DESCHUTES NATIONAL FOREST
ALTERNATIVE TRANSPORTATION STUDY

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CHAPTER 1 INTRODUCTION

The goal of the Deschutes National Forest Alternative Transportation Study (ATS, or Study) is to promote the use of non-motorized alternative transportation options to access high-use recreational areas on the Deschutes National Forest (DNF) while reducing environmental impacts at these sites. The study is a part of a Multi-party Collaboration Plan that uses coordination between stakeholders to provide the framework for developing future project work to accomplish the study goal and support future alternative transportation studies connecting different parts of the DNF to each other and to surrounding communities.

The DNF is a popular destination with over 2 million annual visits (U.S. Forest Service, National Visitor Use Monitor (NVUM) Survey¹). The DNF struggles with limitations on connected bicycle and pedestrian facilities to access major destinations; safety concerns regarding auto and pedestrian and bicycle interaction on higher speed roadways and in parking areas; parking congestion at popular trailheads in the summer and at sno-parks in the winter; limited coordinated wayfinding and visitor information for visitors (particularly those wishing to walk or bike); degradation of recreational, historical, and natural resources by people parking in non-designated areas; and roadway congestion on the roadways (primarily in the winter).

Each of these concerns is likely to be exacerbated by the anticipated growth in visitation, which will affect the visitor experience. Today, more than 57 percent of visitors to the DNF come from the local area (within 50 miles of DNF), based on NVUM program data, making local visits account for around 1.3 million of the 2.27 million annual visits (between October 2007 through September 2008). Assuming that the growth of visits from the surrounding communities occurs at the same rate as the growth in population (approximately 53 percent averaged among the nearby communities), there would be approximately 685,000 additional visits annually from the area to DNF by 2025. Additionally, the DNF, Bend, and Central Oregon are considered a premier destination for outdoor recreation, and this market is growing. With the pressures of increased visitation and the promotion of tourism to support the local economy, there is also a concern that continuing to build for increased capacity (e.g., road and parking infrastructure) will attract even more vehicles, doing nothing to reduce congestion and diminishing the visitor experience.

Two benefits will accrue from improved non-motorized transportation access and connectivity. The first benefit is added convenience to travelers, which will in turn encourage more non-motorized access. Although difficult to quantify, the effect of more integrated, efficient connections between DNF and

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¹ The National Visitor Use Monitoring Report (NVUM) is an ongoing national monitoring program provided by the U.S. Forest Service. It uses a stratified random sample to develop estimates of visitor use, visitor origins, activities engaged in, visitor characteristics, satisfaction, and other information relevant to each national forest. Visitation is estimated through a combination of traffic counts and surveys of exiting visitors, based on a random sample of locations and days distributed over an entire forest for a year—for this report October 2007 through September 2008.
surrounding communities will be to attract new non-motorized users and to increase the satisfaction of those already using the facilities. In addition, providing opportunities to connect to DNF without a car will relieve some of the congestion found in some parking areas. The second benefit is the lessening of adverse environmental impacts from automobiles. Fewer cars and less congestion will mean less engine idling time, decreased fuel consumption, improved air and water conditions, and especially, less degradation to habitat from actions such as parking in undesignated parking areas.

The Study identifies potential opportunities to improve alternative access to the DNF. It is not a decisional document; rather, it is a resource library or warehouse of opportunities that fulfill the project goal. The opportunities presented here are not intended to preclude the development of other solutions to meet the project goal in the future. The study provides an initial assessment, or snapshot, of feasible options. The opportunities aren’t defined in any design terms at this point; later they will be further refined as improvements and projects.

All of the proposed opportunities identified in the Study will need to be analyzed to determine their impacts on the landscape, as related to other resource concerns, and must adhere to National Environmental Policy Act (NEPA) standards. This Study does not actually authorize any project to move forward without adhering to NEPA standards.

In developing the opportunities, the Study considered visitor markets, transportation conditions, and modal and route options for improving transportation service, as well as approaches for building awareness of the resources provided in the DNF. In addition, the ATS focused on summertime opportunities, rather than wintertime opportunities, because winter opportunities mostly included a review of transit improvements, and transit options will be explored in a separate, future study of the area.

The Study is based on a multi-party collaboration process (further described in subsequent sections), which will provide the context for eventual implementation of the Study opportunities. Because nonmotorized access is more feasible in the summer months, the Study focuses data collection and alternative transportation solutions on the summer season.

**BUILDING UPON PREVIOUS STUDIES**

The ATS builds on three major past studies that identified potential opportunities and areas of focus for the DNF area. In 2007, Senator Ron Wyden convened a meeting that included a variety of active outdoor recreation leaders and enthusiasts, economic development leaders, and representatives from each Deschutes County community to serve as an Ad Hoc Committee on Deschutes County Recreation Assets. The main goal of the committee was to find ways to capitalize on the recreational assets of the county as an engine for economic growth. The Ad Hoc Committee on Deschutes County Recreation Assets generated a targeted agenda of projects and efforts to enhance the county’s recreation assets that are documented in the *Deschutes County Recreation Assets Report (2008)*. Recommendations from that report that are applicable to this Study are included as opportunities.
In 2009, an Interagency Transportation Assistance Group (TAG) performed a field investigation of transportation infrastructure and issues at DNF. Using information acquired during the field investigation, the TAG team prepared a report with recommendations arising from the team’s analysis. Based on the TAG team report, the DNF submitted a Fiscal Year 2009 planning application to the Paul S. Sarbanes Transit in Parks (Sarbanes or TRIP) program. This application was successful, and DNF received funds to develop a comprehensive transportation planning study.

Following the award of the TRIP funding, the DNF asked the U.S. Department of Transportation – John A. Volpe National Transportation Systems Center (Volpe Center) to refine the scope of the transportation planning study, because the original grant was awarded for a very broad study. The result was the *Groundwork Planning Report: Transportation Goals, Issues, Corridor Information and Prioritization, and Data Assessment* (Volpe Report). The Volpe Report was completed with input from the DNF and its Technical Advisory Committee (TAC), which included members of the local and regional transportation community, including the Oregon Department of Transportation (ODOT), Deschutes County, the Central Oregon Intergovernmental Council (COIC), and Cascades East Transit (CET). The Volpe Report identified priority corridors, each of which met the following criteria:

- Concentrates on forest transportation access and internal transportation problems.
- Addresses gaps in current alternative transportation infrastructure.
- Serves high-use sites and disperses visitation at lesser known sites.
- Leverages existing area transportation projects.
- Accommodates local and tourist populations.

The ATS builds on the Volpe analysis by focusing on six corridors that met these criteria outlined in the Volpe Report.

### STUDY AREA

The study area for the ATS encompasses six major corridors (shown on Figure 1 on the next page) in the DNF, and the Study focuses on what can be accomplished in these corridors:

- **A.** Cascades Lakes Highway: Bend City Limits to Mt. Bachelor
- **B.** Sunriver Cutoff: US 97 to Cascade Lakes Highway
- **C.** Skyliners Road: Bend City Limits to Terminus
- **D.** Forest Service Road (FSR) 41 (Conklin Road): Sunriver Cutoff to Cascades Lake Highway
- **E.** US 97: Bend to La Pine
- **F.** US 20: Bend to Sisters, Black Butte, and Camp Sherman

The corridors were not intended to focus the Study on the roadways (other than exploring how they can facilitate non-motorized transportation). Rather, the corridors include the surrounding areas, such as parking areas, trailheads, rivers, geologic features, museums, and other attractions. The corridors are geographic organizing units with particular characteristics, and they are not considered alternatives. Multiple opportunities were identified for each corridor, and opportunities in one corridor are not intended to preclude opportunities from being pursued in other geographic areas.
Figure 1. Deschutes National Forest Alternative Transportation Feasibility Study

Study Corridor Vicinity Map

- Deschutes National Forest
- Corridors:
  - A: Cascade Lakes Hwy
  - B: Sunriver Cutoff
  - C: Skyliner's Road
  - D: Conklin Rd/FSR 41
  - E1: Bend to Sunriver
  - E2: Sunriver to La Pine
  - F1: Bend to Sisters
  - F2: Sisters to Black Butte Ranch
  - F3: Black Butte Ranch to Camp Sherman

City Limits
County Boundary
Hydrology

1 in = 6 miles
CHAPTER 2 STUDY PROCESS

An important part of the Study was to gather information from key partners and the community as part of identifying and exploring opportunities to improve alternative transportation in the DNF. This section outlines the planning process used to identify opportunities included in this Study and describes what was found during each stage in the planning process.

COLLABORATION FRAMEWORK

The Study was a collaborative process through all project stages, and tasks were designed to foster involvement by all users of the DNF, such as community groups, environmental organizations, and the business community. The Study followed the following basic framework:

- Use a stakeholder involvement process to engage and learn from stakeholders.
- Develop goals, objectives, evaluation criteria, and performance measures to focus efforts on potential solutions.
- Assess existing conditions and identify key issues and opportunities.
- Review travel market conditions to understand current and potential traveler behavior and potential for shifting behaviors.
- Identify preliminary opportunities.
- Prioritize corridors and assess preliminary opportunities.
- Modify opportunities for incorporation into the ATS.

STAKEHOLDER INVOLVEMENT PROCESS

Stakeholder coordination and involvement was foundational and integrated throughout all stages of the Study, as described in the following section. Information and comments derived from the stakeholder involvement process were integrated into the development of opportunities.

ATS PROJECT COMMITTEES

The ATS project had three formal committees—the Project Management Team (PMT), the Technical Advisory Committee (TAC), and the Stakeholder Committee (SC)—providing guidance and input for the Study.

The Project Management Team: The PMT provided overall coordination of the project for meetings and deliverables. The PMT included members of the consultant team (David Evans and Associates, Inc.), COIC, and DNF.

The Technical Advisory Committee (TAC): The TAC included representatives from ODOT, U.S. Forest Service (USFS) - Deschutes National Forest, COIC, Deschutes County, Commute Options, Bend Parks & Recreational District, and Deschutes County Bicycle and Pedestrian Advisory Committee (BPAC). The purpose of this committee was to review the overall process and methodology, the data collection and analysis, and the “findings” from the data analysis; to provide insight on issues and opportunities; and to
recommend opportunities to meet the goal and objectives of the Study. TAC meetings were held June 10, 2014, and October 16, 2014. Agendas and summary notes from these meetings are included in Appendix A, Stakeholder Involvement.

The Stakeholder Committee (SC): The SC included representatives from a wide cross-section of local tourism businesses and industry representatives, trail user advocacy groups, local governments and state agencies, habitat and environmental groups, and homeowners’ associations. TAC members also participated as members of the SC. The purpose of the SC was to provide information and feedback on project goals, stakeholder group interests and values, implementation feasibility, and partnership opportunities. SC meetings were held June 30, 2014; August 26, 2014; and November 20, 2014. Agendas and summary notes from the SC meetings are included in Appendix A, Stakeholder Involvement.

**OTHER COORDINATION AND OUTREACH**

**STAKEHOLDER INTERVIEWS**

To discuss the study goals, identify possible barriers or concerns, understand desired outcomes and implementation opportunities, and identify ways to improve the process, COIC conducted one-on-one interviews with multiple key stakeholders. The consultant and the PMT considered the insights of these interviewees in identifying constraints and potential solutions that would meet the goal and objectives of the Study. Summary notes from these stakeholder interviews are included in Appendix A, Stakeholder Involvement.

**PRESENTATIONS**

The COIC offered to present on the ATS to various community groups in order to get their input on the direction of the Study. The BPAC had COIC meet with them to discuss the project on September 4, 2014.

**PROJECT WEBSITE**

COIC created and maintained a website for the Study that provides the goal, objectives, and key project documents, including meeting summaries. The website also includes an online public comment form. The website can be found online at: [http://coic2.org/transportation/dnfalternativetransportationstudy/](http://coic2.org/transportation/dnfalternativetransportationstudy/).

**INTERNAL DESCHUTES NATIONAL FOREST COORDINATION**

The DNF rangers and other staff were regularly engaged throughout the Study to leverage their detailed knowledge of the environmental and existing conditions of the corridors and management responsibilities. This coordination with DNF staff included their review of project documents that informed the Study and an in-depth internal meeting as part of the preliminary opportunities assessment.
DEVELOP GOALS, OBJECTIVES, EVALUATION CRITERIA, AND PERFORMANCE MEASURES

As part of the Volpe Report, preliminary project goals were developed that provided the basis for the current project goal and objectives developed for the ATS. These were modified by the PMT and TAC to the following:

**Project Goal:** To promote the use of non-motorized alternative transportation options to access high-use recreational areas on the Deschutes National Forest while reducing environmental impacts at these sites.

**Project Objectives:**

- Promote access to diverse recreation opportunities for all visitors (*ACCESS*)
- Encourage the use, enjoyment, and sustainability of natural resources while protecting DNF lands from degradation resulting from overuse and pollution (*RESOURCE PROTECTION*)
- Foster the use of alternative transportation systems to manage visitation to forest resources and promote active transportation and connectivity among gateway communities and the forest (*ALTERNATIVE TRANSPORTATION*)
- Cooperate and coordinate with regional and community efforts to promote economically and environmentally sound multimodal transportation systems (*COLLABORATION*)

In addition to the project goal and objectives, the PMT identified evaluation criteria and performance measures. Evaluation criteria were developed to compare how well proposed opportunities meet the project goal and objectives. Performance measures were developed that demonstrate what success in meeting the evaluation criteria could look like. They are a mix of qualitative and quantitative assessments based on the criteria and availability of data at this stage of evaluation.

As opportunities are further developed, they will be measured against the evaluation criteria to understand how well they further the goal and objectives. The evaluation criteria will be used to help prioritize opportunities to improve alternative access to DNF.

The project goal, objectives, evaluation criteria, and performance measures were reviewed by the project’s TAC and SC to ensure that they reflected the needs of the project. The finalized versions of the goal and objectives, evaluation criteria, and performance measures are included in Appendix B.

ASSESS EXISTING CONDITIONS AND IDENTIFY KEY ISSUES AND OPPORTUNITIES

The baseline existing conditions and key issues and opportunities for this Study were established through the review of numerous reports and studies, input from the TAC and SC, interviews with stakeholders, input from the PMT, site visits, locally adopted plans and policies, Geographic Information Systems (GIS) mapping, and onsite counts of vehicles. As mentioned in two earlier documents, the *Deschutes National Forest Alternative Transportation Study Groundwork Planning Report: Transportation Goals, Issues, Corridor Information and Prioritization, and Data Assessment* (Volpe Report) (2012) and the *Transportation Observations, Considerations, and Recommendations for*
Deschutes National Forest by the Interagency Transportation Assistance Group (TAG) (2009) provided substantial background information for the Study.

An interactive workshop was held for the SC on June 30, 2014. The PMT presented the baseline conditions for the corridors as illustrated on maps. The stakeholders were then able to comment on the maps, both confirming and remarking on conditions, and identifying issues and opportunities. The comments were incorporated into the assessment of baseline conditions memo (available by request).

IDENTIFY PRELIMINARY OPPORTUNITIES

Based on the review of existing conditions at the SC meeting, opportunities were catalogued and presented at a subsequent Stakeholder meeting held on August 26, 2014. Stakeholders were broken into small, facilitated groups to provide feedback on the preliminary opportunities identified. Stakeholders added more detail on potential issues and benefits of the opportunities presented marking up maps and providing feedback. They also confirmed that most of the opportunities would require greater analysis to understand feasibility, benefits, and potential impacts.

REVIEW TRAVEL MARKET CONDITIONS

Concurrent with the development of the opportunities, the travel market was assessed. This step of the Study explored the current and potential travel markets for the DNF in order to understand the potential for increasing access to the forest via alternative transportation. The travel market assessment reviewed the current visitation patterns and trends for future travel demand to DNF, which, in turn, required an understanding of the current travel behavior (where visitors are coming from, what types of travelers exist, what the desired activities in the forest are, how visitors access the forest) as well as what impediments exist for visitors who want to use non-motorized transportation and transit to access destinations within DNF. The goal of this travel market analysis was to better understand the demand for and use of recreation sites in the forest in preparation for increases in future demand, and the impacts of future demand. Key findings were that more than half of current visitors are from the local area, the number of visitors is anticipated to grow, major destinations have constrained parking and access, and opportunities to increase alternative access through partnerships could be a successful strategy. A summary of the key points of the travel market assessment were presented to the TAC on October 16, 2014, and to the SC on November 20, 2014. The travel market assessment is available by request.

PRIORITIZE CORRIDORS AND ASSESS PRELIMINARY OPPORTUNITIES

An internal DNF meeting was held to update DNF rangers on project progress, determine DNF priority objectives for each corridor and which corridors were most important, and evaluate and prioritize potential opportunities. The group went through several exercises to accomplish their agenda.
They started by reviewing the six project corridors:

A. Cascades Lakes Highway: Bend City Limits to Mt. Bachelor
B. Sunriver Cutoff: US 97 to Cascade Lakes Highway
C. Skyliners Road: Bend City Limits to Terminus
D. Forest Service Road (FSR) 41 (Conklin Road): Sunriver Cutoff to Cascades Lake Highway
E. US 97: Bend to La Pine
F. US 20: Bend to Sisters, Black Butte, and Camp Sherman

They considered the corridors in light of the project goal and objectives, and then realized that the characteristics of two of the corridors (Corridors E and F) varied by location enough for them to be broken into smaller segments. Corridor E was broken into E1 (Bend to Sunriver area) and E2 (Sunriver area to La Pine), and Corridor F was broken into F1 (Bend to Sisters), F2 (Sisters to Black Butte Ranch), and F3 (Black Butte Ranch to Camp Sherman).

Next, the group prioritized the corridors based on implementation relative to environmental concerns and jurisdictional authority, grouping them into:

- Corridors with Various Opportunities and Environmental Concerns (Corridors A, C, E1, and F2)
- Corridors with Various Opportunities and Complex Environmental Concerns (Corridors B, D, and F3)
- Corridors with Little to No Forest Service Jurisdiction (Corridors F1 and E2).

After that, they ranked the objectives for each corridor, keeping in mind that each project objective, especially “Resource Protection,” is important in assessing opportunities in all of the DNF corridors. However, due to unique corridor characteristics, including environmental conditions, the ranking of importance of each objective varies by corridor, when considering the project goal and overall context of the Study. For example, the “Alternative Transportation” objective is ranked first in importance for Corridor A: Cascade Lakes Highway (Bend City Limits to Mt. Bachelor), because it is an area that already experiences high recreation use and is dotted with popular trailheads. However, in advancing any of the opportunities, resource protection is still essential even though it may rank lower such as third in importance for Corridor A. Table 1: Corridor Objectives Prioritization shows the results of the ranking. The ranking of the objectives is also discussed in more detail, by corridor, in the next chapter.
### Table 1: Corridor Objectives Prioritization

<table>
<thead>
<tr>
<th>Study Objective</th>
<th>A: Cascades Lakes National Scenic Byway</th>
<th>B: Sunriver Cutoff (FSR 45)</th>
<th>C: Skyliners</th>
<th>D: Conklin Road (FS 41)</th>
<th>E1: Bend to Sunriver</th>
<th>E2: Sunriver to La Pine</th>
<th>F1: Bend to Sisters</th>
<th>F2: Sisters to Black Butte</th>
<th>F3: Black Butte to Camp Sherman</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACCESS: Promote access to diverse recreation opportunities for all visitors</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>RESOURCE PROTECTION: Encourage the use, enjoyment, and sustainability of natural resources while protecting DNF lands from degradation resulting from overuse and pollution</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>ALTERNATIVE TRANSPORTATION: Foster the use of alternative transportation systems to manage visitation to forest resources and promote active transportation and connectivity among gateway communities and the forest</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>COLLABORATION: Cooperate and coordinate with regional and community efforts to promote economically and environmentally sound multimodal transportation systems</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>
Each opportunity was then assessed against the project evaluation criteria and reviewed to make sure it met the project goal. The DNF staff commented on each opportunity identified and brought their knowledge of the DNF planning, natural resources, and other values to bear on the analysis. The opportunities were divided into three categories based on the assessment of how well they fulfilled the Study’s goal: Priority, Needs More Analysis, and Not a Priority.

The results of the internal DNF meeting were presented to the TAC on October 16, 2014. The TAC was informed that DNF had held an internal meeting to review the goals and objectives for each corridor, prioritize the objectives for each corridor, assess each opportunity according to the evaluation criteria, and prioritize the opportunities. It was noted that the corridors were grouped relative to the general feasibility for implementation (Corridors with Various Opportunities and Environmental Concerns, Corridors with Various Opportunities and Complex Environmental Concerns, Corridors with Little to No Forest Service Jurisdiction) and thus were not necessarily a truly prioritized list. Resource protection was identified as a key objective for all corridors during the prioritization process. The group discussed how different types of opportunities could provide resource protection in different ways—both direct and indirect. The TAC discussed the opportunities prioritization process, focusing on near-term, implementable opportunities. The group reviewed each opportunity, and discussed whether it should remain and how it was prioritized.

The results of the corridor prioritization, corridor objective prioritization, and opportunities prioritization processes were presented to the SC on November 20, 2014. The SC generally had a positive response to the corridor and objective prioritization, but was concerned about the prioritization for the recommended opportunities, because the prioritization process for the opportunities appeared to be vague, especially the classification of “Needs More Analysis.” The PMT agreed that most of the opportunities were not yet well-defined. Therefore, the opportunities identified in this document are not prioritized; rather, they are generally assessed for feasibility, and a list of actions necessary to better understand the needs for implementing the opportunities is included.

**NATURAL RESOURCE MANAGEMENT CONSIDERATIONS**

As part of assessing existing conditions, habitat areas in the study area were mapped, as shown on Figure 2 through Figure 4. These include habitat areas for the Oregon Spotted Frog and Northern Spotted Owl, Key Elk Area, and Deer Winter Range. DNF is charged with managing natural resources, including ensuring ecological resiliency, while balancing recreation and other forest management objectives. Therefore, before considering further opportunities and development, USFS must evaluate the potential environmental effects of those actions. All opportunities will need to be analyzed to determine their impacts on the landscape as related to resource concerns and must also adhere to NEPA standards. Recognizing the importance of the environmental process and constraints, this Study does not authorize any project to move forward without a NEPA analysis.

Each corridor area has environmental resources that may have DNF management objectives. For example, the Wild and Scenic Rivers Act of 1968 requires the development of a Comprehensive River Management Plan that addresses user capacity. Visitation and public desire for recreational opportunities within the Upper Deschutes Wild and Scenic River (UDWSR) and State Scenic Waterway (Corridor A and Corridor B) are expected to increase as the population of Bend, Sunriver, and
surrounding communities increases and as the area draws more tourists to enjoy the recreation opportunities provided on the DNF. Within the UDWSR, the overall goal is to protect and enhance the Outstandingly Remarkable Values. The Outstandingly Remarkable Values (ORVs) for the areas under consideration include geologic, fishery, vegetation, wildlife, cultural, scenic, and recreation values. User capacities should make an explicit tie between the kinds and amounts of visitor and other public use and the protection and enhancement of ORVs, and should describe an actual level of visitor use that will not adversely impact the ORVs. As the DNF considers future projects within or near the UDWSR, such as options for providing access through alternative transportation routes, it will need to consider whether the projects may affect the number or type of users, and whether the projects are consistent with the overall goal to protect and enhance ORVs.
Figure 2. Corridors A, B, C, D: (Cascade Lakes Hwy, Sunriver Cutoff, Skyliner’s, Conklin Rd)
Figure 3. Corridors E1 and E2: Highway 97 South (Bend to La Pine)
Figure 4. Corridors F1, F2, F3: Highway 20 to Sisters, Black Butte Ranch, and Camp Sherman
TRANSIT CONSIDERATIONS

Identifying transit opportunities was not part of the goal of the Study. However, throughout all phases of the Study, the need for and value of transit to provide alternative transportation access to high-use sites in DNF was identified. Longer corridors especially lend themselves to transit opportunities. While the DNF would not provide nor run a transit system, partnering with others to provide service could be an appropriate way to improve access.

Transit can provide access to sites with little or no impact to the environmental resources from its operations. COIC submitted an Oregon Federal Lands Access Program application in February 2015 for the Cascades East Transit (CET) winter shuttle. The winter recreation shuttle would provide a limited-duration (winter season) transit operation and two new buses. The shuttle would connect Bend with Mt. Bachelor, Meissner Sno-Park, and Wanoga Sno-Park. CET, the regional public transportation service, primarily operates buses in Bend and between Central Oregon cities; also runs a wintertime bus from Bend to Mt. Bachelor, which now also stops at the Meissner Sno-Park; and runs a summertime “Ride the River” bus, which caters to people who “float” the Deschutes River from Riverbend Park to Drake Park.

Another identified need for transit exists in DNF between Lava Lands Visitor Center at the Newberry National Volcanic Monument and the summit of Lava Butte. During the summer months, between Memorial Day and Labor Day, Lava Lands hosts an average of 716 visitors per day. The motor vehicle traffic resulting from the current system creates an unsafe environment for people to hike or bike to the summit. The USFS plans to start a Lava Butte shuttle service in May 2015, the same weekend the visitor center opens for the summer season. The shuttle will provide service between Lava Lands Visitor Center and the summit of Lava Butte, a distance of 1 3/4 miles, every 20 minutes. The shuttle will be an isolated segment of the CET system.

Implementation of a shuttle between Lava Lands Visitor Center and Lava Butte will encourage visitors to utilize active transportation methods such as hiking and biking up Lava Butte by limited the amount of auto transportation on the narrow road – cars would not be allowed when the shuttle was in service. Nearby the Lava Lands Visitor Center are Lava River Cave (1.5 miles) and the Benham East Trailhead (4 miles). Off the Monument but still in close proximity are the High Desert Museum and the community of Sunriver. A 5.5-mile, multimodal, non-motorized, paved path connects Sunriver, Benham East Trailhead, and Lava Lands Visitor Center. Bicycle traffic to Lava Lands has markedly increased since the opening of this path, creating an even greater need for a shuttle between the Visitor Center and the summit of Lava Butte to support a safe environment for bikers and walkers.

Another opportunity for expanding transit service in the area in the future is a shuttle between the Lava River Cave, Lava Lands Visitor Center, and Sunriver. Such a shuttle could decrease motor vehicle traffic as well as accommodate many cyclists who wish to ride one way then take a shuttle back to their starting point. Anecdotal evidence suggests that some visitors to Sunriver do not have a personal motor vehicle to use for travelling between recreation sites while they stay at the resort or in vacation homes. Shuttle service can provide access to recreation sites. In addition, cycling is becoming increasingly popular with vacationers, and this trend is likely to continue.
Lava River Cave visitor capacity could be a concern with additional transit and trail access. The management plan states that capacity is 200 people at one time, and access is currently constrained by the size of the parking area, approximately 75 spaces. However, visitors park along the road and in other haphazard places.

These opportunities for expanded transit around the Lava Lands Visitor Center would be best suited for an additional transit study. Such a study would help to better understand the demand for and effects of transit service between Bend, Sunriver, the Newberry National Volcanic Monument, and other points of interest, such as the High Desert Museum in Bend.

Additional transit opportunities identified include:

- The addition of summer transit service to Mt. Bachelor, with stops at high-use recreation areas on the way.
- Development of a "triangle" route linking Bend, Sunriver, and Mt. Bachelor on Century Drive, Sunriver cutoff, and US 97.
- Development of a park-and-ride lot in Sisters to provide shuttle bus access into the Camp Sherman/Metolius area to reduce single-occupant vehicle (SOV) travel into that area.
- In addition, partnerships with existing private shuttle services (such as Cog Wild’s mountain bike shuttles) could be explored.

**STUDY AREA ASSESSMENT CONTEXT**

The key findings and issues for the study area are based on an analysis of the existing conditions data and compiled studies and resources.

**CONNECTIVITY**

There is an overall lack of alternative transportation connectivity, specifically non-motorized transportation connectivity, between the communities of Bend and Sunriver, Sunriver and La Pine, Bend and Sisters, Sisters and Black Butte, and Black Butte and Camp Sherman. Additionally, there is limited non-motorized connectivity between these communities and nearby recreational opportunities.

The *Deschutes County Recreation Assets Report* identified potential family-friendly non-motorized connections in the region. In particular, the report identified as a priority project a connection from Bend to Sunriver. Another of the projects identified in the recreation assets report—Sun Lava Trail (which is a new paved multi-use trail connecting Sunriver to Benham Falls Trailhead and then to Lava Lands Visitor Center and Trailhead)—opened in the summer of 2014 (see Figure 3). However, there is still no connection between Lava Lands, the High Desert Museum, and the City of Bend, which is approximately 6 miles away from Lava Lands Visitor Center. A paved multi-use trail linking these major attractions could eliminate many auto trips. The Ad Hoc Committee on Deschutes County Recreation Assets also recommended the addition of a hard surface multi-use trail linking Bend with the new Cascade Lakes Welcome Station in the Cascade Lakes Highway Corridor. The Cascade Lakes Welcome Station project and the multi-use trail will be built next year.
CYCLING

Bicycle facilities that provide non-highway connections between Sisters, Bend, Sunriver, and La Pine and high use sites in the DNF are limited, intermittent, and may only appeal to avid cyclers. Bicyclists mainly use shoulders on high-volume roads. Road cycling is an increasingly popular activity in the region, but a lack of shoulder and path facilities makes cycling to and in the DNF prohibitive for many potential cyclists. There are safety concerns during the summer, particularly for cyclists riding on highways with limited or no shoulders and high auto speeds. Recent repaving of the Cascade Lakes Highway (also called the Cascade Lakes National Scenic Byway) has added 5-foot shoulders, thus providing a safer facility for biking. Skyliners Road currently does not have continuous shoulders. However, improvements to pave and add shoulders to Skyliners Road are scheduled for 2015. Many recreational road bikers are riding on the highway from Bend up to Mt. Bachelor. Additionally, cyclists use the Sunriver Cutoff, which also has 5-foot paved shoulders.

Mountain bike trails located close to population centers, such as Bend, can be accessed by bike from near Skyliners Road and Cascade Lakes Scenic Byway, such as the West Bend Trail, Cascade Highlands Trail, and Haul Trail which connect to Phil’s Trailhead.

CROSSINGS

There is a lack of pedestrian and bicycle crossings on the highways going from parking areas to trailheads and from trails to trails within the DNF. For example, roadway crossing improvements between Shevlins and Whoops trails on either side of Skyliners Road could improve trail access. A bike and pedestrian crossing of the Deschutes River in southwest Bend near Entrada Lodge would increase alternative transportation access to the DNF from south Bend, as was identified in the Deschutes County Recreation Assets Report, because it would allow numerous trips from the populated portions of the city to access mountain bike trails without using a car. However, there are numerous resource impact concerns surrounding a new bridge in some of the locations currently identified, given the Deschutes River’s Wild and Scenic River state and federal designation and the sensitive wildlife areas.

PARKING CONGESTION

Based on input from stakeholders, observations, and parking studies, summer desire for parking frequently exceeds the number of spaces available at popular trailheads such as: Phil’s, Tumalo Falls, Benham Falls East, Meadow, and Dillon trailheads, and Lava Lands Trailhead and Visitor’s Center. Parking congestion also occurs at Camp Sherman general store and Wizard Falls Fish Hatchery. Dispersed parking at Good Dog Trailhead is known to overflow. When parking lots are full, visitors often park illegally on the roadway shoulders and stop their cars in the roadway to wait for the next available parking space. Most of the popular parking areas are at 10 percent to 20 percent above capacity on holidays and peak weekends. The Ad Hoc Committee on Deschutes County Recreation Assets recommended the development of “gateway” parking areas at the urban edge of Bend, possibly on either side of the Cascade Lakes Scenic Byway, to serve as access points to the trail system.

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2 Paul S. Sarbanes Transit in Parks Program (Transit in the Parks Program Application), 2009.
SIGNAGE, WAYFINDING, AND TRAVELER INFORMATION

There is limited coordinated wayfinding (signs helping with directions to access trails) for alternative transportation opportunities and visitor information for visitors, bicyclists, and pedestrians in the DNF. Additionally, information about DNF for visitors arriving at the cities in the area (Sisters, Redmond, La Pine, and Bend) is not easily accessible.

DEGRADATION OF RECREATION, HISTORICAL, AND NATURAL RESOURCES

When trailhead or visitor attraction parking is full, visitors often park along roadside shoulders, trampling vegetation and compacting and eroding soil. This behavior also can spread invasive species. In addition, traffic congestion can degrade the visitor experience. Compounding this situation, development of new or newly-paved facilities is constrained by the desire to avoid impacts to the DNF’s numerous natural resources.

The Deschutes National Forest is guided by the Northwest Forest Plan and the Deschutes National Forest Land and Resource Management Plan (LRMP). The Deschutes LRMP has been amended to include specific direction for the management of the Newberry National Volcanic Monument and the Upper Deschutes Wild and Scenic River. The Deschutes River is designated as a Wild and Scenic River throughout much of the DNF, with additional protections against bank and channel alterations. In addition, important wildlife habitat has been mapped for Oregon Spotted Frog, elk, deer, and Northern Spotted Owl within the study area.

PARTNERSHIPS AND LAND OWNERSHIP

Parking congestion and lack of alternative transportation facilities affect multiple agencies, jurisdictions, property owners, and organizations, making coordinated improvements necessary. Although current access to DNF does exist in some locations, such as to the Phil’s trail network from Bend Park & Recreation District (BPRD) trails, additional connectivity improvements would provide a more coordinated network that would significantly increase the ease of use. Although the existence of multiple partners can make improvements more difficult to implement, it also can result in more resources for getting things done.

VISITATION AND GROWTH

Given the anticipated growth in population and tourism, congestion and the related safety and natural resource issues are likely to grow worse over time. According to the Deschutes County Comprehensive Plan, the Deschutes County population will increase by approximately 45 percent by 2025. Since the local population accounts for more than 50 percent of visits to DNF, population growth in the surrounding communities is likely to exacerbate congestion-related issues at DNF. In addition, Oregon statewide tourism to the area is increasing. The Central Oregon region experienced a 24 percent increase in visitation between 2007 and 2009 (Longwoods International; 2007, 2010).
VISITOR CONTEXT

Of the approximately 2,274,000 visits annually to DNF, based on NVUM data, more than 50 percent of visits are from users who live within 50 miles of the forest (local visitors) as shown on Figure 5. Fifty miles is a distance easily driven for a day trip. Because most visits to DNF are local, visitation is anticipated to increase significantly as well.

Most local visitors access DNF via private automobile, and most of them visit multiple times a year. Other visitors typically drive to DNF from neighboring counties and larger metropolitan areas in the Willamette Valley, such as Portland and Eugene. According to NVUM data, the majority of visits to DNF were for recreation (73.2 percent), followed by visits by people who were passing through (14.7 percent). The most popular summer activities at the DNF are viewing scenery and hiking (over 40 percent of visitors participate in these combined) and downhill skiing during the winter (approximately 15 percent).

The various DNF recreational visitors could be influenced to access the DNF in different manners:

- “Family bikers” are more likely to ride bikes to destinations if they are short rides (less than 5 miles) and if the bike facilities are separated from automobiles.
- “Mountain bikers” want the easiest access to trails, want unpaved trails, and are sensitive to overcrowding as part of their recreational experience.
- “Road bikers” are willing to travel longer distances and are comfortable with just a shoulder as separation from autos. They might not access DNF land as much as other users; rather, they view it as they ride through.
- Hikers are looking for a natural and more remote experience on foot, and cannot travel as far as bicyclists. Therefore, hikers are more likely to park at trailheads, unless a shuttle or other option were provided.
- Although this study does not focus on winter activities, skiers and those accessing sno-parks could benefit from shuttles, as well.

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Figure 5. Visitor Origins and Destinations

Legend
- Trip Origin 50% Market Area
- Trip Origin 50-75% Market Area
- Deschutes National Forest
CHAPTER 3 CORRIDOR OPPORTUNITIES

This chapter reviews each of the study corridors and the identified opportunities for each corridor based on its unique characteristics. Corridors are prioritized for action, and opportunities are reviewed for how well they meet the Study’s goal and objectives, and with respect to the anticipated considerations for future implementation. In addition, actions are recommended for each opportunity to assist in future efforts.

While the potential opportunities identified in this Study are still in early stages of planning, it is important to understand the level of effort that may be required to move an opportunity forward. Therefore, an early assessment of the feasibility of each opportunity is included. A table is associated with each of the opportunities listing the considerations for feasibility and a general assessment of the difficulty of moving the opportunity toward implementation.

CORRIDOR A: CASCADE LAKES HIGHWAY — BEND CITY LIMITS TO MT. BACHELOR

CORRIDOR A PLANNING CONTEXT

Roadway: Cascade Lakes Highway (also called the Cascade Lakes National Scenic Byway) runs from Bend west to Mt. Bachelor and then hooks south toward Crescent Lake. For the purpose of this Study, only the area surrounding the 18.7-mile section between Bend and Mt. Bachelor ski resort is being reviewed. Cascade Lakes Highway is two lanes from Bend to FSR 45 (Sunriver Cutoff) and is four lanes from FSR 45 to Mt. Bachelor. ODOT recently repaved Cascade Lakes Highway from existing edge to edge, with marked 5-foot shoulders. The speed limit is 55 miles per hour (mph). The highway is designated as a National Scenic Byway (a roadway with intrinsic qualities such as archeological, cultural, historic, natural, recreational, and/or scenic that was established by Congress in 1991 to preserve and protect the nation's scenic but often less-traveled roads while promoting tourism and economic development), and has an average daily traffic (ADT) of 2,500 vehicles and a total daily capacity of 32,000 vehicles. Road use peaks during weekends and holidays; the highest peaks are winter mornings and evenings as people head to and from Mt. Bachelor for skiing. Road use in the summer is more dispersed throughout the day.

High-Use Sites: Cascade Lakes Highway provides access from Bend to Mt. Bachelor ski resort, which offers recreational activities during each season, and is a national draw for winter recreation; Three Sisters Wilderness Area, Tumalo Mountain, and Meissner, Swampy Lakes, Dutchman Flat, Wanoga, and Good Dog trailheads and numerous other trailheads; several private mountain resorts, including the Seventh Mountain Resort; and Widgi Creek golf course. Mt. Bachelor has a downhill bike park and chairlift rides during the summer, and is adding more mountain biking activities for people who would like to practice jumps. Besides Meissner Sno-Park, there are seven sno-parks in the area. In the summer, the Wanoga Sno-Play Area, also known as the Steve Larsen Trailhead, provides access to mountain bike trails south of the Cascade Lakes National Scenic Byway. In addition, it has a shelter that is available for use in the summer and winter. There is also an area for snowmobile parking and trail access, and a mountain bike play area for people to practice. Additionally, it has become popular to ride road bikes down from Mt. Bachelor to Bend.
Urban/Forest Interface Connections: The Haul Road Trail south of the byway is a gravel trail from Bend that connects with USFS trails, including Entrada Lodge. North of the byway, paved and natural trails around Tetherow provide connections to USFS trails. (Tetherow is a major, high-end development in west Bend, with golfing, condominiums, large vacation homes, and permanent residences whose population is growing.) Closer to Mt. Bachelor, there is a network of trails primarily used for mountain biking, and often used by runners, who access it from north of the byway. A paved multi-use trail is planned in this area that will go from Bend to the new Cascade Lakes Welcome Station. Mountain bikes will use the underpass just west of the Seventh Mountain Resort near the new welcome station to access the Wanoga and other trail systems. The new welcome station project will also connect hiking trails on the north and south sides of the Cascade Lakes National Scenic Byway. The welcome station will have limited parking. Of the parking spaces provided, only 15 are dedicated for trailhead, all day parking for recreational use by bikers, hikers, and trail runners, The others are for short-term use.

Existing Trail Connectivity: A new bicycle/pedestrian underpass just west of the Seventh Mountain Resort connects the mountain bike trails south of the byway to the trails north of the byway.

Key Access and Connectivity Issues:

- Distance from Bend to high-use attractions in the summer, such as trailheads, is too far for most people to walk, considering that they will be walking for recreation purposes once they arrive at the trailhead. Some trail systems are within mountain biking distance, such as Good Dog, C.O.D./Phil’s, and the Deschutes River trail systems.
- Distance from Bend to sno-park areas higher up the mountain, such as Meissner Sno-Park and Mt. Bachelor, is from 8 to 18 miles, and with gear, makes them largely inaccessible by non-motorized transportation options.
- Lack of trail crossings for bicyclists and hikers who are crossing the highway can cause conflicts with auto traffic.
- Parking occurs in undesignated areas adjacent to trails which are not at designated access points (trailheads) but are often used to access the trails by people parking at these locations.

CORRIDOR A PRIORITY OBJECTIVE AND RECOMMENDATIONS

As mentioned earlier, the DNF internal team identified Corridor A as one the three priority corridors for implementing alternative transportation projects, given its context and level of complexity of environmental concerns. (It was listed as a “Corridor with Various Opportunities and Environmental Concerns.”) Corridor A’s status as a priority corridor was confirmed by the TAC and SC at their meetings.

In addition, each of the corridors was reviewed by the internal DNF team to reach an understanding of the most applicable project objectives that would guide the type of opportunities to be pursued in that corridor. (The goal and the Study’s four objectives are listed in Chapter 2 and in the appendix of the Study.)

The DNF determined the priority objective for Corridor A as: Foster the use of alternative transportation systems to manage visitation to forest resources and promote active transportation and connectivity among gateway communities and the forest (Alternative Transportation). While there are some environmental concerns in the area, the use of the Cascade Lakes National Scenic Byway both by locals
and tourists to access high-use destinations, such as Mt. Bachelor towards the end of the corridor and trailheads closer to urbanized areas, provides very viable opportunities for alternative transportation.

**CORRIDOR A OPPORTUNITIES**

This section reviews the identified opportunities for Corridor A: Cascade Lakes Highway including key considerations and implementation concerns and opportunities. In addition, it provides recommended next steps for the DNF to take when it is ready to move forward with the opportunities in the corridor.

Table 2 shows the five major opportunities identified for Corridor A, and how they meet the goal and priority objective for the corridor and the Study. Additionally, the opportunities are shown on Figure 6.

**Table 2. Corridor A: Cascade Lakes Highway – Potential Opportunities and Consistency with Study Goal and Objectives**

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Goal and Priority Objective Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A-1: Public support for expanding private shuttles for visitors.</strong> This opportunity could include provision of financial or other support for private services (such as Cog Wild) to carry visitors to destinations, such as mountain bike trails and other attractions, in vans or buses.</td>
<td>This opportunity would support alternative transportation to and from high-use sites, thus lessening impacts on surrounding resources. Although this alternative transportation would be in the form of motorized vehicles, the shuttles could provide one-way transport to trailheads and bikers could ride their bikes back to town, thus increasing non-motorized access. This opportunity could be directed to high-use sites in order to decrease impacts from parking at those sites. Therefore, it meets the project goal and priority objective for the corridor.</td>
</tr>
<tr>
<td><strong>A-2: Shared parking partnerships.</strong> Develop partnerships for shared parking with other entities at existing nearby parking lots. Example: Cascade Middle School parking area. Parking for people to bring bikes and then ride to DNF. Safe access from the parking areas to DNF, such as highway crossings, would need to be assessed.</td>
<td>This opportunity would utilize existing parking lots on the urban edge that may be underutilized at key recreation times such as weekends, holidays, and the summer to provide parking for alternative transportation access to, for example, the nearby mountain bike network, with little or no environmental impact. Therefore, this opportunity meets the project goal and priority objective for the corridor.</td>
</tr>
<tr>
<td><strong>A-3: Improved crossings.</strong> Provide warning signs and other crossing improvements at three bike crossings of Cascades Lakes Highway at Good Dog Trailhead, Conklin Road, and Storm King Trailhead.</td>
<td>This opportunity improves safety, connectivity, and access to provide a more cohesive trail network that can be accessed from more varied locations, which could distribute use. Therefore, it meets the project goal and priority objective for the corridor.</td>
</tr>
<tr>
<td><strong>A-4: Bike and pedestrian crossing of Deschutes River in southwest Bend.</strong> Crossing would be near Entrada Lodge, not on DNF land, to allow alternative transportation access to the DNF from Bend</td>
<td>A new bike/pedestrian bridge would provide access to DNF trails from the more urban core of Bend for pedestrians and bicyclists. Therefore, it meets the goal of the Study and the priority objective for the corridor, <em>if it can meet environmental considerations.</em></td>
</tr>
</tbody>
</table>
## Opportunity

| A-5: Haul road connections to provide north-south mobility. Provide connections between Cascade Lakes Highway and Skyliners Road. | Does not meet the goal of this project. This opportunity would augment internal DNF connections between the existing trail network between the Skyliner’s area and trails and the Cascade Lakes Scenic Byway area and trails. However, it would not support alternative transportation access to the forest. Therefore, it does not meet the project goal. |
Figure 6. Corridors A, B, C, D: (Cascade Lakes Hwy, Sunriver Cutoff, Skyliner's, Conklin Rd)

Legend
- A - Cascade Lakes Hwy
- B - Sunriver Cutoff
- C - Skyliner's Road
- D - Conklin Rd/FSR 41
- Deschutes National Forest
- Park
- Three Sisters Wilderness
- City Limits
- Private Ownership
- Non-Motorized Paved Path

Identified Opportunity that Meets Study Goal

<table>
<thead>
<tr>
<th>Corridors</th>
<th>Identified Opportunity</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-1</td>
<td>Public support for expanding private shuttles for visitors (Not shown on map)</td>
</tr>
<tr>
<td>A-2</td>
<td>Develop partnerships for Shared Parking with other entities at existing nearby parking lots</td>
</tr>
<tr>
<td>A-3</td>
<td>Warning signs and other crossing improvements at three bike crossings across CLNSB at Good Dog, Conklin Rd and Storm King</td>
</tr>
<tr>
<td>A-4</td>
<td>Bike and pedestrian crossing of the Deschutes River in southwest Bend</td>
</tr>
<tr>
<td>B-1</td>
<td>Utilize existing highway crossings to provide trail connections</td>
</tr>
<tr>
<td>C-1</td>
<td>Develop partnerships for Shared Parking with other entities at existing nearby schools</td>
</tr>
<tr>
<td>C-2</td>
<td>Public support for expanding private shuttle for visitors (Not shown on map)</td>
</tr>
<tr>
<td>C-3</td>
<td>Phil's Trail to Shevlin Park connection</td>
</tr>
<tr>
<td>C-4</td>
<td>Reduce and/or manage dispersed parking areas (e.g. 300 Spur)</td>
</tr>
<tr>
<td>D-1</td>
<td>Transportation Demand Management/ITS/Phone Application (Not shown on map)</td>
</tr>
<tr>
<td>D-2</td>
<td>Bend to Sunriver Paved Path</td>
</tr>
<tr>
<td>D-3</td>
<td>Bike and pedestrian crossing of Deschutes River in southwest Bend</td>
</tr>
<tr>
<td>D-4</td>
<td>Manage and reduce parking areas and shuttles (Not shown on map)</td>
</tr>
</tbody>
</table>
OPPORTUNITY ANALYSIS AND RECOMMENDATION

OPPORTUNITY A-1: PUBLIC SUPPORT FOR EXPANDING PRIVATE SHUTTLES FOR VISITORS

This opportunity could provide financial or other support for private services (such as Cog Wild) to carry visitors to destinations, such as mountain bike trails and other key attractions, in vans or buses. Public support could, at the very least, further develop a positive brand identity for existing shuttle providers that may serve as a valuable asset in forging a partnership and would help provide marketing.

Key Considerations: A partnership for providing shuttle service is especially valuable because of the seasonal fluctuation in demand for this service: The partners could work together to minimize the financial risk of these seasonal fluctuations. The private entities already have equipment and staff and could expand the times of day or locations of services to provide better access. A concern is that the service could result in the additional use of trails possibly negatively impacting the recreational experience or causing more off-trail impacts than currently exist.

Table 3 demonstrates the key considerations for implementation and a general assessment of the ease of the feasibility using a scale to demonstrate the level of difficulty by implementation factor.

Table 3. Opportunity A-1: Public Support for Expanding Private Shuttles – Feasibility Assessment

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>Does not require substantial infrastructure. Already in areas that are disturbed and may help minimize environmental impacts by providing alternatives to driving to destination and parking.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>Concept would rely on a public/private agreement to use other organization’s facilities, such as parking areas at pickup spot and existing trailhead parking facilities at drop-off spot.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>Does not require substantial infrastructure.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Does not require substantial infrastructure.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Would need to work out an agreement for how public support could be included. Additional parking at pickup spots may be necessary.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>An agreement would be necessary to outline level of support and responsibilities.</td>
<td></td>
</tr>
<tr>
<td>Community Support</td>
<td>The opportunity would provide travel options for the community with little associated impact.</td>
<td></td>
</tr>
</tbody>
</table>

Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.
Recommended Next Step for DNF:

- Contact potential private shuttle operators.

**OPPORTUNITY A-2: SHARED PARKING PARTNERSHIPS**

This opportunity is to develop partnerships with other organizations for DNF visitor use of existing nearby parking lots. An example would be Cascade Middle School, which has a parking area that might be underutilized by the school during weekends and summer months. The parking area could be used by as a “park ‘n bike” to access trails that connect to the DNF. This opportunity would promote access via alternative transportation, eliminating auto trips on the corridor and reducing parking impacts at trailheads. It would allow people to bring bikes to a less congested area just outside of the DNF and then ride to busy destinations in the forest. The addition of safe access from the parking areas to the DNF, such as highway crossings, would need to be assessed.

**Key Considerations:** This concept could work for mountain bicyclists willing to ride 5 miles to 10 miles roundtrip to mountain bike trail systems, road bicyclists looking for a starting point to ride the Cascade Lakes Highway from urban areas, and “family” riders looking for either a longer ride to the Cascade Lakes Welcome Station from the parking area or when the Welcome Station Trailhead parking is full. An example of this type of arrangement would be a parking partnership between the school district and the DNF for use of the Cascade Middle School lot. It could provide connectivity to the paved Colorado Trail that connects to the Haul Road Trail, which in turn connects to DNF trails.

This concept requires no new ground disturbance and therefore would have minimal impacts on natural resources. Coordination would be required with the City of Bend for necessary wayfinding to direct users safely from parking lots to trails, and coordination with other organizations for agreements to use parking facilities. Signage stating when the parking lot could be used as a park and ride or park ‘n bike and other terms would be necessary. Shuttles from the parking area could also take people to trailheads that are farther from Bend (such shuttles are identified as an opportunity for Corridor A).

**Table 4. Opportunity A-2: Shared Parking Partnerships – Feasibility Assessment**

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>Minimal to none. Does not require substantial infrastructure. Already in areas that are disturbed and may help minimize environmental impacts at parking areas by decreasing use of existing high-use area parking lots and roadside parking. However, there could be increased trail use in certain sections of trail.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>Minimal to None. Concept would rely on an agreement to use other organization facilities rather than obtain property.</td>
<td></td>
</tr>
</tbody>
</table>
### Implementation Factors

<table>
<thead>
<tr>
<th>Considerations</th>
<th>Feasibility Generalizations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical/Design Constraints</strong></td>
<td></td>
</tr>
<tr>
<td>Minimal to none.</td>
<td></td>
</tr>
<tr>
<td><strong>Construction Costs</strong></td>
<td></td>
</tr>
<tr>
<td>Does not require substantial infrastructure.</td>
<td></td>
</tr>
<tr>
<td><strong>Operations and Maintenance</strong></td>
<td></td>
</tr>
<tr>
<td>Minimal. Minor maintenance to keep lot “clean&quot; from dirt that mountain bikes</td>
<td></td>
</tr>
<tr>
<td>may track in and in good repair. Staff time could be required to regulate</td>
<td></td>
</tr>
<tr>
<td>parking issues. Trail connections closer to the shared parking areas might</td>
<td></td>
</tr>
<tr>
<td>require increased maintenance due to increase in use.</td>
<td></td>
</tr>
<tr>
<td><strong>Partnerships, Agreements, and Coordination</strong></td>
<td></td>
</tr>
<tr>
<td>Would need to develop partnerships for use of the lots, potential signage</td>
<td></td>
</tr>
<tr>
<td>to direct users to safe facilities, and a coordinated communications effort</td>
<td></td>
</tr>
<tr>
<td>to let visitors to the DNF know of the option. Could require financial and</td>
<td></td>
</tr>
<tr>
<td>other incentives for partnerships.</td>
<td></td>
</tr>
<tr>
<td><strong>Community Support</strong></td>
<td></td>
</tr>
<tr>
<td>Parents of children attending the school could be concerned about misuse of</td>
<td></td>
</tr>
<tr>
<td>the lot. Potential conflicts during events.</td>
<td></td>
</tr>
</tbody>
</table>

*Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.*

### Recommended Next Steps for DNF:

- Contact potential parking partners to gauge level of interest.
- Hold internal DNF meeting to determine the type of incentives that the DNF could provide parking partners to incentivize this type of arrangement. (Such incentives could include the DNF assisting a school with parking lot maintenance, making minor improvements such as restriping, or others.)

### OPPORTUNITY A-3: CROSSING IMPROVEMENTS (TRAIL ACROSS HIGHWAY)

Warning signs and other crossing improvements will be provided at three bike crossings of Cascade Lakes Highway at Good Dog Trailhead, Conklin Road, and Storm King trailhead (see Figure 6). Crossing improvements will make it easier and safer for walkers and bikers to cross the highway, thus improving overall access and connectivity to the surrounding mountain bike network.

**Key Considerations:** The high travel speeds on Cascade Lakes Highway (speed limit is 55 mph) need to be considered when planning crossing improvements for the highway. Cascade Lakes Highway is an ODOT facility; further roadway safety studies are likely to be needed.
### Table 5. Opportunity A-3: Crossing Improvements – Feasibility Assessment

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>There may be additional minor environmental disturbance created by providing a formal crossing; however, the crossing areas are probably already being used. Additionally, the area adjacent to Cascade Lakes Highway is likely already somewhat disturbed due to the highway.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>Would need to strive to keep improvements within right-of-way.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>High speeds may affect the design of improvements.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Depends on the type of improvement, but because they are small safety “spot” treatments, should be low cost.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Limited operations and maintenance is anticipated to be necessary. Would be considered in overall larger highway maintenance.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>Would require agreement with ODOT and would need to meet ODOT standards.</td>
<td></td>
</tr>
<tr>
<td>Community Support</td>
<td>Safety would be improved for trail users, with little or no negative impact to the community.</td>
<td></td>
</tr>
</tbody>
</table>

*Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.*

**Recommended Next Steps for DNF:**

- Coordinate with ODOT and possibly conduct a road safety analysis in consideration of adjacent recreational uses.

**OPPORTUNITY A-4: BIKE AND PEDESTRIAN CROSSING OF DESCHUTES RIVER IN SOUTHWEST BEND**

This new bike and pedestrian bridge crossing of the Deschutes River would allow alternative transportation access to the DNF from Bend. The exact location has not been determined. It would be near Entrada Lodge, and Bend Parks and Recreation is considering lands both on and off the DNF. This opportunity would strongly impact Corridor A and Corridor D: FSR 41 (Conklin Road).

**Key Considerations:** This opportunity would require extensions of trails and other potential associated features such as parking and restroom facilities. The proximity of the Wild and Scenic River designation as well as the Oregon Spotted Frog habitat would need to be considered. There is currently no connection of the Deschutes River Trail from the east side of the river in the River Rim neighborhood.
(southern urban growth boundary of Bend) over the Deschutes River to the DNF and associated trails. A new connection to that population center could induce many more trips to the DNF, thus putting pressure on important resources. The carrying capacity for trails in this area would need to be considered in a NEPA analysis before choosing a preferred concept for this opportunity. The opportunity would enhance access and promote non-motorized transportation within the DNF, but the benefits of this enhancement would need to be balanced with resource protection.

This section of the river is also designated as a State Scenic Waterway and bridges currently are not approved by the State for this section. Coordination with the State to rectify this would also be needed.

Table 6. Opportunity A-4: Bike and Pedestrian Crossing of Deschutes River in Southwest Bend – Feasibility Assessment

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>This would likely increase the number of recreation users in a sensitive area along the Deschutes River. See Key Considerations above.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>Exact location of bridge to be decided. Could be on private land which may require acquisition.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>Design should account for desired carrying capacity of DNF corridors. Wild and Scenic River requirements and other resource considerations could severely constrain the design, location, and feasibility.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Depends on the design of the structure. Would be substantial, but would be less expensive than a vehicular bridge.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Operations and maintenance are anticipated to be necessary for the bridge. Bend Parks and Recreation would own the bridge under options currently explored. Would be considered in overall trail network maintenance for the area. The system of trails would require continued maintenance by USFS or stakeholders.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>Would require internal DNF coordination to determine whether the use of the area can be modified and the degree of environmental impacts. This section of the river is also designated as a State Scenic Waterway requiring consultation with the State.</td>
<td></td>
</tr>
<tr>
<td>Community Support</td>
<td>Provides connectivity for the community, but also presents concerns with respect to natural resources. Would require coordination with BPRD, consultation with the Oregon Department of Fish and Wildlife, US Fish and Wildlife Services, and Tribal consultation. It is not yet clear the level of community support.</td>
<td></td>
</tr>
</tbody>
</table>
Recommended Next Step for DNF:

- Coordinate with BPRD regarding location of bridge and to conduct an initial assessment of impacts and feasibility. This may require coordination with state and federal regulatory agencies, as well as Tribal consultation.

CORRIDOR B: SUNRIVER CUTOFF — US 97 TO CASCADE LAKES HIGHWAY

CORRIDOR B PLANNING CONTEXT

Roadway: The Sunriver Cutoff is a two-way, two-lane road that runs for 17.8 miles north-south between Cascade Lakes Highway and Sunriver. While it is technically called Edison Ice Cave Road/FSR 45, it is more commonly referred to as the “Sunriver Cutoff.” There are 5-foot shoulders, but no marked bike lanes. The cutoff is a low-volume, but high-speed road. It is the primary route for visitors from Sunriver to access Mt. Bachelor and other outdoor tourist destinations.

High-Use Sites: The Sunriver Cutoff provides the most direct access between Sunriver and Cascade Lakes Highway. It is used to access sites within the DNF including Mt. Bachelor skiing/snowboarding, Kapka Sno-Park (completed in fall of 2014), and Edison Butte Sno-Park for cross country skiing in the winter and for mountain bike trails and 4x4 trail access in the summer. The Sunriver Cutoff is also popular for road biking and accessing hiking trailheads. The primary use of this corridor is to move people along and through established sites (such as Kapka and Edison sno-parks).

Urban/Forest Interface Connections: There are no road bike facilities on the Sunriver Cutoff, although many cyclists ride on the 5-foot paved shoulders. Sunriver Cutoff is a county-designated bikeway.

Existing Trail Connectivity: From the east side of the cutoff, a mountain bike trail network can be accessed via the Dinah-Moe Humm mountain bike trailhead. Edison Butte Sno-Park provides access to a trail network west of the cutoff. Sunriver Resort has a network of trails and is popular for bike riding.

Key Access and Connectivity Issues: The Sunriver Cutoff provides few trail/recreation access points along its length. It is often used by long distance road bicyclists.

CORRIDOR B PRIORITY OBJECTIVE AND RECOMMENDATIONS

This corridor was identified by DNF rangers as one that has complex environmental conditions that would make implementing projects very difficult. DNF determined that the priority objective for the
corridor is: “Encourage the use, enjoyment, and sustainability of natural resources while protecting DNF lands from degradation resulting from overuse and pollution (RESOURCE PROTECTION).”

This prioritization was confirmed by the TAC and SC at later meetings, at which it was pointed out that the long distances to this road from most origins and destinations which makes it hard for nonmotorized transportation options, and the fact that it already serves road bicyclists fairly well, make improvements here a lower priority than in other corridors. However, Corridor B would be served well by transit that connects Sunriver, Mt. Bachelor, and other key sites in the DNF in the winter. (This potential should be explored in future studies that focus on wintertime opportunities and motorized improvements.)

CORRIDOR B OPPORTUNITIES

This section reviews the identified opportunities for Corridor B: Sunriver Cutoff, including key considerations and implementation concerns and opportunities. In addition, it provides recommended next steps for the DNF to take when it is ready to move forward with the opportunities in the corridor.

Table 7 shows the two major opportunities identified for Corridor B: Sunriver Cutoff and how they meet the goal and priority objective for the corridor and the Study. Additionally, the opportunities are shown on Figure 6.

Table 7. Corridor B: Sunriver Cutoff – Potential Opportunities and Consistency with Study Goal and Objectives

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Goal and Priority Objective</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>B-1: Utilize existing highway crossings to provide trail connections. Undercrossing identified at the north end of FSR 4614 that could be used by trail users near Edison.</td>
<td>This opportunity improves safety, connectivity, and access to better provide a more cohesive trail network, while not creating infrastructure. Therefore, it meets the goal of the Study and the priority objective for the corridor.</td>
<td></td>
</tr>
<tr>
<td>B-2: Multi-use trail parallel to Sunriver Cutoff. Could be used in a multi-use loop trail system that includes Sunriver and Bend. Sunriver Cutoff provides the most direct access from Sunriver to Mt. Bachelor in an area already used for road biking. The use of electric bikes would make the distances and terrain more viable.</td>
<td>Does not meet the goal of this project. The Sunriver Cutoff corridor is already serving long distance bike riders on paved shoulders. It is far from most population centers and most popular attractions, and much of the area is not disturbed. Therefore, adding a trail would not “promote the use of non-motorized alternative transportation options to access high-use recreational areas on the Deschutes National Forest while reducing environmental impacts at these sites.”</td>
<td></td>
</tr>
</tbody>
</table>

OPPORTUNITY ANALYSIS AND RECOMMENDATIONS

OPPORTUNITY B1: UTILIZE EXISTING HIGHWAY CROSSINGS TO PROVIDE TRAIL CONNECTIONS

This opportunity would enhance existing crossings of the Sunriver Cutoff for recreational users. An existing undercrossing at the north end of FSR 4614 could be used by trail users near Edison Butte Sno-Park.
**Key Considerations:** This opportunity could provide an option for mountain bikers to go from Mt. Bachelor routes to Bend routes. Safety of the tunnel undercrossing for users would have to be assessed. Also, the tunnel is accessed primarily by USFS roads that are used by bicyclists, snowmobiles, and other recreationists, but are closed to auto use.

**Table 8. Opportunity B1: Utilize Existing Highway Crossings as Trail Connections – Feasibility Assessment**

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>Minimal to none. Use of the existing tunnel does not require substantial infrastructure. However, there could be increased trail use in certain sections of trail, and environmental analysis (NEPA) would need to be conducted to construct any new trails.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>Minimal to none. It is assumed that the crossing is already under DNF jurisdiction.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Minimal to none. Does not require substantial infrastructure.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Routine maintenance of existing structure. Also, any addition to the system of trails would require continued maintenance by USFS or stakeholders.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>It is assumed that the crossing is already under DNF jurisdiction. May conflict with uses of adjacent USFS roads. Parking agreements with Mt. Bachelor for summer parking might be a next phase.</td>
<td></td>
</tr>
<tr>
<td>Community Support</td>
<td>Would provide increased alternative transportation connectivity between Mt. Bachelor and Bend.</td>
<td></td>
</tr>
</tbody>
</table>

*Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.*

**Recommended Next Step for DNF:**

- Assess the implications of the use of adjacent USFS roads and the tunnel crossing.
CORRIDOR C: SKYLINERS ROAD – BEND CITY LIMIT TO TERMINUS

CORRIDOR C PLANNING CONTEXT

Roadway: Skyliners Road connects Bend to the Tumalo Falls Trailhead and picnic area. Skyliners is a county road from Bend for approximately 8.4 miles and then it is FSR 4603 to Tumalo Falls. The FSR 4603 portion of the road is gravel. The county road portion of Skyliners Road is a two-way, two-lane corridor with no marked shoulders or bike lanes. However, Skyliners Road will be repaved and widened, likely in 2015, to provide 6-foot bike lanes on the county portion. Road use peaks during weekends and holidays in summer and winter. The 2009 ADT was 662 vehicles, and the road has a total capacity of 9,600 vehicles. The speed limit is 55 mph on the paved portions of county road. The distance from downtown Bend to Tumalo Falls, where the road ends, is approximately 14 miles.

High-Use Sites: Skyliners Road provides access to Skyliners Lodge, Tumalo Falls (via unpaved FSR 4603), Phil’s Trailhead, and Skyliners Sno-Park, and connections to numerous trails through the DNF. Skyliners Road is also used to access several private residences and several public uses, such as a municipal water intake system. Skyliners Lodge, formerly a private lodge and now owned by the USFS, serves as an environmental education center that is leased from the USFS by the High Desert Education Service District (HDESD), a regional nonprofit organization that provides educational support and resources to school districts throughout Central Oregon. Skyliners Road is used for road biking and seasonal mountain biking in order to access trails (use is for 9 to 11 months of the year, depending on snow elevations), and to access hiking and cross country skiing trails. The road provides access to 183 miles of mountain bike trails.

Urban/Forest Interface Connections: West Bend Trail (natural surface) runs south of and parallel to Skyliners Road, to connect with Marvin’s Garden Trails in the DNF. This area is very near a quickly growing part of Bend and pressure for more connections in this corridor is likely to grow.

Existing Trail Connectivity: Non-motorized connections to USFS trails are via Shevlin Park, north of Skyliners Road, and via the West Bend Trail and Cascade Highlands Trail, which connect to Phil’s Trailhead south of Skyliners Road. Phil’s Trailhead, which is located approximately 3 miles from Bend, is a highly popular trailhead that provides access to miles of mountain biking trails. Tumalo Falls can be accessed by a relatively easy mountain bike trail from the Skyliners Sno-Park. Along this corridor, pedestrian facilities are provided by trails and park areas. Shevlin Park, north of Skyliners Road, contains numerous hiking and bike trails. Skyliners Road and the Tumalo Canyon create a barrier between Shevlin Park and Phil’s Trailhead. The Twin Bridges Bikeway follows Skyliners Road in Bend until Northwest Washington Road, where it heads north to Johnson Market Road.

Key Access and Connectivity Issues:

- Because there are no continuous shoulders on Skyliners Road, road bicyclists must ride in the vehicle travel lane (shoulder improvements are planned).
- The distance from Bend to high-use attractions in the summer, such as trailheads, is too far for most people to walk, considering that they will be walking for recreation purposes once they are at their destination. However, some mountain bike trailheads are within biking distance from Bend.
• There is a lack of crossings for bicyclists and hikers to get across the roadway.
• Parking occurs in undesignated areas adjacent to trailheads.

**CORRIDOR C PRIORITY OBJECTIVE AND RECOMMENDATIONS**

DNF rangers identified Skyliners Road as the corridor with the highest likelihood overall of having potential opportunities implemented, based on current use of the corridor and its existing environmental conditions which includes Deer Winter Range and Key Elk Areas. The priority objective for the corridor was determined by DNF to be, “Foster the use of alternative transportation systems to manage visitation to forest resources and promote active transportation and connectivity among gateway communities and the forest (ALTERNATIVE TRANSPORTATION).”

While there are some environmental concerns in the area, the use of Skyliners Road by both locals and tourists to access high-use destinations such as Tumalo Falls (towards the end of the corridor) and the mountain bike network such as Phil’s Trailhead (closer to urbanized areas) provides very viable opportunities for alternative transportation.

**CORRIDOR C OPPORTUNITIES**

This section reviews the identified opportunities for Corridor C: Skyliners Road, including key considerations and implementation concerns and opportunities. In addition, it provides recommended next steps for the DNF to take when it is ready to move forward with the opportunities in the corridor.

Table 9 shows the five major opportunities identified for Corridor C: Skyliners Road and how they meet the goal and priority objective for the corridor and the Study. Additionally, the opportunities are shown on Figure 6.
Table 9. Corridor C: Skyliners Road – Potential Opportunities and Consistency with Study Goal and Objectives

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Goal and Priority Objective Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>C-1: Shared parking partnerships.</strong> Develop partnerships for shared parking with other entities at existing nearby parking lots. For example, possible shared parking at the Summit High School, New Middle School, and Miller Elementary School parking lots. Provide parking for people who bring bikes and then ride to DNF. Safe access from the parking areas to the DNF, such as highway crossings, would need to be assessed.</td>
<td>This opportunity would utilize existing parking lots on the urban edge that may be underutilized at key recreation times such as weekends, holidays, and the summer to provide parking for alternative transportation access to the nearby mountain bike network, for example, with little or no environmental impact. Therefore, it meets the goal of the study and the priority objective for the corridor.</td>
</tr>
<tr>
<td><strong>C-2: Public support for expanding private shuttles for visitors.</strong> This opportunity could include financial or other support for private services (such as Cog Wild) to carry visitors to destinations, such as mountain bike trails and other attractions, in vans or buses.</td>
<td>This opportunity would support alternative transportation to and from high-use sites, thus lessening impacts on surrounding natural resources. Although this alternative transportation would be in the form of motorized vehicles, the shuttles could provide one-way transport to trailheads and bikers could ride their bikes back to town, thus increasing non-motorized access. This opportunity could be directed to high-use sites to decrease the impacts from parking at those sites. Therefore, it meets the goal of the study and the priority objective for the corridor.</td>
</tr>
<tr>
<td><strong>C-3: Provide Phil’s Trailhead to Shevlin Park connections.</strong> Connection from Phil’s Trailhead across Skyliners Road to Shevlin Park (BPRD). There are existing connections, but they are not sanctioned. Coordination important.</td>
<td>This opportunity improves safety, connectivity, and access to provide a better, more cohesive trail network that can be accessed from more varied locations, which could, in turn, distribute use. Therefore, it meets the goal of the study and the priority objective for the corridor.</td>
</tr>
<tr>
<td><strong>C-4: Reduce and or manage dispersed parking areas (e.g., at 300 Spur).</strong></td>
<td>This opportunity would provide measures to manage dispersed or undesignated parking areas, so that there would be less disturbance of environmental resources. If parking were limited and less available than currently, it would encourage more people to use alternative transportation. Therefore, it meets the goal of the study and the priority objective for the corridor.</td>
</tr>
<tr>
<td><strong>C-5: Improvements to 300 Spur parking area (for example, add bathrooms and more parking).</strong></td>
<td><em>Does not meet the goal of this project.</em> This opportunity would encourage auto access to the DNF by providing more parking, while potentially causing increased environmental disturbance to the area. Therefore, making parking improvements would not meet the goal of this project.</td>
</tr>
</tbody>
</table>
OPPORTUNITY ANALYSIS AND RECOMMENDATION

OPPORTUNITY C-1: SHARED PARKING PARTNERSHIPS

This is the same type of shared parking opportunity as was discussed for Corridor A, but it would include different locations that are closer to Skyliners Road. This opportunity would be to develop partnerships with other organizations to use existing nearby parking areas. For example, the Summit High School, New Middle School, and Miller Elementary School parking areas currently might not be used by the school during weekends and during the summer. The parking areas could be used as a “park ’n bike” to access trails that connect to DNF and would allow people to bring bikes to the parking area and then ride to DNF. This opportunity will promote access via alternative transportation, eliminating auto trips on the corridor and reducing parking impacts at trailheads. Note: Safe access from the parking areas to the DNF, such as highway crossings, would need to be assessed.

**Key Considerations:** This opportunity could work for mountain bikers willing to ride additional miles to their preferred mountain bike trailheads; road bicyclists looking for a starting point to ride Skyliners Road, especially once there are paved 6-foot shoulders; and hikers. For example, a parking partnership allowing parking at Miller Elementary would provide connectivity to the paved Discovery Trail and Summit-Shevlin Trail.

This opportunity requires no new ground disturbance and therefore, would have fewer impacts on natural resources than opportunities that require new construction. DNF will need to coordinate with the City of Bend to provide the necessary wayfinding that would direct users safely from parking lots to trails, and coordination with other organizations for agreements to use parking facilities. Signage stating when the parking lot can be used as a park and ride or bike ’n ride, and other terms may be necessary. Shuttles from the parking area could also take people to trailheads that are farther from Bend (see the discussion of the next Corridor C opportunity).

**Table 10. Opportunity C-1: Shared Parking Partnerships – Feasibility Assessment**

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>Minimal to none. Does not require substantial infrastructure. Already in areas that are disturbed and may help minimize environmental impacts at parking areas by decreasing use of parking lot. However, there could be increased trail use in certain sections of trail.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>Minimal to none. Concept would rely on an agreement to use other organizations’ facilities rather than obtain property.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>Minimal to none.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Does not require substantial infrastructure.</td>
<td></td>
</tr>
</tbody>
</table>
### Implementation Factors

<table>
<thead>
<tr>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations and Maintenance</td>
<td>Minimal. Minor maintenance to keep lot clean from dirt that mountain bikes may track in and in good repair. Staff time potentially required for regulation of parking issues. Trail connections closer to parking areas may require increased maintenance due to increase in use.</td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>Would need to work out an agreement for use of the lots, potential signage to direct users to safe facilities, and a coordinated communication effort to let visitors to the DNF know of the option. May require financial and other incentives for partnerships.</td>
</tr>
<tr>
<td>Community Support</td>
<td>Parents of children attending the school may be concerned about misuse of the lot. Potential conflicts during events.</td>
</tr>
</tbody>
</table>

**Note:** It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.

### Recommended Next Step for DNF:

- Contact potential parking partners to gauge level of interest.
- Hold internal DNF meeting to determine the type of incentives that the DNF could provide parking partners to incentivize this type of arrangement. (Such incentives could include the DNF assisting a school with parking lot maintenance, making minor improvements such as restriping, or others.)

### OPPORTUNITY C-2: PUBLIC SUPPORT FOR EXPANDING PRIVATE SHUTTLES FOR VISITORS

This opportunity could provide financial or other support for private services (such as Cog Wild) to carry visitors to destinations, such as mountain bike trails and other key attractions, in vans or buses. Public support could, at the very least, further develop a positive brand identity for existing shuttle providers that may serve as a valuable asset in forging a partnership and would help provide marketing. Tumalo Falls is a popular destination with parking that is often oversubscribed compromising safety and impacting natural resources.

**Key Considerations:** A partnership to provide shuttle service is especially valuable because of the seasonal fluctuation in demand for this service: The partners could work together to minimize the financial risk of these seasonal fluctuations. A concern is that it could induce additional use of trails, which could impact the recreational experience or cause more off-trail impacts.
Table 11. Opportunity C-2: Public Support for Expanding Private Shuttles – Feasibility Assessment

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>Does not require substantial infrastructure. Already in areas that are disturbed and may help minimize environmental impacts by providing alternatives to individuals driving to destination and parking. It could induce more use of trails rather than just a shift of modes. If that is the case, carrying capacity of the trails should be assessed to prevent impacts.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>Concept would rely on a public/private agreement to use other organizations’ facilities, such as parking areas at pickup spot and existing trailhead parking facilities at drop-off spot.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>Does not require substantial infrastructure.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Does not require substantial infrastructure.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Would need to work out an agreement for how public support could be included. Additional parking at pickup spots may be necessary.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>An agreement would be necessary to outline the level of support and responsibilities.</td>
<td></td>
</tr>
<tr>
<td>Community Support</td>
<td>The opportunity would provide travel options for the community with little associated impact.</td>
<td></td>
</tr>
</tbody>
</table>

Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.

Recommended Next Step for DNF:

- Contact potential private shuttle operators.

OPPORTUNITY C-3: CROSSING AND TRAIL CONNECTION IMPROVEMENTS

This opportunity would include both safety-related crossing improvements from Phil’s Trailhead across Skyliners to Shevlin Park, and additional trail connections from the urban edge of Bend to DNF and Shevlin’s Park. There are existing connections in these areas, but they are not sanctioned and therefore may not be safe or may impact environmental resources. Crossing and connectivity improvements will make it easier and safer for walkers and bikers to cross Skyliners Road, thus improving overall access and connectivity to the surrounding mountain bike trail network.

Key Considerations: The high travel speeds (the speed limit is 55 mph on the paved portions of county road) need to be considered when planning crossing improvements for Skyliners Road. Additionally,
impacts to wildlife and community residential impacts will need to be considered because of the potential for increased recreational use related to crossing and trail improvements.

**Table 12. Opportunity C-3: Crossing and Trail Connection Improvements – Feasibility Assessment**

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>Additional minor environmental disturbance might occur in conjunction with providing formal crossings and trail connections; however, many of the areas are probably already used unsafely by “rogue” crossers. Additionally, the area adjacent to Skyliners Road is likely disturbed due to the roadway use.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>For crossing of existing trails, crossing improvements are anticipated to be within the existing right-of-way. Would need to work with BPRD and property owners or developers on the urban fringe in developing new trail connections.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>High speeds may affect design of improvements.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Depends on the type of improvement, but because they are small safety “spot” treatments and small trail connections, should be fairly low cost.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Limited operations and maintenance are anticipated to be necessary. Would be considered in road and trail maintenance. Any addition to the system of trails would require continued maintenance by USFS or stakeholders.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>Would require agreement with BPRD and private property owners.</td>
<td></td>
</tr>
<tr>
<td>Community Support</td>
<td>Safety and connectivity would be improved for trail users, with little or no negative impact to the community.</td>
<td></td>
</tr>
</tbody>
</table>

*Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.*

**Recommended Next Step for DNF:**

- Coordinate with County and possibly conduct a road safety audit in consideration of adjacent recreational uses.
OPPORTUNITY C-4: REDUCE AND/OR MANAGE DISPERSED PARKING AREAS

This opportunity could include enforcement of parking in undesignated areas, including signage and ticketing. Actual, specific improvements would need to be assessed.

Key Considerations: Disrupting known areas of dispersed parking may lead to visitors parking in other locations that are not designated for parking. There would need to be funds and resources allocated for enforcement of parking regulations.

Table 13. Opportunity C-4: Reduce and/or Manage Dispersed Parking Areas – Feasibility Assessment

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>This opportunity would limit impacts by managing parking that is currently</td>
<td></td>
</tr>
<tr>
<td></td>
<td>causing vegetative and other environmental impacts.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>No property acquisition is anticipated to be necessary for this opportunity.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>All areas that would be impacted are on DNF land.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>No design would be needed for this opportunity.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Construction not anticipated, other than potentially posting signs.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>There would be a cost associated with increasing enforcement (additional</td>
<td></td>
</tr>
<tr>
<td></td>
<td>personnel and ticketing resources). Would require enforcement to be successful.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and</td>
<td>May consider partnerships with law enforcement and tourist destinations to</td>
<td></td>
</tr>
<tr>
<td>Coordination</td>
<td>enforce parking and inform the public.</td>
<td></td>
</tr>
<tr>
<td>Community Support</td>
<td>Public support may be mixed on reducing parking or ticketing visitors.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>There may be initial frustration if parking is limited.</td>
<td></td>
</tr>
</tbody>
</table>

Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.

Recommended Next Steps for DNF:

- Conduct internal DNF coordination and review of potential measures.
- Determine whether DNF has adequate resources to provide enforcement.
- Determine which resources (including partners) could be employed for enforcement and which entities could patrol and ticket.
CORRIDOR D: FSR 41 (CONKLIN ROAD) – SUNRIVER CUTOFF TO CASCADE LAKES HIGHWAY

CORRIDOR D PLANNING CONTEXT

Roadway: Conklin Road (FSR 41) is a two-lane, low-traffic-volume road that is paved from Cascade Lakes Highway south to near Benham Falls and is then gravel south to the Sunriver Cutoff (FSR 40/FSR45). Conklin Road connects Sunriver with the Cascade Lakes Highway and runs almost to Bend. Compared to other corridors within the study area, this road has relatively low traffic volumes.

High-Use Sites: The key destinations along Conklin Road are Benham Falls, numerous trailheads, and the boat ramps to access the Deschutes River.

Urban/Forest Interface Connections: There are no dedicated road bike facilities on Conklin Road, though many cyclists ride on the narrow shoulders. The gravel surface in the south makes this a less ideal route for those trying to quickly access the major destinations to the north of Sunriver. The road connects to two major designated bikeways, Cascade Lakes National Scenic Byway in the north and the Sunriver Cutoff in the south.

Existing Trail Connectivity: Conklin Road provides access to the Wanoga and Deschutes River Trail systems. The new Sun Lava Trail, which is a paved multi-use trail, connects Sunriver, Benham Falls, and Lava Lands. The Bend to Sunriver Paved Path Feasibility Study explored opportunities for connecting the communities of Bend and Sunriver via a paved route and for creating connections among existing recreation opportunities near Conklin Road. That feasibility study explored the area between Bend, Sunriver, and the Cascade Lakes Highway, and identified five alternatives but did not offer a preferred alternative.

Key Access and Connectivity Issues: Popular areas for undesignated parking occur along Conklin Road at the bottom of the Storm King Trailhead and the bottom of the Tyler’s Traverse Trailhead. Based on data gathering for the Study conducted in the Summer of 2014, Dillon day-use and Slough day-use parking areas were not observed to be at capacity (full); however, the boat ramps in these areas can get crowded with both vehicles and trailers trying to maneuver the lot. At Benham Falls West, during parking observations on a Saturday, the number of vehicles parked at the site reached capacity (8 vehicles) and vehicles were observed turning around and exiting the site when no parking could be found. There appears to be ample space for parking at the Bottom of Storm King Trail; however, on the west side of FSR 41/Conklin Road, the edge of the roadway pavement is starting to crumble due to the traffic entering and exiting the shoulder for parking.

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CORRIDOR D PRIORITY OBJECTIVE AND RECOMMENDATIONS

The DNF internal team determined the priority objective for Corridor D to be, “Encourage the use, enjoyment, and sustainability of natural resources while protecting DNF lands from degradation resulting from overuse and pollution (RESOURCE PROTECTION).” Although all of the four objectives are important to the corridor, this corridor has complex environmental conditions that would make implementing projects very difficult.

CORRIDOR D OPPORTUNITIES

This section reviews the identified opportunities for Corridor D: FSR 41 (Conklin Road), including key considerations and implementation concerns and opportunities. In addition, it provides recommended next steps for the DNF to take when it is ready to move forward with the opportunities in the corridor.

Table 14 shows the seven major opportunities identified for Corridor D: FSR 41 (Conklin Road), and how they meet the goal and priority objective for the corridor and the Study. The opportunities are also shown on Figure 6.

Table 14. Corridor D: FSR 41 (Conklin Rd.) – Potential Opportunities and Consistency with Study Goal and Objectives

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Goal and Priority Objective Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>D-1: Transportation Demand Management/Intelligent Transportation Systems (ITS)/phone application. Better and coordinated signage and technology to direct people to trails, inform them about trails, and indicate which trails are more heavily used and when to potentially use less busy trails.</td>
<td>This opportunity would support access by informing visitors to the DNF of available trails and destinations. By providing an understanding of which areas are congested and directing visitors to alternative sites, this opportunity could reduce environmental impacts caused by overcrowding.</td>
</tr>
<tr>
<td>D-2: Bend to Sunriver path. A feasibility study explored paving options for FSR 41 but did not make a recommendation.</td>
<td>A new trail parallel to FSR 41 (Conklin Road) perhaps connecting the Welcome Station with Tyler’s all the way to Sunriver, would provide access to the DNF and improve alternative transportation connectivity between points of interest while potentially relieving congestion on the Deschutes River Trail, and for these reasons, this opportunity supports the goal of this project. However, since this corridor is part of the Wild and Scenic River designated area and has high resource values, additional information would need to be gathered on the carrying capacity of this corridor.</td>
</tr>
<tr>
<td>D-3: Bike and pedestrian crossing of Deschutes River in southwest Bend.</td>
<td>This is the same opportunity as Opportunity A5 listed for Corridor A: Cascade Lakes Highway. See that section of the report for more detail. It is noted here, because the crossing would impact both corridors.</td>
</tr>
</tbody>
</table>
Opportunity Analysis and Recommendation

Opportunity D-1: Transportation Demand Management/ITS/Phone Application

This opportunity would develop technology to create coordinated signage and messages to direct people to trails, inform them about trails, and indicate which trails are more heavily used and when to potentially use less busy trails. This opportunity could be in the form of physical ITS signs throughout the DNF and/or smartphone applications or websites with real-time information.

Key Considerations: This opportunity has the potential to improve and increase non transportation alternative transportation access to recreational opportunities by providing clear directional information that may not require parking in DNF and/or maximize use of existing parking by providing information on times when parking is more likely to be available. This type of service would likely work best if coordinated with partners that already focus on travel issues and transportation demand management.

Table 15. Opportunity D-1: Transportation Demand Management/ITS/Phone Application – Feasibility Assessment

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>Could direct visitors away from congested sites.</td>
<td>(lighter shading = more feasible; darker shading = less feasible)</td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>This opportunity does not require right-of-way, except for space for ITS signage.</td>
<td></td>
</tr>
</tbody>
</table>

Deschutes National Forest Alternative Transportation Study
### Implementation Factors

<table>
<thead>
<tr>
<th>Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical/Design Constraints</td>
<td>Would likely require an outside consultant to develop the software.</td>
<td>(lighter shading = more feasible; darker shading = less feasible)</td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Minimal to no construction costs, depending on the opportunity; however, costs would likely be associated with creating the technology.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Would require personnel or technology to regularly update the conditions of trails and DNF recreation sites.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>Could be coordinated with other agencies and private companies.</td>
<td></td>
</tr>
<tr>
<td>Community Support</td>
<td>Would support tourism in region by providing a tool for visitors.</td>
<td></td>
</tr>
</tbody>
</table>

*Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.*

**Recommended Next Steps for DNF:** The DNF would need to explore the level of effort required and the resources available to create and update this type of system. It is a large-scale opportunity, and the DNF would need to study possibilities and potential partnerships to develop and maintain a real-time system. Exploration of potential grants and partnerships would help move this opportunity forward.

**OPPORTUNITY D-2: BEND TO SUNRIVER PAVED PATH**

This opportunity would study and provide a path between Bend and Sunriver. A new path could be selected from alternatives proposed in the Bend to Sunriver Paved Path Feasibility Study report (2010), or could be a new design in the corridor. It could connect the Welcome Station to Tyler’s Traverse trail and areas south. One option is to create a paved access using existing trails and closed roads as the preferred route. Another option would parallel Conklin Road.

**Key Considerations:** This study would explore an opportunity has already been through a planning process; however, the process did not conclude with a recommendation and there could be other designs that would be more appropriate in the corridor. The corridor has numerous sensitive resources and is heavily used. The addition of a paved path in the area would likely encourage more people to use the route not only to access recreation, but also to use as a quick connection between Bend and Sunriver. A new parallel trail could relieve parking congestion at existing trails and potentially reduce the bicycle and pedestrian volumes on the Deschutes River Trail. However, because “Resource Protection” is the priority objective in this corridor, the opportunity might not be a good fit for this area. A better choice might be a paved path on an already disturbed area in the US 97 corridor. Although the opportunity would enhance access and promote non-motorized transportation within the DNF, this benefit needs to be balanced with objective of providing resource protection. The feasibility study would need to demonstrate the value of moving forward with a path given the key considerations.
Table 16. Opportunity D-2: Bend to Sunriver Path (Potentially Paved)

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>Consider potential impacts to deer migration corridor in this area.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>It is assumed that the land is mostly in the jurisdiction of DNF.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>Would need to consider environmental concerns and elk and Oregon Spotted Frog habitat.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Potentially substantial. Could require cut and fill, culverts, or bridges.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Moderate, depending on the design of the trail, but there will be a maintenance cost given that there is not an existing trail. Any addition to the system of trails would require continued maintenance by USFS or stakeholders.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>May need to involve other environmental agencies.</td>
<td></td>
</tr>
<tr>
<td>Community Support</td>
<td>Multiple user groups would benefit from improved access to the DNF, but residents in the region do not want to see overcrowding.</td>
<td></td>
</tr>
</tbody>
</table>

Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.

Recommended Next Steps for DNF: The DNF should seek to determine the carrying capacity of this corridor and the potential impact a newly paved or unpaved trail parallel to Conklin Road could have on demand. Because “Resource Protection” is the priority objective in this corridor, the opportunity may not be a good fit for this area. A better choice might be a paved path on an already disturbed area in the US 97 corridor. Although the opportunity would enhance access and promote non-motorized transportation within the DNF, the priority objective of resource protection should determine whether this opportunity should be moved forward.

OPPORTUNITY D-3 (A-4): BIKE AND PEDESTRIAN CROSSING OF DESCHUTES RIVER IN SOUTHWEST BEND

This is the same opportunity as Opportunity A-4 listed for Corridor A: Cascade Lakes Highway. See the section of the report, above discussing A-4, for more detail. This opportunity is noted here, because the crossing would strongly impact both corridors. In particular, it could bring many more people onto the Deschutes River Trail and into the sensitive habitats located within Corridor D.
OPPORTUNITY D-4: MANAGE AND REDUCE PARKING AREAS AND PROVIDE SHUTTLES

This opportunity would implement enhanced enforcement of parking regulations at existing parking areas and potentially reduce the size of some existing parking facilities. This could be coordinated with shuttles that would provide access to key drop off points at trailheads.

Key Considerations: Disruption of the dispersed (informal) parking that is presently known to be occurring could lead to unauthorized dispersed parking in other locations or non-forest service parking areas. However, managed, designated parking could also limit the resource degradation caused by errant parked vehicles. Support for shuttles is represented in Opportunities A-1 and C-2.

Table 17. Opportunity D-4: Manage and Reduce Parking Areas and Provide Shuttles – Feasibility Assessment

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>This opportunity would limit impacts by managing parking that is currently causing vegetative and other environmental impacts. Consider potential impacts to deer migration corridor in this area.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>No property acquisition is anticipated to be necessary for this opportunity. All areas that would be impacted are on DNF land.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>No design would be needed for this opportunity.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Construction not anticipated, other than potentially posting signs.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>There would be a cost associated with increasing enforcement (additional personnel and ticketing resources). Would require enforcement to be successful.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>May consider partnerships with law enforcement and tourist destinations to enforce parking and inform the public.</td>
<td></td>
</tr>
<tr>
<td>Community Support</td>
<td>Public support may be mixed on reducing parking or ticketing visitors. There may be initial frustration if parking is limited.</td>
<td></td>
</tr>
</tbody>
</table>

Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.

Recommended Next Step for DNF:

- Determine a few pilot locations to test this opportunity.
- Conduct internal DNF coordination and review of potential measures.
- Determine which resources (including partners) could be employed for enforcement and which entities could patrol and ticket.
CORRIDOR E: US 97 – BEND TO LAPINE

CORRIDOR E PLANNING CONTEXT

Roadway: US Highway 97 (US 97) is a two-way, four-lane (in the vicinity of DNF) highway that travels through California, Washington, and Oregon, including going through downtown Redmond and Bend. Through Bend, US 97 is a four-lane divided highway that has signals and cross traffic, and there is also a parkway bypass. The ADT volumes on US 97 are 11,700 vehicles, and there is a total capacity of 32,000 vehicles.

High-Use Sites: The corridor provides access to the High Desert Museum (privately owned); Newberry National Volcanic Monument (managed by the USFS); Lava Lands Visitor Center; Newberry Caldera (Paulina Lake and East Lake, and multiple recreation sites); and the communities of Bend, La Pine, and Sunriver.

Urban/Forest Interface Connections: Within the city limits of Bend, US 97 is the Bend Parkway and provides marked 5-foot bicycle lanes. There are no bike facilities along US 97, though there are paved shoulders (various widths throughout the corridor) on which cyclists ride. County bikeways provide connections between Sunriver and La Pine on Huntington Road, which parallels US 97 to the west and connects with Paulina Lake Road, which is also a bikeway. Cottonwood Road through Sunriver is also a designated bikeway that runs parallel to, and then connects with, US 97. County bikeway connections to the south are provided from Huntington Road Bikeway on Three Trappers Road, South Century Drive, and Burgess Road.

Existing Trail Connectivity: A new underpass that accommodates pedestrian, bicycle, and wildlife passage was recently completed to provide a connection between Lava Lands Visitor Center and Lava River Cave, which are managed by the USFS. The underpass is closed to motorized vehicles from November to April based on a wildlife winter range agreement with the Oregon Department of Fish and Wildlife. A new paved trail provides a bike and pedestrian connection from the Lava Lands to Sunriver and the Deschutes River Trail. The Benham Falls East parking area provides access to the Deschutes River Trail and the pedestrian/bicyclist bridge over the river.

Key Access and Connectivity Issues: Lava River Cave is a high-use location with a parking lot that is often at capacity (75 spots). There are also 15 parking spaces at the top of the Lava Butte adjacent to the Lava Lands Visitor Center that have a one-hour limit. The Lava River Cave parking is often at capacity, but the Lava Lands Visitor Center parking is not often at capacity. Benham Falls East is a busy weekend destination without enough designated parking spaces for the number of vehicles trying to visit the site. During an on-site observation conducted in the Summer of 2014 parking accumulation reached its peak from 1 p.m. to 2 p.m., with 39 vehicles in the parking lot and along the access road in an area that offers approximately 25 spaces. When drivers could not find a place to park their vehicles in a designated area,

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5 Volpe Report.
they created spots that blocked access to the bike trail or turned around and exited the site without staying to use the trail.

CORRIDOR E PRIORITY OBJECTIVE AND RECOMMENDATIONS

For the purpose of prioritizing objectives and identifying opportunities, US 97 was split into two sub-corridors due to the unique characteristics of the geography, opportunities, and users. The priority objective for the section of Corridor E from Bend to Sunriver (Sub-corridor E1) was determined by the DNF to be, “Foster the use of alternative transportation systems to manage visitation to forest resources and promote active transportation and connectivity among gateway communities and the forest (Alternative Transportation).” The priority objective for the section of Corridor E between the Sunriver area and La Pine (Sub-corridor E2) was determined by the DNF to be, “Cooperate and coordinate with regional and community efforts to promote economically and environmentally sound multimodal transportation systems (Collaboration).” Although all of the objectives are important, certain characteristics of the Corridor E sub-corridors lend themselves to having different priorities.

CORRIDOR E OPPORTUNITIES

This section reviews the identified opportunities for Corridor E: US 97, including key considerations and implementation concerns and opportunities. In addition, it provides recommended next steps for the DNF to take when it is ready to move forward with the opportunities in the corridor.

Table 18 presents three major opportunities identified within the corridor and evaluates how each opportunity furthers the objectives. The opportunities are also shown on Figure 7.
### Table 18. Corridor E: Bend to La Pine – Potential Opportunities and Consistency with Study Goal and Objectives

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Goal and Priority Objective Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>US 97: Bend to Sunriver</strong></td>
<td></td>
</tr>
<tr>
<td>E1: Paved multi-use trail connections from southwest Bend south to major destinations. Connections from Bend to High Desert Museum, to Lava Lands, to Sunriver. Could include access to the Lava River Cave and a more southern connection to Sunriver.</td>
<td>This opportunity would support alternative transportation between high-use visitor destinations as well as to the communities of Bend and Sunriver. This would encourage non-motorized access, thus lessening impacts on surrounding resources and improving safety by providing a designated path for non-motorized transportation. This opportunity meets both the goal of the Study and the priority objective of the corridor segment.</td>
</tr>
<tr>
<td><strong>US 97: Sunriver to La Pine</strong></td>
<td></td>
</tr>
<tr>
<td>E2: Create a paved path between Sunriver and La Pine.</td>
<td>This opportunity would support alternative transportation between two gateway communities to the DNF, encouraging collaboration within the region to promote economically and environmentally sound multimodal transportation systems. Because of limited USFS jurisdiction in this corridor segment, this opportunity would require another agency to lead the effort.</td>
</tr>
<tr>
<td>E3: Bike/trailhead hub on Paulina Road. Potential for some parking/trailhead and a staging area at the bottom of Paulina Road. Could be coordinated with new bus stop.</td>
<td>Does not meet the goal of the Study. This opportunity would serve a limited group of road bicyclists due to its distance from Paulina Lake to US 97 (almost 10 miles) and elevation climb, and thereby would not reduce environmental impacts to a high-use site. <strong>Therefore, providing a bike/trailhead hub and improving the parking at this location would not meet the goal of this Study.</strong></td>
</tr>
</tbody>
</table>
Figure 7. Corridors E1 and E2: (Highway 97 South, Bend to La Pine)

**Legend**
- Identified Opportunity that Meets Study Goal
- Corridors
  - A - Cascade Lakes Hwy
  - B - Sunriver Cutoff
  - D - Conklin Rd/FSR 41
  - E1 - Bend to Sunriver
  - E2 - Sunriver to La Pine
- Deschutes National Forest
- City Limits
- State Park
- Private Ownership
- Non-Motorized Paved Path

**Deschutes National Forest Alternative Transportation Study**

<table>
<thead>
<tr>
<th>Identified Opportunity that Meets Study Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>E1-1</strong> Paved multi-use trail connections from southwest Bend to key destinations</td>
</tr>
<tr>
<td><strong>E2-1</strong> Connect La Pine to Sunriver with a potential paved path</td>
</tr>
</tbody>
</table>
OPPORTUNITY ANALYSIS AND RECOMMENDATION

OPPORTUNITY E1-1: PAVED MULTI-USE TRAIL CONNECTIONS FROM SW BEND TO MAJOR DESTINATIONS

This opportunity would provide multi-use trail connections from Bend to key visitor destinations: High Desert Museum, Lava Lands, Lava River Cave, and Sunriver. The route could be located on already disturbed lands and use existing US 97 undercrossings to connect Bend to major destinations. The trail could connect to the new trail that goes from Lava Lands to Sunriver. It is a short bike ride between Sunriver and these major destinations, so a new paved trail would be attractive to “family” riders.

Key Considerations: This opportunity would need to consider the key elk area west of US 97, existing wildlife undercrossings, the potential jurisdictional issues, and the existing topography. No new undercrossings of US 97 would be necessary or recommended.

Table 19. Opportunity E1-1: Paved Multi-use Trail Connections from SW Bend to Major Destinations – Feasibility Assessment

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>This opportunity would be in already disturbed lands, but will need to consider wildlife undercrossings, the key elk area on the west side of US 97, and CO₂ emissions forecast.</td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>Could use old USFS roads to minimize required right-of-way acquisition. It is assumed that there are small areas outside the jurisdiction of DNF.</td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>Would need to identify the correct area to connect to the City of Bend facilities. There is a flat area that is already disturbed. Would need work within the constraints of existing wildlife crossings and protected lands.</td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Would require new construction of several miles of trail. Would be on already disturbed and flat areas. Would use existing US 97 multi-use undercrossing.</td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>New trails would require additional maintenance. Any addition to the system of trails would require continued maintenance by USFS or stakeholders.</td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>Coordination with the City of Bend and BPRD and potentially, private property owners as trailheads would be on City or private land.</td>
</tr>
<tr>
<td>Community Support</td>
<td>Few residents in the area. Some community members may not want a designated route through their neighborhood, while others in the community support trail connections.</td>
</tr>
</tbody>
</table>

Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)

Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.
**Recommended Next Steps for DNF:**

- Identify teaming partners and feasible route (potentially utilize abandoned forest service roads that are already disturbed and in USFS jurisdiction).
- To minimize impacts, only use existing US 97 multi-use undercrossing.

**OPPORTUNITY E2-1: CREATE A PAVED PATH BETWEEN SUNRIVER AND LA PINE**

This opportunity would provide a continuous paved route off of the highway between Sunriver and La Pine.

**Key Considerations:** This opportunity could work for road bicyclists willing to ride long distances and has the potential to improve safety by getting cyclists off of the highway. This opportunity also has the potential to improve and increase recreational opportunities within the region. Due to limited USFS jurisdiction in this corridor segment, this opportunity would require another agency to take the lead on most potential improvements and would require significant collaboration, since the land is primarily under private ownership.

**Table 20. Opportunity E2-1: Create a Paved Path Between Sunriver and La Pine – Feasibility Assessment**

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>The trail connections should support resource protection.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>It is assumed that the land is mostly outside the jurisdiction of DNF. Would require significant right-of-way acquisition.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>Would need to identify the correct areas to connect existing roadways with trails.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Substantial. Would require new construction of several miles of trail and would entail right-of-way costs.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Depending on the design of the trail, the paved connections between existing roadways would need to be maintained. Any addition to the system of trails would require continued maintenance by USFS or stakeholders.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>Would need to identify a lead agency or agencies. Requires coordination between the communities of Sunriver and La Pine and various private land owners.</td>
<td></td>
</tr>
</tbody>
</table>
Implementation Factors  

| Community Support | Some community members may not want a designated route through their neighborhood, while others in the community support trail connections. DNF does not have jurisdiction, and would need to get community buy-in and leadership for implementation. |

**Note:** It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.

**Recommended Next Steps for DNF:** This opportunity would not provide connections to the DNF from major origins. It would also require significant amounts of private right-of-way. Therefore, this opportunity should not be a top priority for the DNF. Unless a partner would like to lead this effort, the DNF should focus on more easily implementable solutions that better fulfill the objectives of this Study.

**CORRIDOR F: US 20 – BEND TO SISTERS, BLACK BUTTE, AND CAMP SHERMAN**

**CORRIDOR F PLANNING CONTEXT**

**Roadway:** US Highway 20 (US 20) is a two-way, two-lane road that connects central and eastern Oregon with the Willamette River valley west of the DNF via Santiam Pass across the Cascade Range, about 18 miles northwest of Sisters. There are sections of the highway that have three lanes to allow for passing. The speed limit on US 20 varies from 20 mph to 55 mph. In 2009, the highway had an ADT of 7,700 vehicles.

**High-Use Sites:** US 20 provides access to Sisters, Suttle Lake, Scout Lake, Tumalo State Park, Three Creek, Metolius Basin, Black Butte Trailhead, and Camp Sherman. Hoodoo ski area sits just west of Santiam Pass, and Suttle Lake sits to the east. Most day-use sites and their parking areas are set well back from the highway. The key recreational areas with high parking demand are at Black Butte, the Camp Sherman Store, Wizard Falls Fish Hatchery, Canyon Creek, and the Head of the Metolius.

**Urban/Forest Interface Connections:** There are no alternative transportation options along US 20 connecting Bend, Sisters, Black Butte, and Camp Sherman. A proposal for building a multi-use trail from Tollgate (Sisters) to Black Butte was released for public comment and was tabled by the USFS in the fall of 2014 after stakeholders were unable to come to agreement. Stakeholders pointed out that the Brooks/Scanlon gravel roadway provides an alternative route to US 20 between Sisters and Bend for bicyclists. However, Brooks/Scanlon Road is not paved and has steep elevation, making it very difficult for road bicyclists to travel.

**Existing Trail Connectivity:** Popular trails in this corridor include the Metolius River Trail, Suttle Lake Loop Trail, Metolius Windigo Trail, Black Butte Trails, and the Peterson Ridge Trial System. There are three scenic bikeways within or adjacent to Corridor F: Sisters to Smith Rock Scenic Bikeway, which
goes east from Sisters to Smith Rock State Park; Metolius River Loops, which is a series of loops within the Metolius Basin; and the Twin Bridges Scenic Bikeway, which starts in Bend and goes north to Tumalo State Park. Indian Ford Road, east of US 20, is a designated county bikeway.

**Key Access and Connectivity Issues:** The US 20 corridor overall lacks connectivity and access along the entire length of the corridor. US 20 generally is used by road bicyclists with advanced skill levels, and thus access is limited to specific areas throughout the corridor. Visitors to the Camp Sherman Store have been observed parking along the side of the road or in the open dirt area behind the store when the parking spaces in the paved lot are full. The separate parking area for the Metolius River Trail also fills up (capacity of 6 vehicles), with overflow parking occurring on a spur road at the back of the lot. In many cases, the Metolius River Trail parking lot serves both trail users and Camp Sherman Store patrons. The main mode for traveling between key destinations (Black Butte, Wizard Falls Fish Hatchery, Head of the Metolius, and Camp Sherman) is by motorized vehicle. Parking congestion occurs along the corridor, especially at Camp Sherman at the Camp Sherman Store and along roadways throughout the area.

**CORRIDOR F PRIORITY OBJECTIVE AND RECOMMENDATIONS**

For the purpose of prioritizing objectives and identifying opportunities, US 20 was split into three sub-corridors due to the unique characteristics of the geography, opportunities, and users. The priority objective for the section of Corridor F from Bend to Sisters (Sub-corridor E1) was determined by the DNF to be, “Foster the use of alternative transportation systems to manage visitation to forest resources and promote active transportation and connectivity among gateway communities and the forest (Alternative Transportation).” The priority objective for the section of Corridor F between Sisters and Black Butte (Sub-corridor F2) was determined by the DNF to be, “Promote access to diverse recreation opportunities for all visitors (Access).” Finally, The priority objective for the section of Corridor F from Black Butte to Camp Sherman (Sub-corridor F3) was determined by the DNF to be, “Encourage the use, enjoyment, and sustainability of natural resources while protecting DNF lands from degradation resulting from overuse and pollution (Resource Protection).” While all of the objectives are important, certain characteristics of the sub-corridors lend themselves to having different priorities.

**CORRIDOR F OPPORTUNITIES**

This section reviews the identified opportunities for Corridor F: US 20, including key considerations and implementation concerns and opportunities. In addition, it provides recommended next steps for the DNF to take when it is ready to move forward with the opportunities in the corridor.

Table 21 presents opportunities identified within the corridor and evaluates how each opportunity furthers the objectives. The opportunities are also shown on Figure 8.
Table 21. Corridor F: Bend to Sisters, Black Butte, and Camp Sherman – Potential Opportunities and Consistency with Study Goal and Objectives

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Goal and Priority Objective Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sub-corridor F1-1: US 20 – Bend to Sisters</strong></td>
<td></td>
</tr>
<tr>
<td>F1-1: Add a parallel multi-use trail along portions of US 20 (from Bend to Sisters). Existing county roads could provide bike connections parallel to US 20, but the multi-use trail would fill in where there are gaps.</td>
<td>This opportunity would support alternative transportation between two gateway communities to the DNF, thus lessening impacts on surrounding resources and improving safety by providing a designated path for non-motorized transportation. Therefore, this opportunity meets the goal of the Study and the priority objective for the corridor. However, because of limited USFS jurisdiction in this corridor segment, this opportunity would require another agency to lead the effort.</td>
</tr>
<tr>
<td>F1-2: Brooks/Scanlon Road improvements. Improve the surface of this old logging roadway to make it easier to bicycle between Sisters and Bend.</td>
<td><em>Does not meet the goal of the Study.</em> Brooks/Scanlon Road is already used by mountain bikers. It is far from most population centers and most popular attractions; also, much of the area is undisturbed, and it would have to be closed at times for deer winter range. Additionally, there are land encumbrances that make this opportunity less feasible. Improving this surface would serve long distance riders already using it and making trips between Sisters and Bend (but not necessarily to the DNF). Widening and paving could also induce auto us. <strong>Therefore, improving the road would not meet the goal of this Study.</strong></td>
</tr>
<tr>
<td><strong>Sub-corridor F-2: US 20 – Sisters to Black Butte</strong></td>
<td></td>
</tr>
<tr>
<td>F2-1: Sisters to Black Butte Ranch Multiuse Paved Trail Parallel to Highway 20. This opportunity would create a paved multi-use trail between Sisters and Black Butte Ranch on the west side of US 20.</td>
<td>This opportunity would support access to the DNF by providing connections to the DNF and increasing recreational opportunities for users of different skill levels, meeting both the goal of the Study and the priority objective for the corridor. This opportunity would also divert cyclists off of US 20. This approach would require multi-agency and stakeholder cooperation. If the project is in ODOT right-of-way, ODOT would need to be a partner.</td>
</tr>
<tr>
<td>F2-2: Shared Parking Partnerships. Pursue shared-use parking opportunities using parking lots in the City of Sisters.</td>
<td>This opportunity would utilize existing parking lots that may be underutilized at key recreation times such as weekends, holidays, and the summer to provide parking for alternative transportation access to the DNF with little or no environmental impact. Therefore, it meets the goal of the Study and the priority objective for the corridor.</td>
</tr>
<tr>
<td><strong>Sub-corridor F3: US 20 – Black Butte to Camp Sherman</strong></td>
<td></td>
</tr>
<tr>
<td>F3-1: Paved trail extending from Black Butte Ranch to Camp Sherman.</td>
<td>This opportunity would provide a paved connection from Black Butte Ranch to a major destination for bicyclists (Camp Sherman). This corridor segment has multiple land allocations such as Wild and Scenic River, Late Successional Reserve, Critical Habitat to be considered.</td>
</tr>
<tr>
<td>F3-2: Safer, grade-separated crossing of US 20 (e.g., underpass).</td>
<td>This opportunity would support alternative transportation to the DNF by providing a safe and continuous connection across US 20 between Black Butte Ranch to the west and campgrounds to the east. Coordination with ODOT would be needed to ensure that the integrity of US 20 as a freight route is maintained.</td>
</tr>
<tr>
<td>Opportunity</td>
<td>Goal and Priority Objective Assessment</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>F3-3: Trail from Sisters to Camp Sherman (parallel to US 20).</strong> Would create a paved multi-use trail between Sisters and Camp Sherman on the east side of Black Butte.</td>
<td>This opportunity would support access to the DNF by providing connections to the DNF and increasing recreational opportunities for users of different skill levels. This approach would require multi-agency and stakeholder cooperation, and coordination with existing planning documents. This corridor segment has multiple land allocations such as Wild and Scenic River, Late Successional Reserve, Critical Habitat to be considered, making implementation of projects more difficult and complex.</td>
</tr>
<tr>
<td><strong>F3-4: Multi-use trail system in the Camp Sherman area.</strong> Would provide links to destinations for a broad range of users, including bicyclists and hikers. Surface could be paved, natural or a mix of types.</td>
<td>This opportunity would support access to the DNF by providing connections to the DNF and increasing recreational opportunities for users of different skill levels. This approach would require multi-agency and stakeholder cooperation, and coordination with existing planning documents. While this opportunity meets some of the Study’s goal, this corridor segment has multiple land allocations such as Wild and Scenic River, Late Successional Reserve, Critical Habitat to be considered, making implementation of projects more difficult and complex.</td>
</tr>
<tr>
<td><strong>F3-5: Wayfinding signage improvements.</strong> To direct people at parking areas and trails.</td>
<td>This opportunity would provide improved guidance to visitors of the DNF. Enhanced signage could help manage dispersed or undesignated parking areas and trails, so that there would be less environmental resource disturbance. Therefore, it meets the goal of the Study and the priority objective for the corridor.</td>
</tr>
</tbody>
</table>
Figure 8. Corridors F1, F2, F3: (Hwy 20 to Sisters, Black Butte Ranch, and Camp Sherman)

<table>
<thead>
<tr>
<th>Identified Opportunity that Meets Study Goal</th>
<th>Corridors</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1-1 Add a parallel multi-use trail along portions of Highway 20 (from Bend to Sisters)</td>
<td>F1 - Bend to Sisters</td>
</tr>
<tr>
<td>F2-1 Sisters to Black Butte Ranch Multisuse Paved Trail Parallel to Highway 20</td>
<td>F2 - Sisters to Black Butte Ranch</td>
</tr>
<tr>
<td>F2-2 Shared Parking Partnerships</td>
<td>F2 - Sisters to Black Butte Ranch</td>
</tr>
<tr>
<td>F3-1 Paved trail extending from Black Butte Ranch to Camp Sherman</td>
<td>F3 - Black Butte Ranch to Camp Sherman</td>
</tr>
<tr>
<td>F3-2 Safer, grade-separated crossing of Highway 20</td>
<td>F3 - Black Butte Ranch to Camp Sherman</td>
</tr>
<tr>
<td>F3-3 Trail from Sisters to Camp Sherman</td>
<td>F3 - Black Butte Ranch to Camp Sherman</td>
</tr>
<tr>
<td>F3-4 Multi-use trail system in the Camp Sherman area</td>
<td>F3 - Black Butte Ranch to Camp Sherman</td>
</tr>
<tr>
<td>F3-5 Signage Improvements</td>
<td>F3 - Black Butte Ranch to Camp Sherman</td>
</tr>
</tbody>
</table>
OPPORTUNITY ANALYSIS AND RECOMMENDATION

OPPORTUNITY F1-1: ADD A PARALLEL MULTI-USE TRAIL ALONG PORTIONS OF US 20 (FROM BEND TO SISTERS)

There are currently county roads that provide some access along US 20 between Bend and Sisters, and this opportunity would provide connections between the county roads where gaps currently exist. This opportunity would therefore provide a continuous route, off of the highway, for bicyclists traveling between Bend and Sisters.

**Key Considerations:** This opportunity could work for road bicyclists willing to ride long distances (the length of this corridor is more than 20 miles) and has the potential to improve safety by getting cyclists off of the highway. This opportunity has the potential to improve and increase recreational opportunities. However, because of limited USFS jurisdiction in this corridor segment, this opportunity would require another agency to take the lead on most potential improvements. ODOT and Deschutes County are the primary owners of the right-of-way for this segment of US 20.

**Table 22. Opportunity F1-1: Add a Parallel Multi-Use Trail Along Portions of US 20 (from Bend to Sisters) — Feasibility Assessment**

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>Trail connections should support resource protection.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>It is assumed that the land is not in the jurisdiction of DNF. ODOT and the county own most of the right-of-way.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>Would need to identify the correct areas to connect existing roadways with trails.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Substantial. Would require new construction of several miles of trail and would entail right-of-way costs.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Depending on the design of the trail, the paved connections between existing roadways would need to be maintained. Maintenance of a 20-mile trail would likely be extensive. Any addition to the system of trails would require continued maintenance by USFS or stakeholders.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>Would need to identify a lead agency or agencies, and would require a coordinated awareness effort to ensure the cooperation of stakeholders.</td>
<td></td>
</tr>
</tbody>
</table>
Implementation Factors | Considerations
--- | ---
Community Support | Some community members may not want a designated route adjacent to their neighborhood, while others in the community support trail connections.

Feasibility Generalizations
(lighter shading = more feasible; darker shading = less feasible)

Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.

Recommended Next Step for DNF:

The DNF does not have jurisdiction along the highway. Although this project could be an excellent opportunity to connect the communities of Bend and Sisters, providing alternative transportation access to the DNF would be a secondary result of this opportunity. Consequently, the DNF’s role should be to support another entity if one comes forward to lead this opportunity.

**OPPORTUNITY F2-1: CREATE A MULTI-USE PAVED TRAIL PARALLEL TO US 20 (FROM SISTERS TO BLACK BUTTE)**

This opportunity would provide a paved multi-use trail parallel to and on the west side of US 20 from Sisters to Black Butte Ranch. This would provide a continuous route, off of the highway, for walkers, runners, and bicyclists traveling between Sisters and Black Butte Ranch.

**Key Considerations:** This opportunity has already been through a planning process once and failed to advance due to local community concerns and some opposition. The opportunity would enhance access and promote non-motorized transportation within the DNF. There is also the potential to improve safety by getting cyclists off of the highway. This opportunity would require another agency to take the lead on most potential improvements in this corridor segment as it would likely be located within the ODOT right-of-way. Any further proposals should consider engaging a wide spectrum of the community to develop additional consensus before moving forward.
Table 23. Opportunity F2-1: Create a Multi-Use Paved Trail Parallel to US 20 (from Sisters to Black Butte Ranch) – Feasibility Assessment

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>Consider potential impacts to deer migration corridor in this area.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>It is assumed that the land is mostly in the jurisdiction of DNF, but some right-of-way would be required.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>Minimal to none. Would need to find the correct areas to connect to roadways and properties. Black Butte Ranch is gated.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Substantial. Would require new construction of seven miles of trail and would entail trail and right-of-way costs.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Maintenance could be moderate to substantial for a seven mile stretch and could include patching/resurfacing, clearing the trial, sign maintenance, trash, volunteer coordination, and more. Any addition to the system of trails would require continued maintenance by stakeholders or USFS.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>Requires identification of a lead entity to the develop proposal and gain community consensus.</td>
<td></td>
</tr>
<tr>
<td>Community Support</td>
<td>Some community members may not want a designated route adjacent to their neighborhood, while others in the community support new trail connections. The earlier proposed project was strongly opposed by some community members.</td>
<td></td>
</tr>
</tbody>
</table>

Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.

Recommended Next Step for DNF:

- Identify who should be leading this opportunity (it should not be the USFS).

OPPORTUNITY F2-2: SHARED-USE PARKING PARTNERSHIPS

This is the same type of opportunity as was discussed for Corridor A (Opportunity A1), but would include creating parking partnerships at locations within Sisters rather than within Bend.

Key Considerations: This opportunity could work for bicyclists willing to bike additional miles to their preferred mountain bike trailheads or to their road bicyclist destinations. Locations for shared parking have not yet been identified.
Implementation considerations would be similar to those for Opportunity A-1. (See the table for A-1.)

**Recommended Next Steps for DNF:**

- Contact potential parking partners to gauge level of interest.
- Conduct an internal review to determine what incentives the DNF would be willing to provide to encourage parking holders to share parking with the DNF visitors.

**OPPORTUNITY F3-1: PAVED TRAIL EXTENDING FROM BLACK BUTTE RANCH TO CAMP SHERMAN**

This opportunity would provide a paved multi-use trail parallel to US 20 from Black Butte Ranch to Camp Sherman. This opportunity would provide a continuous route, off of the highway, for walkers, runners, and bicyclists traveling between Black Butte Ranch and Camp Sherman.

**Key Considerations:** This opportunity has similar considerations as the other trail opportunities; however, multiple land allocations such as Wild and Scenic River, Late Successional Reserve, Critical Habitat should be considered in this corridor. This opportunity would require multi-agency and stakeholder cooperation, as well as coordination with existing planning documents. Review of social carrying capacity should be considered.

**Table 24. Opportunity F3-1: Paved Trail Extending from Black Butte Ranch to Camp Sherman – Feasibility Assessment**

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>Environmental considerations would rank medium to high in significance. This segment has critical habitat in mature and old growth forest, and is on the edge of known Northern Spotted Owl home range.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>It is assumed that the land is mostly in the jurisdiction of DNF.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>Crossing US 20 would be a constraint. Would need to identify the correct areas to connect existing roadways with trails.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Would require new construction of trail and would entail trail and crossing costs.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Maintenance could be moderate to substantial and could include patching/resurfacing, clearing the trial, sign maintenance, trash, volunteer coordination, crossing maintenance, and more. Any addition to the system of trails would require continued maintenance by stakeholders or USFS.</td>
<td></td>
</tr>
</tbody>
</table>
### Implementation Factors

<table>
<thead>
<tr>
<th>Partnership, Agreements, and Coordination</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consider partnership with Camp Sherman and Friends of the Metolius as well as coordination with existing plans.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Community Support</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would need to coordinate support from the Camp Sherman community and Friends of the Metolius. A paved path is generally not supported. Some community members may not want a designated route through their neighborhood.</td>
<td></td>
</tr>
</tbody>
</table>

Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.

### Recommended Next Step for DNF:

- Understand how this type of opportunity would need to look to gain support from the community.
- Understand potential conflicts with existing plans.

### OPPORTUNITY F3-2: CREATE A SAFER, GRADE-SEPARATED CROSSING OF US 20

This opportunity would create a grade-separated pedestrian crossing of US 20. The location is to be determined.

**Key Considerations:** This opportunity should consider the presence of Late Successional Reserves (LSR) and other environmental concerns. The USFS defines LSRs as having the objective of protecting and enhancing conditions of late-successional and old-growth forest ecosystems, which serve as habitat for late-successional and old-growth related species. In addition, overhead crossings of state highways would require coordination with ODOT and would need to consider freight mobility; a highway undercrossing might be more feasible for this opportunity.
Table 25. Opportunity F3-2: Create a Safer, Grade-Separated Crossing of US 20 – Feasibility Assessment

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental E</td>
<td>Environmental considerations would rank high in significance. This segment has critical habitat in mature and old growth forest, and is on the edge of known Northern Spotted Owl home range.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>Would need to work with ODOT to identify appropriate location.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>An overhead crossing is not a likely option. Would need to consider that US 20 is a freight route with constraints.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Could be substantial. Construction costs will depend on design, but it is likely the opportunity will consider a tunnel or structure.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Maintenance could be moderate to substantial with a structure and would require continued maintenance by stakeholders or USFS.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>Would need to establish a partnership with ODOT.</td>
<td></td>
</tr>
<tr>
<td>Community Support</td>
<td>Community support will likely depend on how the crossing connects to trails.</td>
<td></td>
</tr>
</tbody>
</table>

Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.

Recommended Next Step for DNF:

- Work with ODOT to identify a location.

OPPORTUNITY F3-3: CREATE A MULTI-USE TRAIL PARALLEL TO US 20 (FROM SISTERS TO CAMP SHERMAN)

This opportunity would provide a paved multi-use trail parallel to and on the east side of US 20 that would provide a continuous route, off of the highway, for walkers, runners, and bicyclists traveling between Sisters and Camp Sherman.

Key Considerations: This opportunity either would be on ODOT right-of-way near US 20 or would need to go through some private property. The east side of Black Butte could connect to some campgrounds. The opportunity would enhance access and promote non-motorized transportation within the DNF. There is also the potential to improve safety by getting cyclists off of the highway. However, multiple land allocations such as Wild and Scenic River, Late Successional Reserve, Critical Habitat should be
considered and review of conflict with other planning or regulatory efforts. In addition, some Camp Sherman community members have some concerns with a paved path in Camp Sherman.

### Table 26. Opportunity F3-3: Create a Multi-Use Trail Parallel to US 20 (from Sisters to Camp Sherman) – Feasibility Assessment

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>Environmental considerations would rank medium to high in significance. This area has critical habitat in mature and old growth forest, and is on the edge of known Northern Spotted Owl home range.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>The land near Black Butte is assumed to be mostly in the jurisdiction of DNF. The path may make sense to be located in the ODOT right-of-way south of Indian Ford Road.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>Not enough information to know what the constraints would be, given potential steep vertical grades and water features.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Substantial. This could include miles of trail and a bridge replacement across Indian Ford Rd.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Maintenance could be moderate to substantial and could include patching/resurfacing, clearing the trial, sign maintenance, trash, volunteer coordination, crossing maintenance, and more. Any addition to the system of trails would require continued maintenance by stakeholders or USFS.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>Identify a lead entity to the develop proposal and gain community consensus.</td>
<td></td>
</tr>
<tr>
<td>Community Support</td>
<td>Would need to coordinate support from the Camp Sherman community and other stakeholders to gain community support.</td>
<td></td>
</tr>
</tbody>
</table>

*Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.*

**Recommended Next Step for DNF:** This opportunity is not well defined, and therefore the DNF or the lead entity should review potential routes to understand the feasibility of the trail and identify potential environmental or social concerns. The lead entity should engage the community to determine whether there is support for this opportunity.

**OPPORTUNITY F3-4: MULTI-USE TRAIL SYSTEM IN THE CAMP SHERMAN AREA**

This opportunity would create a new, coordinated multi-use trail system throughout the Camp Sherman area. It would provide dedicated recreation routes and areas for walkers, runners, and bicyclists. Currently, there are four to five bicycle loops in the general area of Camp Sherman along existing paved county and forest service roads. The loop (Hwy 14 & Hwy 12) is paved and is designated a National Scenic Bikeway, traffic is 30-45 mph, visibility is limited and there are no shoulders. Currently biking is
done by adults who are solid road-bikers, however there is ever increasing demand and use by families on the weekends in the summer. Separation from automobile traffic is key to the enjoyment and likely improved safety of walkers, runners, and the more recreational bicyclists.

**Key Considerations:** This opportunity provides opportunities for partnerships with the Camp Sherman community. This area has multiple land allocations such as Wild and Scenic River, Late Successional Reserve, and Critical Habitat to be considered. A designated trail system could help manage how people are using the DNF and could shift people from driving to biking or walking through the community. This opportunity could reach a broad range of users, and therefore consideration should be given to a variety of surface types for the trails. Paved trails would provide the best surface for road bicyclists, but some Camp Sherman residents have voiced concerns about a paved trail system. This opportunity would require stakeholder cooperation and review of existing planning documents.

**Table 27. Opportunity F3-4: Multi-Use Trail System in Camp Sherman – Feasibility Assessment**

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>Environmental considerations would rank high in significance. This area has critical habitat in mature and old growth forest, and is on the edge of known Northern Spotted Owl home range. It is within the Metolius Wild and Scenic River Corridor.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>This could include private and/or DNF land.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>Will need to identify locations that have the least environmental and social impacts and that connect the popular destinations.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Moderate to potentially substantial, depending on the NEPA and planning costs and the type of trail surface. Does not require substantial infrastructure.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Adding to the system of trails would require continued maintenance by USFS or stakeholders.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>Consider a partnership with Camp Sherman and Friends of the Metolius, as well as coordination with other planning or regulatory efforts.</td>
<td></td>
</tr>
<tr>
<td>Community Support</td>
<td>Would need to coordinate with and gain support from the Camp Sherman community and Friends of the Metolius. Paved paths are generally not supported.</td>
<td></td>
</tr>
</tbody>
</table>

*Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.*
Recommended Next Steps for DNF:

- Work with stakeholders to understand their concerns and the types of projects they would support.
- Work with the community to illuminate the tradeoffs between providing better off-road travel choices for bicyclists and having high numbers of bicyclists on the roads and, potentially, more people driving on the roads rather than biking on a trail.
- Understand how this type of opportunity would need to look in order to gain support from the community and understand potential conflicts with other planning or regulatory efforts.

**OPPORTUNITY F3-5: WAYFINDING SIGNAGE IMPROVEMENTS IN THE CAMP SHERMAN AREA**

This opportunity would provide improved and consistent wayfinding signage in the Camp Sherman area to inform and guide visitors to destinations within the DNF (Camp Sherman, Head of the Metolius, and Wizard Falls Fish Hatchery) with better road signage.

**Key Considerations:** This opportunity has the potential to provide a clear map for visitors of the Camp Sherman area. Special consideration should be given to the desires of the Camp Sherman community for how visitors ought to be traveling through the area.

**Table 28. Opportunity F3-5: Wayfinding Signage Improvements in the Camp Sherman Area – Feasibility Assessment**

<table>
<thead>
<tr>
<th>Implementation Factors</th>
<th>Considerations</th>
<th>Feasibility Generalizations (lighter shading = more feasible; darker shading = less feasible)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Considerations</td>
<td>Signage improvements could help visitors to the DNF access the appropriate areas.</td>
<td></td>
</tr>
<tr>
<td>Property Acquisition/Right-of-Way</td>
<td>Would need to work to have any improvements be within the right-of-way.</td>
<td></td>
</tr>
<tr>
<td>Physical/Design Constraints</td>
<td>Need to meet county and MUTCD standards.</td>
<td></td>
</tr>
<tr>
<td>Construction Costs</td>
<td>Depending on the type of sign improvements, this project should be lower cost.</td>
<td></td>
</tr>
<tr>
<td>Operations and Maintenance</td>
<td>Limited operations and maintenance are anticipated to be necessary. Would be considered in overall larger highway maintenance.</td>
<td></td>
</tr>
<tr>
<td>Partnerships, Agreements, and Coordination</td>
<td>Forest Road 14 is County Road and there may be a need for coordination</td>
<td></td>
</tr>
</tbody>
</table>
### Implementation Factors

| Community Support | Improved signage could increase visitors to the area, which could be unwelcome for some members of the community. However, improved signage could guide visitors to the appropriate trails and DNF destinations. |

*Note: It is important to note that the assigned classifications are preliminary assessments to provide a generalized snapshot of level of difficulty. A more in-depth analysis would need to be conducted to understand true feasibility.*

### Recommended Next Steps for DNF

*The DNF should consider a wayfinding study to evaluate visitor behavior in order to determine key locations for wayfinding. Also, wayfinding should be created in coordination with Jefferson County and local communities to maximize effectiveness and minimize jurisdictional conflicts.*
CHAPTER 4 FUTURE OPPORTUNISTIC ACTIONS

Although the Study identified opportunities discussed in Chapter 3, ever-changing conditions could require the need for additional opportunities or solutions to support and improve alternative transportation in the DNF. The table below provides a basic list of solutions that could be considered in the future, some of which have already been identified as applicable for a specific corridor or corridors, and comments on their viability. The viability of these actions is predicated on the need for adequate staffing and resources. The list is not all-inclusive.

Table 29. Additional Opportunities and Their Viability in the DNF

<table>
<thead>
<tr>
<th>Resource</th>
<th>Issue(s)</th>
<th>Potential Solution</th>
<th>Considerations</th>
</tr>
</thead>
</table>
| Transportation Facilities and Traffic Operations | • Limited mobility during peak times delays emergency response times.  
• Lack of traffic calming near recreation sites. | Safety Improvement: Reduce the speed limit and/or create speed zones. Reduction of the speed limit would depend on the features of specific areas of the highway and traffic patterns.  
Install traffic-calming infrastructure, such as bike-friendly speed bumps, near points of interest.  
Intelligent Transportation Systems (ITS): Could inform and visitors of traffic conditions, remind them of bikes on road, and inform them of parking limitations at trailheads and alternate routes or parking areas. | Needs to be consistent with applicable road standards.  
Needs to be consistent with applicable road standards and typical maintenance activities.  
Needs to be consistent with applicable road standards. |
<table>
<thead>
<tr>
<th>Resource</th>
<th>Issue(s)</th>
<th>Potential Solution</th>
<th>Considerations</th>
</tr>
</thead>
</table>
| Parking and Access| • Lack of parking spaces during peak times.  
• Inefficient use of parking lots.  
• Parking on shoulders and dispersed parking. | Provide priority parking for carpools, vanpools, and buses and/or restrict parking to vehicles with minimum number of occupants. | Would require monitoring and enforcement resources. |
<p>|                   |                                                                           | Restripe and/or reconfigure parking lots for greater efficiency.                      | Cost.                                                                           |
|                   |                                                                           | Increase number of day-use fee sites.                                                 | Would require internal DNF coordination and enforcement.                         |
|                   |                                                                           | Provide park and rides in conjunction with private or public shuttle service, vanpool or carpool services. | Opportunities already identified in this study. Ongoing consideration for high-use sites. |
|                   |                                                                           | Promote use of off-site and underutilized parking lots.                               | Could be promoted through ITS and web information.                              |
|                   |                                                                           | Add “No Parking” signs.                                                                | Would require new policy and enforcement to be effective.                        |
|                   |                                                                           | Conduct a bike/pedestrian road safety audit.                                         | Such a study by transportation engineers could identify the most crucial areas to implement spot treatments at key locations that could improve bike/ped safety in consideration of economic constraints. |</p>
<table>
<thead>
<tr>
<th>Resource</th>
<th>Issue(s)</th>
<th>Potential Solution</th>
<th>Considerations</th>
</tr>
</thead>
</table>
| Bicycle, Pedestrian, and Trail Systems | - Roadways with high speeds and little or no designated bicycle facilities.  
- Lack of pedestrian crossing facilities.  
- Lack of bike facilities.  
- Lack of bike racks.  
- Increasing use by bicyclists. | Improve crossings of major roadways to improve trail connectivity. Advance intersection or pedestrian crossing intersection warning signs that would allow drivers to gradually reduce speed instead of a slamming on the brakes at a crossing. Install pedestrian-triggered warning lights.  
Complete planning and conceptual design for multi-use path connections from urban fringe to high-use sites.  
Shoulder improvements where possible.  
Promote bike share/rental service.  
Bike hub facilities such as bike parking, water fountains, and air pumps.  
Develop a multi-agency marketing plan to promote alternative transportation and clearly outline alternative transportation options and potential itineraries. | Needs to be consistent with applicable road standards.  
Opportunities already identified. Needs to consider cost and environmental constraints.  
Already being implemented, such as on Skyliners Road.  
Opportunities already identified. Could be implemented with small hubs or vans, so bikers would have to travel only one way.  
Could be installed at key locations.  
Would require coordination and funding. |
| Signage and Public Information | - Limited wayfinding.  
- Lack of safety signage.  
- Lack of parking and overflow signs.  
- Lack of signs at recreation sites. | Develop a comprehensive, multimodal signage/wayfinding plan.  
Add safety signage for autos; e.g., “Bikes on Roadway” with “Share the Road.”  
Create a traveler webpage clearinghouse with links to recreation travel itineraries (e.g., TriMet 4T – Trail, Tram, Trolley and Train), trail information, weather and incidents, carpool websites, transit websites, parking, and hours of operation. | This plan could improve bicycle and pedestrian access and circulation.  
Needs administration and organization.  
Needs administration and organization. Would require dedicated maintenance to stay current. |
<table>
<thead>
<tr>
<th>Resource</th>
<th>Issue(s)</th>
<th>Potential Solution</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Encourage education of bicyclists and motorists on rules of the road and courteous behavior.</td>
<td>Partnerships and media options.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Implement “Share a Ride” programs to help coordinate carpooling to the recreation sites.</td>
<td>Partnerships and media options.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Driver Awareness Program: The program would be aimed at educating drivers regarding bikes on roadways and pedestrian movements in the area.</td>
<td>Partnerships and media options.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Parking education related to parking areas and safety.</td>
<td>Partnerships and media options.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide shuttle bus service.</td>
<td>Lava Butte shuttle to start in May 2015, and a grant request for increased winter shuttle to Mt. Bachelor and sno-parks has been submitted. Needs further study to determine the viability of additional opportunities.</td>
</tr>
<tr>
<td>Transit</td>
<td>• Lack of public transit.</td>
<td>Engage private recreation bus companies to market and provide service to more local or diverse clientele.</td>
<td>Opportunity already identified. Private recreation buses currently operate.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Improve and distribute transit and carpool rider information.</td>
<td>Needs administration.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Modify trail systems for better connections.</td>
<td>Some of the trail opportunities are already identified in this report could provide better access to transit.</td>
</tr>
<tr>
<td>Natural and Scenic Resources</td>
<td>• Degradation of natural scenic resources.</td>
<td>Implement a “Plants grow by the inch but die by the foot” educational campaign about not going off the trails.</td>
<td>Requires cost and outreach.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide enhanced or real-time travel information on website.</td>
<td>Needs development and administration, possibly through a Transportation Management Association (TMA).</td>
</tr>
</tbody>
</table>
### Resource Issue(s) Potential Solution Considerations

<table>
<thead>
<tr>
<th>Resource</th>
<th>Issue(s)</th>
<th>Potential Solution</th>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visitors</td>
<td>• Overcrowding may be affecting the visitor experience.</td>
<td>Recommend sites to visitors and provide itineraries around peak traffic patterns.</td>
<td>Needs development and administration, possibly through a TMA.</td>
</tr>
<tr>
<td></td>
<td>• Facilities and signage may not be meeting the range of users’ needs.</td>
<td>Use Quick Response (QR) scan codes to upload to mobile devices.</td>
<td>Needs development and administration, possibly through a TMA.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Develop a visitor application for mobile devices.</td>
<td>Needs development and administration, possibly through a TMA.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Develop a visitor reservation system.</td>
<td>Needs development and administration, possibly through a TMA.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Create a portal to connect non-profits with government agencies needing volunteers.</td>
<td>Needs development and administration, possibly through a TMA.</td>
</tr>
<tr>
<td>Partnerships</td>
<td>• Alternative transportation opportunities, especially to mitigate for congestion impacts affect multiple agencies, jurisdictions, and organizations, thus making coordinated strategies more challenging to implement.</td>
<td>Engage volunteer coordinator and volunteers for specific needs.</td>
<td>Needs development and administration, possibly through a TMA.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transportation Management Association (TMA): Create an organization to coordinate alternative transportation, transit, and Transportation Demand Management (TDM) programs.</td>
<td>Would require developing a partnership, funding, and ongoing commitment from members.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Implement management and enforcement.</td>
<td>Would need multiagency coordination. Would require resources.</td>
</tr>
</tbody>
</table>
CHAPTER 5 NEXT STEPS AND IMPLEMENTATION

NEXT STEPS

The Study identified opportunities that can be further developed to achieve the study goal. Chapter 3 provided a brief discussion of “next steps” for each individual opportunity if the DNF chooses to move forward with these opportunities. This section outlines some other steps that may be necessary to see the opportunities to fruition that are not opportunity specific.

DATA NEEDS

Further developing opportunities may require additional data needs and protocols. The data protocols are intended to be used by the partner agencies to ensure that data is collected consistently and that resources are used efficiently. Once the opportunities are being implemented, additional data should be collected to assess the success of implementation, direct adjustments and refinements, and monitor the program in the long term. Data collection methods from National Park Service projects were used as a basis for protocols. Some of the data needs to further develop opportunities may include:

ROADWAY DATA

- Information about transportation facilities for roadways (e.g., roadway width, shoulders, etc.) may be needed. This information includes data about pedestrian and bicycle facilities, such as shoulders and bicycle parking and racks.
- Traffic data and forecasts for passenger vehicles, Americans with Disabilities Act (ADA) accessibility, recreational vehicles, tour buses, bicycles, and pedestrians are needed to determine the existing and forecasted congestion points within the corridor. Other data needed are vehicle classification (passenger vehicle, pickup, or sports utility vehicle [SUV]; motorcycle; camper pickup; recreational vehicle [RV]; private van [shorter than approximately 30 feet]; commercial/tour van [longer than approximately 30 feet]; and towed vehicle [e.g., passenger vehicle plus towed vehicle]) and vehicle occupancy. Data should include information about on- and off-road pedestrian and bicycle facilities.

Data Protocols

Automatic traffic tube counters can be placed at various locations to collect auto and bicycle data. The traffic counters record volumes in one-hour increments in each direction of travel. The traffic counters could collect data for a peak season weekend, covering a 72-hour period from 7 p.m. Friday through 7 p.m. Monday.

Vehicle classification, license plate number, and occupancy data can be manually recorded by field technicians located at points of interest. The data should be collected the same weekend as the traffic counts are made, for consistency. Data on vehicle movements and patterns provides the most accurate
picture of current conditions in the area, and the visitor use and experience. The goal is to determine how many of these cars were stopping at more than one location in the study area.

PARKING AND ACCESS

Existing parking lots and areas need to be inventoried to determine the parking capacity. At striped lots, the number of available spaces needs to be counted, and the use of informal spaces should be inventoried. Capacity should also be estimated for unstriped areas such as roadside parking.

Usage counts need to be performed to capture peak, daily, and seasonal usage and occupancy. Data on the duration of parking should also be collected for all vehicles. Circulation patterns and problems should be noted as well, particularly conflicts among modes—automobiles, bicycles, and pedestrians.

Visitor and use forecasts are needed in order to determine the projected parking needs within the corridor for passenger vehicles, ADA accessibility, recreational vehicles, tour buses, bicycles, and pedestrians.

Data Protocols

Parking activity data should be manually collected by field technicians stationed at the parking lots and by field technicians driving a predetermined route to monitor the roadside and unmarked parking areas. Field technicians could record data every half-hour.

For parking occupancy, the number of vehicles within a parking lot or roadside parking area at a given time should be recorded. Because parking spaces may not always be clearly designated with striping, the parking capacity available in each lot or alongside the road may need to be estimated. The number of actual parking spaces may vary slightly if parking configurations are managed or more clearly designated. For example, some roadside areas change from parallel to head-in parking, the latter accommodating more vehicles. Also note that parking utilization should include all vehicles present, even though the spaces used may not be authorized or acceptable due to resource and/or safety issues.

For parking duration, license plates of vehicles within a lot should be recorded every half-hour. All vehicles would be given an estimated parking duration rounded to the half-hour. The durations of vehicles parked in the spaces are then placed into categories: 0 to 1 hour, 1 hour to 2 hours, and so on. The average parking duration should be calculated for all vehicles that both arrived and departed during the 12-hour monitoring period. Vehicles that arrived before or departed after the monitoring would not be included in the calculation of average parking duration.

For parking access and movements, field technicians would use visual observation to document parking circulation.

BICYCLE, PEDESTRIAN, AND TRAIL SYSTEMS

The purpose of collecting trail-related user data is to identify opportunities for improving safety, accessibility, and connectivity of trails and trailheads in the study area and improving visitor use.
Data Protocols

Trail use counts could be conducted at the same time as the traffic data counts. Data collection generally would begin at 7a.m. and be completed by 7 p.m. Trail use activities would be observed at trailheads. For trails that have multiple entry and exit points, a common area would be observed. In order to capture all trail use, the counts would include users moving in both directions at trailheads or along the trails at a common location. Both pedestrians and bicyclists would be included in the counts.

SIGNAGE AND PUBLIC INFORMATION

Adequate signage for safety and wayfinding must be balanced with the need to minimize clutter. To achieve the balance, existing signage, deficiencies, and opportunities to consolidate need to be identified. Existing signs at parking lots and parking areas, developed recreation sites, historic and scenic features, and trailheads need to be inventoried to determine their adequacy and to identify needs. The location, size, type, and condition of each sign should be recorded and photographed.

Data Protocols

A visual survey should be conducted that counts and records, on paper and via a photographic record, the location, size, type, and condition of signs.

TRANSIT

Because the provision of a shuttle bus or transit, existing public and private transit services were identified there may be data needs to fully analyze the opportunity. Service characteristics and connections:

- Existing routes
- Major connections
- Hours of service
- Headways
- Origin and destination locations
- Route descriptions
- Capacity
- Fares
- Transit center locations
- Location and capacity of park-and-ride lots

- System performance and productivity:
  - Ridership—annual and daily for system, average boardings for each route, percentage of total ridership
  - Mileage
  - Fare collection
  - Passengers/boardings per revenue mile
  - Passengers per service hour or passengers per trip
Cost recovery
- Cost per passenger
- Passengers per trip
- Service hours
- Operating costs per hour
- Cost recovery data

To connect the study area to existing transit systems, viable parking sites and alternatives for taking visitors to the trailheads and recreation sites by shuttle should be identified as well.

Data Protocols

Transit service providers routinely collect data and have their own protocols for doing so.

CONTINUED STAKEHOLDER AND COMMUNITY SUPPORT

To successfully implement long-term efforts, there needs to be a collaboration plan. Building stakeholder support and cultivating champions are central to that plan. To do this, a broad base of support will be needed in support of a clear vision or mission. An important way to build support for community change is to engage those most affected as partners in achieving the vision. Clear identified roles and responsibilities, accountability for actions, and strong management will entrust the community in the collaboration plan as well as continual solicitation and responding to feedback as opportunities develop.

IDENTIFICATION OF ENVIRONMENTAL MANAGEMENT OBJECTIVES

As discussed in the introduction of this report, the DNF is charged with managing the natural, scenic, recreational and visitor values of the Forest. Each opportunity will need to be assessed in relation to the benefits and impacts to those resources including as managed by any respective identified plan such as the Comprehensive River Management Plan for the Deschutes River.

FUNDING SOURCES

Potential funding sources available vary by the type of opportunity. These funding sources and how their applicability to opportunities identified is provided in a separate report on Funding Sources.
CHAPTER 6: CONCLUSION

OPPORTUNITIES IN THE STUDY CORRIDORS

The DNF and the COIC led an in-depth, collaborative process to identify potential opportunities “to promote the use of non-motorized alternative transportation options to access high-use recreational areas on the Deschutes National Forest (DNF) while reducing environmental impacts at these sites” and to prioritize which corridors identified in the Study were most important to focus on and the type of opportunities that are most appropriate in each corridor.

The corridor analysis determined four corridors/corridor segments that were the most suited for successful implementation of projects:

- Corridor A: Cascades Lakes Highway: Bend City Limits to Mt. Bachelor
- Corridor C: Skyliners Road: Bend City Limits to Terminus
- Corridor E1: Bend to Sunriver Area
- Corridor F2: Sisters to Black Butte Ranch

The Study focused on these corridors, because they had various opportunities identified and had less complicated environmental concerns than other corridors. In addition, the land in these corridors and corridor segments is primarily under the jurisdiction of DNF, making it more feasible for the DNF to lead opportunities in those areas. While opportunities were identified for the other corridors, there was a recognition that the environmental concerns and lack of DNF jurisdiction would make those opportunities harder to implement.

Table 30 on page 83 lists the 23 opportunities identified that met the goal of the Study. (Please note, many good opportunities were identified that were not included, because they did not meet the goal of this Study.) None of the 23 opportunities has been prioritized, because a more in-depth analysis would need to be conducted first. A quick review of the opportunities located in the four focus corridors (A, C, E1, and F2) most suited for implementation is provided below.

Corridors A and C shared two opportunities: providing public support for existing private shuttle service (such as mountain bike van shuttles) and pursuing shared parking agreements with nearby schools or other entities for visitors to park and then bicycle into the DNF. The parking agreements may not be very difficult to arrange, and the next steps would be to hold an internal DNF meeting to determine the type of incentives the DNF could provide parking partners and to contact partners in order to gauge their level of interest. Support for private shuttles may be more complicated and would need to be vetted internally at the DNF.

In addition, Corridor A opportunities included improving safety at three trail crossings of the Cascade Lakes Highway, which would require coordination with ODOT, and adding a new pedestrian/bicycle bridge over the Deschutes River. Bend Park and Recreation District is studying the possibility of the new bridge, and such a bridge would have extensive environmental implications. This opportunity would
need to be reviewed to gain a full understanding of the potential impacts on sensitive natural resources as well as the impacts that the addition of a major new connection would have on the carrying capacity of the Deschutes River Trail and other trails, and how it may impact other sensitive resources.

Corridor C also offered opportunities for improving connections between major trails, and reducing and managing parking along Skyliners Road to reduce the impacts of informal parking. Both of these opportunities would require partnerships to succeed.

Corridor E1: Bend to Sunriver Area had one opportunity identified that would likely be heavily used. This opportunity was to develop a paved path connecting Bend with the major destinations to the south, such as the High Desert Museum, Lava River Cave, Lava Lands, and Sunriver. The path could be on old USFS roads that are already disturbed, would use existing undercrossings of US 97, and would likely be a popular bike ride for Bend residents and Sunriver visitors. An environmental analysis would need to be conducted before moving forward with this opportunity.

Corridor F2: Sisters to Black Butte Ranch had two opportunities identified. One was to develop a shared parking partnership with properties in Sisters for park-and-bike opportunities, similar to opportunities in Corridors A and C. The second was to create a multi-use paved trail parallel to US 20 connecting Sisters and Black Butte Ranch. This opportunity would require partnerships with Black Butte Ranch, which is a private, gated community, and with ODOT if the path is in the US 20 right-of-way.

**TRANSIT**

It should be noted that this Study focused on non-motorized transportation due to a limited scope of services for conducting the Study. However, transit services came up a number of times as a good potential solution for improving access to high-use recreational sites. The PMT acknowledged that transit would be an important part of any comprehensive access plan for the DNF and is supportive of additional analysis to look at shuttle service in more depth, particularly for winter access to the ski areas.

**CONSIDERATIONS ON HOW TO USE THIS STUDY**

This Study is a nondecisional document. Although many promising opportunities have been identified, none of these has been vetted through an environmental process. Consequently, the recommendations in this report are not intended to be decisional. Rather, the Study provides an analysis of the current conditions and issues, prioritizes locations where improvements should likely be focused, provides a list of potential opportunities that address the Study’s goal and objectives, and provides a preliminary look at how easy or difficult it may be move forward with these opportunities. The Study is intended to be a resource for the DNF to use when it is ready to pursue projects developed from the preliminary opportunities.

Table 30 on the next page summarizes the 23 projects reviewed that meet the project goal.
# Table 30. Opportunities by Corridor that Meet the Project Goal

<table>
<thead>
<tr>
<th>Corridor A Cascade Lakes Scenic Byway: Bend City Limits to Mt. Bachelor (Four Opportunities)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Project Number / Project Title</strong></td>
</tr>
<tr>
<td>A1: Public support for expanding private shuttles for visitors</td>
</tr>
<tr>
<td>A2: Develop shared parking partnerships with existing nearby parking lots</td>
</tr>
<tr>
<td>A3: Improved Crossings</td>
</tr>
<tr>
<td>A4: Bike and pedestrian crossing of Deschutes River in southwest Bend</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Corridor B Sunriver: US 97 to Cascade Lakes Scenic Byway (One Opportunity)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opportunity</strong></td>
</tr>
<tr>
<td>B1: Utilize existing highway crossings to provide trail connections</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Corridor C Skyliners Road: Bend City Limits to Terminus (Four Opportunities)</th>
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</thead>
<tbody>
<tr>
<td><strong>Opportunity</strong></td>
</tr>
<tr>
<td>C1: Develop shared parking partnerships with existing nearby parking lots</td>
</tr>
<tr>
<td>C2: Public support for expanding private shuttles for visitors</td>
</tr>
<tr>
<td>C3: Phil’s Trailhead to Shevlin Park connections</td>
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<tr>
<td>C4: Reduce and or manage dispersed parking areas (e.g. 300 Spur)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Corridor D FSR 41 (CONKLIN ROAD) – Sunriver Cutoff to Cascade Lakes Highway (Four Opportunities)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Opportunity</strong></td>
</tr>
<tr>
<td>D1: Transportation Demand Management/ITS/Phone Application</td>
</tr>
<tr>
<td>D2: Bend to Sunriver Path</td>
</tr>
<tr>
<td>D3: Bike and pedestrian crossing of Deschutes River in southwest Bend</td>
</tr>
<tr>
<td>Project Number / Project Title</td>
</tr>
<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>D-4: Manage and reduce parking areas and provide shuttles</td>
</tr>
</tbody>
</table>

**Corridor E US 97 – Bend to La Pine (Two Opportunities)**

| E1-1: Paved multi-use trail connections from southwest Bend south to key destinations | Bend to High Desert Museum, to Lava Lands, to Sunriver. Could include access to the Lava River Caves and more southern connection to Sunriver. This opportunity would support alternative transportation between high-use visitor destinations as well as to the communities of Bend and Sunriver. This would encourage non-motorized access, thus lessening impacts on surrounding resources and improving safety by providing a designated path for non-motorized transportation. |
| E2-1: Create a paved path between Sunriver and La Pine | This opportunity would support alternative transportation between two gateway communities to the DNF, encouraging collaboration within the region to promote economically and environmentally sound multimodal transportation systems. |

**Corridor F US 20 – Bend to Sisters, Black Butte, and Camp Sherman (Eight Opportunities)**

**Corridor Segment F1**

| F1-1: Add a parallel multi-use trail along portions of US 20 (from Bend to Sisters) | Existing County roads could provide bike connections parallel to US 20, but the multi-use trail could fill in where there are gaps. |

**Corridor Segment F2**

| F2-1: Sisters to Black Butte Ranch Multiuse Paved Trail Parallel to Highway 20 | This opportunity would create a paved multi-use trail between Sisters and Black Butte Ranch on the west side of US 20. |
| F2-2: Develop shared parking partnerships with existing nearby parking lots | Pursue shared use parking opportunities using parking lots in the City of Sisters to access trail networks such as at Peterson Ridge. |

**Corridor Segment F3**

| F3-1: Paved trail extending from Black Butte Ranch to Camp Sherman | This opportunity would create a paved multi-use trail between Black Butte Ranch and Camp Sherman. |
| F3-2: Create a safer, grade-separated crossing of US 20 | This opportunity would allow safer crossing of Highway 20 between Black Butte Ranch and campgrounds, hiking, and other destinations east of US 20. |
| F3-3: Trail from Sisters to Camp Sherman | This opportunity would create a paved multi-use trail between Sisters and Camp Sherman on the east side of Black Butte. |
| F3-4: Multi-use trail system in the Camp Sherman area | Would provide links to destinations for a broad range of users including bicyclists and hikers. Could be paved, natural or a mix of surface types. |
| F3-5: Signage Improvements | To direct people at parking areas and trails. This opportunity would provide improved guidance to visitors of the DNF. Enhanced signage could help manage dispersed or undesignated parking areas and trails, so that there would be less environmental resource disturbance. |
APPENDIX A: STAKEHOLDER INVOLVEMENT
1. Welcome/Meeting Purpose

Peggy reviewed the project purpose and that the limited amount of grant funds directed the scope of work for the project. The VOLPE study provides a preliminary gaps assessment to provide a framework and purpose for awarding grant money. The study is limited to non-motorized path to access federal lands to reduce traffic and identify parking lot needs and impacts. Scott mentioned there are third party advocates for the project and upcoming interviews with 12 local groups. There is pressure for non-motorized paths. The FS had to prioritize on what area needs make most sense to study first, how to fund, where to put limited resources. The hope is to have a document that will serve multiple organizations based on stakeholder input. Elizabeth gave an overview of the meeting purpose and request for input on materials.

2. Communications Plan Overview

Scott reviewed the communication plan. It was discussed that this is not a formal planning project. The focus is on stakeholders and partners collaboration. This is a framework document without NEPA. The number of TAC meetings needed to be modified from 3 to 2. But, a third TAC meeting is an option. The stakeholder list is large – 75 people with varied interest e.g. recreation, wildlife. COIC will ask stakeholders a range of questions. A summary will be provided by June 20th. The website will be live Thursday. COIC will try to piggy back on other interest group meetings to get project to stakeholders and direct them to the website.

3. Project Work Plan

Elizabeth went over the workplan. Project completion is estimated for early January. The first Stakeholder meeting is 6/30. Corridor maps with issues for participants to confirm and augment. A note will be added to the maps (and in the text) indicating that although issues may exist further out from Mt Bachelor on the Cascade Lakes Scenic Byway; the project is limited to studying just the area between Bend and Bachelor due to funding. Corridors B and C, which are supposed to start in Bend, will start at the USFS boundary. Confusing that transit is included on work plan documents. Convey non-motorized solutions will set the framework for late study of transit. Paratransit, such as COG Wild and Wanderlust, should be regarded as part of the ‘market assessment’. Transit provides big picture of where area riders
are coming from going to. Group discussed concerns about lack of transit solutions as part of the project. Transit data and analysis at this stage will help for future grant applications for additional funding. The behavior of users will set the foundation for transit planning, but the project won’t include actual transit facilities.

Elizabeth stated that DEA will be there 6/30 for meeting, site visits, and information gathering. Peggy has analysis of land ownership to provide land ownership constraints for potential projects. Scott stated there will be new transit connectors with bike racks from Sisters to Bend. The reason the project was extended to Camp Sherman is because of the bikeways and Black Butte. An interim TAC meeting could be helpful for information gathering and solution development.

Most of the trails need connection to another; this should be developing a system. Opportunities, constraints, issues memo needs to be added to workplan. Also may need to note other locations will be included in future studies. The beginning and end of corridor the corridors were discussed and how they interface with urban communities and other bike and recreation plans. FS can only spend money in their jurisdiction. Need to focus on trails, but need to know type, corridor, and connections. Peggy said some subdivisions have trails to FS lands which can impact lands/species. Communication is key to learn conditions. As much as possible will be mapped to account for all jurisdictional facilities.

Elizabeth reviewed the overarching issues. Congestion only at trailheads, but vehicle speeds can make biking dangerous. Shoulder conditions also vary for road bike use. Signage should be coordinated across jurisdictions. Partnerships can be tricky, but it is easier to get grants with more agencies. Corridors where most connections occur need to be clear. On all maps, ATV and snowmobile data have been removed. ATV and snow trails that are actually multi-use trails are shown on the map by the other use, such as hiking or biking.

4. Project Goal and Objectives, Evaluation Criteria and Performance Measures

Peggy stated that TRIPTAC helped develop goals and objectives based on the VOLPE study. They also worked with FTA and FHWA. A TAG group was sent with experience, about 5 people, and agreed the community could use some improvements. The group discussed the Goal and Objectives, Evaluation Criteria and Performance Measures. The question was presented as to whether or not include Pack Trails. BPAC thought they should be included. Peggy is looking into whether or not they should remain within the project scope. We need to add high value to resources. What are we impacting? Changed goal to: To promote the use of non-motorized transportation options to access the high-use recreational areas of the DNF. The group discussed ADA as parts of accessibility access, trails not all ADA accessible. Peggy stated that parking capacity is not preferred solution. Grouped discussed efficient use of parking not increasing capacity - could help with resource degradation; enforcement as option. Groups discussed off-trail and multimodal definitions. There could be potential parking at high school. Other locations for parking such as reservoir were identified. Discussion of gaps and terminology of eliminated, reduced, and improved. The group discussed the desire to do improvements for agencies; it is non-committal, but a measure of success f improvements.
5. Next Steps

Elizabeth – will send out Goals and Objectives in track changes for edits. Elizabeth – reviewed draft stakeholder agenda and meeting time is 1-4pm.
Meeting Summary  
DNF ATFS  
Stakeholder Meeting #1, Kickoff June 30th 1:00-4:00pm

John Allen does introduction  
“Opportunity to build better communities for ourselves.”

**Introductions and Affiliations:**

Chuck Humphreys- Sisters Trail Alliance  
Susan Law- Western Federal Lands/ FHWA- Transportation Planner  
Lauri Turner- Wildlife Biologist, Deschutes National Forest  
Cara Kelly- Archaeologist, Deschutes National Forest  
Dennis Benson- Recreation Program Manager, Deschutes National Forest  
Kirk Flanagan- Deputy District Ranger, Deschutes National Forest  
George Fekaris- Western Federal Lands/ FHWA- transportation planner  
John Allen- Forest Supervisor, Deschutes National Forest  
Wendy Holzman- City of Sisters  
Gary Guttormsen- Sisters Trail Alliance  
Dick Kellogg- Vice President, Friends of the Metolius  
Bruce Ronning- Retired, Director of Planning, Bend Parks & Rec  
Tim Gibbons- Meissner Nordic Club, Winter Collaborative Group  
Ken Roadman- Meissner Nordic, TUG representative  
Kevin Grove- Professor, COCC  
Joni Bramlett- Region Transit Coordinator, ODOT  
Dylan Spieger- Oregon State Snowmobile Association (OSSA)  
Peggy Spieger- Oregon State Snowmobile Association (OSSA)  
Vera Rizer- President, Oregon State Snowmobile Association (OSSA)  
Wally Buckman- Groomer, Sno-Busters  
Mike Riley- Executive Director, Environmental Center  
Kevin Larkin- District Ranger, Deschutes National Forest  
Kristie Miller- District Ranger, Sisters Ranger District  
Marcos Romero- Transportation Program Manager, Deschutes National Forest  
Jim Stone- Bicycle and Pedestrian Advisory Committee (BPAC)  
Scott Hall- Board Representative, Sunriver Homeowners Association  
Hugh Palcic- GM, Sunriver Homeowners Association  
Lee Stevenson- Human powered access advocate  
Ken Thorp- Teacher, Bend La Pine Schools  
Mary Barron- BPAC, retired ODOT  
Amy Tinderholt- Recreation Team Leader, Deschutes National Forest  
Janelle Heller- Recreation, Deschutes National Forest  
Amy Racki- Recreation Team Leader, Sisters Ranger District  
Liam Hughes- Sisters Park & Rec  
Stacy Tschuor- DEA
Welcome/Meeting Purpose

John Allen the DNF Forest Supervisor explained that the project is important to the continued function of the forest. It is important to promote the use of alternative transportation to reduce the impact on natural resources and to improve visitor experience. He explained that transit will be an eventual part of the solution, but this project will need to focus on non-motorized transportation.

Peggy Fisher, DNF Project Manager, led Introductions and then discussed Project Context and Background

Stakeholders included a wide range of attendees from different interest groups and geographies.

Peggy explained that project management team is a collaboration between DNF and COIC. There are two major committees the Technical Advisory Committee and the Stakeholder Committee.

The project is building on past planning efforts. The DNF received a grant in 2009 from Paul S. Sarbanes Transit in the Parks to complete an Alternative Transportation Feasibility Study in 2009 to look at transit and non-motorized access. The intent of the grant was to: relieve traffic congestion and single vehicle trips; enhance visitor mobility, access, and safety; reduce impacts to natural, cultural and historic resources; improve visitor education, recreation, and health benefits; and encourage interagency and private partnerships. This was for feasibility study rather than a project specific NEPA project.

Past efforts have included: 2009 Technical Advisory Group review (FHWA, FTA, USFS and local stakeholders); 2011-2012 Volpe Groundwork Planning Report (developed transportation goals, issues, corridor information and prioritization, and data needs assessment); and 2013 COIC outreach and engagement process.

Current effort—2014 David Evans and Associates, Inc. is completing a feasibility study focusing on non-motorized alternative transportation options. This is a
non-decisional document to assist FS prioritize projects which are linked to and consistent with state, county, and/or local priorities.

Scott Aycock, COIC Project Manager, discussed the Communications Plan and Outreach & Engagement

Scott summarizes Communications Goals:

- Engage partner groups and stakeholders in order to generate information useful to the project and analysis.
- Identify issues/concerns, solutions and partnership opportunities early and often, thereby improving implementation feasibility.
- Engage partner groups and stakeholders in order to create more meaningful, pro-active, and grassroots participation with the planning process and its outcomes.
- Through active engagement, develop a comprehensive planning document that achieves the consent of partner agencies, and support from key stakeholders and the general public.

- Gather info, have a dialogue, build partnerships
- Meant to be a back and forth process
- Mentions sharing summary report with stakeholders
- It will be important for stakeholders to let COIC know if there are any meetings where they would like COIC to attend to share and get real time feedback. These could include standing meetings of interest groups, neighborhood groups, etc...

Elizabeth Mros O’Hara, Consultant Project Manager, reviews Project Work Plan

- Confirm Goals/Objectives/Evaluation Criteria, and Performance Measures (April-June)
- Establish Existing Conditions (April –August)
  - Onsite Data Collection at Parking/Trailheads
  - Trail Network Analysis (Gaps and Demand)
- Travel Market Assessment (May-Nov.)
- Issues, Opportunities, and Constraints (April-Oct.)
- Project Report & Recommended Solutions (Oct– Jan)
  - Non-motorized solutions
- Implementation Plan with Next Steps (Dec. –Jan.)

The project will run until January 2015

2 Committees will have formal meetings:

1) Technical Advisory Committee: meets twice to guide the project from a technical standpoint. Provides comments on goals, methodology, data findings, implementation feasibility and partnership opportunities
Includes representatives from the Bend Parks and Recreation District, Bike and Pedestrian Advisory Committee, COIC, Commute Options, Deschutes County, Deschutes National Forest, and ODOT

2) **Stakeholder Committee:** meets three times to provide information and feedback on goals, interests, values, implementation feasibility and partnership opportunities
   - Includes representatives from a very wide cross-section of local tourism businesses and industry representatives, trail user advocacy groups, local governments and state agencies, habitat and environmental groups, and homeowners associations

Stakeholder Meetings
- **6/30/14**
  - Kickoff and Preliminary Look at Issues (Mapping Exercise)
- **8/26/14**
  - Existing Conditions Report Out
  - Opportunities and Constraints Review and Input
  - Prioritizing exercises
- **11/20/14**
  - Review and Comment on Preliminary Recommendations

*Questions:
Tim Gibbons: Question about winter recreation/transit?
- Scott mentions to meet outside of the group to talk about these issues.

Question about definition of non-motorized?
- About trails through the forest that connect to different areas - access.

George Fekaris, FHWA, mentions that there will be more opportunities out there to look at transit.

John Allen acknowledges that it is difficult to separate the two.

**Elizabeth discusses project Goals and Objectives**

_*Project Goal:_ To promote the use of non-motorized alternative transportation options to access high-use recreational areas on the Deschutes National Forest while reducing environmental impacts at these sites._

_*Project Objectives:_
- Promote access to diverse recreation opportunities for all visitors (ACCESS)
• Encourage the use, enjoyment, and sustainability of natural resources while protecting DNF lands from degradation resulting from over-use and pollution (RESOURCE PROTECTION)
• Foster the use of alternative transportation systems to manage visitation to forest resources and promote active transportation and connectivity among gateway communities and the forest (ALTERNATIVE TRANSPORTATION)
• Cooperate and coordinate with regional and community efforts to promote economically and environmentally sound multi-modal transportation systems (COLLABORATION)

In addition to the Objectives, the Project Management Team identified Evaluation Criteria and Performance Measures. Evaluation Criteria were developed to compare how well proposed improvements meet the Project Goal and Objectives. Performance Measures were developed as mix of qualitative and quantitative assessments based on the criteria and availability of data at this state of evaluation.

Elizabeth demonstrated how the Goals and Objectives are reflected in the evaluation criteria and demonstrated with the Performance Measures. It is important for the Stakeholders to understand all projects will be measured against the Evaluation Criteria to understand if they are appropriate for this effort. If they do not meet the criteria, they will not be recommended.

Elizabeth discussed the project focus and preliminary issues. The project will focus on 6 priority corridors:

- Cascade Lakes Highway
- Sunriver Cutoff
- Skyliner’s Road
- Hwy 20 to Sisters and beyond to Black Butte Ranch and Camp Sherman
- Forest Service Road 41
- US 97 South from Bend to La Pine

They are not alternatives, rather areas of focus. Recommended improvements could happen in 1 or all 6 areas depending on the issues, opportunities, and constraints.

Preliminary issues include:

• Bicyclists
  o Safe non-highway connections are limited
  o Popularity is rising
• Pedestrians
  o Safe & interconnected pedestrian network is limited
  o Crossing roadways
• Safety Concerns (Summer)
  o Bikes on roadways and high speed auto traffic
Pedestrians crossing highways from parking areas to trail heads

- Parking Congestion (Summer)
  - Demand for parking at trailheads exceeds number of parking spaces
  - Trailheads congested (i.e. Phil's Trailhead, Tumalo Falls)
  - When lots are full, people park illegally and back up traffic waiting for spots

- Degradation of recreation, historical and natural resources
  - Illegal parking trampling vegetation, compact/erode soil
  - More wildlife collisions and potential spread of invasive species

Elizabeth introduced small group exercise to identify and confirm issues.

Questions to think about when looking at maps:

- What are the most important areas to connect?
- What are the barriers for people trying to access trail heads and other points of interest without a car?
- What are the biggest safety issues in the corridors?
- Where are the gaps for non-motorized connections?

Small Groups Present Findings

GROUP 1
Corridor F: Hwy 20 to Sisters, BB, Camp Sherman
  - Connectivity
  - Old Brooks Scanlon Rd
  - Tumalo Reservoir Road and Sisemore Rd.
  - Interest on how to get Bend and Sisters connected: county, private, and Brooks Scanlon.
  - Safe crossing of Hwy 20: how would a non-motorized paved path cross Hwy 20? How to work with ODOT?

Corridor E: Hwy 97 South to La Pine
  - Connecting county road from Sunriver to La Pine: Sunriver south is lacking some connectivity: maybe Hwy 97 for a short section then back to another connector road, some say 97 not safe at all- mention of Huntington rd.
  - Lava Lands Visitor Center, Lava River Cave, High Desert Museum- connection from this area to city- this should be easy to do, some issues with private land.
  - Sunriver: Foster Rd.

Corridors A,B,C,D:
  - 'Hub'- creating connectivity between rec sites: welcome center will be a hub, people parking at welcome station and getting on bikes and heading out.
- Paving 41 Rd: Concerns of once we pave 41 it may not be as safe as we think and will become a vehicle commuter route- will this change the use out there?
- Connectivity between welcome center and 41 Rd- maybe creating alternate paved path using FS roads
- Need for motorized transit to the hubs: (TMA will help us to build that bigger transit study that we need)
- Shuttle service to Sno-Parks: everyone agreed this will be an opportunity to look at winter use.
- Shevlin/Skyliners/Phil's TH area- creating some connectivity
- Gap between Vista Butte, Mt Bachelor and ? Butte

GROUP 2
Corridor F:
- Reservoir Rd, Sisemore, Brooks Scanlon, very unsafe section on Hwy 20 that you are forced to be on.
- Hwy 20 between Sisters and Tumalo not safe and no choices.
- If Brooks Scanlon road was paved road bikers could use as an alternative to sharing Highway 20 with fast moving automobiles
- Concern of deer winter range in the area of Brooks Scanlon.
- Reservoir Rd. potential bike route
- Mac- Chloride treatment is an alternative to paving, a lot cheaper.

Corridor E:
- Lava Butte to Lava Lands, no good connectors, no one wants to use Hwy
- Old FS road that parallels 41 road on other side
- Huntington Rd.
- Paulina Lake road possibly becoming open sooner or moving gate at Paulina further up so skiers can access.

Corridors A,B,C,D:
- Connection for bicyclists in between Shevlin and Whoops would be helpful.
- Better signs to connect Bend and Phil's Trailhead, issue of Phil’s parking lot congestion.
- Tumalo Falls parking lot is a heavy traffic area
- Base of Whoops- heavily used undesignated parking area.
- Corridor A- All Sno-Parks should have a transit stop, would need pullouts and left hand turns.
- Cog Wild shuttle service for mountain bikes could be built upon to reduce pressure on roadways from multiple cars.
- Base of Mt Bachelor: re-routing Mt Bachelor parking lot to allow for more space for X-Country and snowmobilers, taking back some areas that have been dedicated to?
- Road from Bachelor to Sunriver: Skiers parking on side of road because no good places to pull over
- Connect new undercrossing by visitors center up to Benham Falls
- Every one, every mode, plus dogs want to be on the river trail

GROUP 3:
Corridor F:
- Same concerns about access and crossing Hwy
- Potential paving from Black Butte Ranch to Sisters for staff
- Possible to have widened bike lanes on 3 or 5 miles of Hwy 20 between connecting county roads to have band-aid fix before having ideal connectors.
- Wayfinding in Sisters
- Using parking lots, high schools, etc. as additional parking options vs. expanding existing trailhead parking (Phil’s TH or Planned Sister’s to Black Butte TH)
- Distance between parking areas- how close would you have to have linkages to expand out?

Corridor E:
- Lava River Cave/HDM important connections
- Potential for some parking and a staging area at the bottom of Paulina Rd.
- River trail: access, floating, shuttling with bikes
- Deschutes River from Benham Falls to Sunriver: Ways to take existing roads and creating some easy ways for people to access river. This area has a high value for recreational potential.
- Connecting La Pine to Sunriver through Foster Rd.- segments that are gravel would have to be paved for road biking. Huntington Road is narrow and congested for bikes
- La Pine State Park, Pringle Falls, fish hatchery- interesting things to do so would be good to have hiking/biking/floating hubs- would be great for economic development for the La Pine area.

Corridors A,B,C,D:
- 41 road paving issues: if paved would become a 60 mph commuter road. If the population increases it may become necessary.
- Many boat launch and river access areas- low elevation X-country and snowshoeing areas that are unutilized.
- Key elk area, winter range, Oregon spotted frog, Wild & Scenic designation
- Accessing Phil’s trail from Miller, Galveston trail, etc. locals know about it but others don’t.
- Discussion of trail phone apps

GROUP 4:
Corridor F:
- Trail from Sisters to Black Butte: would be great for kids in the summer
- Hwy 242: Letting bikers get up before cars can is a good opportunity
Corridor E:
- Connections to the South of Sunriver along the river: different destinations along the river, would be nice to have something on that side of the highway, however questioned benefit of having something go all the way to La Pine if the area doesn’t get much use.

Corridors A,B,C,D:
- Skyliners project with bike lanes would be great.
- Informal bike shuttling along roads, one ways- some way to feed off of that?
- Tumalo Falls trailhead is a mess: need to inform public, improve parking
- Sno-parks along Cascade Lakes- big opportunities there
- A lot of people who want to hike/ride one-way
- Welcome station: will there be enough parking in the future?

GROUP 5:
Corridor F:
- Camp Sherman biggest concern is safety: small road shoulder, dead man’s curve coming into Camp Sherman.
- Road coming into Camp Sherman: 14 road, old railroad trestle
- Possibility of paths to come into Camp Sherman from Black Butte area
- Bike paths on either side of 14 Rd. (bike paths have to be 5 foot on either side of road or 10 ft if stand alone path)
- Go from 12 Rd past Camp Creek CG to lower bridge, having chip seal road.
- Enlarge Black Butte parking area, more parking at store?
- Link from Hwy 20 into Camp Sherman: issues with wildlife- elk, deer, bear, etc. whatever we can do to limit impacts on wildlife.
- Bend Broadband is talking about doing fiber-optic cable, possibility of doing path by that.
- May be nice to move congestion from cars to bikes.
- Friends of Metolius concerned about heritage of area, has 1920s feel- don’t want paved paths everywhere because of character of area, don’t want to shift the feel of the area.

Corridors A,B,C,D:
- Corridor D (Golden Loop): Close to home opportunity, opportunities that already exist on forest close to urban areas, how do we best leverage those opportunities and get people to those areas without having to drive?
- Bridge proposal in SW Bend- not new idea, would create a pedestrian bicycle bridge at SW corner of Bend UGB and connect to FS trail along river and Good Dog area. Would serve 1/3 of population of Bend.
- Everyone has to drive their car from SW Bend which is creating a lot of congestion along Century Drive- bridge would alleviate some of that.

Next Stakeholder Meeting: August 26th 1-4pm
AGENDA
- 1:00 Welcome/Meeting Objectives
- 1:10 Summary of Outreach and Work since June Meeting
- 1:30 Baseline Conditions
- 2:05 Project Goal and Objectives, Evaluation Criteria and Performance Measures
- 2:15 Review Maps and Issues
- 3:45 Next Steps

INTRODUCTIONS AND AFFILIATIONS
- Peggy Fisher (Project Manager for the USFS) asked the attendees to introduce themselves and refer to whether they were on the Stakeholder Committee, the Technical Advisory Committee, were staff, or on the consultant team.
- Peggy reviewed the meeting objectives.

MEETING OBJECTIVES
- 1. Update on Project Progress
- 2. Review Baseline Conditions Findings
- 3. Gather Input on Issues, Opportunities, and Constraints - More detail from the group needed

Summary of Outreach –
Deschutes National Forest, Peggy Fisher
- Review outreach and comments
- Review of Project Purpose
- Update on tasks and timeline
  - Updated the Central Oregon Area Commission on Transportation (COACT) at their July 10th meeting of our initial stakeholder meeting and invited members who were interested and not already involved to attend our August 26th meeting
  - Forest met with some interested stakeholders who were unable to attend the first stakeholder meeting to obtain their comments on the potential for a paved path between Sunriver and the Welcome Station on the west side of the Deschutes River.

Central Oregon Intergovernmental Council, Scott Aycock
Scott talked about the transit meeting which occurred earlier in the morning. COIC will distribute notes from that meeting.
COIC Outreach:
- Requested opportunities to present project purpose and process at the June 30 Stakeholder Committee meeting and in one follow-up email:
Central Oregon Coalition for Access accepted this request and COIC and USFS presented on the project at their August 12 meeting.
- Comments summarized and distributed to Project Management Team
- Gathered comments from project web site – provided to Project Management Team.

Scott reminded the group to let COIC know if they want them to present an overview of the project at any constituent's meeting such as trail user group meetings or public advisory groups. Scott also reminded the group of the public comment form available on the project website:
http://coic2.org/transportation/dnfalternativetransportationstudy/

**UPDATE ON TASKS (APRIL- JAN 2015)**
- Confirm Goals/Objectives/Evaluation Criteria, and Performance Measures *(Completed)*
- Establish Existing Conditions (April –August)
  - Onsite Data Collection at Parking/Trailheads *(Completed)*
  - Trail Network Analysis (Gaps and Demand)
- Issues, Opportunities, and Constraints (April-Oct.)
- Travel Market Assessment (May-Nov.)
- Project Report & Recommended Solutions (Oct– Jan)
  - Non-motorized solutions
- Implementation Plan with Next Steps (Dec. –Jan.)

**BASELINE CONDITIONS**
- Summary of Parking Counts and Observations
- Summary of Findings and Issues
- Discussion of Issues

Elizabeth Mros-O’Hara (Consultant Team project manager) mentioned that it was really important for the group to flesh out the issues. She explained that there would be an opportunity for this later in the meeting when the group discusses the maps and potential opportunities.

**SUMMARY OF PARKING COUNTS AND OBSERVATIONS**

Angela Rogge of Consultant Team (DEA) led a discussion of the data collection and observations. Vehicular counts and general observations were completed at 10 major trail heads in the study area in late July and early August:
- **A: Cascade Lakes Highway**
  - Good Dog
  - Meadow Day Use Area
- **D: Conklin Road (FS 41)**
  - Big Eddy Day Use Area
  - Dillon Day Use Area
  - Slough Day Use Area
  - Benham Falls West Day Use Area
- **E: Hwy 20 North of Sisters**
  - Head of Metolius Day Use Area
  - Camp Sherman Store
  - Wizard Falls Fish Hatchery
- **F: US 97 South from Bend**
  - Benham East Day Use Area

Angela explained the results of the study including peak times, which sites see more traffic, number of vehicles at trailheads, what is occurring on weekends, where vehicles are parking if lots get congested, behaviors of visitors, and interactions between users.
She noted that the peak weekend parking occurred at the following sites: Wizard Falls, Camp Sherman store, Benham falls east, and Meadow Day use area.

One question to think about that was spurred by the study was whether or not people would need more parking available or if that is something that the users want or the landscape has the capacity to hold.

It was also noted that at Camp Sherman there was driver and trail user confusion, and that the area could benefit from increased signage.

**SUMMARY OF SITE OBSERVATIONS:**

- Parking availability contributes to type and number of visitors
- Trail head location sometimes creates conflict with vehicles and trail users
- Lack of signage creates confusion
  - Where to park
  - Where are the trails and who is allowed on them?
- Lack of designated parking causes environmental degradation
- Many sites could benefit from bicycle parking

**SUMMARY OF ISSUES**

Elizabeth led a discussion of the issues that the team had identified from input, observations, and past planning efforts. She went through the issues and asked the Stakeholder attendees to comment on the issues and let the team know if they missed any key pieces or if they had clarifying information on the issues identified.

**GENERAL ISSUES IDENTIFIED**

- **Bicyclists**
  - Safe non-hwy connections are limited
  - Popularity is rising
- **Pedestrians**
  - Safe & interconnected pedestrian network is limited
  - Crossing roadways
- **Safety Concerns in Summer**
  - Bikes on roadways and high speed auto traffic
  - Pedestrians crossing highways from parking areas to trail heads
- **Parking Congestion (Summer)**
  - Demand for parking at trailheads exceeds number of parking spaces
  - Trailheads congested (i.e. Phil’s Trailhead, Tumalo Falls)
  - When lots are full, people park illegally and back up traffic waiting for spots
- **Degradation of recreation, historical and natural resources**
  - Illegal parking trampling vegetation, compact/erode soil
  - More wildlife collisions and potential spread of invasive species
- **Signs, Wayfinding, and Traveler Information**
  - Coordinating information across jurisdictions and large areas is difficult
  - Lack of easily accessible information when people are arriving at cities (i.e. Sisters, Redmond, La Pine, Bend)
- **Partnerships**
  - Problems cross multiple jurisdictions making solutions more difficult to implement.
- **Visitation and Growth in Population and Tourism Anticipated**
  - Deschutes Co. population to increase 45 % by 2025
  - Local population accounts for over 50% of visitors to DNF
  - Oregon statewide tourism in the area is increasing (24% increase between 2007 and 2009)

*Comments from Stakeholders:*

- General agreement that these were key issues throughout the area.
SUMMARY OF FINDINGS AND ISSUES BY CORRIDOR
Elizabeth led a discussion of findings and issues by corridor and asked for comments from the stakeholders.

CORRIDOR A: CASCADE LAKES HIGHWAY
- High Speed Roadway (55 mph)
- Numerous road bikers on 5-foot shoulders.
- Major access to Mt Bachelor and trailheads
- Close proximity to Bend and growing populations
- Limited parking at trailheads
- New non-motorized connection between CSB and Skyliners with easier mtn bike trails (Welcome Center)
- Congestion at trailheads in summer and on roadway in winter.

Comments from Stakeholders:
- Steve Jorgensen: Mentioned the relationship between volume on highways and speed. If volumes are low and speeds are high the shoulders are ok.
- Gary Guttormsen: There are 5 foot shoulders up to Mt Bachelor but not past that.
- Elizabeth Mros-O’Hara: The study only goes up to Mt Bachelor.
- Karen Brand: There are peaks and valleys, there is general interest and there are peak times. The numbers go up during certain special events.
- Marcos Romero: Mentioned the fact that the numbers could increase from what they recorded. We can expect an increase with Bend being a summer destination.
- Stakeholder (Rec Assets): Meadow Camp will eventually be a crossing for the new network. People park at Good Dog and the other area near by. This overlaps with Parks & Rec plans.
- Gil Williams: We talk a lot about parking deficiencies- how do we facilitate and encourage non-motorized as well?

CORRIDOR C: SKYLINERS
- Currently no shoulders on high speed road discouraging walking/biking.
- Repaving project in 2016 (Bend to FS 4603) adding 6-foot shoulders.
- Tumalo Falls is major attraction at end of corridor (unpaved access).
- Close proximity to Bend and growing populations
- Phil’s trailhead is being redesigned to include 76 formalized parking spaces.
- New non-motorized connection between CSB and Skyliners with easier mtn bike trails (COD to Welcome Center)
- Congestion at trailheads with parking on roadway.

Comments from Stakeholders:
- Stakeholder: There are issues where the road has no shoulder, and parts where the road is in bad condition.
- Peter Russell: Volume is a big component. Skyliners is one of the heaviest used roads out there. Residents who live out there may have issues with road bikers riding two abreast, bike events that prevent residents from getting to their houses, etc.
- Stakeholder: The Cascade Lakes Highway has the same issues with safety and access; areas where people have to cross the road to get to the trailheads.
- John Allen: The road that goes through Tetherow is getting more and more use; it’s becoming a corridor itself. Let’s not ignore the Tetherow connection road if we’re talking about the two main corridors.
- Melanie Fisher: There are sandy connector trails that people don’t want to use (one through Tetherow, one along highway to Phil’s) - a lot of people don’t know about these or they are too sandy in the summer so people don’t use them.
- Stakeholder: Mentioned 4606 road. Lots of trash and usage out there.
Ken Roadman: Talked about Skyliners being heavily used, thinks it's important that you do have wide shoulders because residents aren't happy sharing the road.

George Fekaris: There are a lot of issues with Skyliners- you will see a lot of fluctuations on use and it will be several years before it settles into some predictable pattern.

Steve Jorgensen: The 4606 road should be identified and highlighted because it makes a direct connection from Phils to Shevlin.

Stakeholder: After talking to COTA, if you go to the 300 road the next formalized parking is not until Skyliners Sno-Park. One place that you haven't done a count that you should is at the bottom of Whoops. There are always a dozen or more cars there. The 300 road represents an alternative to Phil's.

Melanie: COTA was going to ask about making a trailhead in that area.

Steve: There is a difference between mountain bike user types; what kind of bikes they're riding and how willing they are to ride out there. If you have a downhill specific bike you're probably going to throw it in your truck. There are people driving right to The Lair through Tetherow.

Dennis Benson: The experience on the landscape is going to change if we expand those parking areas: what capacity does the landscape have and what experience do users want to have out there? What is the capacity? What are people looking for?

Scott Aycock: How do you measure capacity?

Dennis: Good question. We have an antiquated model called the Recreation Opportunities Spectrum. We need to revisit that model when talking about this.

Sara Gilbert: It seems like the trails are getting hammered- riding Tyler's after a race has gone through is not that fun.

**CORRIDOR B: SUNRIVER CUTOFF**

- Road biking popular
- 5-ft shoulders; no marked bike lanes
- At-grade crossings at trailhead areas.
- Distance from Sunriver to Cascade Lake Highway 17.8 miles
- High winter use to access ski areas
- New Sno-Park facility
- Fewer trail/recreation access points (Edison Butte, Dinah-Moe Humm mtn bike)

*Comments from Stakeholders:*

- One stakeholder asked where the new Sno-Park will be located. The new Sno-Park is at Vista Butte.

**CORRIDOR D: CONKLIN ROAD/ FS RD 41**

- Paved and non-paved sections – road used to access numerous recreational opportunities.
- Informal parking along roadway at trailheads (Tyler's, Storm King, etc.) is overused and cars are damaging resources
- New mtn bike trail being built paralleling FS 41 from new Welcome Center to Storm King and Tyler's trail (2014-2015)
- Key Elk Habitat and Deer Winter Range on both side of FS 41 and Oregon Spotted Frog critical habitats near Deschutes River
- Deschutes River Wild and Scenic River designation on east side of road
- High recreation use/access to many popular trails and Deschutes River.
- Congestion at Benham falls and picnic areas.

*Comments from Stakeholders:*

- Lee Stevenson: Additional mountain bike trail being planned on west side of Sunriver. Jim Stone and Scott Hall are familiar with the planning stages. The trail would cross the 41 road and connect to Tyler's, it is still awaiting NEPA. People who are visiting Sunriver could access the trail network much easier. There would be a family-oriented trail and a challenging trail. It would also connect to Benham Falls- then they could come back on the paved Sun/Lava trail so they could make a big loop.
Amy Tinderholt: One of the things we’ll be thinking about in Sunriver is that the area is key elk area and
deer winter range. It has high resource values, so as we start to get constrained with more people, we’re
looking at less wildlife habitat. These factors mean our workload will be increased.

Laurie Turner: On all of the routes there are key wildlife concerns that need to be addressed.

Dennis: This ties in with my comment on the capacity issue and finding balance.

Scott Aycock: This seems like a ‘meta-finding’ to me (capacity impact), and it seems like important guidance
for the future.

Gill Williams: Any data, etc. we can get our hands on will have a place in the assessment.

John Allen: Commented on the land between D and E Corridors: we try to concentrate use, we have to
harden recreation services to take that use. Because we have high use we may not want to disperse we may
want to concentrate.

CORRIDOR E: BEND TO LA PINE

- US 97 High speed (55 mph) with paved shoulders of varying widths and rumble strips.
- Lack of bike/pedestrian connectivity from Bend to key attractions in relatively close proximity south: Lava
  Lands Visitor Center, Lava River Cave, and High Desert Museum.
- Distances are likely to determine non-motorized options.
  - Between Bend and LaPine not likely to be high demand for connections all the way there. (30 mi.)
  - Lack of bike/ped connections LaPine to Paulina Lake (10 mi.)
  - Bend to High Desert Museum (1 mi.)
  - Bend to Lava Lands (8 mi.)
  - New paved trail from Lava Lands to Sunriver (5.5 mi.)
- Deer Winter Range east of US97 south of Bend to the Lava Butte area.
- Private land south of Bend near High Desert Museum.
- Crossings of US 97 may be difficult - different amenities/attractons on different side of freeway.
- Less demand further from Sunriver/Bend

Comments from Stakeholders:
- Stakeholder: The section here is the highest ADT in Central Oregon.
- Peggy: These are special places to our Native population; there are heritage considerations here.
- Lee Stevenson: We had looked at connections on Foster Road as a potential corridor- it follows part of the
  Deschutes River.

CORRIDOR F: BEND TO SISTERS & BLACK BUTTE/CAMP SHERMAN

Highway 20 is the main connection between these areas. It is a high speed road, freight route, with limited
shoulders making it difficult to use by bicyclists and pedestrians.

Bend to Sisters
- Distance from Bend to Sisters is 23 miles via Highway 20
- Parallel roads to Hwy 20 are mostly dirt or county roads that don’t travel the whole distance.
- Brooks/Scanlon Road is unpaved, crosses several private property tracts, and has significant vertical
  climbs.

Sisters to Black Butte Ranch
- Some property owner opposition to the preferred alignment of new trail connection identified in the EA for
  Sisters to Black Butte Ranch Multi-Use Paved Trail.
- Connections at the southern end of the same trail into Sisters are not defined.
- A future connection with the Metolius/Windigo Trail would require crossing Hwy 20

Black Butte Ranch to Camp Sherman
- Highway 20 is a barrier for connections between Black Butte Ranch and Camp Sherman trails with no
  protected crossings, high speeds, and limited shoulders.
- Topography in area limits connection routes for trails.
- The area east of Camp Sherman Road is an elk and deer migration corridor.
- There is some opposition to a trail alignment east of Camp Sherman Road north of Highway 20.
- Camp Sherman Road is narrow presenting safety issues for bikes and pedestrians.
- Metolius-Windigo trail crosses the highway without markings or traffic control. A new crossing would need to continue to serve horse riders.
- Visitors are interested in biking and hiking between destinations.

**Camp Sherman/Head of the Metolius/Wizard Falls Issues**
- Pedestrians, bicyclists, and cars share the narrow roadways with limited shoulders, limited sight-distance, and high speeds.
- Families with inexperienced riders are using roadway facilities to access destinations.
- Camp Sherman store’s parking lot regularly fills up and drivers do not have clear direction of where to go.
- South of Camp Sherman Store FS 14 has no shoulders, hills, limited sight-distance and high speeds on the roadway.
- Access from the Camp Sherman Store to the Head of the Metolius is on FS 14, which is narrow and heavily used by cars and bicyclists (including families).

**Comments from Stakeholders:**
- Christie Miller: The Camp Sherman store is busy because it’s a high use area. The Metolius Basin was originally identified as a conservation area. Because everyone loves the area so much they wanted to preserve it to the way it was in the 30s/40s/50s. Both plans were done because from Memorial Day to Labor Day is when Camp Sherman is at capacity. It is problematic to think about increasing capacity to allow more people in there. The Scenic Bikeway designation overlaps the Wild & Scenic River corridor. State Parks wants to advertise it but the Forest Service and Friends of the Metolius are concerned about that. We want people who live there to continue to have the experience they value. The question remains, how do we manage for increased use?
- Peter Russell: Based on other high-use areas, Camp Sherman is not that high-use or a safety hazard. Mentioned the importance of bike user groups: families versus mountain bikers versus road bikers.
- Stakeholder: If you could just have one improvement in that section of Hwy 20 where cyclists have to use road, you could change that experience for a lot for users. How do we get people to Camp Sherman without driving?
- Steve: Technology is changing with bikes; electric bikes will encourage a lot more people to ride that typically don’t. We may want to think about charging stations in the future. In Europe, E-bikes are the highest growing sector.

**Reviewed Project Goals, Objectives, Evaluation Criteria, and Performance Measures**
The group reviewed the Goals and Objectives and Evaluation Criteria that will be used to screen alternatives. It is important to be in agreement on these priorities, because they will be used to prioritize potential improvements.

**Review Maps and Opportunities (GROUP EXERCISE - INPUT)**
Stakeholders broke into four groups and reviewed corridor opportunities and issues. The issues by corridors are listed then comments from the stakeholders. Group did a mapping exercise to flesh out opportunities. Stakeholders broke into four groups (three groups for A, B, C, D; one group for E; one group for F).

The groups were asked to address the preliminary opportunities identified and weigh in on five questions.

**Mapping Activity Questions:**
For Each Preliminary Opportunity
- What are the strengths?
- What are the weaknesses?
- What are the opportunities for partnering to move these forward and maintain them?
- Did we miss anything?
Comments from stakeholder about potential opportunities on the identified corridors:

**GROUP COMMENTS ABCD CORRIDOR (GROUP 1):**

- The new mountain bike path that would go from the Welcome Center to the 41 road would be an additional way to access the area without motorized traffic but would also increase usage to Tyler’s Traverse.
- **Welcome Center:** It is a mixed blessing; some people may want to park there all day which is not the intention. It could increase behaviors we don’t like, but also could increase positive opportunities.
- **Shevlin Park:** Can’t hold a lot of people as a parking/staging area.
- **Extending West Bend trail on South side of Skyliners (gravel).**
- **Tetherow and High School:** Work with city to build trails as areas are being developed. Cascade Highlands trail has a really sandy section that could be improved. Cog Wild shuttles could be improved, there are opportunities for public/private partnerships.
- **The new bridge that could be built at Entrada has a lot of complications. It is a blessing and a curse with increasing access.**
- **Benham West over to 41.**

**FLIPCHART NOTES ABCD CORRIDOR (GROUP 1):**

- New paved path will have at-grade crossing in addition to undercrossing
- While not intended for long term parking, it will happen at Welcome Station
- Weaknesses:
  - New mountain bike trails
  - Welcome Station may encourage more parking at Tyler’s
  - Need to manage parking at welcome station
  - Shevlin Park is not good for staging (parking is restricted and used for events)
- **C:**
  - **Skyliners:** manage/formalize parking. Could use logs to stop parking in pull offs
  - **Extend West Bend Trail on South side of Skyliners**
    - Gravel connection to the jumps
  - **Cascade Highlands Trail access**
  - **School parking:** summer and weekends not used. Could be used by recreationalists to get to USFS
  - **Access to Lair through Tetherow:** Issue with going through private property
  - **Skyliners:** Brooks Scanlon (bike potential)
    - People don’t know about it
- **Cog Wild Types Shuttles**
  - 9:00 Busy – later not busy (would like to make more runs work)
  - Weaknesses:
    - Awareness
    - Free parking
    - No enforcement of illegal parking
  - Public/private partnerships could be an opportunity
- **New Bridge at Entrada**
  - ½ support from neighbors
  - Out-of-direction travel reduced
  - Wild and Scenic river designation limits crossings
  - Resource impacts
    - Use target 44,000 annual trip
    - May overwhelm area
- 2,000 HH within ½ mile
- Partnership: Cascade Highlands Trail improvement for bikes
  - Bend P and R could lead
- Conklin:
  - Pave path for bikers
  - Signage

**CORRIDOR ABCD (GROUP 2):**

- Not only issues at Skyliners, there are areas that are undesignated and we don’t manage them.
- Sustainability versus stability of the land- do we want to concentrate or disperse activity?
- Projected growth adjacent to Forest Service land: there will be a lot of growth just outside FS boundaries, where are those growth areas? Are we working with the County, City, and other entities to tackle these issues? Group mentioned the Miller area growth. There is a need to have discussions to better manage potential issues from growth.
- Opportunities to use existing parking areas: school districts have huge parking areas that aren’t getting used in the summer.
- Corridor capacity and managed land.
- Education, website, technical operations for management use. Possibly having the ability to see if Phils trail is full via internet?
- Existing attractions not well known or used: there are some areas that aren’t getting used that people don’t know about. This could be a way to spread out use.
- Mt Bachelor power line road: is there a potential use for this existing disturbance?
- Existing road system: have we taken a full look at those opportunities?
- The group mentioned mitigating wildlife concerns.
- Importance of communication with City, County, Bend Parks & Rec, Mt Bachelor, etc.

**FLIPCHART NOTES ABCD CORRIDOR (GROUP 2):**

- Skyliners:
  - Parking area is undesignated
    - How to manage?
  - Sustainability of the system (land)
    - Disperse or concentrate uses
  - Projected growth adjacent to F.S. Lands
  - Opportunities to use existing parking areas (i.e. schools, sno-parks, etc)
  - Corridor capacity and manage lands
  - Website: tech-options for management use
  - Existing “attractions,” are not well known or used
  - Mount Bachelor power line
    - Mid-state
      - Potential use of this existing disturbed area
  - Existing road system: Level 1 and 2 opportunities, facilities (Sup, Mt. Bachelor)
  - Communication with city, county, BP Rd on potential growth areas
    - Partnerships

**CORRIDOR E: BEND TO LA PINE**

- How to connect Bend to sites like Lava Butte, High Desert Museum, Sunriver, and La Pine?
- Looked at East and West sides of 97.
- Connection from Bend to High Desert Museum and further could be a good family/tourist connection. Biggest concern/barrier is where to start in Bend. Could there be a Park & Ride?
- Looked at gaps using Paulina Road, teaming with ODOT- paving and creating at Park & Ride out to Paulina?
- Improving routes to school in the Sunriver area.

**FLIPCHART NOTES CORRIDOR E:**

- Bend to LaPine:
  - Avoid US 97 within city limits due to congestion South to China Hat
  - US 97 buffer is actually an okay ride
  - Planning project from Bend to Lava Butte
  - No funding
    - Teaming: NFS, ODOT, HDM, BPAC
  - Decent route
  - LaPine wants connection to Sunriver
  - High cost
  - Planned road in TSP
    - Teaming: Co, LaPine, ODOT, L.P.P&R, Sunriver
  - Railroad crossing on US 97
  - Dirt lot already
  - Formalizing as multi-use park and ride
  - Region 4 park and ride study (identified)
    - Teaming: ODOT paving project on US 97, County
  - Ownership? Land use? Gravel pit
  - People out of cars increase user base intermittent park and ride along route
  - LaPine/City of Bend teaming multi-modal

- Opportunities:
  - Trip Check could add multi-modal/transit aspect
  - Connect Bend to Lava Butte trail
    - Where?
  - Where do you park/ride at Scale House Rd.?
  - Undercrossing at Lava Butte
  - Identify ownership in Bend near Scale House Rd
  - Family friendly potential
  - Trail on west side of US 97 comes close to rail ROW and ODOT will be widening US 97 to be even closer
  - Trail on West side could connect to Lave Butte
  - Beautiful terrain (Ponderosas)
  - Along pre-existing gas line access
  - Wildlife
  - Lava terrain
  - Accessing from West of US 97
  - Forest service roads may be opportunity for connection

**CORRIDOR F: BLACK BUTTE/ CAMP SHERMAN & SISTERS TO BEND**

- Difference between being reactive and proactive about desired conditions, etc.
- Scenic bikeway designation: how do we control that access? Dispersing parking so Camp Sherman General Store isn't ground zero. Enhancing parking lot at FS 14 and Hwy 20. Adjacent bike path might be acceptable as long as it is a part of FS 14.
- Possibility of creating another bike trail around Indian Ford, Green Ridge, and 1120 road? For advanced cyclists with 500 foot vertical gain/drop.
- Group mentioned Hwy 20 drop off to park and bike into Camp Sherman.
- Parking at the Head of the Metolius, Allingham guard station could have a parking lot.
- Sisters south to Bend: looking at alternate routes- Brooks Scanlon was a railroad so it’s flat and enhancing that road could make it useable for many users but the optimal solution would be to create separate bike path to separate use.

**FLIPCHART NOTES CORRIDOR F:**
- B/S potential family route: Bend – Sisters
- Separated pathway
- Sisemore may be an alternate for road bikes to Highway 20
  - Issue: highway crossing Cloverdale
- Camp Sherman: disperse trailheads
- Enhance park at FS 14 and Highway 20
- FS 1120 East and North of BB to access camp Sherman

**FLIPCHART NOTES GENERAL COMMENTS ON ALL CORRIDORS:**
- Corridor A – CSB
  - Volumes versus speed: when the speed limit is high issues, shoulders are okay for low volume
  - Road narrowing
  - Issues during special events
  - Bend/Bachelor as a summer destination may increase traffic volumes in future
  - Good Dog to Mt. Washington roundabout
  - Rec users parking across from Tetherow
  - Overlap with Parks and Rec plans
  - Good Dog may get more use
    - Conflict with parking lot
- Corridor B – Sunriver Cutoff
  - Trail development could alleviate other trails/corridors
- Corridor C – Skyliners
  - Pavement quality
  - Shoulders at substandard width are potentially better than no shoulders
  - Biking conflicts with neighborhood
    - Contentious road in County
  - Staged events
  - Safety of crossing highway to get to trail heads
  - Miller development
  - Tetherow connection Cascade Lakes to Skyliners
    - Along Skyliners (Sandy)
  - Trail conditions force people to road
  - Old Hall could benefit from being upgraded
    - Sanitary and garbage issues
  - Uncertainty of what is to come once construction is complete
  - 4606 connects Phil’s to South end of Shevlin
  - Often dozen of cars are parked at 300 (Whoops)
  - Mountain Bike user types:
    - Some don’t want to ride their bikes to a trail head
      - General comment: how does DNF measure trail capacity?
    - Improving facilities could change user experience
- Corridor D – Conklin/FS41
Trail planned leaving Sunriver (West side) two mountain bike trails
  - High resource values (i.e. elk)
  - Interaction between wildlife and recreation
    - Land between corridors may desire concentrated use

- Corridor E – Bend to LaPine
  - Highest ADT to in Central Oregon
  - Significant heritage
  - Parallel routes
    - Several jurisdictions
      - DNF may not be best agency to handle some of these areas

- Corridor F: Bend to Black Butte/Camp Sherman
  - Conservation plan
  - Camp Sherman at capacity from Memorial Day to Labor Day
    - Additional trail could put it over the edge
  - Manage local users and tourists
  - *General Comment: plan for electric bikes*

- Crossing highway 20

**Next Steps**
- TAC Meeting #2 to review preliminary recommendations and policies
- Market analysis, gap analysis
- Stakeholder Meeting #3, November 20th
  - Review Preliminary Recommendations
  - Discuss technical aspects of priority corridors

**Project Work Plan (April-Jan 2015)**
- Confirm Goals/Objectives/Evaluation Criteria, and Performance Measures (Completed)
- Establish Existing Conditions (April-August)
  - Onsite Data Collection at Parking/Trailheads
  - Trail Network Analysis (Gaps and Demand)
- Travel Market Assessment (May-Nov.)
- Issues, Opportunities, and Constraints (April-Oct.)
- Project Report & Recommended Solutions (Oct-Jan)
  - Non-motorized solutions
- Implementation Plan with Next Steps (Dec.-Jan.)
Deschutes National Forest Alternative Transportation Feasibility Study
Technical Advisory Committee Meeting #2

MEETING SUMMARY
Bend Office of David Evans and Associates, Inc., 320 SW Upper Terrace Drive, Suite 101, Bend, OR
October 16th, 2014, 1:00 PM to 4:00 PM

ATTENDEES
- Peggy Fisher, Deschutes National Forest
- Marcos Romero, Deschutes National Forest
- Scott Aycock, COIC
- Ally Steinmetz, COIC
- Bill Braly, BPAC
- James Bryant, ODOT
- Elizabeth Mros-O’Hara, David Evans and Associates, Inc.
- Gill Williams, David Evans and Associates, Inc.
- Anneke Van der Mast, David Evans and Associates, Inc.
- Angela Rogge, David Evans and Associates, Inc.
- Sara Gilbert, David Evans and Associates, Inc.

AGENDA/MEETING OBJECTIVES
- Welcome/Meeting Objectives
- Update on project – market analysis
- Corridor Priorities
- Preliminary Recommendation of Potential Opportunities
- Review Prioritization of Potential Opportunities
- Review Partnership Opportunities
- Next Steps

Welcome/Meeting Objectives
Peggy and Elizabeth welcomed everyone and outlined the meeting objectives.

Update on project – Market Analysis
Angela gave a summary update of what was being learned during the market analysis research and how it may pertain to some of the opportunities. A review of existing shuttle services led to a discussion of shuttle opportunities in the Metolius area (bike park-and-ride) where there could be potential partnerships with area schools and Black Butte Ranch. Angela reviewed Cog Wild current service; morning shuttles are more popular than mid-day shuttle service. An initial analysis of the Mt. Bachelor shuttle showed the majority of riders were Mt. Bachelor employees, which could mean potential for more public users.

Scott stated they are proposing to add Meissner to the Bachelor Shuttle. A FLAP application is being prepared for the "low hanging fruit projects" for transit: expanding Mt. Bachelor shuttle service and create a shuttle to top of Lava Butte.
Corridor Priorities

The group was informed that DNF had an internal meeting to review the goals and objectives for each corridor, prioritize the objectives for corridors, review each opportunity identified against the evaluation criteria, and prioritize opportunities. Peggy noted that the corridors were grouped in the context of how to make the project successful; not necessarily a true prioritized list (Corridors with Various Opportunities and Environmental Concerns, Corridors with Various Opportunities and Complex Environmental Concerns, Corridor with little to no Forest Service jurisdiction). Peggy also noted that for priority objective prioritization by corridor, resource protection was a key objective for all corridors. The groups discussed how Corridors E and F were broken up into two sections and that we need to ensure the project maintains consistent descriptions of the corridors. Corridor E1 will be Bend to Sunriver and E2 Sunriver to LaPine. Corridor F1 is Bend to Sisters, F2 Sisters to Black Butte Ranch and F3 Black Butte Ranch to Camp Sherman. For Corridor E1, there are archaeological constraints to the west; opportunities have to be east of US 97. The group discussed how different types of opportunities could provide resource protection in different ways – direct and indirect. It was also noted that longer corridors lend themselves to transit opportunities.

Preliminary Recommendation of Potential Opportunities

Elizabeth reviewed the process of identifying the list of priorities opportunities. Opportunities were primarily drawn from input at prior TAC and Stakeholder meetings and DNF. It was noted that the process for identifying opportunities should be explained at stakeholder meeting.

Review Prioritization of Potential Opportunities

The group discussed the opportunities prioritization process with the focus being on near-term and implementable opportunities. There needs to be an understanding of what make opportunities a priority for this plan (e.g. DNF led, environmental concerns, protecting visitor experience, near-term feasibility). The group went through each opportunity and discussed whether it should remain how it was prioritized. The TDM project was moved from Not a Priority to Needs More Analysis.

Carrying capacity was discussed in the context of some of the opportunities, recognizing that it was needed but not sure how to capture it. There was talk about balancing access and dispersal (spread users throughout trails). Is there a desire to try and focus usage or disperse users? Where and when?

Scott mentioned that Dave Rathburn has talked about expanding shuttle service and providing service between Sunriver and Mt. Bachelor. Could there be potential for hiking/biking shuttles from CET? The intent is not to include the transit options in the list of projects, but they’re identified as a piece and need for overall functioning alternative transportation system. Review of transit projects will be to set the stage for another study that will look into the feasibility of transit service.

It’s important to understand what the DNF can actually do with minimal resources. The opportunities presented in the matrix were determined after an extensive evaluation process. The opportunities could be furthered analyzed against the performance criteria as a first step, but this would likely be a separate exercise for the future, conducted outside of this plan as it would be a major undertaking. Project objectives (access, resource protection, alternative transportation and collaboration) are important to each corridor, but the level importance varies based on the unique corridor characteristics. Identified opportunities were developed based on the unique qualities and needs of the corridors. It was generally agreed that the priorities seemed to be accurate and that many of the projects/opportunities needed more analysis before they could be recommended.

Next Steps

The materials used will be edited for the Stakeholder meeting on November 20th. The transit projects will be removed from the opportunities matrix and instead referenced in the final study. The process/steps undertaken to develop the priority list need to be thoroughly explained at the Stakeholder meeting.
Deschutes National Forest Alternative Transportation Feasibility Study
Stakeholder Committee Meeting #3

Meeting Notes
Deschutes National Forest Supervisor’s Office, 63095 Deschutes Market Rd., Ponderosa/Aspen Room, Bend, OR
November 20, 2014, 1:00 PM to 4:00 PM

AGENDA

- 1:00 Welcome/Meeting Objectives
- 1:15 Update on Project
- 1:25 Process for Selecting Priority Projects
- 1:55 Input on priority projects
- 3:15 Next Steps

OBJECTIVES

- Update on Project Progress
- Review of Recommendations
- Process for Selection Priority Projects/Opportunities
- Stakeholder Input on priority projects/opportunities
- Next Steps

WELCOME/MEETING OBJECTIVES

Peggy started the meeting by providing an overview of the meeting purpose which was to review the priority opportunities, the process behind identifying the opportunities and to solicit input from the Stakeholders.

UPDATE ON PROJECT PROCESS

DEA has been working to understand the travel markets and what kind of opportunities present themselves for transportation. In general, the focus of Travel Market Findings is on: Who is accessing the forest, how are they getting there, what are the needs? Are there ways to enhance existing networks? Angela referenced a survey that said over 50% of visitors are accessing from within 50 miles (locals), this shows opportunities for increased transit. Local visitors create opportunities for developing creative access to the forest. A FLAP grant will be prepared to improve transportation to Federal lands. Mt Bachelor shuttle sees 10-20% employee use. Local users could be potential transit users.

PROCESS FOR SELECTING PRIORITY PROJECTS

Identification of Opportunities:

- Elizabeth reviewed how we got to today, that the rangers looked at the corridors in an internal meeting (on September 29th) and considered what is feasible. The internal DNF meeting looked at
opportunities and whether or not they made sense. They also looked at ways people access the forest, and compared that to the Project Goal and Objectives.

- Peggy talked about the DNF internal meeting on Sept 29th: Employees from different backgrounds were able to give input from different areas.
- Peggy reviewed the Project Goal and Objectives (Project Goal: To promote the use of non-motorized alternative transportation options to access high-use recreational areas on the Deschutes National Forest while reducing environmental impacts at these sites.)
- Project Study Corridors- Revised: They decided to break the corridors down even further, the corridor between Bend and La Pine has been broken into two sections: Bend-Sunriver, Sunriver-La Pine. Also the Bend to Camp Sherman corridor has been broken down into Sisters-Bend, Sisters-Black Butte, Black Butte- Camp Sherman.
- Divided these corridors into two categories:
  - Priority corridors with various opportunities and some environmental concerns: Cascade Lakes Hwy, etc.
  - Priority Corridors with various opportunities but MORE COMPLEX environmental concerns: e.g. FS 41 road, Sunriver cutoff, Black Butte to Camp Sherman.
  - Corridors with little to no FS jurisdiction include: Sunriver to La Pine, Bend to Sisters.
- It was acknowledged that all of the corridors have environmental concerns e.g. key elk habitat, frog etc.
- The Objectives (Access, Resource Protection, Alternative Transportation, Collaboration) were ranked for each Corridor.
- Chuck Humphreys brought up the conundrum of both encouraging access to the forest, but also protecting resources from over-use. Peggy replied that there is definitely a competition between the two. Marcos also added that we need to find a balance between the two.
- Discussion: Chuck said that where there is a lot of use you may need to harden the site with rocks, pavement, etc. to allow for more users without causing resource damage. He wonders if that solution was taken into account with prioritization. Peggy said that they didn’t get into the specifics of whether or not they would harden surfaces. Lauri also talked about disturbance impacts. Also how heavy the area is used currently.
- Findings: corridors with most sensitive areas would need to focus on how opportunities impact resources first and foremost.
- DNF reviewed each opportunity for issues and how the opportunities would fit with objectives.
- Elizabeth said that DEA took in depth input from the DNF, including a lot of great ideas about the various issues- and then combined that with info from stakeholders and earlier studies. DEA then came up with 31 opportunities. 6 identified as priority. 21 that need more analysis to know. 4 that were considered but don’t meet project goal. Many identified had merit, but DEA only considered those that fit the goal and objectives of this project. The opportunities are not necessarily flushed out, but are to be considered in a broader sense.
- Elizabeth reminded the group that it was a feasibility project and not a decisional document.
- Black Butte to Camp Sherman and FS 41 road had a lot of issue that needed to be fleshed out still especially with the resource concerns.
- Chuck: The Sisters to Black Butte Ranch project has been rescinded, the EA was adequate, surprised that it was put in second column and not first. Maybe a question of how you measure community support. Skyliners has certainly been rife with this as well. Seems like there are two different issues: with building community support for an issue, and something that seems like a good idea but needs work.
Peggy mentioned that they put it in the analysis; they had to consider if there was community support.  
Kristie Miller said that the project just wasn’t right for this time. Part of the reason why they are presenting today is to figure out where the holes are in the thought process.  
Doug White asked for clarification on this as well. Does analysis also need more fleshing out in terms of public support as well?  
The research team and Forest Service indicated that the term ‘needs more analysis’ means more than just that and it could be ‘needs more...’  
Elizabeth noted that when they were reviewing opportunities, they were looking at opportunities that were not only consistent with the objectives but also implementable. There are kind of two pieces to that and it doesn’t come through very well in the term ‘needs more analysis’.  
John Allen also explained that it seems like to be put in the first category the opportunities really needed to be ripe for implementation- it’s not that they aren’t necessarily ripe for the community, they just aren’t ready yet- need to have a dialogue of what it would take in the community to make it ripe.  
Wendy Holzman explained that the City of Sisters, School District, etc. has done a lot on the project and isn’t comfortable with it in the ‘needs more analysis’ column.  
Doug White also talked about the legal question; it doesn’t seem ok to put it on the back burner when so many plans are hinging on this? It needs to be a priority in terms of being looked into.  
Elizabeth assured that the ones in the second category aren’t being put on the backburner, “we’re not NOT going to do this.” Marcos also said there is some confusion on what the definition of analysis is and they will work on clarifying that.  
Chuck said that naturally what is in the first column will be taken care of first, the less prioritized projects will just get pushed back- there is a different message than saying something needs a lot of work or just needs more community support. Thinks this is a powerful message that risks harming the people who want to move forward on all these other projects.  
Bruce: Sounds like this is about semantics.  
Scott asked if the main reason why is because there are complicated resource protection issues- thus analysis would be the right term for several of them.  
Peggy mentioned that further analysis in some cases may mean that a project does not move forward- so we can look for different terminology, has trouble with saying not ripe for implementation because some of them may never be ripe.  
Kevin Larkin also noted the complications.  
Marcos also said that this is strictly an analysis not a decision making project.  

Corridor A- Cascade Lakes Byway (A1, A2, A3)  
The group discussed the parking agreement opportunity.  
Chuck asked what an agreement would look like: Simply a sign saying no parking during business hours? Forest Service reimbursing entity for re-striping, re-paving from wear and tear?  
Elizabeth: We haven’t got there yet, would need to be looked into.  
Chuck talked about parking issue at Peterson Ridge Trail (Corridor F). What about improving that access through town, would it fit in here? Having people park downtown and biking or walking to trailhead. Peggy- if that was something you wanted to do there are ways to get funding, FS could provide letter of support, we would need city approval/support.  
More riders could impact the recreational experience or cause more ‘off-trail impacts’. Also need to consider Wild and Scenic River for any river crossings.  
Corridor E1  
Simon- When the trail (From Bend to Lava Lands) is done it needs to be done in a way that does not impact wildlife, etc. they have seen a drastic decrease in animal collisions with the advent of
Chuck brought up the point of this one maybe needing more analysis vs. Black Butte Ranch.
Scott brought up the point that all of these will require further analysis at some point. Some of these issues may bubble up so it’s more like these projects are ready to jump through the next phase of analysis versus ready to go right now.
Chuck: The crossings and signs are less complex which makes sense as to why they’re in the left column.
Marcos reminded the group they are getting too project specific.
Dave Rathbun: If you don’t have good transparency as to why one is prioritized and one isn’t, that is where the whole house of cards comes tumbling down.
Peggy and Marco explained who is on the TAC which is a diverse group.
Elizabeth talked about the table of Improvement Opportunity, Key Considerations, Initial Partners Identified.
Corridor D- had 7 that needed more analysis. Has carrying capacity issues.
Corridor F3- This grant went away and we haven’t identified additional funding sources so we don’t have a timeline.
Marcos: The goal was to get as much input from everyone here to provide feedback which he thinks they’ve got, and modify the format accordingly.
Elizabeth also noted that just because certain opportunities may not be in here doesn’t mean they won’t be considered.
Chuck noted that that would be good but when these things get out in the public, some of this language could get lost. Maybe in the middle column if you could list the issues that have to be addressed or the items needing more analysis: various issues that have arisen in your discussion to say that they ‘aren’t ripe yet’. He thinks people will look at that matrix without seeing the subtleties.
Marcos brought up the point that some of these are very project-specific while others are not. He reiterated the fact that this is just a study, starting point to move further, grants, etc.
Dave Rathbun talked about the sewer discussion with the City of Bend that took everyone off course and ended in an advisory group- we’re skipping ahead to show the findings but a lot went into these findings. When this gets put out to the public it should say here is what we found out about these things and based on these criteria this is why they sorted out. How this is accepted with the public will be critical for buy-in and acceptance.
Elizabeth reassured that this was a robust study and analysis, that a lot went into these prioritizations. They held everything up to those Evaluation Criteria.
Scott: Just to echo what Dave was saying, we really need to emphasize that communications piece where we talk about what went into these findings and what it means, needs to be carefully done because it is very nuanced and wrapped up in government stuff the general public may not be aware of.
Chuck: The 5 things you’ve identified to do are the simplest/easiest things. Pick the low hanging fruit, etc. the question is- is this what the priorities for national forest land really boil down to? Seems like all the more interesting things have been shoved off into a different category. Is that the message that you want to send?
Marcos said that we do need to re-look at some things. How can we bite off some things we want to chew on to show that we are working on some things to move towards more innovative solutions? We aren’t saying the middle ones aren’t a priority; it’s just an interpretation I’m not familiar with.
Chuck: They’re bigger bites, more controversial, etc. it’s not saying they shouldn’t be done, maybe not done first, but it’s the issue of how this will be interpreted- and maybe they really are the most
important things that could be done to really improve access. Is this the big result you want to go out there with?

- Doug White wondered if funding may be a cut-off here, would that be a way to move it forward more objectively.
- Scott: Is there something we can do to show simplicity vs. complexity, instead of priority? Short term, mid term....
- Opportunities need to fill a need rather than just be implementable.
- Roger White: Question about Camp Sherman being against paved paths: Business community is 100% for that. Thinks that the community in Camp Sherman would not be against this and he doesn’t even think the community knows about the possibility of a paved path. DEA will fix the language there.
- Chuck: Community support is a different issue than technical feasibility- coming back to point of how public and private sectors work together to provide these opportunities to the community.
- Bruce Ronning: Wondering if the only recommended feasible projects, what’s going to happen to the rest of this- is there an incentive within the agency to continue working on these projects? If you just pick the low hanging fruit the rest of the fruit on the tree will rot and we’ll get nowhere. Marcos thinks we’re getting too hung up on the word priority and we need to fix that. We have the opportunity and are aware of the potential issues/concerns; we will move forward accordingly, hope to continue to work with public to move forward.
- Elizabeth also said that it seems like some of these are being intended to work on in the near future.
- Doug White: Talked about the USFWS inventory for spotted frog, it appears the only inventory is for private property; it’s totally blank- the question is if this info is available to the public. Thinks that this is a complex issue.
- Lauri: Critical habitat is proposed, it’s not a final done deal, information is on their website you may have to go to a different spot. Not sure what that’s referring to, critical habitat is primarily designated on federal lands that’s why I’m not sure what you’re looking at versus what is proposed. It may be referring to something different.
- Simon: The info is available but the information is always not easy to get. Please provide Doug with a link.
- John Allen: Nothing that takes place on the forest comes without complexity or controversy, wants to get up at a higher level and not be in the weeds at a project-level. What I think this group did was identified corridors or things that were important to them under the concept of alternative transportation. I’m interested in what this group thinks about as far as which corridors are most important to them. As the DNF moves forward with planning, if we pick a project we will do NEPA on a corridor and what’s effective on a corridor-level. Having some broad community agreement about which corridors are most important.

**BREAK**

- Peggy explained handout: Corridor Prioritization
- Peggy said that everything we do is complex, so let’s not focus on complexity so much but look at these Corridor Prioritizations and get your input on these specific corridors.
- **If you’re going to tackle a corridor first where do you think we should go? What are your thoughts based on the opportunities that came up?**
- Phyllis: Spreading out use in the corridors? Disperse opportunities among corridors try not to focus on current concentrations
- Lev: COTA recognizes that there are a lot of people parking at the bottom of Tylers and Storm King, are you looking at increasing parking there or trying to move parking to Visitors Center?
- Bruce Johnson: Corridor A as far as getting people out of their cars and increasing alternative transportation in areas with most use.
- E1 Bend to Sunriver corridor because it connects HDM, Lava Butte, connects so many things. Could go as far down as Paulina Lake Road.
- What are the criteria for categories? Open new areas or bring people to existing?
- Chuck: Focus on areas of dispersal, where would people go? We don't know how many people would take advantage of a Camp Sherman trail; we know that area has a big concentration of cars. Corridor F3. Finds what Roger said very compelling. Get people INTO Deschutes National Forest, not just there.
- Elizabeth referred to the market analysis and the desire for people to ride bikes.
- Bruce Ronning: Agrees with Corridor A but needs to be separated, Visitors Center could be used by people who live on the Westside. Then beyond that it can become more of a weekend destination. Divided by opportunities along highway close to town and those that are farther away. Tourist vs local.
- Wendy Holzman: Multi-generational access, Corridor F2 would get a lot of use. They’re all important.
- Black Butte Ranch would get use and experience of DNF without driving.
- Roger White: Bend to Sisters Corridor F1, could be a gateway to the Sisters project. Camp Sherman F3.
- Bend to Sisters via Brooks Scanlon would be more expensive.
- Doug White: Would like to see one from each of the regions.
- Elizabeth noted that it is indeed hard to prioritize them because they all have merit. Maybe we could look at it by what are the things that make these areas important?
- Bruce Johnson: We’re really talking about getting people out of their cars to the areas they are already accessing, not necessarily getting more people into the area- just shifting their method of transportation.
- Dave: What would be the most logical positive outcome of the concept of alternative transportation? Is it to get the most amount of people to ride their bike to a trailhead?
- Peggy: The idea behind this was to not keep expanding and building parking lots.
- Population centers Origin/destination: Corridors lead to those places – interface with communities closest to the forest.
- This Study would provide a pool of opportunities that identify partnerships and how they align with DNF goals. Resource for future grants/funding.
- Elizabeth: So we've identified X opportunities in these corridors, what are the issues, if these opportunities become more ripe, what are we going to have to look at, who are the partners that will need to be contacted to move forward with grants, etc. So it sounds like we need to sort of re-organize/re-structure the way these opportunities and priorities are presented. Would that be a useful document?
- Doug: Well are we trying to create a long-term goal to encourage more people to use alternative transportation.
- Phyllis: We’re thinking about things as they are right now. There is a building boom in Sisters right now; we need to think about how population will increase over time, etc.
- Elizabeth: In the market analysis we did talk about how this area has grown a lot and that it has slowed down but is likely to grow again. Final document may be more categorizing vs. prioritizing.
- Financial assessment could help a lot. Maybe rate them as $, $$, $$, $$$

NEXT STEPS
- Review need for partnership, project advocates and community support
Consider how we present opportunities. We can explore what it would take for them to move forward and what the priority type of project would be by corridor rather than ranking which opportunities are priorities.

Schedule:
- Draft Market Analysis (Dec) Final (Jan)
- Report with Recommendations (Dec) Final (Jan)
- Financial Assessment and Implementation Plan (Jan-Feb)
- Final Report with Recommendations (Late Feb)

*** Make sure website is updated and send email blast once these documents are finalized.
APPENDIX B: GOALS, OBJECTIVES, EVALUATION CRITERIA, AND PERFORMANCE MEASURES
### Project Goal

To promote the use of non-motorized alternative transportation options to access high-use recreational areas on the Deschutes National Forest while reducing environmental impacts at these sites.

The following evaluation criteria were developed to compare how well proposed improvements meet the Project Goal and Objectives. Performance measures were developed as a mix of qualitative and quantitative assessments based on the criteria and the availability of data at this stage of evaluation.

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<th>Objective</th>
<th>Evaluation Criteria</th>
<th>Performance Measures</th>
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| **A. Promote access to diverse recreation opportunities for all visitors (ACCESS)** | 1. Increase visitor mobility and access. | • Improved access for bicyclists and pedestrians to trailheads.  
• Information on parking capacity issues is provided at visitor centers. |
| | 2. Improve traveler safety. | • Improved pedestrian crossings to major trail heads and destinations.  
• Improved pedestrian circulation at recreation sites.  
• Reduced vehicular and pedestrian/cyclist conflict with parking maneuvers. |
| | 3. Provide additional access to diverse recreation opportunities. | • Information is provided about specific less frequented points of interest and recreation opportunities.  
• Information is provided about additional means to access high-use recreational areas. |
| **B. Encourage the use, enjoyment, and sustainability of natural resources while protecting DNF lands from degradation resulting from over-use and increasing pollution (RESOURCE PROTECTION)** | 1. Avoid and minimize impacts to visual, cultural, and environmental resources. | • Reduced visual, cultural and environmental resource impacts from parked cars.  
• Improve parking lot layout and efficiency.  
• Increased parking enforcement.  
• Reduced visual, cultural and environmental resource impacts from unauthorized bike and hiking use. |
| | 2. Improve air and water quality. | • Reduced air quality and pollutant emissions levels.  
Measured/forecast emissions include CO2.  
• Reduced contaminants leaking from cars parking on unpaved surfaces outside of designated parking areas.  
• Reduced storm related soil erosion and airborne particulate matter (i.e. dust) from use of areas off a designated facility. |
# DNF Alternative Transportation Feasibility Study

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<th>Objective</th>
<th>Evaluation Criteria</th>
<th>Performance Measures</th>
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<td>3. Increase public awareness and education of resources and the values of preservation.</td>
<td>• Information on resource preservation is provided at key visitor locations.</td>
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<td>C. Foster the use of alternative transportation systems to manage visitation to forest resources and promote active transportation and connectivity among gateway communities and the forest (ALTERNATIVE TRANSPORTATION)</td>
<td>1. Reduce traffic congestion around trailheads.</td>
<td>• Increase in miles of new or enhanced facilities for pedestrians and bicyclists. • Increase of connections to existing urban trail systems and parking areas.</td>
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<td>2. Improve alternative transportation connectivity within and between points of interest and communities.</td>
<td>• Increase trail links to eliminate or reduce gaps in the system. • Increase linkage in the on-road bike system to eliminate or reduce gaps in the system. • Increase links in the pedestrian network on road or at the major sites to eliminate or reduce gaps.</td>
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<td>3. Provide public awareness of alternative transportation options.</td>
<td>• Information is provided on alternative access via bike and walking to sites. • Information is provided on less-congested trailheads and options for visiting key sites that are currently less utilized. • Maps of bike access and pedestrian access are readily available through multi-media.</td>
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<td>4. Financially feasible and cost-effective.</td>
<td>• Costs of improvements fit within available partnering agency budgets or reasonable near-term funding sources. • Notable public benefit is realized with reasonable cost expenditure.</td>
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<td>D. Cooperate and coordinate with regional and community efforts to promote economically and environmentally sound multi-modal transportation systems (COLLABORATION)</td>
<td>1. Management and operationally feasible.</td>
<td>• Structures and agreements are in place to manage, maintain, and operate new improvements, such as inter-jurisdictional trail maintenance.</td>
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<td>2. Compatible with local, regional, and state plans and regulations.</td>
<td>• Improvements are consistent with adopted plans and policies. • Physical improvements can be adopted into plans and policies.</td>
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<td>3. Provides opportunities for partnerships.</td>
<td>• Improvements are consistent with the goals and visions of various agencies and organizations. • Partner organizations were engaged in defining improvements. • Partner organizations have indicated a desire to partner to develop, maintain, and operate identified priority improvements.</td>
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<td>4. Provides opportunities for funding from other and multiple sources.</td>
<td>• Improvements qualify for a variety of funding types.</td>
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