plants or architectural features. They require a single simple graphic, short title, and 25 words of text.

36 x 48 upright,
Bandelier National Park

36 x 48 upright,
Zion National Park

Upright Orientation Waysides

Common Sizes

Most upright orientation waysides are 36w x 48h. Smaller panels are generally 24w x 36h.

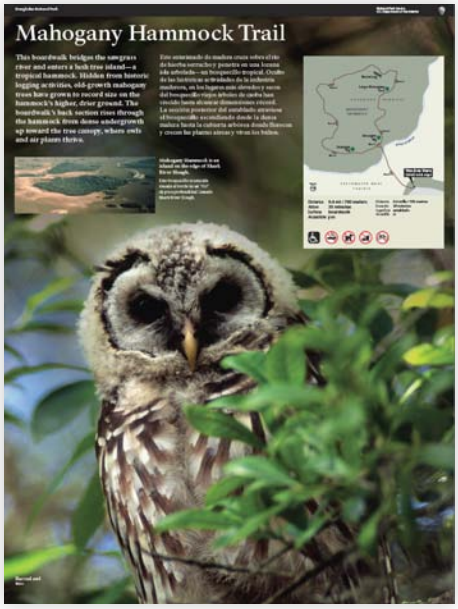
What sets uprights apart from low-profile waysides is that they do not direct a visitor's attention to a specific landscape feature within view. They introduce a trail or an area suitable for a day-hike. They are placed at a pedestrian's decision point and provide orientation, safety, and site significance. They are part of a wayfinding system that may include signs, brochures, and other media.

What Makes an Effective Orientation Wayside?

Like low-profile waysides, orientation waysides are a graphic medium that must attract the pedestrian en route. They should answer the natural questions related to a safe, comfortable, and meaningful experience. They should help visitors decide whether to invest the time and energy required to reach the destination described. The balance between orientation and interpretation depends on the nature and complexity of the site or trail.

The next four pages show some of the key elements of effective upright orientation wayside exhibits.

Haleakala National Park



Everglades National Park

Decision-Making Information

"Why is this trail here and what is there to see? Do I have the time, endurance, or proper gear to comfortably and safely set out on this journey? Is the trail accessible for wheelchairs? Can I bring my dog, my bike, or my fishing rod? If I follow the trail, will I be able to find my way back to my car?" These are questions people may have before heading out. Maybe they stopped at the visitor center first; maybe they did not. The orientation wayside is strategically placed along the natural flow of pathways at the point where the decision to explore, or not to explore, is made. Too soon in the visit, and a person may not be ready to consider all the details of a trail, or experience. Too late and they may have already left without enough water.

Orientation and Site Significance

A careful balance of site significance and need-to-know orientation information makes upright waysides successful. Generally the upright orientation panel is a large panel (36" wide by 48" high), but studies have shown that visitors view them for only 30–40 seconds. The examples above combine a compelling image with minimal interpretive text and a simple map with orientation and safety information to invite people to pause, but not linger, at the trailhead.

Rules and Safety Information

The orientation wayside is an important opportunity to reinforce basic rules, safety, and orientation information before someone heads out into the park. Waysides must attract their audience through compelling graphic presentation. They are not required reading. A long list of "do not" symbols or Code of Federal Regulations may not reach many visitors. Present rules and safety information in the context of what visitors really care about—their experience. Consider presenting safety information as a interpretive opportunity.

Wayside Maps
Wayside maps work differently than other park maps because they are fixed in place and cannot be turned around or carried away for further reference. They often work better when oriented in the direction of view, meaning that north is not always at the top. Wayside maps should provide only the necessary information to help people get from where they are (You Are Here) to point B. At point B, additional trail signs or trail guides may be necessary. If a trail is short and simple, a map may not even be needed.

36 x 48 upright orientation bulletin case, and brochure dispenser, City of Rocks National Reserve

Bases and Ancillaries
Wayside exhibits are on duty even when the visitor center is closed. In this example above, the orientation wayside is placed next to the bulletin case and brochure dispenser to serve as a kind of visitor center information desk for the after-hours visitor. Clusters of waysides, bulletin cases, and other hardware like fee boxes or brochure dispensers can create a sense of focus and destination for self-guiding visitors. They can stand alone at a road-side pull-out, or be placed near a visitor center as this example shows. Keep in mind, all visitors including those with sight impairments, and consider media options for after-hours visitors.

Obed Wild and Scenic River

Great Basin National Park

Great Basin National Park

Kiosks
Clusters of wayside panels, rules and safety information, bulletin cases, brochure boxes, trash cans, and recycling bins are often grouped in a kiosk arrangement with, or without, a roof. Some have lighting to make them useful after dark. Often, the design of the kiosk matches surrounding architectural structures, as in the three examples shown above. Standard panel mounting hardware can be used on custom kiosks to reduce initial and life-cycle costs.

Zion National Park

Park Regulations

Make your park visit enjoyable by following these rules.

Firearms are prohibited except during hunting season, when necessary Tennessee licenses and permits must be carried.

Leave wildlife, plants, rocks, and artifacts undisturbed.

Pets must be leashed.

Fishing in the park requires a Tennessee fishing license.

Camping within 200 feet of developed areas—parking lots, roads, trails, and picnic grounds—is prohibited.

Trapping is prohibited.

Example of a 12” x 12” park regulations sign

Bulletin Cases

Use bulletin cases for frequently changing information. Seasonal notices, short-term trail closures, weekly or monthly interpretive programs, or other temporary messages are appropriate for a bulletin case. Information that does not change for six months or more should be posted in a durable sign material (*see example at left*). Avoid placing small-print documents in a bulletin case. Text smaller than 36 point will be difficult to read. Postings can fade quickly and may need to be changed frequently or printed with UV-resistant inks to maintain contrast and legibility. Rules and safety information should be legible and clear. If a bulletin case is necessary, consider the space needed for postings, and choose an appropriate bulletin case size.

Wayfinding Beyond the Wayside

The elements of wayfinding include a series of visual, editorial, and environmental cues for visitors to navigate and experience a park. Orientation waysides are one of several wayfinding media.

Directional and Orientation Signs
Orientation waysides work best with a good sign system. A common pitfall when developing orientation waysides is a lack of consistency between signs (*left*), maps, and orientation information. For example, a map label that says "Canyon Visitor Center" should match the sign on the building that also says "Canyon Visitor Center." This may seem obvious, but it is an easy mistake to make when the park staff refer to a site, building, or trail by a common name that differs from its formal name.

National Park Service Sign Program
The National Park Service UniGuide Sign Standards include over 600 pages specifying the design and fabrication of a wide range of sign types, including trail signs.
http://www.nps.gov/hfc/products/uniguide.htm

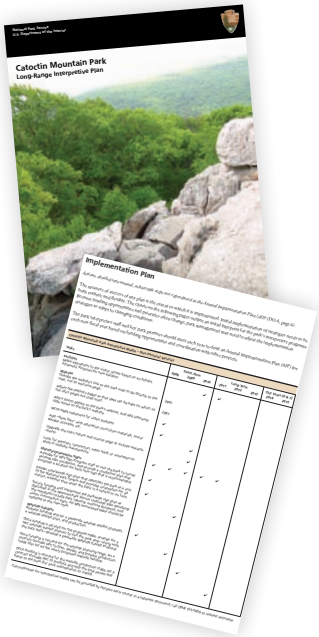
Park Publications and Trail Guides
Park-produced trail guides or site bulletins are another wayfinding tool. Site bulletins (*left*), park newspapers, NPS Unigrid brochures, and other park publications can provide longer narratives and more detailed portable maps. They can expand upon safety and regulatory information. And they can be printed in Braille or large print text for visitors with sight impairments.
http://www.nps.gov/hfc/products/pubs/

National Park Service Maps
The Harpers Ferry Center cartographic website contains park maps (those published in the NPS Unigrid brochures), special map collections, and map resources and information like starter map files and recreation symbols.
http://www.nps.gov/hfc/carto/index.htm

Other Wayfinding Media
New technologies like GPS-based, hand-held devices (*left*) can help a self-guiding visitor with a lot of information via audio and small-screen video. None of these devices provide the large format graphic that a wayside exhibit does. Some of these devices and new technologies can be used in concert with waysides to provide an audio component including audio description for visitors with sight impairments, and translations for those who do not read English.

Advice for Park Managers

Wayside exhibits can be a relatively inexpensive medium on a per-unit basis if the project is handled properly and false starts are kept to a minimum. Here are the key factors to help you keep your project in budget and on schedule.



Work with Foundation Documents
Review the General Management Plan, Long-Range Interpretive Plan, Historic Structures Report, and other foundation documents with your project team. These plans match appropriate media with the message, describe desired interpretive opportunities, and provide important reference for wayside projects. They help the project team focus on specific visitor experience goals and avoid trying to tell all park stories in a single medium.

Assign a Project Lead
Make sure it is clear who is responsible for managing the project within the park. Also make sure the team leader has authority and skills to assemble a team; monitor project agreements and contracts; build consensus; enforce deadlines; consolidate review comments; comply with the requirements and limitations of project funding; and coordinate work among resource management, law-enforcement, maintenance, and interpretation. This is a significant workload.

Dedicate Staff Time
How much time should be dedicated to the project? At a minimum, every project will require team members to participate in the initial site visit and to assemble various resource packages. But that is just the beginning. Your staff will need time to review and prepare consolidated comments on concepts, text drafts, map and illustration roughs, graphic layout proposals, and production proofs. Maintenance staff will need time to inspect, assemble, and install panels and bases. Some installations may require landscaping, vista clearing, building accessible pads, or other site preparation.

Consider Park and NPS Resources
What does the park have to contribute to the wayside project? Is there a well-managed graphic collection? Is there existing artwork? Providing draft text, primary source material, custom photography, GIS data, or landscape design services may shorten the project schedule, save money, and help ensure a better final product. This also requires significant time.

Avoid Discrimination
There are no laws that require waysides in National Parks. There are laws that require accessibility for all programs. A collection of wayside exhibits is considered a program. Avoid discrimination and make sure your wayside program is accessible to all visitors.

Understand Wayside Contracts
There is no one-stop shopping for wayside exhibits. Wayside projects generally require working with one or more contractors. These may include cartographers, illustrators, and fabricators. Unlike many firms that plan and design museum exhibits or signs, the contractors who specialize in waysides are typically few in number and small in size. It is important to respect established schedules. Avoiding delays will also reduce cost overruns and ensure a smoother work process.

Know the Approval Process Up Front
Decide who will review each stage of the project, resolve differences of opinion, and consolidate written comments. Do this before the project starts. As the project progresses, the cost of changes increases. Reviewers who have not been involved throughout the project can cause delays, confusion, and add significantly to costs. If you plan to involve reviewers outside the park, consider inviting them to the project start-up meeting. If you want visitor input, plan for the evaluation process in the budget and schedule.

Ensure Compliance
Make sure staff from interpretation, maintenance, resources management, law-enforcement, and other divisions and the accessibility coordinator, are involved. Obtain compliance with regulatory and policy guidelines.

Take Pride in Ownership
Are there funds for staff or volunteers to do regular maintenance, repair, and vista-clearing? Wayside exhibits are a relatively low-maintenance medium, but they do require routine inspection, periodic cleaning, repair, and replacement. It is important that this responsibility be clearly assigned. For parks working with Harpers Ferry Center, project files are archived at the Center. If not, select a secure location to store production files. When it's time to replace a damaged or worn panel, you'll need these files to get the job done.

Wayside Guide

Section B Wayside Development

The Wayside Exhibit Development Process chart that begins this Section outlines five major stages of work. This section details the development process, highlighting for each stage the major roles, common pitfalls, case studies, and recommendations for review and approval.

Contents

27 Wayside Exhibit Development Process Chart

28 Project Startup

30 Site Analysis

34 Project Proposal

38 Research and Graphic Acquisition

40 Wayside Exhibit Plan

41 Design with a Grid
42 Wayside design: How is It Different?
43 Case Studies
47 Common Pitfalls in Wayside Design
48 Writing for Wayside Exhibits
49 Common Pitfalls in Wayside Writing
50 Examples of Good Wayside Writing
52 Tools and Resources for Wayside Writers
53 Wayside Exhibit Plan Review and Approval

54 Creating New Illustrations

56 Creating New Maps

58 Models and Tactile Elements

60 Final Wayside Plan

Wayside Exhibit Development Process

Summary Chart (For more detailed requirements see http://www.nps.gov/hfc/products/waysides)

Project Startup

Project Startup focuses on preparing a solid foundation for all work that follows, ensuring that the project is logically structured and its goals are understood and realistically attainable. Project lead, team members, and stakeholders are identified and their roles defined.

Project Startup

Establish the project team
- Identify the project lead, subject-matter experts, project reviewers, park partners, and media specialists.

Review foundation documents
- Gather and review General Management Plans, Long-Range Interpretive Plans, Historic Structures Reports, and other guiding documents

List potential wayside exhibit sites and subjects

Conduct Front-End Evaluation

Establish the funding and any time restrictions

Develop a Project Management strategy

Begin Research
- Identify resource materials and bibliographies
- Gather potential site-specific graphic resources
- Develop a graphics notebook containing potential graphics for use when evaluating exhibit sites during the site visit.

Plan the site visit

Site Analysis

Wayside exhibit planners and designers work with the park staff and subject-matter experts to evaluate potential exhibit sites and determine exhibit purposes and content based on site-specific features, events, and park primary themes.

Site Analysis

Conduct startup meeting
- Review what makes an effective wayside, the work process, accessibility requirements, panel and base material choices, resources gathered, and team roles and responsibilities.

Analyze wayside exhibit sites
- Visit potential exhibit sites with park staff and subject-matter experts.
- Identify site-specific significance and meaning, and relevant graphic materials.
- Identify each exhibit's purpose, orientation, panel size, and site conditions.
- Develop thumbnail sketches to facilitate discussions and agreement.
- Photograph exhibit sites and site-specific features.

Gather Reference and Graphic Material
- Based on site discussion, gather graphic source materials relevant to wayside content.

Conduct close-out meeting
- Review thumbnails and graphic direction for the waysides.
- Review revised schedule, budget, and next steps.
- Summarize decisions made and any outstanding issues.

Project Proposal

A proposal document is prepared using the Wayside Exhibit Planner Database. The Proposal identifies the project's scope including cost estimates, schedule, and other pertinent project data.

Project Proposal

Prepare proposal
- Document the selected exhibit locations and purposes, panel and base selections, and map and graphic needs.
- Create site map of wayside locations.
- Refine thumbnail sketches.
- Develop detailed cost estimate.

Proposal review, revision, and approval
- Submit Proposal, cost estimate, and project agreement for review and approval.
- Park staff, including maintenance, review the Proposal to confirm all decisions.

Reference and graphics package
- Based on the approved Wayside Proposal, identify, gather, and organize reference and graphic materials.

Wayside Exhibit Plan

Guided by the Proposal, reference material, and graphics package, the planner will research each exhibit topic and work with the designer to develop draft wayside exhibit design layouts that are compiled into a Wayside Exhibit Plan for review and approval.

Draft Wayside Exhibit Plan

Develop Wayside Exhibit Plan
- Read and review references and graphics.
- Organize the content, establish hierarchy.
- Prepare draft interpretive exhibit text.
- Create draft maps.
- Draw sketches of new art.
- Draw sketches of tactile elements.
- Create draft layouts.

Wayside Exhibit Plan review and approval

Procure approved graphics and use-rights
- Secure use-rights for the life of the wayside and document use-rights agreements.
- Acquire high-resolution graphics.

Develop original art
- Develop detailed sketches.
- Place detailed sketches in layout and adjust both for fit, legibility, size, margins, bleed.
- Develop final art and get high-resolution scan.

Create maps
- Use wayside Map Guidelines and starter map files to create actual-size digital maps.

Procure second-language translations

Procure tactile elements

Final Wayside Plan

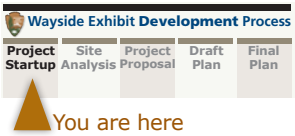
Assemble final text, photos, maps, diagrams, and art for park's final review and approval prior to production. Any changes to exhibit elements should be minor at this stage of exhibit review.

Final Wayside Exhibit Plan

Complete editorial review and make all text changes to exhibit layouts
- Place second-language text in layouts.

Place all final graphics in layouts
- Final approved art.
- Final approved maps.
- Final high-resolution photos.
- Detail position of tactile elements.

Final Wayside Exhibit Plan review and approval
- Make any minor final adjustments.
- Secure final approval to go into production.



Project Startup

The first few steps of a journey are crucial because they set the direction, pace, and quality of the trip. Several steps listed here can help ensure a successful wayside project. Work done in this first phase will establish a strategy for funding, phasing, and managing the people and resources necessary to develop wayside exhibits.

Get Started

Gather Foundation Documents
General Management Plans, Long-Range Interpretive Plans, Historic Structures Reports, and other planning documents help the project team focus on specific visitor experience goals, and understand relevant park policies and operations. See examples, and find more information about Long-Range Interpretive Plans on this webpage.
http://www.nps.gov/hfc/products/ip-lrip.htm

Pick a Strong Team
Find and assess subject-matter expertise. Select experienced media specialists. Decide on a project lead and determine the responsibilities of each team member. Consider how park partners, contractors, and media specialists may contribute. Use this white paper to learn about the many skills needed for a successful wayside team.
http://www.nps.gov/hfc/products/waysides/way-team.htm

Before the site visit, the park staff should look for potential wayside locations and site-specific resources. Analyze visitor flow and accessibility issues.

Define the Scope

Identify wayside needs based on the strengths of the medium. Work with subject-matter experts to select potential wayside sites. Think about what is significant, visible, and accessible in the park. Consider visitor experience goals and what is known about the targeted audience. Will bilingual waysides be required? Understand accessibility requirements. Evaluate the function and condition of existing wayside exhibits. Use the Wayside Guide Section A and the following resources to define the scope of your project.

Interpretive Media Selection
http://www.nps.gov/hfc/products/ip-media-select.htm

Checklist To Evaluate Your Wayside Exhibits
http://www.nps.gov/hfc/products/waysides/way-process-evaluate.htm

Plan for Accessibility
Review the requirements for programmatic accessibility. Choose methods and options for site-specific interpretation and orientation. Refer to the accessibility rules and recommendations on this webpage, including "Department of Interior Section 504 Guidelines for Federally-Assisted Park and Recreation Programs and Activities"
http://www.nps.gov/hfc/accessibility/index.htm

Conduct Front-End Evaluation
Learn the characteristics of the targeted audience. Find out what visitors want to know. What questions do they have? What sites do they find most compelling? What important sites do they avoid and why? See examples, and get more information on the following webpage.
http://www.nps.gov/hfc/products/evaluate.htm

Establish the Funding
Develop an initial cost estimate for your project and identify a funding source. Understand the limitations and requirements of the funds. This webpage has current information about wayside cost estimating.
http://www.nps.gov/hfc/products/waysides/way-cost-estimating.htm

Develop a Project Management Strategy
Decisions about funding, schedules, roles and responsibilities, communication channels, and project goals should be carefully determined early on, and be clearly documented in a work plan or other appropriate project agreement. Decide how partner agencies will be recognized before the project gets underway, both to manage expectations and to meet NPS policies.

Cost Estimating

For help with cost estimating for NPS projects call Harpers Ferry Center at 304-535-5050.

Begin Research

Find graphics, objects, artwork, and any maps that may be needed for potential waysides. It is helpful to make copies and put all these images in a notebook, sorted by wayside locations, before the site visit. Be sure to record source information, including copyright and date.

Review Secondary Sources
What sources provide a good overview to the content? For project team members new to the subject, secondary sources, like books, magazine articles, or videos, can establish a working foundation. Also review the relevant history section of Historic Structures Reports or Historic Resource Studies.

Site Analysis

The site visit is key to developing successful wayside exhibits. Travel to each wayside location. Choose the best site for each wayside based on considerations listed below. The success of each individual wayside exhibit is directly related to how well these elements work together.

Major Roles

Park Interpreter shares interpretive goals for the project, hosts and guides the wayside team.

Wayside Planner documents potential content, base and panel options. Drafts focused, achievable purpose statements.

Wayside Designer explores potential graphics, develops thumbnail roughs, and takes site photos, records GPS data.

Startup Meeting

Invite all stakeholders to an initial meeting. Review the strengths and limitations of the wayside medium and the wayside development process. Review the goals of the project, the budget and schedule, and clarify team roles. Review the day-to-day site visit schedule, including time to visit local museums and historical societies, and to meet with relevant subject-matter experts. Review the graphic and content resources available like quotes, drawings, photos, or other sources for the team to keep in mind on the site.

Site-by-Site

Observe Visitors
Observe and note how visitors use, or ignore, any existing waysides or signs. Note the use patterns at overlooks and on designated trails, unplanned social paths, or tour roads. Are visitors with disabilities avoiding or unable to use current waysides?

Identify the View
Select views that enhance the opportunity for visitors to make meaningful connections to the landscape. Note the landscape feature that is the point of focus. Match the direction of view with potential graphics. Take a compass reading and note the site on a map.

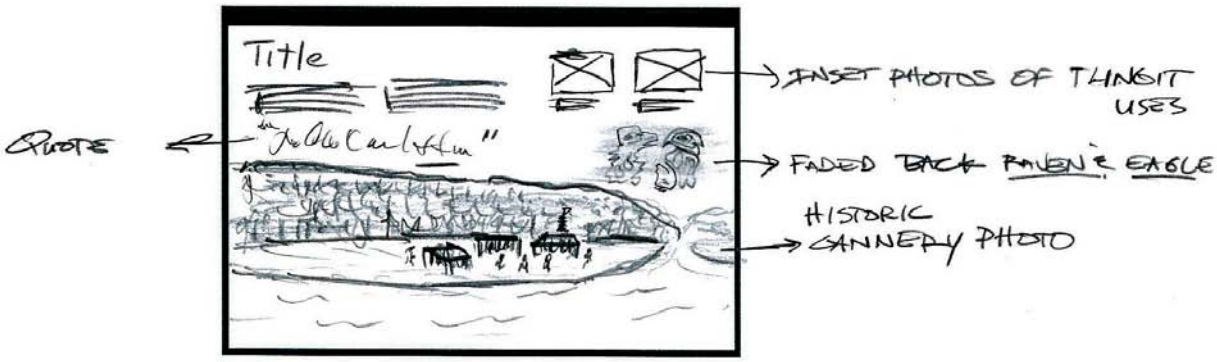
Establish the Message
Work for consensus on what exactly is the appropriate interpretive message for each site. Each wayside must be linked specifically to something people can see at the site. Note the relevant interpretive themes at each location.

What To Expect

Plan to spend about **one hour per wayside exhibit**. A week is generally enough time to conduct a thorough site visit for a medium-sized project of 20 to 40 waysides.

Review Graphics
What photos, illustrations, maps, or other images tell the story? It is helpful to have an initial selection of graphics during the site visit. Look for images that convey meanings, provoke thought, or elicit curiosity about the site. As in the example above, look for graphics that match the view from the planned wayside location.

Check Site Conditions
Evaluate each location for safety, accessibility, and comfort. Note landscaping and site improvement work needed. Consider archeological issues and other compliance requirements. Consider long-term maintenance requirements.



Prepare Thumbnails
Choose a panel size and develop pencil sketches on-site. Seeing visual representations of interpretive ideas promotes discussion and clarifies the focus of each wayside. Sketches are good catalysts for refining the thinking and are the basis for developing a wayside layout.

Document wayside locations with GPS coordinates to include in-park GIS data resource files and wayside location map.

Take Photos
Shoot photos in the direction of view of each wayside exhibit, with a marker showing where the base will be installed (*above*). Geotag site photos to record and map planned waysides. Shoot additional photos to document unique or unusual site or resource conditions.

Wayside planner takes notes on dicussions and decisions, information that will be documented in the Wayside Proposal.

Choose Panel Material
Take note of potential vandalism, environmental conditions, relative permanence of the information, and access to the site for installation and maintenance. Choose the most appropriate panel material. Current information about materials is available on this webpage.
http://www.nps.gov/hfc/products/waysides/way-product-panels.htm

Choose Base Structure
Take note of the landscape conditions and choose the best base style, color, and finish. Gather information needed for custom wayside base construction drawings. Note custom installation needs. Take any critical measurements and photographs, like wall dimensions. Identify existing signs to be removed before new waysides arrive. Current information about materials is available on this webpage.
http://www.nps.gov/hfc/products/waysides/way-product-bases-low.htm

Document Discussions
Take notes on all team discussions reflecting possible interpretive ideas, relevant meanings, reasons for paths-not-taken, and decisions made.

Common Pitfalls

A common mistake at this early stage of graphics research is to gather images without proper source information. Also, don't assume that every graphic or resource in a park collection is an original source and in the public domain.

Park and Partner Resource Review

Identify resource materials, footnotes and bibliographies, graphics, and artifact collections. Gather references for proposed illustrations and maps. Meet with local historical societies, museums, or other relevant off-site partners. Meet with subject-matter experts to develop and refine wayside exhibit content. It is helpful to dedicate at least one day to research and review materials during the site visit. Some of this work may be necessary before the site-by-site analysis. More research time may be helpful at the end, based on clarification of site visit discussions.

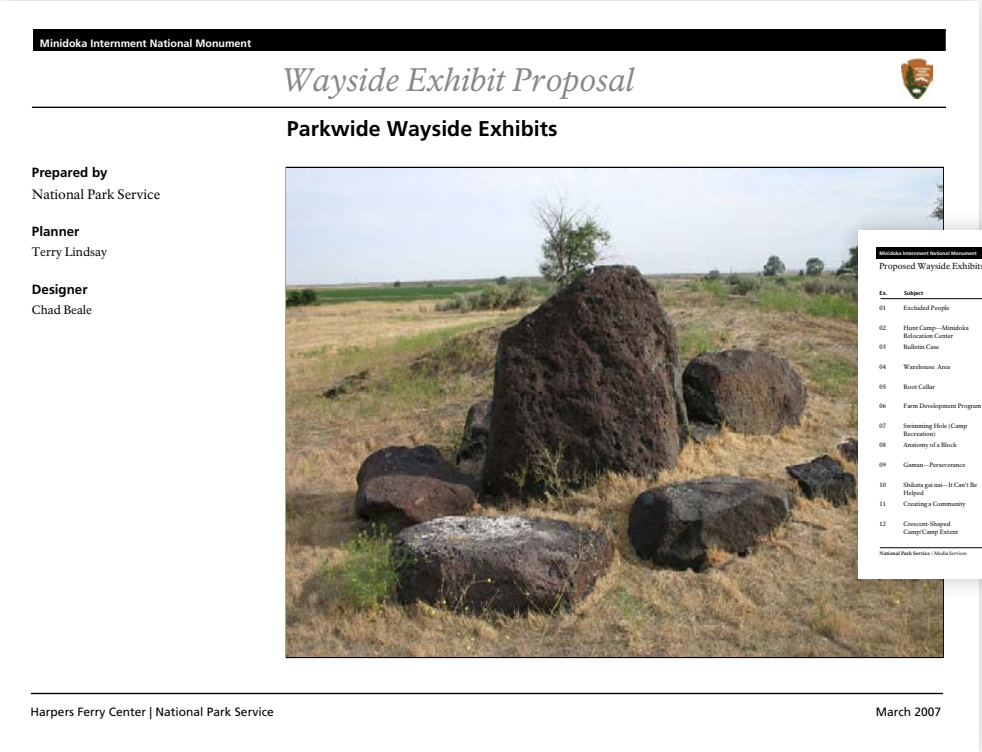
Look for Primary Sources
Examples of primary sources include quotes, diaries, letters, photos, drawings, or inventories from someone who was at the site, or participated in the event. Secondary sources include books or articles written about a site or event by someone who was not a participant. A subject-matter expert can help identify primary sources and verify their accuracy. For example, some of James Taylor's drawings of Harpers Ferry, published in *Frank Leslie's*, were drawn during the Civil War. Others were done in the 1890s from memory.

Review Reference Material
Based on site visit discussions, identify source material relevant to the wayside content. Read and review material from the correct time period and location. Some of this work may have already been done by park staff. Look for material rich in meanings and site significance.

Gather Source Information
Make copies of potential resources and record enough source information so they can be located and properly acquired when needed. For graphics, record the image source, reference number or title, artist or photographer, size, and reproduction medium (slide, negative, digital file etc.) For written material, record the publication name, source, author, date, and copyright.

Close-Out Meeting

Summarize the site visit, decisions made, and any outstanding issues. Review thumbnails and graphic direction for the waysides. Review selected materials and other graphics needed. Discuss custom installation or maintenance issues. Review the schedule and next steps. Review any special site requirements with park maintenance staff.



Minidoka Internment National Monument

Wayside Exhibit Proposal

Parkwide Wayside Exhibits

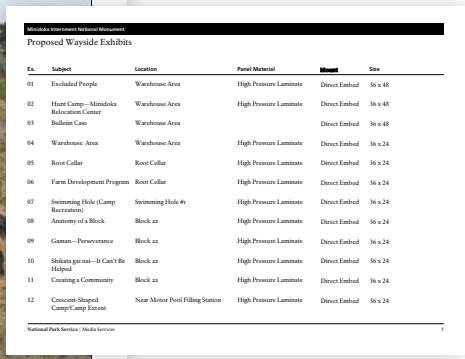
Prepared by
National Park Service

Planner
Terry Lindsay

Designer
Chad Beale

Harpers Ferry Center | National Park Service

March 2007



Minidoka Internment National Monument

Proposed Wayside Exhibits

Ex.	Subject	Location	Panel Material	Mount	Size
01	Excluded People	Warehouse Area	High Pressure Laminate	Direct Embed	36 x 48
02	Hunt Camp—Minidoka Relocation Center	Warehouse Area	High Pressure Laminate	Direct Embed	36 x 48
03	Bulletin Case	Warehouse Area		Direct Embed	36 x 48
04	Warehouse Area	Warehouse Area	High Pressure Laminate	Direct Embed	36 x 24
05	Root Cellar	Root Cellar	High Pressure Laminate	Direct Embed	36 x 24
06	Farm Development Program	Root Cellar	High Pressure Laminate	Direct Embed	36 x 24
07	Swimming Hole (Camp Recreation)	Swimming Hole #6	High Pressure Laminate	Direct Embed	36 x 24
08	Anatomy of a Block	Block 22	High Pressure Laminate	Direct Embed	36 x 24
09	Gaman—Perseverance	Block 22	High Pressure Laminate	Direct Embed	36 x 24
10	Shikata gai nai—It Can't Be Helped	Block 22	High Pressure Laminate	Direct Embed	36 x 24
11	Creating a Community	Block 22	High Pressure Laminate	Direct Embed	36 x 24
12	Crescent-Shaped Camp/Camp Extent	Near Motor Pool Filling Station	High Pressure Laminate	Direct Embed	36 x 24

National Park Service | Media Services 1

This Wayside Proposal was prepared using the Wayside Exhibit Planner database.

Project Proposal

A Wayside Proposal defines the project scope of work. For each wayside exhibit there are at least 35 data points recorded during the site visit. Use a database to record and to efficiently manage the data and to prepare detailed cost estimates, base orders, panel orders, site maps, and installation plans.

Major Roles

Wayside Planner
writes a project summary, records all data, and prepares the Wayside Proposal.

Wayside Designer
refines thumbnails and identifies what graphics are needed.

Data Needed for Each Wayside

Exhibit Number
Subject
Purpose
View
Comments
Potential Graphics
Potential Maps
Potential Illustrations

General Location
Specific Location
GPS Coordinates
Site Photo
Orientation
Access Issues
Site Prep Issues
Panel Size
Panel Material
Duplicates Needed

Duplicate Numbers
Installation Notes
Inventory Notes
Base Category
Base Style
Base Color
Base Material
Base Angle
Base Mount
Ancillaries

Panel Costs
Base Costs
Ancillary Costs
Graphics Costs
Illustration Costs
Map Costs

Prepare the Proposal

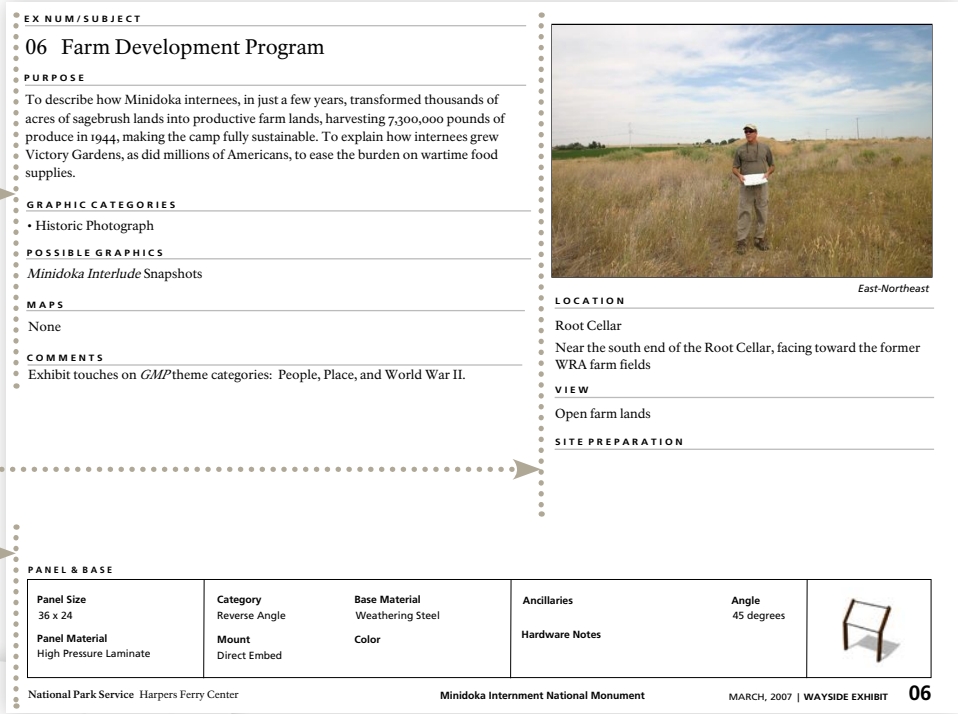
Gather most of this data during the site visit. In the weeks following the site visit, the team will review decisions, refine the data and thumbnails, make a wayside location map, and prepare the Wayside Proposal document for review and approval.

A single page like this defines each proposed new wayside exhibit.

Purpose and content

Location and site data

Base and panel choices



EX NUM/SUBJECT

06 Farm Development Program

PURPOSE

To describe how Minidoka internees, in just a few years, transformed thousands of acres of sagebrush lands into productive farm lands, harvesting 7,300,000 pounds of produce in 1944, making the camp fully sustainable. To explain how internees grew Victory Gardens, as did millions of Americans, to ease the burden on wartime food supplies.

GRAPHIC CATEGORIES

• Historic Photograph

POSSIBLE GRAPHICS

Minidoka Interlude Snapshots

MAPS

None

COMMENTS

Exhibit touches on *GMP* theme categories: People, Place, and World War II.

East-Northeast

LOCATION

Root Cellar

Near the south end of the Root Cellar, facing toward the former WRA farm fields

VIEW

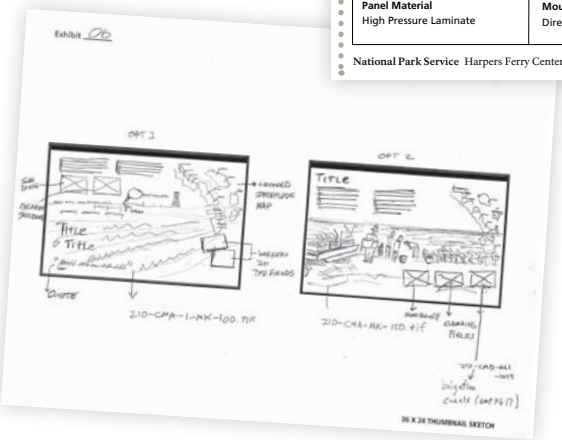
Open farm lands

SITE PREPARATION

PANEL & BASE

Panel Size	Category	Base Material	Ancillaries	Angle
36 x 24	Reverse Angle	Weathering Steel		45 degrees
Panel Material	**Mount**	**Color**	**Hardware Notes**	
High Pressure Laminate	Direct Embed			

National Park Service Harpers Ferry Center | Minidoka Internment National Monument | MARCH, 2007 | WAYSIDE EXHIBIT 06



Multiple thumbnails show options for the layout. They identify graphics needed and show the visual intent of each wayside.

What To Expect

Depending on the size of the project, and schedules of the team, reviews can take from one week to one month.

Review and Approval

Ask all stakeholders—including park managers—to review the Wayside Proposal. Once team members reach consensus and all changes are incorporated into the draft Proposal the park manager signs off, laying the foundation for the next stage of work, the Wayside Exhibit Plan.

Content Review: Park interpreters review the Wayside Proposal by focusing on the purpose of each wayside, and considering how graphics (i.e., photographs, illustrations, and maps) will be used to serve that purpose. Remember that any new graphics will require money and time to research, create, and review.

Technical Review: Resource management, facilities and maintenance staff review the Proposal by looking at the material choices for each wayside, to be sure they understand the maintenance and installation requirements for proposed waysides. They review landscaping recommendations for safe access, like rerouting trails, pouring concrete pads, and clearing and maintaining vistas. They can begin planning installation needs for equipment, compliance, and labor and materials.

What makes a good purpose statement?

Each wayside needs a straightforward purpose statement that defines the interpretive goal. Purpose statements describe how the wayside will connect visitors to the audience-relevant meanings and significance of a site. They are the foundation for all work that follows. A poorly focused purpose will cause false starts and delays during wayside development.

Focus on One Interpretive Opportunity
Waysides work best when they have a single, site-specific interpretive opportunity. Avoid overloading this teachable moment. Don't expect too much for 30–45 seconds of the viewer's attention.

Visual Reference
If the purpose statement sounds more like a book or movie description, it is probably too complex. A good wayside purpose statement describes a goal that can be accomplished with a bold graphic presentation.

Not a Theme Statement
Broad park interpretive themes are not specific enough to serve as good wayside purpose statements. Good waysides are built on stories locked to a place with a particular view. Key park themes can be woven into most waysides. But do not plan waysides based on interpretive themes alone.

Clear and Specific
Purpose statements should use clear, specific language in measurable terms. Start with infinitive action verbs like "To describe..., to link..., to illustrate..., to reveal..." Workable, practical purpose statements do not arrive instantaneously. Plan to invest time and thought to get them right.

Five Examples of Good Purpose Statements

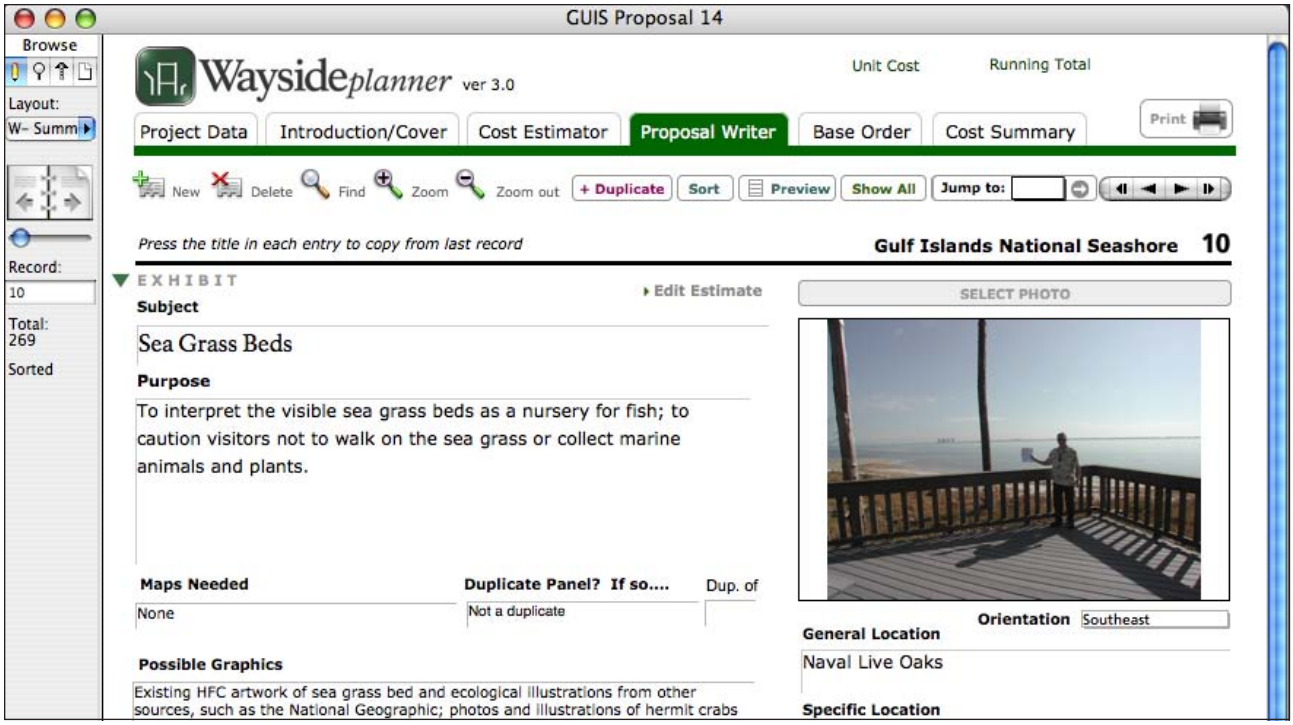
Low-Profile Waysides
To show and describe how Brown's Chapel [in view] was first a physical focal point, and later a symbolic focal point, as the headquarters and refuge for mass meetings and organizing during the 1965 Civil Rights march demonstrations.

To reveal the tapestry of life through historic use of the site. To describe how John Herrmann's 128-acre farm was situated on former relocation center land where one of Minidoka's fire stations, a water tower, sewage treatment plant, Blocks 21 and 22, and parts of other blocks were located. To identify remaining fire station and barrack buildings [in view] that became farm outbuildings.

To illustrate how plants, animals, and humans all share the rich tidal zones of Bartlett Cove [in view], highlighting the harbor seal, river otter, and other animals in the intertidal environment. To explain how humans must be careful of their influences on the tidal environment.

Orientation Waysides
To briefly inform visitors of the significance of this area as the first federal tree reserve in the United States and to orient them to the facilities in the area like the visitor center, picnic pavilion, camping area, and trails.

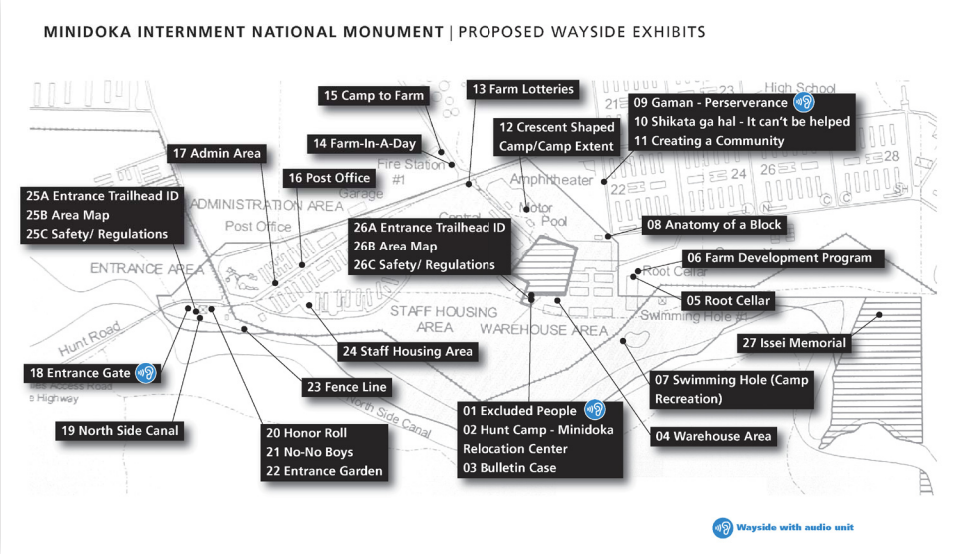
To mark the trailhead and provide trail information and safety tips. To interpret the subtle changes in elevation and plant life along the trail so that visitors can read the landscape as they enjoy the trail.



Wayside Exhibit Planner database entry screen

Wayside Exhibit Planner Database

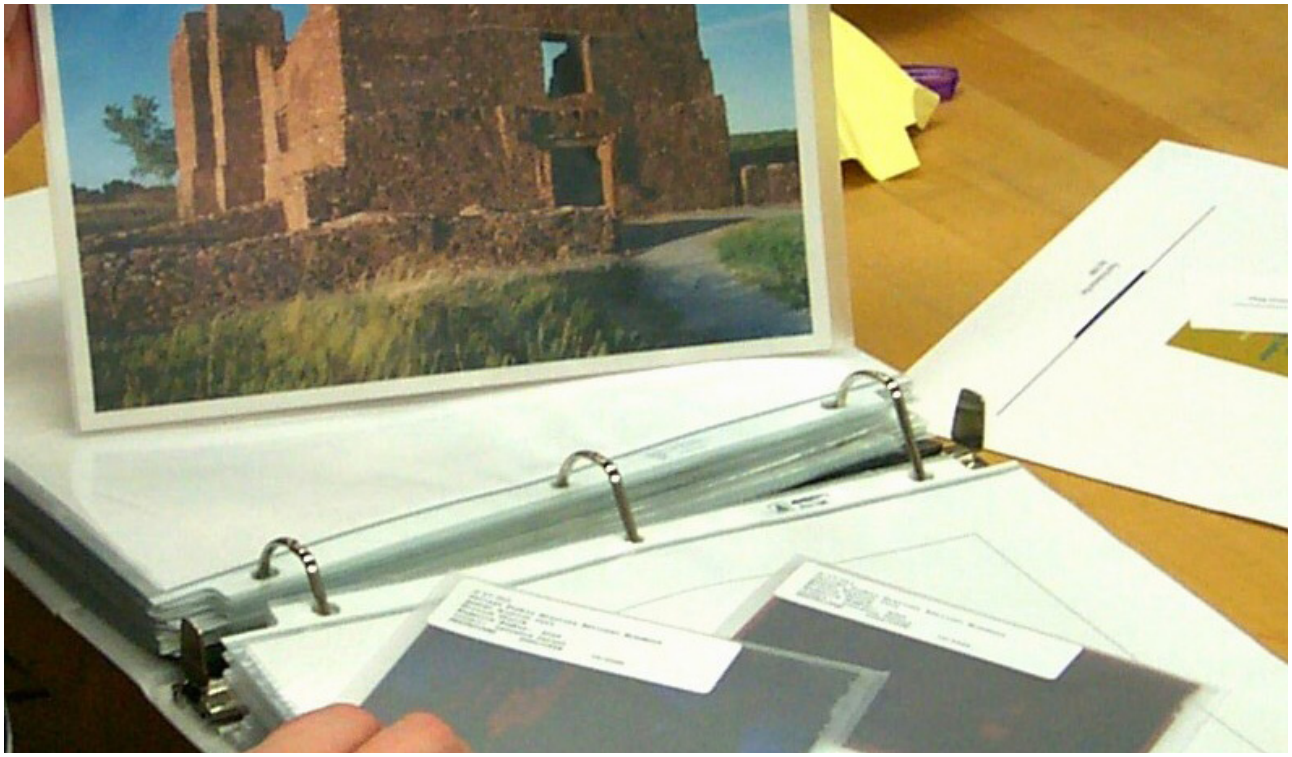
The advantages of using a database to manage your wayside project are many. Input the size, style, material, location, and other information once to be able to quickly and accurately generate panel orders, cost estimates, or lists, like new illustrations or maps.



Wayside site map

Other Wayside Proposal Elements

The Wayside Exhibit Proposal should also include accessibility information and site-location maps.



Major Roles

Researcher
researches and gathers reference material

Graphics Researcher
contacts outside sources, orders graphics, negotiates use-rights and fees, acquires images and permission letters, documents agreements, purchases images, and archives all records.

Park Interpreter
gathers park materials

Wayside Designer
reviews the quality of potential graphics and researches other possible sources.

Research and Graphic Acquisition

Graphics and reference gathering is done before, during, and after the site visit. Upon park approval of the Wayside Proposal additional material is gathered. The planner and designer read and review these materials to develop wayside text and layouts.

Graphics

Photographs, illustrations, maps, and documents like newspapers, are examples of graphics that can tell a story of the landscape. Many parks have large collections of site-specific graphics, but most wayside projects require images from other sources too.

Sources
In addition to park collections, good public sources of graphics include the Library of Congress, National Archives, Smithsonian Institution, portrait galleries and museums, historical societies, and libraries. Commercial sources include stock houses, private collections, and professional photographers. International sources include museums, libraries, art galleries, historical institutes, and universities.

Use-Rights
Get written permission from the owner of the graphic to use it for the life of the wayside and pay the negotiated fee before using it. Keep use-rights and image-use permission letters for the life of the wayside. Other important records include image orders, purchase requests, cleared checks, receipt of property, facsimiles of images, invoices, receipts, and license agreements.

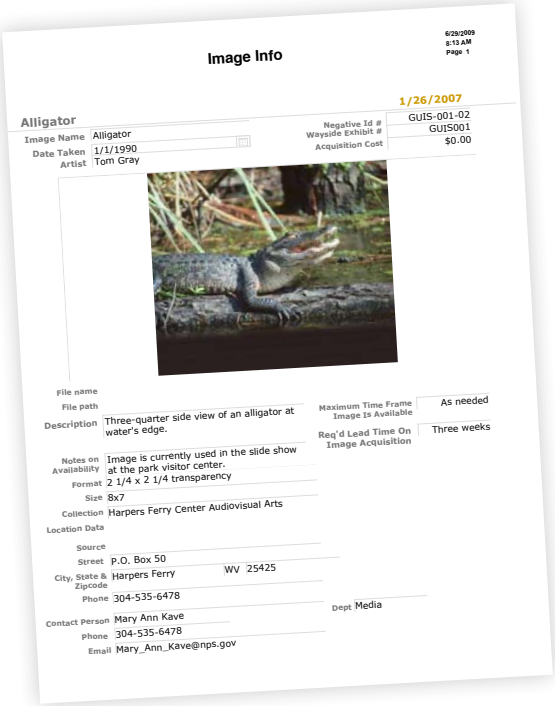


Image Info

6/29/2009
8:13 AM
Page 1

Alligator

1/26/2007

Image Name: Alligator
Date Taken: 1/1/1990
Artist: Tom Gray
Negative Id #: GUIS-001-02
Wayside Exhibit #: GUIS001
Acquisition Cost: $0.00

File name
File path
Description: Three-quarter side view of an alligator at water's edge.
Maximum Time Frame Image Is Available: As needed
Req'd Lead Time On Image Acquisition: Three weeks
Notes on Availability: Image is currently used in the slide show at the park visitor center.
Format: 2 1/4 x 2 1/4 transparency
Size: 8x7
Collection: Harpers Ferry Center Audiovisual Arts
Location Data
Source
Street: P.O. Box 50
City, State & Zipcode: Harpers Ferry WV 25425
Phone: 304-535-6478
Contact Person: Mary Ann Kave
Dept: Media
Phone: 304-535-6478
Email: Mary_Ann_Kave@nps.gov

- Copy of the image
- Negative or identification number
- Description of image
- Wayside exhibit number for which the image is needed
- Acquisition cost for one-time use for the life of the exhibit
- Format or medium
- Original size
- Size of reproducible needed
- Required lead time on acquisition of image
- Source of the original with address and name of collection
- Contact person or department
- Telephone number
- E-mail address
- Owner of the graphic
- Copyright data
- Photographer or artist

What To Expect

The average time to get images from sources inside the United States is at least four weeks, often months. International orders can take from two to six months. One missing graphic can delay a wayside project from moving into final review and production.

Record Source Information
Gather image data for each graphic proposed for use on the wayside exhibits. The example above lists the kind of data needed for each image.

Photo Release Form
Use a release form for new images that include recognizable people.
http://www.nps.gov/hfc/products/waysides/way-graphics.htm

Credit Lines
To reduce clutter, avoid adding credit lines on waysides. Negotiate use-rights agreements that do not require the use of credit lines. Archive credit information with project records.

Graphic Requirements

Large-format wayside graphics have different technical requirements than other media like the web or offset printing. A graphic must meet these technical quality standards to reproduce well. Refer to the following document to learn more about wayside graphic requirements.

Standards for Digital Image Files
http://www.nps.gov/hfc/products/waysides/way-graphics.htm

Research and References

The researcher gathers reference and source materials and organizes it by exhibit. With a good working knowledge of the material, the researcher sifts through and highlights site-specific stories and ideas guided by the Wayside Proposal purpose statements.

Wayside Exhibit Plan Cover

Layouts are designed at actual size and printed at 11x17 for review.

Wayside Exhibit Plan

Wayside panels begin as full-size layouts with draft text and proposed graphics. Through a process involving many stages of development and review, they become final production files. The rest of this section describes the major stages of design and writing and the supporting work to create art, maps, and tactile elements.

Major Roles

Wayside Planner
studies text references and graphics, writes draft text, and guides team reviews.

Wayside Designer
studies text references and graphics, makes draft layouts, and plans new art and maps.

Illustrator
creates new artwork.

Cartographer
creates new maps.

Graphic Sources
provides images.

Park Interpreter
consolidates park review comments.

Create Panel Layouts

Good writing and design are based on a clear interpretive hierarchy. Organize ideas and images into primary and supporting roles. For example, a wayside that interprets a glacial landscape might also include a preservation message. Those two topics, geology and preservation, should lead to a layout that shows one topic as primary and the other as supporting.

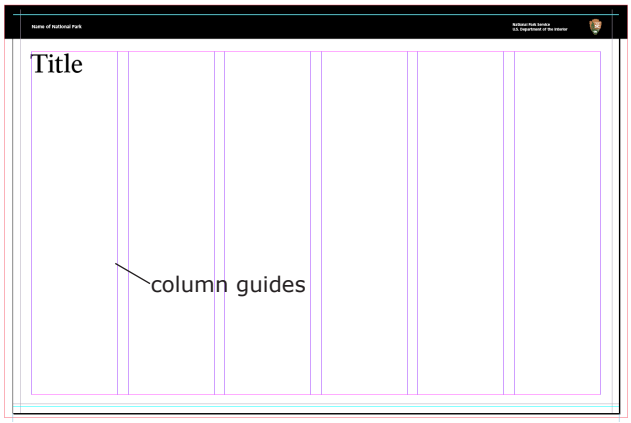
Design

The panel layout is based on the thumbnail rough and panel size approved in the Wayside Proposal. The first graphics placed in the layout may be low-resolution, or draft illustrations. Draft text, title, captions, and labels are added to the layout with the appropriate typographic treatment. Even as a draft, the layout should present the intended style and composition. The next seven pages address wayside exhibit design.

Writing

Text must connect with, support, and enhance the images and landscape visitors will see. The first draft is based on the approved purpose statement, thumbnail rough, selected graphics, and site features. It can be written directly into the layout, or it can be written with the layout in mind. Pages 48 through 52 address some challenges of wayside writing.

Original 1991 Grid



June 2008 Grid

Paragraph Styles palette

Did You Know?

In 1990 graphic designer Massimo Vignelli developed a "Guidelines and Standards Manual" for National Park Service Wayside Exhibits." The Manual included a wayside grid based on the "Unigrid" developed for National Park Service publications. The grid was updated for the 2001 Graphic Identity Program, and the 2006 UniGuide Sign Program.

Design with a Grid

Wayside grids are presized Adobe InDesign® files with built-in type styles and appropriate NPS identity elements. They include the correct bleeds and margins for fabrication and installation in a full-frame NPS base. Go to this webpage to download the grids, typographic standards, and other standards, or see a video on using the grids.
http://www.nps.gov/hfc/products/waysides/way-grids.htm

Scale and Proportion
The column guides visible inside the margins serve as reference points, not as the strict formatting guides that might be found in a newspaper or magazine. They help with text line length, inset photo dimensions, and analyzing proportions and spacing. Waysides are generally bigger than even the largest computer screens, so layouts are viewed at a smaller scale. The grid helps the designer achieve appropriate scale, proportion, and consistency for the typical two- to three-foot viewing distance of a wayside exhibit.

Architecture of the Layout
The grid rarely determines the layout of the wayside panel. Rather, the composition of the main image, or the focus of the largest graphic determines the panel layout. The title in the upper left corner of the grid is there for starter purposes only and is not locked in place.

Typographic Styles in the Grid
Embedded in the National Park Service grids are typographic or paragraph styles (*see above*) that contain specifications for type size, leading, and hyphenation. These specifications maximize legibility and are set to the proportions of each grid.

Wayside Typographic Standards
Legibility is the goal of the wayside typographic standards. Point size is one of the many aspects of typography that the designer needs to address. The typographic standards are developed in concert with the wayside grids to help designers create legible text. Download the standards from the link above.

Did You Know?

NPS Rawlinson was designed in 2000 based on requirements established by the National Park Service.

NPS Typefaces
Typography is an important component of the NPS graphic identity standards. These standards specify two typefaces: NPS Rawlinson and Adobe Frutiger. To learn more, visit this webpage.
http://www.graphics.nps.gov/typefaces.htm

Sequoia National Park

Mount Rainier National Park

Wayside Design: How is It Different?

Several things make wayside design different than other media design.

Compelling Focus
Selecting and developing compelling graphics can be the biggest challenge in wayside design because wayside graphics must attract visitors. The graphics should relate directly and obviously to the landscape in view and tell a story. They must grab attention and spark an immediate connection. Align the title and main text to enhance the focus of the main image.

Designing for the Landscape
An effective wayside will lead the eyes and attention from the wayside to the landscape. The designer must consider the direction of the view and the fact that visitors cannot turn the sign around.

Visual Layering
People may look at a wayside for three seconds or three minutes. The average is 45 seconds. Wayside exhibit design should have a clear focus and hierarchy so the viewer who spends only a few seconds gets the main idea. Give those who take more time some details worth pondering. Many of the details should be in the images.

It is Outdoors. Why Does This Matter?
The designer must consider outdoor conditions like sunlight, glare, and the viewing distance. Large areas of white on a wayside exhibit are hard to look at in bright sunlight. Use neutral colors and avoid bright colors used over large areas. Lighting outdoors is variable. Design text with good contrast.

Designing for Large Format
Wayside exhibits are generally viewed from two to three feet away. Panel sizes and the scale of graphics should reflect this. Too large, and viewers feel like they are in the front row of a movie theater; too small, and the graphic impact is lost. Print layouts actual-size to check scale and proportion.

Not a Book
Waysides are more like billboards than publications. They attract attention quickly, with impact, and with a single memorable message. The best wayside exhibit facilitates a powerful and immediate connection to the landscape.

Florissant Fossil Beds Case Study

Compelling Focus
The main graphic is the same in both panels at right. But the bottom panel shows how an image can be adjusted to create visual focus on the area of interest—in this case, a fossil layer. The first and most powerful element in any wayside is the immediate message of the title and main graphic. In the top panel the message is hidden in the text and inset graphics. The bottom panel is more effective because the descriptive title is close to the visual and interpretive focus of the images. Three seconds vs. 30, billboard vs. publication.

Visual Layering
The top example's mix of horizontal and vertical elements in the hard- and soft-edged boxes creates visual noise. The boxes also obscure the main image and compete for attention. The bottom example emphasizes the relevant layer of the large graphic and makes all other elements compatible with its horizontal direction.

Subject Title vs. Interpretive Title
"Shale Outcrop" is a subject title. It doesn't convey the intended meaning in "Hidden Treasures." Placing the title "Hidden Treasures" beneath the rock layer of hidden treasures enhances both image and title. It is both title and image label.

Not a Book
In the top example the idea of hands splitting shale to reveal fossils is an inset with separate text, caption, and redundant photos. In the bottom example a single larger graphic conveys the same idea, but it also connects visually to the primary graphic and text.

Starting Point
Although the top layout uses the classic location for title and text in the upper left corner, the result disconnects it from the visual focus. The bottom layout creates a clear visual starting point by bringing together the focal point of the main graphic with the title and main text.

Architecture of the Image
The flat architecture of the main graphic in the top example lacks dynamic lines of focus. In the bottom example, darkening the main image to focus on the fossil layer sets up a strong horizontal architecture that is supported by the horizontal alignment of text and inset images.

Gallery of Examples
Visit this website to see other examples of NPS wayside exhibits.
http://www.nps.gov/hfc/products/waysides/way-samples.htm

Did You Know?

Minimal text and visual clarity are particularly important for visitors with cognitive and learning disabilities, as well as those with low vision.

Before

After

Grand Canyon–Parashant Case Study

Compelling Focus
The main graphic in the top example (*right*) is the same view as the visitor will see from the wayside location. The main graphic in the bottom example shows the dramatic effect the lava had on the landscape. It adds perspective to the story by highlighting the visitor's location (You Are Here) in an aerial perspective with a graphic arrow that shows the location and direction of the lava flow. It broadens the view

Visual Layering
In the top example, there is only one layer of information. The graphic does not tell a story, the story is presented only in the main text. In the bottom example, the title introduces the story, the main graphic suggests a dramatic event with the transparent arrow, two inset diagrams show geological change on the landscape, and labels and captions offer more supporting details about basalt and flooding.

Subject Title vs. Interpretive Title
The title "Whitmore Canyon," a place name, doesn't express the idea of a changing landscape. What is it about Whitmore Canyon that warrants a wayside exhibit? It is the significance of massive geologic change. The title "When Lava Choked the Colorado" introduces that story.

Not a Book
The main text in the top example begins with a definition of basalt. It attempts to tell the whole story and uses scientific jargon. In the bottom example the main text is more succinct because the graphics tell much of the story. Rather than describe the lava dam in so many words, the bottom example shows the lava flow, the dam, and temporary lake. And to spark interest, the text begins with a powerful, site-specific, first sentence, "You are standing on remnants of a failed 180,000-year-old dam."

Gallery of Examples
Visit this website to see other examples of NPS wayside exhibits.
http://www.nps.gov/hfc/products/waysides/way-samples.htm

Before

After

Common Pitfalls in Wayside Design

Too Many Colors and Styles
Layouts with many elements (text, graphics, colors, typographic styles, decorative elements) may be fine for web pages or magazines, but not waysides. Visitors quickly scan waysides for information and inspiration, unlike book pages on which they may study the materials. Clarity and focus help prevent readers from rejecting a wayside.

Too Many Little Pictures
Waysides cannot replace guidebooks or field guides. Visitors cannot visually memorize a multitude of small images on a wayside.

Long Line Lengths and Small Text
Reading text while standing outdoors is not like sitting in a comfortable chair with a book. Typography for wayside exhibits requires careful attention to appropriate line lengths, point sizes, line spaces, and contrast to be legible for an audience that will vary in height, visual ability, and types of corrective lenses. Waysides like those shown above make reading hard work.

Trying To Tell the Whole Story
Waysides can provoke interest and help visitors make a connection to the landscape, but they are not a good medium for telling complex stories that occur in multiple stages over long periods of time.

Too Many Logos
Logos convey the authority of the message, but too many can overwhelm the purpose and dilute the focus and authority. Logos benefit the wayside creator more than the wayside user. Err on the side of helping visitors enjoy an experience. Use logos with restraint. Find other ways to recognize donors and partners. Review the NPS Partnership Identity document.
http://www.nps.gov/hfc/products/waysides/index.htm

Writing for Wayside Exhibits

Start with a place. Tell a short, engaging story. Leave readers wanting more. It sounds simple, but space is limited and the audience fleeting. Visitors may linger at a wayside for 45 seconds or less. Can something of value be read in that short time? Wayside text must connect with, support, and enhance the images and landscapes visitors see.

Stay Connected with the View
Do not take it for granted that readers will automatically understand the link between the story and the place where they are standing. Make sure they do. But be careful not to describe what they can see readily with their own eyes.

Two great American writers said it best.

"If I had more time, I would have written a shorter letter."
T.S. Eliot

"There was never a story so good that it could not be improved upon."
Mark Twain

The Most Powerful Sentence
Many writers find they need to work up to the heart of the matter, like a diver bounces on a diving board. It may take one, two, or three sentences to get there. After writing draft wayside text, find the best sentences. Try them out as the first sentence instead of leaving them in the middle or at the end.

Use the Active Voice
Weed out passive voice, and use short, active verbs. Keep the story moving. Use common language. Look for ways to replace longer words derived from Latin or Greek with basic plain English. For safety rules on trailhead waysides, stick with direct, simple Do's and Don'ts. Don't dance around the subject.

How Many Words?
There is no one right answer to this question. Raw word counts vary for the many different sizes of waysides. An 18x18 can support far fewer words than a 36x48. A better measure is to get a stopwatch and have someone read draft wayside text out loud. Are the key ideas conveyed in less than 45 seconds? Did the reader stumble on hard-to-pronounce or not widely known words? If so, strike them out and rewrite.

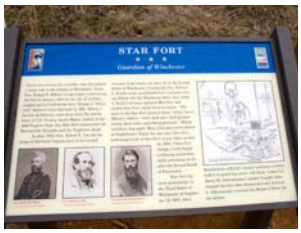
Did You Know?

These guidelines for wayside writing are particularly important for visitors with cognitive and learning disabilities.

Put Text into Hierarchies
All wayside text is not created equal. Keep key thoughts in main text blocks, and supporting details in captions or labels. Some visitors only read the title and look at the main graphic. Others read the main text and some captions. A few read it all. Sometimes ideas that started out in the main text find a better fit as a sidebar or a caption. Sometimes a phrase can be cut out of main text and put to work as a direct label on an image. Keep each element focused.

Get Feedback and Edit, Edit, Edit
Compose the first draft. Compare it to the purpose statement. Read it in the context of the layout and a photo of the site. Get feedback from other writers, interpreters, and general-knowledge-only readers. Rigorously cut away everything that can be eliminated. The craft of writing good waysides depends as much on subtraction as on creativity.

The "So-What?" Test
Good wayside writing will help people discover something meaningful and worth the interruption. Why should they care? Look for hidden relationships. Find an angle of interest, a way to help visitors see what can't be seen. Write for the reader's benefit, not for your own pleasure or sense of what people ought to learn. Think about the visitor's sense of place and address the moment of curiosity, the questions inspired by the place



Too many words.

Common Pitfalls in Wayside Writing

Avoid Subject Titles
Avoid subject titles like "Geology" or "Plants." Write titles to reveal the significance of the story, like "Wheels to Wings" or "River on the Rampage." An effective title linked to a compelling image can pull people into the story. Try a hook, a surprise, or a play on words to engage interest. Don't just label something, choose words that deliver meaning.

Don't Let Data Overwhelm
Conflict, mystery, and surprise keep people engaged. Too many facts or complicated scientific processes will turn them away. A wayside is not a book. Write more like haiku and less like term papers.

Avoid Jargon and Buzzwords
Write for a general audience. Question whether words and phrases will be understood by people not familiar with government terms or terms used by subject-matter specialists. Leave out buzzwords like "natural and cultural resources" or "front-country." Jargon confuses. Buzzwords become dated, bureaucratic, and flat. Write in plain, basic English. Avoid repeatedly referring to the site as "the Park."

Common Words?

Consider word choice carefully. Which phrase would you use?

"shroud of snow"
"blanket of snow"
"a foot of snow"
"snow cover"

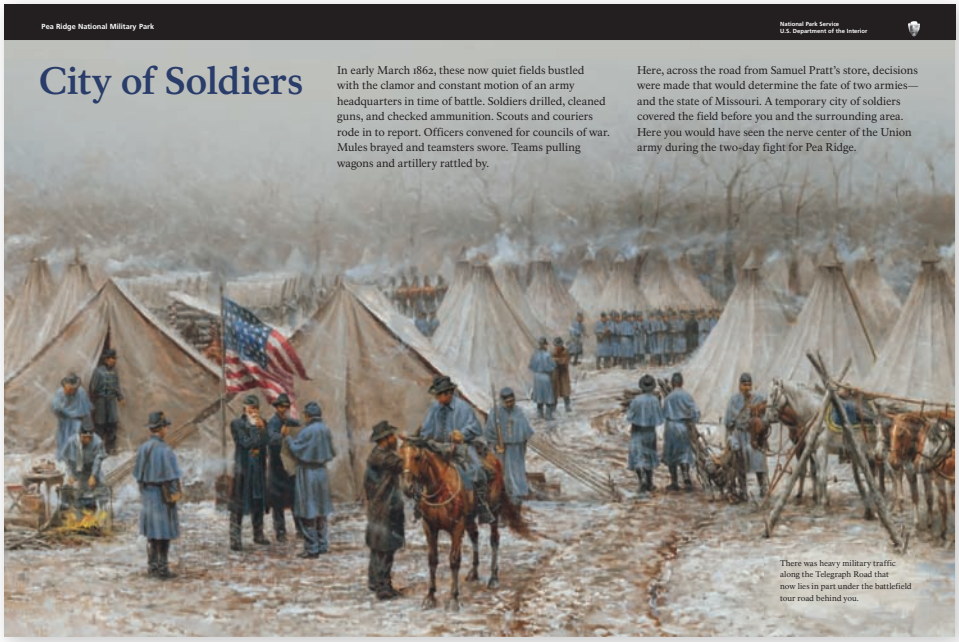
Don't State the Obvious
This happens when writers have to work up to a good idea or write the way they normally speak. Weed out habits of speech that creep into writing that may lead to redundancies. An example would be the expression "for all intents and purposes."

It is Not a Ranger Talk
Informal conversations have conventions of speech and common courtesy. On a wayside with a time crunch to connect with the reader, don't waste time or space to say "Welcome to Big Beautiful National Park." Make every phrase work to connect and to convey significance. Avoid clauses of casual speech.

Avoid a Sales Pitch
Travel books and airport posters induce people to come see a site. With waysides the person is already there. Save limited text for revealing what makes this place significant and meaningful.

Information or Interpretation?
Make sure the writing style and content support the wayside exhibit's purpose and intended outcomes. Understand the difference between presenting information and interpretation. For guidance on interpretation, review this 24-page Interpretive Foundations document.
http://www.nps.gov/idp/interp/101/foundationscurriculum.pdf

Pea Ridge
National Military Park



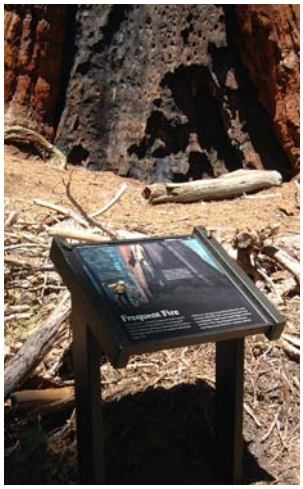
Example of Good Wayside Writing

Title **City of Soldiers**

Main Text In early March 1862, these now quiet fields bustled with the clamor and constant motion of an army headquarters in time of battle. Soldiers drilled, cleaned guns, and checked ammunition. Scouts and couriers rode in to report. Officers convened for councils of war. Mules brayed and teamsters swore. Teams pulling wagons and artillery rattled by.

Here, across the road from Samuel Pratt's store, decisions were made that would determine the fate of two armies—and the state of Missouri. A temporary city of soldiers covered the field before you and the surrounding area. Here you would have seen the nerve center of the Union army during the two-day fight for Pea Ridge.

Caption There was heavy military traffic along the Telegraph Road that now lies in part under the battlefield tour road behind you.



Sequoia and Kings Canyon National Parks

Example of Good Wayside Writing

Title **Frequent Fire**

Main Text Many fires created the large scar on the sequoia in front of you. Frequent fire is common in good sequoia habitat, and mature trees have ways to survive. Most large sequoias survive fire and live well despite large scars.

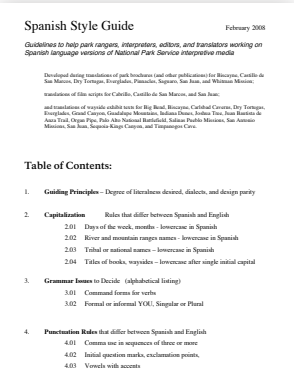
Thick bark with many air pockets insulates the wood from heat. With little sap or pitch in it, the bark is not very flammable. High branches hold foliage well above most fires. With competing plants burned away, surviving trees get more water, nutrients, and sun.

Caption New wood grows from either side of a fire scar, covering a little more each year. This healing growth leaves telltale marks on the tree's annual growth rings. These marks reveal how many fires a tree has survived.

Caption A fire worker examines the base of a large fire scar. A typical sequoia here might have survived several fires each century.

Visit the HFC web site to read some good examples of wayside writing.
http://www.nps.gov/hfc/products/waysides/way-samples.htm

Editorial Style Guide



Spanish Style Guide

Tools and Resources for Wayside Writers

Reading Level

How challenging is it to read wayside text? Use Microsoft Word to check the readability of draft text. The proofing tool analyzes text and reports a level-of-effort score (*shown below*). It checks for wordiness, jargon, sentence structure, passive sentences, and many other aspects of grammar and style. Wayside text should score no higher than 8–10 on the Flesch-Kincaid scale.

Readability Statistics

Counts	
Words	52
Characters	267
Paragraphs	1
Sentences	4
Averages	
Sentences per Paragraph	4.0
Words per Sentence	13.0
Characters per Word	5.0
Readability	
Passive Sentences	0%
Flesch Reading Ease	65.1
Flesch-Kincaid Grade Level	7.4

Readability Levels
4 Hemingway
6 Mark Twain
8 Readers Digest
8–10 Most Popular Novels
10 Time, Newsweek
12 Typical Insurance Policies
15–20 Academic Papers

Ideally, wayside writing is level 8.

Effective Interpretive Writing TEL broadcast 2008-05-09

Veteran HFC writer-editor Ed Zahniser gives a concise, hard-hitting talk on interpretive writing for a 2008 TEL (Technology Enhanced Learning) broadcast. This 20-minute video is packed with good ideas on interpretive writing.
http://www.nps.gov/hfc/products/waysides/way-process-writing.htm

Editorial Style Guide

Words and how we use them change over the years. Is it better to say "Native American" or "Indian?" Is it "buffalo" or "bison?" This Style Guide lists preferred word choices for NPS media products. Use the Style Guide to speak with a consistent voice and help avoid reader confusion. For general writing reference books, see the list on the front page of the Style Guide. For park-specific editorial style, create your own Section D of the Wayside Guide.
http://www.nps.gov/hfc/products/waysides/way-process-writing.htm

Bilingual Waysides

Visit this webpage for general recommendations for bilingual waysides.
http://www.nps.gov/hfc/products/waysides/way-process-language.htm

Spanish Style Guide

The Spanish language has different rules than English. Specific solutions used during translation and interpretive editing of many NPS sites' Spanish-language waysides and publications are listed in this document.
http://www.nps.gov/hfc/products/waysides/way-process-language.htm

Wayside Exhibit Plan Review and Approval

Review the plan on site and evaluate each wayside as a first-time visitor would see it. Formative evaluation is recommended at this stage by placing full-size mock-ups in their intended locations. Review for programmatic accessibility. All stakeholders should review the Wayside Plan, but the park staff is responsible for compiling and consolidating all comments.

Things To Consider

Consider the best approach to resolve differences in opinions and ideas between and among reviewers. In some cases, it is best for the park staff to come to consensus, consolidate comments, and provide clear direction to the planning and design team. Sometimes the planners and designers are included in the discussions. Either way, strike a balance between giving highly specific directions and asking for open-ended discussions.

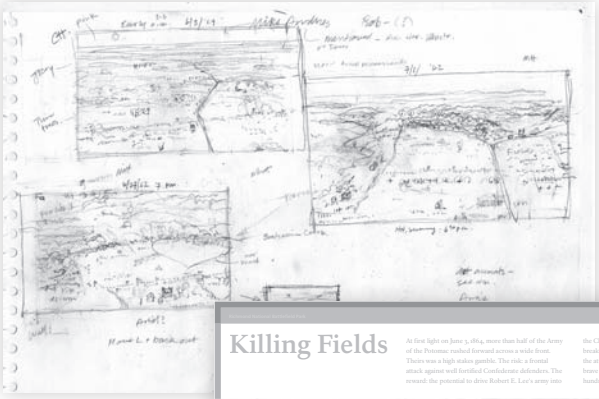
Review in the conference room or office is common (*above*), but ideally, waysides are reviewed in the setting in which they will appear (*left*). Though this may not always be possible or practical, referencing the site photos and original purpose statements in the approved Wayside Proposal will keep the review focused and prevent backtracking.

Try to keep from bogging down on matters of style or wordsmithing. Check to be sure the facts are correct and that the editing process has not distorted accuracy or meaning. Check image labels and captions for accuracy. Be sure the selected graphics are appropriate. Check draft maps for labels, features, geographic area, hierarchy, and focus. Look for consistency between map labels, text, and graphics on each wayside, and among all layouts in the project. If the text was written in-house, ask someone other than the author to review and edit it.

Creating New Illustrations

Reference Package
Artists need details and direction. Organize a comprehensive reference package. Understand what is known and consider how to handle unknowns. If possible, the artist should visit the site.

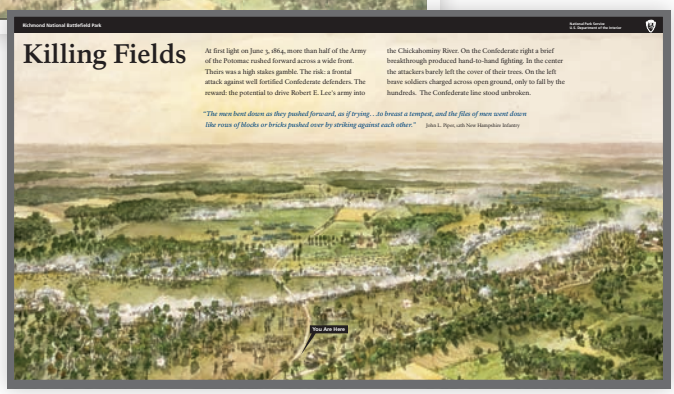
Sometimes there are no photographs, existing illustrations, or other graphics that can help explain the significance of a site. Although a new illustration will require an investment of time and money, it will reveal significant meanings, relationships, and details to visitors, and may also help park staff gain greater insight into the subject. Art for waysides must be place-specific so visitors can easily compare it to the actual landscape.



Thumbnails show basic content, focus, perspective, and general composition within the wayside exhibit panel.

Sketches are reviewed and refined in multiple stages to establish accurate detail, exact dimensions, compelling composition, and a good fit within a wayside layout. The sketch leaves space for text. The artist must take into account the necessary margins, bleeds, and frame overlap of the wayside hardware.

Full-color rendering is developed, reviewed and corrected for accuracy, fit within the wayside layout, color reproduction quality, and to ensure consistency between text and art.



Final art is scanned at high-resolution and placed in the layout with final text, labels, and other graphics. The final artwork represents the best compilation of knowledge at the time. Date the original for future reference.

Selecting the Artist

Some artists are good at architectural detail, others capture people, natural scenes, wildlife, or scenes from specific historical time periods. It is important that the artist understand the subject matter to represent ideas accurately. An artist without subject-matter expertise may require a prohibitively large reference package.

Art Review and Approval

Expect this to be a learning process for both the artist and the park staff. Invest time and attention during every review to correct the content along the way. Pay attention to the details. Don't wait until the final review! Creating new artwork is a learning process for subject-matter experts and artists. Assume additional research will be needed throughout the process.

Revisions Are Cumulative
Once a detail or direction has been decided, don't go back to change it at a later review stage. The biggest changes should happen in early reviews. Later reviews are for fine-tuning the details only. Asking for big changes in composition or direction late in the game means delays, cost overruns, and missed deadlines.

Full-Scale Reviews
Sometimes artwork for waysides is created at the actual size of the wayside. This is not always practical. The artist may be working on a smaller scale. Print out actual-size review copies of the work-in-progress to be sure that the level of detail is appropriate for the size of the wayside.

On-Site Reviews
Consider reviewing the work-in-progress on site at the wayside location to ensure that the details match the view visitors will see.

What To Expect

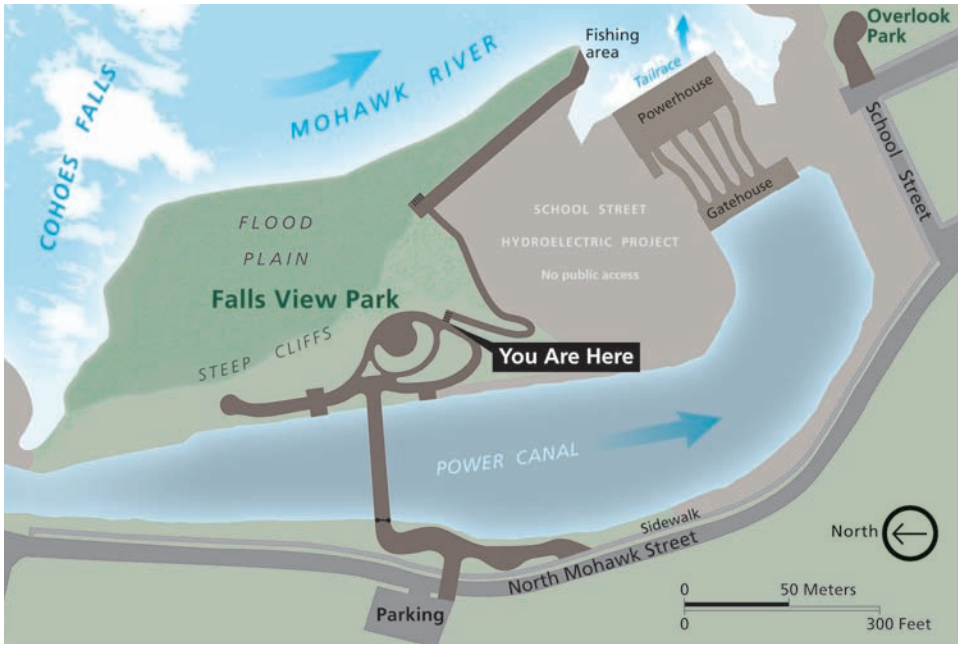
Creating new artwork as a part of a larger wayside project can significantly add to the cost and time it takes to complete a project. Begin early and develop art in tandem with the layout to avoid delays.

Links and Documents

HFC Commissioned Art Collection
http://www.nps.gov/hfc/products/art-collection.htm
Before spending time and money to develop new art, search the Harpers Ferry Center Commissioned Art Collection. This archive contains over 10,000 illustrations. Part of the collection is available online to federal employees. Most of the collection is owned by the National Park Service and can be freely reproduced.

Acquiring New Illustrations
http://www.nps.gov/hfc/products/waysides/index.htm
These guidelines and worksheets state the policies and procedures for commissioning any new artwork for the National Park Service. This can help in developing the artwork Scope of Work.

NPS Art Contracts
http://www.nps.gov/hfc/acquisition/contracts.htm
Harpers Ferry Center maintains several contracts with talented artists familiar with National Park Service requirements. The contracts have fixed rates, quality standards, and detailed specifications for use-rights.



Creating New Maps

Did You Know?

Harpers Ferry Center created Wayside Map Standards to establish a common language among National Park Service visitor-use maps.

Unlike most maps, wayside maps can only be used on-site. They need to be quickly understood and easily remembered. The wayside audience is mostly on foot. The **You Are Here** is the most important feature on orientation maps, which should provide only the information person needs to travel from the wayside (point A) to point B.

Map Guidelines

Visitors will likely use a combination of wayside maps and brochure maps for orientation purposes. Consistency in the look, feel, and function of all visitor-use maps will improve reader orientation and understanding. Map standards serve as a guide, not as a hard-and-fast set of rules.

Planning a Map
The installation location of a wayside affects the content of the map. Start by defining the purpose. A map may not be the best way to accomplish the goal!

Audience
Remember, a wayside audience is mobile. Visitors face a particular direction with a view of specific landscape and structural features. To work, the map must relate to the view.

Orientation
Wayside trailhead maps usually work best when they are oriented to match the direction viewers face. In contrast, most other types of maps generally work best when north is at the top.

Size and Scale
Map size and scale is based on the purpose, geographic area, and content. Scale must be considered before size. Scale is the amount of geographic area represented in a particular physical size. Size is the physical length and width of the map. Figure out the scale first, mock up the map, and then develop the wayside layout around it. Create a map at the same size as it will appear in the layout.

Content
Determine what geographical information and labels to include on the map. Gather resource maps to be used for base information, keeping in mind that these reference maps were created for different purposes. Make sure the map labels are consistent with park signs, wayside exhibit text, or park publications. Make a list of all relevant features (park areas, open water areas, drainages, roads, trails, etc.) and labels (*spelled correctly*) in order of importance. This helps the cartographer understand the map requirements.

Designing Tactile Wayside Maps
Tactile maps are not just regular printed maps with Braille or textures added. They are maps converted for low-vision users who may not be able to relate map features to the visible landscape. This PDF has more information.
http://www.nps.gov/hfc/accessibility/index.htm

Common Wayside Map Pitfalls

Map Goes Here. Never create a wayside layout with a box and a "map goes here" note. A poorly scaled map can be misleading and possibly dangerous to visitors. Once a map is produced, adding to the map area or changing the scale means delays, cost overruns, and missed deadlines.

Too Much Detail. Remember the audience and how they use maps. Can they understand where they are with a single glance? How much detail can they commit to memory as they walk away? For trailhead maps, limit key elements to what is within range of a typical day-hiker. Provide topo maps, brochures, tour maps, GPS units, or trail signs for more complex wayfinding.

One Size Does Not Fit All. Existing park brochure maps and older sketch maps of trails rarely do a good job when inserted into a large-format wayside layout. A simple map works best.

Links and Documents

Wayside Map Standards
Use these guidelines as a tool to plan, create, and evaluate your outdoor orientation maps.
http://www.nps.gov/hfc/products/waysides/way-process-maps.htm

Starter Map File
This Adobe Illustrator file contains tagged layers with preset features for lines, fonts, colors, and symbols to streamline making on-site orientation maps.
http://www.nps.gov/hfc/products/waysides/way-process-maps.htm

NPS Map Resources
This webpage contains downloadable park map files, resources like NPS recreation symbols, and information about the design and production of visitor-use maps.
http://data2.itc.nps.gov/hafe/hfc/carto.cfm

Models and Tactile Elements

Wayside exhibits are a primarily visual medium. For people with limited or no vision, tactile elements give greater access to the site's significance. For fully sighted visitors, tactile elements add richness that two-dimensional wayside exhibits do not provide.

What To Expect

Tactile elements are custom items. They require additional planning, design, prototyping, testing, and fabrication. To ensure success with visually-impaired audiences, consider getting input on design ideas at the outset.

Design Considerations

What is the best way to communicate concepts to visitors with visual impairments? A raised-line map can reveal geographic relationships effectively, but would not be a good choice for a steam engine. Bas relief can reveal the texture of an alligator but would not be appropriate for a cactus. Braille provides access for some visitors but is not used by all people with visual impairments.

A tactile element may be a single item or a combination of items on a single base. When planning a tactile element on a wayside think about how it will integrate with other graphics and text. Will it need its own text or caption? Will Braille labels be added? Will visitors with low vision know where to find it?

Fabrication Guidelines

Safety

Consider the use of materials in hot or cold climates. Avoid undercuts, or places where thin or narrow features are unsupported. At these weak points breaks are more likely to happen, leaving dangerous sharp edges. Watch out for small spaces that trap fingers.

Vertical Exaggeration
Items that project off the surface too far become handles for children and others and can break or bend a panel. A flatter tactile is less destructible. The more vertical exaggeration needed, the more important it is that the material be durable and strong.

Mounting
An important part of tactile design is the attachment method. Will it be surface mounted? Will fasteners hold it from behind? Will you need to drill holes through the panel, use security screws, or special tools for installation and removal? If the tactile elements are small, consider mounting them to a separate base. A base not only protects smaller objects from damage but visually sets off the object and provides a larger mounting surface.

Materials

Resin
High-impact resin plastics are available that look highly realistic when colored and will endure years of normal use.

Cast Metal
If the application requires decades of durability, bronze or other cast metal may be the correct choice. Cost may be a factor because metal casting is much more involved than plastics. Metal is also difficult and costly to color if the base metal color is not acceptable. Metal castings in direct sunlight may become too hot to touch.

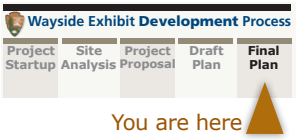
Plastics
Thermoformed plastics can be combined with full-color graphic layouts. This works well for limited-relief maps that include Braille labels.

Reference Package Requirements

Photos and Samples
A collection of pictures or samples is required to produce tactile models. Depending on the tactile element, a sample may be available (a natural specimen), but often pictures of animals, buildings, or objects may be necessary. Be sure to annotate the photos with a scale or dimensions.

Specifications
Clearly define the specifications in writing or in drawings to show size, scale, orientation, material, finish, and mounting method. Be thorough when specifying a tactile model; the outcome will only be as good as the directions are clear.

Tactile Maps
Tactile maps are not just regular printed maps with Braille or textures added. They are maps converted for low-vision users who may not be able to relate map features to the visible landscape. This webpage has more information.
http://www.nps.gov/hfc/accessibility/index.htm



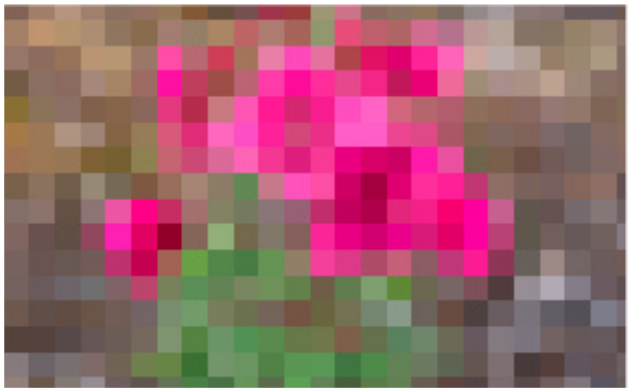
Final Wayside Plan

The Final Wayside Exhibit Plan is the last step in the planning and design process before the exhibits move into production. Changes to content and layout should be minimal at this point. The designers and planners adjust the final text, photos, maps, diagrams, and art for final review and approval before producing wayside exhibits.

Final Text Adjustments

Final Editing
The planner or an editor works directly in the InDesign exhibit file to correct spelling, grammar, or punctuation errors. Confirm all dates, facts, and labels. Add credit lines if required, and check for accuracy.

Final Typographic Treatment
The designer makes the final adjustments to line lengths to smooth out the rag, look for awkward line breaks, adjust word and letter spacing (kerning), remove extra spaces, check alignments with other elements, and make final image adjustments so that any text printing over an image will be legible.



Low-resolution image
(50 dpi at actual size)

High-resolution image
(200 dpi at actual size)

Place Final Graphics

Final Scans of Approved Art
Once the artwork is completed, reviewed, and approved, a high-resolution scan is made and placed in the layout file. Adjustments are made to the scan to improve legibility for any text or labels placed over the image.

Final Approved Maps
Final map files are placed in the layout. Map labels are cross-checked with the wayside panel text. For example, if the wayside text refers to the "Nature Center," the map label should not read "Visitor Center." If the text says "Army of the Potomac," the map label should not read "Union Troops."

Final High-Resolution Photos
All low-resolution graphics selected and approved will be replaced or updated with high-resolution graphics, once use-rights have been secured. A high-resolution file is at least 100–200 dpi at actual size of the final reproduction.

Production Files

Assemble the final high-resolution graphic files, InDesign layout files, and fonts, using file naming conventions for wayside exhibits. Make sure all graphics meet color management requirements.

File Naming Conventions
Refer to the document on this webpage for guidance on file naming and archiving.
http://www.nps.gov/hfc/products/waysides/way-grids.htm

Color Management for Designers and Cartographers
Managing image requirements for wayside fabrication requires a solid understanding of the imaging processes and how to manage color throughout design development and into production. Refer to the document on this webpage for color management.
http://www.nps.gov/hfc/products/waysides/way-grids.htm

Wayside Guide

Section C Wayside Production

The Wayside Exhibit Production Process chart at the beginning of Section C outlines six major stages of work. This section details fabrication, installation, and long-term maintenance.

Contents

64 Wayside Exhibit Production Process Chart

65 Production Files

67 Fabrication: Bases and Panels

69 Preparing the Site

71 Installation: Panels and Bases

73 Archive and Inventory

75 Maintenance

Wayside Exhibit Production Process

Summary Chart (For more detailed requirements see http://www.nps.gov/hfc/products/waysides)

Production Files

Based on the approved Wayside Exhibit Plan a production-ready package is assembled. The production package includes digital layout files, high-resolution graphic and map files, fonts, color proofs, and production notes for the fabricator.

Production Files

Review all layouts, printed full size
- Take the time to check for hard-to-see errors, and make final corrections

Assemble the production package
- Write production notes to guide the fabricator
- Print 11x17 color-correct copies of all layouts
- Burn all production files to disk (layouts, graphics, maps, fonts)
- Prepare base order form
- Gather custom base drawings
- Define tactile model specifications

Print final layouts for park records

Park identifies delivery location for panels and bases

Park writes a work order for site preparation and installation

Fabrication

Panels are imaged from digital files. Fabricator provides production proofs for review. Once corrections are made the panels are produced. Bases are fabricated and shipped.

Fabrication

Fabricator images production proofs
- Production proofs and samples are inspected and marked with any corrections

Panels are fabricated and shipped
- HFC takes delivery of panels, inspects, and ships to the park

Bases are fabricated and shipped to the park

Tactile models are fabricated and shipped

Preparing the Site

Park prepares wayside exhibit sites for installation, making certain sites are safe and accessible.

Site Prep

Secure permits and clearances

Make wayside exhibit pads accessible and safe

Clear the vista

Stake the sites

Remove existing signs

Installation

Park installs the exhibits according to installation plans and assembly instructions and ensures safety and accessibility at each site.

Installation

Shipping and receiving
- Park takes delivery and inspects shipments of panels and bases

Install bases
- Installation plan guides location, direction of view of each wayside
- Installation meets accessibility requirements

Install panels
- Fill in installation information on the sticker on the back of the panel
- After bases are securely in place, panels and tactile elements are installed

Prepare audio description of each wayside and its location

Conduct summative evaluation

Archive / Inventory

Production files are archived, back-up panels are inventoried and securely stored, warranty and graphics-use records are appropriately filed, final project data is input into Media Inventory Databse System (MIDS), and project accounts are closed.

Archive / Inventory

As-built files are returned by the fabricator and archived
- HFC maintains wayside archive for projects done via HFC

Backup panels are inventoried
- Park keeps backup panel in safe convenient location for easy replacement as necessary

Critical project materials are archived
- Warranty and use-rights agreements
- Final Wayside Exhibit Plan
- Production files and master files
- Original source materials like prints, negatives, or original art

Park updates MIDS data

Park enters FMSS data

Project accounts are closed

Maintenance

The park site manager is provided with a wayside exhibit maintenance kit and informed how to properly clean and maintain the new exhibit panels and bases. The park maintains the exhibits and replaces as needed.

Maintenance

Clean panels and bases
- Use the wayside exhibit maintenance kit, which includes written instructions and materials for maintaining the exhibit
- Regularly wax fiberglass panels

Touch up bases
- Repair scratches and chips

Replace deteriorated or damaged panels
- Keep a backup panel in storage
- Replace damaged panels with the backup panel and order a new backup

Clear the vista
- Perform regular maintenance to remove or trim obstacles

Maintain the site
- Ensure site conditions, wayside pad, entrances, and exit remain clear, safe, and accessible

You are here

Production Files

Once the Final Wayside Exhibit Plan is approved, production begins with assembling the digital graphics, design files, and manufacturing specifications needed to fabricate the wayside bases and panels.

Major Roles

Wayside Designer
reviews full-size proofs and makes corrections to files and prepares production-ready package.

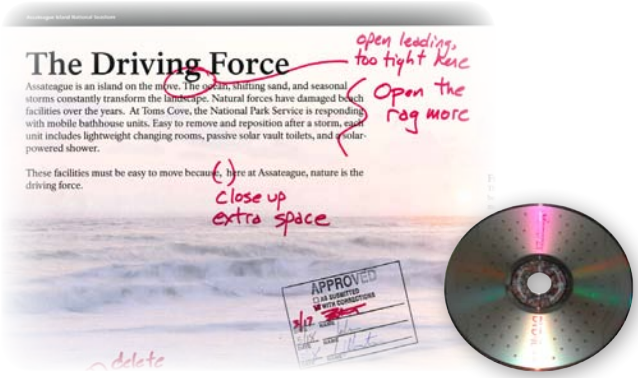
Wayside Planner
reviews full-size proofs.

Park Maintenance
picks delivery location, writes work order, reviews custom base drawings.

Start with a Final Full-Size Print Review

Up to this point in most wayside projects, panel layouts have been reviewed as scaled-prints, usually about 40 percent of the actual panel size. But before fabrication begins, it is recommended that all layouts be printed at actual size for a final, detailed review. Both the planner and designer review these full-size proofs. The park staff may also review them, but this is less common.

What To Look For
At this stage the review should not be about content. Look for things like extra spaces between words or letters, misalignment of elements, blemishes in graphics, and typographic refinements like kerning, rag, and legibility.

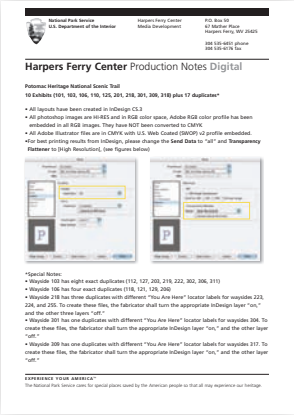


Portion of a full-size print showing corrections marked up during full-size print review stage. This is the last round of corrections before the job is burned to a disk and sent to the fabricator.

Elements of the Package

Printed Production Notes

The Production Notes document is a written set of instructions that direct the fabrication of wayside panels. It provides specifications like file type and version, and color-space, and special notes like non-printing layers or project-specific notes like duplicates with "You Are Here" label changes.



National Park Service
U.S. Department of the Interior

Harpers Ferry Center
Media Development

P.O. Box 50
67 Mother Place
Harpers Ferry, WV 25425

304 535-6032 phone
304 535-6176 fax

Harpers Ferry Center Production Notes Digital

Potomac Heritage National Scenic Trail
10 Exhibits (101, 103, 106, 110, 125, 201, 218, 301, 309, 318) plus 17 duplicates*

- All layouts have been created in InDesign CS.3
- All photoshop images are Hi-RES and in RGB color space, Adobe RGB color profile has been embedded in all RGB images. They have NOT been converted to CMYK
- All Adobe Illustrator files are in CMYK with U.S. Web Coated (SWOP) v2 profile embedded.
- For best printing results from InDesign, please change the **Send Data** to "all" and **Transparency Flattener** to [High Resolution], (see figures below)

*Special Notes:
- Wayside 103 has eight exact duplicates (112, 127, 203, 210, 222, 302, 306, 311)
- Wayside 106 has four exact duplicates (118, 121, 129, 206)
- Wayside 218 has three duplicates with different "You Are Here" locator labels for waysides 223, 224, and 256. To create these files, the fabricator shall turn the appropriate InDesign layer "on," and the other three layers "off."
- Wayside 301 has one duplicate with different "You Are Here" locator labels for waysides 304. To create these files, the fabricator shall turn the appropriate InDesign layer "on," and the other layer "off."
- Wayside 309 has one duplicates with different "You Are Here" locator labels for waysides 317. To create these files, the fabricator shall turn the appropriate InDesign layer "on," and the other layer "off."

EXPERIENCE YOUR AMERICA™
The National Park Service cares for special places saved by the American people so that all may experience our heritage.

Production Notes example

Color Copies of All Layouts

Final color copies of the layouts, printed at scale on 11x17 paper, are provided to the fabricator for cost-estimating purposes, as well as to show them what each panel should look like in its finished form.

Color Target Proofs

It is useful to provide the fabricator with color prints that reflect the intended color of the final panel. Called color target proofs, these can be generated in a variety of output materials. Color target proofs are less critical when a good color management process is in place.

Color Management for HFC Designers and Cartographers

http://www.nps.gov/hfc/products/waysides/index.htm

Digital Files on Disk

Digital files provided to the fabricator include the exhibit file, linked high-resolution graphic files, maps or other vector graphic files, and fonts.

Custom Base Drawings

Mounting wayside hardware onto existing railings, masonry structures, or other existing hardware will require detailed fabrication drawings. Wayside bases that are not standard NPS design will also require design drawings.

Installation Work Order

With the fabrication contract in place, a delivery location and date are established. The park writes a work order for wayside base installation and site preparation.

Tactile Model Specifications

Identify the model material, color, and method of reproduction and mounting. Provide a reference package with samples, photographs, and drawings showing layouts of multiple-object models, dimensions, and other specific details. List shop inspections needed for adequate review and approval.

Fabrication: Panels and Bases

Wayside exhibits are manufactured by a variety of contractors who specialize in panel imaging, base manufacturing, or both. Panels are produced from the digital files provided with the production-ready package. Bases are fabricated according to detailed shop drawings.

Base Fabrication

Material Choices
A variety of material choices are available for the bases and panels. Current information about materials is available on this webpage.
http://www.nps.gov/hfc/products/waysides/way-product-panels.htm

Base Fabrication Contracts
Harpers Ferry Center maintains several contracts with hardware fabricators for waysides and pedestrian signs. The bases are made according to NPS standards for design and materials.
http://www.nps.gov/hfc/acquisition/contracts.htm

Custom Base Shop Drawing
Create new shop drawings when mounting or other requirements call for detailed custom hardware solutions. Fabrication drawings can be created by HFC staff or hardware fabricators.

Major Roles

Production Manager
directs panel and base fabrication contracts, and inspects panels.

Wayside Designer
reviews production proofs and makes corrections to files.

Wayside Planner
reviews production proofs.

Panel Fabrication

Considerations

Fabrication is not finished when you receive your shipment. Panels and bases must be inspected right away. Any unacceptable parts will need to be corrected or re-fabricated. Allow time for this.

Wayside panels may be fabricated in several materials, each with different manufacturing processes and requirements. But all manufacturing should begin with a production proof and in some cases a material sample. Production proofs are inspected for color accuracy, print errors, and other flaws. Corrections are made and the panel is imaged and shipped to the Production Manager for final inspection. Park shipping address is confirmed and the park is notified when delivery will be made. The park needs a safe place to receive and store the panels and bases until installation is complete.

Panel Fabrication Contract
Harpers Ferry Center maintains several contracts with panel fabricators for wayside exhibits and pedestrian signs. They can produce a variety of panel types, including fiberglass, high-pressure laminate, porcelain enamel, and fused polycarbonate. Harpers Ferry Center staff provide final panel inspection for projects managed by the Center.
http://www.nps.gov/hfc/acquisition/contracts.htm

Production Proof
Different types of panels are reviewed using different types of proofs. In all cases a full- or half-size paper proof is obtained. It is important that the proofs accurately represent the final production color and material. Porcelain enamel and high-pressure laminate panels also require a material sample for accurate color proofing of certain colors. Changes are noted on the paper proofs along with a signature of approval, and returned to the fabricator. PDFs may be adequate to confirm the changes.

Inspection and Acceptance
Upon final panel inspection, the production manager will check fabrication quality, color accuracy, size, and overall consistency. Rejected panels are replaced. Panels are shipped to the park when the entire order is accepted.

Tactile Model Fabrication
Work with a skilled model maker who, in most cases, will not be the same vendor fabricating the panels or bases. Request a prototype or sample of work from the model maker and test or evaluate the sample with the target audience.

Preparing railing mounts at Obed Wild and Scenic River

Preparing the Site

Proper site preparation and base installation is essential to the success of outdoor interpretive exhibits. Wayside locations must be safe and should have an unrestricted view of the relevant landscape features. Consider the following recommendations for wayside installation.

Major Roles

Park Maintenance
prepares site for safe installation.

Park Interpreter
reviews site locations with park maintenance to ensure proper placement.

Vista Clearing
Park staff (maintenance, interpretation, and resource managers) identify specific obstacles to be removed for the wayside exhibit to be successful. Refer to initial planning documents for a list of obstacles to clear and address compliance issues. Once cleared, include regular maintenance at the site to keep the vista clear.

Custom Mounts
As shown above, waysides sometimes require custom mounting to existing railings, or other structures. The installation crew should have copies of approved base and installation drawings. The area may need to be closed to the public to ensure safe installation.

Permits and Clearances
Understand the necessary permits and clearances to install wayside exhibit bases, create paths or trails, or resurface wayside pads. Permissions and clearances should be secured well in advance of panel and base delivery.

Stake the Sites
Before digging any holes or pouring concrete, refer to the approved Wayside Proposal, which identifies specific site locations, and stake each site with one flag for each wayside base leg. Have a copy of the final layouts on hand to ensure that the location of the base will match the intended view of the wayside panel.

This wayside is not only inaccessible to someone in a wheelchair, but people on foot would struggle to reach it and stay balanced.

Accessibility
Wayside exhibits must be installed at heights and angles favorable for viewing by everyone, including wheelchair users. For a low-profile exhibit the recommended height is 32 inches from the bottom of the exhibit frame to the finished grade. For an upright or bulletin board, the recommended height is between 24 and 36 inches from the bottom of the exhibit frame to the finished grade, depending on the panel size.

Wayside Pad
Accessibility guidelines recommend that wayside exhibits have level, firm, hard-surfaced, and slip-resistant exhibit pads.

Removing Existing Signs
Refer to the approved Wayside Proposal, which identifies the removal of any existing signs before installing new waysides. Some parks may have a separate installation plan or work order to remove existing signs.

Wayside bases delivered to Harpers Ferry National Historical Park

You are here

Installation: Bases and Panels

Upon receipt of the panels and bases, the park directs the installation. The first task is to open the crates immediately and inspect the shipment for damage or missing items.

Shipping and Receiving

Identify a location, like a maintenance warehouse, to receive shipments. Inform the warehouse staff of delivery details, including the expected delivery date, size and type of delivery truck (to determine whether a forklift is needed), and size and weight of the shipment.

Major Roles

Park Maintenance installs wayside bases and panels.

Inspection

Immediately upon receiving a delivery, the panels and bases must be inspected for damage or missing items. Uncrate the panels and bases and recycle the packing materials. Check the packing slip against the original order and check the items delivered against these lists. Contact the vendor and Contracting Officer or COR (Contracting Officer's Representative) as soon as possible if items are missing. Keep small parts together with the bases. Make sure there is a manufacturer's sticker on the back of each panel.

Wayside Base Installation
Install bases plumb and level. Follow instructions provided with each wayside base delivery. Refer to these written instructions for installation procedures.

Wayside Installation Video
http://www.nps.gov/hfc/products/waysides/way-service-base-install.htm

Panel Installation
Once the bases are securely installed, installation of the panels can begin. Before installing panels, fill in any relevant information like the installation date and exhibit number on the sticker on the back of the panel.

Tactile Model Installation
If tactile elements require drilling holes through the wayside, use a drill template for correct placement of holes. It is recommended that the fabricator provide security screws and the appropriate screwdriver for mounting a tactile model. Keep the security screwdriver with your cleaning kit (*see page 75*).

Bulletin Cases

After a bulletin case is installed, store the keys in a safe place. Inspect bulletin cases regularly for faded or out-of-date content.

Audio Description

Once the waysides are installed, audio description of each wayside and its location can be done. Audio descriptions can be made available to visitors through a variety of new technologies.

damaged wayside
Gulf Islands National Seashore

You are here

Archive and Inventory

After installation several tasks must be completed to close out the project successfully. These are listed on the Wayside Exhibit Production Process chart. The most important is to archive the production files. The cost of replacing a wayside from archived files is a fraction of the cost of starting over. If your project is managed by Harpers Ferry Center, archived records are maintained at the Center. Otherwise you will need to archive the following:

Major Roles

Production Manager archives product warrantees, production files, original graphics, and graphic use-rights agreements.

As-Built Files
During the production process, an error may be corrected or a change made. Changes made during production are often made by the fabricator. Make sure the files archived for future replacement are the most recent.

Warranty
Manufacturing companies often provide a written warranty for their products. Harpers Ferry Center maintains all warranty information for panels and bases produced under its contracts.

Master Files
Keep all layered master graphic files with the production files for each wayside. These are Photoshop files that contain original unedited images. Often these files are flattened for production, but the layers of information should be kept in case future changes are needed.

Did You Know?

Panels last 2–25 years averaging about 5 years before replacement is necessary.

All waysides produced by Harpers Ferry Center are maintained in green three-ring binders organized by park name.

Did You Know?

Harpers Ferry Center has digital archives for wayside projects for 212 parks.

Keep Final Copies
Keep a printed copy of the final wayside panels or an archived PDF file to easily identify the number, date, content, and size of each of your wayside exhibits.

Use-Rights Agreements
All images not in the public domain must have a use-rights agreement that documents the payment and terms or conditions of the use. Keep this document in a safe, accessible, place with a printed copy of the final waysides.

14,000 waysides are listed in the MIDS database. March 2009

Source Materials
All scans, prints, slides, negatives, and large-format color transparencies are returned to the sources. Duplicates are stored with the project's production-ready package for future updates or replacement.

MIDS

The NPS Media Inventory Database System (MIDS) contains data on the content and condition of National Park Service interpretive media, including wayside exhibits. MIDS permits parks to add new media inventory records, update existing records, or delete obsolete records. All of these steps should be taken to keep the MIDS database up-to-date.

FMSS

Waysides are entered into the NPS Facility Management Software System (FMSS) as an interpretive media asset. Refer to interpretive media business practices and inspection guidance documents for specific information.

Create a wayside cleaning kit: backpack, paper towels, graffiti remover, window cleaner, fiberglass wax, polishing cloth, written instructions for panel replacement, and a copy of the manufacturer's information.

You are here

Maintenance

Wayside exhibits are among the most durable of all interpretive media, usually requiring little maintenance, but their usefulness can be enhanced and extended by periodic inspection and care. We recommend that each wayside exhibit be examined and cleaned twice each year.

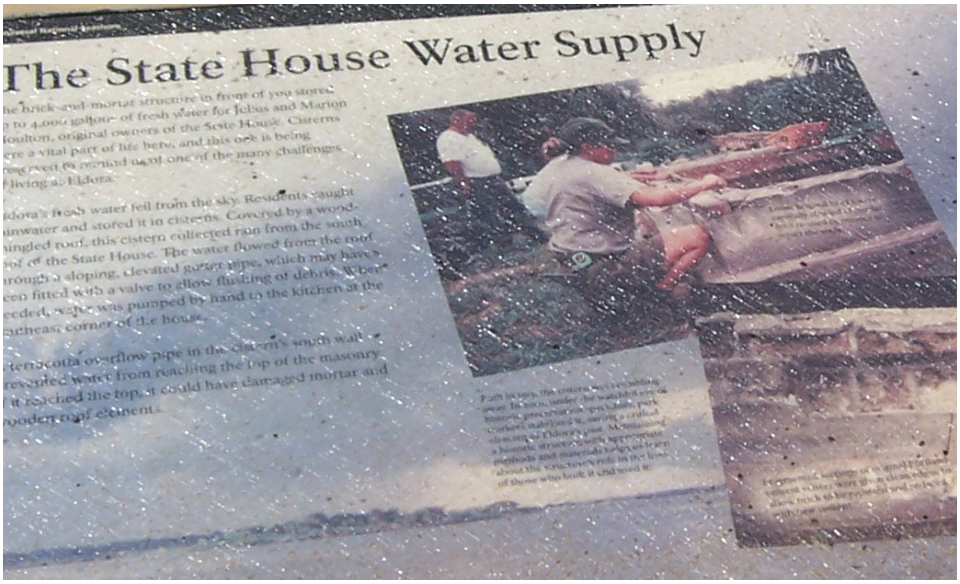
Major Roles

Park Staff
performs routine inspection and cleaning.

Cleaning
Regular cleaning of wayside panels, bases, and tactile models with mild soap and water will maintain the general appearance of the wayside and will remove dirt and debris that can cause more damage. Keep a well-stocked cleaning kit (*shown above*), including any special instructions and tools for removing or replacing panels or tactile models.

FMSS
Follow regular maintenance procedures as required according to the Facility Management Software System.

This panel at Canaveral National Seashore is showing extreme deterioration from weathering and should be replaced.



Wayside Panel Maintenance

Cleaning each exhibit with mild soap and water before inspection can reveal hidden damage, remove dirt or debris that may cause more damage, and improve the general appearance of the exhibit.

Problem	Solution
Common surface dirt, including bird droppings	Wash with mild soap or use window cleaner
Spray paint (all types) or permanent markers	Apply graffiti remover
Small Chips	Wash area and apply auto touch-up paint
Extreme deterioration, like large chips, rust spots, sharp edges, faded text or graphics	Replace panel

Digital Products (HPL, Fiberglass, Fused Polycarbonate)

Problem	Solution
Common surface dirt	Wash with mild soap and water, then apply marine wax or fiberglass wax
Spray paint (all types) or permanent markers	Apply graffiti remover
Extreme deterioration, like weathering, vandalism, faded text or graphics, delaminating	Replace panel

This wayside base at Canaveral National Seashore is showing extreme deterioration from weathering and should be refinished.

Wayside Base Maintenance

Cleaning each exhibit base with mild soap and water before inspection can reveal hidden damage, remove dirt or debris that may cause more damage, and improve the general appearance of the exhibit.

Touch Up Painted Aluminum Bases

Minor scratches and paint chips can be repaired by applying small amounts of paint according to the following procedures:

Sand Area
By hand or orbital sander, first use 80-grit sandpaper, then smooth with 100-grit sandpaper.

Clean
Wipe with a lint-free rag, using a solvent like enamel thinner or lacquer thinner. Wipe solvent off immediately. Do not touch the surface after cleaning.

Mix Catalyst and Paint
Mix catalyst and paint following manufacturer's specifications. Paint will become too glossy and brittle with too much catalyst. With too little catalyst the paint will not cure properly and will fade quickly. Mix only what you can use in two hours.

Apply Paint
Depending on the amount of surface to cover, use a disposable artist's brush, roller, or sprayer (spraying requires reducer and thinner). Stipple the fresh paint using a pipe cleaner folded in half to simulate the original textured finish. Air temperature at time of application should be from 65 to 85 degrees Fahrenheit. Paint dries to the touch in 3 hours, is workable in 8–10 hours, and cures in 2–3 days under normal conditions.

Refinishing

If the surface of the wayside exhibit base has suffered extensive damage, the entire base can be repainted. Contact Harpers Ferry Center for a video guide to refinishing NPS wayside hardware in the field.

Replacement
Time, budget, logistical, and environmental considerations associated with refinishing wayside exhibit bases in the field may suggest that replacing bases is a better alternative than repairing them. New bases typically cost under $1,000. Take the old bases to your local metal recycling center.

Vista Clearing and Site Maintenance
Park staff (maintenance, interpretation, and resource management) work together to inspect wayside vistas routinely to identify specific obstacles that may need to be removed or trimmed. Perform regular maintenance on the site to keep the vista clear.

A

Accessibility 24, 27, 29, 31, 37, 53, 64, 70

See also Audio

See also Braille

See also Tactile

See also tactile

Archive 24, 38–39, 55, 64, 73–74

Audience 5, 7, 10, 14, 18, 29, 36, 47–49, 56–58, 68

Audio 9, 10, 22

B

Base 10, 19, 24, 27, 30, 32, 34–35, 41, 57–59, 64, 65, 66–73, 75, 77, 82

See also Low-profile

See also Upright

Braille 9, 22, 57–59

C

Cartographer 24, 40, 57, 61, 66, 83

Case Study 43–46

Cleaning 9, 24, 64, 72, 75–77

Color 32, 34, 42, 47, 54–55, 57, 59, 61, 64, 66, 68

See also Color Management

Color Management 61, 83

Common Pitfalls 22, 33, 36, 47, 49, 57

Contracts 23–24, 28, 55, 67–68, 71, 73, 83

Credits 39, 60 *See also* Use-Rights

Custom 20, 24, 32–33, 58, 64, 65–67, 69

D

Data 24, 27, 32, 34–35, 37, 39, 57, 64, 74, 83

Designer 27, 30–34, 38–47, 53, 60, 61, 65–67

Did You Know? 12, 41, 43, 48, 56, 73, 74

Digital Files 27, 33, 39, 64, 65–67, 74

See also High-resolution

See also Production files

E

Evaluation 10, 24, 27, 29, 53, 64, 68

F

FMSS 64, 74–75

G

GPS 22, 32, 34, 57

Graphics 11–13, 17, 29, 73–74

H

High-resolution 27, 54, 61, 64, 65–67

See also Production files

I

Illustrator 40, 54–55, 57

Inspection 9, 65–68, 71, 75–77

See also Review and Approval

Installation 10, 24, 32, 33, 68–72

Interpretation 7–10, 17, 23–24, 29, 36, 49

See also Park Interpreter

Inventory 73–74

K

Kiosks 20

L

Landscape 7–15, 17, 30, 32, 38, 40, 42, 45, 47–48, 54, 56–57, 59, 69–70

Layout 12, 24, 27, 31, 35, 38, 40–43, 47–48, 53–55, 57, 59–61, 65–66, 70

Low-profile 7, 11–17, 70, 78

M

Maintenance 7, 9, 10, 24, 31–33, 35, 62, 64, 69, 75–78

Map 18–19, 22–24, 27, 30–35, 37–38, 40, 53, 56–61, 64, 66, 73

MIDS 64, 73, 74

O

Orientation 10, 17–19, 22, 27, 29, 34, 36, 56–57, 59

P

Panel 15–18, 20, 32, 34–35, 41–43, 59–61, 82

Park Interpreter 30, 35–36, 38, 40, 48, 69, 78

Park Maintenance (staff) 23, 24, 27, 35, 65–66, 69, 71

Park Manager 23–24, 35

See also Superintendent

Permits 64, 69, 74

Planner 30, 32, 34–38, 40, 53, 60, 65, 67

Production files 40, 61, 64, 65–67, 73

Production Manager 67–68, 73

Project Lead 23–24, 27, 28

R

Reference 23, 27, 33, 38–40, 52, 54–55, 59, 66, 73

Research 29, 33, 38–39

Resources 22, 24, 27, 28–30, 33, 52, 57, 83

Review and Approval 23–24, 27, 34–35, 38–40, 53–55, 60, 64, 65–68

See also Inspection

Roles 27, 29–30, 34, 38, 40, 65, 67, 69, 71, 73, 75

S

Safety 9, 17–18, 20–22, 31, 48, 58, 64

Shipping 64, 68, 71

Sign Program 22, 41, 81

Site-specific 7–10, 22, 27, 29, 36, 38–39, 45

Specifications 41, 55, 59, 64, 65–66

Superintendent 23–24

See also Park Manager

T

Tactile 9, 15, 27, 40, 57–59, 64, 66, 68, 72, 75, 83–84

Team 23–24, 27, 28, 30, 32, 34, 35, 40, 53

Text 11–12, 14, 16, 18, 21–22, 24, 27, 40–54, 57–58, 60–61, 76

Things To Consider 53

Tools 52, 59, 75

Typography 41, 47

U

Upright 7, 17–22, 70

Use-Rights 27, 38–39, 55, 61, 73

V

Vista Clearing 9, 24, 35, 64, 69, 78

W

Wayfinding 17, 22, 57

What to Expect 31, 35, 39, 55, 58

Writer 48–52

The following Web addresses for in-depth webpages are listed in the order in which they appear in the Guide.

Section A Site-Specific Media and Wayfinding

Interpretive Media Selection
http://www.nps.gov/hfc/products/ip-media-select.htm

Evaluations and Visitor Use Studies
http://www.nps.gov/hfc/products/evaluate.htm

Foundations of Interpretation
http://www.eppley.org/index.php?main_page=index&cPath=40

National Park Service Sign Program
http://www.nps.gov/hfc/products/uniguide.htm

Park Publications and Trail Guides
http://www.nps.gov/hfc/products/pubs/

National Park Service Maps
http://www.nps.gov/hfc/carto/index.htm

Section B Wayside Exhibit Development Process chart

General Information
http://www.nps.gov/hfc/products/waysides/

Project Startup

Long Range Interpretive Plans
http://www.nps.gov/hfc/products/ip-lrip.htm

Developing a Wayside Exhibit Team
http://www.nps.gov/hfc/products/waysides/way-team.htm

Interpretive Media Selection
http://www.nps.gov/hfc/products/ip-media-select.htm

Checklist To Evaluate Your Wayside Exhibits
http://www.nps.gov/hfc/products/waysides/way-process-evaluate.htm

Accessibility Rules and Recommendations
http://www.nps.gov/hfc/accessibility/index.htm

Evaluations and Visitor Use Studies
http://www.nps.gov/hfc/products/evaluate.htm

Wayside Exhibit Cost Estimating
http://www.nps.gov/hfc/products/waysides/way-cost-estimating.htm

Section B continued

Site Analysis

Choose Panel Material
http://www.nps.gov/hfc/products/waysides/way-product-panels.htm

Choose Base Structure
http://www.nps.gov/hfc/products/waysides/way-product-bases-low.htm

Research and Graphic Acquisition

Photo Release Form
http://www.nps.gov/hfc/products/waysides/way-graphics.htm

Standards for Digital Image Files
http://www.nps.gov/hfc/products/waysides/way-graphics.htm

Design

NPS Wayside Grids
http://www.nps.gov/hfc/products/waysides/way-grids.htm

NPS Typefaces
http://www.graphics.nps.gov/typefaces.htm

Writing

Examples of Wayside Writing
http://www.nps.gov/hfc/products/waysides/way-samples.htm

Interpretive Foundations
http://www.nps.gov/idp/interp/101/foundationscurriculum.pdf

Effective Interpretive Writing Tel broadcast 2008-05-09
http://www.nps.gov/hfc/products/waysides/way-process-writing.htm

Bilingual Waysides
http://www.nps.gov/hfc/products/waysides/way-process-language.htm

Editorial Style Guide
http://www.nps.gov/hfc/products/waysides/way-process-writing.htm

Spanish Style Guide
http://www.nps.gov/hfc/products/waysides/way-process-language.htm

Section B continued

Creating New Illustrations

HFC Commissioned Art Collection
http://www.nps.gov/hfc/products/art-collection.htm

Acquiring New Illustrations
http://www.nps.gov/hfc/products/waysides/index.htm

NPS Art Contracts
http://www.nps.gov/hfc/acquisition/contracts.htm

Creating New Maps

Designing Tactile Wayside Maps
http://www.nps.gov/hfc/accessibility/index.htm

Wayside Map Standards
http://www.nps.gov/hfc/products/waysides/way-process-maps.htm

Starter Map File
http://www.nps.gov/hfc/products/waysides/way-process-maps.htm

NPS Map Resources
http://data2.itc.nps.gov/hafe/hfc/carto.cfm

Tactile Elements

Designing Tactile Wayside Maps
http://www.nps.gov/hfc/accessibility/index.htm

Production Files

File Naming Conventions
http://www.nps.gov/hfc/products/waysides/way-grids.htm

Color Management for Designers and Cartographers
http://www.nps.gov/hfc/products/waysides/index.htm

Section C Wayside Exhibit Production Process chart

General Information
http://www.nps.gov/hfc/products/waysides/index.htm

Base and Panel Fabrication

Material Choices
http://www.nps.gov/hfc/products/waysides/way-product-panels.htm

Base Fabrication Contracts
http://www.nps.gov/hfc/acquisition/contracts.htm

Panel Fabrication Contract
http://www.nps.gov/hfc/acquisition/contracts.htm

Installation

Wayside Installation Video
http://www.nps.gov/hfc/products/waysides/way-service-base-install.htm