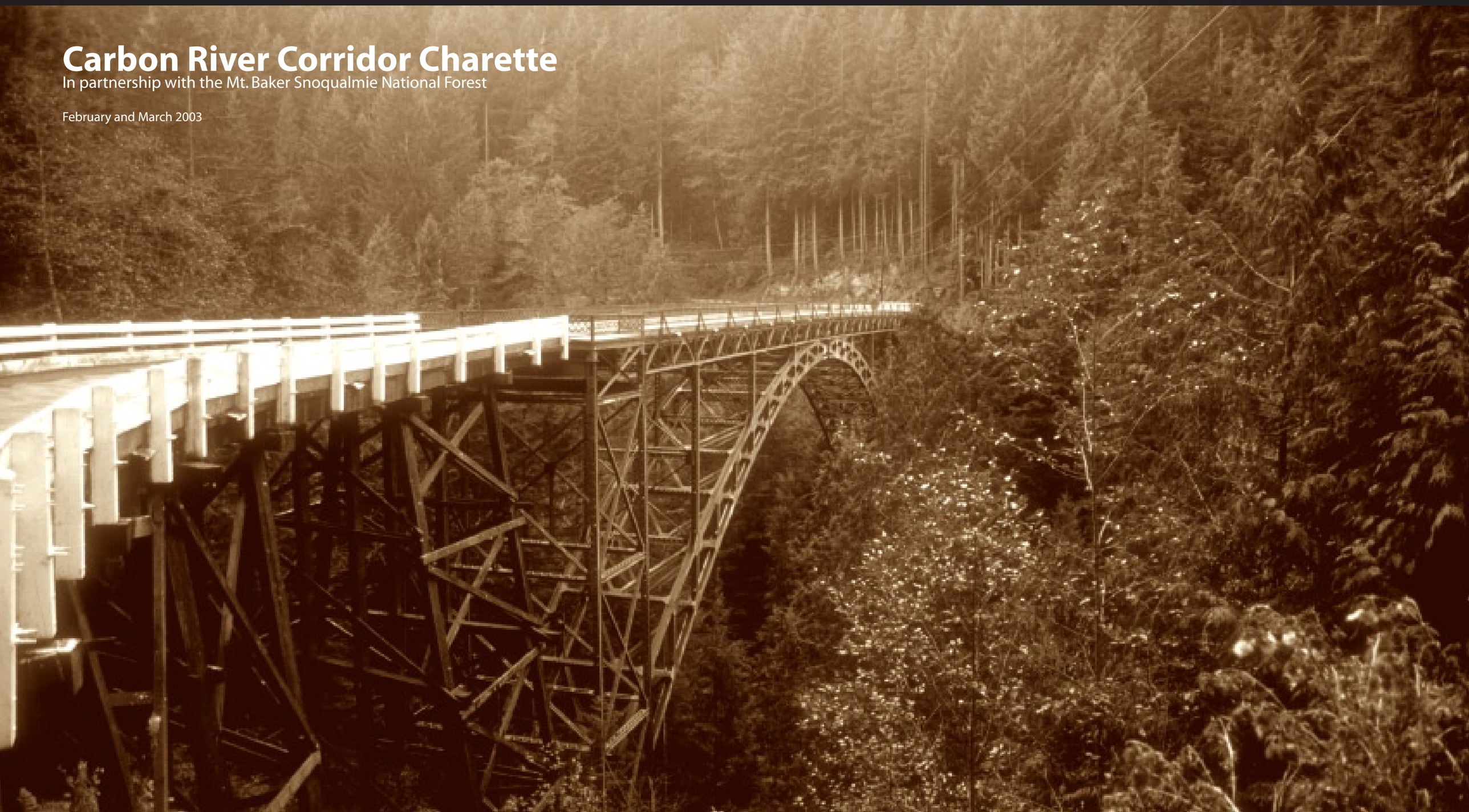
National Park Service
U.S. Department of the Interior

Mount Rainier National Park • Washington

Carbon River Corridor Charette

In partnership with the Mt. Baker Snoqualmie National Forest

February and March 2003



ABOUT THIS DOCUMENT

This document is the fourth in a series of studies of the highway corridors leading to Mount Rainier National Park. The study focused on the Carbon River corridor on the north side of the park, looking at portions of the SR 165, SR 162, and SR 410 corridors. The study included public outreach, with participation from the communities of Wilkeson, Orting, South Prairie, and Buckley, as well as the Puyallup Tribe and several participating agencies.

The study explored a variety of opportunities to improve the visitor experience in the corridor, and to strengthen the relationship between local communities and the park.

The National Park Service partnered with the US Forest Service and local jurisdictions to complete the study through a two-week "charette" process. Public workshops, stakeholder meetings, and interviews were followed by a week of intense idea generation and development of concepts and visualizations for potential activities in the corridor.

All recommendations in this document are collective ideas generated by the project participants and are conceptual in nature. Consequently, they may contain inaccuracies or omissions. A formal draft document was not distributed prior to the release of this final document. If advanced, recommendations would require planning, and compliance with a variety of environmental review including, but not limited to:

- Section 106 of the National Historic Preservation Act (NHPA)
- The National Environmental Policy Act (NEPA)
- Washington State Environmental Policy Act (SEPA)

All of the ideas included here would also generally require additional public input, permitting, and design prior to any implementation.

Therefore, until affected historic, cultural, and natural resources are identified and avoidance or mitigation strategies are negotiated with regional Native American tribes and other interested parties, the recommendations and visions that follow remain subject to design changes, relocation, or termination resulting from federal, state, and local policies and laws designed to ensure that tribal and other historic, cultural, and natural resources are given appropriate consideration and protection.

The charette process included public meetings throughout the corridor

GENERAL STATEMENTS FROM THE MUCKLESHOOT AND PUYALLUP INDIAN TRIBES ON THE CHARETTE

Perspective of the Muckleshoot Tribe of Indians on the Carbon River Corridor Charette

The Muckleshoot Indian Tribe does not support the proposals conceptualized in this document. Formal tribal consultation is required for federal agency undertakings under NHPA, NEPA, and other federal and state laws and policies. To date, only limited consultation has taken place, as planning and design activities for specific corridor components have not yet occurred. The area under discussion is of primary treaty and traditional importance to the Tribe, which has expressed its grave concerns regarding the potential direct and indirect effects of the developments conceptualized here. These include potential adverse effects to historic, archeological and traditional cultural resources, as well as to natural resources and related values in the project area. It is important that planners and project proponents understand that the Muckleshoot Tribe does not see themselves as part of the stakeholder group and has not subscribed to the visions and values expressed here. Additional studies addressing the Tribe's concerns will be required prior to finalization of any component designs.

Perspective of the Puyallup Tribe of Indians on the Carbon River Corridor Charette

The Carbon River is the middle river within a three-pronged river system referred to as the Puyallup River watershed. For the Puyallup Tribe, the Carbon River basin is a region that has always been treasured as an area of ongoing traditional cultural significance that is central within the tribes' traditional homelands.

Historically, the indigenous people of the Carbon River basin were primarily displaced to the Puyallup Indian Reservation after it was established in December 1856. The Puyallup Tribe recognizes the entire Carbon River basin as an area of great cultural value which is linked both geographically and hydrologically to the overall lower Puyallup River valley since each of the three separate rivers of the greater Puyallup watershed system all join together here. Local ethnographic and historic information emphasizes that tribal residences existed both downwards of the foothill areas, as well as throughout the overall Carbon River basin area. Wapato John - of the Puyallup village sited near the forks of the Puyallup/Carbon Rivers - described Puyallup territory as reaching to both Mount Rainier and the Cascade Mountains crest. Early written descriptions of the region oftentimes referred to the Carbon River as the main branch of the river (compared to the Puyallup branch). Since a time immemorial, the Carbon River and its tributary systems have served as central features of the cultural landscape of the Puyallup Indians; all-importantly, the Carbon River was also the most direct link between the lower Puyallup valley and the overall Mount Rainier region.

Puyallup tribal connections to every portion of the Carbon River basin persist strongly today, although comparatively reduced due to property ownership patterns and basic limitations upon tribal access and/or available uses. It is significant for the Puyallup tribal community that key traditional practices and the natural and cultural resource elements they rely upon do have some reserved protections. Of particular concern to the Puyallup are adverse impacts to local tribal cultural opportunities related to native plants, fisheries, and wildlife, and also tribal traditional cultural properties, sacred sites and/or special places; especially important is determining adverse effects in terms of cultural needs of the tribes' still forthcoming future generations.

The intent of the charette process and the vision presented via the charette document are not congruent with Puyallup tribal needs in the Carbon River region in that concepts nurturing future urban growth and tourism in fashions that conflict with tribal natural and cultural resource needs expected in the same geographic area are effectively highlighted. Altogether, the Puyallup Tribe recognizes the Carbon River Charette document does not initiate any actions on an official basis, and that any future actions should still be subject to tribal consultation requirements; therefore the Puyallup Tribe expects that it will be properly included in all such related reviews and consultations, whenever pertinent and/or appropriate in the future.

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Introduction

THE ROADS TO RAINIER—
GATEWAY CORRIDOR CHARETTES

Rising above its nearby neighbors in the Cascade Range, Mount Rainier's rounded shoulders and broken top are a familiar profile throughout western Washington. The mountain is a cherished symbol of the region, and although its meaning has changed with differences in cultures and attitudes, it has been a place of cultural significance to local residents for thousands of years.

The area that is now Mount Rainier National Park has been an important resource area for Native American peoples for millennia. Its extensive sub-alpine ecosystems provided opportunities for hunting mountain goat and elk, collecting berries and bulbs, and harvesting other resources during the summer and autumn seasons. These resources and traditions are still vitally important to Native American peoples today. The mountain also has great cultural significance for Native American groups throughout the region, where it figures prominently in the tribes' stories and their understanding of everyday life.

Mt. Rainier

Mt. Rainier National Park was established in 1899, in recognition of the unique opportunities for recreation and for the preservation of the valuable scenic and natural qualities of the park area. The idea of American national parks was only 25 years old when Mt. Rainier was selected for addition to the system, and it was only the fourth national park established, following Yellowstone, Yosemite, and Sequoia.

The purpose of the National Park system "is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." Since its inception, the greatest challenge of the National Park Service has been to find the appropriate balance between the preservation of the resources under its stewardship and providing access to those resources for public enjoyment. The series of corridor studies that includes this study of the Carbon River corridor was prompted by the recognition that the tribes, communities and regions surrounding the park play a critical role in helping to maintain that balance.

Today, Mt. Rainier supports almost two million visits per year, and most of those visits occur in the four-month season from June to September. Most visitors travel to the park in single-family cars, and most visits to the park are day trips. Only one visit in ten includes an overnight stay in the park. In the short summer season a high proportion of visits are on weekend days, testing the park's ability to handle peak crowds.

Peak traffic volumes are currently above the capacity that the park is able to accommodate. At Sunrise and Paradise, roadside overflow parking winds down the access roads, often for a mile or more. The Carbon River corridor does not have the same visitor volumes as the more popular destinations, but it also has less capacity to handle even smaller crowds. Here also parking lots are regularly crowded to overflowing, with informal parking stacking up along the roadside. Traffic volumes also affect the communities outside the park, where tourist traffic can cause significant congestion and interfere with local mobility. Crowds also interfere with tribal seasonal activities.

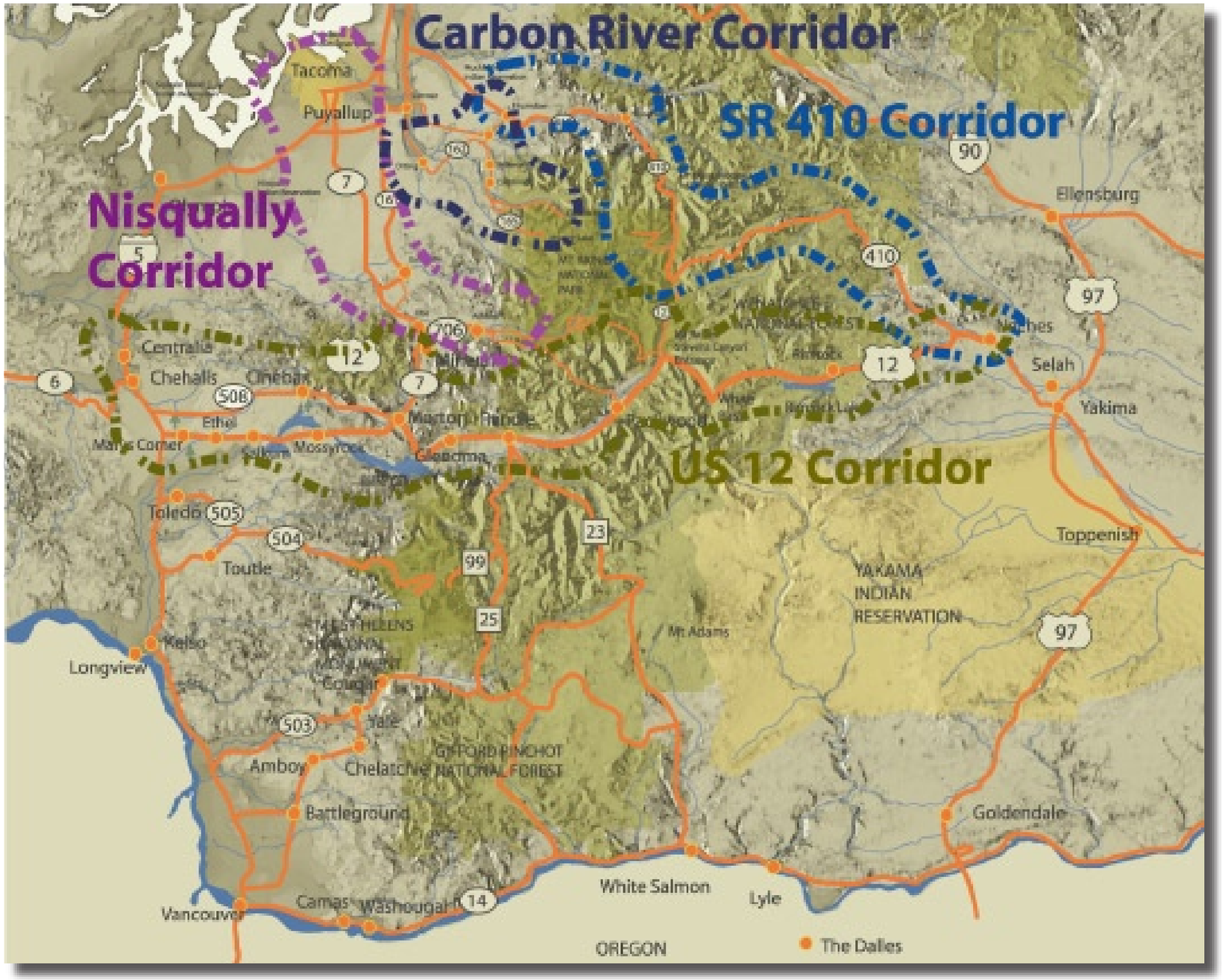
Highway 165 in the Carbon River corridor

The underlying population and recreation trends that cause crowding in the park and gateway regions are increasing, and it is likely that these issues will only become worse in the future. Many of the ideas developed in the charette processes focus on options for managing growth and improving the balance between benefits and impacts associated with recreational travel.

Four transportation corridors provide access to different portions of Mount Rainier National Park:

- The Nisqually Corridor leads from Seattle, Tacoma, and Olympia to Mount Rainier's Nisqually entrance in the southwest corner of the park.
- The SR 410 corridor approaches the Park along its northeastern edge and leads to the Park's Sunrise entrance.
- The US 12 Corridor travels east to west along the Park's southern boundary, providing access between southern and eastern Washington State and Oregon, and the Park's Nisqually and Ohanapecosh entrances.
- The Carbon River Corridor leads from Seattle and Tacoma to Mt. Rainier's Carbon River and Mowich entries in the northwest corner of the park.

Mt. Rainier National Park Gateway Corridors



Studies for the Nisqually, SR 410, and US 12 Corridors were completed between 1999 and 2002. The Carbon River Corridor is the last of four regions to be studied. Together, these studies identify many possibilities for partnerships and community enhancements that may be possible for each of the specific regions surrounding Mount Rainier.

Charette team members learning about the Foothills Trail

Like the other corridor studies, the Carbon River charette focused on the area outside of the park. It emphasized gateway communities, overall landscape patterns and opportunities, interpretation, the visitor experience, and a range of other related issues that have recreational travel in the corridor as their connecting thread. In exploring the opportunities related to the transportation network connecting the Carbon River and Mowich Lake entries of the park with the surrounding region, the study emphasized ideas for helping local communities benefit from their relationship with the park in concurrence with helping the park meet its long-term management goals.

The Transportation Perspective

The series of four gateway charettes for Mt. Rainier are being completed under the Alternative Transportation Program of the National Park Service, with funding through the Federal Highway Administration. Although the ideas explored during the charette process are not all related to roads or trails, they are connected by analysis from a transportation perspective. Gateways, visitor amenities, and the broader environmental setting for these activities are connected by the role they play in influencing the recreational travel experience. The close ties between transportation and land use, transportation and economic development, and transportation and resource access all help to connect the issues studied in the charette as pieces of the recreational transportation puzzle.

In the past, National Parks have set some of the best examples for the development of recreational travel systems. Mt. Rainier National Park is an example of the best of early park planning. It was one of the first parks developed through an exhaustive planning and design process, with every curve in the road and guardrail carefully considered for its contribution to the visitor experience. Mt. Rainier is also a good example of how providing public access to park resources creates resource management challenges. Areas of the park with easy access are heavily impacted by visitor use. Remote areas are much easier to manage for long-term protection of the characteristics that make the park unique.

The challenge for the park is to find strategies that protect the park's unique resources while still allowing access—and as important as access, an exceptional visitor experience. The challenge of balancing access and conservation holds just as true outside the park, in the surrounding gateway regions. Developing new visitor amenities, providing new parking for visitors, making visitors more aware of opportunities—all of these kinds of activities have the potential to increase the negative impacts that visitors can have on resources and quality of life. A common opinion in gateway communities is that visitors who don't do what you want them to aren't guests, they're just traffic, and no one needs more traffic. In the gateway regions, the charettes are working to identify ideas to help communities manage their recreational travel traffic, emphasize the desired benefits of travelers to the region, and minimize the undesirable impacts.

In traditional transportation planning, demand for additional capacity is often met by building more facilities, whether they are more lanes on a roadway or more spaces in a parking lot. In the parks (and more and more in areas that put a high value on quality of life and the quality of the environment), increasing transportation and parking capacity can cause impacts that are not consistent with the original and overriding purpose of the park—to maintain the quality of the place that we all want to visit. Rather than increase capacity, the National Park Service is exploring strategies to manage visitor demand and the impact of visitors on the resource.

In some cases, this might mean getting visitors out of their single-family cars. Many times park destinations can accommodate more

Downtown Buckley

people even when they can't accommodate more parking. Providing transportation options like shuttles or bicycle trails can allow visitors to enjoy the park resources without having to increase parking lots or adding road lanes. In other cases, strategies are being developed to distribute visitors more evenly throughout the park. To relieve demand at a single large destination, there might be opportunities to promote or develop a series of smaller sites in the park. Other strategies include providing incentives for visitors to avoid peak times and instead take advantage of times when the park is less crowded.

Park, Forest, and Gateway Partnerships

As Mt. Rainier works to maintain the balance between access, visitor experience, and resource conservation within the park, many

of the same issues are being faced by communities and other public lands surrounding the park. Recreational destinations in the Mt. Baker Snoqualmie National Forest are very popular and are threatened by overuse. In many of the Carbon River gateway communities, visitors drive through but never turn off the highway to support downtown businesses. The management issues and opportunities represented by recreational travelers in the corridor cross the boundaries between jurisdictions and agencies. Solutions must also cross the same boundaries.

Charette participants shared a wide range of interests in the corridor:

- A healthy, attractive natural environment as a place to live, visit and/or respect.
- Sustainable, vital local community economies.
- Functioning multi-modal transportation systems.
- Amenities to improve local quality of life and the recreational travel experience.

Corridor partnerships between residents, agencies, tribes, and local jurisdictions are a promising strategy for achieving these shared interests. Whether intended or not, actions taken by agencies or jurisdictions in the corridor affect each of the corridor stakeholders. As partners develop a better understanding of each other's priorities and concerns, there is a much better chance that integrated solutions can be developed that provide benefits for each participant. Mt. Rainier National Park's recently completed General Management Plan was an early step in describing the park's commitment to partnerships with gateway communities and public land managers. The Wilkeson visitor welcome center is an example of the kinds of activities that the plan advocates, where the park can benefit from an opportunity for visitor contact early in the corridor, and the community of Wilkeson can benefit from travelers who stop for information, then wander down the street and grab a snack at the store or a meal in a restaurant.

The charette process is another step in helping to understand the potential benefits of corridor partnerships. In developing partnerships, it is important to acknowledge the importance of all affected communities, and to meet federal trust responsibility obligations to tribal governments. Some of the ideas described here include the park as a major partner, and others focus on local jurisdictions or other agencies. However, each of the charette ideas approaches shared issues in the corridor and works to find opportunities to provide shared benefits for corridor partners.

The Carbon River Charette Process

A charette is an intensive, focused effort to develop conceptual ideas within compressed, creative, high-energy working sessions. In addition to the components of a workshop, a charette involves production of drawings and concepts based on the input of all participating interests. The term "charette" initially appeared in Paris in the late 1800's. Art and architecture student projects at the Ecole des Beaux Arts were collected on a cart, which was called a charette. Often working until the last minute, students would rush to complete projects as the cart approached, sometimes jumping onto the cart to apply the final finishing touches. Later the word came to mean any intense, short-term student design project. Today the architectural and design community uses the word to describe any intense, on the spot design effort.

Public meetings were organized to collect ideas and discuss possibilities for the corridor

The charette is not intended to be a formal or comprehensive planning process. Instead, it is a starting point towards coordinated planning for corridor transportation, resource conservation, community development, and recreational opportunities. The charette is intended to improve the connections between communities and agencies, foster community dialogue, and assist in exploring project ideas that show promise for meeting community goals.

The objectives of the Carbon River Corridor charette were to:

- Strengthen partnerships among corridor stakeholders and interest groups; encourage broad participation and creativity.
- Consider concepts for retaining intrinsic values and special resources through collaborative initiatives and management while enhancing use and enjoyment for visitors and residents alike.
- Build on and advance previous plans or initiatives; develop ideas/concepts as a step towards a common vision for the corridor presented in a highly graphic and user-friendly ideas document.
- Recognize corridor opportunities and develop approaches to disperse congestion; explore alternative transportation opportunities.

Members of the charette team meet with one of the landowners in the proposed park boundary adjustment area

- Support opportunities for enhancing a sustainable, less seasonally dependent economic vitality for corridor gateway communities and visitor service providers.

The outcomes of the charette, most of which are described in this document, reflect a combination of community input and the judgment of the charette team in deciding which ideas best fit with community interests and the charette objectives.

The project drawings and narratives that were developed from the charette are early steps in project or program development. Even if the drawings look good, it doesn't mean that the projects are feasible or that they should be pursued. They are intended only to provide better information to support on-going dialog and decision-making about community priorities. Each of these ideas needs "reality checking" before moving forward. It is important to emphasize that critical information including financial feasibility, detailed ownership information, environmental considerations, cultural resources, and stakeholder support could not be considered in the charette.

The Charette Team

The charette team was selected to bring together technical expertise in issues facing the corridor, including representatives from Mount Rainier National Park and the Mount Baker-Snoqualmie National Forest, as well as representatives from the Foothills Trail Coalition and Puyallup River Watershed Council to bring a local perspective to the charette process. Technical disciplines represented on the team included transportation, recreation, and community planning, architecture and landscape architecture, and tourism planning.

Although not technically team members, the most significant contribution to the project came from the large group of interested community participants who attended the focus group sessions and public workshops.

Charette Activities

The charette was held over two weeks in February and March 2003. The first week was spent visiting the corridor and nearby recreation and travel destinations, meeting with key stakeholders in corridor communities, and in public workshops.

Listening workshops were held in Wilkeson, Buckley, and Orting. On the last day of the week, a summary workshop was held in Buckley where the team reported back what was heard, and participants were able to discuss the assembled results for the entire corridor.

At the summary workshop, participants were able to break into small groups to discuss topics in more detail, and to identify issues and project ideas they felt were the highest priority for further work during the second week of the charette.

After a short break, the charette team came back to the corridor for the second week to work on project ideas identified during the first week of meetings. Alternating between design work and site visits to some of the project locations, the team spent the week developing ideas, drawings, and maps for potential corridor improvements.

The second week of the charette ended with a final workshop in Wilkeson to present and discuss the project ideas and drawings developed over the week. The final workshop was held in open house format for review of the project drawings, and finished with a discussion on next steps and implementation.

The outcome of this charette is not a comprehensive or coordinated plan for the region. Rather, it is a series of ideas that, with continuing work, can contribute to the development of a clearly communicated and widely shared vision for the future of the Carbon River region.

The Carbon River Corridor Region

THE CARBON RIVER GATEWAY REGION

The Carbon River corridor is Mt. Rainier's "hidden" access route, with significantly less traffic than the Nisqually, Sunrise, or Stevens Canyon entries. Although it is the closest of the entries to the major population centers of the Puget Sound region, it is also the least-developed access to Mt. Rainier National Park. The Carbon River corridor includes two entries to the park—Carbon River and Mowich Lake. The Carbon River entry is at a low elevation and is accessible most of the year. Developed areas at the Carbon River entry include the Ipsut Creek Campground, ranger facilities, and trailheads to the Carbon Glacier and

The Carbon River

Wonderland Trail. The Mowich Lake entry provides access to the park at a higher elevation, and is typically closed October through June. There is a small campground area at Mowich Lake, a ranger station, and access to trails including the Wonderland Trail to Spray Park. Carbon River and Mowich Lake both have limited capacity for visitors. There are few developed visitor facilities, and trailheads for backcountry hiking (with most visits being day hikes) serve as the major use for both sites.

The study begins with the Carbon River and Mowich Lake entries to the park, then extends out to the "gateway" communities of Carbonado and Wilkeson, then to the nearby communities of South Prairie, Buckley, Enumclaw, and Orting. As part of the transportation analysis, the study will also include road and trail connections to Sumner, Puyallup, Tacoma, and the south Puget Sound region.

The roads to the two entries split beyond the town of Carbonado as they head towards the park. The Carbon River Road follows the south side of the river, winding through timberlands and the historic Fairfax townsite before entering the park. The road to Mowich Lake is a state highway, SR 165. Originally intended to connect through the park to the West Side Road, the highway was never completed and it now serves timberlands and off-road vehicle recreation areas before ending at Mt. Rainier.

The Nisqually, Stevens Canyon, and White River entries to Mt. Rainier include long approaches through the foothills, where bottomlands give way first to forests then to the mountain landscapes of the south cascades. As the landscape changes in these corridors, so does the development pattern, with the densest development located along transportation routes in the lower, flatter landscapes, then slowly becoming sparser as foothills become steeper and agricultural land gives way to forest. In the Carbon River corridor, the same pattern is generally true, but is compressed as the entire transition is traversed between the beginning of SR 165 at Buckley and the arrival at Mt. Rainier, only twenty or so miles later.

As the entry corridor nearest to the Puget Sound region, the lowland region surrounding the corridor has experienced much more significant historical and contemporary development pressure. The region is criss-crossed with rural roads that have become state highways, and dotted with communities that were once small agricultural centers and are now becoming larger suburban centers. The agricultural land that once separated these communities is rapidly giving way to large lot suburban development, and strip commercial development is becoming more common along the state highway routes. There is no other entry to Mount Rainier that has such a close relationship between highway-related strip retail development and the high alpine country of Mt. Rainier.

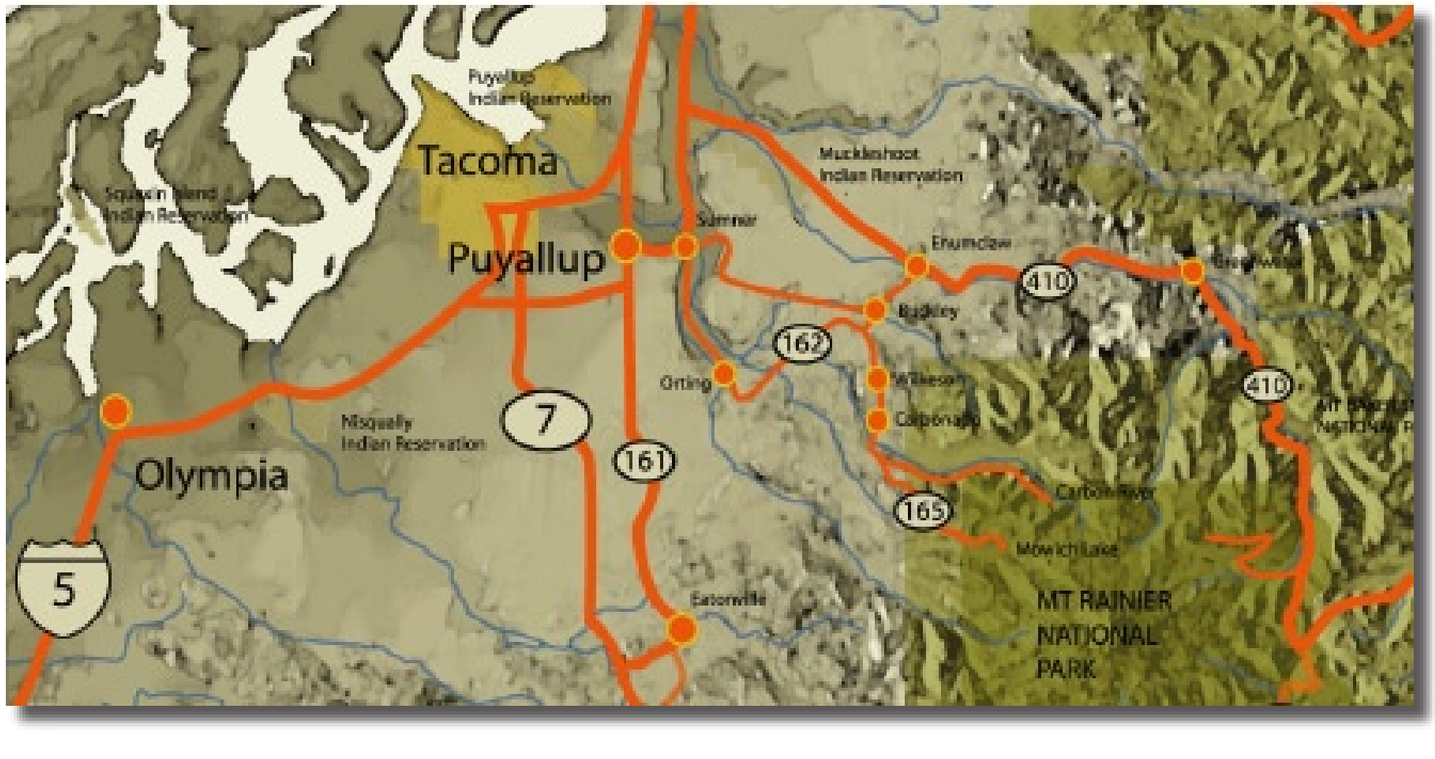
Travelers come to the Carbon River corridor from several different directions, and via several different roads. Interstate 5 delivers drivers from Seattle and further north, then disperses traffic onto one of several smaller north-south routes including State Routes 164, 167, and 169. In turn , these roads each bring travelers to SR 410, running east and west past Mt. Rainier, and then to SR 165 and the Carbon River entries. Travelers heading south from Tacoma, Sumner, or Puyallup—or adventurous travelers from further north—may travel south on SR 162 to Orting, the west gateway to the corridor, then continue on 162 as it bends towards the east, passes through South Prairie, and eventually intersects with SR 165 near Cascade Junction, a historically important railroad junction.

Travelers have to find their way to SR 165 towards Wilkeson (there is very little signing to indicate that SR 165 is a route to Mt. Rainier.) Along the way travelers find low density agricultural and residential landscapes, and then working forest as they make their way toward Wilkeson. Travelers following SR 162

A view of Mt. Rainier from highway 165 near the Mowich Lake entry

from Orting toward the park make their way through the largely agricultural lower Carbon River valley. They are also following the historic route of the Northern Pacific railroad into the corridor, which is slowly being developed into the trail route for the Foothills Trail.

The corridor passes through the town of Wilkeson, then soon after passes by the town of Carbonado and heads into the upper Carbon River valley. One of the most dramatic spots in the corridor appears soon—the canyon of the Carbon River and the landmark Fairfax Bridge that crosses over the river at its narrowest point. Here the river is deeply incised in vertical stone walls, and is dropping rapidly over small falls and rapids. The steel structure of the bridge, with brightly painted white wooden rails, contrasts beautifully with the wild canyon. The obviously historical structure is one of the few visual reminders of the historic heritage of the Carbon River region.



The Carbon River Corridor

The Carbon River corridor is generally bounded by Mount Rainier National Park, the City of Buckley, and the City of Orting. Other communities in the corridor include South Prairie, Wilkeson and Carbonado .

THE FOOTHILLS TRAIL

The Carbon River corridor grew by rail—for many years the only way into the corridor communities was by rail, horse, or foot. Eventually highways came to the region, and rail travel was replaced with access by cars and trucks. The Northern Pacific railroad ended service on the tracks in the corridor, and much of the railbed has been acquired as the route for a non-motorized trail system known as the Foothills Trail.

Rails-to-Trails projects are becoming more and more common throughout the nation, providing a network of non-motorized transportation opportunities. Railroad routes are perfect starting points for trails—they are already structurally sound, provide crossings over creeks, roads, and other obstacles, and are developed at a shallow grade that works as well for bicyclists as it did for trains.

The Foothills Trail is planned to extend from McMillin to Buckley, with a spur route connecting to Wilkeson and Carbonado. Sections of the Foothills Trail in McMillin, Orting, South Prairie and Buckley have been completed, and Pierce County plans to complete several more sections over the next five years. Although the sections of the trail currently completed are relatively short they have attracted thousands of users, and have already become valued parts of the communities they serve.

Future trail connections are being planned that will link the Foothills Trail to other regional trail systems, eventually connecting the Carbon River corridor to destinations throughout south Puget Sound and to Mt. Rainier.

The Carbon Glacier

Most of the private forestland in the corridor is actively managed for timber production, and the corridor passes by stands of various ages as it heads towards the park. After the split between SR 165 to Mowich Lake and the Carbon River Road to the park, long views begin to open up—generally to the foothills and valley walls surrounding the mountain, but with occasional glimpses of Mt. Rainier also. While many visitors find the views to recent clearcuts unsightly, timber harvest is also the main reason that there are long views from the highway rather than the roadway being enclosed in a tunnel of trees.

Soon after the Fairfax Bridge the road splits, with SR 165 continuing up towards Mowich Lake and the Carbon River Road continuing towards the Carbon River entry. SR 165 passes through private forestlands and the west side of the Evans Creek Off-Road Vehicle Area before reaching the park entry, and the parking and camping area at Mowich Lake.

The Carbon River Road winds along the river, with frequent views over the river to the wooded valley walls beyond. The river itself flows in a wide, cobbled bed and is heavily braided during low flows. The Carbon River was originally the Upper Puyallup, considered the main stem of the tributaries that become the Puyallup River. Then the first coal seam was discovered, the mines grew, and the Upper Puyallup was renamed for the element that made it one of the most significant places in the Washington Territory, the carbon called coal. During melt and runoff times it can flow very high, carrying large rocks and vigorously resculpting its channel. The Forest Service bridge to Copley Lakes crosses the width of the entire channel, and provides a good viewing spot up and down the river. The Carbon River entry itself is modest, with an information area and restrooms. From the entrance the road winds through old-growth forest in the park for about 6 miles until it reaches the Ipsut Creek campground, parking, and trailheads into the backcountry.

Although they finally all lead to Mt. Rainier, the three main road corridors in the Carbon River gateway region offer strong contrasts. SR 410, while it still retains some of its rural character, is quickly being lined with highway-related strip development. SR 162 between Orting and SR 165 remain quiet rural roadways for now, but the rapid development of the highway north of Orting may be a sign of what is likely to follow for the more eastern section of the highway. SR 165 is forested and quiet, with little development and still retains the look and feel of an older Washington.

Corridor History

Ancestors of the modern-day Puyallup and Muckleshoot tribes inhabited the corridor region for thousands of years prior to the arrival of EuroAmerican settlers. A rich resource base in, and around, the corridor supported a large local indigenous population. Rivers and streams provided salmon habitat. Wetlands and fire maintained meadows provided a wide variety of plants for food and fiber, as well as habitat for deer and winter forage for elk. Higher elevation landscapes on Mount Rainier and surrounding peaks provided a seasonal abundance of mountain goats, elk, huckleberries, and other plant and animal resources important to indigenous people. Native American traditional use areas were not limited to the corridor, but also extended across Mount Rainier to areas east of the Cascades. For most of this period, overland travel was pedestrian-based. Transportation and resource options were further enhanced about 300 years ago following introduction of the horse, acquisition of which permitted seasonal travel as far as the Mt. Adams region to take advantage of abundant huckleberry fields.

Permanent aboriginal village sites were located throughout the lowland areas of the corridor, and there were well-established living sites, resources areas, seasonal rounds and seasonal camps which ranged throughout the Carbon River valley to Mt. Rainier and beyond. Overall, tribal traditions emphasize that all major confluences of streams were areas where extended families resided - quite typically, various forms of fish weirs and/or fish-trapping operations were included. Altogether, the historical record of the locations of traditional village sites is sketchy, and the cultural memory of the local tribes in general was at least partially interrupted by the disease, conflicts, and displacements which occurred up until the early modern times.

Before European settlement, the Carbon River corridor encompassed uncounted village sites, resource areas, and transportation routes. The Carbon River valley provided access between the lowland areas of Puget Sound and the upper elevation forest and subalpine resource areas of Mount Rainier. The valley also served as part of a long-distance trail system that connected the area known today as Tacoma with eastern Washington. The areas that are now Buckley, South Prairie, and Orting supported Native American villages over long spans of time, many of which still existed at early contact. It is difficult to speculate on the size and structure of the villages at any particular time,

Coal miners in the mines

but these locations are of ongoing and extensive tribal cultural significance.

By 1830, only 25 years after Lewis and Clark arrived at the Pacific coast, there was a Hudson's Bay Company outpost located near the current location of Buckley. EuroAmerican settlement in the Carbon River region was slow over the next decade, but became widespread by the mid-1800's. Through the treaties of Medicine Creek and Point Elliot in 1854 and 1855, Native American lands were ceded in the corridor to the federal government. In exchange, tribes retained their right to hunt, fish, and gather in these areas, and certain provisions were set aside to assist in their relocation to reservations. It is unlikely that most Native American inhabitants of the region were aware of or understood the implication of the treaties. Consequently, conflicts grew as EuroAmerican settlers increasingly encroached on traditional Native American lands. In October 1855, hostilities referred to as the Puget Sound Indian Wars began and the Carbon River region was the site of some of the period's most significant conflicts. The opening and closing battles of the war were fought on Connell's Prairie, west of Buckley, and a temporary militia fort was established at South Prairie.

Coke ovens in production. Flames can be seen extending out of the ovens to the left of the photo

As hostilities subsided, local tribes and bands were essentially relocated to the reservation lands established at the mouth of the Puyallup River and upon the Muckleshoot Prairie. Settlement continued in the lower Carbon River and Puyallup River valleys where the land was suitable for farming, but did not extend into the upper Carbon River area until the discovery of coal in the late 1860's. Coal transformed the Carbon River valley, and for a short time made it one of the most important regions in the developing Washington Territory.

Railroads are made from steel, refining steel requires coke, and coke is made from coal. The Northern Pacific Railroad was formed in 1864 under a federal charter signed by Abraham Lincoln. In exchange for generous land grants in the western territories to be served by the railroad, the Northern Pacific was tasked with constructing an entirely new line connecting Lake Superior to the Pacific Northwest, following the general route of the Lewis and Clark expedition. Early USGS surveyors had noticed signs of potential coal in the Carbon River valley, which was of great interest to Edward Smith, Pacific Coast manager for the Northern Pacific construction effort. Exploring the valley on foot, Smith discovered the first coal mine sites in the area that would become Wilkeson, and was instrumental in forming the Tacoma Coal Company to mine the coal. With demand driven by the needs of the railroad, the Carbon River valley was soon dotted with mines, coke ovens, and company towns to house the workers that made them run.

The pace of development in the corridor accelerated with the discovery of coal seams that ran all along the Carbon River, and subsequent construction of rail lines connecting Tacoma all the way up the corridor almost to the current park boundary. The first rail line from Tacoma to Wilkeson was finished in 1877, and for many years the rail lines connecting the valley communities were the main transportation corridor for both train and foot traffic in the valley. Soon a string of towns, each one generally associated with a coal mine site, lined the railroad corridor and its spurs from Enumclaw and Orting up the valley. Crocker, Douty, South Prairie, Cascade, Burnett, Pittsburgh, Wilkeson, Carbonado, and Fairfax each had a stop. Together they were one of the densest collections of communities in Washington State. At its peak, the population of communities in the upper Carbon River valley may have numbered as many as 65,000 residents, compared to today's population of under 2,000.

Almost all of the mining towns were company-owned, and the mining was hard work. Most of the miners and their families were first-gen-

Coke, Coal and Iron

Coke is made by heating coal to high temperatures in an oxygen-poor environment to produce a more concentrated carbon. It is a critical ingredient in the process of refining iron in blast furnaces.

In the iron refining process, coke, iron ore, and limestone are heated to extremely high temperatures, liquefying the iron ore, removing impurities, and chemically modifying the molten iron.

A remnant of the huge machinery originally used to move stone blocks at the Wilkeson Sandstone Quarry

eration immigrants from European mining regions, with a high proportion of Italians and Finns. Miners generally worked ten hour days, six days a week. The company towns were surprisingly complete, with schools, community halls, and recreation facilities. There were some notable exceptions for available services, including taverns, cigar stores, and other outlets for similar "unsavory" activities. In the early days of the mining communities residents would walk to South Prairie along the rail line to go to a tavern. Later on communities developed near the company towns to provide these services. What we currently think of as downtown Wilkeson was originally a community called Hope, developed adjacent to Wilkeson proper. Hope was not company-owned, and included thirteen taverns (for men only), a cigar shop, and ice cream parlor among its commercial offerings.

For recreation, each of the towns fielded a baseball team, complete with uniforms. Competition among the towns was fierce, and was an important part of the local culture of the mining communities. Star baseball players often got the better jobs in the mines.

As widespread as the mining communities were in the valley, the truly remarkable construction was underground, in the mines themselves. Mine shafts followed coal seams with their own unique construction logic and geometry, ensuring that new excavation was supported by column systems, that air flow was maintained, and that an effective transportation system could be built to get both miners and coal out of the mines. Although it is likely an exaggeration, the mines were so extensive there were claims that one could walk underground from Carbonado to Buckley, a distance of almost 6 miles as the crow flies.

The coal seams were located in the upper Carbon River valley, but the effects of the coal mining activities were felt throughout the corridor. South Prairie and Orting both found markets for agricultural products in the coal mining towns, and also saw a wide range of economic contributions from the train traffic that served the upper valley.

Although coal was the primary reason for developing rail access up the Carbon River valley, there were other resources too, and the trains were soon carrying timber, milled lumber, and the unique Wilkeson sandstone out of the corridor. Wilkeson sandstone was a very

Downtown Buckley

high grade building material—a dense sandstone that was watertight and resisted cracking and discoloration. Several of Wilkeson's prominent buildings were constructed of sandstone, as well as the Washington State Capitol. Stone was mined and worked at the Wilkeson quarry site, where raw stones weighing several tons each could be cut first into smooth slabs and then elaborate shapes with huge stone-cutting saws.

It was hard work in the mines, quarries, and woods of the Carbon River valley, but there were also plenty of folks with some leisure time in the Puget Sound region, and many of them were drawn to Mt. Rainier as soon as train service was available. Outfitters met tourists in Wilkeson, then guided them by pack horse train until the terrain became too rough for horses and they continued on foot. Although early tourists needed to be hardy sorts to put up with the rigors of a trip to the mountain, excursions were a popular part of the railroad operation. Bailey Willis, a railroad surveyor who stayed on at the mountain and became an early outfitter, built the trail that connects Mowich Lake to the Nisqually entry (and is now called the "Bailey Willis Trail") with the support of the Northern Pacific to draw tourists.

Roads came relatively late to the corridor, and the shift from train travel to travel by car was more than just a technological change. It also was a factor in the decline of rail construction that contributed to lowered demand for coke, and the eventual collapse of the Carbon River valley economy. SR 165, the highway that connects SR 410 through Wilkeson and Carbonado to the Mowich Lake entry to Mt. Rainier, was originally the Enumclaw to Fairfax branch of Primary State Highway #5, the National Park Highway. Although originally intended as the beginning of a highway route that would connect the Carbon River area with the Nisqually entry to Mt. Rainier, the intervening terrain was too difficult and the entire highway route was never completed. Today, the section of SR 165 between the intersection with the Carbon River Road and park boundary is the only remaining section of unpaved state highway.

By the time the Wilkeson Arch was constructed over the highway in 1925, coal mining was already on the decline. Although timber harvest and the Wilkeson quarry remained in operation, mining had been the mainstay of the valley's economy, and the numerous small towns in the corridor began to lose jobs and population. Company towns literally shut their doors and moved away, taking buildings and whatever they could salvage with them. Carbonado and Wilkeson were able to maintain an employment base and remain viable communities. Most other communities in the upper valley have disappeared.

The historic Fairfax Bridge

In the lower valley, the communities of Buckley, South Prairie, and Orting had always been able to look to the north and Puget Sound as well as the south and the bustling Carbon River valley. These communities strengthened their ties to the growing Puget Sound area and their neighbors to the east and west.

In the intervening years between the bust of the coal boom and today, Wilkeson and Carbonado contracted, but were able to maintain a stable economy and residential base without coal. Orting was primarily an agricultural center until recently, and timber played an important role in Buckley's economy. As urban development has spread south and east from the Interstate 5 corridor and Puget Sound region, Orting and Buckley have become more closely tied to the regional economy and employment centers outside of the communities themselves. The pace of change in the region has accelerated with approaching urban develop-

ment—although it doesn't approach the scale of transformation the region experienced during the coal boom. Today, corridor communities are faced with the challenge of responding to growth pressures in a way that stays true to their own sense of identity, and enhances the values that community residents feel contribute to their quality of life.

Gateway Communities in the Carbon River Region

Gateway communities are usually recognized as communities that exist at or near the access points of popular destinations to public lands. They are usually rural small communities

Visitor information kiosk in downtown Orting

often having some economic interests or ties to tourism associated with the public lands near them. The communities of Wilkeson and Carbonado are the closest communities in the Carbon River corridor. Orting, Buckley and South Prairie all have opportunities to capitalize on their gateway location and take advantage of the economic contribution that recreational travelers can make to their communities.

Wilkeson is the more public of the two upper Carbon River valley communities, with restaurants and retail shops fronting the roadway. Until recently a grand arch, with pillars of locally-mined sandstone, was located at the entry to Wilkeson and welcomed visitors to the Carbon Glacier. The arch is currently awaiting repair after recent earthquake damage.

Wilkeson has a rich historical heritage, with a number of intact historic buildings and sites. Mt. Rainier National Park operates a seasonal visitor information center in downtown Wilkeson. The Wilkeson sandstone quarry, which continues to operate, supplied the stone used to construct the Washington State Capitol in Olympia. Several of the community's historic buildings, including the elementary school and library, are also constructed of Wilkeson sandstone.

Carbonado proper is off the main highway, providing some privacy for local residents. The community is primarily residential, without any significant travel-related retail or services. It still retains the texture and scale of a company mining town. Carbonado sees itself as a residential community, and generally is not interested in developing visitor amenities or attracting more visitor traffic.

Further away from the park entries, most visitors also pass through one or more of the communities of Buckley, South Prairie, Orting, and Enumclaw. These communities play an important role in wayfinding for park visitors; have the opportunity to provide visitor services such as information, retail, or dining; and also may be able to benefit from the economic contribution of park visitors to local economies.

Storefronts in downtown Buckley

Typical gateway regions share some common elements:

- They are rural areas near public recreational resource lands.
- Their traditional economy developed around resource extraction, and there are often contemporary trends that are reducing the contribution of resource extraction activities to local economies.
- Tourism is growing in importance to the regional economy, and the community is working to balance a new tourism economy with a reduced resource economy.

In the Carbon River corridor, however, development patterns are trending in a different direction. Local development is following patterns of exurban growth linked to the expanding economies of the south Puget Sound region. The growing connection between residential areas in the corridor and employment in the larger urban areas to the north is defining the way that these communities understand themselves and choose to develop.

Because tourism is a secondary component of corridor community economies, there is less focus on enhancing visitor amenities for recreational visitors than in many other gateway regions around the country. Also, the goals for enhancing tourism amenities are somewhat different than in other gateway regions. With less emphasis on tourism economic development, there is an interest in targeted tourism improvements that can contribute to other community development goals.

One of the community development goals shared in common throughout the corridor is an interest in telling the stories of their heritage. There is a rich heritage of Native American life in the corridor. The shared heritage in coal mining, timber, and farming industries that supported the communities' early development is a fascinating story, and continues to be a part of residents' sense of their commu-

Wilkeson City Hall. The fence is constructed out of worn sawblades from the sandstone quarry

Mountain scenery in the Carbon River valley

nity identity today. The industries that were responsible for the development of these communities are still a part of life in the corridor. There are opportunities throughout the region to share the region's heritage with visitors, ranging from museums to small interpretive sites.

Another set of shared community development goals focuses on targeted economic support for businesses in the communities' historic cores. In both Orting and Buckley tourism is part of a strategy to improve the vitality of traditional downtown cores, currently competing with newer highway-related retail and service businesses. In Wilkeson and South Prairie, residents are interested in visitor amenities for the value they can also bring to residents—they hope that visitors can create a market that will enliven the community with new restaurants, retail, and lodging.

Visitors to the region also feel strongly about the corridor and the management issues at Mt. Rainier that may affect access to campgrounds and backcountry trailheads. There was strong interest in the charette process from stakeholders who live outside the corridor but value Mt. Rainier and the Mt. Baker-Snoqualmie National Forest as recreational lands. Visitors expressed appreciation for the character of corridor communities, especially Wilkeson as a small-town gateway community. As participants in the charette workshops, visitors often were discovering the diversity and quality of heritage resources in the corridor for the first time. Their interest in these resources is a strong indication that visitors would appreciate facilities that would allow them to learn the corridor's heritage stories.

Access to the park was an important issue to charette participants whether they were local residents or lived outside the corridor. The General Management Plan for Mt. Rainier National Park discusses the eventual closure of the Carbon River Road between the park entrance and the Ipsut Creek Campground because of repeated flood damage to the roadway. However, the timing and specific implementation of closure is discussed only generally. The urgency of the issue was emphasized during the charette because flooding had caused the closure of the Carbon River Road and park staff were unsure whether they would be able to reconstruct the road to allow access for the summer season. Following the charette the park was able to complete repairs, but the temporary closure was an illustration of the intensity of the concerns that corridor stakeholders have over the potential long-term closure of the road.

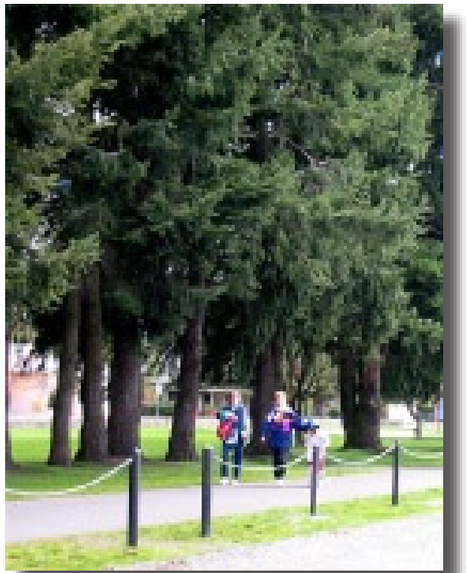
During the charette process, the team felt that three major corridor-wide issues would set the context for future change in the corridor. The management and project ideas that are described later in the document all respond to these themes to some extent.

1—THE FEDERAL LANDS IN THE CORRIDOR ARE CLOSE TO THEIR CAPACITY FOR RECREATIONAL USE

Major recreation destinations on federal lands in the corridor are at or exceeding capacity. Opportunities for increased recreational capacity in the future will be found in the corridor communities and with the development of the Foothills Trail.

2—THERE ARE STRONG OPPORTUNITIES FOR CORRIDOR COMMUNITIES TO COOPERATE IN CONSERVING AND COMMUNICATING THEIR HERITAGE

Cooperative heritage links could be developed into a regional heritage framework for interpretation. A regional approach for sharing heritage stories reflects the historic links between communities, and might create the kind of "critical mass" that could make corridor heritage interpretation a compelling experience for visitors.



On the Foothills Trail in Orting

3—THE CARBON RIVER CORRIDOR IS A UNIQUE OPPORTUNITY FOR PROACTIVE CONSERVATION ACTION

Development pressure is increasing in the corridor. Although it is strongest in the SR 410, SR 162, and SR 169 corridors, it is also increasing in the SR 165 corridor. There is a strong opportunity to plan for the conservation of the region's environmental quality and important natural setting with the potential establishment of a greenway conservation framework connecting from Buckley and Orting to Mt. Rainier.

These three themes set the stage for the ideas developed in the charette. What are some of the implications of these themes? First, there is limited capacity to attract new users for

Private residence in the area of the proposed park boundary adjustment

backcountry activities in the park and national forest. For communities to see increased contributions to their local economies from visitors, they must either change the patterns of current visitors to the corridor, or provide new destination activities that will draw visitors to the communities themselves, rather than the park or forest.

Ideas for the corridor discussed during the charette process can contribute to both of these opportunities. For example, a visitor information center near the intersection of SR 410 and SR 165 may provide travelers with information for visiting downtown Buckley and the Foothills Historical Society museum—activities they may not have considered when planning their visit to the park or forest. Examples of opportunities to attract new visitors to the corridor include bicycle-related itineraries that could be developed around the completed Foothills Trail, or a self-guided corridor heritage tour that could provide a day or more of activities for visitors.

A heritage interpretation and management framework in the region would reflect the historical connection between regional communities and provide a venue for project planning with a regional perspective. Each individual project idea for heritage interpretation in the corridor would be strengthened by the relationship with other projects, each telling part of the story. The development of heritage tourism opportunities also creates more capacity for visitor activities in the corridor.

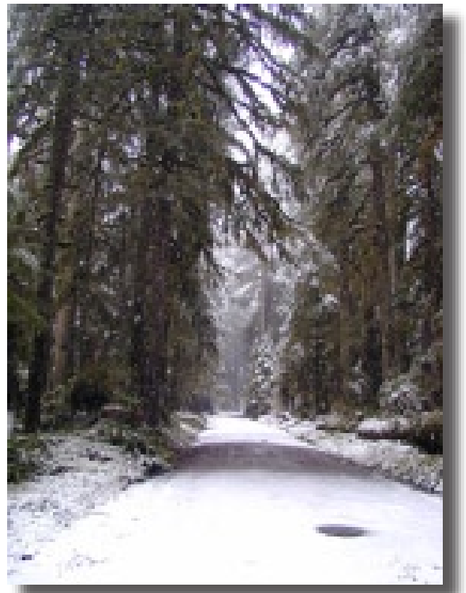
The greenway framework combines many of the elements discussed in the charette, from the interest in conserving the natural resources that contribute to regional quality of life to the importance of the corridor's rivers and streams. Some of the ideas in the greenway framework raise the question of what role timber harvest plays in the corridor as local economies become less dependent on natural resource extraction.

Park & Public Lands Issues

The opportunities in the Carbon River corridor are strongly influenced by the management of public lands that are accessible from the corridor roadways. The primary recreational lands in the corridor are Mt. Rainier National Park, and the Clearwater Wilderness and Evans Creek Off-Road Vehicle area managed by the Mt. Baker-Snoqualmie National Forest. There are also extensive National Forest lands in the corridor that were historically managed for timber production, but are currently in protective land use designations in recognition of unique environmental values on the forestlands.

All of the public lands in the corridor are heavily used in relation to the developed facilities available for recreation. Parking, campgrounds, and trails are often over capacity, and are showing the effects of overuse, whether it is in damaged roadside plants where visitors are using road shoulders for overflow parking, or erosion and trail downcutting where the volume of trail users is higher than trails are able to accommodate.

Public lands managers are faced with the challenge of preserving access while also protecting resources, knowing that there is more demand for recreation than they are able to meet.



Old growth forest surrounds the Carbon River Road inside the park

Mt. Rainier National Park

Mt. Rainier draws the most visitors of the public lands in the corridor, and has the most visible presence as a management agency. The Carbon River area is accessible year-round (as long as the road is passable), and the Mowich Lake area is open seasonally, typically opening sometime in July and closing sometime in October or early November depending on snow. The park maintains a visitor welcome center in Wilkeson, and generally has rangers stationed at both Carbon River and Mowich Lake during periods of high use.

Both Ipsut Creek and Mowich Lake have limited parking available. During peak use weekends both areas are typically overcrowded with overflow parking lining the access road. Both Ipsut Creek and Mowich Lake also offer campgrounds with limited services. Neither campground provides potable water, and both offer pit toilets.

Development and management of Mt. Rainier National Park is guided by the park's General Management Plan (GMP), a broad policy document. Mt. Rainier recently completed a GMP that describes management of the park over the next twenty years or so. The GMP includes several elements that will affect the future use of the Carbon River and Mowich Lake entries.

The most significant proposed change in management is for the Carbon River entry, where the plan calls for the eventual closure of the Carbon River road to private vehicles beyond the park entry, a boundary adjustment for the park near the Carbon River entry, and the development of a new campground facility on property currently outside the park boundary.

The Carbon River road inside Mt. Rainier National Park was a fairly early development, and the road corridor is currently in historic designation. Unfortunately, the road alignment is

The Carbon River near the proposed park boundary adjustment area

within the meander zone for the Carbon River, and has been subject to frequent flooding since its original construction. The riverbanks near the road show years of attempts to harden the bank and protect the roadway from floodwaters.

Recognizing that it is not economical to continually rebuild the roadway to the standards required for private vehicle use, the plan describes options of either closing the road to motorized vehicles completely, or maintaining the road to a lower standard and providing shuttle vehicles for access to Ipsut Creek. The plan recognizes that closure of the road would reduce the recreational opportunities in the corridor, and proposes to replace some of those opportunities by acquiring properties near the Carbon River entry and developing a new campground facility.

In addition to the challenges of maintaining road access to Ipsut Creek, the campground itself does not have access to potable water, and has poor soils for an on-site sewage system. A new location outside of the current park boundaries would provide the opportunity to improve the infrastructure for camping in the corridor, allow for the development of more camp spots, and allow the development of sites to modern standards that accommodate RV's and large-group camping.

Without the development of a shuttle system, the closure of the road would reduce the opportunities for day-use hiking starting at the current Ipsut Creek trailheads. Ipsut Creek is the only place in the lower 48 states where there is a reasonable day hike from low-elevation old growth forest to the snout of a glacier, and many participants in the charette process were concerned about losing this opportunity. Currently, day hiking is the most significant use in the Carbon River entry. If day hiking is not practical following the closure of the road it would be a significant change in the use of the corridor, potentially adding to the current crowding problems in the Clearwater Wilderness and the Mowich Lake area.

The potential extension of the park boundary through acquisition of private lands is a piece of the package of changes at the Carbon River entry that complements a change in use for the road inside the park, and the accompanying change of the Ipsut Creek campground from drive-in to backcountry camping. There are several private parcels included in the proposed park extension, which would be acquired from willing sellers at market value.

The largest private parcel in the proposed boundary adjustment area is a largely undeveloped piece of property that stretches from the Carbon River road to the river that the current owner would like to see become part of the park. The main residence is a charming historic structure, solidly built, with attractive regional detailing and a "park-like" feel. The property is a complex mixture of woodland and open meadow, and has historically been used for low intensity grazing. In addition to the main house, there are several outbuildings on the property for storage and animal care. A second small residence on the property was the original ranger's cabin on the Mt. Baker Snoqualmie National Forest, an interesting historic structure. The property plays a key role in some of the charette concepts for the corridor discussed later.

At the Mowich Lake entry the General Management Plan calls for the relocation of parking away from the lake, and limiting overflow parking. Parking at Mowich Lake would be relocated down the hill from the current location, protecting the lake from impacts related to parking and the heavy use associated with parking areas. The parking layout would be modified from head-in parking as in its current location, to parallel parking along the entrance roadway. More designated parking spaces would be available in the new layout. Overflow parking, however, would be restricted, reducing total parking availability from current levels. The same number of camping spaces at the Mowich Lake campground would be maintained.

Overall, it is difficult to predict the effects that implementation of the GMP would have on use of Mt. Rainier. If it is not feasible to provide shuttle service to the Carbon River Road or Mowich Lake, then there would be an increase in the availability and quality of camping spaces in the Carbon River entry area, but day use of the corridor would be significantly reduced. With shuttle service, day use capacity (currently limited by parking availability) may actually increase. Use of the Mowich Lake area, which would continue to be limited by parking availability, would likely show a small decrease from current levels.

As the park works to implement the management plan, a broad range of associated issues also need to be addressed in recognition of

Mount Rainier Carbon River Corridor scenarios for GMP implementation

	New campground developed while Carbon River Road remains open (No shuttle service)	New campground developed, Carbon River Road closed	
Recreational use		With shuttle service	Without shuttle service
Carbon River Campgrounds	Increased use	Increased use	Increased use
Carbon River Backcountry	No change	Increased use	Decreased use
Carbon River Day Use	No change	Increased use	Decreased use
Mowich Lake Campground	No change	No change	No change
Mowich Lake Backcountry	No change	Increased use	Decreased use
Mowich Lake Day Use	No change	Increased use	Decreased use

changed visitor use patterns, new facilities, and the ongoing issue of increasing demand for recreation.

Mt. Baker Snoqualmie National Forest

The Mount-Baker Snoqualmie National Forest Manages lands that wrap around the north side of Mt. Rainier—area that was part of the original Mt. Rainier Forest Preserve but that was not included in the park. National Forest lands in the Carbon River corridor are at the southern and eastern limits of the Mt. Baker Snoqualmie National Forest, and represent a small part of the area managed by the forest. As mentioned above, most of the national forest lands located in the corridor are in a restricted use category that is not available for timber management.

National Forest lands in the corridor include two major recreation areas, the Clearwater Wilderness, and the Evans Creek Off-Road Vehicle Area. The main access to the Clearwater Wilderness is via a bridge over the Carbon River very near the Carbon River entry to the park. This crossing provides access to an extensive road system and several trailheads with good access to high elevation lakes and subalpine recreation areas. The Copley Lakes area is a popular day use and overnight location, and has been showing signs of overuse. Forest managers have been making management modifications—including relocating a road end to locate parking further from the resource—in response to impacts, and continues to look for opportunities to reduce impacts without restricting access.

The Evans Creek ORV area is popular with off-road enthusiasts, especially in the wet seasons when "mudding" is at its best. According to local residents the use of the area actually drops in the summer when the weather is driest. The ORV area is something of an anomaly in this part of the Mt. Baker Snoqualmie—an active motorized recreation area in a region that is otherwise designated for resource protection. The forest surrounding the ORV area is designated as late-succession reserve, an area that includes mature coniferous forest. Currently, the Evans Creek area includes a small campground located at the hub of an extensive network of ORV trails. The area actually connects to both of the entry corridors to the park, bridging the gap between the Carbon River Road and SR 165 heading to Mowich Lake.

Contemporary Native American Perspectives

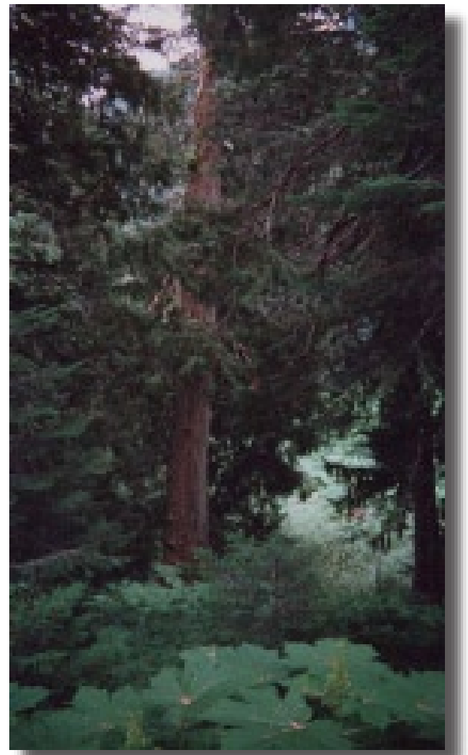
The region studied during the charette process is the traditional territory and homelands of the indigenous peoples described today as the Puyallup and Muckleshoot tribes. Other indigenous bands and tribes were also likely to have used various parts of the corridor. Both the Puyallup Tribe of Indians and Muckleshoot Indian Tribe are sovereign, federally recognized governments that maintain a nation-to-nation relationship with the United States. Each tribe has an approved constitution and by-laws, is self-governed via a regularly elected Tribal Council, and owns tribal trust property, especially within each tribes established reservation.

As a result of displacement, only limited numbers of Puyallup and Muckleshoot tribal members currently live in the corridor area. However, these local tribes and their individual members continue to maintain strong ties to Mount Rainier and the Carbon River region. Mount Rainier is a sacred place for all Native Americans of the Pacific Northwest. The lands in the park are a traditional use area shared by tribes from the surrounding regions. Furthermore, the mountain remains an important presence in the spiritual landscape. Mount Rainier continues to be a place of significant cultural importance.

In addition to the importance of the region as the traditional homeland for the tribes, rights to natural and cultural resources in the corridor are reserved for the local tribes by federal treaty. The Puyallup and Muckleshoot tribes continue hunting and fishing in the corridor, and are committed to protecting their rights to use their usual and accustomed lands. Tribal cultural resources include important sites and artifacts, as well as traditional cultural properties and even unusual or endemic plant and animal species. Each of these are vitally important to the local tribes and are protected from damage under a variety of regulations.

As in the past, affected local treaty tribes share an intense concern over resource protection. Longstanding inhabitation of the region by tribal peoples has left a cultural legacy of sites and artifacts throughout the corridor. Although some of these sites have been documented, the great majority of them have not. Cultural sites are not just a part of the historical record, but are of continuing importance to tribes. Whether sites are documented or not, tribes have specific concerns about treatment of their cultural resources, and project development needs to include an investigation for potential impact to cultural sites, consultation with tribes, as well as provide safeguards against disturbing cultural resources when they are discovered during project development.

Natural resources are also important as elements of the tribes' cultural heritage, continuing cultural survival, and contemporary tribal members' way of life. The treaties of Medicine Creek and Point Elliott contain specific provisions for harvesting fish and animals as well as plant and other materials throughout their traditional homelands and ceded territories. For example, salmon fulfill an important cultural and economic role in contemporary life, and the modern-day health of the river systems and their contributing watersheds are issues of great interest for each of the local Treaty tribes. In general, local tribal interests in the health of the natural environment range from site-specific concerns for habitats of culturally important plants or other resources, to large-scale concerns for the ecological health of watersheds and regions.



Giant trees and Devil's Club in the park

The Muckleshoot Tribe has expressed serious concerns over the charette processes for Mount Rainier. The tribe believes that development in the region surrounding the park inevitably has a negative impact on natural and cultural resources, and that the charette processes emphasize development over resource conservation. Both the Puyallup Tribe and Muckleshoot Tribe are also concerned about the informal nature of the charette. They prefer processes that include designated roles for government, tribes, and agency representatives with a more formal structure for guidance, review, and comment. Altogether, local affected tribes each consider meaningful government-to-government interactions and relationships to be of irreplaceable value. Overall, local tribes each firmly emphasize that Treaty-based provisions are a reserved right and not a privilege, and that in total, this principle needs to be respected throughout any charette-generated endeavors.

For the potential projects described in this document there are a variety of requirements for formal inclusion of tribes during the planning, design, and permitting process. However, Native American concerns also extend beyond the formal requirements of permitting processes. In general tribes have a role to play in a wide range of management and development activities, including building projects, the development educational displays, land management activities such as timber harvest, and the overall policy development that shapes growth in the region.

Public Lands, Gateway Communities & the Challenge of Growth

The first railroad in the territory that would become Washington State connected Kalama to Tacoma and the ports of Puget Sound, then

Flooded wetland in the corridor

Wilkeson, Carbonado, and the other communities of the Carbon River valley. Growth followed fast along the rail line, with the Carbon River valley becoming one of the most densely populated areas in the territory. Railroads connected the first fast-growing communities, then trucks and roads began to displace trains and railroads.

At first, roads connected the communities of the south Puget Sound region and the Carbon River corridor. Soon, however, the roads themselves became the corridors for growth, providing easy access to markets and employment centers. As urban centers developed more heavily, and the rural food and fiber production became less labor-intensive, roads that began as farm-to-market routes (and in the Pacific Northwest, forest-to-market routes) became routes to support commuting from rural homes to urban employment centers. Eventually development followed the roads themselves, and population growth with development.

More than any of the other gateway corridors to Mt. Rainier, population growth and suburban development may lead to the most significant changes in the character and experience of the Carbon River corridor. The Carbon River entry is the least developed of the routes to Mt. Rainier, and has the least capacity to accommodate visitors. It is the closest to the Puget Sound population centers, especially the south sound communities including Tacoma, Lakewood, Puyallup, and Auburn and the smaller communities of Sumner, Orting, Bonney Lake, Buckley, and Enumclaw. These communities, and the unincorporated areas of Pierce County nearby, are some of the fastest-growing areas in Washington State.

As of 1997, Pierce County population was estimated at almost 674,000 residents. Over the 20 years between 1997 and 2017 population is expected to grow to almost 925,000 with almost half of that growth taking place in what is currently unincorporated Pierce County. Many of those new residents will be living in the communities in or near the Carbon River corridor. For the residents already here and the thousands of new residents who will join them, the Carbon River corridor is right in their backyard, an easy day trip to the snout of the Carbon Glacier or the high country of Spray Park.

The challenge for Mt. Rainier National Park and adjacent gateway communities is maintaining or enhancing the visitor experience in an environment of increasing demand for recreational opportunities. The area near the Carbon River corridor is growing fast, and visitor services (especially parking) at the two entries to the park are at or near capacity in peak season. The combination of growing demand with limited capacity will almost inevitably lead to conflicts.

The charette process is intended to explore possible responses to the challenges expected to come with future change. Many of the opportunities developed in the charette were already in discussion among community leaders and activists, while others emerged as the charette team worked with community members in public meetings and workshops, as the collaborative process led to the identification of new possibilities.

The ideas that follow are not a coordinated plan or vision, but as individual ideas and in combination they describe exciting possibilities for positive change in the region.

Charette Outcomes

CHARETTE OUTCOMES

The charette outcomes are a series of planning and design opportunities for the corridor. Several of these ideas are projects that communities had identified prior to the beginning of the charette, many ideas came out of the meetings and workshops during the charette process, and some ideas are the suggestions of the charette team.

The descriptions of the charette outcomes begin with projects on the corridor scale or located outside of corridor communities, then outcomes for individual communities follow.

CORRIDOR-WIDE OPPORTUNITIES

The landscape of the Carbon River corridor is connected by rivers, streams, and forests. The natural resources in the corridor are also the basis for both the historic and contemporary connections between corridor communities.

The Historic Fairfax Bridge

Salmon, forest resources, and the unique hunting and collecting resources in the sub-alpine zones flanking Mt. Rainier drew Native American inhabitants of the region up the valley every year for thousands of years in a seasonal pattern responding to weather, the availability of plant resources, and game movements. Coal, timber and sandstone were the foundations for early community development. Today, timber and sandstone are still important parts of the regional economy, but the natural landscapes of the Carbon River valley and Mt. Rainier are becoming increasingly important as recreational resources and as a setting that contributes to regional quality of life.

Although each is unique, the communities in the corridor share many values and community development goals. Orting, Buckley, South Prairie and Wilkeson are connected historically, and in some of the challenges they face today:

- Each community is working to maintain quality of life for long-time and new residents in the face of growth and a shift in local economies from natural resources and agriculture to residential and services.
- They are each exploring new strategies to provide public services in response to growing demand and limited revenues.
- They each see value in their historic heritage, and are looking for strategies to preserve and share their artifacts and stories.
- They are each trying to revitalize their community cores by attracting specialty retail and services.
- Although tourism isn't necessarily the most important economic sector in the community, they each see recreational travelers, whether they are traveling by car or bicycle, and going to Mt. Rainier or another corridor destination, as a critical market to support community revitalization.

The other connecting element through the corridor are travelers themselves, who may be finding their way to the region for the first time, or may be interested in discovering something new in a familiar place. Typically unaware of the contemporary and historic connections between corridor communities, travelers are genuinely interested in the history of the places they visit, and on the lookout for amenities that can improve their trip.

A trailhead for the Foothills Trail

The common goals that corridor communities share, and the corridor-wide needs of recreational travelers, present a strong opportunity for regional coordination. Cooperative work to protect and share the region's heritage, link the region with a variety of transportation options, and conserve the natural setting that supports regional quality of life and the tourism economy could provide a wide range of benefits for corridor communities. Awareness of the corridor as a region would also help corridor communities to raise their profile as a unique destination, and encourage a sense of shared values that will help to guide regional growth and development.

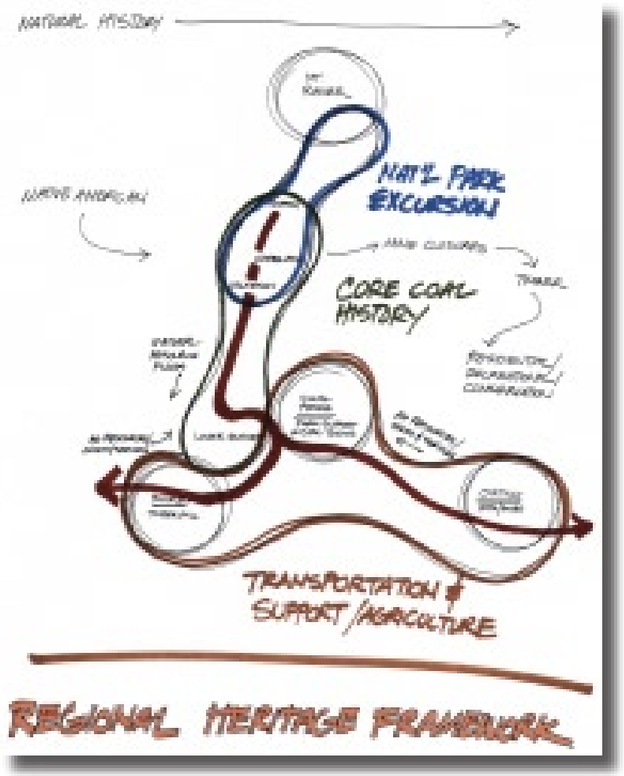
Regional Heritage Framework

As much as the corridor is connected by roads, it is connected by heritage and stories. Corridor communities share a history of trains, mining, timber and tourism. Each also has a special relationship with Mt. Rainier as partners that share in the heritage and future of a unique region. The sites that tell the story of the region's heritage are scattered throughout the corridor. Developing a cooperative framework for understanding, conserving, and sharing the corridor's heritage is one of the strongest opportunities identified during the charette.

Residents of the Carbon River region are often very aware of the history that surrounds, and have a deep interest in maintaining connections to their historic heritage. The large group of stakeholders who are committed to maintaining and sharing the region's heritage are a potential source of volunteer time and political support for implementing a regional approach to heritage resources.

Outdoor exhibits at the Foothills Historical Society Museum in Buckley

Although a range of specific ideas were identified during the charette for a heritage interpretive system, the core activity is coordination between community heritage advocates. De-



veloping a strong working group to explore the possibilities for sharing resources and clarifying roles throughout the corridor will be the foundation for a successful program.

The charette team suggested five elements that could be a part of the regional framework:

Regional Coordination

Each community in the corridor has an established historical society or is considering forming one. These groups are the caretakers of the region's heritage, and likely are the core for any future coordinating group. Partnerships between heritage groups and local governments are important to ensure that heritage and community development projects are coordinated.

Inventory, Conservation and Monitoring

Understanding the resource is the first step in managing and interpreting it. In addition to the widespread historic sites, artifacts and documentation of the region's history are currently scattered throughout the corridor, many in private ownership. Working with the large group of corridor residents who have an interest in the region's history would help to make the workload manageable and to increase the support base for heritage activities. Even if individual owners of artifacts, photos, and other heritage resources aren't interested in sharing them with heritage societies or museums, it is valuable to understand where the resources are, and to monitor them regularly for opportunities for loans or acquisitions.

Not all heritage resources are physical. The first-hand memories of long-time corridor residents are also valuable for telling the corridor's stories. The remaining residents who remember living in the region during the mining period are aging. There is an opportunity to document their first-hand experiences in oral history projects. Some opportunities include collecting oral histories, working with younger generations to make sure that family histories are documented, and holding informal events where "old-timers" can tell their stories.

The National Park Service is a leader in historic and archeological conservation and interpretation, and may be able to provide technical assistance. State resources, either through the Washington State Historical Society or the Washington State History Museum may also be available to help conserve these important resources.

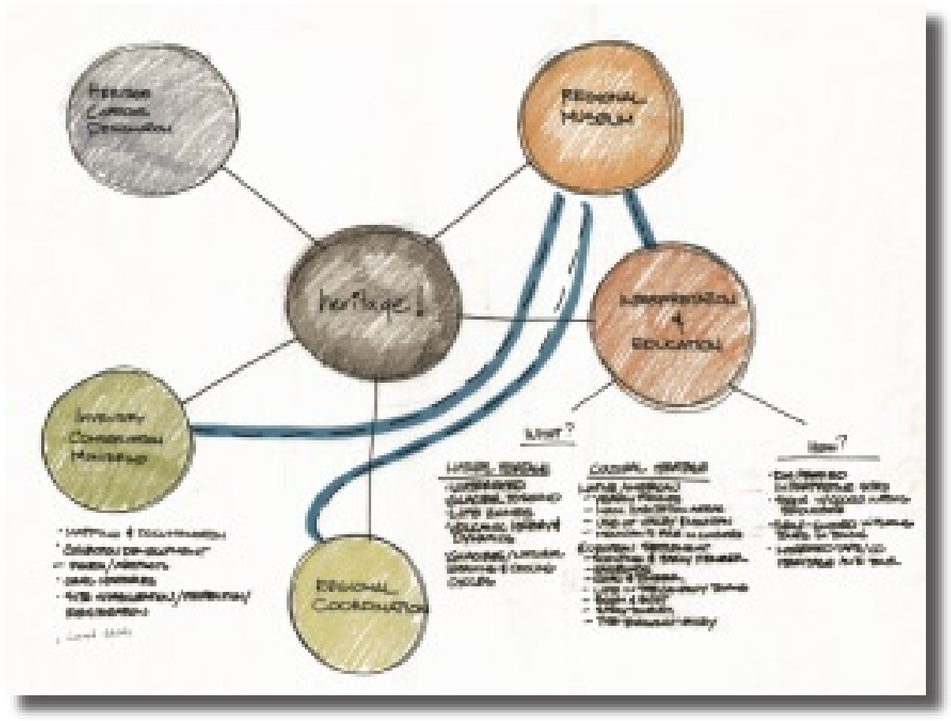
Key inventory and conservation elements:

- Mapping and documentation
- Collection development—photos/artifacts
- Oral histories
- Site stabilization/protection/restoration

Regional Museum

A museum would be a component of the interpretation and education strategy, but it is a significant enough project on its own to deserve separate consideration. The region's heritage is linked, and the heritage stories are regionwide. One potential strategy for coordinating a regional heritage strategy is the development of a regional museum as an anchor facility. A single museum could be able to develop the "critical mass" of interest and support to attract funding and visitors. There would also be efficiencies in staffing and technical resources. It is expected that heritage interpretation in the corridor would be widely distributed with individual sites in each community, and potentially also using portable techniques including brochures, driving tour tapes/cd's, and low power radio transmitters.

A central facility would contribute to the region's ability to support and maintain distributed projects with continuity between sites and effective management of an interpretive



Potential elements of a regional heritage framework

INTERPRETIVE TOPICS & DELIVERY

NATURAL HERITAGE
- Watershed
- Glacier to sound life zones
- Volcanic history and dynamics
- Glaciers/ natural warming and cooling cycles

CULTURAL HERITAGE

Native American
- Annual rounds and use of the landscape
- Main habitation areas
- The valley and the mountain
- The mountain's cultural role in Native American life

Euro-American Settlement
- Scouting & early pioneer times/conflicts with Native American residents
- Railroads
- Coal and timber
- Life in company towns
- Boom and bust
- Early tourism
- The evolving valley

INTERPRETIVE METHODS
- Dispersed interpretive sites
- Signs with coordinating brochure
- Self-guided walking tours in towns
- Narrated tape/CD heritage auto tour

system. There are several options for the location and scale of a regional facility. Potential sites for a regional museum include the existing Foothills Historical Society Museum in Buckley, or a new facility in South Prairie or Wilkeson. The museum should be integrated into an existing community, and designed to complement the community's development goals.

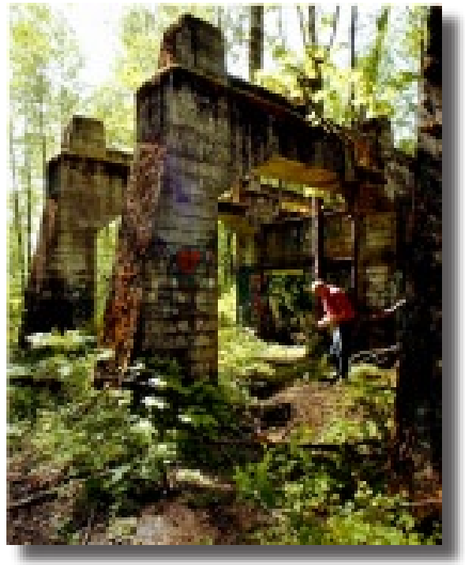
Interpretation & Education

Interpretation and education are approaches for sharing the region's heritage with both local residents and visitors. The region's history is a compelling story, and visitors have a natural curiosity about the history of corridor communities and the natural history of the landscape connected to the park. An overall interpretive planning process is important as a starting point for developing the interpretive and educational program for the region. The interpretive plan would identify some organizing themes for interpretive messages, clarify the roles that different communities and sites play, and develop a common design "look and feel" for interpretive sites, signs, and printed materials.

Without coordination in the development of interpretive systems in the corridor, it is likely that there would be significant duplication of information between communities, and that the different methods used to deliver interpretation wouldn't provide visitors with a sense that the valley stories were connected by a shared landscape and historical ties.

Heritage Corridor Designation

The concept of a "heritage corridor" is an emerging tool that is being used to help organize dispersed communities and sites that are tied together by a shared heritage. At the state level, benefits to having the road designated as



Remnants of the coal mining industry

a heritage corridor include access to funding, technical assistance and potential inclusion on state scenic byway maps. On the national level, the National Park Service has been a partner in the development of several heritage corridor regions, taking the leadership in the development of selected sites, and acting as a partner in the overall designation, development and management of the corridor. The Carbon River valley is a historic region of regional, and possibly national importance. If communities in the region see value in coordinated planning for a joint future of the corridor that is consistent with the conservation of heritage resources, and that includes tourism as an important component of the local economy, then pursuit of national recognition may be appropriate at some time in the future.

CARBON RIVER CORRIDOR ALTERNATIVE TRANSPORTATION

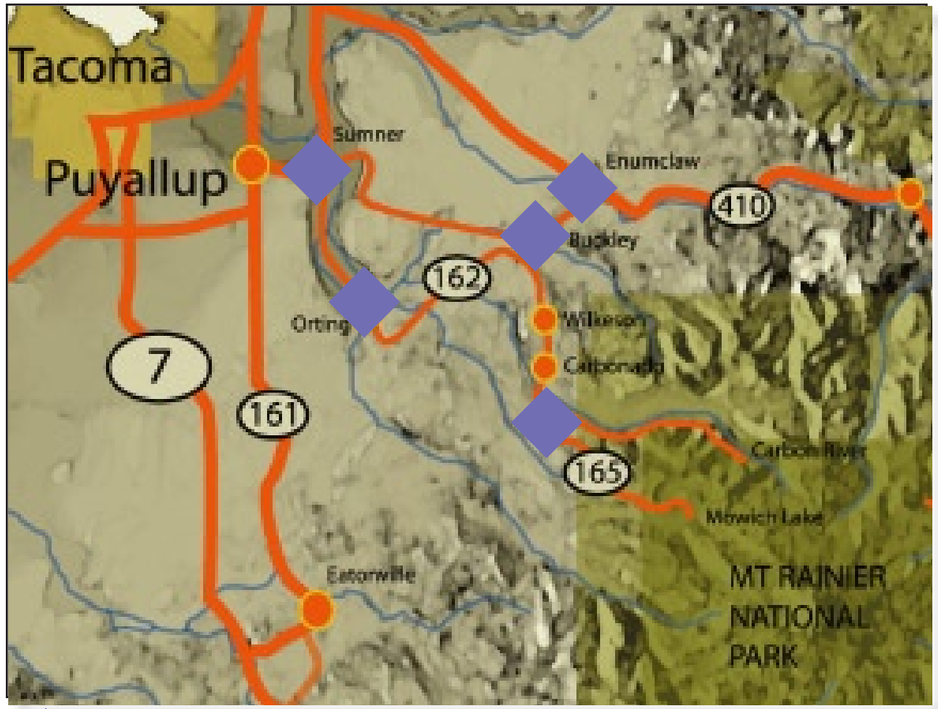
Traveler Information

Recreational travelers are often visiting a destination for the first time, and travel information can have a strong influence on their route choices and itineraries. The methods and content of that travel information can be developed to support visitor management and community goals, while providing real value to travelers.

Highway signing

Highway signing is very effective in directing travelers—possibly too effective for the Carbon River corridor. There is a concern that prominent signing to the Carbon River corridor would mistakenly attract visitors on their way to the Sunrise or Nisqually entrances. Often these travelers would be disappointed by the lack of facilities at the Carbon River corridor entries, and be unprepared to enjoy their visit at locations that require more self-reliance than the other entries. Even without signing to Mt. Rainier, the ranger at the Wilkeson Visitor Welcome Center reports that many visitors stopping for information are surprised that they are not heading to one of the more developed entries for the park.

Currently there is no signing to the Carbon River/Mowich Lake entries from Highway 410 that indicates Mt. Rainier National Park is at the end of the road. Instead, there is a sign directing visitors to the "Carbon River



Major traveler decision-making points in the corridor

Ranger Station." This has been an effective compromise that provides educated travelers a reminder for the turn to the Carbon River entry, but doesn't attract as many general visitors to the park who are intending to travel to either Sunrise or Paradise.

Given the constraints to the information that can be effectively presented on highway signs, they should be planned with care in the Carbon River corridor. Important wayfinding decision points in the corridor include:

- Orting, where visitors to Mt. Rainier might be heading towards the Nisqually entry, Sunrise entry, or Carbon River entry.
- SR 410/SR 165 intersection, where travelers are heading to the Carbon River entry.
- SR 162/SR 165 intersection, where travelers might be heading either to the Sunrise entry or the Carbon River entry.

Although there is some interest in the corridor communities to increase visitor traffic in the corridor, it is important that visitors have the correct expectation of the facilities at the park. Given the typical overcrowding at the Carbon river corridor entries, there is also little benefit in attracting new visitors into the corridor who have not planned their trip in advance, with some expectation of dealing with limited parking opportunities.

Given the current facilities and capacities, appropriate signing might include:

- Orting: signs to the Nisqually entry directing travelers to the Orville Road, signs to the Sunrise and Carbon River entries directing travelers to SR 162.
- SR 410/SR 165 intersection, sign directing travelers to historic Wilkeson and Wilkeson Visitor Welcome Center.
- SR 162/SR 165 intersection, signs directing travelers towards SR 410 for the Sunrise entry, and towards Wilkeson for the Carbon River entry (in this case the low-volume of travelers along this roadway might make signing to the Carbon River entry appropriate.)

As visitor amenities in the corridor are developed, the approach to signs in this corridor should be reevaluated to assess how changes in the corridor change visitor information and management needs.

Visitor Information Centers

Visitor information centers are typically operated by public agencies, such as the park service or forest service, by local governments, or by community organizations like chambers of commerce. Currently, the park service operates a visitor welcome center in Wilkeson, which is the only visitor information center in the corridor. While visitor information centers are popular with travelers, they are also expensive to operate, requiring at least part-time staffing with trained staff.

The goals for visitor information in the corridor are quite complex. For visitors to the National Park and National forest, there are several visitor management issues that visitor information should address:

- Ensure that visitors understand the opportunities in each of the major recreational areas, and are prepared to be relatively self-reliant.
- Provide clear information on parking availability and the options available if parking is full.
- Offer alternative destinations or activities if travelers are not prepared to enjoy the recreational opportunities in the corridor, or do not want to risk the possibility of driving to an entry and then finding out that parking is not available.
- Provide accurate information on camping availability, the need for permits, fee collection, and Forest Pass requirements.
- Provide accurate information on road closures, including SR 410, SR 123, the Carbon River road inside the park, and SR 165 to Mowich Lake.
- Direct travelers to the Wilkeson Welcome Center as the primary fee collection and visitor contact site for the park.

National Park Service visitor welcome center in downtown Wilkeson

If shuttle systems are implemented sometime in the future, then visitor information will also be important to explain shuttle operations.

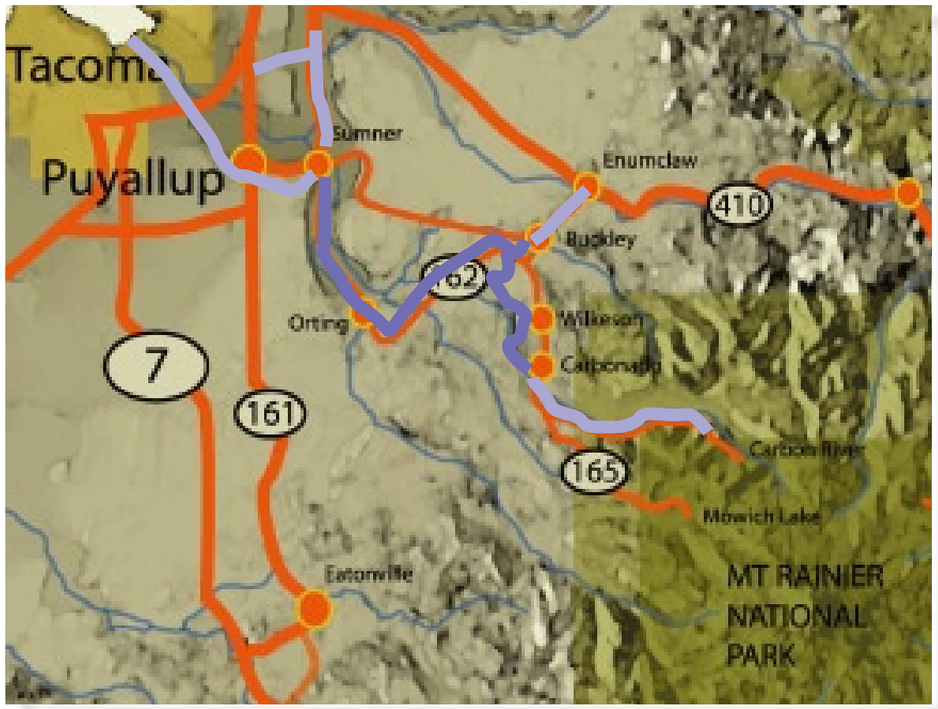
Visitor centers can also contribute to meeting community development goals by providing information for local activities as well as the park and forest. As the corridor develops, recreational activities based in the communities will attract more and more visitors on their own, complementing the recreational resources in the park and forest.

Visitor centers can generate direct revenue through the distribution of brochures, retail sales, and a few other potential strategies, however they rarely recover their full cost of operations. Both the City of Buckley and the City of Orting are considering the development of visitor centers. Both of these locations make sense for the development of modest facilities, and could provide valuable services for travelers.

Marketing and promotion

In general, Mount Rainier National Park does very little marketing or promotion to increase visitation to the park. The park web site offers travel planning information and links to local community marketing organizations. Marketing is intended to influence traveler decision making about destinations and itineraries, and at the community level is usually initiated by chambers of commerce or visitor & convention bureaus. Mt. Rainier is frequently marketed as a destination by gateway communities or associations of gateway communities that share one of the corridor regions. For example the Nisqually corridor is marketed by a partnership including Ashford, Elbe, Packwood, and Eatonville.

Communities in the Carbon River corridor interested in increasing tourism should consider marketing in coordination with the other traveler information strategies discussed above.



Planned Foothills Trail alignment
Potential future extensions

Non-Motorized Connections

The Foothills Trail

The Northern Pacific Railroad opened its first line between Tacoma and Wilkeson in November of 1877. Rail corridors were the first high volume transportation system in the corridor, and most of the corridor communities developed during the rail age, oriented to the rail lines as their primary connection to the rest of the northwest.

The rail corridor has been abandoned, and the Foothills rail to trail project, led by Pierce County and the Foothills Rails-to-Trails Coalition, has been slowly developing portions of the railbed into segments of a non-motorized trail. Although it is being developed in phases, when complete the Foothills Trail system will connect all of the communities in the Carbon River corridor and link to other regional trail systems. Eventually a network of non-motorized trails may be available to connect from Tacoma and Sea-Tac Airport to Mt. Rainier.

Currently, the trail is complete only in sections, with segments almost complete connecting Orting, South Prairie, and Buckley. Connections to Sumner and Wilkeson are planned for the next few years, and a segment beyond Wilkeson to Carbonado would complete the core trail system.

Trail advocates have a vision for a non-motorized trail system that connects from the City of Tacoma up the Carbon River corridor to the park—a non-motorized corridor from Puget Sound to Mt. Rainier. A potential connection to the Interurban Trail would connect almost to SeaTac Airport, offering a non-motorized option from airplane to the peak.

A rail bridge converted for use by the Foothills Trail

The long-term vision for the trail includes a connection to the park near the existing carbon river entrance station, although the exact route is not clear and right-of-way has not been acquired. Railbed is still in place for much of the route, making it easier to route a trail through the increasingly rugged landscape heading towards the park boundary. There remain some significant technical challenges to future trail development to the park, including crossings

A future Postcard from the Carbon River Corridor–

A BICYCLE TOUR

Arriving from New England at SeaTac, a family sits on their duffle bags, waiting in the baggage claim area for their bicycle travel cases to arrive. The baggage handlers finally bring the bulky cases out, and the family spends a half hour reconnecting wheels to frame and chains to chainrings. They had reserved their trailers (familiarly called "bobs") from the bicycle rental stand months ago, and the rental place also offers storage for their bike travel cases. They could have rented their whole outfit here bikes and all, but they were very attached to their own bikes, and decided to take the trouble to bring them on the plane. Less than two hours from touching down they are pedaling out of the airport for Mt. Rainier.

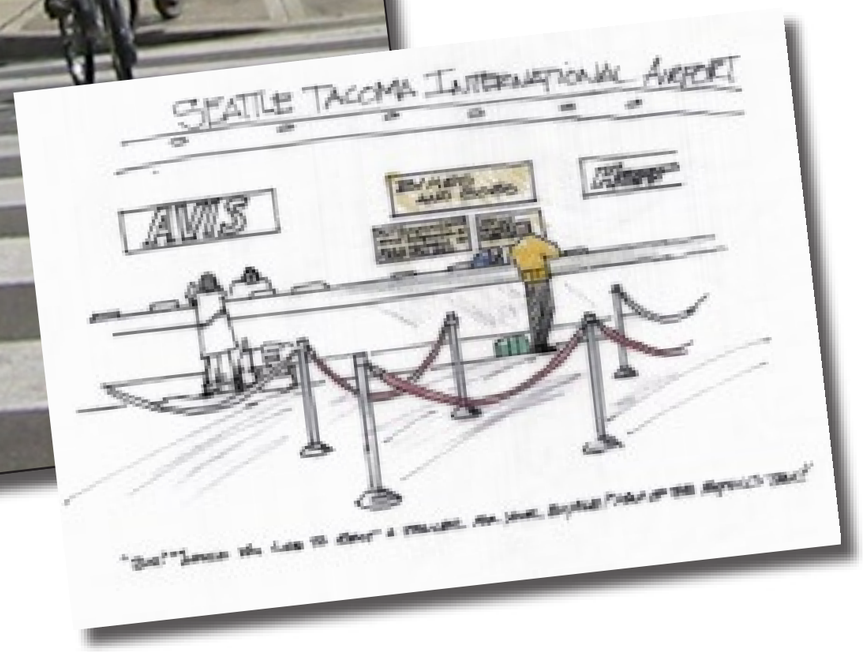
Not all of the trail connections are in place yet, so they have to ride a few miles on road before they reach the Green River valley and head south, taking advantage of the Green River and Interurban trails as they head toward the Foothills Trail that will take them all the way to the mountain. Their offroad tires and luggage trailers slow them down a bit, but they know they will be thankful for them once they leave the paved trail for the last miles of gravel trail that will take them into the park and to their campsite.

It's been a long travel day, and they've decided not to be too ambitious with mileage this trip. Heading south they have reservations for a bed and breakfast in Orting for tonight–a comfortable bed and shower before they camp for several days in the park. They get beautiful weather for the ride from Orting, and take some time in Wilkeson to stop for lunch and to take the self-guided historic walking tour. Feeling rushed for time, they decide to book a room at the historic hotel on Orting's Main Street and stay in town on their trip out. This will give them some time to enjoy the historical museum and see the sandstone cutting demonstration at the quarry.

Once past Carbonado the trail heads into wild-feeling territory, with views down to the Carbon River from deep forest. The trail actually crosses under the Fairfax bridge, giving them a great view of the complicated steel framework that supports the historic structure. The bridge is worth a stop, and they enjoy reading about its history at the interpretive pullout on the trail. After miles of riding in the forest, without any sounds of cars or logging trucks, they cross the Carbon River to the Park Service's main administrative site for the Carbon River entrance. They have reservations to camp here for night, and signs direct them to the bicycle-only campground. They enjoy being able to camp in a relatively undeveloped campground– enjoying the quiet, the trees, and the stars.

Walking up to the ranger station, they pass the historic display of the first ranger cabin for the Mt. Baker Snoqualmie National Forest, and take a few minutes to learn about the early history of public lands in the corridor. At the ranger station they are able to check in for their camp spot tonight near the Carbon River Entry, and for the next few nights at the Ipsut Creek campground at the end of the park access road. They enjoy a campfire talk at the amphitheater, then turn in for the evening.

The next few days are spent hiking to the Carbon Glacier and exploring the old growth forest around the campground, then it's back on the bikes for a last night in Wilkeson, then a big day back to SeaTac and home. Beautiful bicycling on good trails, charming historic communities, old growth forest and a glacier—there's no other bike trip like that, anywhere.



of the Carbon River, and unresolved ownership issues.

The Foothills Trail has already proved itself a valuable contributor to local communities. The segments currently in place are popular with residents and visitors to the communities they serve. As more of the trail is completed, offering greater variety in the lengths of available trips and itineraries, it is likely that the trail will become significantly more popular.

The extension of the trail toward the park and connections to other long-distance trail systems will make the Foothills Trail one of a relatively few trail systems that can be considered a destination travel experience for bicyclists who may drive or fly to the region (with their bikes) to complete a multi-day trip on the trail. As the volume of users grows, the trail is likely to become a more effective contributor not just to community quality of life, but also community economies as trail users spend money in the towns they pass through.

Community-based amenities that could support the trail as it grows into a more significant destination include safe long-term parking for trail users, bike racks in community commercial centers, maps and guides to local communities, and similar travel assistance. Private sector businesses that may be supported in part by trail users include bike shops, restaurants and coffee shops, bed and breakfast style lodgings, and campgrounds along the trail route.

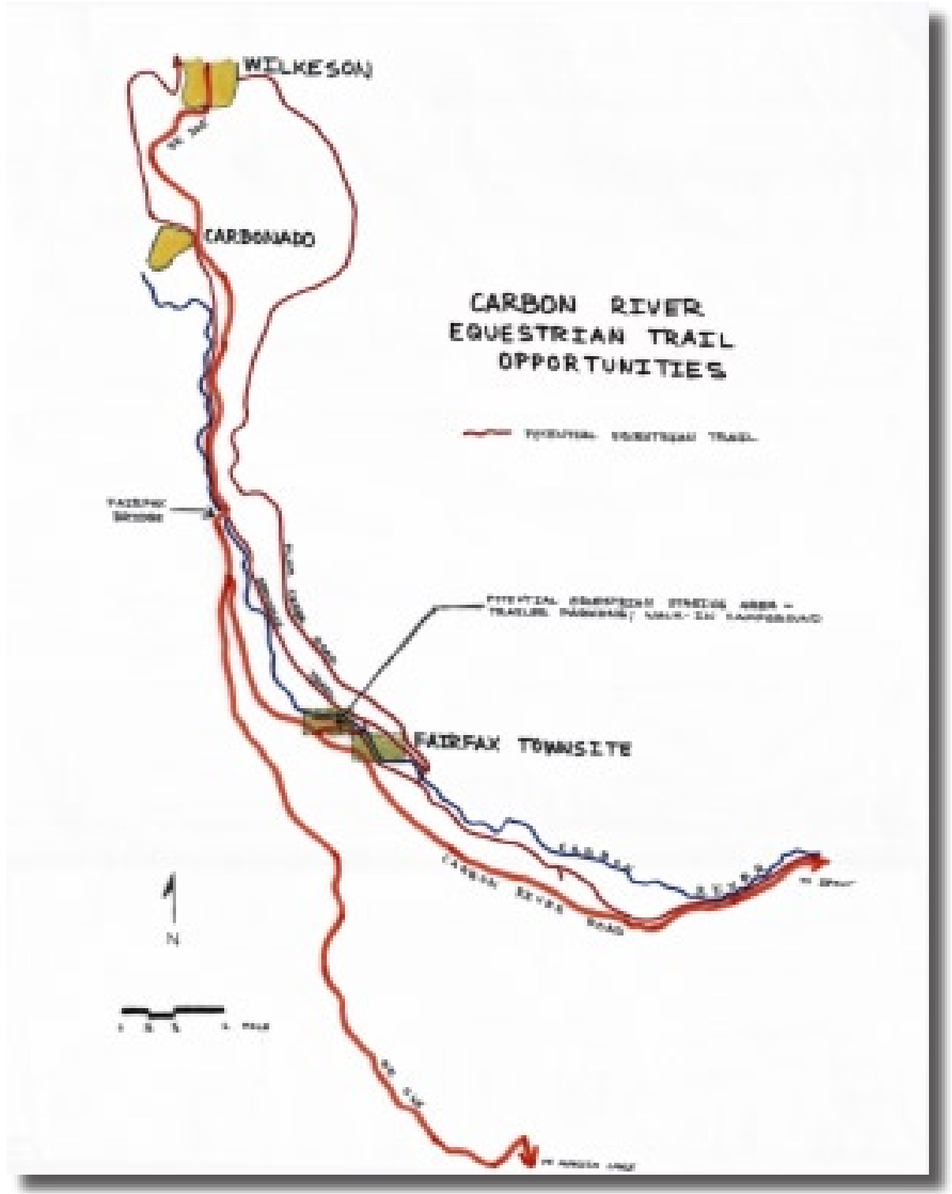
Like the railroad before it, the Foothills Trail is a spine connecting the communities and landscapes of the region. Each of the more general strategies for the region, from heritage interpretation to travel information to landscape conservation, includes opportunities that can tie into the trail. Trailheads are already being used as locations for heritage interpretation and regional maps. Trailheads are also used by a wider range of travelers than just trail users. Although this may be a management challenge in the long run, the trailheads provide some of the few public restrooms in the corridor, and they will likely become used even more than they are today as *de facto* rest stops for drivers.

As discussed previously, Mt. Rainier, the Clearwater Wilderness, and Evans Creek ORV area are near capacity during the peak season from May to September. The Foothills Trail is one of the most significant opportunities to develop new recreational activities in the corridor, attracting new visitors and leading them into the heart of corridor communities.

Equestrian Trail Systems
in the Carbon River Valley

The Carbon River valley has the potential to provide a variety of high quality equestrian trails. Routes ranging from short day trips to multi-day adventured could be developed using a combination of the Foothills Trail with existing trails in the National Forest and low volume logging roads on Plum Creek timberlands. The trail system drawing shows a simple loop option that could be developed as an easy initial phase. With more study it is likely that an extensive system of equestrian trails could be developed in the valley. Private timberlands owners will be critical partners in developing trail systems, and should be included in any early planning discussions.

Equestrian staging, including trailer parking, camping and restrooms could be accommodated at the Fairfax townsite and properties in Mt. Rainier's planned boundary adjustment area.



Carbon River Road Shuttle

The Carbon River Road was originally designed and constructed beginning in 1921. The Carbon River Road was carefully planned to provide a uniquely scenic travel experience, responding carefully to views and landscape features. According to the National Park's annual report of that year, the road was "being laid out so as to develop and save such scenic accents as individual fine trees and springs gushing from the rocks—in short, to make the most of every scenic detail in making travel over the road enjoyable." The road is considered an important part of the history of the park, and is located in a designated historic corridor. The old growth forest outside of the corridor is designated wilderness.

This section of the Carbon River Road inside Mt. Rainier National Park washes out frequently

A significant segment of the road is within the historic meander zone of the Carbon River, and is frequently damaged by flooding. While the park continues to repair the road following minor flood damage, it may not be sustainable to continue to repair major flood damage in the future. The park General Management Plan recommends the eventual closure of the Carbon River Road to private vehicles, with the possibility of establishing a shuttle to provide access to the Carbon River campground and trailheads. The charette began to explore possibilities for shuttles in the Carbon River corridor, and it was the subject of several discussion sessions with charette participants.

Participants at the workshop were strongly in favor of maintaining the Carbon River Road and allowing private vehicle access as long as possible. If the park becomes unable to maintain the road due to serious or repeated flood damage, participants were in favor of providing a shuttle for access. Shuttle service to the Carbon River entry would need to serve several distinct user groups:

- Day hikers
- "Car Campers" who may bring more camping supplies than they are able to carry easily
- Overnight backcountry travelers
- Travelers of a variety of different ages and abilities

To be effective, meeting participants felt that shuttle service needed to meet a wide variety of criteria:

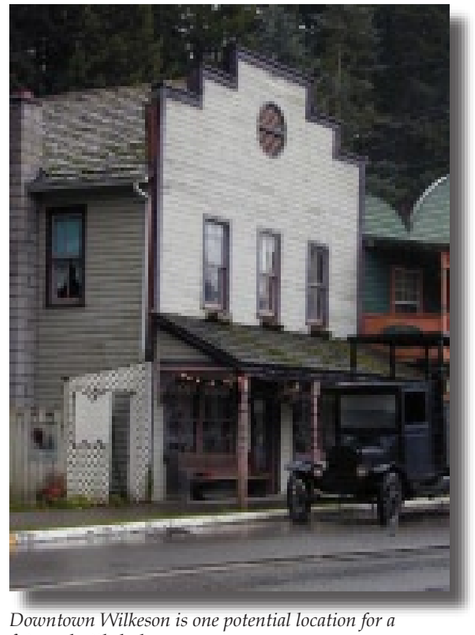
- Short headways, with 10-15 minutes preferred ("headway" is the longest wait time between two shuttles.)
- Comfortable vehicles with flexible storage options for passenger gear, including bicycle racks.
- Protected areas for passengers while they are waiting for the shuttle—at least covered, and possibly fully enclosed with heat lamps or other warming technology.
- Shuttles should begin early in the morning, seven o'clock at the latest, and continue until past dusk. It may be possible to have longer headways during the earlier and later parts of the day.
- There must be an option for 24-hr emergency transportation for hikers who go over their planned time, need assistance or develop a medical problem. This could be provided by a resident staff ranger at the Ipsut Creek campground, or by telephone/radio.

Throughout the discussion of specific needs to make shuttle service successful in the corridor, participants emphasized that their first priority was to maintain the ability to take day trips in the corridor to the Carbon Glacier, and no shuttle service would be successful if it didn't make it possible for the widest range of users to enjoy that unique day-hike opportunity.

Shuttle Staging Locations

Shuttle systems would operate out of one or more staging areas, providing long and short-term parking for shuttle travelers, as well as orientation information and amenities while waiting. While the potential closure of the Carbon River entry is the primary reason for considering shuttle services, it may also be worthwhile to consider shuttles to Mowich Lake. The Mowich Lake entry provides limited parking, and during periods of overflow parking may require a long walk from a parking space to the entry area. However, adding shuttle service to Mowich Lake complicates the requirements for a staging area, and increases the importance of providing effective visitor information. It is unlikely that parking would be eliminated at Mowich Lake, making the shuttle optional rather than required.

There are very few practical locations for shuttle staging in the corridor. Staging locations need to be easy for travelers to find, provide large areas for parking, have access to or the ability develop infrastructure for restrooms and most likely a staffed visitor facility, and allow convenient circulation for shuttle vehicles to enter and leave the roadway. Shuttle staging for the Carbon River entry would require a location that could accommodate 100-150 vehicles, along with passenger waiting areas. If shuttle service were also provided to Mowich Lake the size of the required parking lot could double.



Downtown Wilkeson is one potential location for a future shuttle hub.

Three shuttle staging locations were considered by the charette team: Wilkeson, the proposed campground in the boundary adjustment area, and a potential site at or near the intersection of the Carbon River Road and SR 165. Although

A future Postcard from the Carbon River Corridor–A VISIT TO THE CARBON GLACIER

Two days left on a visit from out of town, and her brother admits he's never seen a glacier up close. The next morning they're in the car early, heading for the snout of the Carbon Glacier. The weather looks pretty good, but they can see clouds around Mt. Rainier—no surprise, really, but they hope it's only mist and not rain. It's been a while since she's been up to the Carbon River entrance, and they stop at the new visitor's center in Buckley at the intersection of SR 165 and SR 410 to check the weather on the mountain and pick up some maps.

The visitor's center is staffed by a volunteer from the city, but she knows her stuff and is able to give them some information: "Looks like it's light rain at Ipsut Creek—I hope you brought some gore-tex. If you haven't been up here for a little while you might not be familiar with the new shuttle program. The road to Ipsut creek was hit pretty bad in the floods a few years ago, and the Park Service closed it to private vehicles. You catch a shuttle from downtown Wilkeson, and they'll drive you right to the trailhead."

They were a little skeptical, but headed up the road to see if the shuttle system could really get them there and back for their planned day trip. The phrase "park shuttle" also brought to mind images of an old broken down school bus. As they headed up the road they talked about how much they were not looking forward to getting in an old yellow bus to head up a road that was too rough for passenger cars.

They were in the mist by the time they were approaching Wilkeson, and driving under the historic entry arch they started to look for signs to shuttle parking. They drove slowly through downtown, spotting a coffee shop where they could warm up. The shuttle stop was at the far end of downtown, next to a new Park Service welcome station and the City of Wilkeson's City Hall and Historical Museum. They found a parking spot, then wandered back to the welcome center to pay their entry fee. As they walked back out to the shelter at the shuttle stop a clean, high clearance passenger van was loading passengers. They decided to skip the latte for now and climbed into the van, daypacks in hand.

Heading from Wilkeson to the Carbon River entry the driver narrated the history of coal mining in the Carbon River Valley, pointing out historic town sites along the way. A couple with two young children were waiting to board the shuttle at the Fairfax Townsite interpretive area. They had gotten an early start and spent the last hour exploring the artifacts and interpretive displays. The shuttle continued toward the mountain, making a final stop at the new campground by the Carbon River entry to pick up a few more folks heading to the trailhead. The driver points out some of the unique features of the old-growth forest as they make their way up the rough road, then they're at the end of the road and ready to walk. It was raining pretty hard, but they had come this far, and weren't going to turn back now.

It was a good hike, and they could hear the glacier spitting out rocks and chunks of ice before they could see it through the mist. They got back to the trailhead tired, wet and cold. Looking around, they didn't see a shuttle, and hoped it wouldn't be too long before the next one arrived. At least there were several shelters to get out of the rain, and some interesting interpretive displays to help pass the time. The heat lamps in the shelter were a welcome relief, and it wasn't long before they were feeling comfortable on their wait. Five minutes later a few more folks came down the trail and joined them in the shelter, and five minutes after that the shuttle arrived. The ride back to Wilkeson helped to warm them up and dry them out, and when they arrived in town they were for an early dinner before heading home.

They grabbed some hot chocolate at the espresso shop, then walked up and down the street checking out the menu options at the town's three restaurants. A good dinner, then back to the car for the trip home.

a site at the intersection of the two roads provides some interesting possibilities as a visitor information/shuttle staging facility, it also poses a series of challenges that would make it difficult to justify considering the planned acquisition of property near the Carbon River entry.

A comparison of sites in Wilkeson and in the boundary adjustment area shows some benefits and challenges for each site. A summary of the advantages and disadvantages of each site are shown in the sidebar. The boundary adjustment area is the most cost-effective location for shuttle staging because of the shorter trip length, but it also would require a higher level of development at the site than is currently being considered. Wilkeson requires longer trips, and also has several potential impacts to the community. A more detailed discussion of potential shuttle staging in Wilkeson can be found in the discussion of charette outcomes for that community.

Shuttle Staging Comparisons

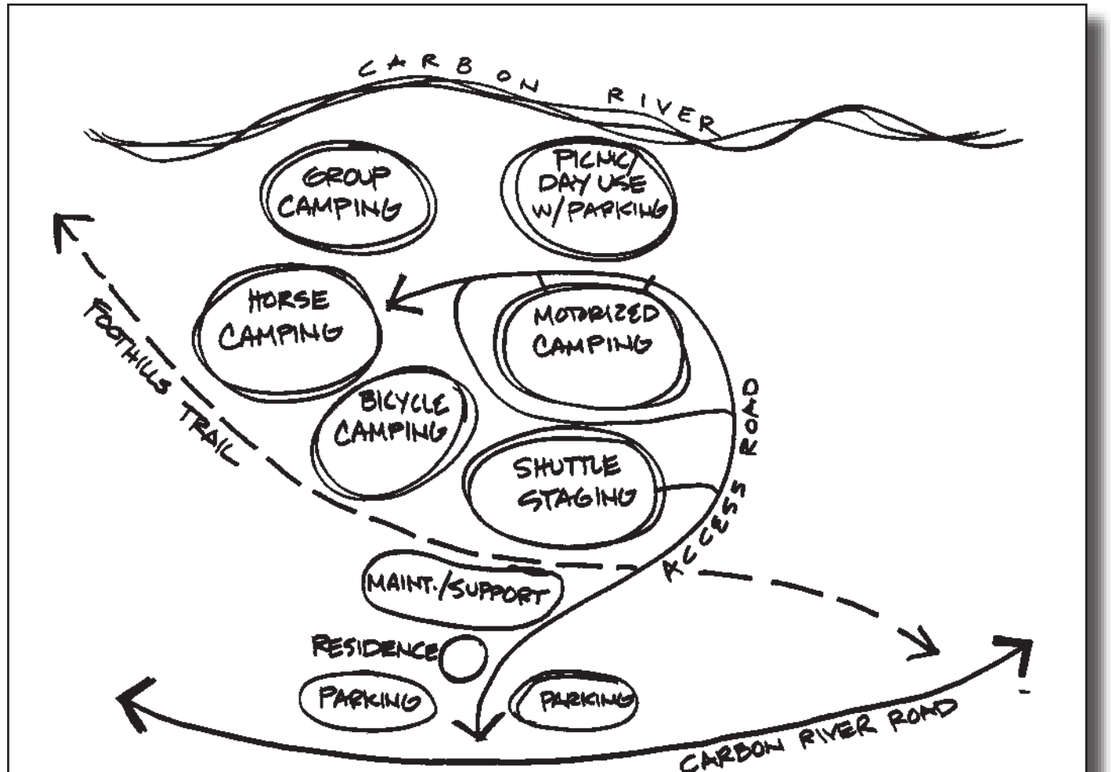
Boundary adjustment area to Ipsut
- Low mileage, quick trip, can run frequently
- Property has potential to park 100+ cars
- Overflow parking could be controlled
- Brings visitors closest to the park
- Long-term connections with Pierce Transit unlikely

Wilkeson to Ipsut
- Puts visitors into area with multiple services
- Potential benefits to Wilkeson businesses
- Good service for locals visiting park
- Could serve other destinations along the route (for example the Fairfax townsite)
- Long-term potential for Pierce Transit connection
- Scale of parking area required may not "fit" in town
- Potential for overflow parking in residential areas
- Longer trip to Ipsut, more expensive to serve, may be less frequent

MT. RAINIER BOUNDARY ADJUSTMENT AREA

As described earlier, the General Management Plan for the park proposes a boundary adjustment near the Carbon River entry. One of the privately owned properties in the boundary adjustment area is located near the Carbon River entry to the park, and extends from the Carbon River Road all the way to the river itself. The owners of the property have lived there for many years, and been careful stewards of its natural resources. They are interested in the property becoming a part of the park to allow public use of this beautiful site, and protect the legacy of care that they have shown for it through the years.

The main residence is located adjacent to the road, and is a sturdy building with an Arts and Crafts look and feel. Although it would require significant structural modifications to allow use as a park facility, the house is well-built, and could be modified for use while retaining its historic charm. The house is located near the road, and the property quickly falls away towards the river behind it. Several level areas between the house and the river have been cleared for meadows/pasture, including a large area near the river. The property includes several historic features besides the main house—a second residence on the property was the original ranger cabin for the Mt. Baker Snoqualmie National Forest, and the remains of an old timber railroad can still be made out heading up the hillside.



Potential functions for park development inside the proposed boundary adjustment area

The park's GMP identifies the property as the proposed location for developing a new campground to replace the Ipsut Creek campground if (or when) the road to Ipsut is closed. The proposed campground would likely provide more camping than Ipsut, and be developed to a modern standard that would accommodate larger vehicles. Campground infrastructure, particularly potable water and waste treatment, would be developed to high standards to provide quality services at the campground and protect the resources of the site and the adjacent river. The property is at relatively low elevation, and it is possible that the campground would remain open year-round, one of the few year-round facilities in the park.

The site is large enough to accommodate a large number of campsites, and there are design opportunities to disperse camping throughout the property to reduce the perceived scale of development. The property also provides good opportunities for day use, and should

be designed to maintain some of the riverfront parts of the property as a day use facility.

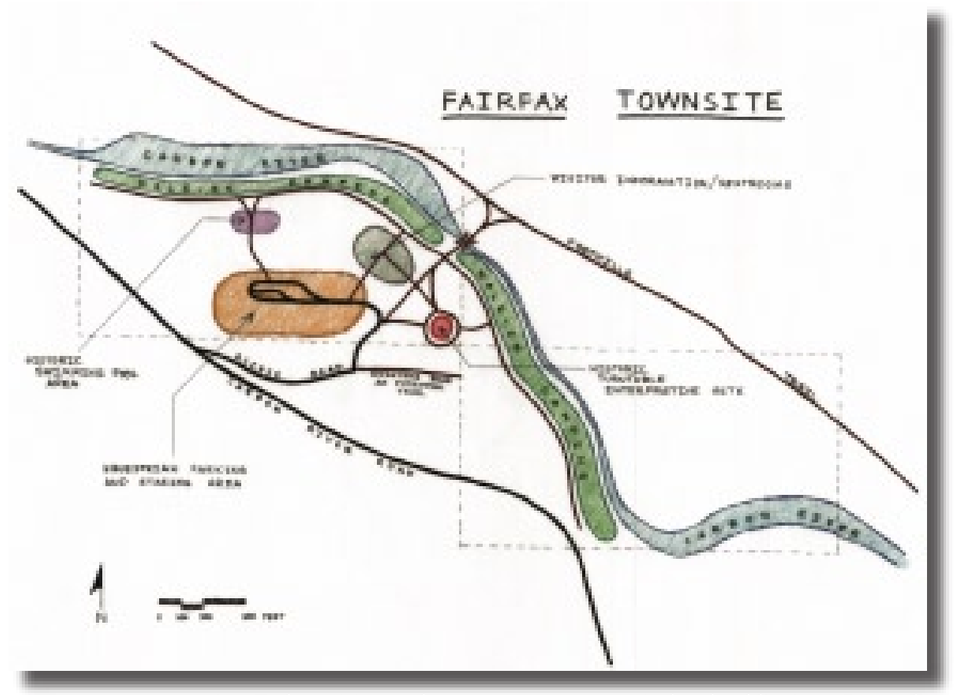
The charette team proposed some general development opportunities and functional relationships for the property. The size and character of the site allows for the separation of different types of camping uses so that each camping area could be developed to meet the needs of individual user groups. Besides its strong relationship to the road and the Carbon River entry, the property also has the potential to connect with the extension of the Foothills Trail from Carbonado to the park, and with the potential equestrian trail system developed during the charette. As a multi-modal hub, the value of the property as a visitor information and management site is increased, bringing together car and RV campers, bicyclists and equestrians.

The site is also promising as a shuttle staging location, where shuttle vehicles could serve the entire community of visitors using the property, from campers to bicyclists to day users.

In general, proposed elements for the property include:

- Visitor welcome and information at the main residence
- Short-term parking for check-in visitors
- Connections to the Foothills Trail and equestrian trail system
- Interpretive amphitheater
- Auto and RV camping
- Bicycle/walk-in camping
- Equestrian camping
- Group/Scout campsites
- Day use and picnic areas
- Loop trails
- Maintenance and equipment storage
- Potential shuttle vehicle parking and staging

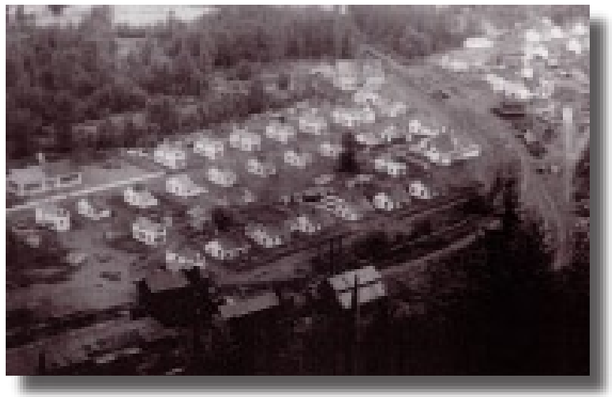
If the acquisition of the property is completed, then further planning for the site should evaluate the site's capacity for development. The "wish list" of program elements for the site is long, and there is the potential that the level of development associated with that list would impact the site to the point that its unique natural qualities and sense of place were lost. The current owners are interested in maintaining the quality of the site as part of their legacy in transferring ownership to the park, and scenarios that include less development may be a better balance between serving visitor needs and maintaining the site's value as a national park destination.



FAIRFAX TOWNSITE

The historic Fairfax townsite was recently acquired by Pierce County as open space. Although at one time the town was filled with company housing, railroad sidings, a large schoolhouse, hotel and all of the accompanying elements that make a community, only minor remnants remain. Today, visitors who look carefully can see the outlines of the old rail turntable (and visitors who don't look carefully may fall into the old swimming pool, the only evidence left of the school house.) Although the site is currently undeveloped, it could play an interesting role in the corridor's future recreational and heritage development. The site is not appropriate for intense development as a recreational site, but could support low intensity development to accommodate specific uses.

In any scenario, the site is an interesting and accessible historic site. It provides a good location to illustrate how effectively the bustling late 19th to early 20th century communities in the corridor can disappear back into the landscape, taking their stories as well as their structures along with them. It is also a good example of the management challenges that can accompany isolated public sites. Currently the site has been blocked off to discourage off-road vehicle use and other unauthorized uses that damage the site and require resources for cleanup and repair. Developing access to the site without the overwatch of frequent recre-



The historic Fairfax Townsite during its heyday. Only minor remnants of the community remain.

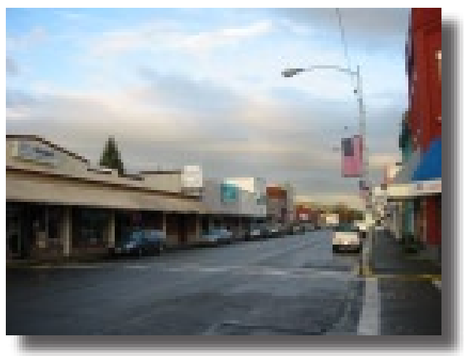
The Fairfax Townsite today

ational visitors or site managers would only encourage inappropriate use, rather than provide access to the site's resources and stories.

The Fairfax townsite may be a good example of an opportunity for phased development. In the short term minor improvements to allow vehicle access with an effective gate could allow the site to be used for guided tours operated by a corridor historical society. In the longer term, the site may be appropriate for more intense development oriented towards its role as a heritage interpretive site, and its key location as a potential equestrian trailhead and camping site associated with the Foothills Trail.

Development features that could be appropriate for the site include:

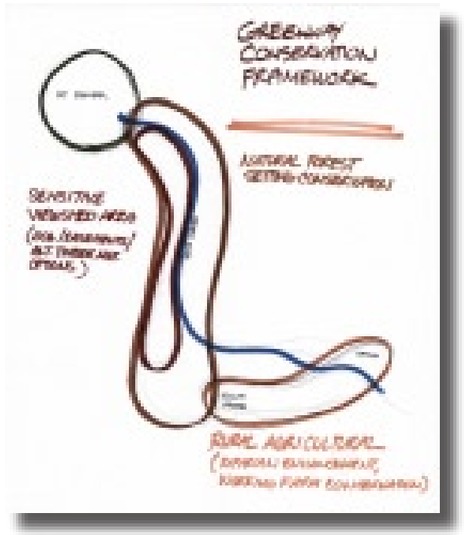
- Interpretive trails and displays describing the historic townsite
- Equestrian trailhead and trailer parking
- Restrooms
- Bridge over the Carbon River connecting to regional trail systems
- Equestrian/Bicycle/walk-in camping (non-motorized)



Heritage tourism would be a benefit for Buckley's town center

Carbon River Conservation Framework

The Carbon River and Puyallup rivers flow from Mt. Rainier to Commencement Bay in Tacoma. They are a direct connection between two regional icons—Puget Sound and Mt. Rainier—and create both a functional and symbolic link between them. The link is very real for wildlife, as spawning salmon use the rivers



to reach the headwaters of the Carbon river in its upper watershed, and marbled murrelets fly each day from the their nests in Mt. Rainier old growth forests to their feeding grounds in Puget Sound. The link is also real for corridor residents and visitors, who are more and more connected to the Puget Sound region.

The corridor is also experiencing rapid change as farm and forestlands are converted to highway related commercial development and residential neighborhoods. As this change has become more apparent, and issues related to longer-term changes like declines in salmon

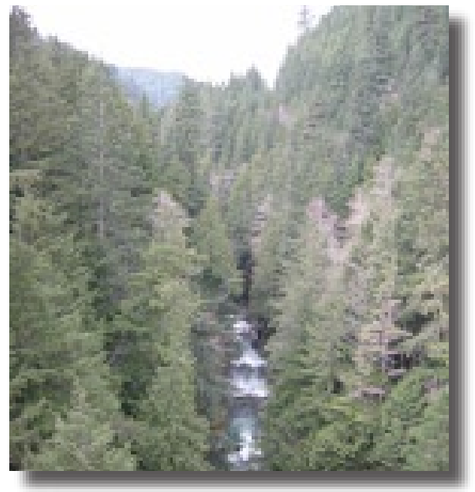
Orting is growing quickly, but also values its small town heritage

stocks have received more attention, there has been increasing discussion about appropriate growth in the corridor. Several recent planning efforts have begun to describe a picture of a conservation vision for the corridor, especially along the Carbon River above its confluence with the Puyallup. The Upper Puyallup watershed plan, led by Pierce County, identified a variety of strategies for enhancing water quality and aquatic habitat in the Carbon River and its tributaries. Pierce County's recent "gap analysis" study also identified the Carbon River corridor as an important habitat connector. The Carbon River corridor provides valuable habitat—especially true because of it's connection to the protected habitat areas inside Mt. Rainier National Park—and much of that habitat does not have formal protection or recognition.

The natural environment that provides the setting for corridor communities is important for more than just wildlife. In the public meetings held as part of the charette process, participants emphasized the importance of the forested and agricultural landscapes in the region for their contribution to the corridor's unique quality of life. Long-time residents of the corridor emphasized the resilience of the region's natural resources, where timber has been harvested for generations, and salmon returned to spawn year after year even when the coal mines were dumping tons of soot and sediments into the rivers and streams as part of their washing operations. The landscape of the upper Carbon River is more forested now than in recent memory as previously harvested areas regrow.

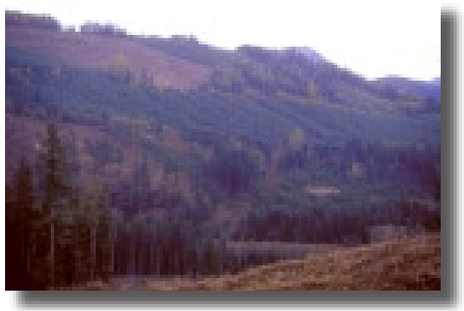
The agricultural lands in the lower river valleys are still open and green, but the underlying economic realities of farming are slowly eroding the viability of agricultural production, and farms are starting to shut down or convert to residential uses. There is also a growing awareness of the impacts that both farming and timber management can have on water quality, and a recognition that cooperative solutions are necessary to protect resources that literally flow from one part of the region to another.

An informal conservation partnership has begun planning for a greenway that would integrate habitat conservation, promotion of vital



Some reaches of the Carbon River are exceptionally rugged and beautiful

local economies, and protection of heritage sites in the corridor. The Carbon River Conservation Project is supported by a wide range of local conservation and community groups, and has developed a draft vision for the future of the Carbon River valley.



Sustainable timber management is one piece of the conservation puzzle

Key elements of the Carbon River Conservation Project vision include:

- Support for the Mt. Rainier National Park boundary extension at the Carbon River entry
- Coordination with local timberlands owners to discuss potential conservation easements, land purchases, management strategies or other vehicles to protect key wildlife corridors and viewsheds that are in private ownership.
- Development of partnerships to preserve and share the corridor's heritage resources
- Economic studies of the corridor to understand the dynamics of local community economies and their relationships to the corridor's natural and heritage resources.

The group of partner organizations and individuals working to develop the Carbon River Conservation Project are early in the process of building a coalition to refine their goals and identify strategies that can meet the needs of the diverse group of stakeholders in the region.

The charette addressed conservation issues in the corridor in a very general way, developing some of the activities and elements that could form a framework for continuing discussion about the value of conserving corridor resources, and the role that a healthy natural environment plays for both maintaining vital communities and protecting the ecological health of Mt. Rainier National Park. The conservation framework focuses on broad goals for major resource areas in the corridor, and the interrelationships between the health of natural systems and community vitality.

Community Vitality

Corridor communities were originally supported by the extraction or harvest of resources from the surrounding landscape. Residents were employed in mining and timber harvest, in the mills that sawed trees or sandstone, in processing coke from coal, and in raising crops or dairy cows. Even more were employed supporting those industries—transportation, hotels, restaurants, construction, teaching school, running stores and more. Also, from the early days there were also residents making their living working in the park, working as forest rangers, outfitting and guiding the visitors who wanted to see Rainier up close, not just as a view on the skyline.

Resource extraction proved to be a much more significant economic driver than anything that has followed for the upper Carbon River valley. The bust that followed the resource booms brought with it a massive depopulation. The pressure for growth is now approaching the Carbon River from the surrounding urban and suburban communities. In the lower valley, urban and highway-related growth have reached Buckley and Orting, especially for Orting bringing with it an unprecedented influx of new residents. Buckley has space and interest in community growth, but is currently limited by moratoriums on infrastructure development. The proposed Cascadia development above Orting will be the largest planned community developed in Washington State since the adoption of the state's growth management act, with over 10,000 new residents expected over the next twenty years—twice as many residents as lived in the entire City of Orting in 2000.

Community-based discussions about appropriate conservation strategies in the corridor need to clearly address the opportunities for community development that will help to ensure economic vitality as well as maintaining quality of life and the integrity of the larger landscape.

The Upper Carbon River Valley – Sustainable forest management

The upper Carbon River Valley is primarily forested. Land use is generally timber management, with development in the few towns in the valley and some scattered residential development along the roads. A large plateau to the east, mostly in active timber management by Plum Creek, slowly rises up to the top of the Carbon River valley wall, then drops off steeply to the river. The river bed as it leaves the park is wide and cobbly, showing the typical braiding of high volume glacial rivers. The valley narrows downstream, until it is in a narrow canyon at the location of the Fairfax bridge, then broadens again as it flows past Carbonado and to the west of Wilkeson.

National Forest lands in the corridor are mostly in restrictive land use designations that do not allow timber harvest. Private forest lands in the corridor are actively managed and regularly harvested. In contrast to many past practices, Washington State's current Forest Practices Act and the requirements of the Forests and Fish Agreement generally limit the size of clearcuts, provide some protection for riparian zones, and require a higher proportion of "leave-trees" in harvest areas.

In the Carbon River corridor, the critical issues for sustainable forestry include water quality, wildlife habitat and viewshed management. Maintaining water quality is an issue throughout the actively managed timberlands, although the area of most concern for water quality and aquatic habitat may the forestlands on the plateau to the east of the Carbon River called the "Wilkeson Block."

Connectivity is an important issues for wildlife habitat, and several wildlife corridors may be appropriate to consider for enhanced conservation emphasis. The Fairfax Forest is a large forested parcel recently acquired for conservation by Pierce County, and may be appropriate for inclusion in prior wildlife corridors.

Viewsheds are most critical where there are long views into the landscape. In general, the open views in the corridor are from the Carbon River Road and SR 165 as they near the mountain. From the Carbon River Road the most critical viewshed is the valley wall that rises from the east side of the Carbon River and rises to the ridgeline. From SR 165 there are several long views into the foothills looking towards the mountain. These views cover large areas of landscape, and often include a variety of harvest patches of different stages of regrowth. Some of these long views would not be available from the road if the forestlands directly adjacent to the road were not recently harvested, and the visual impact of recent harvest activity needs to be weighed against the value of open views, even if they include harvest areas.

Lower Carbon River rural character and water quality protection

The rural landscape of the lower Carbon River Valley is both beautiful and a living link to the corridor's heritage. At the same time, there are challenges to the long-term viability of the valley as an agricultural landscape. Conversion of agricultural land to residential and commercial development is increasing—changing the overall scale and character of the landscape. Also, at the same time that they are valued land uses, agricultural and dairy operations can have significant water quality impacts. Traditionally, agricultural lands were worked even directly adjacent to rivers, only leaving a buffer area if the riparian areas were too wet for farming or pasture.

The conservation framework in the lower valley focuses on these two issues—considering a variety of tools to maintain rural lands, and finding complementary strategies to protect water quality along with rural land uses.

The historic Wilkeson School

CONSERVATION FRAMEWORK ELEMENTS

Regional Vision
- Conferences and discussions
- Elected officials/community leaders

Sustainable Communities
- Functioning natural systems
- Smart growth
- Attractive natural settings
- Infrastructure and healthy water resources

Agricultural/Rural Life
- Corridor along SR 162
- Riparian enhancement/conservation
- Technical assistance and support
- Transfer/purchase of development rights
- Strategic acquisitions
- Land use policy/designation
- Community association cleanup/ beautification/stewardship
- Christmas tree farms/other alternative agriculture

Sustainable Forestry
- Maintain water quality—reduce road miles and stabilize roads
- Partial cuts and other harvest options
- Watershed approach/set harvest levels at the landscape scale rather than individual harvest units
- Long-term strategies and extended rotations
- Protect viewsheds and key views from SR 165 and the Carbon River Road
- Strategic acquisitions/easements
- Maintain working forests as an important component of the landscape

Greenway as Organizing Vehicle
- Bring stakeholders together
- Develop consensus on mission and goals
- Work towards priorities and action agenda
- Become effective political voice
- Raise awareness of corridor and corridor issues
- Connect economic and natural systems opportunities

WILKESON— THE CENTER OF COAL COUNTRY

Located along the Carbon River on the road to Rainier, Wilkeson is the most prominent gateway community in the corridor. The city's natural setting and compact scale contrast with the more urban development of nearby Orting, Buckley, Enumclaw, and Bonney Lake, and the high-speed SR 410 corridor. Wilkeson is also the hub of many of the historic activities that were important to the corridor's development. A coal mining town, the site of roaring coke ovens that processed raw coal for use in refineries, home of the Wilkeson sandstone quarry that provided the building stone for Washington's state capitol, and a timber town, Wilkeson has been shaped by all of the major land use and resource development activities that affected the region.

Wilkeson proper was a company town, which means that all of the land, housing, and businesses were owned by the mining company and rented to employees. The town proper was originally located near the current location of the Coke Ovens Park. What remains of "downtown" Wilkeson today was actually a community called Hope, an adjacent developed area of individually owned homes and businesses.

Wilkeson was one of the earliest gateways to the park, as visitors made their way first by train and then by auto from the Puget Sound region to the Carbon River and Mowich Lake areas. Several outfitters provided support for park visitors, including Bailey Willis, namesake of the Bailey Willis Trail from Mowich Lake to the Nisqually area of the park.

As the coal market declined and many of the coal mining towns were abandoned, Wilkeson and Carbonado had the critical mass of residents and local economy to remain viable through difficult economic times. Timber became more important as the foundation for a resource economy, and improved transportation connections allowed community residents to work outside the corridor. Today Wilkeson and Carbonado are becoming exurbs of the south Puget Sound suburbs—rural bedroom communities that provide a unique and appreciated quality of life for residents who often work in Tacoma or Seattle.

The recent GMP for Mt. Rainier National Park emphasized the importance of a National Park presence in Wilkeson, and have opened a staffed contact station in the community. The intent of the contact station location in town was to improve the contribution that park visitors make to the local tourism economy, with the idea that visitors who have stopped for National Park information might also take advantage of local stores and restaurants.

Residents see a variety of opportunities for Wilkeson to take better advantage of its role as a gateway community. Small hotels/bed and breakfasts, a wider variety of choices for restaurants, and improved public amenities such as historic interpretive activities are all opportunities to attract new visitors and improve the visitor experience. However, there is also some

The Wilkeson sandstone mines in the early 1900's

concern that new visitors might change the character of the town or impact quality of life for current residents. Unlike many rural communities, Wilkeson is not heavily dependent on tourism for its economic well-being. Residents are able to work outside the community, and retail and service businesses maintain a viable trade with a relatively small input from visitors.

In part because of its economic options as a rural community within the commuting range of a variety of urban centers, Wilkeson seems to have different goals and motivations for tourism development than some of Mt. Rainier's other gateway communities. Wilkeson's interest in tourism seems to be focused on two opportunities:

- Maintaining and enhancing the community's historic resources to share with visitors.
- Attracting tourism businesses on a small scale that can provide amenities for residents as well as visitors.

The charette team felt that the community needs to continue its internal dialogue on the appropriate role for tourism in Wilkeson's future. The visitor-oriented projects that the team worked on are intended to assist that internal discussion by illustrating the potential for some visitor-oriented projects in the community.

Some of these ideas—like the replacement of the Wilkeson arch—are relatively straightforward and would not have major impacts on the community. Other ideas explored in the charette, especially the possibility of locating a shuttle staging area in Wilkeson, could involve significant change for the community. While many aspects of this could be positive for the community, there needs to be extensive discussion on the benefits and concerns that project ideas could raise.

Unlike the many historic coal towns in the corridor that were abandoned with the decline of the industry, Wilkeson is still a living example of the type of communities that once spread up and down the roadway. Wilkeson has the opportunity to be the physical location where the story of these lost communities is told. It is one of the few places whose contemporary character is a living reminder of the corridor's heritage.

Wilkeson assets for community development:

- Historic resources including the arch, main-street buildings and neighborhoods, cemetery, coke ovens, tailing piles, sandstone quarry
- Sandstone buildings
- Compact town center
- Mt. Rainier visitor contact center
- Camp
- Trail/rail project

Wilkeson Mt. Rainier National Park Welcome Center

The visitor welcome center in Wilkeson is intended to provide travel information for park visitors, collect entry fees, and distribute permits for backcountry use. Wilkeson is a convenient location for the park to provide visitor services, allowing one facility to serve both the Carbon River and Mowich Lake entries. The location of the welcome center in Wilkeson is also intended to assist the city in attracting visitors to local businesses and attractions.

The current welcome center is a modest facility located on the east side of SR 165. Although use of the facility is increasing, the majority of park visitors do not stop at the welcome center prior to visiting the park. Some concerns about the current welcome center include its location on the "outbound" direction for park visitors, the lack of parking, especially for large vehicles, and a low visual profile.

The charette team explored a variety of opportunities for design in downtown Wilkeson, including investigating potential alternative sites for the future development of a new welcome center. The rationale for investigating alternative locations for the NPS presence in town included solving the issues described above for access, parking, and visibility, and also investigating opportunities to contribute to other development possibilities for the community.

Two locations were discussed for the welcome center, one in the "triangle" separating SR 165 from Railroad Avenue, and the second adjacent to the historic library building, now housing City Hall. Both of these locations offer high visibility for travelers heading towards the mountain, and could provide a reasonable number of parking spaces. The "triangle" location would require left turn entry and exit to leave and return to the highway. The location adjacent to the library provides an opportunity to share parking with City Hall in a common public services parking area. The charette team chose the location adjacent to city hall to illustrate the idea.

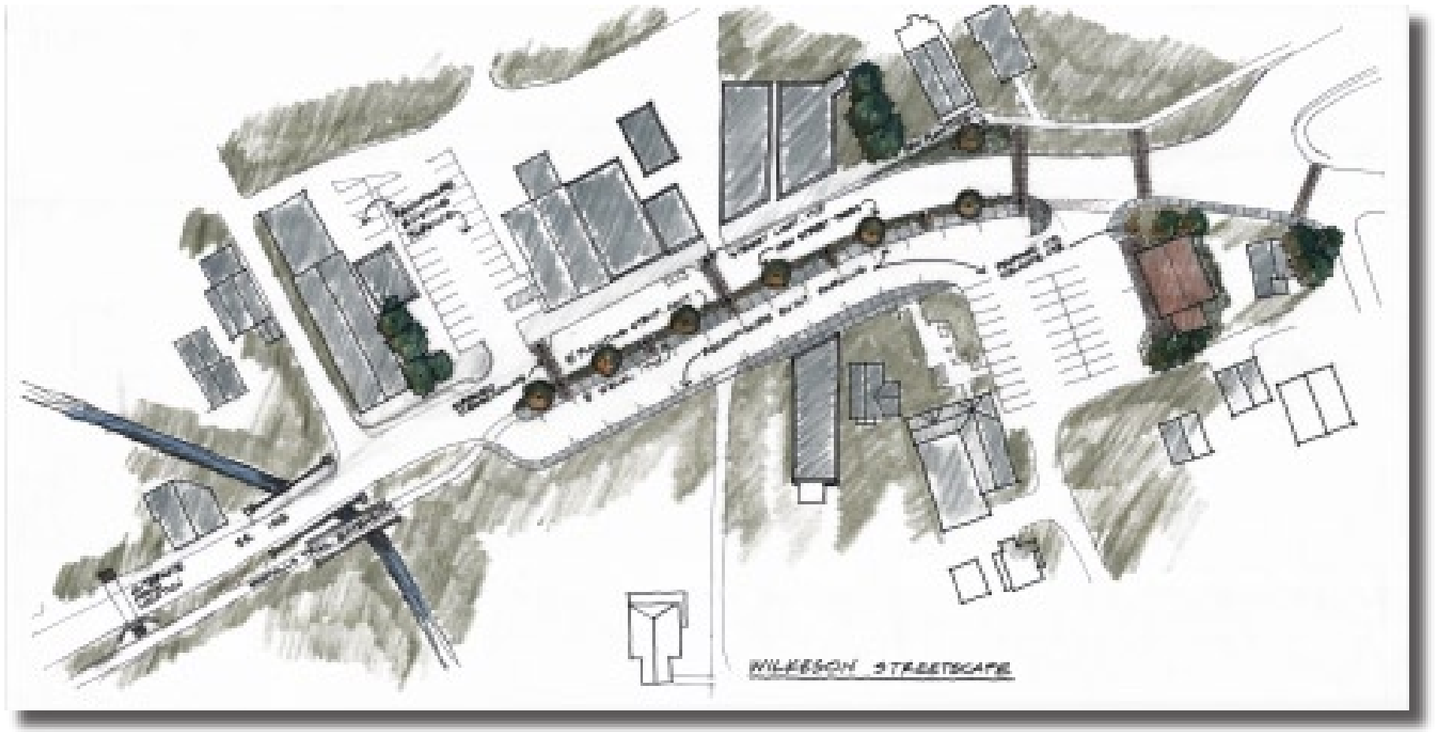
Both of these locations also provide an opportunity for developing a design character for the building that is sympathetic with Wilkeson's historic architecture, but also stands out with elements of the rustic Cascadian style associated with national park buildings in the northwest.

The illustrated opportunity shares parking with the City Hall. This location offers strong connections to downtown Wilkeson, provides the opportunity to share parking, and is highly visible for travelers. This site is especially strong if a portion of City Hall is redeveloped as a Wilkeson History Museum.

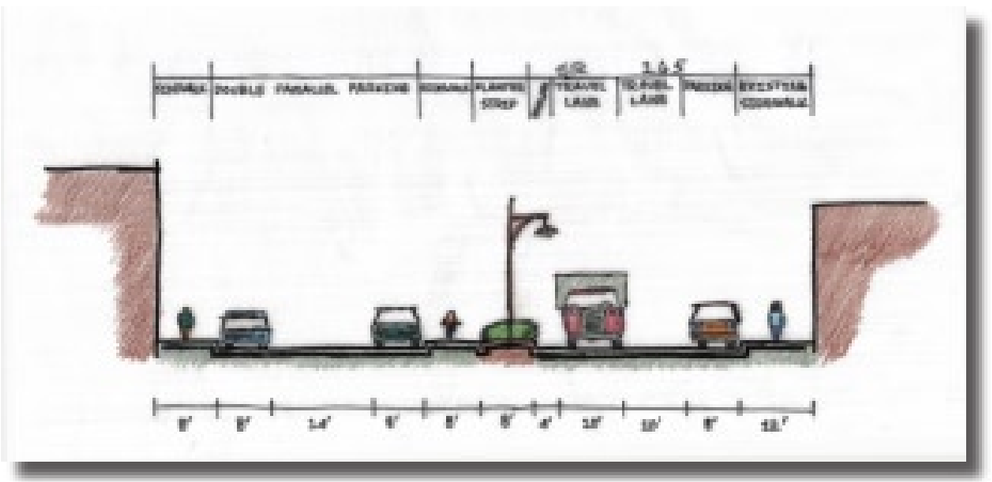
Wilkeson Streetscape

Much of the charm of Wilkeson's downtown relies on the small-scale charm of the buildings and the historic feel of the city's layout. Currently, the combination of roadway and adjacent parking creates a broad area of paving that competes with the city's building stock and is out of character with the goal of supporting a pleasant and pedestrian-scaled downtown. The layout of the paved area creates a challenge for providing efficient parking, and the pedestrian circulation on the west side of the roadway is poorly developed. An associated benefit of streetscape development could also include a traffic calming effect, as travelers drive more slowly through the apparently narrower roadway area.

The charette team looked at several options for plan and cross-section of the roadway. The concept shown here includes reorganized parking which, along with providing important parking capacity for downtown businesses, also simplifies circulation and wayfinding. A new pedestrian pathway connects to the Foothills Trail trailhead, and marked crossing locations help to improve safety for pedestrians parking on the west side of the street and wanting to visit businesses across the way. Street trees can soften the impression of the paving downtown, and provide scale elements to complement the false-front commercial buildings of the downtown core. However, the use of street trees should be evaluated for their appropriateness in a historic setting.



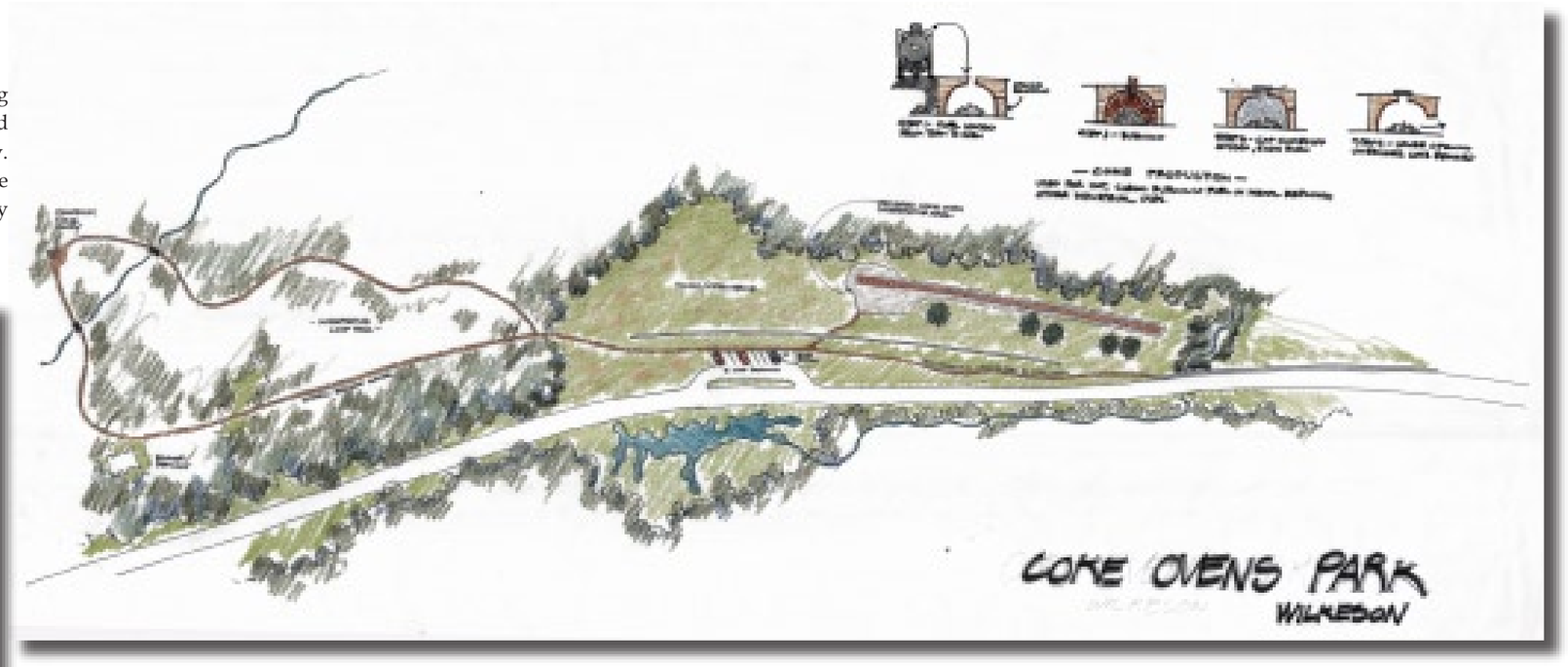
SR 165 through downtown Wilkeson



Wilkeson Coke Ovens Park

Coke Ovens Park includes the best remaining examples of the historic coke ovens that used to burn throughout the Carbon River Valley. They are a strong visual connection to the region's heritage, and provide an opportunity to tell the story of the region's development.

The tracks in Wilkeson's Coke Ovens Park are used for the town's annual handcart races



"Old time" Wilkeson residents who remember what the town was like when the coke ovens were still active describe a vivid picture of roaring orange flames shooting out of the ovens, coloring the clouds on overcast nights and raining soot down on the town.

The park also includes remnants of the rail lines used to transport coal and coke from the mines, currently used for Wilkeson's annual pushcart races. The recommendations for the park were relatively minor, with the intention of maintaining the park's current informal character, while increasing its capacity to accommodate visitors and help them understand the processes of coal mining and coke production.

The major enhancement for the park includes stabilization and interpretation of the remaining coke ovens. A short section of coke ovens could be restored with historically accurate Wilkeson sandstone cladding, and interpretation incorporating historic photos could be developed to tell the story of coke production. Trail improvements provide a dry access route for viewing the ovens, and a short decorative fence provides protection from casual vandalism. Other historic materials used in the production of coke—from samples of coal and coke to masonry tools to historic train cars used for transport—could be incorporated into the historic display area if they were available.

The parking area is recommended to be formalized and there is an opportunity to develop an interpretive trail connecting the park to nearby mining relics, including the large concrete bunker structure and the closed Skookum Mine entry.

Making Coke from Coal

Coke is the high-carbon product of controlled burning of coal in an oxygen-poor environment. Coke is primarily produced as a fuel for the blast ovens that are used for making steel. The process of making coke from coal removes many of the impurities from coal, leaving a hot-burning energy source for refining metals.

There are remnants of historic coke ovens throughout the Carbon River corridor, many of them hidden in the forests and brush that

The opening to one of the remaining coke oven structures in the park

are reclaiming the corridor's abandoned town sites. The best-preserved examples of coke ovens in the corridor are in Wilkeson's Coke Ovens Park, just off the highway. Although they have fallen into disrepair, many of the coke ovens retain their characteristic "beehive" shape, and it is easy to imagine the ovens when they were in use.

The process of producing coke from coal begins with loading the coal into the brick ovens. In Wilkeson there were train tracks on both sides of the line of Coke ovens. Coal would be brought to the ovens by train, and loaded from the top (the tip of the "beehive" that also served as the vent or chimney.) The lower openings to the oven would be bricked shut to limit oxygen flow into the fire chamber and resist the intense heat created by the burning process.

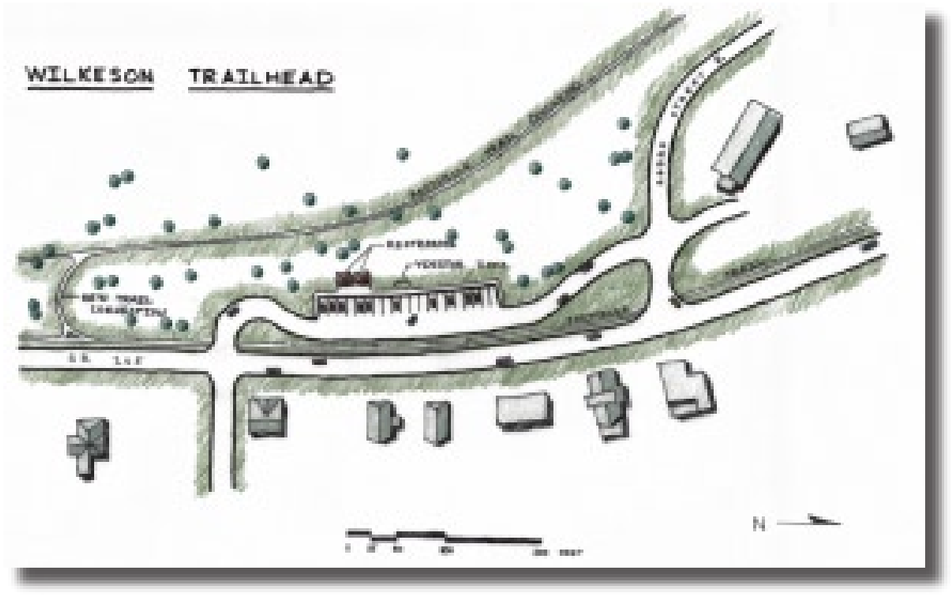
The burning process lasts about 3 days, and is controlled by the amount of air let in from the top of the oven. When the process is finished, the oven is capped off to prevent any air flow and put out the fire. The lower openings in the oven, bricked up before the burn, are opened up and the coke is removed from the base, then loaded into train cars for transportation.

Wilkeson Foothills Trail Trailhead

Pierce County has acquired property for a trailhead in the triangular area between the highway and the historic "incline" section of the railroad line connecting Wilkeson to Carbonado. This site will serve as a gateway to Wilkeson for trail users. Design elements and interpretive displays at the trailhead could be used to give visitors a sense of Wilkeson's historic character, and draw them into the downtown to visit local businesses and heritage sites. Located on a topographic bench before the main grade begins, the parking area is slightly elevated above the highway to limit its visual impact from the roadway, but still will provide a sense of being open to overwatch from the highway.

The concept developed in the charette shows twenty parking spaces, restrooms, and a visitor information area. Vehicle access to the trailhead is provided from the highway, and then feeds into 163rd Street at the other side of the trailhead. The restroom building and information kiosk are recommended to be built from Wilkeson sandstone, with historic detailing of the wooden roof elements similar to the library building or Wilkeson School. Interpretive elements at the trailhead provide an opportunity to tell the story of Wilkeson and the importance of the Northern Pacific rail line, and to encourage trail users to visit downtown.

In addition to the Foothills Trail alignment that continues on toward Carbonado, the plan suggests a spur connection to downtown Wilkeson and Coke Ovens Park. The spur would use the existing rail bridge over Wilkeson Creek, and would eventually be integrated into the downtown Wilkeson streetscape improvements.



A future postcard from the Carbon River Corridor–

CAMPING BY THE CARBON RIVER

The Washington State sticker still freshly attached to the map on the back window, the RV turned off Interstate 5 and headed towards Mt. Rainier. It's a new rig with a great layout, but a little bit long. The campground guide said that most of the campgrounds in the park couldn't accommodate the a forty-footer, but the new campground at Carbon River had full hook-ups and was developed for full-sized RV's. Their campground reservations made, they're looking forward to spending a few days visiting the park.

Stopping at Wilkeson, they spend a some time exploring the Coke Ovens Park, especially the restored coke ovens area. With coal mining heritage in their family from a few generations ago in Pennsylvania they know the hard work—and danger—that coal miners faced every day. Crossing the street they caught a short tour of the Wilkeson Sandstone mine, putting on hardhats and watching a demonstration of the historic stone-cutting saws. They couldn't believe the shapes those old machines could cut into the stone, and bought one of the souvenir cut stones to take home for their yard.

Driving towards the park from Wilkeson the terrain got wilder and more forested, and they caught glimpses of the wide braided channel of the Carbon River. There are no glaciers in Ohio, and no rivers quite like this. They checked in at the campground entry, then followed the road down to their site. As they approached the river and their campsite, the landscape just got greener and greener, with giant trees creating a canopy over the road. They found their site and settled in, enjoying the beautiful setting they would be enjoying for the next few days. They took a short walk, then fixed dinner before wandering over to the amphitheater for the evening ranger program.

The next morning they were up early, and caught the park shuttle as it came by their campground loop. The shuttle would take them to the Carbon River trailhead areas—and the RV could stay safely in the campsite. Stopping at the first trailhead, they spent the morning exploring the old growth forest then caught a shuttle back for a relaxing afternoon by the river. Tomorrow they would see the glacier, then up bright and early the next morning and on the road. Next stop, Oregon!

Wilkeson Arch Reconstruction

The Wilkeson arch was a landmark for travelers heading to Mt. Rainier for over seventy-five years until it was damaged in the Nisqually earthquake of 2001. As a result of the earthquake, the arch's crossing log was jarred from the top of the pillars, and one of the pillars was damaged and subsequently removed.

The Wilkeson Arch in the 1920's

As one of the community's most beloved landmarks, reconstruction of the arch is a high priority for community residents. However, changes in the standards for highway design since its original construction have caused some concern over the approach to replacing the landmark. The historic scale and location of the arch no longer meet the safety requirements for roadside elements, and both the Washington State Department of Transportation and the office of the State Historic Preservation Officer have worked with the community to develop appropriate plans for its reconstruction.

Wilkeson has changed significantly since the arch was first constructed. At that time larger downtown scale buildings extended further toward the arch, the forest surrounding the arch location had been recently harvested, and the roadway under the arch was much smaller. Since the time of its construction a major fire has destroyed several of the significant buildings closer to the arch, the forests surrounding the arch location have re-grown, and the highway has also changed in scale to accommodate larger vehicles and modern design standards. If historic photos are to be believed, Mt. Rainier was also much closer to the arch when it was first constructed than it is today. However, rather than documenting one of the great geological mysteries of the modern era, local residents are fairly sure that the old photo was an artistic fake and that the mountain hasn't moved several miles over the intervening years.

This remaining support after the 2001 earthquake

The changed context for the arch and the requirement to meet contemporary safety standards open the question of where the arch can best be located and how it can best be redesigned to honor its historical role in the community and serve contemporary community needs. Several of the ideas for the reconstruction of the arch have positive aspects, and the charette team didn't have a strong opinion that any of the options were clearly better than the others. The key considerations for the arch reconstruction included:

- It is important that the arch cross the highway to provide an entry experience similar to the original arch.
- Power lines, signs, and other roadside elements compete with the arch for the traveler's attention. As much as possible the arch should be located where competing elements can be relocated or removed.
- Some sort of safety improvements are necessary to redirect vehicles away from the arch pillars if they lose control and leave the highway. Safety improvements to the arch should be as inconspicuous as possible, and should be consistent in look and feel with the historic character of the arch.
- The arch is an important landmark for the city, and should function as a true gateway to the community in the context of the town's structure.

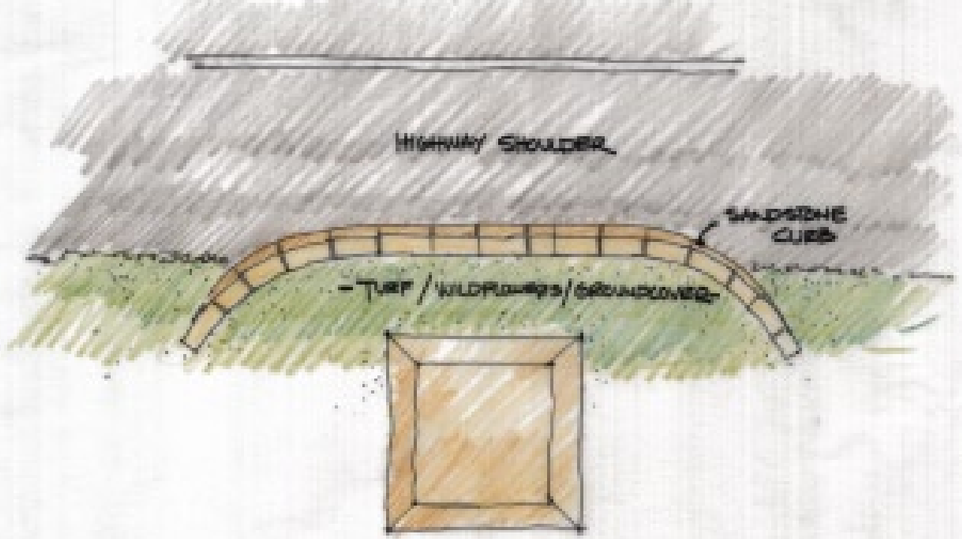
The charette team looked at two locations for the arch, one in the general area of its historic location, and a second closer to the current commercial center. Rebuilding the arch in its exact historic location is not preferred because of awkward traffic flow and concerns about traffic safety. The exact historic location is an option if traffic is redirected in the area of the west post. Near the historic location, a new proposed location just south of the existing bridge provides an effective setting for the arch with fewer traffic concerns.

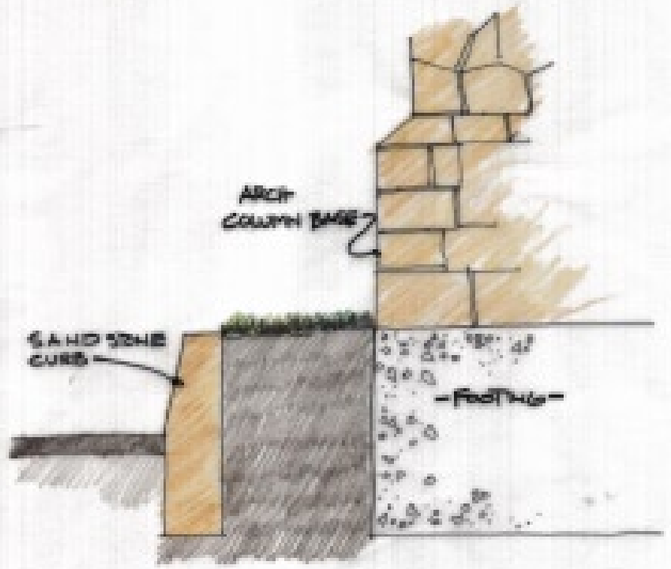
Another potential location for the arch is further south along SR 165, nearer to the "downtown" section of Wilkeson. From a community design perspective, locating the arch closer to the historic core could improve the sense of arrival in the commercial and interpretive center of town. The arch is a powerful entry element, and locating it nearer to what visitors perceive as the center of town would help them to understand that they have arrived at a place of interest, slow down, and explore the downtown area.

In any location, it is important that the arch retain its historic scale and character as much as possible. The primary concern for reconstruction of the arch is traffic safety, since current design standards would require either that the arch be extremely wide, limiting its effectiveness as an entry element, or that it be protected from collisions, potentially reducing its design integrity by the addition of steel guardrails or other visually incompatible safety barriers. To allow the arch to be rebuilt with a reasonably narrow profile, the charette team recommended a low sandstone curb as a barrier that could be appropriate given the road's relatively low design speeds. As the final location and design is negotiated with the Department of Transportation, the city should work to keep the arch column spacing as narrow as possible to approximate the arch's historic proportions.

WILKESON ARCH

-RECONSTRUCTION W/TRAFFIC PROTECTION CONCEPT-





Wilkeson Shuttle Staging Opportunities

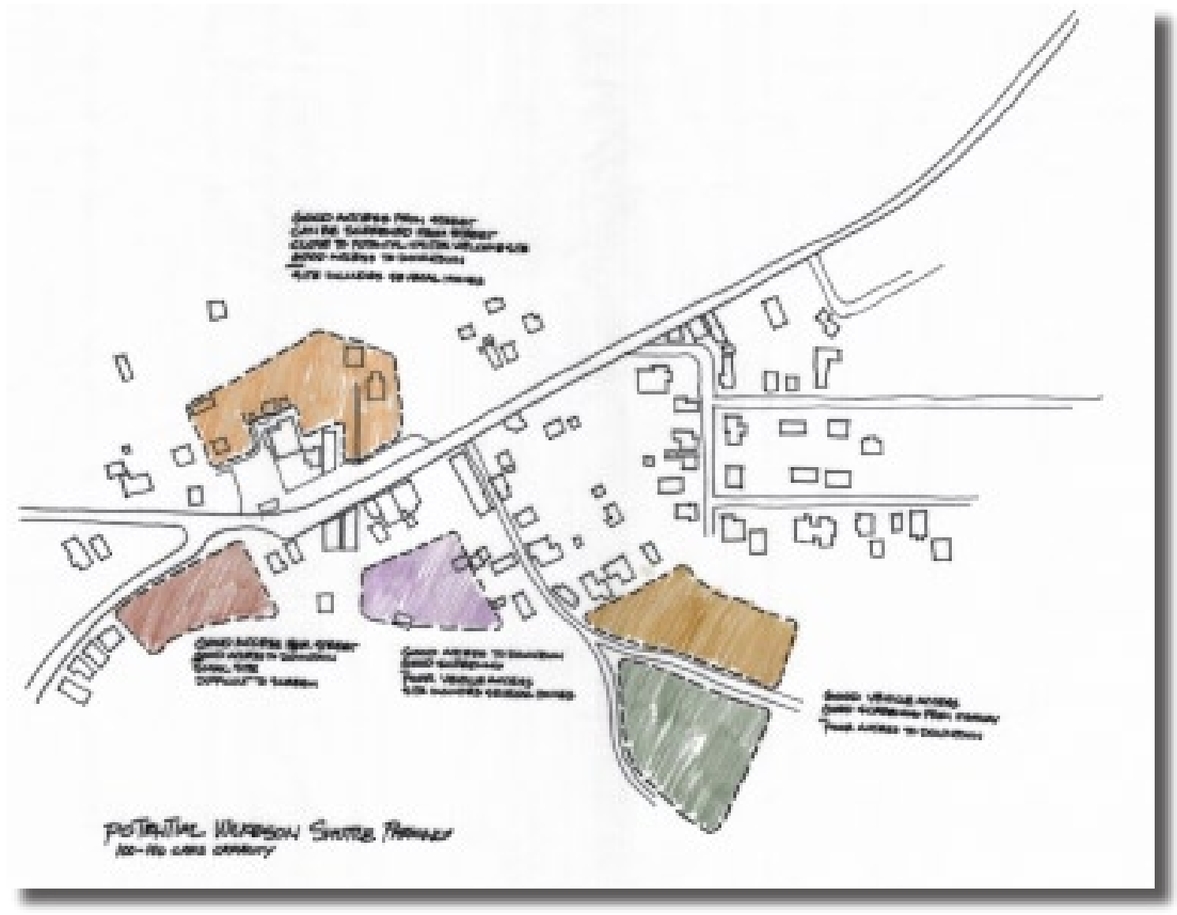
One scenario for managing future access to the Ipsut Creek area is for the park to close the access road to private vehicles, but maintain the road at a minimum standard that could accommodate high clearance shuttle vehicles. Shuttles are a management strategy that could maintain access to the Ipsut Creek area and its trailheads for day use without requiring the park to maintain the access road to private vehicle safety standards. The options for shuttle service operation have been described previously. One of the options for shuttle staging is to locate the main transfer point—where visitors would park their own vehicles and transfer to the park shuttle—in Wilkeson.

The Wilkeson Eagle's Club building

Shuttle staging requires significant space and infrastructure. Although there may be benefits for Wilkeson to stage shuttles in town, it would be a significant change in the structure of the community and require careful consideration to balance potential benefits with potential impacts. As discussed earlier, the shorter the route of the shuttle system is, the more economical it is for the park service to operate. Shuttle staging in Wilkeson would be considerably more expensive than staging closer to the park entry, for example somewhere in the proposed park acquisition area. The additional capital investment and operating costs that would be required for the park to operate a shuttle from Wilkeson would only make sense if the community would receive significant benefits.

The potential benefits to the community come from the increased visitor activity that would occur downtown. Especially with parking located near the downtown core, visitors to the park would be required to park in Wilkeson, check in at a welcome center, and then catch the shuttle. Visitors would be very likely to spend some additional time in the community if there were amenities available to them—either while they were waiting for the shuttle or after they had arrived back in town after their visit to the park. There would also be an opportunity to encourage visitors to take the historic Wilkeson walking tour, or visit the historical museum.

The physical components of a shuttle staging area include parking for approximately 100-150 cars, an information and fee station, and shuttle waiting and loading zones (covered to provide some shelter from weather). The drawing shows potential shuttle parking locations in town. Criteria for parking locations included ease of access from SR 165, distance from downtown, the potential for screening the parking from the highway/downtown area, and impacting as few homes as possible. Each of the locations shown on the drawing could work; however, significant additional study would need to be completed prior to selecting a location. The drawing gives a general sense of the size of parking area that could be required, and the magnitude of change it might mean for the community.



Shuttle systems in the Carbon River corridor are many years in the future, if they prove to be feasible at all, and the park is committed to developing shuttle service in the Nisqually corridor prior to other locations. It is a worthwhile opportunity for community discussion to understand if the potential benefits of locating shuttles in Wilkeson outweigh the potential impacts.

ORTING–"BLUE HIGHWAYS" GATEWAY TO MT. RAINIER

Thirty years ago Orting was a small community surrounded by fields of daffodils, and logging trucks were the usual big vehicles on the road, instead of residential traffic and recreational vehicles. Suburban growth has caught

One of Orting's historic murals on a downtown building

up to Orting, spreading along SR 162 as Puyallup, Sumner and Orting develop into one of Pierce County's main population centers. Orting has been working to guide this growth with design guidelines and active planning. However, the community is changing rapidly, and it is unclear how the community's character will develop as the new takes its place along side the old.

As new residents move into the community and the retail/commercial focus moves from the historic center of town to the highway, Orting is interested in maintaining its small-town character, and strengthening its downtown core with specialty retail and services. Recreational travelers are a potential market for downtown businesses and may be able to contribute to the demand for specialty niche services that will help to grow a diverse and vital town center.

As a community in the Mt. Rainier region, Orting has good opportunities for positioning itself as an attractive destination for recreational travelers. The community has the potential to develop minor attractions for rural tourism. Orting is near the confluence of the Carbon and Puyallup rivers, and there are opportunities to develop river access for recreational fishing and boating. The nearby Soldiers' Home is an opportunity for redevelopment, and may be a good location for camping and recreation. Orting also hosts several events during the summer that draw large groups of visitors, and provide a short-term boost to the local economy.

Orting also has two opportunities to play a greater role as a regional recreation hub and gateway. One is as a "blue highways" gateway to the mountain, offering a transition point from freeway driving through relatively developed landscapes to two-lane road routes through rural landscapes and small communities. The second is as a major trailhead for regional travel on the Foothills Trail. As more and more segments of the trail are completed the opportunity for long-distance, destination bicycle touring becomes much more attractive, and Orting is in a good position to be one of the communities where bicyclists either stop as part of a longer trip, or drive to with bikes on their car and use Orting as the location to begin and end a bicycle tour.

"Blue highways" is a term used by American road-trippers, and popularized by William Least-heat Moon in his book of the same name. Blue highways are the secondary roads criss-crossing the country—two lane routes that connect small rural communities instead of major cities, and are prime roads for wandering and discovery. Orting has the potential to become a "blue highways" gateway to Mt. Rainier, for travelers who would like to make the drive to the mountain an enjoyable part of their travel experience.

Orting is located on routes that make it a reasonable stop for three of Mt. Rainier's four entries: Carbon River, Sunrise, and Nisqually. From Orting, travelers can follow the Orville-Kapowsin Road to the south, eventually connecting to SR 161 near Eatonville. To the east, travelers can continue on SR 162 through South Prairie, eventually connecting to SR 165 between Buckley and Wilkeson. Travelers continuing to the Carbon River entry turn right, up the Carbon River valley. Travelers heading to the Sunrise entry turn left, arriving in Buckley and connecting to SR 410 to take them to the park.

In the short term, beginning the process of attracting travelers for this kind of experience is mostly an information and marketing challenge—make travelers aware of the opportunity for going to Mt. Rainier by way of Orting, and paint a compelling picture of why the Orting routes are different than the ways that they usually travel to the mountain. Some travel amenities, such as wayfinding signs to assure visitors that they are going the right direction, and a modest visitor information center, are physical improvements that would support this strategy.

Mt. Rainier from Orting

In the long term, the success of this kind of strategy also includes a rural conservation vision for the landscapes south and east of Orting. SR 162 to the north of Orting is quickly developing into a residential and commercial corridor. Orting's long-time viewpoint pullout along the highway that offers good views of Rainier will soon be surrounded by planned housing developments. The landscape and character of the highway are both changing to a more suburban character, and won't meet the expectations of target travelers who are looking for a route that is off the beaten path. The strategy of becoming a gateway to the rural approaches to the park depend on the routes to the south and east of Orting remaining rural. Orting has the opportunity to be the transition point where highway-oriented development to the north ends, and rural landscapes to the south and east begin, but it will require community consensus around the land use issues that will be required to achieve this long-term vision, as well as private and public partnerships between the city, Pierce County, and conservation groups.

The Foothills Trail in Orting

The opportunity to position Orting as a bicycle gateway to long-distance rides on the Foothills Trail also includes a combination of travel information/marketing with the physical development of amenities for bicyclists. Safe parking near the trail, visitor information, wayfinding signage, and public restrooms would be an attractive package of public or partnership investments to meet bicyclists' needs. Orting is already a popular spot for bicyclists and other trail users, some of whom are driving in from Tacoma or other locations outside the corridor to use the trail. Downtown businesses are providing many of the services for these visitors. As usership increases, additional private businesses including restaurants, bicycle shops, espresso stands, and bed and breakfast lodgings could complement the public investments to take advantage of the bicycle market.

Charette outcomes for Orting:

The charette study focused on Orting's town center, looking for opportunities to locate some of the community design needs identified in the work with community stakeholders. Assuming a future redevelopment of SR 162 through downtown into a one-way couplet, the community overview drawing focuses on opportunities for public investment and land use emphasis to reinforce the town center. Potential locations for event parking and future enhancements for users of the Foothills Trail are shown in coordination with the land-use emphasis areas for the city center.

Orting ideas to enhance the visitor experience

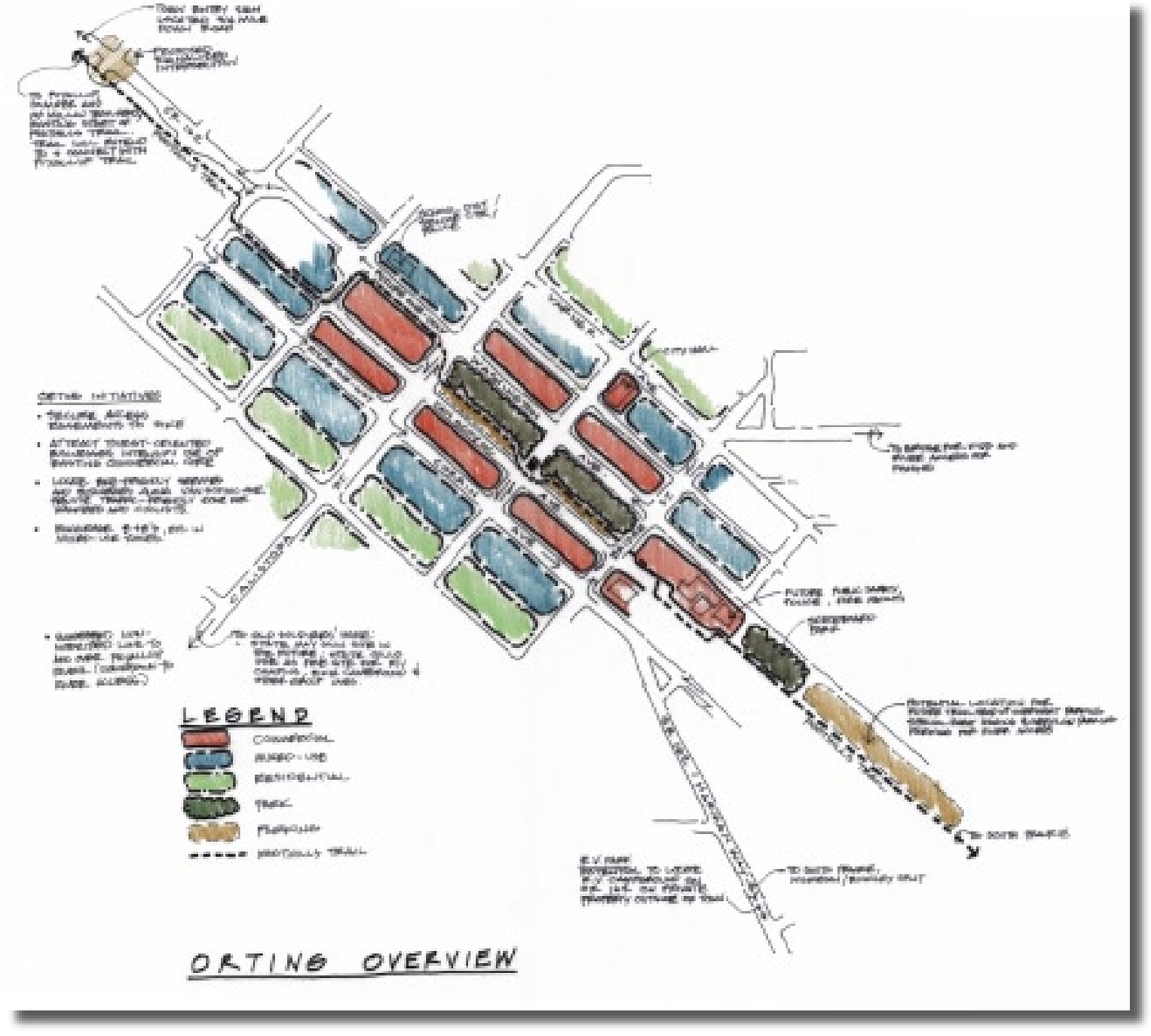
Services for bicyclists
- Repairs/rentals
- Food/lodging/campgrounds
- Parking

Bicyclist/hiker/walker visitor information
- Bike tour route maps
- Bicycle tour itineraries

Carbon River corridor heritage information
- Historic sites (where, what, and how to get there)
- Heritage loops/tours

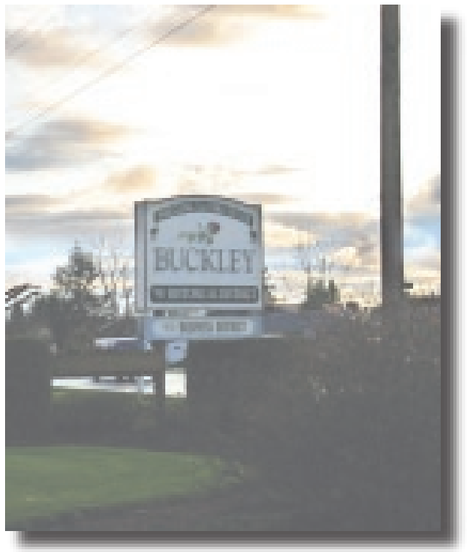
Organized educational experiences (schools & adults)
- Heritage
- Resources/conservation

Improve information dissemination methods
- Signage (fixed and variable)
- Web-based (cameras, reservations, routes/tours, road conditions, etc.)
- Information at airport, hotel, etc.
- Interactive kiosks



Buckley–Railroad and Timber Town

Located at the intersection of SR 410 and SR 165, Buckley is charming small community, and plays an important wayfinding role for visitors to the Carbon River corridor. Unlike its neighbor Bonney Lake, Buckley has maintained the character of its street frontage, and has a strong historic town center to build on for downtown revitalization.



City of Buckley welcome sign

Located near the White River, the community was first called Perkins' Prairie, then White River Siding when a railroad spur was developed to connect it to the Carbon River system. Buckley was incorporated in 1890, named in honor of the district superintendent of the Northern Pacific Railroad. Buckley was at the tail end of the coal production region, and was eventually much more oriented to the timber economy than mining.

An unusual community design feature of Buckley is a series of "park blocks" that separate the town from SR 410. Originally the location for the railroad line and a major water supply pipeline for the City of Tacoma, the park blocks are now a unique public open space that create a kind of "front yard" for the city. This open space is the location for the Foothills Trail corridor (developed along the alignment of the Northern Pacific railroad), and a growing collection of public buildings and park amenities. Among other public buildings, the Foothills Historical Society Museum is located in these blocks, with both indoor and outdoor displays.

The city of Buckley is interested in revitalizing the downtown core with a higher proportion of visitor-related retail and destination restaurant/shopping opportunities. Although downtown buildings are generally occupied now, many of the businesses are services with a local client base. Over the long term, the city is interested in attracting more visitors to the downtown area and encouraging downtown retail and services that balances local services with the kind of unique destination retail that can draw visitors from surrounding communities and travelers heading to Mt. Rainier.

Buckley faces a series of challenges in maintaining its distinct character as a community. Development pressure is intense along SR 410, and both Bonney Lake and Enumclaw have seen significant highway-oriented development. Buckley is likely to see similar pressure for highway-oriented development, and face a decision about whether to emphasize the historic downtown district or the highway as an economic development priority.

The open space blocks fronting SR 410 provide Buckley a unique sense of place, especially for highway travelers, however they also make it difficult for travelers to see downtown Buckley and be drawn off the highway. While there are some opportunities for improving wayfinding for travelers, and to emphasize the entry to town as a landmark, travelers need to be enticed off the road to contribute to the community's goal of attracting more economic contribution from tourists.

As traffic demand increases on SR 410, there are also planned improvements for the highway in Buckley that will affect the future character of the roadway as it passes through the community. The SR 410 Route Development Plan includes recommendations to widen the highway to four or five lanes through the City of Buckley, and to develop traffic signals at several intersections that are currently not signalized. The highway improvements may cut into the park block area adjacent to the highway in Buckley, and will certainly change the scale of the roadway as it passes through the community.

Landscaping in the open space blocks in Buckley

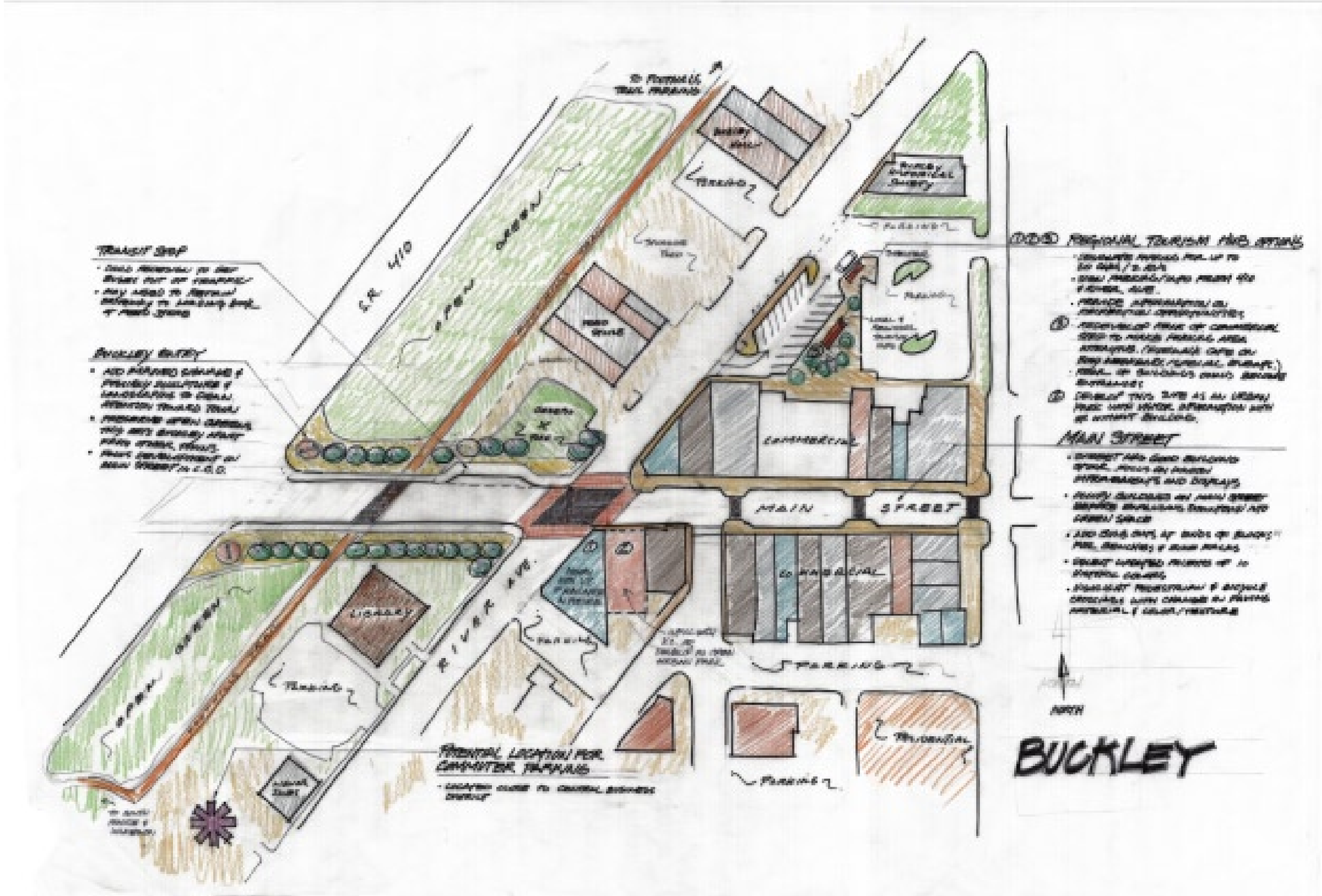
Another significant challenge is the location and physical layout of the SR 410/SR 165 intersection. Currently the intersection is complex and dangerous. The geometry of the connecting streets, combined with a crossing for the Foothills Trail make this intersection a uniquely difficult design problem. The SR 410 Route Development Plan also calls for the redesign of this intersection. Beyond its function as a part of the roadway system for Buckley, this intersection is a critical community design location. Most visitors heading to the Carbon River entrances pass through this intersection, and it provides an opportunity to offer travel information or wayfinding signage connecting to downtown. Unfortunately, the intersection is quite far from the town's historic center, making it difficult to make the physical connection between the intersection and downtown.

Buckley assets for community development:

- Strong historic town center
- Park blocks public open space
- "Crossroads" location at the intersection of SR 410 and SR 165
- Location along SR 410 also has opportunity to attract travelers to the Sunrise area of Mt. Rainier, and Crystal Mountain in the winter season.
- Foothills Historical Society Museum

Charette Outcomes for Buckley

Buckley has a good community fabric as a starting point, with a core grid of commercial and residential buildings at the community's center, loosening into a more rural development pattern farther from town. The historic downtown core has a good density of human-scale buildings with historic materials and detailing, and the open space blocks are a unique community feature that distinguishes the city from other towns along the road.


MAIN
STREET
BUCKLEY

The charette team looked at a series of design strategies to:

- Strengthen the historic core
- Improve the intersection of SR 410/SR 165
- Study the opportunity for a visitor information center/park & ride facility near the SR 410/SR 165 intersection
- Strengthen the role of the open space blocks as a connecting element and foreground to the community

Buckley Historic Core

Activity and density are keys to successful historic downtown revitalization. The charette concepts explored design options for collecting activities in the downtown core that could make it more attractive for visitors. The charette ideas also explored investments in public infrastructure to reinforce the town's sense of place, and create a better environment for private investment in retail and commercial businesses.

One of the projects being considered by the city is the development of joint visitor information center/park and ride facility near the intersection of SR 410 and SR 165. Some options for developing that facility are illustrated with the alternatives for the redevelopment of the intersection, however the charette team also felt it was worthwhile to develop some possibilities to provide those functions in the town core, rather than at the SR 410/SR 165 intersection. If it is feasible to develop those kinds of facilities in the town core then they could contribute to the goals for revitalization. However, there is some question of whether a downtown location would be as effective as a location next to SR 410 for attracting visitors.

For a downtown location, the park and ride and visitor center functions would likely be located in separate locations, with the visitor center located in one of several potential historic storefront locations, and the park and ride developed with a major parking lot behind the main street buildings. The visitor center would be provided with a smaller dedicated parking area, with only minor opportunities for sharing parking between the two uses.

Locating these activities downtown would have the benefit of bringing both regular commuters and Mt. Rainier visitors directly into the town core. Commuters would likely improve the market for convenience services, and retail (and definitely coffee). Locating the visitor information center in town would get visitors out of their car in the retail core—a great opportunity to interest them in a historic walking tour or window shopping at specialty retail shops. Having visitor information in town would also be more effective in drawing visitors to the planned water recharge/wetland park that could be a draw for wildlife tourists.

Streetscape improvements are suggested for improving the pedestrian environment in the downtown core, including the development of sidewalk extensions at crossings, the addition of pedestrian scale light fixtures, and additional street furniture like benches and trash receptacles. Street improvements like these can be effective in reinforcing a community's historic character and making the community more inviting and comfortable for pedestrians.

Intersection of SR 410 and SR 165

Although the traffic volume through this intersection is relatively low, it is increasing and the intersection is a surprisingly complex design challenge. In addition to the two highways, the intersection area includes local roads, a crossing of the Foothills Trail, and needs to accommodate the geometry of Buckley's roadside open space. The charette team looked at several potential geometries for the redesign of the intersection. The intent of developing several options was to evaluate the function of several alternatives to meet traffic and community needs. The design criteria for evaluating the options included:

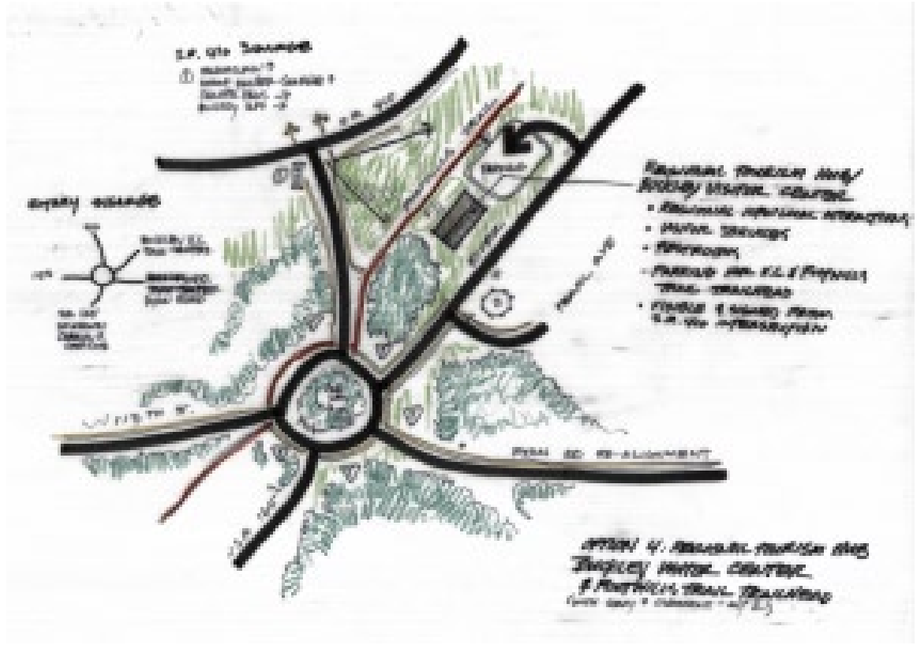
- Traffic safety
- Safe crossing for the Foothills Trail
- Adequate stacking space for waiting vehicles
- Allows for effective directional signs
- Facilitates traffic flow to the town center

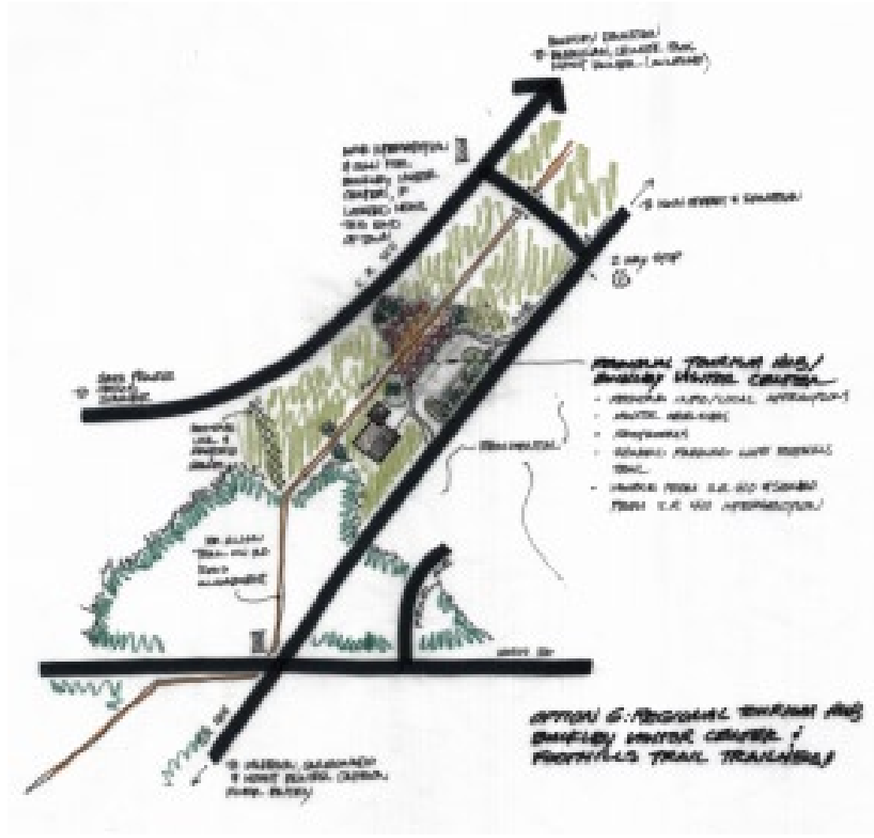
Each of the options solves some of these issues, but not all of them. Some advantages and disadvantages of each alternative are described in the drawings.

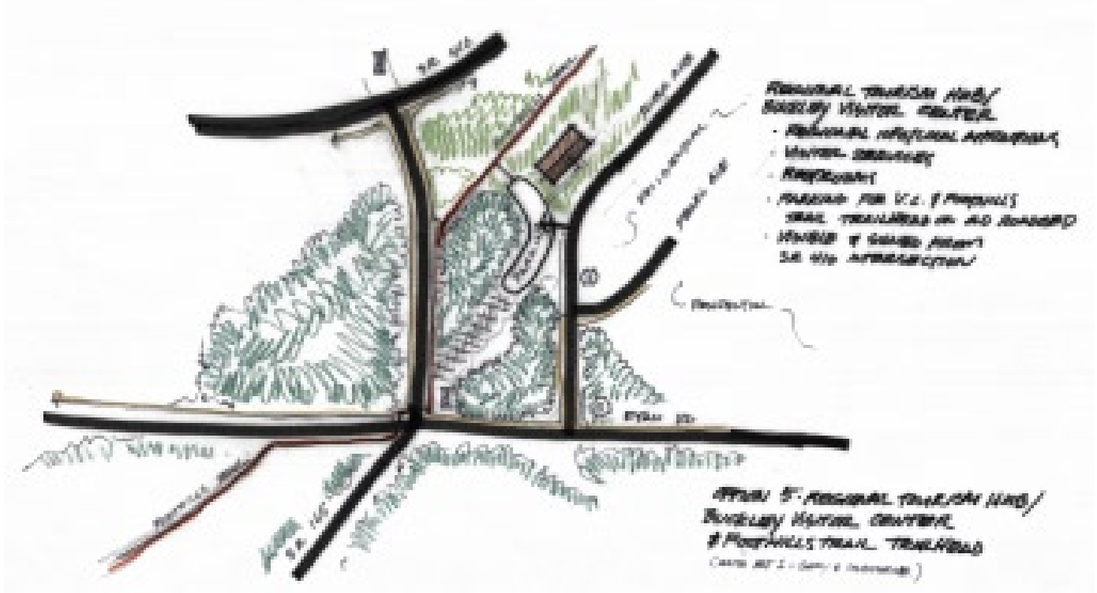
Park Block Structure and Downtown Entry Development

The park blocks are Buckley's front yard. From the visitor's perspective—especially on first impression—they define the visual character of the community, and contribute to the expectations that visitors have for the community. Over the years the park blocks have been partly developed, mostly with public service facilities, and there is an interest to develop more facilities in the open space. As elements have been added to the open space it has begun to look unplanned, with individual pieces sitting in the landscape rather than an organized whole.

The charette team proposed a planting pattern for the park blocks that would provide structure—defining landscape "rooms" that can be used to organize elements in the park blocks—while still allowing views into the community.

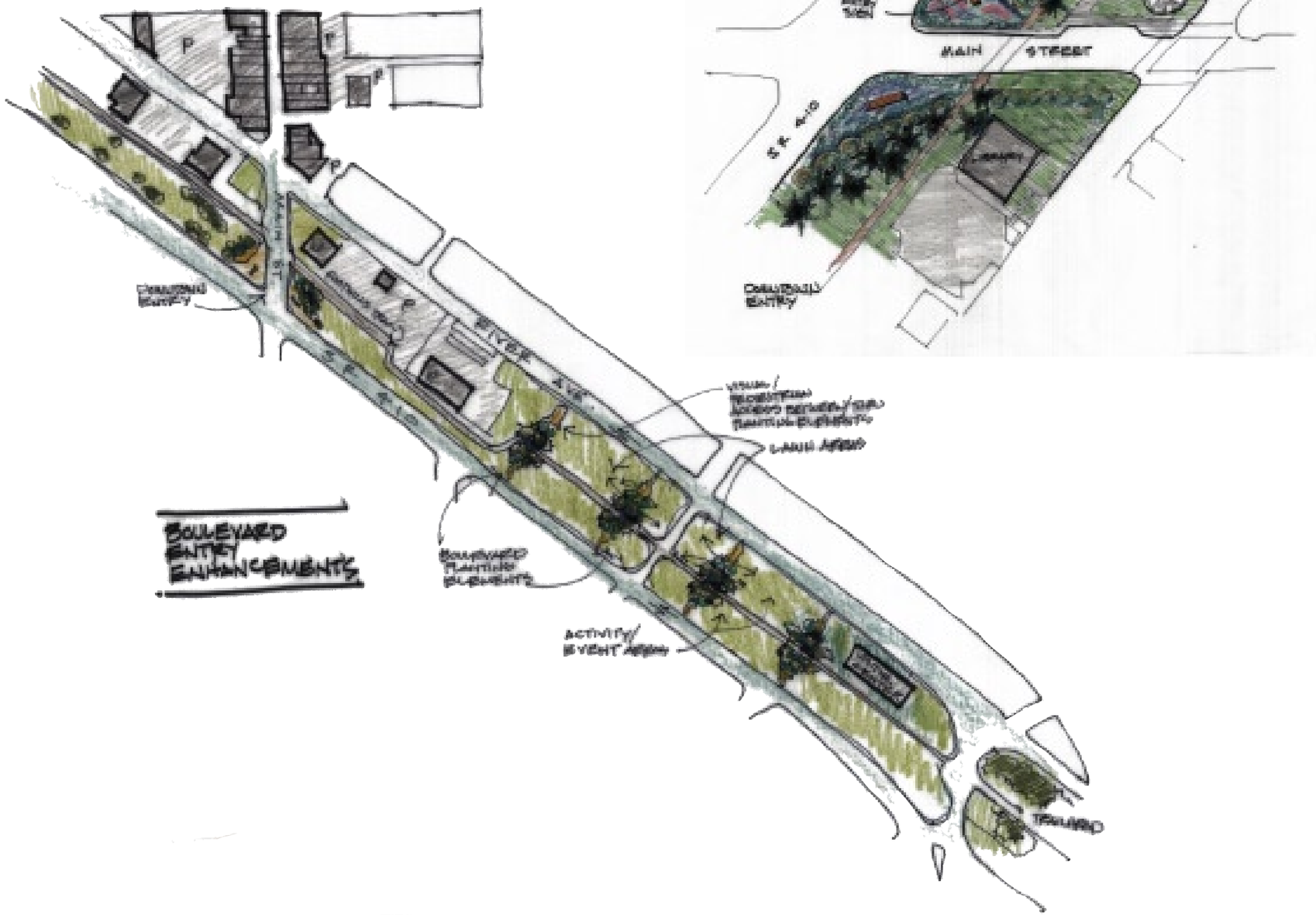






The design concept for the area includes the development of rows of planting that run at a ninety degree angle to the highway. The plants in the hedgerows would be of varying species and height, in part to accommodate the power lines that run over the open space area, with some large trees to add structure and smaller flowering trees and shrubs for seasonal variation. These landscape features would allow easy sightlines into the community, provide an attractive planting for travelers on highway 410, and make it easier to develop new elements in the park blocks without detracting from the overall attractiveness of the community from the highway. It may be appropriate to research the historic landscape treatment for this area prior to developing an approach to landscape modifications.

The park blocks also separate the town center from the highway, making it harder to attract visitors into the downtown business district. The intersection of Main Street and SR 410 needs a landmark that shouts "turn here" to travelers to get their attention and interest them in visiting the community. A backdrop of larger trees sits behind layers of flowering plants and annuals to add color and grab attention. A more prominent entry sign also directs folks downtown.



Next Steps

NEXT STEPS

The Charette process identified a variety of project opportunities that may be appropriate for the corridor. However, these ideas are just a starting point—most of them aren't real projects yet, and there is no community consensus on corridor priorities or direction. Overall, many issues remain to be addressed, including the manner in which cumulative adverse effects associated with increased access to the Mount Rainier vicinity will be avoided or mitigated; and how nation-to-nation relationships between local affected tribes and the United States will continue to be respected. The intent of illustrating these project ideas is to advance community dialogue on the possibilities for the corridor, and help corridor stakeholders to visualize possible directions. Ultimately, corridor communities, tribes, private landowners, and public land management agencies will decide whether these or other ideas for the corridor make sense to pursue.

The decline of the mining and timber economies in the corridor has also weakened the economic connections between corridor communities, and there is little sense of community cohesion in the corridor. Communities feel a common connection to Mt. Rainier, value their shared historic heritage, and are also rediscovering their historic rail line connection with the development of the Foothills Trail. While individual projects may be developed without community coordination, there is an opportunity in the corridor to begin coordinated planning. It is likely that coordination between corridor communities would provide the most benefit given the limited resources in the corridor for project development.

Getting from Good Ideas to Built Projects

The project images developed during the charette aren't ready to build, although they are a good starting point for building support and testing feasibility for projects. So what does it take to go from the charette information to a completed project? Development of projects can be quite complex, but there are good technical resources available within local jurisdictions, state, and federal agencies that can provide assistance. The following steps may not be required for all projects, and they may vary in the order they are completed, but they should be considered before moving to the next step in project development.

Planning

Double check to make sure the intended project is consistent with federal, state, county and local plans. Is additional planning and compliance legwork necessary prior to moving the idea or project into design?

Programming

Programming means looking at the intended uses of a project, and making sure that the project works to accommodate the uses. The charette projects included general, but not detailed programming.

Survey

Most building projects require a survey before design can begin. The survey identifies site features and topography as a basis for design, and also identifies boundaries and ownership. None of the charette projects had current survey data available.

Feasibility review

Feasibility studies focus on the financial side of projects, especially projects that have significant long-term maintenance and operation costs, or that will rely on user revenues (such as entrance fees or gift shop purchases) for part of their budget. Feasibility studies generally balance capital and operational costs against likely capital funding sources and revenue-generation opportunities. Feasibility studies often lead to significant changes in the original assumptions for major projects.

Conceptual design

A more detailed early design than the charette work, conceptual design begins to work out the details of how the project can meet the programming goals and fit on the site.

Funding

Understanding where funding is going to come from on a project is critical before too much effort is put into development. Some of the grant-based funding opportunities for projects of the type developed in the charette are included later in this document, along with some tips on grant preparation.

Environmental and land use review

Prior to permitting, building projects must undergo environmental review to understand the potential impacts associated with a project, and land use review to ensure that the project is consistent with zoning, or other development policy. Environmental review requires formal evaluation under the State Environmental Policy Act (SEPA) for projects without federal agency funding, ownership, or sponsorship. If there is federal agency involvement, then the project will require review under the National Environmental Policy Act (NEPA): Zoning or development policy review depends on the location of the project. Outside of federal lands, incorporated cities or counties will lead the land use review process. On federal lands, including National Park and National Forest lands, the federal agency will be responsible for determining if the project conforms to adopted plans and policy.

Final design, permitting, and construction

With community support, funding, and initial project reviews in place, projects are finally ready to build.

PLANNING PROCESSES TO ADVANCE PROJECT IDEAS

The charette process was a short , first look at many ideas. In many cases a longer, more fully considered planning process makes sense before moving on to project implementation. There are several opportunities for follow-on planning to benefit the corridor.

Community dialogue

Informal community dialogue, outside of any formal planning process, would be a valuable first step in identifying common interests and resources. Communities share an interest in economic development, transportation, traveler information, heritage conservation, and other areas.

Mt. Rainier National Park NEPA review

Mt. Rainier's planned boundary adjustment completed National Environmental Policy Act (NEPA) review during the environmental impact statement (EIS) process for the park's General Management Plan. As the park acquires property and considers development in the boundary adjustment area, capital improvements will be analyzed for environmental impact, allowing public comment. Corridor stakeholders have the opportunity to comment on the park's plans, especially where there are opportunities for coordination with community projects or interests.

Carbon River Corridor Conservation Project

The Carbon River Corridor Conservation project is working to include a broad set of stakeholders in their planning process. As the project develops it has the potential to be a forum for natural and historic heritage resource conservation planning. The current project partners have a strong interest in community economic development, and may provide expertise and resources for linking conservation and economic development opportunities.

Heritage Corridor Designation & Management Planning

Designation as a state heritage corridor is discussed earlier in the document as a potential implementation strategy. Heritage Corridor designation does very little in itself, but it is a required step before corridors can have access to grant funding through the National Scenic Byways program, and it can be a benefit when applying for other grant funding as well.

Application for designation as a heritage corridor is managed through the Washington State Department of Transportation (WSDOT), and ultimately requires approval by the State Transportation Commission and legislature. WSDOT and the legislature will evaluate the application based on the corridor's resources, and most importantly whether there is community support for the designation.

FUNDING

The charette included ideas for a wide range of projects and project types, each of them with a unique set of project stakeholders and key issues. A general overview of the steps for developing a project were described earlier in the document, but the key to successful project development is often finding funding.

TYPES OF FUNDING

There are three main pools of funding available for the projects identified in the charette:

- public sector grants
- private, non-profit grants and foundations
- private sector corporate giving

Public Sector Funding

When finding funding for charette projects, public sector grants will probably be the easiest to obtain. Local, state, and federal agencies make grant funds available that support their various program goals, especially economic development, environmental conservation and cultural preservation. Many charette projects support objectives for the FHWA Transportation Enhancements program and the National Scenic Byway program.

Grants typically require a partial match –either financial or in-kind donations of labor and materials—and are often limited in the funds they provide.

Private non-profit Grants and Foundations

Private, non-profit organizations and foundations also offer grants, especially for projects with an emphasis on environmental education and conservation. The Bullitt Foundation and the Brainerd Foundation are examples of groups that might support Carbon River charette projects with a conservation or interpretive focus. Historical groups might also support projects illustrating and preserving the heritage of the Carbon River corridor.

Private Sector Funding

Many private corporations maintain grant funds to support community projects that are consistent with their charitable giving mission. Corporations with local ties are generally more willing to provide funds for local projects that will improve or enhance their perceived level of commitment to the area.

SUCCESSFUL GRANT PREPARATION

A successful grant proposal is one that is thoughtfully planned, well prepared, and concisely packaged. There are nine basic components in a typical proposal package:

- Proposal summary
- Introduction of the Group Seeking Funding
- Needs Assessment
- Project Objectives
- Project Method and Design
- Project Evaluation
- Future Funding
- Project Budget
- Appendices

Each one of the grant components is discussed briefly below.

Proposal Summary

The proposal summary appears at the beginning of the proposal and outlines the project. It can be a cover letter or a separate page. It should be brief: no longer than two or three paragraphs. Be sure to include a simple map to orient the evaluator and provide a geographical context.

It is often helpful to prepare the summary after the proposal has been developed. This makes it easier to include all the key points necessary to communicate the objectives of the project. The summary document becomes the foundation of the proposal. The first impression it gives will be critical to the success of the venture. It very possibly could be the only part of the package that is carefully reviewed before the decision is made to consider the project further.

Introduction of the Group Seeking Funding

Most proposals require a description of an applicant's organization and its past, present, and projected operations. Some features to consider are:

- A brief biography of key group members
- The organization's goals, philosophy, and record with other grantors any success stories.

The data should be relevant to the goals of the granting organization and its grant program, and should establish the applicant's credibility.

Needs Assessment

The Needs Assessment is a key element of a proposal. It should be a clear, concise, well-supported statement of the problem to be overcome using the grant funding. Zero in on a specific need you want to meet or an issue you want to address. Make a connection between the issue and your group/organization and make a case of your project locally and regionally.

Demonstrate your knowledge of the needs or issues. This could be done with data (such as surveys, reports, and statistics) collected during a Needs Assessment that would illustrate the problems to be addressed. However, be sure to use only the data that is immediately relevant and supportive of the project.

Project Goals and Objectives

This section should clearly describe the goals and objectives of the project. Project goals will be more general than the objectives and should come first. They will provide the evaluator with a general understanding of your project.

Project objectives are more specific and relate directly to the problem or issue that the project addresses. Ideally, project objectives have measurable outcomes. Be careful to select objectives that are attainable –it is more important to reach simple objectives than to fall short of grand, impressive objectives. Be sure to explain the expected results and benefits of each objective. Also, include the specific criteria of the grant program and describe how the proposal meets each criterion.

Project Method and Design

The project method outlines the tasks that will be accomplished with the available resources. Describe in detail the activities that will take place in order to achieve the project's goals and objectives. It is helpful to structure the project method as a timeline that includes major milestones. Break the activities into smaller tasks and lay them out in a schedule over the grant time period. This will provide a chance to consider what personnel, materials, and other resources will be needed to carry out the tasks.

Project Evaluation

Applicants should develop evaluation criteria to evaluate progress towards project goals. It is important to define carefully and exactly how success will be determined. Applicants should ask themselves what they expect to be different once the project is complete.

There are two types of evaluations that will need to occur for the project: a Process Evaluation and a Project Evaluation. The Process Evaluation will allow the group to determine its effectiveness in meeting project objectives and can be used as a tool to make process changes along the way. The Project Evaluation will determine the success of the project once it is completed.

Future Funding

Be prepared with a list of continuing funding sources that are expected to contribute to the project, especially if your project has maintenance needs after the conclusion of the grant. Even if future funding sources are not required for the grant, considering how the project will be maintained once it is completed will be a valuable exercise and could prevent future problems.

Also, if funding is being provided from a variety of sources, the grant may require a list of the other sources their amounts of funding.

Project Budget

Particular expenses should be outlined in detail in the project budget. It can also be helpful to divide the budget into categories, such as personnel salaries and benefits, travel, equipment, supplies, contract costs, etc. Many grant applications request a line item budget. The budget should show how funds will be spent and by whom. The budget should also demonstrate consistency with project activities. If you plan to hire someone with the funding, include a position description and perhaps put the person's or firm's resume in the Appendix. Outline your matching contributions in the budget as well.

Appendices

Appendices provide a place to include information that supports your project and request for funding. Use discretion when including an appendix or appendices as too much information can overwhelm the evaluator. Items that could be included an appendix include:

- Resumes of key group members
- Lists of other grants the group has received or managed
- Letters of support or endorsement from different entities

POTENTIAL GRANT SOURCES

PUBLIC SECTOR GRANT SOURCES

Transportation Enhancements Grants

Transportation Enhancements (TE) are transportation-related activities that are designed to strengthen the cultural, aesthetic, and environmental aspects of the Nation's intermodal transportation system. The program provides for the implementation of a variety of non-traditional projects, with examples ranging from the restoration of historic transportation facilities, to bike and pedestrian facilities, to landscaping and scenic beautification, and to the mitigation of water pollution from highway runoff.

Eligible Lead Agencies:

All public agencies. However, the project must be administered and application signed by a Certification Acceptance (CA) agency to be considered for funding. Agencies who have CA status have formally demonstrated that they have the resources, knowledge and systems in place to comply with all requirements that accompany the use of federal funds. (Local Agency Guidelines (LAG) manual, Chapter 13). An agency that does NOT have CA status may still apply for Transportation Enhancement Funds, however they must have a "CA Sponsor." The sponsor must be willing to assume the responsibilities of project management PRIOR to applying for Enhancement funds.

Eligibility:

"Transportation enhancement activities" means, any of the following activities if such activity relates to surface transportation: facilities for pedestrians and bicycles; safety and educational activities for pedestrians and bicyclists, acquisition of scenic easements and scenic or historic sites; scenic or historic highway programs (including the provision of tourist and welcome center facilities); landscaping and other scenic beautification; historic preservation; rehabilitation and operation of historic transportation buildings, structures or facilities (including historic railroad facilities and canals); preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian or bicycle trails); control and removal of outdoor advertising; archaeological planning and research; environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity; and establishment of transportation museums.

National Scenic Byways Programs Discretionary Grants

This is a federally funded program specifically for the development of scenic highways. Projects are eligible for funding even without National Scenic Byway designation, however the Carbon River Corridor is not eligible for these funds unless the corridor pursues and achieves state heritage corridor designation.

- Planning, design, and development of a State scenic byway program.
- Development and implementation of a corridor management plan to maintain the scenic, historical, recreational, cultural, natural, and archaeological characteristics of a byway corridor while providing for accommodation of increased tourism and development of related amenities.
- Safety improvements to a State scenic byway, National Scenic Byway, or All-American Road to the extent that the improvements are necessary to accommodate increased traffic and changes in the types of vehicles using the highway as a result of the designation as a State scenic byway, National Scenic Byway, or All-American Road.
- Construction along a scenic byway of a facility for pedestrians and bicyclists, rest areas, turnouts, highway shoulder improvements, passing lanes, overlooks, and interpretive facilities.
- Improvements to the scenic byway that will enhance access to an area for the purpose of recreation, including water-related recreation.
- Protection of scenic, historical, recreational, cultural, natural, and archaeological resources in an area adjacent to a scenic byway.
- Developing and providing tourist information to the public, including interpretive information about the scenic byway.
- Development and implementation of a scenic byway marketing program.

This program requires a minimum matching fund of 20% from a non-federal government source. Funds are administered through WSDOT.

Washington State Interagency Committee for Outdoor Recreation (IAC)

The IAC administers several grant programs for recreation and habitat conservation purposes. Depending on the program, eligible project applicants can include municipal subdivisions of the state (cities, towns, and counties, or port, utility, park and recreation, and school districts), Native American tribes, state agencies, and in some cases, federal agencies and nonprofit organizations.

To be considered for funding assistance, most grant programs require that IAC be given assurance that the proposed project will be operated and maintained in perpetuity for the purposes for which funding is sought. Most grant programs also require that sponsors complete a systematic planning process prior to seeking IAC funding. Grants are awarded by the Committee, based on a competitive public process that weighs the merits of proposed projects against established program criteria.

Boating Facilities Program
The state Marine Recreation Land Act (Initiative 215) was approved by voters in 1964. This legislation earmarks taxes paid on motor vehicle fuel used in watercraft for boating-related lands and facilities. Acquisition, development and renovation projects on fresh or salt water are eligible, including launch ramps, transient moorage, and upland support facilities. Background and policies are explained in IAC's Boating Facilities Program Plan.

Washington Wildlife Recreation Program (WWRP)
The WWRP provides funds for the acquisition and development of recreation and conservation lands. WWRP funds are administered by account and category. The Habitat Conservation Account includes critical habitat, natural areas, and urban wildlife categories. The Outdoor Recreation Account includes local parks, state parks, trails, and water access categories. The Committee's prioritized list of projects must be submitted for consideration and approval by the Governor and the Legislature before IAC awards grants. For more information,

ask for the IAC report Washington Wildlife and Recreation Program: The First Five Years.

Nonhighway and Off-Road Vehicle Activities (NOVA) Program
The NOVA program provides funding to develop and manage recreation opportunities for users of off-road vehicles and nonhighway roads. The NOVA Program is primarily funded through one percent of the state motor vehicle fuel tax. Other NOVA funds originate from off-road vehicles (ORV) permit fees. Every year IAC provides funding for the planning, acquisition, and/or development of off-road vehicle and nonhighway road recreation opportunities. In odd-numbered years, funds are also provided for the maintenance and operation of ORV facilities; and education and enforcement related to ORV recreation. Background, including IAC policies for the program, is explained in the NOVA Plan 1993-1999.

Firearms and Archery Range Recreation Program (FARR)
Firearms and Archery Range Recreation Program funds are used to acquire, develop, and renovate public and private nonprofit firearm and archery training, practice, and recreation facilities. The program receives funding from a portion of the fee charged for concealed weapons permits. Projects in this program are funded in odd numbered years.

The National Recreational Trails Program
The National Recreational Trails Program is the successor to The National Recreational Trails Act (NRTFA). In 1999, IAC will grant approximately 1.1 million to further NRTP's goal of providing funds to rehabilitate and maintain recreational trails that provide a backcountry experience. In some cases, new "linking" trails, relocations, and education proposals are also eligible.

Riparian Habitat Program (RHP)
The Riparian Habitat Grant Program is a pilot program for funding watershed plan implementation projects that protect, restore, and enhance riparian habitat. Funding is in the form of matching grants to counties, cities and towns, conservation districts, land trusts, and nature conservancy organizations. Projects eligible for funding include acquisition of land using less-than-fee methods such as conservation easements and purchase of development rights; and habitat restoration and enhancement projects on those lands.

Land and Water Conservation Fund
The Land and Water Conservation Fund (L&WCF) was enacted by Congress in 1964 to establish a funding source for grants to state and local governments for land acquisition and/or development of outdoor recreation areas and facilities. The program is managed by the National Park Service but administered in each state through a governor-appointed stage agency responsible to the National Park Service (i.e., federally funded/state administered program). L&WCF grants require a 50% match from state or local funds. Eligible applicants include cities, counties, state agencies, tribes, and recreation and park districts authorized to provide public park and recreation facilities. Areas funded through L&WCF assistance are required to be dedicated in perpetuity for public recreation use. In Washington, the L&WCF is managed by the Interagency Committee for Outdoor Recreation.

Washington State Heritage Capital Projects Fund

Provides capital funding for projects that interpret and preserve Washington's history and heritage. The fund provides up to 1/3 of project funding, with the remaining funding required to be from non-state sources. up to half of the applicant match requirement may be in-kind labor and materials. This loan program does not fund planning activities, and successful grants will typically have planning completed prior to application.

Pierce County Tourism, Promotion & Capital Facilities Fund

This grant program is funded by the lodging tax collected in unincorporated Pierce County, and can be used to fund projects that promote tourism.

This fund supports capital development, and grant applications with planning completed are more likely to be successful.

Heritage Technical Assistance

Although not a source for funding, the state Heritage Resource Center provides technical assistance to heritage organizations throughout the state.

Private Sector, Non-Profit Grant Sources

Washington Wildlife and Recreation Coalition

Washington Wildlife and Recreation Coalition is dedicated to the preservation of outdoor recreation opportunities, wildlife habitat, and natural areas in Washington state. The grants support public education activities aimed at building local community support for land acquisition and stewardship.

The Bullitt Foundation

The Bullitt Foundation is committed to the protection and restoration of the environment of the Pacific Northwest. This commitment includes environmental problems that disproportionately impact lower-economic people in both urban and rural communities. The Foundation invites proposals from nonprofit organizations that serve Washington, Oregon, Idaho, British Columbia, western Montana (including the Rocky Mountain Range), and the rain forest region of southern Alaska. The majority of grantees are citizen groups located in the Northwest that are working to build and strengthen the environmental movement and to educate the broader public about the importance of protecting and restoring the environment.
Proposals are reviewed two times a year and must be received by May 1 and November 1.

The Brainerd Foundation

The Brainerd Foundation funds organizations that are dedicated to protecting the environmental quality of the Pacific Northwest.

Private Sector Corporate Giving

For corporate donations, the appropriate companies will need to be identified early on in the project process and contacted at that time about partnership and funding opportunities. Most large companies will have a public relations department, which is a good place to start when investigating possible partnerships. If the company does not have a public relations department, the marketing department should also be able to provide direction.

Before contacting a company, become familiar with it. Today many companies have

"Mission" and "Vision" statements that can be helpful in determining what the company values and therefore, can help you determine if your project reflects those values. Also, consider the benefits your project has to offer to the company in exchange for its donation.

WalMart Community Matching Grant Program

The Community Matching Grant Program is the largest program funded by Wal-Mart and SAM'S CLUB. Associates raise funds with a local nonprofit organization at their stores. Wal-Mart and SAM'S can match a portion of the funds raised. More than 50,000 matching grants, totaling $42 million, were awarded through the Community Matching Grants program last year.

Organizations qualifying for the Matching Grant Program are 501(c)(3) non-profit organizations or organizations that are exempt from needing 501(c)(3) status, such as public schools, churches and government agencies.

WalMart Environmental Grants

Wal-Mart and SAM'S CLUB provides grants to 501(c)3 nonprofit organizations and schools to support environmental efforts and education in communities where stores are located. Last year, the company contributed more than $1.5 million to local communities through environmental grants.

The Home Depot Environmental Grant

The Home Depot provides grants in the following areas:

- Sustainable and Green Building Practices
- Forestry and Ecology
- Clean-up and Recycling
- Lead Poisoning Prevention
- Consumer Education

OTHER AREA PLANNING ACTIVITIES

Counties, cities, and towns within the Carbon River Corridor and vicinity have conducted planning efforts to develop a vision for their future, to responsibly conserve and protect resources, and to guide and direct future growth. The charette effort is intended to recognize these efforts and to suggest exploration of ideas and concepts that are consistent with these plan recommendations and design standards. Numerous planning efforts involving Lewis and Yakima Counties, communities, agencies, and private businesses along the corridor and its feeder routes are underway, or have recently been completed. The following Plans and initiatives are efforts relevant to the Carbon River Corridor. Some specific plan highlights are given for alternative transportation opportunities, congestion relief for popular destinations, and visitor/tourism opportunities.

Mount Rainier National Park Final General Management Plan/ Environmental Impact Statement (2001)

The National Park Service (NPS) has finalized this Final General Management Plan and Environmental Impact Statement to provide guidance on the management of Mount Rainier National Park over the next 20 years. The plan establishes a framework for monitoring resource conditions and visitor experiences relative to the defined, long-term goals to ensure that Park resources are preserved and high quality visitor experiences are provided. Within these mandates, the plan addresses issues confronting the Park, such as vehicle congestion, perceived overuse of wilderness, and changes in Park infrastructure.

Mt. Baker Snoqualmie National Forest Forest Plan

The Forest Plan generally guides the activities on the forest, including timber management, recreation, habitat conservation, and non-timber forest products. Most of the National Forest area in the Carbon River Corridor is in restricted harvest status reflecting the habitat value of mature forests adjacent to the park.

WSDOT Roadside Classification Plan (1996)

The Roadside Classification Plan (RCP) has been prepared to coordinate and guide the management of Washington State highway roadsides, including planning, design, constructions, and maintenance activities.

The intent of this plan is to provide a uniform framework for consistent, pro-active roadside management statewide, and to facilitate cost-effective restoration of state roadsides. The policies and guidelines provided here allow room for regional variations within the statewide parameters.

In coordination with the State Highway System Plan, the RCP:

- Sets statewide goals and objectives for roadside management, establishes roadside character classifications, and records roadside character designations in the Roadside Classification Log.
- Provides guidelines for roadside restoration.
- Advocates the use of native plants, Integrated Vegetation Management (IVM) and a long-term management approach to achieve sustainable roadsides.

Appendices

APPENDIX A–EXISTING TRANSPORTATION

Prior to beginning the charette transportation information was collected to provide background information for the charette participants. The transportation information presented here was current at that time, but has not been updated following the completion of the charette.

Because transportation is a focus of study for this project, it is important to analyze "baseline conditions", or current transportation system. This memorandum provides an overview of the various transportation elements in the study. The document begins with a description of the present highway system, including physical description, traffic volumes and accident data. Following the roadways discussion is an overview of the various alternative transportation services including public transit and bicycle/pedestrian facilities. This discussion also lists planned/programmed improvements associated with the Washington State Department of Transportation (WSDOT) and various public transportation providers.

HIGHWAY SYSTEM

The Carbon River study area is located in northern Pierce County and southern King County, south of the Puget Sound urban area. Within this area are the cities of Buckley, Bonney Lake, Carbonado, Enumclaw, Orting, Wilkeson and other communities. Several state highways connect the communities within the study area. The highways at the focus of attention are SR 162, SR 165 and SR 410.

Physical Features

SR 162

Approximately 20 miles in length, SR 162 begins at SR 410 in Sumner and ends at SR 165 just south of Buckley. Following the Puyallup and Carbon rivers, the highway passes through the communities of Orting and South Prairie. The highway generally consists of a two-lane cross-section with a posted speed of 50 m.p.h. through a mostly rural landscape. Center turn lanes and lower speed limits exist in the urbanized areas. Although SR 162 generally has smooth high-speed curves, motorists encounter sharper curves within the City of Orting and just west of South Prairie. The McMillin Bridge, carrying the roadway across the Puyallup River, is listed on the National Register of Historic Places.

SR 162 is a major traffic corridor for local and regional traffic traveling between north central Pierce County and the City of Tacoma. Commuters make up the majority of vehicle traffic. Recent development growth in the corridor – mainly housing developments – has been high. The route is also used for recreational travel, including motorists traveling to Mount Rainier National Park. As shopping centers, service centers and other development sprouts along the roadway, traffic volumes are expected to grow steadily.

SR 165

Approximately 21 miles long, SR 165 travels between Mount Rainier National Park and SR 410 in Buckley. Following the Carbon River, the highway passes through the communities of Carbonado and Wilkeson. The first seven miles of SR 165 are unpaved. This is the only state highway in Washington containing an unpaved section. Between Mount Rainier National Park and Carbonado, the roadway travels on mountainous terrain with a posted speed limit of 35 m.p.h. From Carbonado north, SR 165 follows rolling terrain with posted speeds between 30 and 50 m.p.h. The highway's entire length has one travel lane in each direction.

Recreational traffic comprises the majority of vehicles on SR 165. As the roadway terminates at Mount Rainier National Park's Carbon River entrance, the opportunity for this road to serve far reaching destinations does not exist. Traffic volumes on this road vary seasonally. The greatest number of vehicles using the highway usually occurs during summer months.

Primarily near Mount Rainier National Park, SR 165 has been prone to rock slides and washouts. During the 1990s, slides occurred near milepost (MP) 2, and a washout occurred about two miles south of Carbonado. More recently, a rockslide occurred near MP 4 and the Nisqually Earthquake resulted in slide near the Fairfax Bridge. The Fairfax Bridge slide presently blocks a portion of the highway.

Relatively low traffic volumes and a lack of maintenance funds have forced WSDOT to maintain SR 165 near Mount Rainier National Park on a "reactive" basis. Much of the roadway in this area is not built to current standards, as the present right-of-way width prevent motorists from driving comfortably.

SR 410 (Bonney Lake to Enumclaw)

SR 410 is approximately 107 miles long and serves as an important east-west transportation link between the South Puget Sound Region in Pierce County and the Central Washington region near Naches in Yakima County. The segment between Bonney Lake and Enumclaw passes through Buckley, and is about 13 miles long. In the vicinity of Bonney Lake, the highway has a four-lane (two lanes in each direction) cross-section with limited access. The remaining portion contains a two-lane cross-section. SR 410 generally follows level and rolling terrain with posted speeds ranging between 35 and 55 m.p.h.

Because SR 410 is a major east-west transportation corridor for local and regional traffic, commuters comprise the majority of users. The development rate along this corridor is high, and traffic volumes are expected to grow at a steady rate. Truck traffic also uses this route to move freight and goods, and recreational traffic uses SR 410 to reach Mount Rainier National Park and other points east.

Access Management

WSDOT's access management program combines traffic engineering and land use regulatory techniques. The goal of the program is to protect the public's investment in its streets and highways by ensuring mobility, while simultaneously providing other benefits such as access to adjacent properties. Because many collisions result from conflicting turn movements, limiting the number of access points on a highway reduces the risk of accidents.

WSDOT has adopted a system of access management classifications for the state highway system. These classifications seek to balance access needs of property owners with traffic flow needs of the traveling public. A number of factors play a role in a roadway's access management classification including development level, speed limit, and functional classification. Table 1 describes the characteristics of each access management classification, and Table 2 identifies classifications along state highways in the study area.

Table 1: WSDOT Access Management Classification Characteristics

Access Management Classification	Characteristics
Class I	• Higher speeds, higher volumes, longer trips • Restrictive medians required on multi-lane highways • One-mile minimum spacing between intersecting streets • 1,320' minimum distance between public or private access connections
Class II	• Medium to high speeds, medium to larger volumes, medium to long trips • Restrictive medians required on multi-lane highways • One-half mile minimum spacing between intersecting streets • 660' minimum distance between public or private access connections
Class III	• Moderate speeds, moderate volumes, shorter trips • Restrictive medians typical on multi-lane highways; two-way left-turn lanes may be used where special conditions warrant • One-half mile minimum spacing between intersecting streets • 330' minimum distance between public or private access connections
Class IV	• Moderate speeds, moderate volumes, shorter trips • Typical median treatment is nonrestrictive • One-half mile minimum spacing between intersecting streets, roads, or highways in rural areas • 250' minimum distance between public or private access connections
Class V	• Slower speeds, moderate volumes, short trips • One-quarter mile minimum spacing between intersecting streets, roads, or highways in rural areas • 125' minimum distance between public or private access connections

WSDOT, *Access Management in Washington State*, 1995

Table 2: Access Management Classifications on State Highways in the Study Area

Begin MP	End MP	Segment Description	Access Management Classification
SR 162			
9.23	*10.34*	*City of Orting*	*Class IV*
10.34	*17.25*	*Orting to South Prairie*	*Class III (proposed class II mp 11 to 17.25)*
17.25	*17.78*	*City of South Prairie*	*Class IV*
17.78	*19.78*	*South Prairie to SR 165*	*Class III*
SR 165			
0.00	*21.24*	*SR 410 to Mt. Rainier NP*	*Class III*

Traffic Volumes and Traffic Operations

Table 3 provides a summary of available information on existing and projected daily traffic volumes along state highways within the study area. The data was provided by the Washington State Department of Transportation (WSDOT). Also illustrated in the table are volume-to-capacity (V/C) ratios for each highway segment that relate the traffic volume data to roadway geometry and other factors, and provide a descriptive assessment of varying degrees of congestion.

Table 3: Existing/Projected Volumes and Roadway Performance (LOS) on Study Area State Highways

Begin MP	End MP	Segment Description	2001 ADT	2001 V/C	2021 ADT	2021 V/C	Truck %
SR 162							
0.00	0.29	SR 410 to 75th Street Court	21,238	1.01	33,981	1.61	6
0.29	4.30	75th Street Court to 102nd Street	17,969	1.01	28,750	1.62	6
4.30	6.81	102nd Street to Puyallup River	15,914	0.90	25,462	1.43	6
6.81	9.73	Puyallup River to Washington Avenue	13,790	0.70	22,064	1.13	6
9.73	10.97	Washington Avenue to Orville Road	13,790	0.78	22,064	1.24	6
10.97	12.74	Orville Road to Patterson Road	6,821	0.27	10,914	0.44	6
12.74	17.25	Patterson Road to South Prairie (west city limits)	4,707	0.22	7,531	0.36	6
17.25	19.78	South Prairie (west city limits) to SR 165	5,470	0.28	8,752	0.44	6

SR 165							
0.00	4.00	Mount Rainier National Park to MP 4	237	0.06	379	0.09	11
4.00	7.00	MP 4 to MP 7	237	0.06	379	0.09	11
7.00	9.72	MP 7 to near MP 10	237	0.06	379	0.09	11
9.72	10.91	Near MP 10 to Fairfax Forest Preserve	237	0.06	379	0.09	11
10.91	14.39	Fairfax Forest Preserve to Carbonado (south city limits)	330	0.06	528	0.09	11
14.39	17.14	Carbonado (south city limits) to Wilkeson (north city limits)	330	0.03	528	0.05	11
17.14	19.60	Wilkeson (north city limits) to SR 162	6,008	0.48	9,613	0.77	11
19.60	21.24	SR 162 to SR 410	6,428	0.42	10,285	0.81	7
SR 410							
12.72	13.34	Bonney Lake (west city limits) to 181st Avenue/Sumner-Buckley Highway	42,811	0.70	53,000	0.87	7
13.34	13.61	181st Avenue/Sumner-Buckley Highway to 184th Avenue	42,811	0.98	54,940	1.26	7
13.61	14.88	184th Avenue to 202nd Avenue	33,285	0.83	42,715	1.07	10
14.88	15.60	202nd Avenue to 214th Avenue	25,496	0.54	34,845	0.73	6
15.60	20.41	214th Avenue to Hinkleman Extension Road	19,723	0.82	26,955	1.12	8
20.41	20.68	Hinkleman Extension Road to SR 165	16,133	0.64	22,049	0.87	8
20.68	22.02	SR 165 to Pierce/King County Line	20,000	0.83	28,000	1.17	8
22.02	23.67	Pierce/King County Line to SE 456th Street	14,199	0.67	19,879	0.93	6
23.67	24.29	SE 456th Street to Roosevelt Avenue	13,596	0.74	19,034	1.04	11
24.29	24.84	Roosevelt Avenue to SR 164	11,023	0.52	15,432	0.72	9
24.84	25.71	SR 164 to Enumclaw (east city limits)	9,279	0.43	12,991	0.61	9

Note: LOS means "Level of Service", and V/C means "volume-to-capacity ratio".
V/C > 1.0 indicates severe congestion
V/C .75 - 1.0 indicates heavy congestion
V/C .5 - .74 indicates moderate congestion
V/C < .5 indicates low or no congestion
WSDOT Planning and Policy Office, 2003.

Highway Traffic Accident Experience

Two "High Accident Corridors" (HACs) exist within the study area. According to WSDOT, a HAC is a highway section one mile or greater in length where a five-year analysis of collision history indicates that the section has higher than average collision and severity factors. SR 162 is a designated HAC between milepost (MP) 0.0 and MP 6.5 (between SR 410 and 136th Street). SR 165 is also a HAC from unincorporated Burnett to just south of Buckley (between MP 19 and MP 20). A "High Accident Location" (HAC) is a highway section typically less than 0.25 mile in length with a two-year collision history indicating that the section has a significantly higher than average collision and severity rate. A HAL is located on SR 162 at MP 0.58 (80th Street), and on SR 165 between MP 19.5 and 19.7 (the intersection with SR 162).

Accident rates are measured in terms of "millions of vehicle miles traveled" (MVMT). For instance, an accident rate of 1.00 represents one accident per one million vehicle miles traveled. In 1996 (the most recent year with available data), the overall accident rate in King County was 2.27 MVMT, while Pierce County experienced a rate of 2.06 MVMT[1]. While no state highway segments within the study area exceeded King County's 1996 accident rate, several segments exceeded the Pierce County rate. These highway segments are identified in Table 4.

Table 4: Highway Segments Exceeding the 1996 Pierce County Accident Rate

Begin MP	End MP	Segment Description	Segment Length (miles)	Accident Rate
SR 162				
5.35	9.54	Military Road to Calistoga Street	4.19	2.20
9.54	10.97	Calistoga Street to Orville Road	1.43	3.40
10.97	17.82	Orville Road to Prairie Road	6.85	2.60
17.82	19.78	Prairie Road to SR 165	1.96	2.50
SR 165				
19.60	21.24	SR 162 to SR 410	1.64	3.60
SR 410				
16.81	20.68	233rd Avenue to SR 165	3.87	2.30
20.68	22.02	SR 165 to King County line	1.34	2.10

WSDOT, *1996 Washington State Highway Accident Report.*

WSDOT Planned Highway Improvements

Short-Term Improvements

WSDOT's *Highway Construction Capital Improvement & Preservation Plan* lists several projects along state routes within the study area to be completed between 2002 and 2008. Roadway widenings and intersection realignments are among the planned improvements, as listed in Table 5.

Table 5: Short-Range Planned State Highway Improvements

Begin MP	End MP	Segment Description	Planned Improvement
SR 162			
11.39	11.51	Voights Creek Bridge	Replace structurally deficient bridge
11.39	11.74	Voights Creek vicinity	Reconstruct and widen existing roadway to accommodate a new bridge
19.73	19.78	SR 162/SR 165 Intersection	Change intersection to a T-intersection with stop control on the Wilkeson (south) leg
SR 165			
19.40	19.75	SR 162/SR 165 Intersection	Change intersection to a T-intersection with stop control on the Wilkeson (south) leg
SR 410			
15.70	16.94	214th Avenue to 234th Avenue	Construct 2 additional general purpose lanes, a median barrier and signal
20.86	20.86	Jefferson Avenue intersection	Widen roadway to accommodate a left-turn lane and minor safety improvements

WSDOT, *Highway Construction Capital Improvement & Preservation Program*, 2002.

Long-Term Improvements

The *2003-2022 Washington State Highway System Plan* identifies long-range planned and programmed improvements for state routes in the study area. Some improvements are identified in earlier Route Development Plans (RDPs) and they are reflected in the list. Purchasing of access rights, realignments and widenings comprise the majority of planned improvements. Table 6 lists the planned/ programmed improvements.

Table 6: Long-Range Planned State Highway Improvements

Begin MP	End MP	Segment Description	Planned Improvement
SR 162			
0.00	3.21	SR 410 interchange to Pioneer Way	Widen to 5 lanes – per SR 162 RDP
0.10	0.53	SR 410 to Sumner (south city limits)	Purchase access rights – proposed partial limited access
0.53	6.11	Sumner (south city limits) to 128th Street	Purchase access rights – proposed partial limited access
3.21	7.10	Pioneer Way to 144th Street	Widen 4 lanes – per SR 162 RDP
6.11	9.23	128th Street to Washington Avenue	Purchase access rights – proposed partial limited access
7.10	9.34	144th Street to Washington Avenue	Widen to 5 lanes – per SR 162 RDP
9.34	9.84	Washington Avenue to Harman Way	One-way couplet system using existing SR 162 and Corrin Avenue
9.84	10.34	Harman Way to Orting (south city limits	Widen to 5 lanes – per SR 162 RDP
10.34	10.97	Orting (south city limits) to Orville Road	Purchase access rights – proposed partial limited access
10.95	11.01	Railroad Crossing (vacated) to Orville Road	Realignment
11.44	11.64	Voights Creek Bridge vicinity	Realignment and new structure
13.02	13.07	Burlington Northern Railroad vicinity	Realignment and new structure
14.50	14.96	South Prairie Creek Bridge vicinity	Cross-section/geometric improvements
SR 165			
15.83	16.36	Gale Creek Bridge vicinity	Cross-section/geometric improvements
17.14	21.24	Wilkeson (north city limits) to SR 410	Intermittent passing lanes and realign SR 165 at SR 410
17.91	18.50	South Prairie Road to 141st Street Court	Cross-section/geometric improvements and realignment
19.28	19.36	Fettig Road vicinity	Cross-section/geometric improvements

SR 410

12.72	13.37	Bonney Lake (west city limits) to 181st Avenue	Purchase of access rights; proposed full limited access
13.64	15.70	184th Avenue to 214th Avenue	Urban access control; local arterial (City of Bonney Lake) – per SR 410 RDP
16.94	20.41	234th Avenue to Hinkleman Extension Road	Widen to 4 lanes – per SR 410 RDP
20.41	21.48	Hinkleman Extension Road to Park Avenue	Widen to 4/5 lanes – per SR 410 RDP
20.66	20.84	Shopping Center to Jefferson Avenue	Cross-section/geometric improvements
21.48	21.99	Park Avenue to White River Bridge	Widen to 4/5 lanes – per SR 410 RDP
21.99	24.14	Pierce/King county line to Cole Street	Widen to 4 lanes; access management; signal coordination and route continuity strategy
24.26	24.40	Roosevelt Avenue to Mount Villa Drive	Install guardrail

WSDOT, *2003-2022 State Highway System Plan*.

ALTERNATIVE TRANSPORTATION

Several agencies provide public transportation within and near the study area. Ranging from intercity rail to local bus service, several transportation services provide an alternative to the personal automobile. Additionally, bicycle and pedestrian facilities are found in most incorporated and unincorporated communities and along some of the state highways.

Amtrak

From the Tacoma Amtrak Terminal, the Amtrak Cascades and Coast Starlight trains operate a total of four daily trips north to Seattle and four daily trips south to Eugene, Oregon (one trip continues south to Los Angeles, California). Northbound trains depart at 11:17 a.m., 3:02 p.m., 7:05 p.m., and 8:47 p.m. Southbound trains depart at 8:18 a.m., 10:53 a.m., 2:33 p.m., and 6:13 p.m. The service is financed in part through funds made available by WSDOT and the Oregon Department of Transportation.

Greyhound

Greyhound provides six daily northbound and southbound trips from Tacoma. The first bus to Seattle and other northern cities departs at 1:25 a.m., and the last bus leaves at 9:25 p.m. The first bus to Portland and other southern points leaves at 2:00 a.m. and the last bus departs at 9:20 p.m.

Sound Transit

Sound Transit provides public bus and commuter rail service to King, Pierce and Snohomish counties. The Sounder Commuter Rail train provides weekday peak hour service between Tacoma and Seattle on the Burlington Northern Santa Fe railroad line. Three morning trips operate in the northbound direction and three southbound trains operate in the afternoon. Within vicinity of the study area, stations are located in Tacoma, Puyallup, Sumner and Auburn. Table 7 displays departure times for each station.

Table 7: Sounder Commuter Rail Departure Times

Station	**Northbound (Monday-Friday)**		
Tacoma	6:15 a.m.	6:30 a.m.	6:45 a.m.
Puyallup	6:27 a.m.	6:42 a.m.	6:57 a.m.
Sumner	6:32 a.m.	6:47 a.m.	7:02 a.m.
Auburn	6:40 a.m.	6:55 a.m.	7:10 a.m.

Station	**Southbound (Monday-Friday)**		
Auburn	5:25 p.m.	5:40 p.m.	6:05 p.m.
Sumner	5:34 p.m.	5:49 p.m.	6:14 p.m.
Puyallup	5:38 p.m.	5:53 p.m.	6:18 p.m.
Tacoma*	5:55 p.m.	6:10 p.m.	6:35 p.m.

* Times listed in the schedule are arrival times because this is the final stop on the route.

Sound Transit also operates express buses in the study area. Rout 582 – Bonney Lake-Tacoma Express provides weekday service with ½- to 1-hour headways. Operating between 5 a.m. and 8 p.m., the route serves Bonney Lake Park-and-Ride, Sumner Sounder Station, Puyallup Sounder Station, and downtown Tacoma.

Route 585 – Lakewood-Auburn Express generally follows SR 512 and SR 167. Operating with ½- to 1-hour frequencies on weekdays, buses serve the South Hill Park-and-Ride and Sumner Sounder Station. Service begins at 5:45 a.m. and ends at 9:45 p.m.

Planned Improvements

The Sound Transit *Six-Year Transit Development Plan 2001 Annual Report* outlines a number of planned improvements. In general, the agency plans to add buses to the existing fleet, continue construction on the Tacoma Link light rail project and commence construction on Seattle's Central Link light rail. Sounder commuter rail service will grow both in terms of areas served and headways. Trains are scheduled to provide service to South Tacoma and Lakewood beginning in 2005, and the line will extend northward from Seattle to Everett in 2009. Within the study area, Sound Transit will increase rail service between Tacoma and Seattle to 18 weekday trips in 2006.

Pierce Transit

Pierce Transit is the public transportation agency for Pierce County, providing the community with local and express bus routes, vanpools, rideshare services, and shuttle transportation for people with disabilities. Of the agency's numerous bus lines, two fixed routes directly serve communities within the study area. Route 406 – Buckley provides weekday service with buses running every

two hours. Traveling between Bonney Lake Park-and-Ride and Buckley along SR 410, buses begin running at 6:30 a.m. and end service at 6 p.m.
Route 407 – Bonney Lake-Prairie Ridge follows a circuitous route serving several neighborhoods and park-and-ride lots. Beginning at 7:15 a.m. and ending at 7 p.m., buses run every two hours on weekdays.

In conjunction with Transpo, Paratransit and Laidlaw, Pierce Transit operates the "Orting Loop". The Orting Loop is a dial-a-ride service designed to connect Orting to the South Hill Mall Transit Center and the Korum YMCA. Vans operate every two hours on Tuesdays, Thursdays and Saturdays beginning at 9 a.m. The service is free, and reservations must be made one to five days in advance. Pierce Transit also provides connections at the Sumner Sounder Station. Route 202 – 72nd Street and Route 413 – Wildwood provide service to other points in the County.

Planned Improvements
The agency's *Transit Development Plan* outlines annual improvements for all transit modes. In February 2002, the voters of Pierce County approved a 0.3% increase in the Sales and Use tax to replace the Motor Vehicle Excise Tax funding lost at the beginning of 2002 following the passage of Initiative 695. The new sales tax took effect on July 1, 2002. Pierce Transit raised the local bus fare from $1.00 to $1.25 in January 2002.[2]

Although specific transit enhancements in the study area are not listed, the *Transit Development Plan* outlines a number of planned agency-wide improvements. Proposals include:

- Adding eight buses in 2003, and four buses each year through 2008;
- Introducing a sub-fleet of smaller buses to be operated in suburban areas;
- Adding three SHUTTLE vans in 2007, and adding four more vans in 2008;
- Adding 108 vans to the Vanpool fleet between 2003 and 2008;
- Adding 240 bus shelters; and
- Expanding park-and-ride facilities.[3]

King County Metro
Metro provides transit service to Seattle and surrounding King County. With a fleet of over 1,300 vehicles, the agency attains an annual ridership of over 100 million passengers. Of the many bus routes throughout the County, three routes serve communities within in the study area, as identified in Table 8.

Table 8: King County Metro Bus Routes within the Study Area

Route #	Destinations Served	Days Served	Service Hours	Headways
152	Downtown Seattle Auburn Enumclaw	Weekdays (peak hours)	5 a.m. – 9 a.m.; 3:30 p.m. – 7:30 p.m.	15-30 minutes
912	Covington Black Diamond Enumclaw	Weekdays	9 a.m. – 3:45 p.m.	80 minutes
915	Auburn Enumclaw	Weekdays	6:30 a.m. – 5 p.m.	30-90 minutes

King County Metro Online.

Planned Improvements
The King County Metro *Six-Year Transit Development Plan* was completed in September 2002. The *Plan* outlines general and specific actions intended to improve all aspects of the Metro transit system. Among the general improvements between 2002 and 2007 will be to better coordinate Metro services with Sound Transit services, especially at commuter rail stations that are served by both agencies. Park-and-ride facilities will also be expanded during this period, and employers will be encouraged to participate in group pass programs. Two of the Metro bus routes listed above will be enhanced through 2007. Table 9 describes the pending improvements according to the *Six-Year Transit Development Plan.*

Table 9: King County Metro 2002-2007 Planned Transit Improvements

Route #	Description of Changes
152	Route deleted when Sounder commuter rail at full service
915	Add 30-minute peak service to replace route

King County Metro, *Six-Year Transit Development Plan for 2002-2007.*

Bicycle/Pedestrian Facilities
The *State Highway System Plan* does not identify any state highways within the study area as "Bicycling Touring Routes". Typically a shoulder width of at least 4 feet (the WSDOT minimum standard for Bicycle Touring Routes) is needed to provide for safe bicycle travel. Portions of the three state highways in the study area contain shoulders over four feet wide. Of the roadways under study, SR 410 contains the greatest amount of wide shoulders. Table 10 identifies segments of each highway containing such facilities. Most of the listed segments however do not contain continuous 4-foot shoulders, as there are gaps in the system (i.e. narrow bridges, portions of gravel shoulders, etc.).

Table 10: Highway Segments Containing Shoulders at least 4 Feet Wide

Begin MP	End MP	Segment Description
SR 162		
0.08	0.51	SR 410 to Puyallup River
3.23	4.40	Bowman-Hilton Road to 102nd Street
6.85	9.30	Puyallup River to Orting High School
13.09	15.05	Carbon River to South Prairie Creek
SR 165		
18.71	19.01	Lower Burnett Road to Burnett unincorporated limits
SR 410		
13.37	13.62	181st Avenue to 184th Avenue (Bonney Lake)
13.62	15.60	184th Avenue to 214th Avenue (south side of highway only)
19.43	25.71	Buckley (west city limits) to Enumclaw (east city limits)

WSDOT, *State Highway Log, Planning Report 2002.*

Bicycle/Pedestrian Accident Information

The period 1994-1996 is the most recent timeframe for which statewide bicycle/pedestrian accident data was collected. The "collision rate" is expressed in terms of the number of reported bicycle accidents per 10,000 residents. The statewide bicycle collision rate in 1994-1996 was 3.00 (based on a total of 4,892 reported bicycle accidents and a population of roughly 5.5 million residents). During this period, King County reported a collision rate of 3.95 and Pierce County experienced a 2.46 collision rate.[4]

Pedestrian collision rates are also expressed in terms of the number of reported accidents per 10,000 residents. Between 1990 and 1995 (the latest period for which data was collected), the statewide pedestrian collision rate was 3.43 reported accidents per 10,000 residents. King County reported a rate of 5.21, while Pierce County yielded a 3.28 collision rate.[5]

Planned Improvements

Shown in Tables 5 and 6, WSDOT's *Highway Capital Improvement and Preservation Program* and *State Highway System Plan* identify few planned improvements along state highways in the study area specifically for bicyclists and pedestrians. The *Pierce County Nonmotorized Transportation Plan*, completed in 1997, contains a vision for the County's non-motorized transportation system in the year 2020. The document contains goals, policies and criteria for selecting improvement projects. King County's *2001 Transportation Needs Report* provides a lengthy list of transportation projects to be implemented in future years. Although none exist within the study area, several planned improvements aim to enhance non-motorized movement on state highways. Both the *Pierce County Nonmotorized Transportation Plan* and King County's *2001 Transportation Needs Report* include bicycle/pedestrian projects not currently listed in the *State Highway System Plan*. Whether these projects will be included in the State's Plan has yet to be resolved. Pierce County's planned improvements are listed in Table 11

Table 11: Pierce County Planned Non-motorized Transportation Improvements on State Highways

Begin MP	End MP	Segment Description	Planned Improvement
SR 162			
9.54	15.91	Calistoga Avenue (Orting) to Spring Site Road	Paved shoulders
SR 165			
	21.24	Mount Rainier National Park to SR 410	Paved shoulders, wide lanes, or path
21.15	21.24	SR 410/Ryan intersection	Foothills Trail crossing treatment
SR 410			
11.46	21.99	166th Avenue to Pierce/King county line	Paved shoulders

Pierce County Nonmotorized Transportation Plan, 1997.

notes

[1] WSDOT, *1996 Washington State Highway Accident Report.*

[2] Pierce Transit, *Transit Development Plan 2003-2008.*

[3] Ibid.

[4] WSDOT, *Washington State Bicycle Collision Data, 1994 to 1996.*

[5] WSDOT, *Washington State Pedestrian Collision Data, 1990 to 1995.*

APPENDIX B–EXISTING & PLANNED LAND USE

Prior to beginning the charette land use information was collected to provide background information for the charette participants. The information presented here was current at that time, but has not been updated following the completion of the charette.

In order to help communities identify ways to benefit from the park in future years, it is important to examine their present character. At the same time it is also important to study each community's vision for the coming decades. The following text provides a brief description of the cities within the study area – Bonney Lake, Buckley, Carbonado, Enumclaw, Orting and Wilkeson.

CITY OF BONNEY LAKE

The City of Bonney Lake is located in the southern portion of the Puget Sound urban area in Pierce County. The community is situated along SR 410, a main east-west thoroughfare. With roughly 12,400 residents, the City mainly serves as a "bedroom community" for the larger nearby employment centers to the west and north. Of the 4,390 acres within City limits in 1995, residential uses comprised 62% of land. Commercial and Industrial lands only accounted for 6% of lands, thus resulting in the relatively small employment base[1].

Commercial development is concentrated in the SR 410 corridor, with highway-related retail lining the roadway through most of the community. Commercial development is a mix of large "big box" chain retailers and smaller developments with more diverse and local businesses.

In the coming decades, the character of Bonney Lake is expected to remain relatively similar to its current state. Lands within the City's urban growth area (UGA) will largely be devoted to residential uses. The population is expected to reach approximately 21,200 residents by 2016. Employment also expected to grow, from a current (1995) workforce of 3,480 employees to roughly 5,700 employees[2]. Future development is not expected to significantly change the largely residential character of the community.

CITY OF BUCKLEY

The City of Buckley is situated on the south side of the White River in Pierce County. The community lies at the junction of SR 165 and SR 410. According to the 2000 census, approximately 4,150 persons reside in the City. Residential uses comprise a large portion of land within City limits. Of the 2,452 acres of land within the City of Buckley in 1993, homes accounted for nearly 44% of the area, or 1,080 acres. Commercial uses accounted for 3% of land coverage while industrial lands do not exist[3]. Most residents commute to employment centers in other parts of King and Pierce counties. The Rainier State School for the developmentally disabled is a large landowner adjacent to the community. Although it is not located within the city limits, it is an integral part of the community, and a major employment center.

Buckley's 1995 *Comprehensive Plan* is based on the "Rural Center" development plan, which is the preferred plan among city leaders for future development. The development plan aims to accommodate the projected 7,400 residents in the year 2014. The concept calls for increased development of various types of housing, ranging from "Rural Residential" (2 dwelling units per acre) to "High Density" (8-12 dwelling units per acre). The alternative assumes the strict measures restricting urban/suburban growth between Buckley and Bonney Lake will be enforced by Pierce County. In terms of employment and economic development, the Rural Center development plan assumes that farming will decline as an economic placeholder while the manufacturing, retail and service sectors will grow. This coincides with citizen demand for more retail and consumer services in the city.

At the time of the charette development in Buckley has been constrained by a moratorium on development

Goals, Objectives and Policies

Supported by objectives and policies, the *Comprehensive Plan* outlines several goals intended to guide growth and development in the coming decades. The goals are classified into several elements such as "residential", "commercial" and "resource protection".

The *Plan's* "general goal" in guiding future development is to "*assure a healthful and productive environment for Buckley's citizens*". This goal is supported by a number of land use objectives that include using the City's Urban Growth Area and Neighborhood Planning Areas as centerpieces for future land use policy, and ensuring that an adequate reserve of land supply exists to support growth beyond the twenty-year planning period. Policies adopted to support these objectives seek to strike a balance between maintaining a high quality of future urban growth while preserving a sense of rural character. Citizen preferences are to be considered at all planning and development stages.

Buckley's overall "transportation goal" is as follows: "*Streets and transportation systems should enhance the appearance, quality, and function of residential neighborhoods*." The primary supporting objective is to ensure the coordination of land use and transportation decisions. The *Comprehensive Plan* lists several policies intended to fulfill this objective. These policies include encouraging the development of a grid street pattern and providing an attractive streetscape that is inviting to both vehicles and pedestrians. Attractive streetscapes, according to the *Plan*, contain sidewalks on both sides of streets, planting strips between street and sidewalks, street trees, pedestrian-scale furniture, on-street parking, and accommodations for bicycles.

CITY OF CARBONADO

With a population of about 600 residents, the small city of Carbonado is located on SR 165 north of Mount Rainier National Park. Residential uses comprise the vast majority of land coverage within the community. Except for a newer housing development completed in the past decade, the housing stock is comprised mostly of older homes. Many residents commute to employment centers in the Puget Sound area.

Carbonado will likely maintain its state as a "bedroom community". The City recently received a community development grant to refurbish its historic fire station.

CITY OF ENUMCLAW

Enumclaw is located in southern King County at the confluence of SR 164, SR 165 and SR 410. With a 2000 population of roughly 11,100, the community calls itself the "Gateway to Mount Rainier". According to the Enumclaw 1999 *Comprehensive Plan*, about 3,750 acres of land lie within City limits. 27% of these lands are devoted to residential uses, and agricultural lands make up 23%. Commercial, Warehousing and Industrial lands collectively account for about 7% of City lands. Enumclaw's overall rural character is increasingly attracting newcomers from the more urbanized Puget Sound region.

While recognizing that growth is inevitable, residents place a high value on preserving Enumclaw's rural identity and sense of community. The *Comprehensive Plan* projects the population to grow to nearly 14,000 residents by 2014. The Urban Growth Area (UGA) (reserved for future development) contains approximately 1,090 acres. Future growth will largely be in the form of residential development. Within the UGA, 30% of land will be devoted to housing while Commercial and Warehousing uses will each receive less than 1% of new land. Industrial uses will see no growth.

Vision

In addition to maintaining its rural and residential character, Enumclaw's overall vision also aims to increase economic development. The City's vision is as follows: "*The City of Enumclaw . . .*

- *Is located in southeast King County and is the dairy and equestrian center of Washington state.*
- *Is a family-oriented town that meets the needs of a traditional, hometown community*
- *Is home to small and medium sized non-polluting, light industry that provides living wage jobs for local residents*
- *Has a varied and sound economic base that includes a healthy mix of community, professional, and medical services, with revitalized commercial and retail districts.*
- *Promotes team strategies through public, private and community partnerships, building on civic and entrepreneurial leadership of the Enumclaw Plateau.*
- *Meets education needs with quality primary and secondary, essential higher education programs and facilities, and mutually supportive linkages between education, local business, and government.*
- *Has active arts and heritage programs, building on the rich and diverse cultural heritage of the Enumclaw Plateau contributing to the economic vitality of the community.*
- *Is home to a full-spectrum of year-round recreational opportunities on the Plateau and gateway to the Cascade foothills, Crystal Mountain Ski Resort, Mt. Baker-Snoqualmie National Forest, and the White River entrance to Mt. Rainier National Park, for lifestyle elements for local residents and tourists."*[4]

Goals and Policies

Among other elements, the *Comprehensive Plan* outlines general land use and transportation goals to support the City's vision. These goals are further supported by a number of policies. Following is a summary of land use and transportation goals.

Land Use

Enumclaw has two main land use goals. Land Use Goal "A" is "*to support and improve a rural, residential community comprised largely of single-family neighborhoods together with an urban center and a broad range of other support services and businesses which occur in identified commercial areas, surrounded by preserved open space and agricultural use*". This goal is supported by an array of policies dealing with both land development and land conservation. Several factors must be considered before land use decisions are made including the need for the proposed use, proximity of the land to community infrastructure and services, and the potential effect of the proposed use on the small-town character of the City. At the same time, the *Plan* encourages preserving agricultural lands on the City's fringe.

Land Use Goal "B" seeks to "*encourage a land use pattern and corresponding regulations that conserve environmental resources.*" This entails preserving historic, visual and cultural entities, including views, landmarks and areas of special locational character.

Transportation

Transportation policies are guided by Land Use Goal "A" (stated above). Many of the policies stated in the *Comprehensive Plan* support alternative travel modes. The policies range from general actions to more-detailed elements of transportation design. General directives include utilizing surplus rail and street right-of-ways for bicycle/pedestrian trails, and encouraging segregated internal pedestrian circulation systems in new or redeveloping commercial districts. Detailed requirements include providing sidewalks and planting strips along arterial streets, installing lighting and wheelchair ramps to improve safety, and providing transit shelters to enhance pedestrian comfort.

CITY OF ORTING

The City of Orting is located on SR 162 in Pierce County. The City's 1996 *Comprehensive Plan* estimated the population in 1992 to be 2,240 residents with about 500 employees. Residential and agricultural/forestry uses comprise the majority of lands within City limits. Residential uses account for 11% of land coverage (about 183 acres) and agricultural/forestry lands cover over 1,220 acres (73%)[5]. Within the City, a small commercial district exists along the main street consisting of retail and service entities.

By 2013, Orting's population is expected to reach nearly 4,400 residents with almost 700 employees[6]. Much of the growth will take place in the planned Cascadia development. Currently under a permitting process, the development will contain a variety of land uses including residential, commercial, industrial and institutional. By 2020 Cascadia is anticipated to add over 6,200 residents to the Orting area. Although not incorporated, the community will be served by City of Orting agencies and infrastructure. Within the same period, nearly 400 acres of land will be developed for business parks, likely resulting in an increased employment base[7].

Vision

The *Comprehensive Plan* outlines the vision for Orting created in 1992 with the help of both residents and city officials. The City's vision is as follows: *"Orting is a cohesive rural community nestled in the Puyallup Valley. Its distinctive natural features include two river corridors and a spectacular view of Mount Rainier. Orting's downtown is its historic center. It should be enhanced as a vital center where all residents come to transact daily commerce and to meet for social activities. Orting should expand its employment base so that young people can choose to live and work in the community. Orting should preserve its pastoral heritage which is rooted it its open spaces, undisturbed edges, and small-scale agricultural establishments. It should preserve the distinctive qualities of its natural amenities, which should be linked through scenic corridors of green along its rivers. Foremost, Orting should preserve its small town character. It should remain a place that is free of urban pressures; where people know their neighbors, take time to tend a garden, and have mutual respect for their fellow citizens"*[8].

Goals and Policies

Land Use

General land use goals stated in the *Comprehensive Plan* seek to promote economic development while maintaining a sense of rural identity. On the economic development side, General Land Use Goal #1 is to *"establish a development pattern that is true to the vision for Orting by encouraging the expansion of its economic base while preserving its agricultural heritage and its rich resources"*. At the same time, development should not run unchecked, as mandated by General Land Use Goal #2. This goal simply calls for the preserving *"the small town character of Orting"*.

Transportation

The *Comprehensive Plan* also outlines several goals and supporting policies for alternative transportation modes. In terms of transit, the City encourages entrepreneurs and businesses to develop transportation service that complements service provided by public transit agencies. This includes using small vehicles (such as shuttle buses) to transport residents in lower-density areas to designated "pick-up points". To support bicycle and pedestrian movement, the *Plan* calls for a non-motorized plan for both on- and off-road facilities that link residential areas with schools, parks, recreational areas and retail/commercial destinations. Coordinating transportation and land use planning is also encouraged to foster pedestrian-friendly environments.

TOWN OF WILKESON

Located at the foothills of Mount Rainier, the Town of Wilkeson lies on SR 165 in Pierce County. The rural community contains about 400 residents. As of 1995, residential lands comprised much of the city's acreage (approximately 125 acres). A cluster of commercial structures in the central business district and a highway commercial strip occupy another 8 acres[9]. As local natural resource-based jobs have declined, most residents are employed in the Puget Sound area.

Wilkeson's 1995 *Comprehensive Plan* projects the 2012 population to be near 840 residents. The growth in population will be primarily from commuters searching for a rural lifestyle. Most of the residential growth will occur within the existing Town limits as land is developed to its capacity. The rate of commercial development is expected to remain near current levels[10].

Vision

Assisted by the Planning Commission, Wilkeson residents developed "community vision statements" for seven categories pertaining to future growth. The subjects included utilities, economics and transportation. The overwhelming theme of the citizens was *"to retain the charm and ambiance that makes Wilkeson unique. The 'small town' atmosphere and setting of Wilkeson is important to the citizens and visitors of the community. All other decisions affecting the community should be measured against this rule."*[11]

Goals and Policies

Land Use

The *Comprehensive Plan* outlines several goals and many supporting policies to serve as a foundation for fulfilling the community's vision. Most of the goals are intended to control the type of development so that the Town does not lose its rural character. One goal states that Wilkeson should only allow a limited amount of growth in order to complement the Town's character as well as the services and infrastructure currently available. Orderly development with respect to the natural environment is also encouraged. With close proximity to many natural features, the Town of Wilkeson wishes to maintain and support its existing and future recreational and cultural activities.

Transportation

The Wilkeson vision is also supported by goals pertaining to alternative transportation modes. Although the community currently lacks public transit service, the *Comprehensive Plan* calls for the creation of some form of service to link residents to employment and shopping centers in other parts of Pierce County. Coordination with Pierce Transit is identified as a first step. Providing pedestrian amenities throughout the community is alternative transportation goal. With the local School District, the Town of Wilkeson wishes to identify major pedestrian routes to the school campus. These routes will then be provided with improved amenities to facilitate safer travel. Additionally, the *Plan* calls for the provision of sidewalks on all newly constructed or reconstructed streets.

notes

[1] City of Bonney Lake *Comprehensive Plan*, 1998.
[2] Ibid.
[3] City of Buckley *Comprehensive Plan*, 1995.
[4] City of Enumclaw *Comprehensive Plan*, 1999.
[5] City of Orting *Comprehensive Plan*, 1996.
[6] Ibid.
[7] City of Orting *General Sewer Plan/Engineering Amendment*, 2001.
[8] City of Orting *Comprehensive Plan*, 1996.
[9] Town of Wilkeson *Comprehensive Land Use Plan*, 1995.
[10] Ibid.
[11] Ibid.

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APPENDIX C– CHARETTE TEAM AND APPRECIATIONS

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Carbon River Conservation Project
Plum Creek Timber Company

PHOTO CREDITS

(unless listed below all photos were taken by the charette team as a part of the project)

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Page 2, lower left	Curt Warber
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Page 8, upper right	Jeff Peacock
Page 10, upper left	Mt. Rainier National Park
Page 10, lower right	Calton Family Collection
Page 11, left	Robert Pilloli Collection
Page 14, left	Mt. Rainier National Park
Page 14, right	Foothills Trail Coalition
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Page 22	Foothills Trail Coalition
Page 25	Foothills Trail Coalition
Page 28	Mt. Rainier National Park
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Page 43, right	Foothills Trail Coalition
Page 44, left	Foothills Trail Coalition
Page 59	Mt. Rainier National Park