Development Guidelines
Mount Rainier National Park
Mount Baker-Snoqualmie National Forest
Wenatchee National Forest
DEVELOPMENT GUIDELINES

Mather Memorial Parkway

August 1991

Prepared by
United States Department of the Interior / National Park Service

in cooperation with
Mount Baker-Snoqualmie National Forest
Wenatchee National Forest
Federal Highway Administration
Washington State Department of Transportation
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INTRODUCTION

Mather Memorial Parkway (MMP) traverses portions of Mt. Baker/Snoqualmie National Forest, Wenatchee National Forest, and Mount Rainier National Park. A legal proclamation, a land classification order, signed by the secretary of agriculture, and an executive order signed by the secretary of the interior in 1931 established the parkway, a 75-mile portion of State Route 410 (SR 410). However, its existence is basically unknown to the visiting public. A joint effort is being undertaken by the U.S. Forest Service, the National Park Service, the Federal Highway Administration, and the Washington State Department of Transportation (WSDOT) to rehabilitate the parkway. This effort will require a unified approach to design, detailing, maintenance, and interpretation. The following guidelines are the initial results of this effort.

The character of the parkway has remained basically unchanged since its construction. These two photographs were taken shortly after construction was completed.
PHILOSOPHY AND OBJECTIVES

The guiding philosophy for modifications along the parkway is to perpetuate and communicate the respect and protection of the aesthetic, natural resource, and recreational values that were common to land-managing agencies in the 1930s. Modifications to accommodate visitor use and needs along the corridor should promote reasonable consistency and continuity throughout. In addition, the following objectives will be emphasized:

- Provide convenient access and parking for views and areas of special interest.
- Provide safe and functional visitor use facilities throughout the parkway.
- Provide a managed transition zone adjacent to the roadway and other development that minimizes intrusion and damage to natural resources.
- Develop guidelines for integrated roadside detailing, maintenance, signs, and interpretive concepts.

This document provides a foundation for the development of a unified and unique identity for Mather Memorial Parkway. The document primarily gives guidance in areas of visual and aesthetic considerations. Rather than providing final design details, it is a starting point for their development. Although safety and design standards will change overtime, every effort should be made to ensure that they adhere to the spirit of the concepts presented here.
The design theme or style established for the parkway is “rustic Cascadian,” which is characterized by large-scale design elements of native materials, primarily quarried stone and timber. This theme should continue to be the guide for modifications of site and architectural detailing and new construction throughout the parkway.

Rustic Cascadian architecture emphasizes craftsmanship, materials detailing, proportion and mass of structural elements, and an organic quality – as if it has grown from the site.
DETAILING

To maintain continuity throughout the parkway, a process has been developed for evaluating site options, types of material, and detailing to use in various situations. This detailing/material selection process is as follows.

**Natural Site Detailing**

Natural site detailing should be the preferred approach in all locations where native rather than man-made site materials can be used to meet design needs and also blend with the site.

**Quarried Stone Detailing**

Quarried stone detailing will be appropriate only if it meets the following use requirements:

- An adequate and compatible source of material is available.
- The stonework detailing is proposed in selected areas as a permanent, long-term, ground contact solution.
- The stonework detailing is an integral visual element in areas where it will be seen or used by many visitors – such as the inboard faces of guardwalls, bridge abutments, tunnel entrances, signs, interpretive waysides, viewpoints, and visitor centers.

**Timber Detailing**

Timber detailing should be appropriate if the timber structures are: a visual feature or focal point themselves (entrance gateways, signs, etc.); an integral visual element (guardrail posts, railing elements, signs, etc.); or are in a high visitor use areas (barriers, signs, etc.).

**Detailing with Other Material**

Generally, construction with materials other than the ones previously mentioned should be avoided. Realistically this is not always possible.

If it can be demonstrated that alternative materials can provide significant benefits without compromising aesthetic, historic, or resource concerns, they should be considered during the design process.

The most important element to be considered is visual appearance of the final product and whether it is compatible with the proposed theme and visual character of the parkway.

If no significant benefit of alternative materials can be shown, traditional materials should be used for construction.
SIGNS

Developing a unified coordinated approach to signs is probably one of the most important elements in creating a unique identity for the parkway. Signs are the most visible and important man-made structures that visitors see from the parkway. The signs need to be easy to read and clearly convey orientation and traffic safety information, and they must be carefully designed and located to avoid creating hazards to drivers while allowing convenient maintenance.

The guidelines and examples given in this document are not meant to replace a comprehensive sign plan, but rather to give guidance in the development of one. For the parkway to be recognized as a unique entity, the various managing agencies will need to coordinate and develop a unified sign plan that addresses the many legitimate technical and maintenance concerns that are beyond the scope of this guideline. The final color, size, mounting height, material, text, etc. need to be developed for each type of sign.

Entrance Signs

Entrance signs should be simple large monolithic native stone panels with logo and MMP labeling that are flanked by smaller stone panels with the USFS identification at the Mt. Baker/Snoqualmie and Wenatchee national forest boundaries. At the Crystal Mountain and Chinook Pass entrances to Mount Rainier National Park, the information on existing entrance arches should be reinforced by the addition of a down-scaled-size MMP sign to indicate continuation of the parkway through the park. This sign will have the same information as the larger signs, but will only be 6’ x 3.5’. All stone signs or other signs without breakaway features should be outside the clear zone.

Note: For reproduction purposes, the MMP logo is available through the NPS Denver Service Center, Graphics Division.
Intermediate Directional Signs

These stone signs with routed wood panels should be at major intersections along the MMP (e.g., Crystal Mountain, White River, SR 123, etc.). Signs parallel to the parkway and facing the intersecting road should have the standard MMP logo in the center with smaller directional information panels on each side. Signs perpendicular to the parkway should have a stone support with a routed wood panel. The panel should be the standard USFS or NPS shape with the MMP logo and roadway destination. The typical sketches show a front view and two side views.
Interpretive Approach Signs

Signs that advise motorists that they are approaching an interpretive pullout should be ¼ mile ahead of the pullout for each direction of traffic flow. These signs should be routed wood, contain the name of the area and the international interpretation symbol, and show the MMP logo, which is an inset porcelain enameled medallion. Signs should use the appropriate color scheme, be sited in a readily visible location, and be large enough to be easily read from a vehicle travelling at 45 m.p.h.

All wooden signs within the clear zone should adhere to WSDOT breakaway standards. Sign panels and text should be sized in accordance with the NPS Sign Plan Guidelines for the appropriate design speed category.

Milepost Markers

Wooden milepost markers will be used throughout the length of the parkway. Markings will be based on the WSDOT milepost marking system. This system will help facilitate the development of an integrated interpretive plan and informational brochures. Areas of interest can easily be identified and referenced in the publications and readily located on the ground by visitors. This system will work equally well regardless of the direction the visitor is traveling.
Interpretive Displays

Using the MMP logo as an identifying element, signs that are distinctive from existing NPS and USFS types and specific to the parkway should be developed. These signs should use the appropriate MMP color scheme (discussed later) and type style for text and graphics.

Stone waysides should use the same type of stone and masonry detailing as stone guard walls, directional signs, etc. A flat, smooth surface should be provided for attaching interpretive panels. Barrier-free access should be provided from the parking areas to the interpretive display.

Stone curbs should be used where the public is invited to step out of their cars, such as at interpretive waysides and other areas of concentrated visitor use.
Timber waysides should only be used in areas where vandalism problems are minimal. Stone masonry work should be similar to stone waysides, stone guard walls, etc. Wooden rails should be #1 pressure-treated Douglas fir or better.

Directional/Informational Signs

The standard NPS and USFS recreation/cultural area symbols should be used for normal directional/informational signs for facilities such as campgrounds and picnic areas that occur along the parkway. Areas of more intensive development or special interest, such as the Sunrise intersection, Crystal Mountain Ski Area, etc., will use distinctive MMP signs.

Regulatory Signs

Regulatory signs should conform to MUTCD standards. Signs should be mounted on wooden posts similar to other MMP signs.
COLOR SCHEMES

A unified color scheme will be developed for use on all facilities within the MMP corridor. This will promote a sense of continuity along the parkway and help develop a uniform identity. Slightly different palettes will be used for areas on the east and west sides of the Cascade Divide. Although the colors will all be similar, darker shades will be used on the east side to compensate for a more open landscape and brighter, harsher lighting conditions. Westside schemes will incorporate lighter shades for better visibility in the denser vegetation and more subdued lighting conditions.

Different color schemes will be developed for public facilities that are designed to attract the attention of visitors versus administrative buildings that have no public function. Public buildings will feature lighter, brighter shades and also include accent colors to help enhance their visibility. Administrative buildings will use darker, more somber shades to help them blend into the landscape and reduce the amount of attention that they attract.

Roofs typically should be cedar shakes or composition shingles of a similar color. Existing painted metal roofs and other types of roofs that can be painted should use a compatible color chosen from the color charts.
Color Charts

**Public Buildings**

<table>
<thead>
<tr>
<th>West</th>
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<tbody>
<tr>
<td>BODY PP #3635</td>
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<td>TRIM PP #2633</td>
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<tr>
<td>ACCENT #1 PP #4010</td>
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<td>ACCENT #2 PP #4066</td>
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**Administrative Buildings**

<table>
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<td>TRIM PP #3634</td>
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<tr>
<td>ACCENT PP #7011</td>
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</tbody>
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All color references are from the Pittsburg Paint Co. Substitutes, if carefully chosen, should work equally well.
STRUCTURES

Bridges

Native stone or native stone veneer should be used on visible inboard faces. Outboard faces should be evaluated individually to determine their visual sensitivity and appropriate type of treatment. Parapet walls on the bridge should be continued into guardwalls (off the bridge) that flare and taper into the ground, hillsides, or rock formations.

Existing bridges with incompatible railing designs should be retrofit with new rails that are similar to the following designs. In cases where the structure of the bridge will not support solid stone masonry, stone veneer or similar simulated stone rails may be substituted.
Retaining Walls

Native stone walls or walls of similar character should be used where visible from the parkway. Wall ends should be flared and tapered into the ground, hillsides, or rock formations. If gabions are used, they should be sloped and curved to blend with the site and covered with soil and revegetated as on other fill slopes.

Gabions should not be used in places where they will be highly visible to the public. Walls may be constructed primarily of reinforced mortared stone masonry, concrete with stone veneer, or dry-laid construction in areas where it is deemed appropriate.

Artificial Stone

Recent development in the concrete industry has refined surface treatment techniques that allow the creation of very realistic simulated stone surfaces through high relief form liners. Walls constructed using these methods may be substituted for natural stone, in approved situations, where final appearance and durability will not be seriously compromised.
BARRIERS

Natural barriers and guardrails are the two major types of barriers. Natural barriers are used primarily for traffic control and to prevent parking in inappropriate areas. Guardrails are used to provide protection from safety hazards along the roadway.

The types of barriers cannot be the same for the entire parkway due to aesthetic site considerations and maintenance concerns (repair costs, snow loading and removal, etc.); however, barrier types should be consistent with the overall theme. Following are the acceptable barrier types and the preferred areas for their use.

Natural Barriers

For traffic control, use of natural elements should be emphasized whenever possible. These natural barriers should maintain the aesthetics of the natural surroundings and be almost maintenance free. Barriers can be created by mounding, boulder placement, planting, etc., which should be evaluated on a site-by-site basis to ensure that the results will blend naturally with the surrounding environment. Some examples of these treatments are shown below.

Mounds. Barriers created by mounding should be considered in areas where there is sufficient space, soil, and vegetation to blend the mounds with existing surrounding landforms. The constructed mounds should flow or undulate to match the adjacent terrain. Berms in the shape of windrows should be avoided. Slopes of mounds should not exceed 2:1; 3:1 and 4:1 are preferable. Slopes steeper than 4:1 should only be used where special conditions exist.

Mounds and berms may substitute for guardrails under certain circumstances where adequate space for construction is available.
**Plantings.** Roadside plantings can be used to control unauthorized vehicular access into roadside areas. Plants used within the clear zone should be limited to shrubs or small trees with an ultimate growth size of less than 6" dbh. If trees are used, they should be planted an appropriate distance from the edge of the pavement to prevent limbs from drooping across the road during periods of heavy snow or ice. All plant materials should be indigenous species and planted in natural-appearing patterns.

**Boulder Placement.** Rock barriers should be considered in areas where the existing natural setting has rock outcrops and minimal vegetation. Boulders should be grouped and partially buried. A “dragons tooth” appearance (equal spacing and alignment of boulders) should be avoided. Rock barriers should only be used in areas that are outside the designated clear zone.
Guardrails

Three types of guardrail should be used. The first is a native stone veneer guardwall, which is generally used in conjunction with a retaining wall or bridge as shown on the previous sketch of a retaining wall. The second type is a timber guardrail. This style should be used on the lower, more heavily forested sections of the road where minimal snow removal is required. The ends of the guardrail should be flared away from the road and tapered into the adjacent ground or hillside.

The following drawings may be used for conceptual design. All stone guardwalls and various types of guardrails implemented should conform to approved, crash-tested design. Simulated stone may be substituted for native stone in approved locations where appearance and durability will not be significantly compromised.
Ground termination

Timber guardrail
The third type is the standard weathering steel W beam guardrail currently in use between Cayuse and Chinook passes. This type of guardrail should be used, as it currently is, in areas where guardrails are frequently damaged by snowblowers and road plows opening the parkway in the spring. This type of guardrail should also be used on the east side of Chinook Pass where it blends well with browns, beiges, and open forest of the drier east side. As with the timber rail, the ends should be flared away from the road and tapered down into the adjacent ground or hillside.
Gates should be finished in the appropriate eastside or westside color scheme and signed according to the applicable standard.
Entry Arch and Gate Detail

The concept and appearance of the portal arches at the entrances to Mount Rainier National Park should conform to the spirit of the following drawings.

SPECIFICATIONS

The following specifications should be used as a guide to help maintain a consistent visual character throughout the parkway.

Stone Masonry

Generally stone should be at least 5" thick and 12" wide or 1½ times their thickness, whichever is greater. Stones should also be approximately 1½ times as long as they are wide. At least 50 percent of the total volume of work should consist of stones of 1 cubic foot or larger. Stones should be dressed to remove any thin or weak portions. Face stones should be dressed to achieve bed and joint lines with a maximum ¾" variation from true. Corners of stones at bed and joint lines should be rounded with a radius of approximately 1". Exposed faces should present an irregular rock surface, with projections beyond true pitch limited to 1½" and no concave surfaces below the pitch line. No tool or drill marks should be visible on any exposed faces. All mortar joints should be raked to a depth of 1½" to 3/4". Mortar beds should be 1" thick ±½" and should not extend through more than five stones.

Wood Construction

All new wood structures and buildings should be constructed in the rustic Cascadian style. This includes an emphasis on the use of heavy timbers, shingles or shakes, and quarried stone. The structures should contain unique or interesting details that help exhibit the quality craftsmanship of the construction. Surfaces of wood should be rough sawn or hand hewn to reinforce the rustic character and should be painted or stained with the appropriate eastside or westside color scheme.

NOTE: All wooden material should be chromated copper arsenate (CCA) pressure treated (with brown tint) to 0.40 lbs/ft³ retention and AWPA standard C2-80 (AWPB LP22) minimum, unless the element is of a size that would make treatment impractical. In visitor use areas, timbers should be ponderosa or red pine to eliminate the need for incising to meet treatment retention standards.

Paved Walkways

Primary walkways, such as those at interpretive waysides or other high use areas, should be colored concrete or simple asphalt with flush, cut stone borders and edging where applicable. The stone will frame the asphalt and present a clean appearance that will complement the more complex nature of other stone masonry and rustic wood detailing. This should provide a more economical and longer-wearing surface than other more complex types of pavements.

The stone edging may be omitted on secondary paved walkways and trails that do not serve high volumes of pedestrian traffic.
ROADSIDE VEGETATION

Tree Protection

To preserve the scenic value of the road corridor, large trees should be saved wherever possible. All conifers 50 years and older (i.e., 18" dbh and larger) are candidates for preservation. Each tree that meets this criterion will be evaluated individually. Four methods are proposed for protecting them: sensitive road alignment, tree wells in fills, shortening fills with toe walls, and guardrails.

Sensitive Alignment. The most effective method of preserving large trees is a sensitively designed road alignment that avoids these important resources wherever possible.

Tree Wells. If a fill will place more than 1 foot of material at the base of a significant tree, tree wells should be considered. The tree well should protect 50 percent of the area between the trunk of the tree and the drip line. If the height of the tree well is estimated to be greater than 5 feet, the tree should be considered for removal.

Toe Walls. If several large trees are found within 10 feet from the end of a fill, construction of a toe wall should be considered to save the trees. Toe walls can be constructed of various materials: dry laid stone, reinforced concrete, and concrete with stone facing. In areas well hidden from public view, gabions would be acceptable. Dry-laid stone is preferable because there is no need for foundation digging that may damage root systems.

Guardrails. Where appropriate, guardrails of the types described previously would be used to protect large trees close to the road. See illustrations on pages 16-17.

Whatever method is used, care should be taken to avoid damaging the trees during construction. The common practice of driving or parking construction equipment under large trees is prohibited. The resulting soil compaction and root damage can be as destructive to the tree as the effects of filling around it. Barricades or fences should be used in sensitive areas to help minimize this type of damage.
Treatment of Steep, Raveling Slopes

High, bare, rugged slopes and occasional falling rocks are a natural part of the mountainous terrain on the upper part of the parkway. Not every slope that has these characteristics needs treatment. In many cases no action will be the wiser choice. Every effort should be made not to create new sliver cuts on existing healed slopes. Existing steep slopes that pose problems will be evaluated for treatment with one of the following methods: toe wall construction, biotechnical structures like brush-layering and willow wattling, terraced slopes, or laying back slopes.

Toewall Construction. One way to treat steep raveling slopes is to build a toewall and fill in behind it (see illustration). Because the new slope will not be as steep as the original, it will be more stable and easier to plant. Toe walls can be constructed of various materials: dry-laid stone, reinforced concrete, or concrete with stone facing. In areas that are not visually sensitive, gabions could be used for toewalls. Toe walls on inboard cut slopes where there is potential for slough or rockfall should be carefully evaluated for stability and tendency to launch rocks onto the roadway.

Biotechnical Systems. Biotechnical systems use a combination of vegetative and structural elements to prevent surface erosion and shallow slides. The vegetative elements are used for functional as well as aesthetic reasons. Two techniques are contour wattling and brush-layering. The wattling protects the toes of slopes or benches; brushlayers provide mechanical fiber reinforcement and can stabilize shallow slides (up to 4-5 feet) and also protect against surface erosion to some degree.

Terraced Slopes. Terraced slopes provide stretches of level ground where salvaged topsoil can easily be replaced and where larger plants can be installed. Staggered terraces, such as the ones used in the Vail Pass project, are preferable to a series of parallel benches extending around the entire slope (see illustration).
Laying Back Slopes. Laying slopes back to the angle of repose or flatter makes the slope more stable. At the angle of repose, raveling and sloughing will be reduced. This alone will improve the chances for successful revegetation. At 3:1 and flatter, there is even greater improvement. The tradeoff is the greater short-term impact on undisturbed surrounding vegetation.

Along the parkway, this technique should be used with discretion. It would be appropriate where the slope can be laid back to an existing bench or the top of the slope has an “eyebrow” that would benefit from rounding. It would not be appropriate where old-growth trees or a large area of subalpine vegetation must be removed or the slope in question is extremely high.

All opportunities to salvage and reuse topsoil, plant materials, duff, and litter should be exploited when slopes will be laid back.

Erosion Control. Erosion control measures such as mulch, fabrics, and straw bales should be an integral part of any new construction or disturbance of natural areas.
Rock Faces

Rock faces covered with moss and scattered native vegetation are visually pleasing and contribute a great deal to the character of the highway (see illustration). Cutting rock faces should be avoided if possible. If a cut must be made, the excess rock should be removed along natural fracture planes. Visible drill marks should be avoided. Opportunities for creating planting pockets should be explored. Raw faces should be treated with some type of accelerated weathering agent that gives the rock a natural weathered look (see illustration).

Before treatment

After treatment

Planting Guidelines

When restoring road slopes, unwanted turnouts, and other disturbed areas, the goals are to control erosion and reestablish low-maintenance, noninvasive vegetation that is compatible with nearby undisturbed native plant communities and does not present undue hazards to motorists. Some specific ways of achieving these goals are as follows:

Slope Preparation. The surface of graded slopes should be rough, not smooth and even. Rough slopes are easier to revegetate because the rough texture provides better seed establishment sites. Topsoil should be salvaged and replaced. This practice improves the planting medium and restores the native seed bank. Dead and down logs, duff, and litter should also be salvaged. Replaced on the site, these materials give the rehabilitated site a more natural appearance, improve wildlife habitat, and accelerate the reestablishment of native forest-edge species.

Plant Materials. Indigenous plant materials should be used wherever possible. A seed mix composed of indigenous pioneer species should be developed. This mix would be used for erosion control on large open slopes and in disturbed areas near the travelway to prevent establishment of noxious weeds. Seed and plant sources considered indigenous for purposes of the project are discussed following the plant list.

If aliens must be used (e.g., as a short-lived nurse crop), select short-lived, noninvasive species that cannot survive outside the road corridor. Select species that are appropriate to the environmental conditions at the planting site. If road construction creates a large open slope, plant mostly sun-tolerant early to mid-successional species. Later successional, forest-edge species can be
used where there is part shade near undisturbed forest (e.g., in restoring an unwanted turnout in lowland forest). The success of forest-edge species is often enhanced by the application of native duff, litter, and woody debris.

Take advantage of opportunities to salvage existing vegetation. Salvage is a good way to obtain larger plants that are well adapted to local environmental conditions. Some criteria for selecting salvage species are (a) the species transplants successfully, (b) enough individuals grow close together to allow an efficient salvage operation, (c) existing vegetation cannot be propagated easily or cheaply, and (d) large plants are needed in the planting design.

**Planting Design.** Planting design should imitate the patterns of naturally occurring plant communities. Planting in clusters or with random spacing rather than straight rows is recommended. Abrupt edges between undisturbed natural vegetation and cut slopes should be softened by using undulating clearing limits. Where clear-cutting mature forest has exposed rows of bare tree trunks, the row effect can be mitigated by planting larger material (trees) close to the edge. This material will grow taller and hide the edge. Planting various different-sized shrubs and adding native forbs can also break up the abrupt transition between forest and bare or grassy slopes. Saving occasional clusters of large trees (see preceding section) would also be desirable.

Low mat-forming shrubs or grasses should be used within about 10 feet of the road edge. This practice will help maintain good sight distances. Grasses may inhibit establishment of woody shrubs (e.g., alder) next to the road. If mowing is necessary close to the road, the visual impacts of mowing are less noticeable if there is a ground cover of low mat-forming shrubs (e.g., salal) or forbs (e.g., coltsfoot).

To achieve variation in plant height while minimizing safety hazards in the clear zone, plant several types of multistemmed shrubs or small trees that can be pruned to a multistemmed form (e.g., vine maple).
Plant List

Note: These are preliminary lists that have not been approved by the agencies involved. The U.S. Forest Service and the National Park Service are currently reviewing their lists to select species for propagation and salvage. With the exception of commitments made under the interagency agreement between the National Park Service and the Soil Conservation Service, deletions and addition to the list are expected.

**West Side, Low Elevation**

**Trees**
- Douglas fir (*Pseudotsuga menziesii*)
- red alder (*Alnus rubra*)
- western hemlock (*Tsuga heterophylla*)
- western redcedar (*Thuja plicata*)

**Shrubs**
- currant/gooseberry (*Ribes* spp.)
- mountain ash (*Sorbus sitchensis*)
- oceanspray (*Holodiscus discolor*)
- Pacific willow (*Salix lasiandra*)
- red elderberry (*Sambucus racemosa*)
- salmonberry (*Rubus spectabilis*)
- Scouler’s willow (*Salix scouleriana*)
- serviceberry (*Amelanchier alnifolia*)
- thimbleberry (*Rubus parviflorus*)
- vine maple (*Acer circinnatum*)

**Low shrubs**
- Alaska huckleberry (*Vaccinium alaskense*)
- bald-hip rose (*Rosa gymnocarpa*)
- bunchberry dogwood (*Cornus canadensis*)
- five-leaf bramble (*Rubus pedatus*)
- kinnikinnick (*Arctostaphylos uva-ursi*)
- Nootka rose (*Rosa nutkana*)
- Oregon grape (*Berberis nervosa*)
- Pacific blackberry (*Rubus ursinus*)
- red huckleberry (*Vaccinium parvifolium*)
- salal (*Gaultheria shallon*)
- slender wintergreen (*Gaultheria ovatifolia*)

**Forbs**
- thimbleberry (*Vaccinium membranaceum*)
- twin flower (*Linnea borealis*)

**Grasses**
- bentgrasses, other indigenous (*Agrostis* spp.)
- blue wildrye (*Elymus glauces*)
- Columbia brome (*Bromus vulgaris*)
- Thurber bentgrass (*Agrostis thurberiana*)

**East Side, Low Elevation**

**Trees**
- larch (*Larix occidentalis*)
- ponderosa pine (*Pinus ponderosa*)

**Shrubs**
- Nootka rose (*Rosa nutkana*)
- oceanspray (*Holodiscus discolor*)
- Oregon grape (*Berberis nervosa*)
- snowberry (*Symphoricarpos albus*)

**Low shrubs**
- kinnikinnick (*Arctostaphylos uva-ursi*)

**Forbs**
- lupine (*Lupinus* spp.)

**Grasses**
- blue wildrye (*Elymus glauces*)
- pinegrass (*Calamagrostis rubesens*)
West and East Sides, High Elevation

Trees
mountain hemlock (*Tsuga mertensiana*)
Noble fir (*Abies procera*)
Pacific silver fir (*Abies amabilis*)
subalpine fir (*Abies lasiocarpa*)

Shrubs
rosy spirea (*Spirea densiflora*)
Scouler’s willow (*Salix scouleriana*)
thimbleberry (*Rubus parviflorus*)

Low shrubs
Alaska huckleberry (*Vaccinium alaskense*)
bald-hip rose (*Rosa gymnocarpa*)
cascade willow (*Salix cascadensis*)
mountain lover (*Pachystima myrsinites*)
snow willow (*Salix nivalis*)
thinleaved huckleberry (*Vaccinium membranaceum*)

Forbs
aster (*Aster foliaceus*)
beargrass (*Xerophyllum tenax*)
broadleaf lupine (*Lupinus latifolius*)
pearly everlasting (*Anaphalis margaritacea*)
prairie sage (*Artemesia ludoviciana*)

Grasses/sedges
alpine timothy (*Phleum alpinum*)
bentgrasses, other indigenous (*Agrostis spp.*)
blue wildrye (*Elymus glaucus*)
Columbia brome (*Bromus vulgaris*)
green leaf fescue (*Festuca viridula*)
Merten’s sedge (*Carex mertensii*)
mountain hairgrass (*Deschampsia atropurpurea*)
showy sedge (*Carex spectabilis*)
thick-headed sedge (*Carex pachystachya*)
Thurber bentgrass (*Agrostis thurberiana*)

Acceptable Plant and Seed Collection Zones

Trees. In national forests, seed used for propagation and any plants collected for replanting along the road will come from the appropriate USFS seed zones and elevation bands. Substitutions must be approved by the forest silviculturist.

In the park, USFS seed zones and elevation bands will be observed. If the park establishes genetic resource areas for tree species, the genetic resource areas will take precedence. Substitutions must be approved by the park botanist.

Shrubs, Forbs, and Grasses. For the national forests and the park, collection zones will be selected in the field based on drainage, aspect, elevation, and moisture regime.
INTERPRETIVE CONCEPTS FOR MATHER MEMORIAL PARKWAY

INTRODUCTION

Mather Memorial Parkway is a unique entity, traversing portions of two national forests and one national park. It exists as a legal proclamation (a land classification order signed in 1931), it exists as a physical location (a portion of highway 410), and it exists in terms of one sign in the middle of the section of road crossing the national park. But, it does not exist as a place in the minds and hearts of people. The catalyst that converts a physical location into a place is the process of experiencing deeply - a place is a piece of the whole environment that has been claimed by personal experiences and feelings. The national forests and the national park that the parkway traverses are places in this sense; the parkway is not. It has no identity as an entity unto itself.

The response of many of the native Americans to their land was a response of reverential awareness. They spoke of and treated the land as sacred, sacred in the sense of spiritually powerful; the closer to the original condition, to the raw forces of nature, the more powerful.

The Europeans who discovered America brought to the new land no such reverence. Enamored with progress, they scarcely got to know the land before they began to alter it beyond recognition. Woven deeply into the historical fabric of this nation is the notion that man showed his love of the land by civilizing it - by farming it, building on it, clearing the forest, and managing the resources.

Yet among all those who viewed the land as a commodity that was exchangeable for private wealth, there were a few who worked to preserve some places on the land for public benefit, who loved the natural characteristics of the land and fought to preserve its features. These were the conservationists, the people who created the national parks and the national forests. Steven T. Mather was such a man, and the Mather Memorial Parkway is named in his memory. Mather started the process by proposing that the parkway be set aside; interpretation can help by creating a framework for the "sense of place" that is now missing.

To give the parkway a sense of place we must mentally separate the parkway from the larger and better known "places" it traverses - the two national forests and the national park. Interpretation for the parkway should be unique, both in style and approach, and it should not resemble the National Park Service's or the U.S. Forest Service's existing interpretive efforts. The National Park Service and the U.S. Forest Service representatives who collaborated on the interpretive concepts recommend approaching interpretation of the parkway in terms of the spirit of the place - spirit in the native American sense of the word. The interpretive messages should contain both the reverential viewpoint, a quote from an appropriate early conservationist (Mather, Pinchot,
Muir, etc., or a native American) relative to the view or resource being interpreted, and the more traditional natural/cultural history and environmental values approach. The contrast of the two ways of seeing the “place” would be the basis for the interpretive messages. The aim would be to create a change in our visitor’s imaginative picture of the world – a picture that has been handed down from remote ancestors and has been learned by each of us in early childhood.

**INTERPRETIVE OBJECTIVES**

The following objectives are suggested for interpretation of the parkway.

- Provide adequate interpretation to communicate the history of the parkway and the resources of natural and cultural value and to identify significant points of interest that are visible from the parkway (wilderness areas, mountain peaks, etc.)

- Create a sense of place that will set the parkway apart from the national forests and the national park it traverses.

**INTERPRETIVE PROGRAM DEVELOPMENT GUIDELINES**

The following guidelines should be used for developing an interpretive program for the parkway.

- All interpretive programs/media should maintain a unified presentation to the public and should stimulate involvement within the parkway (rather than in the national forests and national park).

- Interpretive themes should have a primary tie to the resources of the parkway; agency-related themes should be secondary. The resources, subjects, and/or experiences interpreted should be inherent to or visible from the parkway.

- Interpretation should be designed to let each visitor experience the site on his/her own terms, depending on abilities and interests. Programs/media for children should be designed specifically for them, not just watered-down versions of adult programs.

- Interpretation should deal with the resources/experiences that are unique to the parkway.

- Visitor orientation to the entire range of facilities, resources, and programs available along the parkway should be provided. This can be accomplished through gateway information centers, special publications, and the development and use of a MMP logo on all interpretive media and facilities.

- All interpretive facilities should be designed to provide barrier-free access.
MMP RECOMMENDED INTERPRETIVE SITES AND PROPOSED THEMES

Most of the interpretive sites along the parkway should be automobile pullouts with wayside exhibits; at selected pullouts short interpretive trails should be available. These interpretive opportunities should be supported by more in-depth interpretation at the proposed gateway information/orientation centers and by parkway-related publications. In addition each agency should develop additional interpretive programs within their respective areas to satisfy the needs of their longer-term users.

Mount Baker-Snoqualmie National Forest

Weyerhaeuser Clearcut. Interpretive themes: Stephen T. Mather and vegetation management (clear-cutting). A view of Mt. Rainier should be identified, with an illustration for viewing when Mt. Rainier is not visible.

John Muir Discovery Trail. Interpretive theme; old-growth forest. Area has an existing historic shelter.

Skookum Creek Waterfalls. Interpretive themes: glacial flour and runoff characteristics, salmon-steelhead, and wildlife viewing (goats).

Silver Creek Guard Station. Interpretive themes: history of the parkway and CCC development. USFS/NPS management areas should be identified. Possible staffed cooperative gateway information/orientation center. Could be operated by joint USFS/NPS and/or Crystal Mountain ski area staff.

Timber Entrance Arch. Appropriate signs should clarify that the parkway continues into Mount Rainier National Park (driving south) and into Mount Baker-Snoqualmie National Forest (driving north). Smaller parkway signs should be located approximately 100 yards on either side of the arch.
Mount Rainier National Park

White River Overlook. Interpretive themes: the dynamics of this glacial stream, its seasonal changes, and the geologic history of this stream valley (the Osceola mudflow).

Avalanche Chute Overlook. Interpretive theme: avalanche activity, the dynamics involved, its effects on the landscape, and safety – how to identify an avalanche area (i.e., “you are standing in one”).

Crystal Lake Trailhead. A map of the trail system should be provided, along with appropriate resource protection and safety information.

Mount Rainier Overlook (first closeup view of Mt. Rainier from the parkway). Wayside exhibits along a short, stretch-your-legs trail should be provided. Existing wayside exhibits about volcano geology and mountain climbing should be replaced with similar topics but in the MMP design approach. A new wayside dealing with the mountain as a weather creator should be added.

Mount Adams and Goat Rock Wilderness Overlook. Interpretive theme: the concept of wilderness areas. A short trail from parking to the vista at the edge of cliff should be provided. Wayside exhibits should identify Mt. Adams as another cascade volcano.

Tipsoo Lake Picnic Area. Interpretive themes: the formation of Tipsoo Lake, common wildlife and plants, and the short growing season and fragility of the plant community in this high, subalpine meadow. This should be a major parkway interpretive site within the national park and should contain a trailhead exhibit for the local trail system. A kiosk (incorporating the existing Steven T. Mather bronze plaque) should interpret the history of the parkway and the history of the Tipsoo Lake area and also contain a parkway map. Several additional wayside exhibits should be placed along a series of pullouts between the picnic area and the park entrance timber arch (an historic structure) – all connected by a trail. An additional wayside should interpret the history of the timber arch (the Pacific Crest Trail crosses the top of the arch). The geology of the Cowlitz Chimneys should be interpreted at a pullout that affords a view of the chimneys.
Wenatchee National Forest

Chinook Pass Entrance Arch. Appropriate signs should clarify that the parkway continues into Wenatchee National Forest (driving south) and into Mount Rainier National Park (driving north). Smaller parkway signs should be located, as appropriate, on either side of the arch.

Chinook Pass Overlook. Interpretive themes: life zones and the history and effects of fire in the area. An orientation map of the parkway and the Naches district and a vista identification device identifying the Rainier Fork of the American River, the carved glacial valleys, and views of Norse Peak and the William O. Douglas Wilderness should be provided.

Chinook Pass Wilderness Overlook. Interpretive themes: wilderness areas and wild and scenic rivers (their creation and management); also the naming of the American River (miners named it after the American River in California, hoping it would be as rich in gold deposits).

Morse Creek. Interpretive theme: mining history and the colorful names of the mines in the area. An information sign should cover both the summer and winter recreational opportunities of the area.

Lodgepole Campground Area. Interpretive theme: lodgepole forest ecology, source of the name lodgepole, resistance to fire, etc.

Pleasant Valley. Interpretive themes: elk, wildlife and vegetation relationships, and ant mounds. A short interpretive loop trail from the pulloff area should be provided.

Talus Slope. Interpretive themes: fish and the Yakima Indians (historic reliance on fish, traditional means of catching, etc.). Area could have a short trail down to the American River.

Junction with the Bumping/Goose Prairie Corridor on Road 2000. This junction should be a major recreational stop on the parkway – a year-round area for hikers, campers, fishermen, and cross-country skiers. Basic media should be an orientation map; some interpretation of CCC projects and famous people from the area could also be included.

Edgar Rock Overlook. Interpretive themes: story of John Edgar (a scout for the Union army during the conflicts with the Yakima Indians) and the area geology.

Chinook Pass Work Center (beginning and/or end of the parkway). This area should be the site for a gateway interpretive/information center, which should be staffed and contain a mixture of interpretive media and a cooperating association sales area. Other amenities should include public restrooms, picnic area, drinking fountain, and pay phones, all barrier free.
ADDITIONAL INTERPRETIVE RECOMMENDATIONS

The National Park Service and the U.S. Forest Service should work with the Federation Forest State Park to provide information on the parkway at their interpretive center; in turn the National Park Service should help direct visitation to the state park as an interpretive location for learning about the life zones of Washington state and the associated plant communities unique to each life zone.

The special MMP logo should be used by both the National Park Service and the U.S. Forest Service (along with the individual agency symbol) on all interpretive media to carry through and help unify the entire MMP interpretive program.

An identifiable MMP publication format should be developed, reflecting the style and color of the wayside interpretive media along the parkway. A parkway brochure (auto tour guide) should be considered as the top priority for production. The brochure should be designed so that it can be easily used by visitors traveling either direction along the parkway. A more "interpretive" parkway handbook and additional special emphasis publications could be developed as needed by either or both agencies.

Details on the content and possible structural changes or additions to the proposed gateway interpretive/information centers should be worked out in a separate development concept plan/interpretive prospectus.
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