

FINAL REPORT

*Needs Assessment & Feasibility Study
for a Community Transportation System*

Denali National Park and Preserve

*Prepared by HDR Alaska, Inc.
April, 2006*



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*Denali National Park and Preserve
Task Order Number T2000041414*

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1.0 INTRODUCTION

Approximately 400,000 people visit Denali National Park and Preserve each year, primarily during the short summer season between May and September when the single 90-mile park road is free of snow. The primary attractions are the opportunity to view wildlife and see North America's tallest mountain. Access to the park road is restricted to preserve wildlife viewing opportunities and the wilderness character of the road, so almost all visitors travel into the park on tour buses or the park's Visitor Transportation System buses.

Visitation to Denali increased dramatically in the 1970s after completion of the Parks Highway, which significantly reduced the driving distance from Anchorage and Fairbanks to the Park. Visitors arriving before 1972 either rode the Alaska Railroad or drove the Denali Highway, a long gravel connection to the Park from the Richardson Highway. Visitation surged again in the 1990s with growth of the cruise industry in Alaska generally, and specifically to Denali, which is a common stop on optional land tours.



Requiring most visitors to travel into the Park by bus has been successful at minimizing the impacts of increasing visitation on the Park's natural ecosystems. Denali has maintained its reputation as a world renowned site for wildlife viewing while accommodating increasing numbers of visitors. However, the combination of access into the heart of the park by bus and an increasing number of visitors who are part of organized tours has meant that the number of people arriving at the Park entrance to connect with their trip into the park has grown significantly. The increased number of visitors has exceeded the ability of the existing system of hotel and visitor venue shuttle buses to handle the load gracefully and effectively. Adding to the pressure on the frontcountry transportation system is the fact, unusual for parks in the U.S. that a high percentage of each year's 400,000 visitors arrive by rail, motorcoach, or recreational vehicle – some mode other than the private car. What began as an occasional hotel shuttle pulling up to the park Visitor Center to deliver hotel guests is now a steady stream of shuttle buses from hotels, outside the Park attractions, such as river rafting, flight seeing and golf, and buses operated by the Park concessionaire dropping off passengers returning from a ride in the park. These factors make Denali National Park a prime setting for a Community Transportation System to provide frontcountry transportation.

1.1 Existing Conditions and Services

The entrance area of Denali National Park and Preserve is located at the westernmost edge of the Park, where the Parks Highway and the Alaska Railroad intersect the road

into the Park. Land just outside the Park to the north of the entrance has become densely developed with hotels and other visitor services. This area, called Nenana Canyon, contains the majority of guest rooms in the broader Healy to Cantwell segment of the Parks Highway in which most Park visitors stay. Figure 1.1 provides an overview of the Denali National Park entrance area and Nenana Canyon, and Figure 1.2, an illustration of the Cantwell to Healy portion of the Parks Highway.

At present there are a variety of bus and shuttle bus services sponsored by the National Park Service, as well as services operated by nearby hotels and other visitor attractions. The primary destinations in the vicinity of the Park entrance are the Wilderness Access Center (WAC), which serves as the hub for transportation ticketing and boarding and overnight camping and backpacking services, the new Denali Visitor Center (DVC), and the Alaska Railroad station, all in the Park frontcountry, along with the three major hotels and other smaller lodgings and services located in Nenana Canyon.

The following are brief summaries of the major types of buses services in and around the Park. With the exception of the Kantishna lodge buses and the courtesy vans and buses, all of the buses described are operated as part of the Park concession contract.

Tour Buses

There are two narrated bus tours provided for visitors, the Tundra Wilderness Tour and the Natural History Tour. The majority of the passengers on these buses are traveling as part of a cruise land tour package and almost all cruise land package visitors travel to Denali and are booked in one of these tours as part of their package. These tours operate from hotels to the Park frontcountry and then into the Park.

The **Tundra Wilderness Tour** travels to the Toklat River at Mile 53 and return. The average length of the tour is six to eight hours. This tour provides visitors the opportunity to view wildlife along Denali Park Road and interpretive narration. Stops are made frequently to allow the passengers to observe wildlife and take pictures. On clear days, the tour is extended another five miles to Stony Hill Overlook to view Mount McKinley. During the shoulder season, prior to Memorial Day weekend and late in September, the Tundra Wilderness Tour only goes to Teklanika Rest Stop at Mile 29.

The **Denali Natural History Tour** travels to the Primrose Scenic Overlook at Mile 17. The duration of the tour is 3-5 hours. The purpose of this tour is to interpret the natural history of the area, including a living history presentation at the historic Savage Cabin and Native Alaskan interpretation at Primrose. Wildlife viewing is not the focus of this experience, but the bus stops when wildlife is sighted.




Park Road Transportation

In addition to the narrated tours, there are also two categories of buses that provide transportation along the park road west of the Savage River Bridge.

Denali Community Transportation Plan

OVERVIEW MAP

MAP LEGEND

-  Parks Highway and Other Principal Roads
-  Alaska Railroad
-  Principal Roadside Trails



SCALE 1 inch = 1,500 feet
Feet

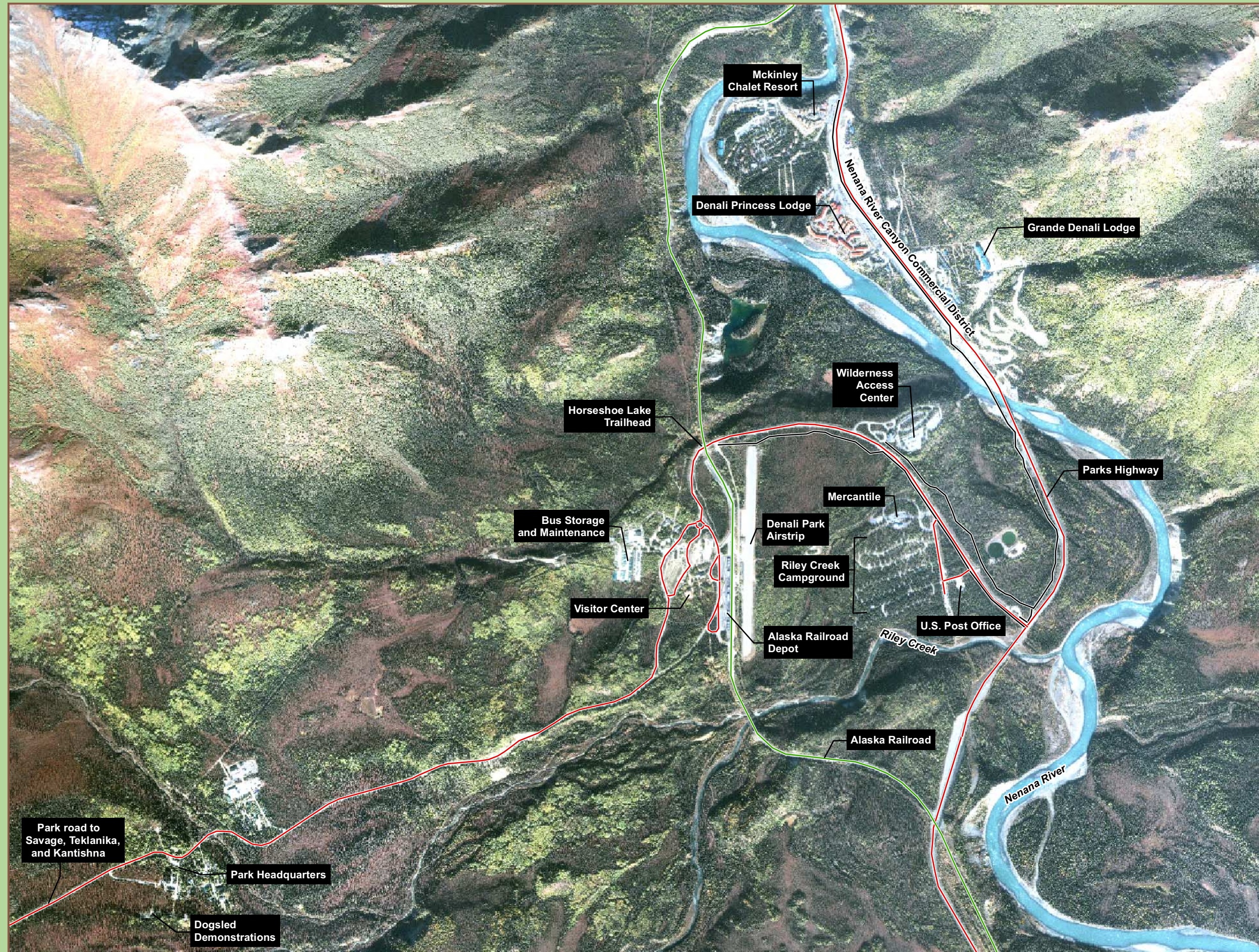
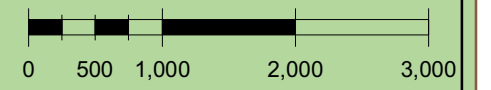
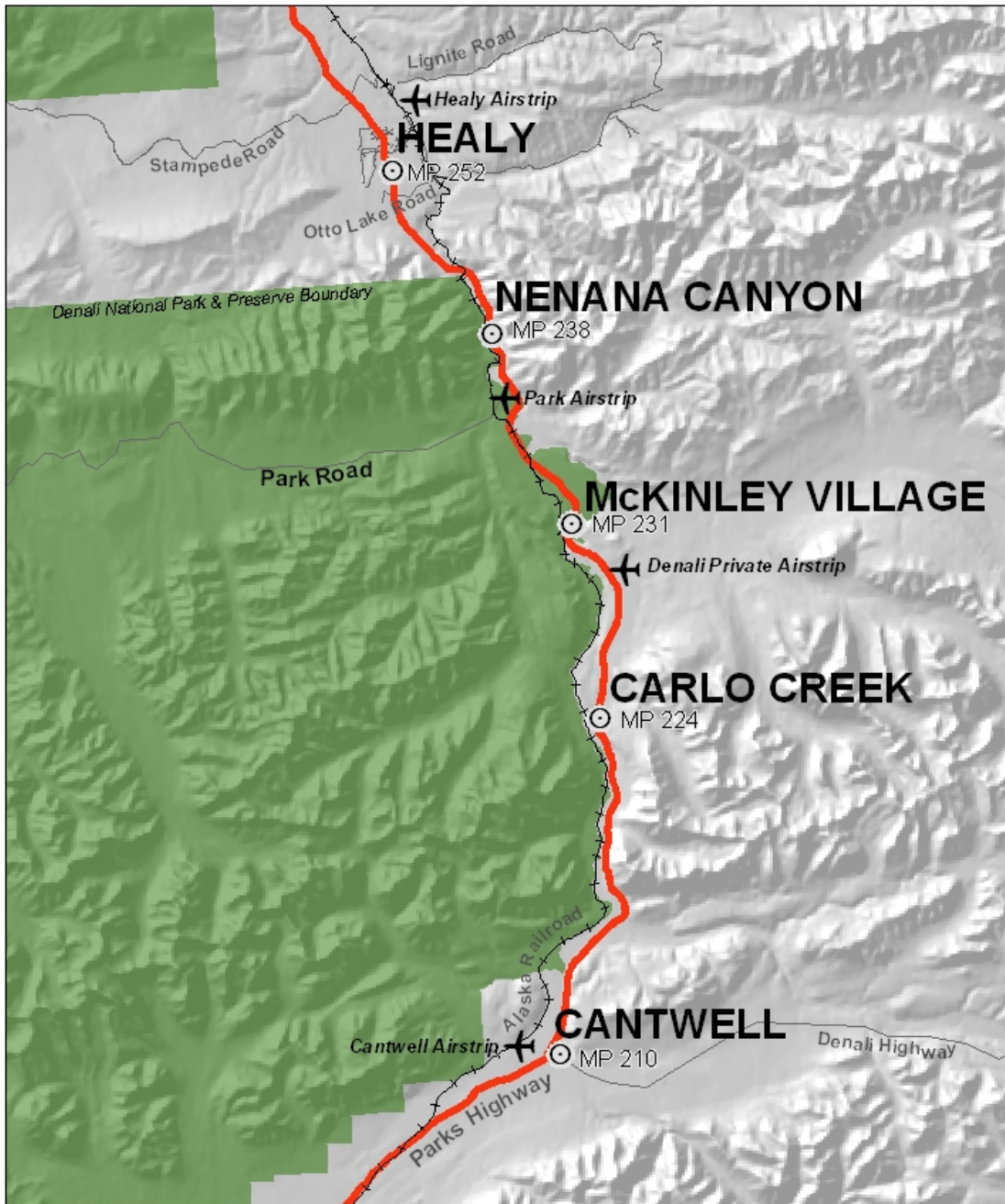


Figure 1



National Park Service
Denali National Park & Preserve

Parks Highway Corridor

Figure 1.2. Denali Entrance Area Overview

The **Visitor Transportation System (VTS)** buses provide basic transportation for park visitors in lieu of personal vehicle access. Also operated by the park concessionaire, these buses transport passengers on a regular schedule to various turnaround points along Denali Park Road. These buses turnaround at Polychrome (Mile 47), Toklat (Mile 53), Eielson (Mile 66), Wonder Lake (Mile 85), Kantishna (Mile 90) and stop at all rest stops. VTS passengers can get off the bus and go for a hike. They can also switch from one bus to another, subject to the availability of seating. The majority of these passengers are not on package tours. A fee is charged for riding on these buses.

Kantishna lodge buses are operated independently by each of the three privately owned lodges at the end of the park road in Kantishna—Camp Denali/North Face Lodge, Denali Backcountry Lodge and Kantishna Roadhouse—to transport guests to their facilities for overnight stays or day trips. These buses stop at the rest stops and the Eielson visitor center en route to their destination.

While the purpose of both the VTS and the Kantishna lodge buses is to provide transportation, the buses stop to view wildlife and scenery, and the drivers are often knowledgeable and provide interpretive information to passengers as they travel.

Frontcountry Shuttles

In addition to the tour buses and the buses that provide transportation services along the park road west of Savage River, there are a variety transportation options for visitors moving around the park frontcountry east of Savage River and to the communities outside of the park.

The **Savage River Shuttle** is a park concession-operated service that transports visitors from the Park Entrance to the Savage River (Mile 15). All Savage shuttles stop at the WAC, Park headquarters (Mile 4), Savage Campground (Mile 13) and the Savage River parking lot.

The **Dog Sled Demonstration Shuttle** is a park concession-operated service that transports visitors interested in attending the Dog Sled Demonstration presented daily in the historic NPS headquarters area. The shuttle departs from Riley Creek Campground thirty minutes before each demonstration time and stops at the WAC.

The **Riley Creek Loop Shuttle** is a park concession-operated service that that begins at Riley Creek Campground and includes stops at the WAC, Horseshoe Lake Trailhead, and the Alaska Railroad Train Depot.

Lastly, **courtesy vans and buses** operated by local businesses that transport visitors from their establishments in the surrounding area to the Park. These buses and vans stop at the WAC and the Train Depot. They are not regulated by the Park Service except in defining a drop-off area at the visitor center. These shuttles and their connections to the shuttle bus services operated in the Park are the focus of this study. A summary of the principal shuttle and courtesy buses that operate on a regular schedule is provided below in Table 1-2.

Table 1-1. Existing Frontcountry/Park Entrance Shuttle Services

Service	Owner	Operator	Route	Frequency (buses/hr)
Riley Creek Loop	NPS	Doyon/Aramark Joint Venture	Denali Visitor Ctr. to WAC & Post Office	2
Savage River Shuttle	NPS	Doyon/Aramark Joint Venture	WAC to Riley Cr. Campground to Savage River	1
Sled Dog Demonstration Bus	NPS	Doyon/Aramark Joint Venture	Denali Visitor Ctr. To Demo Site	3 times per day
McKinley Chalet Resort Shuttle	Aramark	Aramark	McKinley Chalets to WAC	4
Denali Princess Hotel Shuttle	Princess	Princess	Princess Hotel to Denali Visitor Ctr. via WAC	1
Grande Denali Hotel/Bluffs Shuttle	Grande Denali	Grande Denali (04); Aramark (05)	Grande Denali and Bluffs, McKinley Chalets, Princess, WAC	3
McKinley Village Shuttle	Aramark	Aramark, McKinley Village Lodge runs addl. trips	McKinley Village to WAC, McKinley Chalets, Tesoro Sta.	1

From the visitor’s perspective, there are not only a large number of shuttle services, but each serves a separate purpose, follows a different route, and runs on a unique schedule. The Park-sponsored shuttles are somewhat easier to sort out as most services stop at the WAC. The existing transportation services that link the frontcountry destinations and activities of the Park and the visitor services of the Canyon can be characterized as follows:

- The existing shuttle services are confusing to users. Transportation between the Park entrance area and visitor services outside the Park can detract from visitor enjoyment. It is not uncommon to stand outside the WAC and be asked “Where do I board the bus to the Denali Something-or-other hotel? Does the shuttle to golf or the sled dog demonstrations leave from here? Which bus?”
- The physical environment is not conducive to sorting out the different shuttle buses services and seeing where the visitor should board the bus to their destination. It is not possible to see the hotel shuttle arrival and boarding area from inside WAC. If one waits outside the WAC at the hotel and incidental shuttle area, there is nowhere to stand out of the rain or weather while waiting for one’s bus (Figure 1.3).
- The hotels would prefer not to operate shuttles, but do so by necessity to move their guests from the hotel to the park and return. Operating transportation services is not their primary business activity and all have stated that they would prefer to not provide the service. The hotels feel that in all there are many “empty seats being driven around” in the current system that potentially could be used to carry hotel guests.



Figure 1.3. Wilderness Access Center Courtesy Bus Stop

- Most visitors don't have time to learn how the transportation system works. Limited duration stays – typically one to two nights – give visitors limited time to learn the multitude of routes and schedules. Ninety percent of the visitors are from the US and typically are not regular transit users.
- There is no integration of routes or schedules between Nenana Canyon and the WAC, or between the WAC, the DVC and related services, except that most buses stop at the WAC and/or the DVC at some point along their route.
- Apart from information that an individual hotel might provide to its guests, there are few signs and fewer route maps, schedules, or other aides to the rider displaying information about the services.

A humorous view of the existing situation is provided by “Where does this bus go???” attached as Appendix A.



Figure 1.4. A Sampling of Denali Entrance Area Shuttle Buses – McKinley Village Lodge van at the McKinley Chalet Resort (upper left), A Natural History Tour bus at the McKinley Village Lodge (upper right), A Visitor Transportation System bus dropping off passengers at the WAC (lower left), and a Riley Creek Loop bus stopping at the WAC (lower right).

2.0 GOALS & OBJECTIVES

The overall objective of this plan is to recommend a Park Gateway community transportation system that is safe, efficient, and user friendly and that reflects respect for wildlife and park resources.

Goal 1: Improve the transportation experience of visitors to Denali National Park.

Objective 1(a): Make it easier to travel in the Denali National Park area without using a personal vehicle.

Objective 1(b): Establish frequent coordinated or consolidated transportation service that would shuttle visitors between private lodgings and the frontcountry of the Park.

Objective 1(c): To the extent possible, coordinate or integrate shuttle service within the frontcountry of the Park with shuttle service connecting the Park to lodging and activities outside the Park.

Objective 1(d): Reduce visitor confusion with transportation in general, and specifically in connection with how, where and when to catch shuttle services from the Wilderness Access Center to other points in the frontcountry or outside the Park.

Objective 1(e): Make the shuttle services identifiable and attractive to the Park visitor to increase use and satisfaction with the service.

Goal 2: Improve transportation between Denali Borough communities from Healy to Cantwell.

Objective 2(a): Provide transportation service that enables area visitors to travel within and between communities to take advantage of available activities and services

Objective 2(b): Help employees of visitor service businesses get to work locations outside the Park as well as in the Park frontcountry.

Objective 2(c): Improve the potential for business expansion outside the Canyon area while reducing congestion in the Canyon.

Objective 2(d): To the extent possible, provide a basic level of transportation during the summer season for residents living in and in-between Healy and Cantwell.

Goal 3: Reduce the cost to private visitor venues of transporting their clients in the Denali National Park area.

Objective 3(a): Consolidate the myriad shuttle services connecting private visitor services with the Park.

Objective 3(b): Make it easier for employees in the Park area to travel to and from work without a private vehicle.

Objective 3(c): Lower the per passenger cost of privately-operated shuttle service.

Objective 3(d): Improve the viability of small business development of frontcountry visitor attractions by lowering the cost of doing business.

Goal 4: Ease the need to expand parking within the Park.

Objective 4(a): allow visitation to increase without the need to increase in-Park parking.

Objective 4(b): Minimize increases in in-Park parking and limit parking to the number contained in the *Entrance Area and Road Corridor Development Plan*.

Objective 4(c): Plan and develop the shuttle system to capture an increasing share of the trips to the Park frontcountry that originate outside the Park.

Goal 5: Develop a transportation system linking the nearby communities and the Park that can grow with Park visitation.

Objective 5(a): Ensure that to the extent possible, the shuttle system can be expanded as visitation increases.

Goal 6: Develop fully accessible transportation systems in the Park area.

Objective 6(a): Require community transportation system to provide wheelchair-accessible vehicles or alternatively provide separate dedicated services for the disabled.

Objective 6(b): Encourage private operators of shuttle services to provide accessible transportation services for their guests.

Goal 7: Create a sustainable financial and management structure to operate the community transportation system.

Objective 7(a): Ensure that, to the extent possible, all private and public beneficiaries of the system contribute to support costs of operation on an ongoing basis.

Objective 7(b): Given that the NPS has no legal authority outside the Park, operations of a community transportation system outside the Park must be managed by private and/or local public interests.

3.0 SHORT-TERM IMPROVEMENTS

3.1 Purpose

The purpose of the short-term improvements project is to quickly implement transportation system enhancements that will improve the visitor experience without requiring significant capital or additional operating expense. Furthermore, any short-term improvements will need to be relatively simple institutionally, in order to avoid prolonged discussion or significant renegotiation of the Park's concession agreements. It is hoped that virtually all parties involved will see the proposed improvements as positive steps that will upgrade current conditions for visitors, the Park, and businesses that provide Denali area visitor services. Existing data, material collected in the course of this project, and the visitation and employment elements of this project provide the background information necessary to complete the short-term element.

3.2 Short-term Improvement Objectives

The short-term improvements are intended to include all service, organizational, informational, or other changes to Denali area transportation that can be accomplished quickly. Improvement objectives include:

- Simplify visitor transportation in the Park entrance area, and between the entrance area and the visitor services near the Park. Make it possible for visitors to use the system with a minimum of pre-trip information and preparation.
- Improve transportation without purchasing new vehicles. Draw from vehicles currently in use in the area. A provider, however, could draw from existing fleets at Denali or elsewhere.
- Implement improvements within a year of the acceptance of this short-term report.
- Keep overall transportation provider costs, both public and private, equal to or lower than existing costs.
- Encourage visitors to leave personal vehicles at their place of lodging and take a shuttle bus to the Denali entrance area. Improved shuttle service should lessen the growth in demand for entrance area parking.
- Implement a system that can be easily expanded as demand warrants.
- Minimize the requirement that visitors transfer between shuttles at the WAC or the DVC.

3.3 Short-term Improvement Alternatives

Improvement alternatives address two dimensions – operational and institutional. The operational alternatives include variations in routing, schedule frequency, vehicle type, and other aspects of the service that visitors see and use. Institutional alternatives address organizational issues, funding requirements (who is responsible for paying for specific components of the service), who is responsible for managing which parts of the service, and related issues.

Operational Alternatives

Short-term operating improvement options include service from the Park entrance area to Nenana Canyon (“Canyon”) and return, as well as an option to extend service to McKinley Village. There are opportunities to consolidate and simplify service in this area, and a number of willing participants who recognize the opportunity to improve service to their customers without increasing operating expenses.

Service to destinations beyond the Canyon and McKinley Village, including Healy, Carlo Creek and Cantwell is not currently provided by hotels in these locations. Implementing service to these more distant locations would add to existing transportation costs, and consequently is not included among the short term options. Extending service to these areas in the future would warrant the possible formation of a regional transit system to provide additional funding needed to support service expansion. This raises questions of Borough or NPS support, contributions on the part of smaller, more distant lodging operators and other issues that will take time and effort to resolve successfully. These issues are addressed in the long-term report.

Four short-term operational alternatives have been developed to provide options for consolidation and simplification of the shuttles connecting the visitor venues to the Park frontcountry.

Alternative A: Canyon - WAC Shuttle

This service would operate from the McKinley Chalets to the Wilderness Access Center and return. The Riley Creek Loop would continue to operate unchanged, from the Alaska Railroad Depot to the WAC, the Riley Creek Campground, the Post Office and return (Figure 3.1).

For this as well as the other alternatives, the greatest operational dilemma is whether to serve the Grande Denali Hotel as part of the Canyon route. Although an argument could be made either way, it would be in the greater overall interest for a separate shuttle to serve the Grande Denali. The trip up the hill to the Grande and back to the highway takes 10 to 15 minutes, depending on weather and the number of passengers boarding/alighting at the hotel. To route the Canyon shuttle to the Grande would inconvenience a majority of all shuttle passengers - who would be headed to some other destination in the Canyon - potentially extending the duration of their trip by 50 to 100 percent to make the detour. It would be more appropriate for the Grande Hotel to use a bus specified for that purpose to shuttle up and down the hill to meet the Canyon shuttle bus. With one vehicle, a connection could be made to every Canyon shuttle, either the inbound or outbound, depending on the time of day.

Excluding the Grande Denali Lodge, the Canyon – WAC Shuttle could be operated with two vehicles providing service every 15 minutes. It is assumed that the Park would continue to sponsor operation of the Riley Creek Loop with one bus, providing service every 30 minutes. The schedules would be timed so that the Canyon shuttle and the Riley Creek Loop meet at the WAC every half hour. In the morning, the Riley Creek

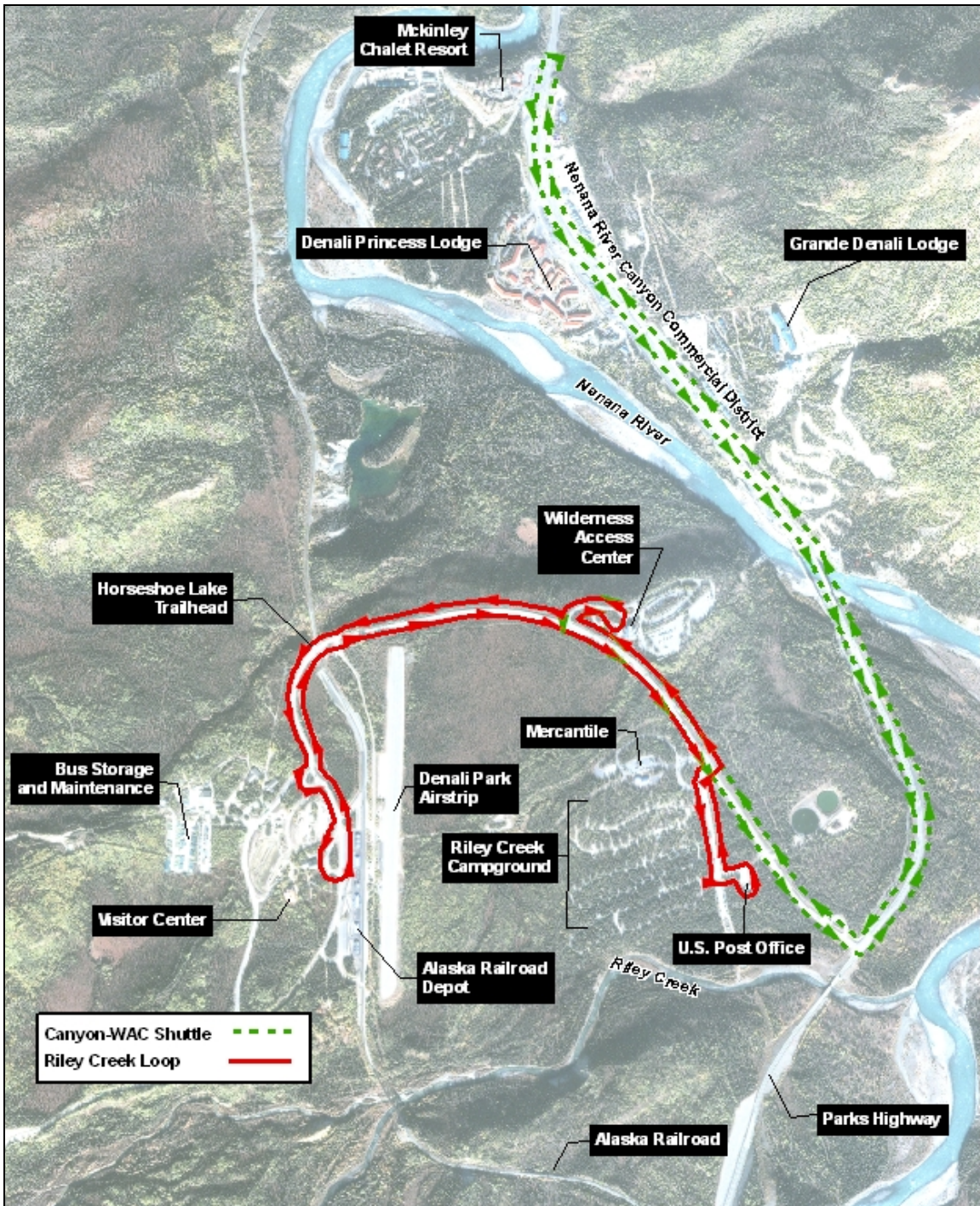


Figure 3.1. Alternative A: Canyon – WAC Shuttle

Loop would be timed to meet the Canyon Shuttle at the WAC on the way from the Post Office to the DVC in order to provide the best connection for visitors traveling into the Park. In the afternoon, the Riley Creek Loop would be timed to meet with the Canyon - WAC shuttle at the WAC outbound, on the way from the DVC to the WAC, in order to provide the best connection for people traveling out of the Park. This alternative would involve the least amount of change from the existing situation.

The institutional advantage of this shuttle option is simplicity, in that the Park continues to be responsible for the Riley Creek Loop, while the consortium of hotels and visitor services is responsible for the Canyon-WAC shuttle. Operationally, this alternative forces passengers traveling between the Canyon and the Denali Visitors Center, the Alaska Railroad station, the Murie Center, or the Horseshoe Lake trailhead to transfer between routes at the WAC. Requiring transfers as part of a trip is not ideal, as passengers uniformly prefer to ride directly from origin to destination. This is especially true where, as in the Park, the riders have not generally ridden the system before and are not familiar with how and where to find the connecting bus, the routes, schedules, etc. In comparison to the present situation, however, this alternative does have the advantage of reducing the number of shuttles stopping at the WAC.

Alternative B: Consolidated Shuttle

The consolidated shuttle option combines the Riley Creek Loop and hotel Canyon shuttles into a single route to provide direct service from the Canyon to all of the principal destinations in the entrance area of the Park. This service option would operate as a loop from the McKinley Chalets to the Denali Visitor Center – railroad station bus stop inside the Park frontcountry (Figure 3.2) and return. The shuttle could be operated with three vehicles, providing service every 20 minutes, including service to the Denali Bluffs Hotel. This assumes a round-trip running time of 60 minutes, which should be sufficient given the results of test runs conducted during the summer season. Operation of this route would require three vehicles. Please refer to Appendix B – Draft Running Times: Consolidated Route – Denali Visitor Center to Canyon. The round-trip time would allow 25 Minutes more than the current 35-minute Denali Princess Lodge shuttle service to add the Denali Bluffs Hotel, the McKinley Chalet Resort and possibly other stops in the Canyon.

The advantages of a consolidated shuttle include those of the Canyon-WAC shuttle with the additional, significant advantage of eliminating the need to transfer at the WAC for visitors traveling from the Canyon to the DVC or other points beyond the WAC. This both simplifies travel for the visitor and reduces the number of people boarding and alighting at the WAC. This alternative, in comparison with the Canyon-WAC shuttle, further reduces the number of shuttle buses stopping at the WAC by eliminating the need for a transfer between the Riley Creek loop bus and the hotel shuttles every half hour. This option would require the same number of buses (three) as the Canyon-WAC and Riley Creek shuttles combined, while improving the service frequency for the Riley Creek Loop portion of the route from 30 to 20 minutes.

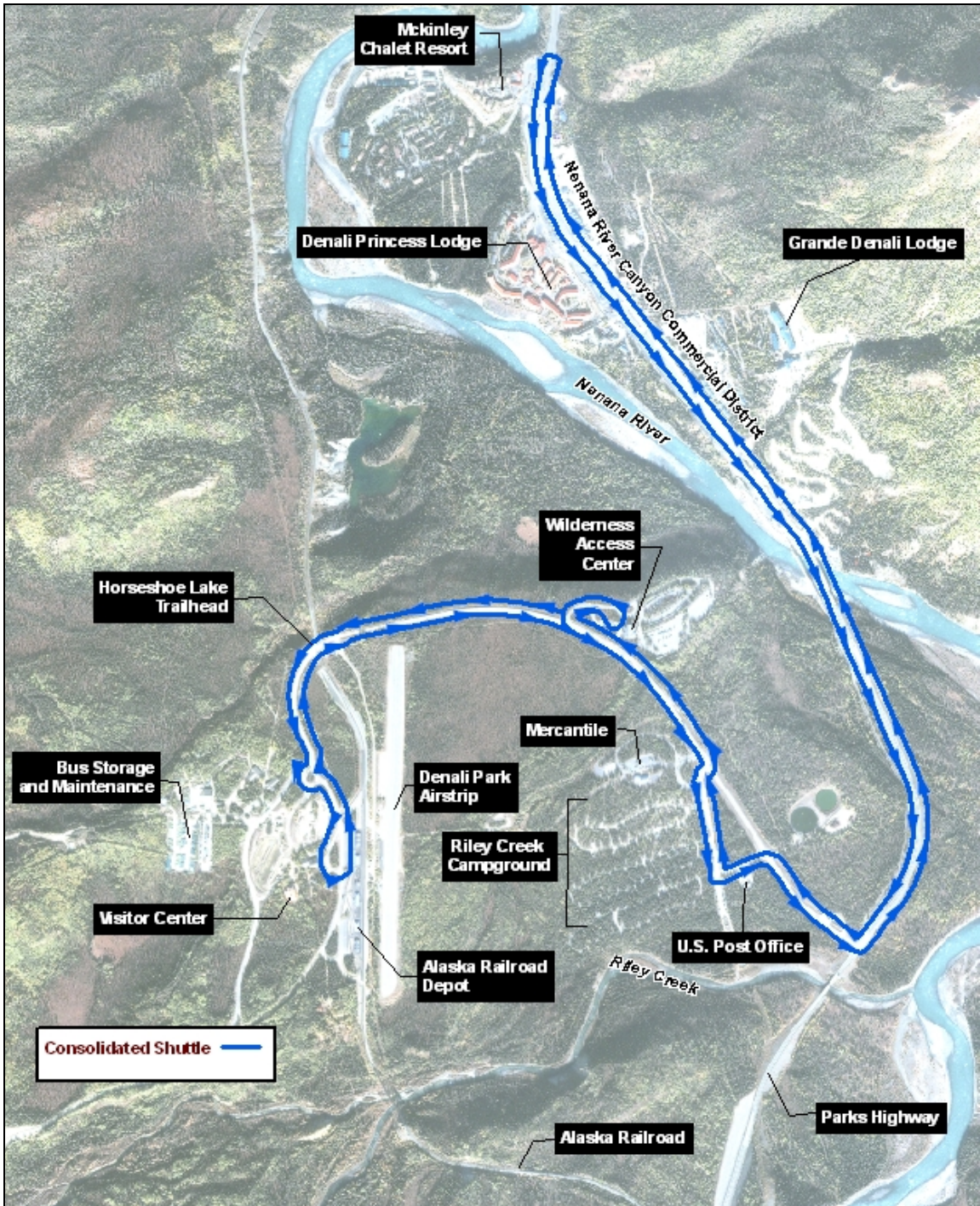


Figure 3.2. Alternative B: Consolidated Shuttle

Alternative C: Consolidated + Village Shuttle

The Consolidated + Village Shuttle would feature two routes. One would operate identically to the Consolidated Shuttle as described above, and the second would operate between the DVC, the WAC and the McKinley Village area (Figure 3.3). The McKinley Village route would be timed to connect with the consolidated route at the WAC or the DVC. The timed connection at the WAC would allow the McKinley Village route to run only to the Park entrance area, rather than to both the entrance area and the commercial area in the Canyon as does the current McKinley Village shuttle service. Passengers on the shuttle from the Village could connect with minimal wait time to or from buses serving the Canyon. Visitors staying either in the Canyon or at McKinley Village could also connect with the full range of park buses at the WAC.

The advantages of this option include all the advantages of the consolidated shuttle, outlined above, plus the benefits of including the McKinley Village area in a central shuttle system. Perceived disadvantages include the requirement for passengers to transfer at the WAC or the DVC to travel between McKinley Village and the Canyon. This may increase the number of boardings and alightings at the WAC slightly above the current McKinley Village shuttles; however, this increase would be more than offset by the reduction in boardings and alightings achieved with the consolidated segment of the shuttle.

The Canyon route could be operated with three vehicles, which with a one-hour round-trip running time would provide service every 20 minutes between the Canyon and the Park. The Village shuttle could also be operated with either one or two vehicles, which would provide service every 40 minutes (one vehicle) or every 20 minutes (two vehicles) between the Park Visitor Center and the McKinley Village area. One Village bus would mean every other Canyon bus would connect with the Village bus at the WAC and the DVC. The 60-minute round-trip time may include excess time, and might be able to be reduced once some peak season experience has been gained. Refer to Appendix B – Draft Running Times: Canyon + Village Shuttle – Denali Visitor Center to Canyon and to McKinley Village area.

Alternatively, the McKinley Village route described in this option could be connected to Alternative A – the Canyon-WAC shuttle. A disadvantage of this hybrid option is the greater number of transfers that would need to occur at the WAC, since the Riley Creek Loop would still be operating.

Alternative D: Consolidated + Village to Canyon via Park Shuttle

The Consolidated + Village to Canyon via Park option would, similar to Alternative C, feature two routes. The Canyon-to-Park route would operate the same route as the Consolidated (Alternative B) Shuttle option. The Village segment of the service would operate from the McKinley Village area to the Denali Visitor Center and then to the Canyon (Figure 3.4). The return would be similar, from the Canyon to the Park and then on to the Village area. The key difference between this alternative and Alternative C is

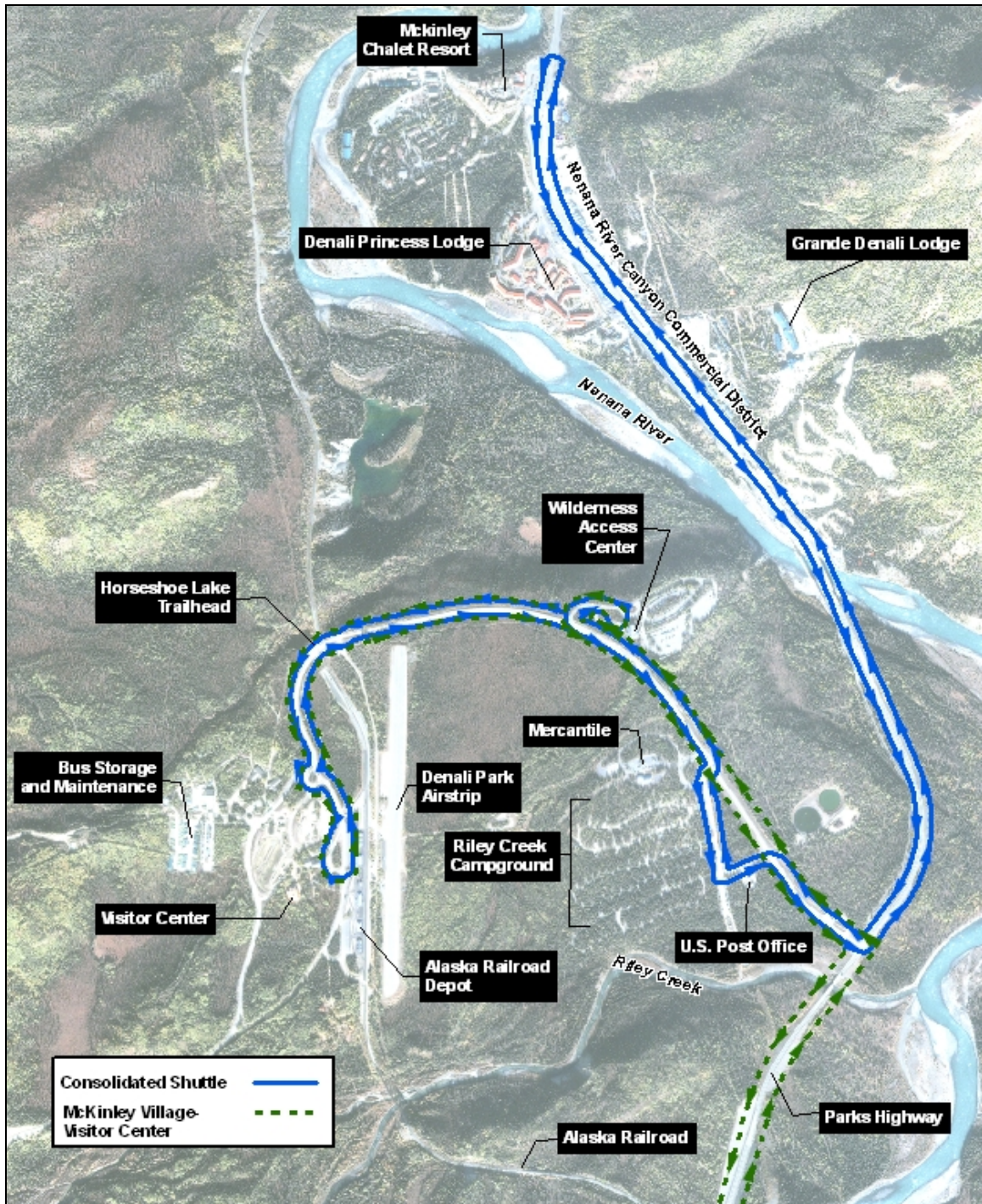


Figure 3.3. Alternative C: Consolidated + Village Shuttle

that the McKinley Village area service would be run as a continuous route from the Village to the Canyon via the Park WAC and DVC. The Park to Canyon portion of the Village route would duplicate the Consolidated route except that it would not operate through the Riley Creek Campground/Post Office area. Schedules for the two routes, each operating every half hour, would be coordinated such that the two routes would alternate in the Canyon area, resulting in a bus every 15 minutes between the Canyon and the Park.

The advantages of this option include all those of the Consolidated Shuttle, outlined above, plus inclusion of the McKinley Village area in a coordinated shuttle system. Riders could board the service in the McKinley Village area and ride directly to the Park or on to the Canyon. This reduces opportunities for confusion for riders traveling to and from the Village, and reduces the number of passengers transferring at the WAC or DVC. The disadvantage of this option is its greater complexity. The schedules for the two routes would need to be coordinated between the Canyon and the Park, which would require greater operational coordination and supervision than the simpler options. Similarly, riders going to the Riley Creek Campground would need to board the Canyon shuttle that deviates to the campground, Mercantile and Post Office area.

The Canyon to Park route would be operated with two buses running 60-minute round trips, which would provide service every 30 minutes. The Village to Park to Canyon route would be operated with three buses running 90-minute round trips, also providing service every 30 minutes. The routes would be “interleaved” so that along the common segment between the Park and the Canyon, a bus would operate every 15 minutes.

All Alternatives: Public Information

Improved public information will be among the key enhancements to transportation in the Denali area. Each of the alternatives A-D outlined above would include the following information elements:

- Readily available shuttle route and schedule information, with maps and schedules posted at all regularly used shuttle stops,
- A distinctive and consistent shuttle bus stop sign that can be posted both inside and outside the Park at each bus stop, and
- A shuttle bus sign and logo graphically consistent with the bus stop signs that would be painted or magnetically applied to the buses used in shuttle service.

If a cable channel is available, shuttle information could be placed on a cable channel that could be viewed in hotel rooms in the Canyon equipped with television.

Institutional Options

The institutional options address the issues the public generally does not see – for example: how is the delivery of the service organized and managed; who is paying for the service; who operates the buses; and similar issues. As with the operational alternatives, there are several options:

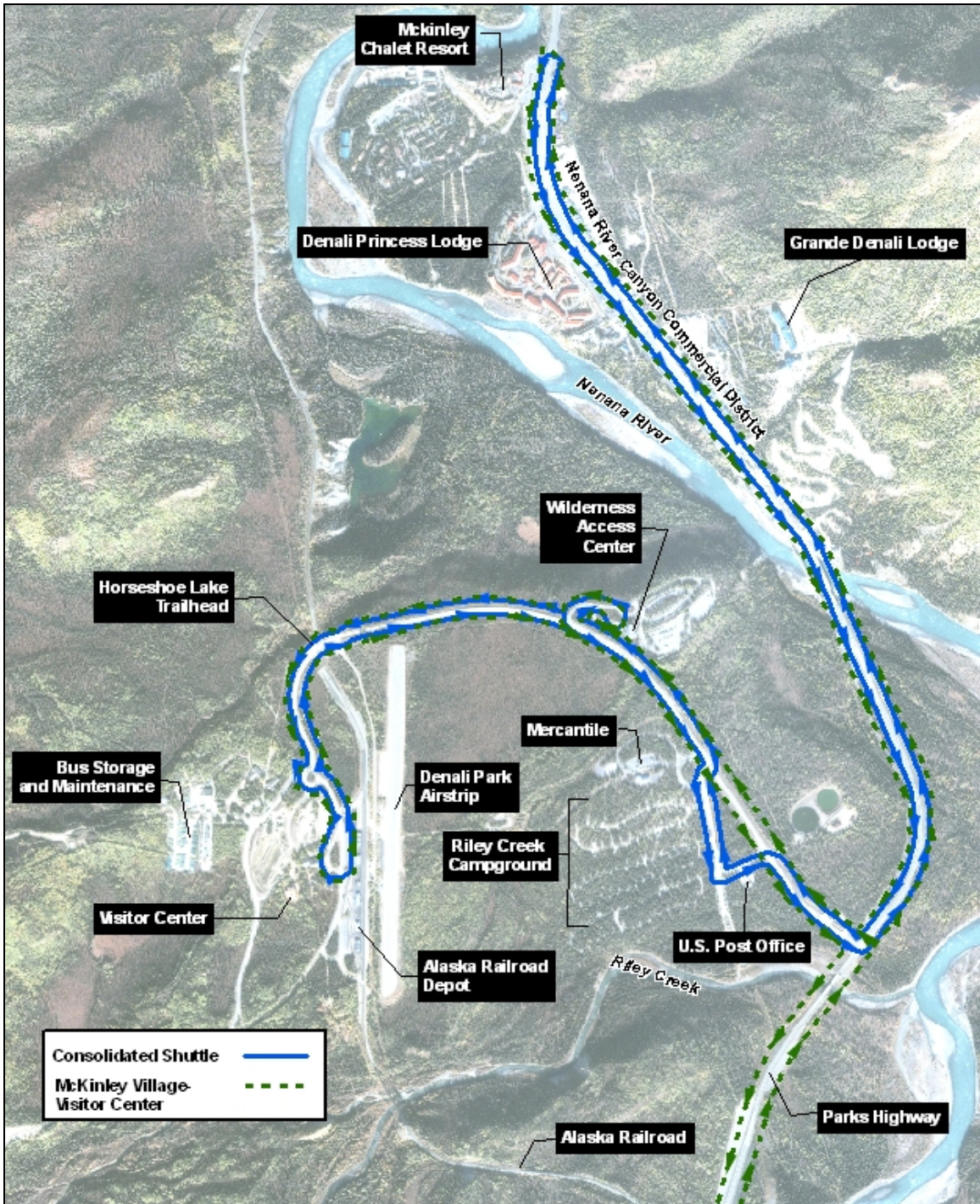


Figure 3.4. Alternative D: Consolidated + Village to Canyon via Park Shuttle

- Combine the independently operated private hotel shuttles into a “consortium shuttle service.” The Princess, McKinley Chalets and the Grande/Bluffs shuttles would be run jointly on a uniform route and schedule. Advantages of this approach include institutional simplicity – these three hotels currently provide service and would continue to operate. The number of vehicles each hotel would need to contribute would in most cases be fewer than the number currently operated. Disadvantages of a consortium operation are that no one organization would be ultimately responsible for service quality issues such as schedule adherence and reliability. All four of the shuttle alternatives could be operated with this approach, although it lends itself most readily to Alternative A – the Canyon-WAC shuttle.

- Operate a consolidated service as a public-private consortium. Operation of the service would be let competitively or negotiated with the Doyon/Aramark Joint Venture, with contribution made toward the cost of operation from all hotels/businesses served. Contributions would be based on an easily determined factor, such as number of rooms and/or campsites at each property. In the case of Alternatives C and D – contributions would be scaled in proportion to the amount of service operated in the Canyon and Village areas, and would be based on a combination of number of rooms and/or campsites. The advantages of this option include better service reliability by using an operating company that is in the business of running bus service. It would allow the hotels to largely extricate themselves from the shuttle bus business. Consolidation of the many private shuttles into a more efficient consortium service should also result in virtually all lodging businesses saving money. From the Park’s perspective, the hours of bus service currently dedicated to the Riley Creek Loop service could be used to operate part of a consolidated service, which would allow the Park to improve service to visitors at little or no extra cost. A consolidated system operating as a NPS or NPS- sanctioned service could make the service more attractive to the user. An additional advantage of this option is that it could be used for any of the operational alternatives. Disadvantages include likely higher hourly cost due to contracted operation, assuming the contractor is paying prevailing wages for professional drivers and mechanics. This would be more expensive than some of the hotel-sponsored shuttles driven by general hotel employees.

- Extend the Riley Creek Loop out of the Park to the hotels in the Nenana Canyon. This option is similar to above alternative, except that it would effectively extend an existing Park shuttle bus to the McKinley Chalets in the Canyon. The additional cost of operation would be borne by participating hotels in proportion to number of rooms or some other simple, easily determined factor; the NPS contribution to the service would be equivalent to current expenditures, with adjustments for inflation in future years. Advantages of this approach include probable cost savings on the part of the hotels – their contribution should be less than current shuttle expenses. The service would be operated by the park concession under the transportation concession agreement. The concessionaire would collect contributions from the private-sector participants. Disadvantages

include higher costs per hour, although this should be offset by the need for fewer buses overall. Some years from now, there is also the possibility of complaints on the part of the hotels and others about how much more cheaply they could operate service, etc. Additional cons include the time required for the Park to set up this unusual arrangement, which could move it out beyond the short-term. This approach would be an option for Alternative B – the Consolidated Shuttle, and possibly for Alternatives C and D.

- Extension of the shuttle to McKinley Village under Alternative C or D raises interesting institutional issues. The McKinley Village Lodge’s decision to join would likely be dependent on whether the shuttle made economic sense (i.e., would save money) as they operate a hotel shuttle at present. For the smaller lodgings and businesses in the McKinley Village area that have expressed a need for shuttle service for their clients, the issue will be one of cost. A “consortium” operated shuttle would open the door to cost sharing among sponsoring McKinley Village businesses. The cost of the McKinley Village to WAC Shuttle should be borne by all businesses whose guests use the shuttle, ideally based on a simple formula, such as number of rooms and campsites available. A related issue is the fraction of trips originating in the McKinley Village area with destinations in the Canyon, such as trips made to Cabin Night performances.

3.4 Alternative Comparison and Analysis

Table 3-1, below, compares the four alternatives against the transportation service improvement objectives. The comparison is not exhaustive, but provides an indication of the relative desirability of each alternative. The results indicate that alternatives B, C, and D are all shown to be preferable to Alternative A. Alternatives C and D are preferable to alternative B because they both would extend service to the McKinley Village area.

3.5 System Financing

At least initially, it is assumed that the consolidated shuttle would be financed through an expansion of the NPS concessions contract with additional funds provided by participating businesses in the accommodations industry, tour companies and other service/activity providers in the frontcountry business community. Developing an appropriate mechanism to equitably apportion financial responsibility for shuttle operations would be an immediate priority. A reasonable precept is that criteria used to determine a “fair share” distribution costs should have a direct relationship with the cost of providing service capacity.

A suggested approach is to employ multiple criteria to determine a fair share distribution of transportation system costs. For example, the number of available rooms (or beds) owned by participating hotels and lodges provides a means for the accommodations industry to divide a portion of transportation costs. Similarly, the number of customers served or tours sold could be used to distribute costs among providers of flight seeing, rafting trips, golf and other activities. Financial participation by NPS would be

Table 3-1. Comparison of Alternatives

Factor	Alt. A: Canyon-WAC	Alt. B: Consolidated	Alt. C: Canyon+Village	Alt. D Village – Canyon via park Entrance Area
Simplify visitor transportation	1	2	3	3
New vehicles required	3	3	3	3
Provider costs same or reduced	3	3	3	3
Encourage visitors to leave vehicles outside park	1	2	3	3
Scalability (expand or contract service to fit demand)	3	3	3	2
Reduction of congestion at WAC	1	3	2	3
Geographic coverage	1	2	3	3
Summary	13	18	20	20

Scale: 1 = Nominal improvement; 2 = Significant improvement; 3 = Substantial improvement

equivalent to the value of the hours presently used by the Riley Loop Shuttle. A short-term financial objective is that the cost of the consolidated shuttle be the same or less than the amount individually and cumulatively spent by consortium members on visitor and employee transportation.

The Canyon + Village shuttle (Short-term Alternative C) operating approximately 9,100 vehicle hours¹ during the park season is estimated by the Doyon/Aramark Joint Venture to cost \$255,000 for the 2006 summer season². The shuttle clearly would reduce the cumulative number of bus hours operated by hotels and others currently spent on shuttling visitors within the Entrance area and Canyon; however, it remains to be determined how much the existing providers actually spend and whether part or all of these expenses could be avoided by consolidating service delivery under a single contract.

Assuming that the consortium is organized initially as a confederation rather than a legal entity, it would be preferable for each participant to be invoiced directly by the service provider according to the terms of the agreement.

¹ Assumes 3 buses each operating between 16 and 18 hours per day, seven days per week over the 120-day park season.

² This amount represents the cost to private contributors with the National Park Service providing the hours of the Riley Creek Loop to the system..

User fees in the form of cash fares paid by passengers boarding the consolidated shuttle are not recommended during the demonstration period. Since fares are not charged for current services, their introduction likely would deter ridership and compromise any comparisons attempted in the areas of passenger satisfaction and service quality. In addition, onboard fare collection would slow down passenger boarding and add to confusion created by an already new shuttle service. Cash handling and revenue accounting would require the installation of locking fareboxes on the vehicles, purchase of money counting equipment, a secure location to process the cash, and new procedures to transport and deposit the revenue in a bank. Generally speaking, onboard collection of fares from customers would cost a significant portion of the amount collected, and would reduce ridership. It is recommended that the service avoid onboard fare collection for as long as possible.

3.6 Recommended Short Term Improvements

1. Operational recommendation: Alternative C should be pursued if McKinley Village area lodging owners are willing to participate and share the cost of the McKinley Village to WAC service as proposed. If they are unwilling to participate at present, then Alternative B should be implemented.
2. Institutional recommendation: The major stakeholders in the provision and consumption of visitor transportation services choose to form a consortium to cooperatively oversee and fund the service. Initially, a contract with the Doyon/Aramark Joint Venture to operate the shuttle would ensure a stable transition to the new service design and likely provide service stability in the longer run. It would minimize managerial challenges and would likely produce the best quality service. The disadvantage of this option is that it could cost more per bus hour than the incremental approach that partly relies on hotel vehicles and contributed staff to provide service.
3. Supplementary improvements are proposed in conjunction with the start-up of an improved and consolidated shuttle service. There are several improvements that will enhance the visitors' experience and make getting around the Canyon and Park frontcountry a less confusing experience. The availability of easy-to-read route and schedule information is particularly important given the age of many visitors and the short time they typically have to absorb the details of traveling around the Denali National Park frontcountry. Refer to Appendix C for an illustration of how these elements might look and relate to one another.

3.7 Next Steps

Initial meetings with managers of hotel and visitor venue operations and their reactions to a central, simple shuttle service have been positive without exception. Most potential private-sector participants recognize that service to their customers could be improved, costs could be lowered and management hassles reduced. Park management sees the creation of an improved and consolidated shuttle service as a key way to improve the visitor experience in the Park entrance area, making it more positive and enjoyable. Key

elements of an implementation strategy for short-term improvements in entrance area transportation include:

- Continue discussions with key hotel and campsite vendors to develop common ground on not only the broad objectives of short-term improvements, but on detailed elements as well.
- Draft an agreement that would lay out the responsibilities of participating visitor service businesses, the Park Service and one or more potential service vendors. Discussion of the draft agreement will bring up concerns of participants and get them on the table for resolution. An initial draft is included as Appendix D.
- Discuss purchase of new shuttle-specific vehicles for operation during 2007 and subsequent summers. If new vehicles cannot be obtained in time, existing hotel shuttle or Joint Venture-owned equipment could be used. Vehicle capital and maintenance costs should be included in the agreement up front.
- Designate one of the parties to take responsibility for design of a distinctive shuttle logo and for fabrication and furnishing of bus stop signs, bus stop schedules and maps, benches and other rider amenities. An illustrative design is provided in Appendix C.
- Initial customer route and schedule information should be posted at hotels, bus stops, and Park entrance area facilities. Because early operating experience will likely result in some changes in the schedule and possibly the routes, a simple, duplicated page would be best to start. Also, since visitors are using the system for relatively short periods of time, the emphasis should be on posted information, rather than handouts.

4.0 VISITATION BACKGROUND AND FORECAST

4.1 Introduction

Visitors to Denali National Park and Preserve arrive in a variety of modes and engage in a number of activities. However, the possibility of seeing the mountain and the hope of viewing the Park's phenomenal wildlife are the major draws for the approximately 400,000 people who visit Denali each year. While the National Park Service can do little about the weather and the visibility of the great mountain, limiting road access and requiring almost all visitors to travel into the Park by bus has been very successful at preserving the Park's natural ecosystems. It is so successful that Denali is a world renowned site for wildlife viewing. Few visitors who invest a day of time to view wildlife leave the Park disappointed. Expansion of the visitor center and diversification of activities in the frontcountry also enhance the visitor experience.

The Denali transportation system was established in 1972 to address increased visitation expected to result from the completion of the George Parks Highway that connected Anchorage and Fairbanks via the park entrance. The park's 1986 General Management Plan determined an annual vehicle trip capacity for the 90-mile park road of 10,512 vehicles that can travel past mile 15, the Savage River Bridge. The goal of limiting the number of vehicles past mile 15 is to protect wildlife viewing opportunities, wildlife and wildlife habitat, and the wilderness character of the park road. Limiting private vehicles beyond mile 15 alters transportation patterns. Denali National Park is served by a variety of transportation services, and makes the Park a prime setting for a Community Transportation System to serve frontcountry transportation needs of visitors arriving without cars. This analysis focuses exclusively on visitors coming through the main entrance of Denali off the Parks Highway because these are the visitors who will use the Community Transportation System being developed.

The restrictions on personal vehicles and the Park transportation system both simplify and complicate estimating the number and types of visitors to the Park, now and in the future. Without the private automobile as the primary visitor transport, Denali has no traditional entrance ranger kiosk charging admission and counting visitors. However, limiting vehicles also requires visitors to take concession buses into the Park. Consequently, an estimated three-quarters of the visitors take one of the bus riding/tour opportunities. This provides one count of the number of visitors and also helps identify visitors by distinct visitor segment. As a result, this analysis relies extensively on bus ridership numbers to estimate future visitation.

Unfortunately, there are no good, comprehensive counts or estimates of the number of visitors who travel to Denali each year or detailed Denali-specific surveys that provide accurate visitor profiles. Data collected by the NPS are collected by a variety of programs and there is no central comprehensive visitation database. To address this deficiency, this report compiles information available relating to visitors traveling to Denali. From this patchwork, a clearer depiction of current visitation and recent trends is constructed and used to develop estimates of future visitation.

To estimate future visitation, it is essential to develop forecasts by distinct market segment because growth rates and trends are unique to each. In addition, each is sensitive to different market and external forces. As a result, the estimate of future visitation to Denali is the sum of a series of estimates of different visitor segments. For each, market characteristics and particular external events or conditions that may affect the market are discussed. Because it is impossible to predict many of these external events such as stock market performance, fuel and airline ticket prices, and national security concerns, a range of likely outcomes are presented in sensitivity analyses for each market segment. This allows more active and realistic planning for a community transportation system to address a likely minimum level of demand by each of these segments. It also allows the system to focus on potentially meeting the needs of travelers who are most likely to use the system or who may disproportionately impact Park resources, such as visitors who arrive in private or rental vehicles and utilize parking in the frontcountry.

Therefore, the discussion on visitation is divided into sections. Background information is provided first and contains information on general visitor patterns and characteristics including types and locations of overnight accommodations. This is followed by more detailed information by visitor segment and an estimate of future visitation. Each section contains information regarding the kinds of events that could affect the market. The visitor segments covered include cruise ship and cruise land tour visitors as well as independent travelers. The independent traveler segment is further divided into backcountry and recreational vehicle visitors. The final section summarizes likely future visitation scenarios based on the collective analyses of the individual market segments.



Figure 4.1. Visitors Waiting for a Shuttle Bus at the Wilderness Access Center

4.2 Visitor Background and Characteristics

Denali National Park and Preserve may be unique in the national park system in that its visitation patterns range from mountain climbers whose goal is the summit of North America's highest mountain, to a large number of cruise ship tour passengers traveling comfortably. The majority of visitors to Denali are retirees concentrated in tour groups; visitors arriving via recreational vehicles (RVs) also tend to be retirees. Independent travelers, including backcountry visitors, are a broader age range, but families with young children constitute a minority of overall visitors. Most families do not stay in the larger

hotel properties in the Nenana Canyon area but instead in smaller hotels, bed and breakfasts, and campgrounds in Healy, McKinley Village or Carlo Creek areas.³

Two surveys provide information on visitors to Denali. These include a 1999 survey conducted by the National Park Service and the 2000-2001 Alaska Visitor Statistics program research on visitors conducted by the Alaska Department of Community and Economic Development.

1999 Denali Visitor Survey

A 1999 NPS survey of visitors to the Park identified the following characteristics of vehicles entering the Park:⁴

- 91% were automobiles, trucks or recreational vehicles;
- 6% were vans;
- 2% were tour buses; and
- <1% were courtesy shuttle buses;

There was an average of:

- 2.7 passengers in automobiles, recreational vehicles and trucks;
- 3.3 passengers in vans;
- 2.2 passengers in shuttle buses; and
- 36.8 passengers in tour buses.

Of the visitors to the Park, 75% had taken or planned to take a bus past Mile 15 into the Park. Of these visitors:⁵

- 62% rode the Visitor Transportation Shuttle (VTS);
- 22% were going to take a tour;
- 11% took the Tundra Wilderness Tour;
- 3% rode the Kantishna Tour;
- 1% took the Natural History Tour;
- 2% took more than one tour.

Of the 25% who did not take a bus, only 3% did not because the tour was too full or too crowded. The majority did not for a variety of reasons including not interested, not enough time, poor weather or uncertain (possibly had not had a chance to understand the bus system when surveyed).

Based on survey respondents' zip codes, visitors were from the following regions:⁶

³ Healy Chamber of Commerce and Carlo Creek businesses, stakeholder meetings, September 2004.

⁴ National Park Service, *Denali National Park Visitor Use Survey: 1999*, no date.

⁵ These data suggest there are problems with the survey sampling methodology. In 1999, bus ridership data indicate that 64% of bus ridership was on the Tundra Wilderness and Natural History Tours and 33% of bus ridership was on the VTS. The Kantishna ridership of 3% in the survey matches the Park bus ridership statistics. This indicates that the results of the 1999 survey are heavily biased toward non-tour visitors. This sampling bias means results presented are not likely an accurate reflection of Park visitors. In addition, it suggests that the estimate of the fraction of people visiting Denali who do not take buses (25%) that is used to calculate total annual Park visitation may not be accurate.

⁶ The total does not equal 100% because of missing data.

- Pacific Northwest, including Alaska—28%
- North Central—12%
- Mountain states—11%
- Atlantic states—16%
- West central—15%
- New England—3.5%
- South—2.4%
- Total United States—88%
- Foreign—9%

Alaska Visitor Statistics Program Survey Data

The Alaska Visitor Statistics Program (AVSP) is a comprehensive series of surveys of Alaska non-resident visitors. It consists of a Random Arrival Survey, a Visitor Expenditure Survey and a Visitor Opinion Survey. The most recent research was conducted in 2000-2001.⁷ This is a statewide survey of Alaska visitors and not specifically directed at Denali visitors. The results for Denali visitor travel patterns and demographics are presented in Tables 4-1 and 4-2.

Compared to the profile of all visitors to Alaska, in 2001 Denali visitors were more likely to be highway visitors. In addition, they were almost exclusively vacation and pleasure visitors with significantly fewer of them coming primarily for business or to visit friends and family. Their trips to Alaska were longer than the norm with the majority (53%) visiting Alaska for 8-14 days and another 18% spending more than 15 days in Alaska. They were a higher proportion of package and “inde-package” travelers—the latter referring to visitors who are independent travelers who also purchase a travel package for a portion of their trip. Some of these packages could be as short as a day or as long as a week or more; as a result, many visitors to Alaska fall into the inde-package category. Denali visitors were also significantly more likely to have purchased packages for activities in Alaska along with their tour, with approximately half of them having done so compared to slightly less than a third for all Alaska visitors. Well over half of Denali visitors (58%) also planned to purchase day tours or sightseeing trips while in Alaska as compared to slightly more than a third for all visitors.

Denali visitors were also significantly more likely to be first time visitors to Alaska (73% compared to 58%). If they did visit Alaska previously, most came as pleasure travelers or to visit family and friends, with the latter being a higher proportion than the general population of visitors to Alaska.

A higher proportion of Denali visitors were retired (48% compared to 42% for the general visitor population of Alaska visitors); and 60% of visitors to Denali were women. Denali visitors were also older but their incomes did not vary significantly from other Alaska visitors, with the vast majority (82%) of Denali visitors having had annual

⁷ All information in this section is from AVSP data files, 2001.

**Table 4-1. Trip Characteristics of Alaska Summer &
Denali National Park and Preserve Visitors, 2001**

Trip Characteristics Alaska Summer & Denali NP Visitors, 2001		
(percent)		
	All Visitors	Denali NP Visitors
% of Alaska visitors who visited Denali	44	--
Mode of Arrival Transportation		
<i>Domestic air</i>	47	63
<i>International air</i>	1	0
<i>Ferry</i>	1	2
<i>Cruise ship</i>	42	23
<i>Highway</i>	10	13
Method of Departure from Alaska		
<i>Domestic air</i>	50	53
<i>International air</i>	4	6
<i>Ferry</i>	1	1
<i>Cruise ship</i>	34	27
<i>Highway</i>	10	13
Purpose of Trip		
<i>Business only</i>	23	3
<i>Business and Pleasure</i>	7	2
<i>Vacation and Pleasure</i>	60	93
<i>Visit Friends and Relatives</i>	10	2
<i>Staying additional days beyond business trip</i>	25	7
Visited friends & relatives while in Alaska	10	13
Duration of Trip to Alaska		
<i>7 days or less</i>	54	30
<i>8-14 days</i>	31	53
<i>15-30 days</i>	10	15
<i>more than 30 days</i>	4	3
Visitor Trip Type		
<i>Independent</i>	13	11
<i>Inde-Package</i>	29	29
<i>Package</i>	58	59
Purchased package(s) for activities	30	51
Plan to purchase day tours or sightseeing trips while in Alaska	36	58
Been to Alaska before?		
<i>Yes</i>	42	27
<i>No</i>	58	73
Purpose of Previous Trip		
<i>Business only</i>	10	6
<i>Business and Pleasure</i>	8	6
<i>Vacation and Pleasure</i>	66	62
<i>Visit Friends and Relatives</i>	9	21
<i>Used to live or work in Alaska</i>	7	5
# of previous business trips (mean)	0.4	0.2
# of previous pleasure trips (mean)	1	1
Source: AVSP data 2001.		

household incomes over \$50,000. Most were also U.S. residents with an average traveling party size of 2.2 persons.⁸ Alaska visitors, with the vast majority (82%) of Denali visitors having had annual household incomes over \$50,000. Most were also U.S. residents with an average traveling party size of 2.2 persons.⁹

Table 4-2. Demographics of Alaska Summer and Denali National Park Visitors, 2001

Demographics of Alaska Summer and Denali NP Visitors, 2001		
(percent)	All Visitors	Denali NP Visitors
Mean Household Size	2.4	2.2
Gender		
<i>Female</i>	59	60
<i>Male</i>	41	40
Employment Status		
<i>Employed full-time</i>	45	38
<i>Employed part-time</i>	3	3
<i>Unemployed</i>	1	1
<i>Student</i>	1	1
<i>Retired</i>	42	48
<i>Homemaker</i>	5	3
Household Income		
<i>Less than \$25,000</i>	3	3
<i>\$25,000-\$49,999</i>	14	15
<i>\$50,000-\$74,999</i>	16	18
<i>\$75,000-\$99,999</i>	12	10
<i>More than \$100,000</i>	14	12
<i>did not answer</i>	42	43
Age of Respondent (mean)	56	59
Number in traveling party (mean)	2.2	2.1
Country of Residence		
<i>United States</i>	91	94
<i>Canada</i>	8	5
<i>Other</i>	1	1
Source: AVSP data 2001.		

⁸ Alaska Department of Community and Economic Development, Alaska Visitor Statistics Program data, 2001.

⁹ Alaska Department of Community and Economic Development, Alaska Visitor Statistics Program data, 2001.

A 1999 Alaska cruise ship passenger study also identified demographic characteristics. These are shown in Table 4-3 below.

Table 4-3. 1999 Cruise Ship Passenger Demographics

1999 Cruise Ship Passenger Demographics	
	Percentage
Age	
< 35 years	2
35-44 years	7
45-54 years	22
55-64 years	31
65+ years	38
Country of Origin	
US	82
Canada	12
Other	6
Income Distribution	
< \$20,000	2
\$20,000-\$39,999	19
\$40,000-\$59,999	19
\$60,000-\$79,999	22
\$80,000-\$99,999	12
\$100,000+	26
Source: InterVistas Consulting, Inc., 1999.	

4.3 Denali Visitor Transportation

To understand Denali visitation, it is important to understand the bus system that moves visitors around the Park. Ridership on these buses is also used to estimate current visitor numbers by market segment. An overview of the system is presented in Section 1. The following repeats some of that overview for the convenience of the reader. With the exception of the Kantishna lodge buses and the courtesy vans and buses, all of the buses described are operated as part of the Park concession contract.

Tour Buses

There are two narrated bus tours provided for visitors—the *Tundra Wilderness Tour* and the *Denali Natural History Tour*. The majority of the passengers on these buses are traveling as part of a cruise land tour package and almost all cruise land package visitors travel to Denali and are booked in one of these tours as part of their package.

The *Tundra Wilderness Tour* travels from the Park entrance area to the Toklat River at Mile 53 and returns. The average length of the tour is six to eight hours. This tour provides visitors the opportunity to view wildlife along Denali Park Road and interpretive narration.

The *Denali Natural History Tour* also starts at the Park entrance area, travels to the Primrose Scenic Overlook at Mile 17 and returns. The duration of the tour is three to five hours. The purpose of this tour is to interpret the natural history of the area. Wildlife viewing is not the focus of this experience, but the bus stops when wildlife is sighted.

Park Road Transportation

In addition to the narrated tours, there are also two bus services that provide transportation along the park road west of the Savage River Bridge.

The *Visitor Transportation System (VTS)* buses provide basic transportation for park visitors in lieu of personal vehicle access. These buses carry passengers on a regular schedule to various turnaround points along the park road, including Polychrome (Mile 47), Toklat (Mile 53), Eielson (Mile 66), Wonder Lake (Mile 85), and Kantishna (Mile 90). VTS passengers can get off the bus at any stop and board a later bus traveling in either direction. The majority of these passengers are independent travelers not on package tours.

Kantishna Lodge Buses are operated independently by each of the three privately owned lodges in Kantishna—Camp Denali/North Face Lodge, Denali Backcountry Lodge and Kantishna Roadhouse—to transport guests to their facilities for overnight stays or day trips. Kantishna Roadhouse has had a successful day trip program for many years; Denali Backcountry Lodge began offering day trips in 2004. The Kantishna properties are booked by a number of tour companies including Alaska Tour and Travel, All Alaska Tours, and John Hall's Alaska.¹⁰ The expansion of Kantishna visitor numbers in 2004 most likely reflects in part the additional day-trip offerings.

While the purpose of both the VTS and the Kantishna lodge buses is to provide transportation, the buses stop to view wildlife and scenery, and the drivers are often knowledgeable and provide interpretive information to passengers as they travel.

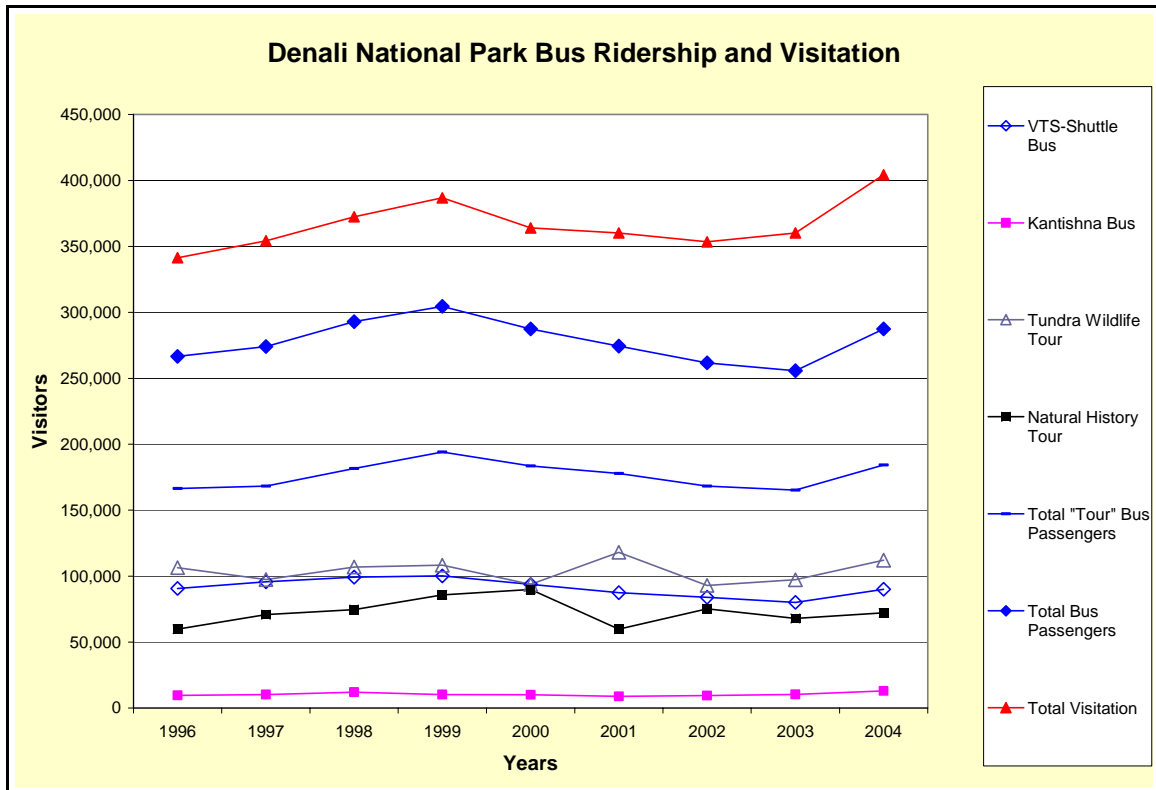
Table 4-4 and Figure 4.2 show ridership on these buses from 1996 through 2004.

Table 4-4. Denali National Park Bus Ridership and Estimated Visitor Numbers, 1996-2004

Denali National Park Bus Ridership and Estimated Visitor Numbers, 1996-2004									
	1996	1997	1998	1999	2000	2001	2002	2003	2004
VTS-Shuttle Bus	90,641	95,733	99,337	100,227	93,734	87,532	83,922	80,192	90,160
Kantishna Bus	9,636	10,176	12,015	10,221	10,019	8,931	9,553	10,342	12,994
Total "Independent" Bus Passengers	100,277	105,909	111,352	110,448	103,753	96,463	93,475	90,534	103,154
Tundra Wildlife Tour	106,476	97,383	106,860	108,302	93,724	118,077	92,963	97,218	112,135
Natural History Tour	59,873	70,858	74,664	85,735	89,880	59,861	75,247	67,987	72,149
Total "Tour" Bus Passengers	166,349	168,241	181,524	194,037	183,604	177,938	168,210	165,205	184,284
Total Bus Passengers	266,626	274,150	292,876	304,485	287,357	274,401	261,685	255,739	287,438
Total Visitation	341,385	354,278	372,519	386,867	363,983	360,191	353,560	360,189	404,234
<small>Source: Denali National Park and Preserve, Visitation Statistics, 2004.</small>									

¹⁰Kirk Hoessle, President, Alaska Wildland Adventures, personal communication, March 24, 2005.

Figure 4.2. Denali National Park Bus Ridership and Visitation



Frontcountry Shuttles

In addition to the tour buses and the buses that provide transportation services along the park road west of Savage River, there are a variety of transportation services for visitors moving around the park frontcountry east of Savage River and to the communities outside of the Park.

The *Savage River Shuttle* is a Park concession-operated route that connects the WAC, the WAC, Park headquarters (Mile 3), Savage Campground (Mile 13) and the Savage River parking lot (Mile 15).

The *Dog Sled Demonstration Shuttle* is a concession-operated service that transports visitors interested in attending the Dog Sled Demonstration presented daily in the historic NPS headquarters Area. The shuttle departs from Riley Creek Campground thirty minutes before each demonstration time and stops at the DVC.

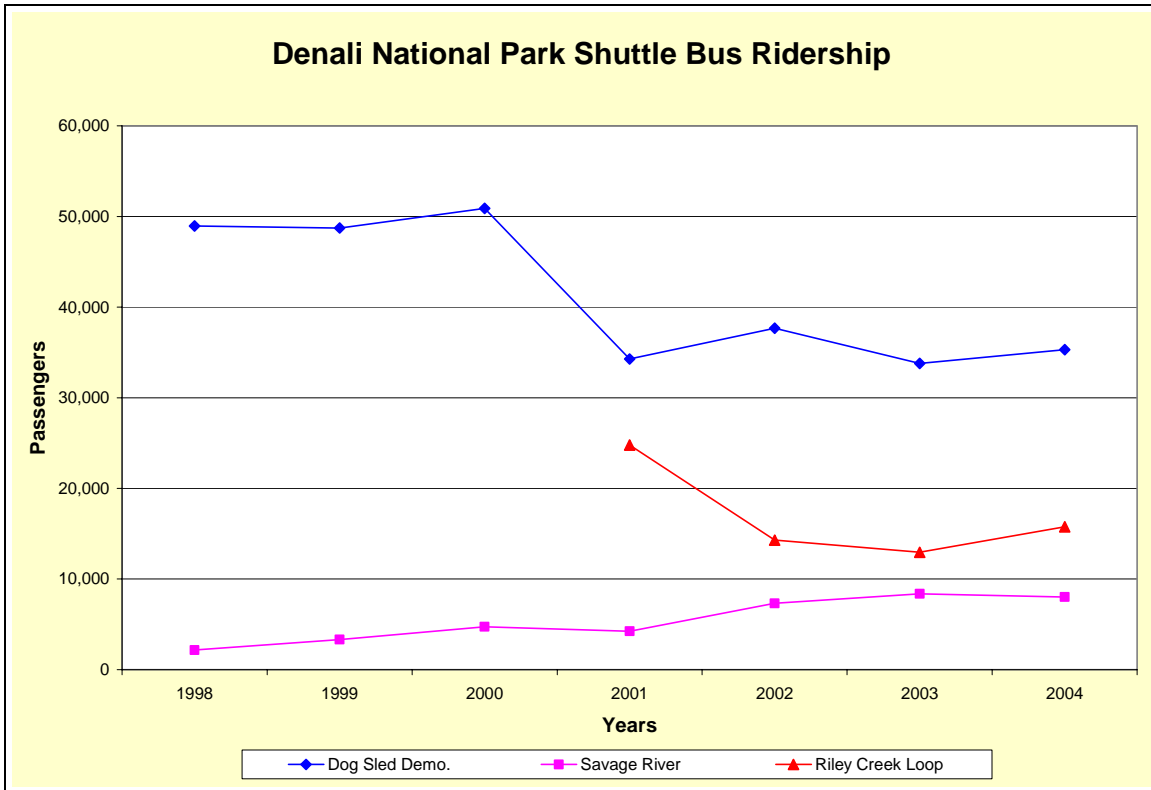
The *Riley Creek Loop Shuttle* is a Park concession-operated service that serves all of the in-Park entrance area activity sites, beginning at Riley Creek Campground and includes stops at the WAC, DVC, Horseshoe Lake Trailhead, and the Alaska Railroad Train Depot.

Lastly, *courtesy vans and buses* operated by local businesses that transport visitors from their establishments in the surrounding area to the Park. These buses and vans stop at the WAC and the DVC/Train Depot. They are not regulated by the Park Service except in defining a drop-off area at the visitor center. Table 4-5 and Figure 4.3 show ridership on these shuttles with the exception of the courtesy vans.

Table 4-5. Denali National Park Shuttle Bus Ridership, 1998-2004

Denali National Park Shuttle Bus Ridership, 1998-2004				
Year	Dog Sled Demo.	Savage River	Riley Creek Loop	
1998	48,936	2,176		
1999	48,723	3,321		
2000	50,893	4,731		
2001	34,272	4,242 w - 3,698 e	24,781	
2002	37,668	7,323 w - 6,788 e	14,285	
2003	33,786	8,370 w - 6,157 e	12,948	
2004	35,305	8,019 w - 5,495 e	15,763	
w = west, e = east				
Dog Sled Demonstration buses transport visitors from the Visitor Center to park headquarters for dog sled demos.				
Savage River Shuttle runs every hour from Riley Creek Campground to Savage River and back.				
Riley Creek Loop bus does a continuous loop between Riley Creek Campground, the Visitor Center, and the train depot.				
Source: Denali National Park and Preserve, Visitation Statistics, 2004.				

Figure 4.3. Denali National Park Shuttle Bus Ridership



4.4 Historic Visitation

Visitor travel to Alaska has increased steadily since the early 1990s and has been driven, in part, by the strong development of Alaska as a premier cruise destination (Figure 4.4).¹¹ In Figure 4.4, total Alaska annual visitation tracks visitor numbers for both cruise ship passenger arrivals and total cruise ship passengers.¹² Visitation to Alaska was flat in 2000 and 2001, most likely the result of the economic recession in the U.S., the source of most visitors to Alaska. The slight recovery in 2002 and 2003 may be attributable to more domestic visitors choosing to stay in the United States and travel to Alaska rather than travel to Europe, one of Alaska's primary competitor destinations, following the September 11, 2001 terrorist attacks. 2004 saw a significant surge in Alaska visitation reflecting peoples' increased propensity to travel influenced by both an improving U.S. economy and reduced fear of terrorists' threats to domestic travelers. According to National Park Service data, Denali visitation does not appear to track Alaska visitation closely. Based on NPS estimates of visitation, Denali has experienced flatter growth since 1996 with the exception of a visitor peak in 1999. Visitor numbers in 2004 surpassed reported visitation in 1999 (Table 4-4, Figures 4.2 and 4.4).

4.5 Denali Area Accommodations

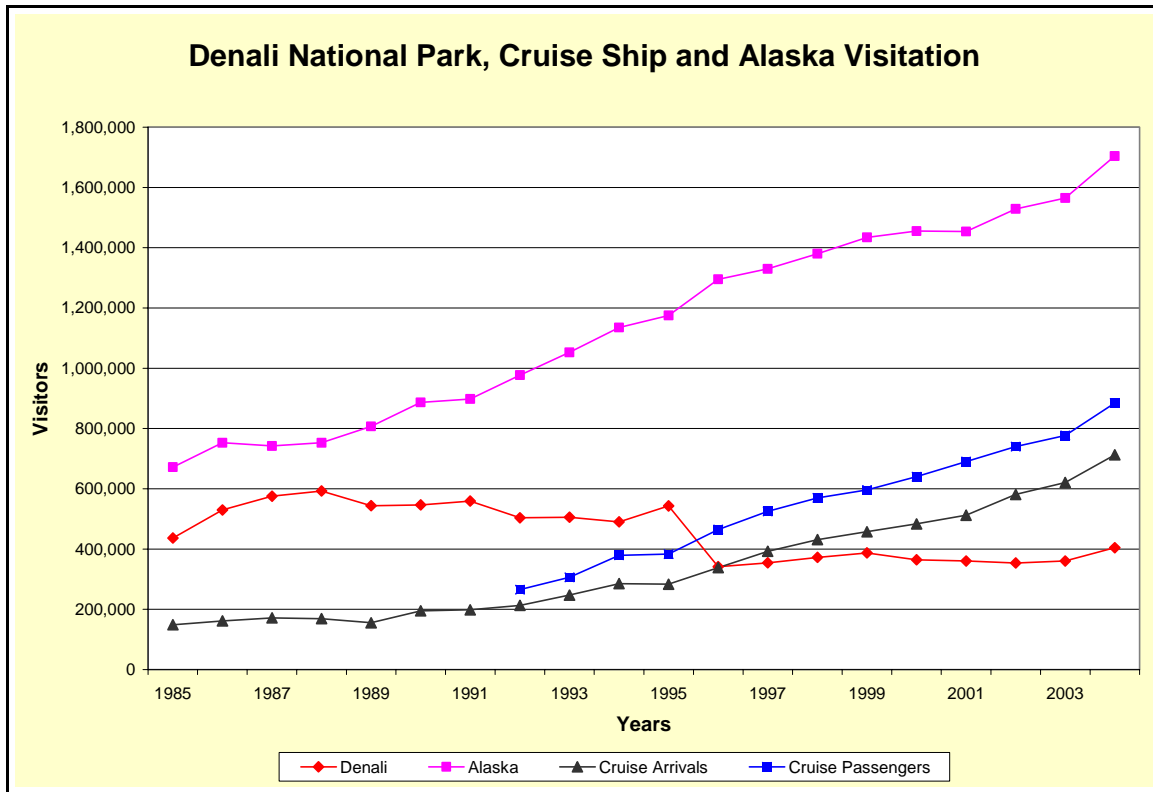
Visitors to Denali generally stay in lodges along the Parks Highway corridor between Healy to the north and Carlo Creek to the south. Table 4-6 shows the number of specific types of accommodation by sub area. Figure 4.6 shows the number of visitor accommodations of all types (though predominantly hotel rooms) offered each year since 1999 by sub area. Figure 4.7 shows the relative proportion of accommodations by type from 1999-2004. The heaviest concentration of hotels is in the Nenana Canyon area just outside the Park entrance—69% of accommodations are located within the corridor from Nenana Canyon area (54%) to McKinley Village (15%), six miles south of the Park entrance. Another 14% are located in Healy, approximately 11 miles north of the Park entrance. Healy has a number of bed and breakfast accommodations plus small hotels and campgrounds for tents and recreational vehicles (RV). Carlo Creek, approximately 14 miles south of the Park entrance, has four properties that contain approximately 4% of the area's guest accommodations. According to Healy Chamber of Commerce members and Carlo Creek property owners, Healy, and Carlo Creek tend to attract visitors with families and those staying for longer than the usual one or two night stays. Prices also tend to be lower than the premium rates at the major hotels in the Canyon.

Close to half of the hotel rooms in Healy have been or are in the process of being converted to employee housing to allow for more guest rooms in the Nenana Canyon. RV

¹¹ The sudden shift in Denali visitation numbers in 1996 results from a change in measurement methodology and not a change in actual number of visitors.

¹² Cruise ship passengers are the number of people who take a cruise in Alaska. This number differs from "Cruise Arrivals" because some cruise ship passengers arrive by airline and then cruise one way south. Other passengers cruise north and fly south and some passengers cruise both ways. When initial methods to track Alaska visitors were developed, almost all cruise itineraries had visitors cruising round trip from Vancouver, B.C. However, the market has gotten more complex and cruise ship arrival statistics alone under estimate cruise visitors and market trends.

Figure 4.4. Denali National Park, Cruise Ship and Alaska Visitation



campground space in Healy is also being used for employee housing. Guest rooms in the Denali area have increased by 10% since 1999, and are expected to increase by another 1,100 rooms. With the exception of the additional campground spaces added within Denali National Park, RV space has remained relatively stable since 2000. It is expected that during the next five to ten years, hotel rooms located in Nenana Canyon will continue to drive additions in overnight accommodations to the extent that land is available for new construction or employees can be moved to other less valuable locations (Figure 4.6). According to campground owners in the area, the return on investment per unit is considerably higher for hotel rooms than campground space. This disparity is exacerbated by the expectations of amenities offered in private campgrounds.



Figure 4.5. McKinley Chalet Lodge Entrance

Table 4-6. 2005 Denali Borough Accommodation Totals

	Room	Cabin	RV	Bunks	Totals
Healy	198	41	137	0	376
McKinley Village	213	117	81	0	411
Cantwell	85	7	81	8	181
Anderson	12	0	48	0	60
Canyon	1,225	63	149	0	1,437
Kantishna/Pk Campgrounds	20	56	0	0	76
Carlo Creek	3	63	24	25	115
Remote Locations	0	35	0	0	35
TOTAL	1,756	382	520	33	2,691

Units are the number of rooms, cabins, RV, or bunk spaces available.
Source: Denali Borough mayor's office; National Park Service, Denali National Park.

Figure 4.6. Denali Borough/National Park Area Accommodations by Community

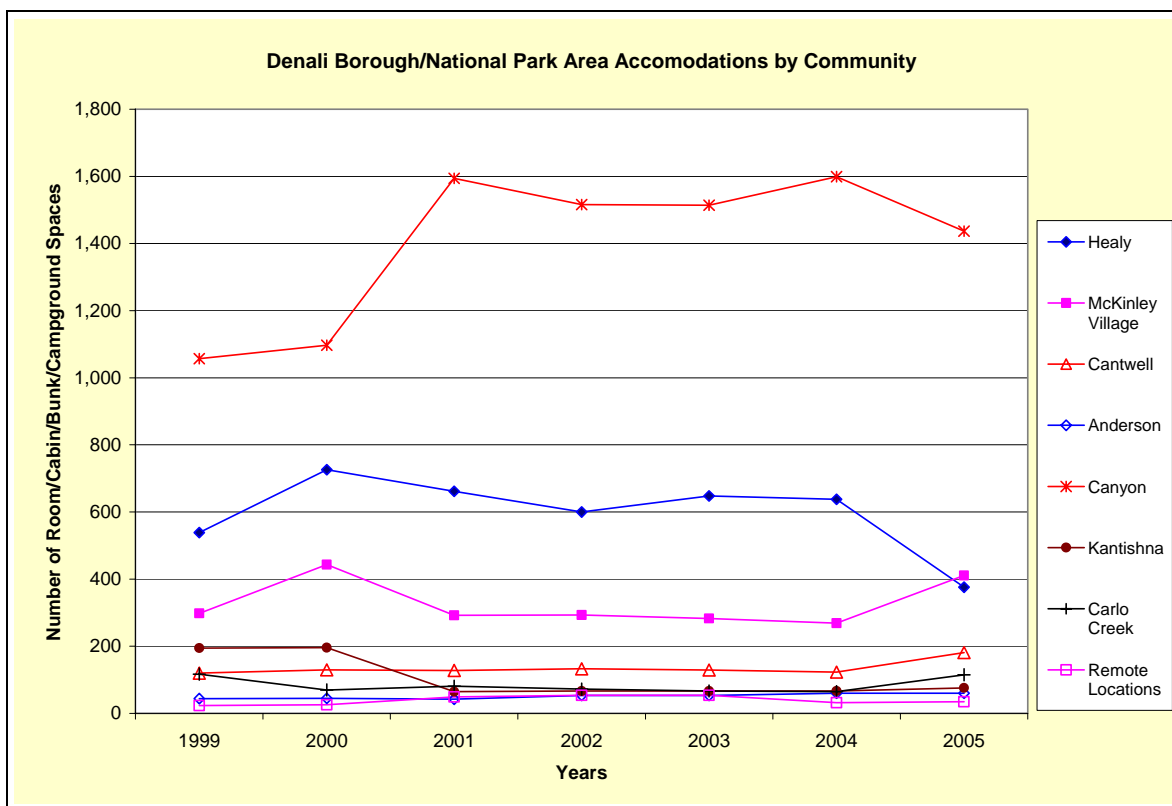
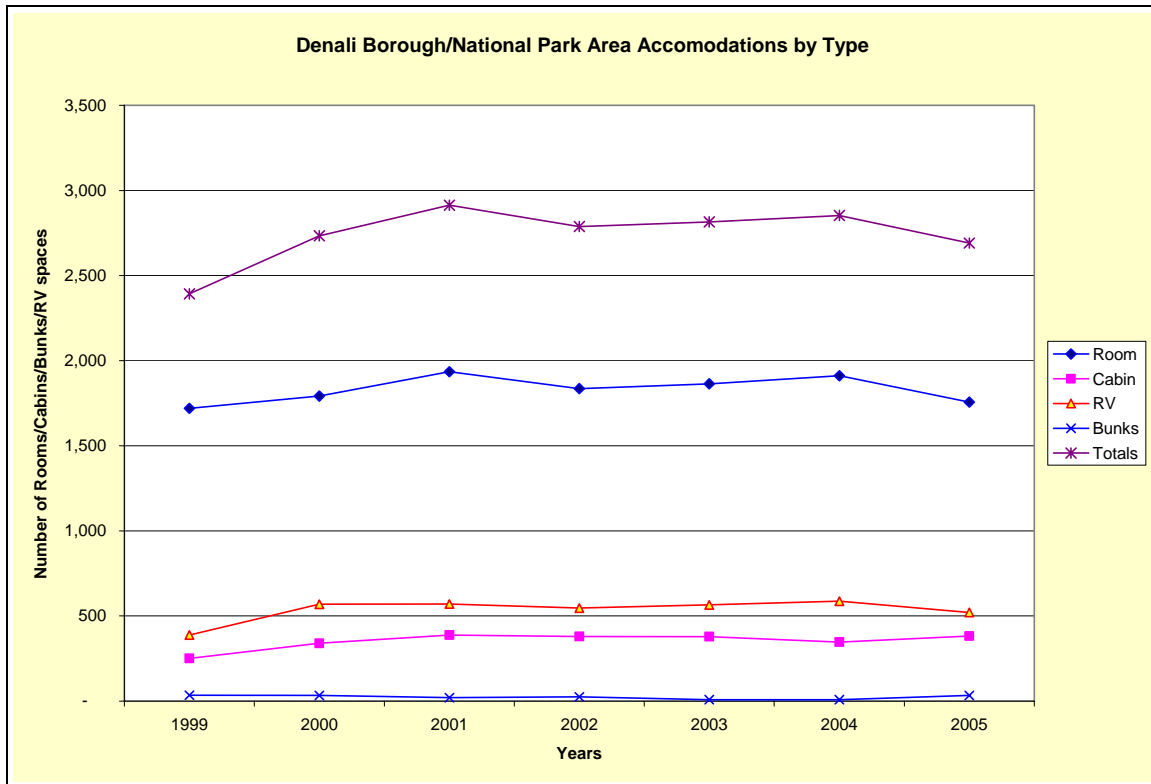


Figure 4.7. Denali Borough/National Park Area Accommodations, 1999-2005



In Figure 4.7, the increase in accommodations available in 2000 is most likely a response to the surge in visitors in 1999. However, after this increase, Denali visitation declined and only in 2004 surpassed 1999 levels. In 2001, the new Grande Denali hotel opened in Nenana Canyon and the Denali Park Hotel closed, which account for much of the 2001 “Canyon” spike as well as the decline in rooms inside the park entrance. The decrease in rooms in Healy in 2005 was the result of conversion of rooms to employee housing.

Additional guest rooms are being planned and constructed in the next three to five years and more employees are being moved from the Canyon area including:¹³

- Princess Cruises is adding between 200 and 300 rooms to its present facility in Nenana Canyon.
- Holland America contracted for construction of 500 rooms over the next three to five years.
- Cook Inlet Region, Inc. purchased property in McKinley Village and is designing a 300 room facility to be built in the next five years.
- There is an 18 room unit under construction at Carlo Creek and a larger year-round lodge in the planning stages.

¹³ Lynn, Elwood, Assistant Superintendent – Operations Denali National Park and Preserve, personal communication, March 28, 2005.

- Princess Cruises purchased the North Star Inn and began housing a portion of their employees there during summer 2005.
- Aramark purchased the Chevron Station and campground in Healy and began operating the Otto Lake Campground during summer 2005. They plan to use these facilities primarily for their employees.

Altogether, there are approximately 1,100 additional rooms known to be in the planning stage for construction in the next five years—over a 50% increase and a further concentration of guest rooms in the Canyon and employee relocation to Healy and other areas. Additional movement of employees and conversion of employee housing to guest rooms could easily increase this number to 1,500 additional guest rooms, or an almost 80% increase in rooms. However, a significant portion of these new rooms will be needed to support the trend in longer stays by cruise land tour guests. It is estimated that over 60% of cruise land guests will spend two or more nights in the Denali area, which means that the major hotels in the Canyon would have to increase the number of rooms by a similar percentage to accommodate longer stays for the same number of guests.

4.6 Visitor Itineraries and Transportation Needs

Visitors to Denali National Park largely fall into two categories: cruise tour land package visitors and independent visitors primarily arriving in private or rental cars and recreational vehicles (RV). Approximately 10% of independent travelers arrive on the Alaska Railroad; intercity bus transportation also transports visitors from Fairbanks and Anchorage but those numbers are not tracked. As mentioned previously, the majority of cruise passengers arrives by train and stays in the Nenana Canyon area while the independent visitors are more dispersed. This pattern results primarily from ownership of and contracts for provision of rooms in the major hotels located in the Canyon. As a result of their more set patterns, the itineraries of tour guests are more readily discernable. The recent shift, however, from almost exclusively one-night to two-night stays and the addition of trains from Whittier to Denali will significantly change tour visitor itineraries in 2005 and future years. The transportation needs of visitors center on movement between the train station and hotels, and from accommodations to the Park. The primary routes that visitors travel and need transportation for are listed below.



Figure 4.8. The Train from Fairbanks Pulls into the Denali National Park Railroad Depot.

Tour groups:

- Denali Railroad Depot to Nenana Canyon and other points along the Parks Highway
- Nenana Canyon to Denali Entrance Area (including the DVC and WAC)

Independent and RV visitors:

- from Healy to Nenana Canyon and Denali Entrance Area

- from McKinley Village to Nenana Canyon and from Carlo Creek to Nenana Canyon and Denali Entrance Area
- from Cantwell to Nenana Canyon and Denali Entrance Area
- Travel within Denali Entrance Area
- Denali Entrance Area to Savage River

The travel patterns of independent visitors are more flexible than that of tour visitors. Most independent visitors stay in the area for an average of two nights. Their activities are generally adapted around when they take a shuttle into the Park. While obtaining seats on buses into the Park is generally easy for independent visitors, it appears that a larger percentage of them elect not to take a bus into the Park. In contrast, most tour passengers are booked onto a Tour as part of their travel packages. The timing of the tour on which they are booked depends on their train arrival time to the Park depot. With the exception of the early morning focus of getting on VTS buses for longer trips into the Park, independent visitors spend time in the entrance area and in the Park vicinity without set times for their comings and goings.



Figure 4.9. Train Time at the Denali National Park Depot

More detailed information on the itineraries of tour visitors is presented in the following sections. Some aspects of visitor travel patterns are proprietary so information is provided in general patterns except where information is commonly known or public knowledge. Because a significant portion of the tour groups arrive by trains, the itineraries focus largely on those visitors. Buses continue to bring tour groups to the Park, but those visitors are a smaller percentage than those arriving by train.

Single to Multiple-night Stays

In recent years, especially evidenced by the 2005 season, the tour operators are shifting their Denali itineraries from one night stays ‘in the park’ to two and three night stays. ‘In the park’ refers to staying either in Nenana Canyon or the Talkeetna/Trapper Creek area. Of the two major tour operators interviewed, 60 to 70% of their 2005 cruise tour bookings have at least two night stays in the park. For Holland America, a two night stay in the park means two nights in Nenana Canyon. For Princess, a two night stay in the park means either two nights in Nenana Canyon, or a two night stay split between Talkeetna/Trapper Creek and Nenana Canyon. Not all the tour operators are offering three night stays for their cruise tour passengers, but the general trend is multiple night stays versus single night stays. Gray Line Tours, a division of Holland America, is offering three night Denali packages. Cruise tour passengers want to see and spend more time in Denali National Park, so tour operator companies are trying to provide this experience. In the past, most cruise tour passengers would be in and out of the Park in about 24 hours.

New Arrival and Departure Times

2005 was the first season in which there were more options for cruise tour visitors to arrive and depart from Denali via train. Prior to the 2005 season, trains arrived at the Park Railroad Depot at either 12:15 p.m. from Fairbanks or 4:15 p.m. from Anchorage. Entrance area activity tended to focus around these two train times.

For the 2005 season, Princess provided a new train schedule for their passengers between Whittier and Denali. On ship days, Princess Cruise passengers were able to go straight to the park, bypassing Anchorage and/or Fairbanks. The intention of this itinerary is to give their passengers additional time in the park. Twice a week—Saturdays and Mondays—Princess operated their own chartered train service and did not hook up their railcars to the Alaska Railroad train. Northbound trains departed Whittier at 8:15 a.m., and arrived at Denali around 6:00 p.m. Southbound trains left Denali at 8:15 a.m., and arrived at Whittier at about 6:00 p.m.



Figure 4.10. Passengers from Train Board Buses for their Hotels

Princess also initiated chartered train service between Whittier and Talkeetna. Northbound trains departed Whittier at 7:15 a.m. and arrived in Trapper Creek around 1:00 p.m. Southbound trains departed Talkeetna around 1:30 p.m. and arrived in Whittier near 7:00 p.m. Princess expects this train service to increase in frequency during the 2006

season. Transportation between Talkeetna and Denali will be both by train and bus occurring approximately two to three times per day.

Itineraries for One-night Tour Groups Arriving by Train

The train on which a visitor arrives dictates the time they take the Tundra Wilderness Tour or the Natural History Tour. If arriving by train at noon from Fairbanks, a tour group would take an afternoon tour departing between 1:30 p.m. and 3:30 p.m. Their free time would be the following morning, before departing on the noon train bound for Anchorage. If arriving at the park at 4:00 p.m. from Anchorage, the tour group would have free time that afternoon between 4:00 p.m. to 8:00 p.m. They would take a tour into the park departing between 5:00 a.m. and 7:00 a.m. the next morning, arriving back at the depot in time for the 4:00 p.m. train to Fairbanks.

This is a tight schedule and only allows a four hour block of time for visitors to pursue activities in the entrance area. Tour operators encourage passengers to sign up for optional excursions during their free time, which with this schedule, means they have little or no free time in the park entrance area. With the pace of their overall Alaska tour, many people in tour groups rest during this time and only “experience Denali” during the six to eight hour bus ride into the park. This schedule changes significantly with the shift to two night stays.

Itineraries for Two-night Tour Groups Arriving by Train

The itinerary pattern remains similar to that of one night stay visitors even with tour groups shifting to two nights; the only difference is that there is a full day of free time between the first and second night. The effect of tour groups staying two nights is that not as many people have concentrated free time between 4:00 p.m. and 8:00 p.m. and between 9:00 a.m. and 12:00 p.m. With an extra day of free time, shuttle service needs to be more regular and often throughout the day to accommodate a variety of itineraries. For at least one day of their visit, two-night stay tour group schedules provide the same flexibility as independent visitors.

With the shift from one night stays to two night stays, cruise passengers have more free time in the Park, or to explore activities just outside the Park which include such excursions as:

- Horseback riding
- Golf in Healy
- Dog mushing demonstrations
- Helicopter and fixed-wing flightseeing
- Jet boat excursions
- Dinner theatre night
- River rafting

With the additional free time, tour operators will undoubtedly offer more types of optional excursions to their passengers as the multiple night stay packages become the standard. In the past, most providers of excursions have run their own shuttle buses to

collect clients from their hotels to their business locations. The current excursion providers are located in Nenana Canyon and in the corridor from Healy to Cantwell. With the increase in length of stays, new businesses and business expansion are likely to respond to the need for additional visitor activities. A consolidated shuttle service could serve the expanding demand for transportation between the Park entrance area and local hotels and activities.

Because there is a larger block of free time for many cruise passengers, being able to move around Nenana Canyon and to the park entrance area at different times throughout the day is more important. Before, there were only two trains coming into and out of Denali, and transportation within the park entrance area was directed at accommodating the train schedule. Now, with different train time departures and arrivals, a more developed and full-day frontcountry shuttle service is needed.

Other Considerations

According to tour operators, the primary factor limiting bookings on cruise tours and stays is not the number of rooms available but the number of people they can put on tours (i.e., the Wilderness Tundra Tour or the Natural History Tour) into the Park. All of Princess' cruise passengers take tours into the Park; it is believed that the majority, if not all, cruise passengers booked with other companies also take such tours.

4.7 Future Visitation Assumptions

For all visitor sectors, estimates of future visitation are based on a number of sources of information. Bus ridership information for Denali National Park and Preserve west of Savage River is reliable but the total estimate of visitation is probably inaccurate. Based on visitor surveys conducted in 1996 and 1999, it is estimated that 25 percent of visitors who come to the park do not ride buses. As mentioned previously, the data suggest there are problems with the survey sampling methodology. In 1999, bus ridership data indicate that 64% of bus ridership was on the Tundra Wilderness and Denali Natural History Tours and 33% of bus ridership was on the VTS. The survey results show the opposite proportion of tour and VTS riders. The Kantishna ridership of 3% in the survey matches the Park bus ridership statistics. Therefore, the results of the 1999 survey appear significantly biased toward non-tour visitors. As a result, the 25% estimate of people visiting Denali who do not take buses, which is used to calculate total annual Park visitation, may be too high. If the survey results are adjusted to reflect actual bus ridership proportions, the percentage that would be added to bus ridership to estimate total visitation would be 11%. This suggests that total Park visitation may be overestimated.

With these limitations in mind, the following general assumptions are made to estimate future Denali National Park visitation:

- Non-tour visitation that is not counted as a specific submarket, such as backcountry users, is probably overestimated. Taking this into account, future visitation growth estimates are conservative.

- It is assumed that all independent and tour visitors who wanted to take buses for the years 1996 to 2004 were able to, though 2004 bus numbers are adjusted to reflect those tour visitors who were booked on VTS buses. Likewise, independent travelers on tour buses were also adjusted for in 2004, which is used as the base year.
- The high forecast reflects demand at the Park's entrance area based on Alaska tourism trends for cruise tour packages and independents. It is assumed that everyone who wants to visit the Park does so regardless of whether they ride a bus because there are sufficient activities and opportunities in the park frontcountry.
- Creative solutions are developed to increase the number of visitors accommodated within the vehicle management plan.
- For the low forecast scenario, there is a dampening effect from reaching practical capacity on the park road. Some visitors choose other parks or choose a South Denali experience, where a new visitor center is planned for completion before 2013.
- Moderate forecast scenario assumes something in between, with some dampening of visitation due to road capacity constraints being reached, some demand being diverted to South Denali, and some ongoing growth at the park entrance.

4.8 Cruise/Tour Visitors

Over half of all visitors to Denali are part of a tour group, primarily on a cruise ship company land tour. Most of these visitors arrive at the Park via the Alaska Railroad or in motor coaches and stay in hotels in the Nenana Canyon, just north of the main Park entrance or properties approximately six miles south of the Canyon.

There are seven basic itineraries for Alaska cruises, the prominent two being:¹⁴

- **Inside Passage** (round trip cruise)—this is the primary seven-day staple of the major North American cruise lines, has the most consumer recognition, and is approximately 50 percent of the Alaska market. This package fits into the prominent one week American vacation and has a fairly consistent port of call pattern in Southeast Alaska.
- **Open-Jaw** (one-way cruise)—this is a cruise one way, fly one way itinerary with significantly more competition among ports for starting and ending locations (current competition focuses on Vancouver, B.C. and Seattle in the south and Seward and Whittier in the north). This is a longer 10-15 day trip with constant efforts by cruise companies to fully utilize their Alaska and Canadian land investments and move passengers more efficiently. The longer trip length allows

¹⁴ kpff Consulting Engineers; Bermello-Ajamil and Partner, Inc.; Peratrovich, Nottingham and Drage, Inc.; BST Associates; and Millers + Peters Architects, *Port Planning Project, Phase I-Inventory Needs and Assessment*, prepared for the City of Ketchikan, December 2002.

for more fluctuation in trip itineraries and more competition in the land components among companies. This sub-segment is approximately 39 percent of the Alaska market and includes the Denali land tour component. Princess Cruises dominates this market sector with four vessels dedicated to this sub-segment, followed by Holland America Line with two vessels, and Royal Caribbean International, Celebrity Cruises, Carnival Cruises and Radisson each have one vessel.¹⁵

The remaining five sub-segments are Alaska Repositioning (4 percent), Alaska Coastal (4 percent), Inside Passage Introductory (1 percent), Small Ship Adventure (2 percent), and Dry-dock and ship servicing (less than 1 percent). These are used to move vessels between summer and winter regions, and to fill in shoulder seasons and niche cruise markets. With the exception of the small cruise ship sub-segment, the others are not pertinent to Denali National Park tour visitation.

Given Alaska's geographic location and distance from the rest of the United States, most domestic and international visitors travel to Alaska via cruise ship or airplanes. As these visitors arrive in Alaska without automobiles, alternative systems have evolved for transporting visitors to Denali. The prominent form is the Alaska Railroad, especially for cruise ship passengers arriving in the ports of Seward and Whittier and connecting to land tours. Table 4-7 and Figure 4.11 show passenger numbers on the Alaska Railroad Denali segments from 1998 to 2004. Pull contract passengers are cruise ship passengers "pulled" by the Alaska Railroad in cruise ship company-owned passenger cars. "Denali Star" passengers are visitors who book directly with the Alaska Railroad to travel to Denali on Alaska Railroad cars. For the years shown, passengers traveled north from Anchorage and/or Talkeetna to Denali or south from Fairbanks to Denali. Cruise land tour passengers typically travel north to Denali, stop for one or two nights and then continue north to Fairbanks to depart by airline or motorcoach to Seward or Skagway to cruise south (depending on whether their land segment occurs before or after their cruise segment). Passengers who start their land tour in Fairbanks take the train to Denali, stop for one or two nights and then continue south to Anchorage to fly home or to Seward or Skagway to cruise south.¹⁶ The Alaska Railroad trains run once each day in each direction, with the additional two Princess Cruises-only trains per week in each direction starting in 2005.

For 2004, approximately 65,000 cruise land passengers traveled north to Denali and 73,000 traveled south to Denali from Fairbanks for a total of approximately 138,000 arriving to Denali by train (Table 4-7). Given time constraints, most cruise land tour visitors travel either north stopping in Denali; they then continue north to Fairbanks for their airline departure. Alternatively, they fly into Fairbanks and take the train south to Denali. After their visit in Denali they take the train south to board a cruise ship for the cruise leg of their vacation. Most cruise land tour visitors travel only one direction via train.¹⁷

¹⁵ kfpp, p. 8-28.

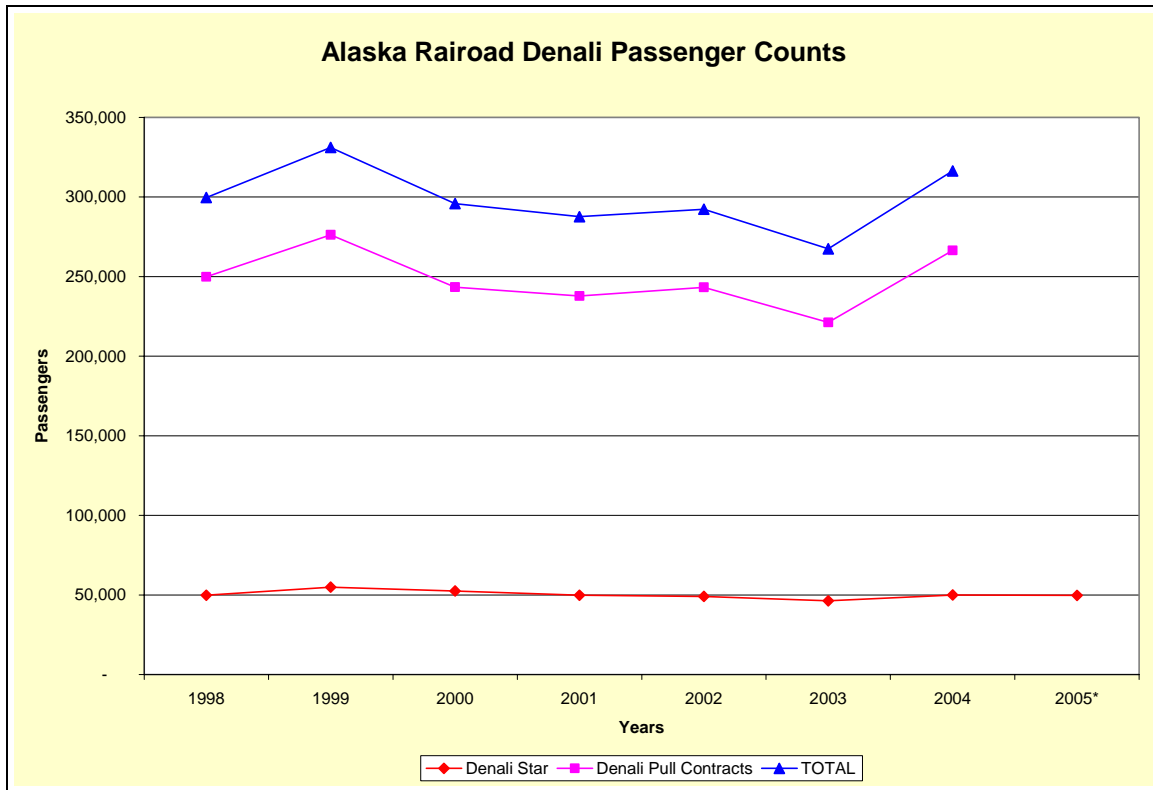
¹⁶ In 2004, some ships shifted docking from Seward to Whittier; with an increased number in 2005.

¹⁷ This is confirmed by conversations with tour operators, hotel managers and Park staff.

Table 4-7. Alaska Railroad Denali Related Segments

Alaska Railroad Denali Related Segments								
Denali Star	1998*	1999*	2000	2001	2002	2003	2004	2005**
Anchorage-Denali	15,697	16,018	13,863	14,560	14,050	13,113	15,108	15,853
Talkeetna-Denali			3,696	1,618	2,155	2,128	2,781	2,014
Denali-Fairbanks	8,722	9,323	8,845	8,846	8,316	7,857	7,430	7,148
Fairbank-Denali	10,125	12,367	10,164	10,079	9,402	8,932	9,083	8,886
Denali-Talkeetna			2,318	954	1,853	1,886	3,023	3,023
Denali-Wasilla							231	
Denali-Anchorage	15,287	17,199	13,578	13,744	13,223	12,308	12,323	12,717
TOTAL Alaska Railroad	49,831	54,907	52,464	49,801	48,999	46,224	49,979	49,641
Pull Contracts								
Anchorage-Denali	35,722	42,247	31,777	24,031	22,597	23,710	27,114	
Talkeetna-Denali	25,009	26,945	26,068	33,933	36,031	29,388	37,038	
Denali-Fairbanks	63,387	69,573	62,660	56,514	54,701	49,131	57,141	
Fairbank-Denali	67,349	73,511	66,774	62,724	66,848	60,868	72,946	
Denali-Talkeetna	25,810	27,445	28,117	35,730	39,296	36,225	41,457	
Denali-Anchorage	32,554	36,531	28,054	24,889	23,824	21,908	30,761	
TOTAL Pull Contracts	249,831	276,252	243,450	237,821	243,297	221,230	266,457	
TOTAL	299,662	331,159	295,914	287,622	292,296	267,454	316,436	
<small>*Ridership numbers for 1998 and 1999 were recorded in different ways than 2000 and forward.</small>								
<small>**2005 projections by the AKRR for Denali Star passengers. No projection is made for pull contracts.</small>								
<small>Pull contractor numbers are cruise ship company passengers who are "pulled" in cruise ship company owned rail cars via contract with the Alaska Railroad.</small>								
<small>Source: Alaska Railroad data files, November 2004.</small>								

Figure 4.11. Alaska Railroad Denali Passenger Counts



Given that approximately 60% of Denali National Park and Preserve visitors are cruise tour land package travelers, it is surprising that the Denali visitation numbers (Figure 4.4) and bus ridership numbers (Table 4-8 and Figure 4.12) do not more closely correspond to the trends in cruise visitation. It may be that despite Denali being prominently featured in most Alaska tourism marketing and a component of almost all cruise land tour packages, the additional time and cost of including Denali with an Alaska cruise could not overcome the dampening effects on the market in 2000-2003. In addition, over the last decade there has been a trend for Americans to take increasingly shorter vacations. This along with a sluggish economy and travel fears, could cause travel to Denali to increase at a slower rate than cruise passenger visitation. Visitation to Denali did rebound in 2004 with an 11% increase over 2003.

During the 2004 booking season, the Tundra Wilderness Tour was temporarily closed to reservations to ensure tours were not sold in excess of vehicle capacity constraints and allocations. In response to this closure, approximately 3,000 VTS tickets were purchased by tour companies when the Tundra Wilderness Tour was closed for reservations. Beginning in December, people can fax or mail to purchase eight tickets at a time in individual names in for the VTS buses; beginning in February, phone in purchases are allowed. The day after Tundra Wilderness Tour reservations closed there was a surge in VTS bookings. In the last couple of years, tour companies bought VTS tickets to fulfill client demand though the extent to which this happened in earlier years is uncertain.¹⁸ If the bus ridership numbers are adjusted for this “reallocation” in 2004, visitor segments are as depicted in Table 4-8 and Figure 4.12. Since the late 1990s, the percentage of visitors on tours has remained fairly steady at 64-65%.

These bus ridership adjusted numbers show the combined tour passengers increasing in 2004 at a rate (13%) that is more consistent with the increase in cruise passengers (12%). A 12% increase is not inconsistent with growth rates in Alaska cruise visitors in the second half of the 1990s but the 2004 increase could also be a relatively short term rebound of pent up demand for travel. Cruise ship company representatives and hotel managers identified 15% as a target annual rate of growth in visitors for the indefinite future. The average annual rate of growth in cruise ship passengers since 1996 is 9%, with some years significantly higher and some years lower. However, if companies can successfully attain and sustain this substantial average rate of growth, visitor capacity constraints both in Denali and hotels make it difficult in both the short- and long-term. Short-term constraints include hotel and bus tour capacity. By improving efficiency in filling all seats in dispatched buses, some increases in tour visitation might be accommodated.

Hotels in the Denali area are actively responding to address hotel capacity constraints. There are reportedly 1,100 new rooms under contract from Nenana Canyon to McKinley Village. In 2004 Princess added 88 new guest rooms at the Denali Princess Lodge. Princess also recently purchased additional property in the Nenana Canyon; Princess was

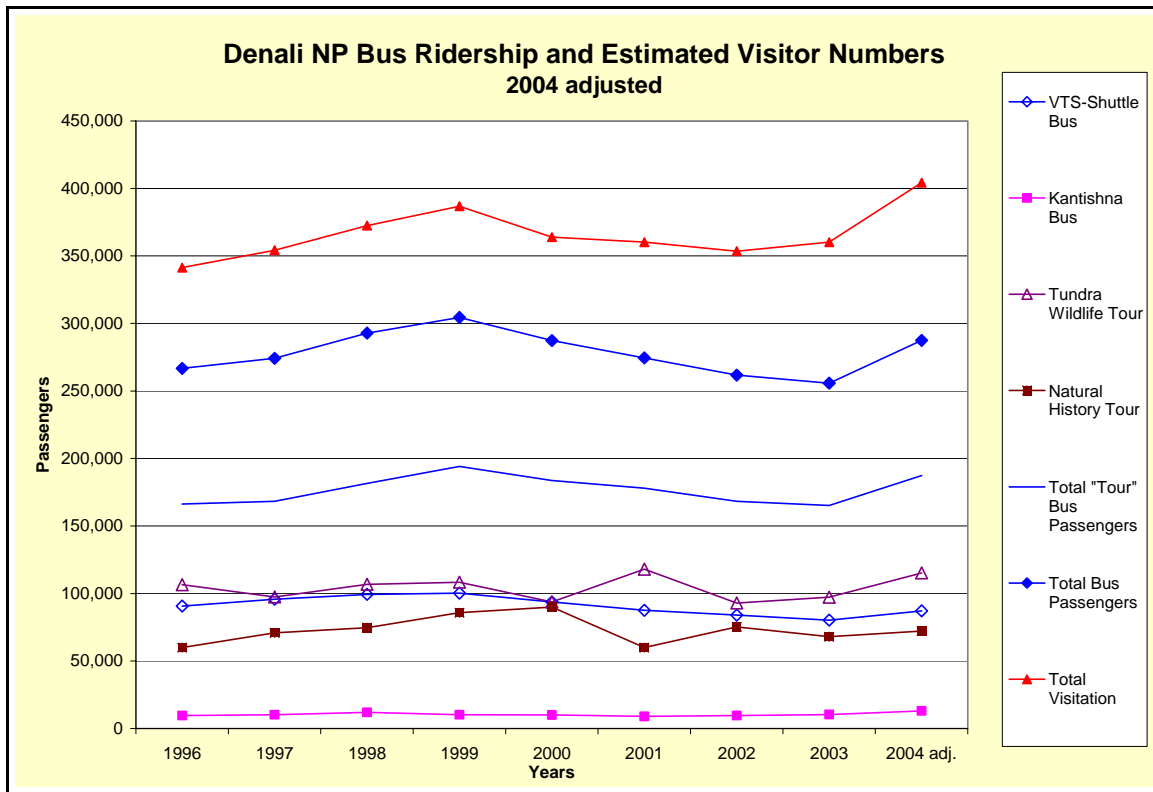
¹⁸ Curtis, Clare, Denali National Park and Preserve, Visitor Access Center Manager, personal communication, September 7, 2004.

Table 4-8. Denali National Park Bus Ridership and Estimated Visitor Numbers, 1996-2004

Denali National Park Bus Ridership and Estimated Visitor Numbers, 1996-2004											
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2004 adj.	% change 2003-2004
VTS-Shuttle Bus	90,641	95,733	99,337	100,227	93,734	87,532	83,922	80,192	90,160	87,160	8%
Kantishna Bus	9,636	10,176	12,015	10,221	10,019	8,931	9,553	10,342	12,994	12,994	20%
Total "Independent" Bus Pass.	100,277	105,909	111,352	110,448	103,753	96,463	93,475	90,534	103,154	100,154	10%
Tundra Wildlife Tour	106,476	97,383	106,860	108,302	93,724	118,077	92,963	97,218	112,135	115,135	16%
Natural History Tour	59,873	70,858	74,664	85,735	89,880	59,861	75,247	67,987	72,149	72,149	6%
Total "Tour" Bus Passengers	166,349	168,241	181,524	194,037	183,604	177,938	168,210	165,205	184,284	187,284	12%
Total Bus Passengers	266,626	274,150	292,876	304,485	287,357	274,401	261,685	255,739	287,438	287,438	11%
Total Visitation	341,385	354,278	372,519	386,867	363,983	360,191	353,560	360,189	404,234	404,234	11%
% Change Independents		6%	5%	-1%	-6%	-7%	-3%	-3%	14%		4%
% Change Tour		1%	8%	7%	-5%	-3%	-5%	-2%	12%		15%
% Change Total Visitation		4%	5%	4%	-6%	-1%	-2%	2%	11%		11%
Spread--Tour & Independent	66,072	62,332	70,172	83,589	79,851	81,475	74,735	74,671	81,130	87,130	
% Change in Spread 1997 to 2004									23%		24%
Market Share of Independents	38%	39%	38%	36%	36%	35%	36%	35%	36%	35%	
Market Share of Tours	62%	61%	62%	64%	64%	65%	64%	65%	64%	65%	

2004 adjusted numbers reflect the estimated VTS reservations that were booked by tour travelers and not independent travelers.
Source: Denali National Park and Preserve, Visitation Statistics, 2004.

Figure 4.12. Denali National Park Bus Ridership and Estimated Visitor Numbers, 2004 adjusted



the most constrained property in terms of land and space for expansion of the major hotels. Princess is continuing to increase guest rooms in the Canyon by shifting more employee housing to Healy with their recent purchase of the North Star Hotel. Other major hotel properties in Nenana Canyon have more land available upon which to

construct guest rooms; most of the major companies also house employees in the Canyon and could move them to less prime guest housing locations. This continued investment in properties near the Park suggests that companies anticipate continued growth in the tour visitor market.

Beginning in 2005, the typical land itinerary changed in a number of ways. In the past, most tour visitors spent one night in the vicinity of the Park. Tour operators began offering two-night stays in 2002; by the 2005 season, the majority of cruise land packages are two-night stays with few one-night packages offered. For all of the major cruise/tour companies, this means that cruise land tour visitors typically have one day in which they travel by bus on the Tundra Wilderness Tour or Natural History Tour into the Park and another free day to do activities in the Park frontcountry and environs.

In 2005 the new Park visitor center opened and provided significantly more for visitors to see and do in the park entrance area. The new center has a larger auditorium for film viewing, displays, a larger bookstore and a food court. Located near the train depot, the center can provide a half day of park and natural history education and activities for visitors arriving and departing by train as well as for all other visitors. The expanded offerings of the new visitor center have been incorporated into the Natural History Tour to make it comparable in depth and duration to the Tundra Wilderness Tour.

For most of the Princess Cruise Line visitors, their two nights are divided between the Denali Princess Lodge in the Nenana Canyon and the McKinley Princess Lodge in Talkeetna on the south side of the Park. By dividing two-night stays between the Denali and McKinley Princess Lodges, occupancy rates are evened out while accommodating visitor demand for Denali experiences.

As vehicle traffic on the Park road reaches capacity, flightseeing is a logical alternative method to see the Park. This is especially true for those who are reluctant to embark on or uncomfortable with the multi-hour bus ride of the tours or VTS shuttle. With Princess guests spending a portion of their visits in Talkeetna, from which there is no road access into the Park, flightseeing may be an easily accessible alternative. Talkeetna is the location from which mountain climbers have traditionally flown to begin their ascents of Denali. It is also where most flightseeing and air taxi flights originate. The flight services must have permits to land in the Park. As a result, the National Park Service collects information on the number of visitors landing in the Park for day tours or overnight camping.¹⁹

However, flightseeing that does not involve a landing is not regulated by the National Park Service so the number of people who choose to see the Park from the air rather than on a Natural History or Tundra Wilderness Tour or VTS bus is unknown. Flightseeing tours are actively sold by cruise companies at the time people book their vacations, on the ships and in hotels. It may be that the number of visitors to Denali is currently higher than

¹⁹ Valentine, Dan, Joe Van Horn and Karen Fortier, *Visitors and Aircraft Use of the Ruth Glacier, Denali National Park and Preserve, 1999*, National Park Service, February 2000.

realized because people who see the Park via flightseeing rather than buses go uncounted. Increased flightseeing could have a detrimental impact on on-the-ground visitation especially for some visitor segments such as backcountry and campground users.

4.9 Future Cruise Sector Visitation

Estimates of future Alaska cruise passenger visitors are based on estimates of cruise passenger market growth studies.²⁰ Future visitation was estimated in the context of Alaska cruise ship passenger growth in the last ten years (Table 4-9). Over the 12 years, the average annual rate of growth was 9.4 percent.

Table 4-9. Alaska Cruise Passenger Annual Growth

Alaska Cruise Passenger Annual Growth		
Year	Cruise Passengers	Annual Growth Rate
1992	265,000	
1993	306,000	13%
1994	379,000	19%
1995	383,000	1%
1996	464,484	18%
1997	524,842	12%
1998	569,707	8%
1999	595,959	4%
2000	640,477	7%
2001	690,648	7%
2002	739,757	7%
2003	776,991	5%
2004	884,406	12%
Source: Alaska Cruise Line Agencies.		

A number of characteristics of the cruise industry support and suggest continued robust cruise passenger growth rates. These include:

- Cruise lines have been highly adept at converting the land-based resort guest into a cruise passenger. They have been able to package and mass market an all-inclusive resort-at-sea experience that is highly price competitive when compared to similar land resort vacation. At the same time they enjoy a high profit rate.
- Cruise lines have also been successful at developing new products that generate sustained interest in cruising.
- Cruise line industry products deliver a high level of passenger satisfaction with high cruise retention rates—Alaska has one of the lowest cruise return rates but other cruise regions help feed a loyal clientele into the Alaska cruise market.

²⁰ Glostien Associates, Inc., *Cruise Ship Traffic Projections Technical Memorandum*. September 2001. Prepared for HDR Alaska, Inc.
City of Ketchikan-*Ports and Harbors Facility Development Plan, Phase I-Inventory and Needs Assessment*, Contract No. 02-04, December 2002.

- Cruise ship companies continue to add to their berth capacity via construction of new and larger ships targeted for Alaska deployment. Alaska ships have historically filled their capacity with rates of growth being primarily berth supply constrained rather than market demand constrained.
- The cruise lines land tour components continue to add investment in the form of rail cars and hotel rooms.
- Denali south-side development will allow for increased accommodation of cruise land tour visitors.
- In addition, the retirement of the baby boomer generation, a core demographic group of cruise travelers, will continue to support future cruise sector growth.

Factors limiting Alaska cruise growth include:

- Vessel size and capacity growth is likely to continue which impacts berth space, tendering operations, and all shore logistics. Limited docking space in terms of number of ships that can be accommodated in Alaska ports and the increased size of ships are issues that will need to be addressed along with investment capital for the construction of additional berth space.
- The growing number of passengers in ports requires that shore excursion coordination and development be addressed by improving and expanding dispatch sites, coordinating the movement of passengers and increasing shore excursion opportunities.
- Many of the land tour excursions are open jaw with cruising in one direction and airlift in the other. Airline capacity and competitive pricing affect the expansion of this portion of the cruise market.
- Community accommodation and tolerance of growing numbers of cruise visitors is a significant factor that could impact expansion in a number of communities. New itinerary options with expansion into secondary ports is challenging because of the smaller size of the secondary communities and larger ships that require rapid expansion of shore excursion and logistics capability. Major ports have been able to adjust over time as passenger numbers and ship sizes increased.
- Sustaining current rates of growth will require increasing the Alaska return factor. Expansion of pre- and post-cruise land tour options are an important component of enhancing the level of repeat visitors but will require changing passenger attitudes about travel to Alaska.
- Depending on how Denali bus capacity is addressed will determine when and how the road constraint will affect future growth in visitation for all visitor segments, especially cruise land excursion because they have been highly marketed around the Denali National Park tour bus experience. It may also be that a growing number of visitors will travel to the Park but not travel past the mile 15 Savage River bridge. How the cruise lines adjust their land tour product in light of road capacity constraints will be significant.

Development of future growth rates for the Denali National Park land tour reflect past growth, expectations of future growth by recent research, construction activities and rail car purchases of major tour companies, and the likely timing and effects of the Denali

Park road reaching capacity constraints. They are based also on the following assumptions:

- Denali tour bus ridership through 2004 is assumed to reflect market demand for tours and travel to Denali (2004 tour bus ridership numbers are adjusted to include tour package visitors who took a VTS shuttle when tour slots were unavailable),²¹
- High, medium and low growth rates are based on 7%, 5% and 2% annual growth in cruise visitation to Alaska, respectively;
- Approximately the same proportion of total Alaska cruise passengers visit Denali as occurred in 2004 (22% for the high estimate);
- For the medium and low growth scenarios, some dampening effect from reaching the road capacity is expected and the proportion of cruise visitors who take a land tour that includes the Denali entrance area drops to 21% and 20%, respectively.
- In both the medium and low growth scenarios, it is also assumed that Denali cruise tour visitation grows at a lower rate than overall cruise visitation to Alaska. This is consistent with historic growth patterns and is likely to continue to occur given Denali Park road capacity constraints to protect Park resources.

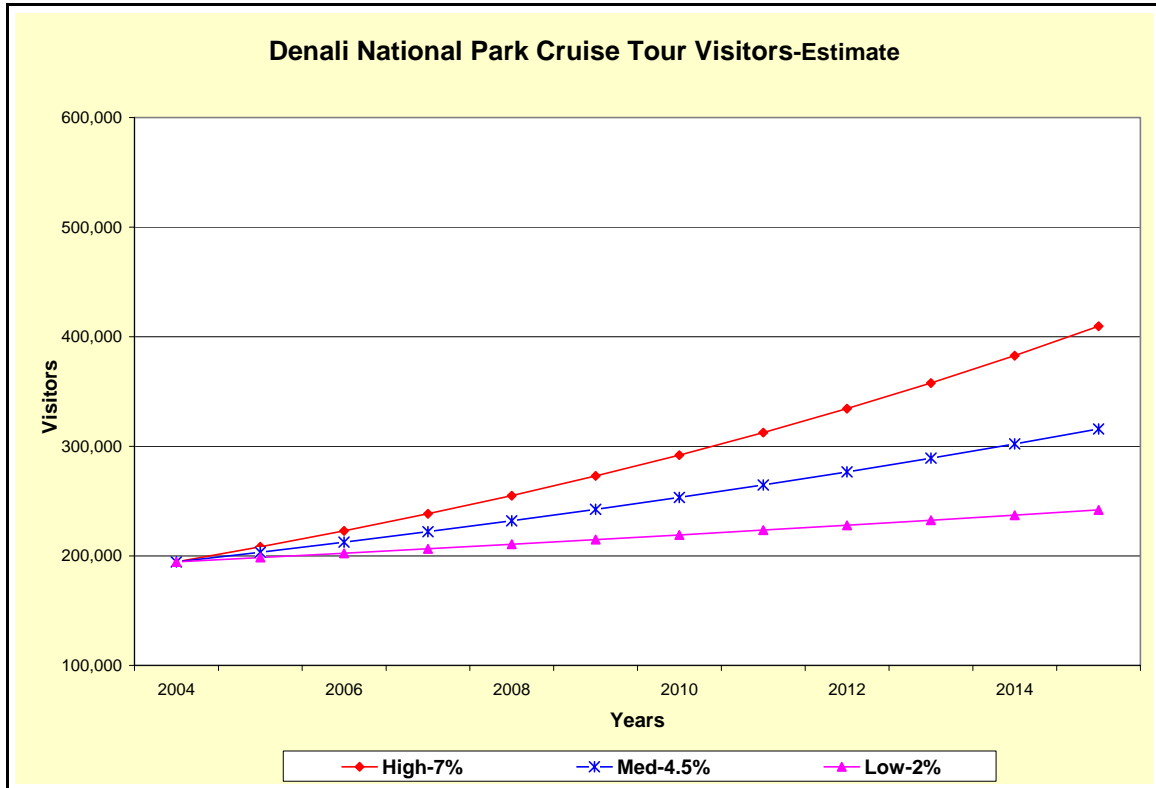
Weighing these considerations, the estimated high, medium, and low rates of growth are 7%, 4.5%, and 2%, respectively. Denali cruise land tour visitor numbers are shown in Table 4-10 and Figure 4.13. The middle, 4.5% annual growth rate results in approximately 60% more cruise visitors in ten years. This medium or base case, is consistent with the 4.2% annual average increase in the number of cruise tour visitors to Denali since the early 1990s.

Table 4-10. Alaska Cruise and Denali National Park Cruise Visitor Growth Estimates

Alaska Cruise and Denali NP Cruise Visitor Growth Estimates						
Year	Alaska Cruise Passengers			Denali Cruise Tour Visitors		
	High-7%	Med-5%	Low-2%	High-7%	Med-4.5%	Low-2%
2004	884,406	884,406	884,406	194,569	194,569	194,569
2005	946,314	928,626	902,094	208,189	203,325	198,461
2006	1,012,556	993,630	965,241	222,762	212,475	202,430
2007	1,083,435	1,063,184	1,032,808	238,356	222,036	206,479
2008	1,159,276	1,137,607	1,105,104	255,041	232,028	210,608
2009	1,240,425	1,217,240	1,182,461	272,894	242,469	214,820
2010	1,327,255	1,302,446	1,265,234	291,996	253,380	219,117
2011	1,420,163	1,393,618	1,353,800	312,436	264,782	223,499
2012	1,519,574	1,491,171	1,448,566	334,306	276,697	227,969
2013	1,625,944	1,595,553	1,549,966	357,708	289,149	232,528
2014	1,739,760	1,707,242	1,658,463	382,747	302,160	237,179
2015	1,861,544	1,826,748	1,774,556	409,540	315,757	241,922

²¹ This proportion adjusts for the number of tour visitors who took the VTS bus when seats were not available on the Wildlife Tundra Tour.

Figure 4.13. Denali National Park Cruise Tour Visitors-Estimate



4.10 “Independent” Travelers

Independent travelers generally refer to travelers that are not on package tours. In actuality, especially in Alaska relatively few travelers are completely “independent” as many pre-purchase a portion of their trip activities or are part of a tour at some point in their trip. For Alaska, and Denali National Park and Preserve in particular, it makes more sense to view visitors as those who come primarily as part of a major cruise company land package and those who do not. If visitors take a land tour as part of their cruise package, almost all include Denali. In general, Alaska is marketed with Glacier Bay National Park as the cornerstone of the at-sea component and Denali National Park and Preserve the cornerstone of the land component of the cruise land tour.

In this analysis, independent travelers are those who do not come to Denali as part of a cruise land tour. Sub-segments of independent travelers include backcountry hikers and campground campers and recreational vehicle (RV) visitors. Visitors to Denali on small cruise ships and smaller tour companies are generally more similar to independent travelers than to travelers with the major cruise companies. Many of them stay at accommodations in Kantishna. As a result, they are included in the independent traveler analysis and forecasts. Overnight stays for visitors who stay in the Park are shown in Tables 4-11 and 4-12. An overnight stay in the Park is defined as an overnight by one person. So if one person stays in the Park two nights, their visit is recorded as a two night stays. The average Denali campground and backcountry visitor stays two nights resulting

Table 4-11. Denali National Park and Preserve Number of Overnight Stays within the Park

Denali National Park								
Number of Overnight Stays within the Park								
Location	1997	1998	1999	2000	2001	2002*	2003	2004
Park Hotel**	22,223	18,330	19,912	19,095	19,106	0	0	0
Backcountry	14,769	10,758	11,698	10,018	10,583	11,464	9,864	10,016
Savage Group Campground	2,019	1,878	1,349	2,002	1,457	455	1,372	3,309
Tent Campers at Riley Creek Campground	2,671	8,514	9,167	9,030	3,134	4,446	13,922	21,665
RV Campers at Riley Creek Campground	26,423	20,762	21,080	20,992	14,945	8,012	25,975	29,165
Tent Campers at Savage River Campground	817	3,601	2,440	3,632	2,214	2,026	4,721	5,628
RV Campers at Savage River Campground	10,462	6,843	7,677	6,208	5,243	2,950	5,603	6,609
Tent Campers at Wonder Lake Campground	6,605	5,447	6,009	6,637	4,521	2,820	5,887	6,167
Tent Campers at Morino Campground***	3,025	2,012	2,928	2,179	2,244	1,425	0	0
Tent Campers at Sanctuary Campground	1,246	1,061	1,303	1,343	714	631	1,115	1,081
Tent Campers at Igloo Campground****	1,428	1,341	1,192	1,680	0	0	0	0
Tent Campers at Teklanika Campground****	1,443	5,360	5,073	5,668	237	4,165	0	0
RV Campers at Teklanika Campground	11,696	9,450	9,853	10,062	9,581	1,218	13,477	15,437
	1997	1998	1999	2000	2001	2002*	2003	2004
Total RV Campers	48,581	37,055	38,610	37,262	29,769	37,412	45,055	51,211
Total Tent Campers, vehicle accessible CGs	7,956	19,487	19,608	20,509	7,829	13,236	18,643	27,293
Total Tent Campers, bus only CGs	9,279	7,849	8,504	9,660	5,235	6,119	7,002	7,248
Backcountry Campers	14,769	10,758	11,698	10,018	10,583	10,224	9,864	10,016
Savage Group Site	2,019	1,878	1,349	2,002	1,457	1,415	1,372	3,309
Total Overnight Stays	104,827	95,357	99,681	98,546	73,979	68,405	81,936	99,077
* 2002 data are inaccurate, believed to be due to faulty data entry.								
** The Park Hotel closed after the 2001 season.								
*** Morino Campground was closed after the 2002 season; an expanded Riley Creek Campground provided replacement sites.								
**** Igloo and Teklanika Campgrounds have been closed to tent campers because of problems with assertive, habituated wolves.								
Source: Denali National Park Visitor and Use Data, 2004								

Table 4-12. Total Annual Overnight Stays within Denali National Park and Preserve

Total Annual Overnight Stays within Denali National Park and Preserve.												
	RV		Tent, vehicle access		Tent, bus only		Backcountry		Savage Group Site		Total Overnight Stays	
1997	48,581		7,956		9,279		14,769		2,019		104,827	
1998	37,055	-31.1%	19,487	59.2%	7,849	-18.2%	10,758	-37.3%	1,878	-7.5%	95,357	-9.9%
1999	38,610	4.0%	19,608	0.6%	8,504	7.7%	11,698	8.0%	1,349	-39.2%	99,681	4.3%
2000	37,262	-3.6%	20,509	4.4%	9,660	12.0%	10,018	-16.8%	2,002	32.6%	98,546	-1.2%
2001	29,769	-25.2%	7,829	-162.0%	5,235	-84.5%	10,583	5.3%	1,457	-37.4%	73,979	-33.2%
2002*	37,412	20.4%	13,236	40.9%	6,119	14.4%	11,464	7.7%	1,415	-3.0%	69,646	-6.2%
2003	45,055	17.0%	18,643	29.0%	7,002	12.6%	9,864	-16.2%	1,372	-3.1%	81,936	15.0%
2004	51,211	12.0%	27,293	31.7%	7,248	3.4%	10,016	1.5%	3,309	58.5%	99,077	17.3%
* 2002 data are inaccurate, believed to be due to faulty data entry; 2001 also had measurement inconsistencies.												
Source: Denali National Park Visitor and Use Data, 2004												

in approximately 100,000 overnight stays in Park in 2004; this equates to approximately 50,000 visitors. The reported occupancy rates at area campgrounds suggest another 30,000 visitors stay in area campgrounds outside the Park for a total of approximately 80,000 visitors staying in Denali area campgrounds in 2004.

Backcountry Visitation

Information on backcountry visitation focuses on visitors entering through the main visitor entrance in Nenana Canyon who are potential users of the Community Transportation System. Backcountry visitors also enter the Park from the south and via

aircraft into the Ruth Glacier area; both of which generally stage out of Talkeetna. These latter visitors are not considered in this analysis.

According to recent research developed for updating the Denali Backcountry Management Plan, two-thirds of backpacker/backcountry overnight users are non-Alaskan U.S. residents.²² The average age for non-local Alaskans and nonresidents is 30 years old. Local Alaskans, many of whom are summer seasonal, non-resident students employed at local hotels and visitor facilities, average 25 years old.²³ Few hikers are retired, 1%, and most, 60%, are employed. Two-thirds of overnight backcountry users surveyed were male; 83% were Caucasian.

The majority, 75%, of backcountry hikers reported that they had not taken another backcountry trip in Denali in the prior three years and 77% had only received one backcountry permit in their lifetimes. Most Denali backcountry users decided to take their trip to Denali prior to leaving home (94% of non-local Alaskans and 81% of non-Alaskans)—not unexpected given the equipment and preparation for a trip in the Denali backcountry.

Most trips are relatively short, between two and four nights in the backcountry and surrounding community. About half of overnight backcountry users did not take any day hikes in Denali separate from their backcountry trip. About 30% took one or two day hikes and 10% took more than three day hikes in the backcountry. While in the backcountry, the majority of overnight backcountry hikers (84%) did not report feeling crowded by encounters with other hiking parties or camping within sight or sound of other campers being as expected or less than expected. Between 50 and 60% of all backpackers surveyed reported some annoyance with aircraft and 45% reported that aircraft detracted from their experience. But only 10% reported that aircraft experiences would alter plans for future visits to Denali.

Most backpackers (96%) rated their backcountry experience as good or very good. Most support current management practices to limit use and impacts. However, many found the permitting system complicated and frustrating especially those who traveled long distances and then could not obtain permits for the time and places in which they preferred to hike. There appeared to be frustration with only being able to obtain permits on site, a limitation that tended to favor persons employed seasonally in the area to more easily obtain permits.

²² Swanson, Jane, Mark Vandekamp, Darryll Johnson, Robert Manning, and Steven Lawson, *A Survey of Overnight Backcountry Visitors to Denali National Park and Preserve*, Technical Report NPS/CCSOUW/NRTR-2002-04, NPS D-318, Cascadia Field Station, 2002—for visitor information in this section.

²³ This is conjecture by the study team because the survey failed to adequately distinguish this group of backcountry visitors.

The recently completed Denali Backcountry Management Plan provides guidance for future growth and use of the park backcountry.²⁴ Based on research conducted as part of the planning process, demand for guided and educational services is expected to grow over the next 20 years, including demand for scenic air tours. In locations accessible to guided services, backcountry visitation is expected to grow at a similar rate to overall visitation. The plan provides for new backcountry opportunities in the Kantishna Hills, including advanced registration and designated campsites. The plan also calls for studying and deploying a more efficient registration system park wide, which should make it possible to accommodate more independent backpackers with greater efficiency. Additional educational activities are planned for the “old” Park backcountry, which will increase use. Finally, commercial groups will be able to lead hikes on entrance area trails that connect visitor venues.

Based on based trends and usage patterns and recent research, pertinent factors influencing current and future backcountry user numbers can be summarized as follows:

- the average age and racial demographics of backcountry overnight users is a U.S. population cohort that is projected to experience the lowest rate of growth in the next 20 years;²⁵
- backcountry use has been relatively flat since 1997 experiencing a 1.5% increase in 2004 when Alaska visitation increased by 13% and Denali visitation by 11% (Tables 4-11 and 4-12);
- despite high ratings of their experiences by backcountry users, many still expressed frustrations with the permitting system, transportation to and from the backcountry, and the level of aircraft encounters in the backcountry;
- without any changes in the backcountry management system, independent, overnight backpacking in the Park core will probably increase only slightly; and
- visitation could increase in all backcountry categories in the park additions, especially for guided and educational activities. Additional use of the old park backcountry for guided and educational groups is also anticipated.

Given these factors, two future growth scenarios are possible. One assumes relatively few backcountry management improvements are implemented. Without improvement and given the opportunities to experience other premium backcountry environments in Alaska, the backcountry overnight use in Denali would most likely remain flat. Past visitor numbers reflect single year spikes largely attributed to feature articles in national magazines such as *Backpacker* or *Outside* but these do not appear to affect the overall Denali visitor trends.²⁶ Changes in the permitting process that allows a portion of non-locals to reserve permits prior to arrival or otherwise facilitates the permitting process could result in an increase in overnight backcountry use. Increases in guided and

²⁴ Loeb, Charlie, backcountry planner, and Mike Tranel, Chief of planning, Denali National Park and Preserve, personal communication, March 2005.

²⁵ U.S. Census data, downloaded from: www.census.gov/ipc/www/usinterimproj/

²⁶ Loeb, Charlie, backcountry planner, Denali National Park and Preserve, October, 2004.

educational opportunities would appeal to older, baby-boom generation visitors and is likely to increase backcountry use. In contrast, increases in the number of aircraft encounters and scenic over flights could further diminish the quality of the experience and reduce the number of backcountry overnight visitors. “Tranquility” was identified as an important primary factor motivating visitation to the Denali backcountry. The extent to which this attribute is lost, will impact backcountry use in the future. Two estimates of future growth are made—one projection is for relatively flat visitation (0.5% annual growth) and the other is for an annual average growth of 1.5 percent, as was seen in 2004.

Recreational Vehicle and Rental Car Visitors

There are approximately 816 spaces for camping in the Denali area between Cantwell and Anderson (Table 4-6, Figure 4.7); 25% of these are located within Park campgrounds and are usually full during the peak summer season. Campground spaces represent approximately 26% of all the overnight accommodations in the Denali area but those outside the Park have lower occupancy rates than the Park campgrounds or area hotels. Some of these spaces are occupied by car campers and backpackers, as well as recreational vehicles (RV). The relative proportion of campground to hotel room space is changing as a larger proportion of accommodations shift to rooms with recent and planned construction and conversions of employee housing to guest hotel rooms.

National Trends

According to a 2001 University of Michigan study commissioned by Recreation Vehicle Industry Association (RVIA), RV travel and sales reached record levels since September 11, 2001. RVs are owned by nearly 7 million U.S. households – a 7.8 percent increase during 1998-2001 and a 38 percent gain during 1980-2001. There are an estimated 30 million RV enthusiasts nationwide, including RV renters. Among all U.S. households, one in six intends to purchase an RV in the future. The market is expected to continue to grow because the 77 million baby boomers comprise the industry's largest customer base. As baby boomers enter their prime RV buying years, the number of RV-owning households is projected to rise to nearly 8 million in 2010—a gain of 15 percent from 2001-2010, outpacing the expected overall U.S. household growth of 10 percent.²⁷ Sales of motor homes rose by 19.1 percent in the first half of 2004 compared to 2003. RV shipments in 2004 returned to the record levels of the late 1970s when nearly 390,900 RVs were sold in 1978. In 1979, the industry took a major hit from gas price increases and rationing during the Iran hostage crisis.

A typical RV owner is 49 years old, married, with an annual household income of \$56,000—higher than the median for all households. RV owners are likely to own their homes and spend their disposable income on traveling—an average of 4,500 miles and 28-35 days annually, RVIA surveys show. More RVs are now owned by baby boomers than any other group. This is also the fastest growing segment of the RV market. Nearly 10 percent of those 55 and over own an RV, slightly exceeding the 8.9 percent ownership rates of 35-to-54 year olds.

²⁷ Affinity Group, Inc., *National Survey Indicates RVers and Campers Spend Billions of Dollars*, August 30, 2004.

Changes in the frequency and duration of vacations are believed to favor the RV industry. Americans are traveling shorter distances and on weekends with less planning, according to recent studies. One factor contributing to the accelerated pace of RV sales is the discovery that they are useful for activities other than long road trips. Despite higher fuel prices, three-fourths (75 percent) of RV owners say they expect to travel more and nearly a quarter (23 percent) will travel about the same this year as they did a year prior. The average RV is driven 7,000 miles a year and gets 10 miles to the gallon. As long as there are no long lines at the pump or gasoline rationing, the RV industry forecasts that higher fuel costs should have little impact on RV sales. The desire to take more "mini-vacations," enjoy nature, travel at their own pace, escape stress and spend quality time with family are cited as the top reasons to travel more by RV. When fuel prices go up, RV owners say they continue to travel, but sometimes adjust their plans or eliminate a leg of their trip.²⁸ However, this research was conducted in 2001, before gas prices were approaching \$2.50 a gallon. More recent indications are that prices are reaching levels that are starting to affect peoples' driving behavior.

Implications for Denali Recreational Vehicle and Rental Car Visitation

These statistics have mixed implications for travel to Alaska and Denali via RVs. Demographics favor increased visitation as baby boomers retire and have more time to make long haul trips to Alaska. However, impacts of increased travel by this cohort are not likely to be felt for another five years as the first of the baby boomers (now in their late 50s) reach retirement in their mid-60s. Retirement will provide the time for longer vacations that driving an RV to Alaska necessitates.

A significant portion of the surge in RV sales and ownership is attributable to both the 34-54 year old age group purchasing RVs and the increased ownership of RVs for "local" use. The majority of the younger set is unlikely to make driving vacations to Alaska in their recently purchased RVs in the next ten years as they are still working and raising children, which for most people does not allow the time required to drive to Alaska. The RVs purchased for "football tailgate parties and soccer tournament" travel are also unlikely to be used in the near term for highway travel to Alaska.

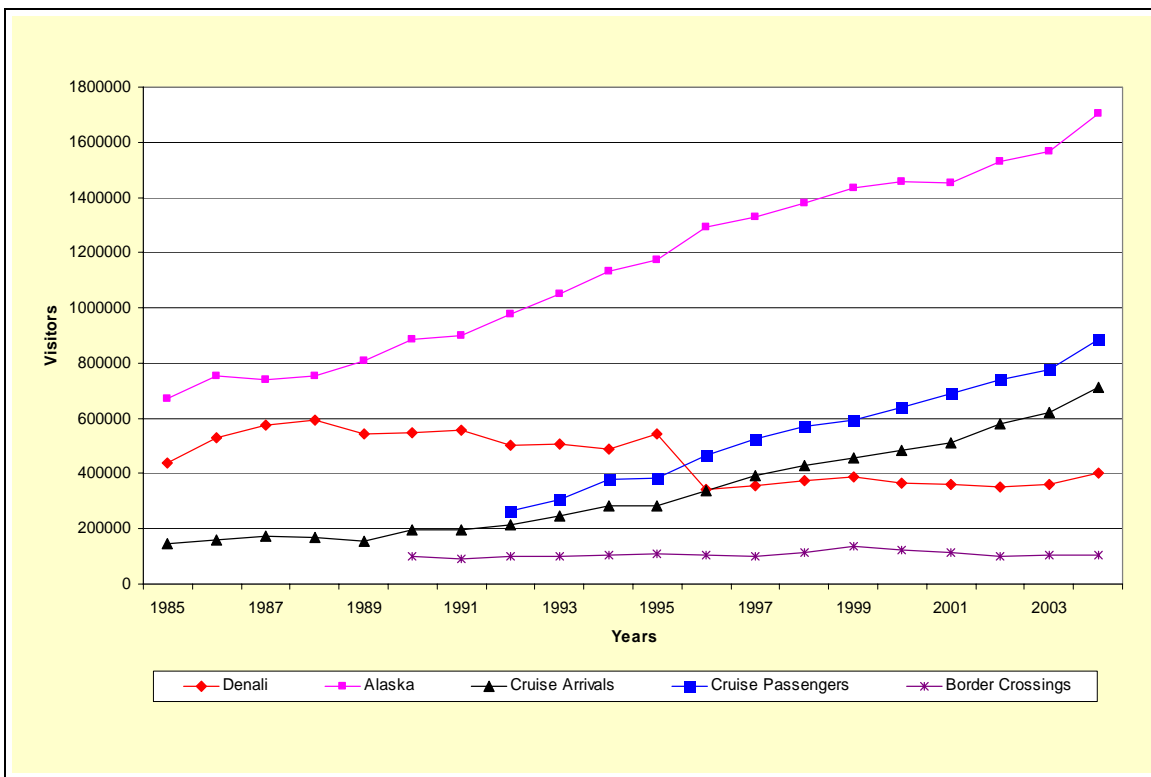
The assessment that higher gasoline prices have little impact on RV use, cited above, is based on the 7,000 annual miles of use category and is only marginally applicable to the issue of shifts in use patterns by "higher mileage" RV owners. However given the overall costs of an RV and the costs of use and maintenance, the price of gasoline is a relatively small portion of the costs. In addition, reactions to price changes are greater for sudden increases or price volatility; as prices rise and then reach stabilized higher levels, people adjust and largely return to previous behavior patterns. In addition, the time and cost commitment of a RV driving trip to Alaska is such that higher gasoline prices are unlikely to alone deter someone from traveling. However, if prices are volatile with sharp increases it could make people receptive to the many competing driving destinations in

²⁸ Christie, Les, *Wheels on fire: Who's afraid of soaring gas prices? Not the drivers of these super-luxurious motor homes*, CNN Money, October 14, 2004. money.cnn.com/2004/09/21/pf/mobilehomes/

the U.S. and Canada or encourage would-be RV visitors to travel to Alaska by other lower cost means.

Highway travel to Alaska in recent years has been flat with the exception of 1998 and 1999. These increases coincide with a marked increase in Alaska state tourism marketing funds directed at boosting highway visitation. This concerted effort has not been maintained and was followed by two years of declines in border crossings from Canada and then two flat years. Despite the 12% increase in Alaska visitation in 2004, highway border crossings only increased by 1% (Figure 4.14 and Table 4-13).

Figure 4.14. Alaska Total and Denali National Park & Preserve Visitation, Cruise Ship Arrivals and Passengers, and Alaska Border Crossings



The increase in RV campers and vehicle accessible campgrounds in Denali in 2004 reflect the expansion of the Riley Creek campground. According to local campground owners, this expansion drew campers from outside the Park to these new Park facilities. It is expected that RV and vehicle accessible tent spaces in Park campgrounds will continue to reach capacity before spaces outside the Park. This is attributable to both the greater draw of staying within the Park and the lower cost of the Park spaces, in part because visitors staying in Park campground are not subject to the Denali Borough bed tax. During the peak summer season, campground spaces within the Park are at capacity. Outside of the park, RV campground owners reported approximately 50% capacity for the 2004 season.

Table 4-13. Alaska-Canada Border Crossings 1990-2004

Alaska-Canada Border Crossings, 1990-2004															
Passengers by Month, May through September and Summer Season Totals															
Alcan	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*	2000	2001	2002	2003	2004
May	10,912	10,601	11,492	9,861	11,038	12,764	11,341	9,456	9,128	10,716	9,901	11,918	9,868	9,800	11,200
June	21,560	19,466	23,518	19,711	22,676	27,148	22,344	22,081	22,805	29,900	29,903	23,809	19,955	19,382	21,863
July	22,988	20,129	17,923	20,178	24,572	23,024	23,997	23,349	25,619	30,022	28,277	24,155	21,619	21,097	21,414
August	15,681	15,491	16,641	17,264	15,091	13,713	15,283	13,926	20,627	20634	19466	16,902	15,344	17,520	16,701
September	6,648	6,213	4,469	6,116	6,038	5,932	6,101	7,098	9,664	9,692	7,996	8,454	7,294	9,162	9,436
Total	77,789	71,900	74,043	73,130	79,415	82,581	79,066	75,910	87,843	91,516	87,899	85,238	74,080	76,961	80,614
Poker Creek	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*	2000	2001	2002	2003	2004
May	649	650	689	890	856	1,147	1,126	1,044	1,342	1,431	882	1,089	1,008	1,149	1,173
June	5,838	5,134	7,631	7,413	7,294	6,632	7,391	6,490	8,411	10,058	7,692	8,814	8,307	8,113	7,030
July	9,291	8,739	10,424	10,636	10,151	10,851	9,958	8,722	10,057	10,825	11,014	10,563	10,861	9,106	7,149
August	5,527	4,981	5,714	6,105	6,393	6,382	6,591	5,779	6,578	7558	6770	6,548	6,127	6,400	5,297
September	1,387	1,001	1,114	1,275	1,503	1,387	1,663	1,317	1,755	2,474	1,549	2,039	2,366	2,090	2,060
Total	22,692	20,505	25,572	26,319	26,197	26,399	26,729	23,352	28,143	32,534	22,276	29,053	28,669	26,858	22,709
Combined	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999*	2000	2001	2002	2003	2004
May	11,561	11,251	12,181	10,751	11,894	13,911	12,467	10,500	10,470	13,397	10,783	13,007	10,876	10,949	12,373
June	27,398	24,600	31,149	27,124	29,970	33,780	29,735	28,571	31,216	39,005	37,595	32,623	28,262	27,495	28,893
July	32,279	28,868	28,347	30,814	34,723	33,875	33,955	32,071	35,676	40,847	39,291	34,718	32,480	30,203	30,520
August	21,208	20,472	22,355	23,369	21,484	20,095	21,874	19,705	27,205	28,192	26,236	23,450	21,471	23,920	21,998
September	8,035	7,214	5,583	7,391	7,541	7,319	7,764	8,415	11,419	12,757	9,545	10,493	9,660	11,252	11,496
Total	100,481	92,405	99,615	99,449	105,612	108,980	105,795	99,262	115,986	136,728	123,450	114,291	102,749	103,819	105,280
% change		-9%	7%	0%	6%	3%	-3%	-7%	14%	15%	-11%	-8%	-11%	1%	1%
* Beginning in 1999, numbers include both passenger vehicles and bus passengers; prior to 1999, no bus passengers are included.															
Source: Tok Chamber of Commerce and Alaska Department of Community and Economic Development Tok Visitor Information Center from U.S. Border Station Reports.															

No hard data exist for fly-drive travelers to Alaska. Enterprise car rental reports bringing 3,000 new rental cars into Alaska. Avis reports that business was up in 2004 after a few sluggish years.²⁹ The car rental business in Alaska is quite competitive, rental information is proprietary, and companies are reluctant to provide rental volumes. There is no formal fly-drive program because today's internet technology allows most people to book cars and flights over the web for less than the cost of traditional fly-drive packages.

According to Alaska Visitor Statistics Program data, in 2001, approximately 27% of visitors who arrived via domestic airlines, rented a car or recreational vehicle and drove to the Denali area. This equates to approximately 157,000 traveling parties or 314,000 individual people. It is difficult to discern from survey responses whether people only drove through the area, spent the night in the Park area, entered the Park as far as the Savage River Bridge, or took buses into the Park. However, looking at data for individual respondents, a **minimum** of 40%, or approximately 125,600, of those who rented cars and drove to the Denali area also overnights in the Denali/Nenana Canyon area. An additional 20% at least stopped for the day or part of a day in the park entrance area, or approximately 62,800 visitors. A minimum of 25% of the 314,000 fly-drive people took a concession bus into the Park, or approximately 78,500 people. It is clear that flying into Alaska, renting a vehicle and driving to the Denali area is a huge draw for airline visitors as well as cruise passengers (approximately 22% of whom take a land tour to Denali).³⁰

Total in-state RV rentals over the season are estimated to be approximately 8,000 and RV rentals into Alaska from Canada at approximately 2,000. The vast majority of these RV renters visit Denali. The major exceptions are those renting RVs for the primary purpose of fishing on the Kenai Peninsula. This latter group is approximately 10% of the total. The RV rental market grew 5 percent in 2004 and is expected to continue to grow at 5 percent annually.³¹

Given this set of factors, three potential growth scenarios for future RV/campground visitation are:

- Low forecast—1% through 2010 and 2% annual after 2010;
- Medium estimate—2% through 2010 followed by a 5% annual increase after 2010; and
- High estimate—5% beginning in 2005 and continuing through the study period.

The increase in overnight stays will occur in campground facilities outside the Park located primarily in Healy, McKinley Village and Carlo Creek. Over time it is expected that campground space in Nenana Canyon will be converted to higher value hotel space.

Estimates for future visitation in RVs and camping are provided in Table 4-14 and Figures 4.15 and 4.16, below.

²⁹ Halcro, Andrew, Avis Rent a Car, personal communication, March 2005.

³⁰ Alaska Department of Community and Economic Development, Alaska Visitor Statistics Program data, 2001.

³¹ Odle, Gary, Senior Vice President, Marketing & Sales, Alaska Travel Adventures, personal communication, March 25, 2005. Based on the Alaska Visitor Statistics Program rental vehicle to Denali data, this estimate seems a bit low.

Table 4-14. Denali Area RV and Camping Overnight Stay Growth Estimates

Denali Area RV and Camping Overnight Stay Growth Estimates			
Year	Growth Scenarios		
	Low	Medium	High
2004	159,900	159,900	159,900
2005	161,499	163,847	166,090
2006	163,114	167,903	172,569
2007	164,745	172,071	179,349
2008	166,393	176,354	186,448
2009	168,057	180,756	193,879
2010	169,737	185,280	201,659
2011	172,625	192,607	209,805
2012	175,566	200,278	218,336
2013	178,560	208,310	227,271
2014	181,609	216,719	236,628
2015	184,714	225,526	246,430

Figure 4.15. Future RV and Campground Overnight Stay Estimate, Denali and Environs

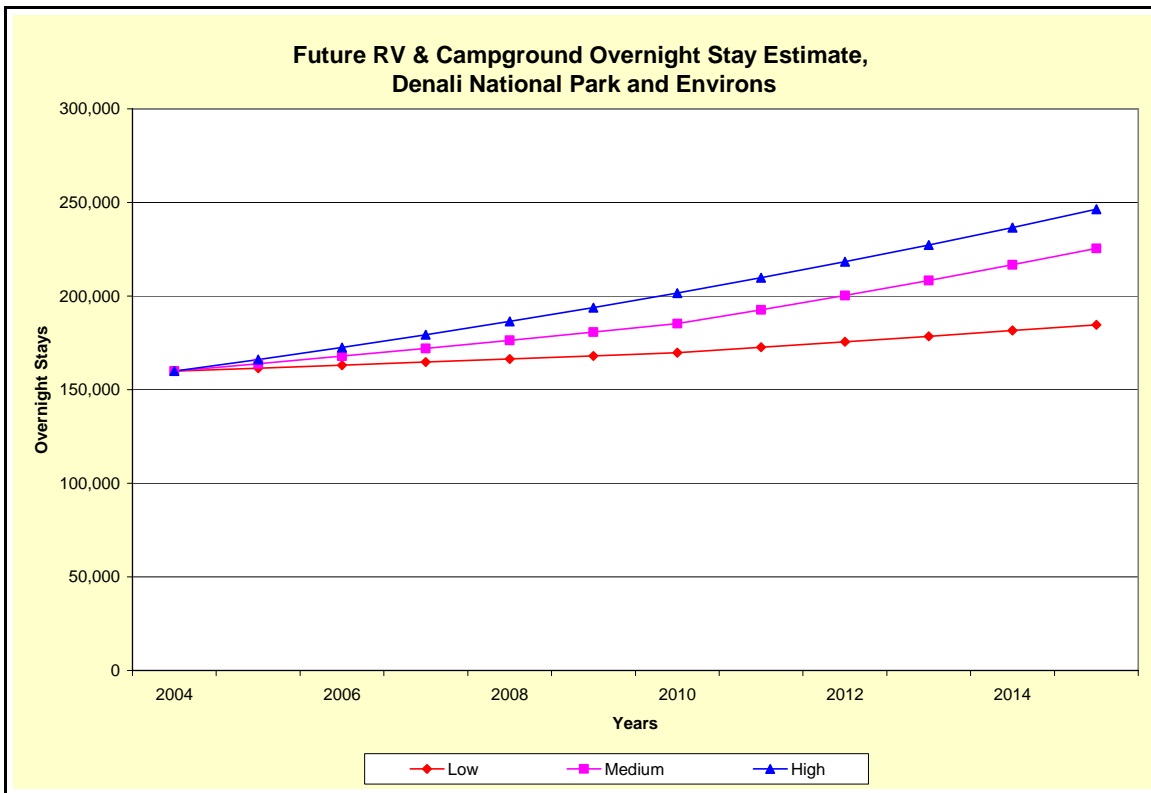
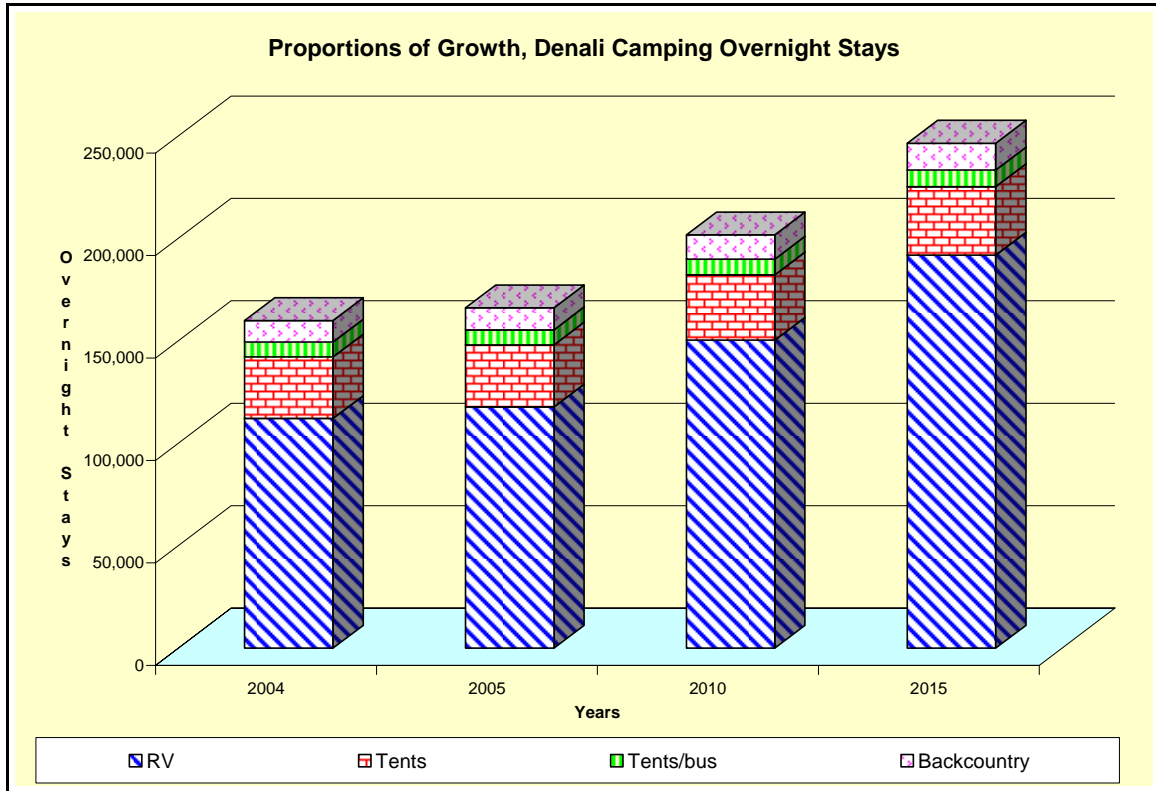


Figure 4.16. Proportions of Growth, Denali Camping Overnight Stays



Note: Assumes high growth scenarios for both backcountry and RV visitation.

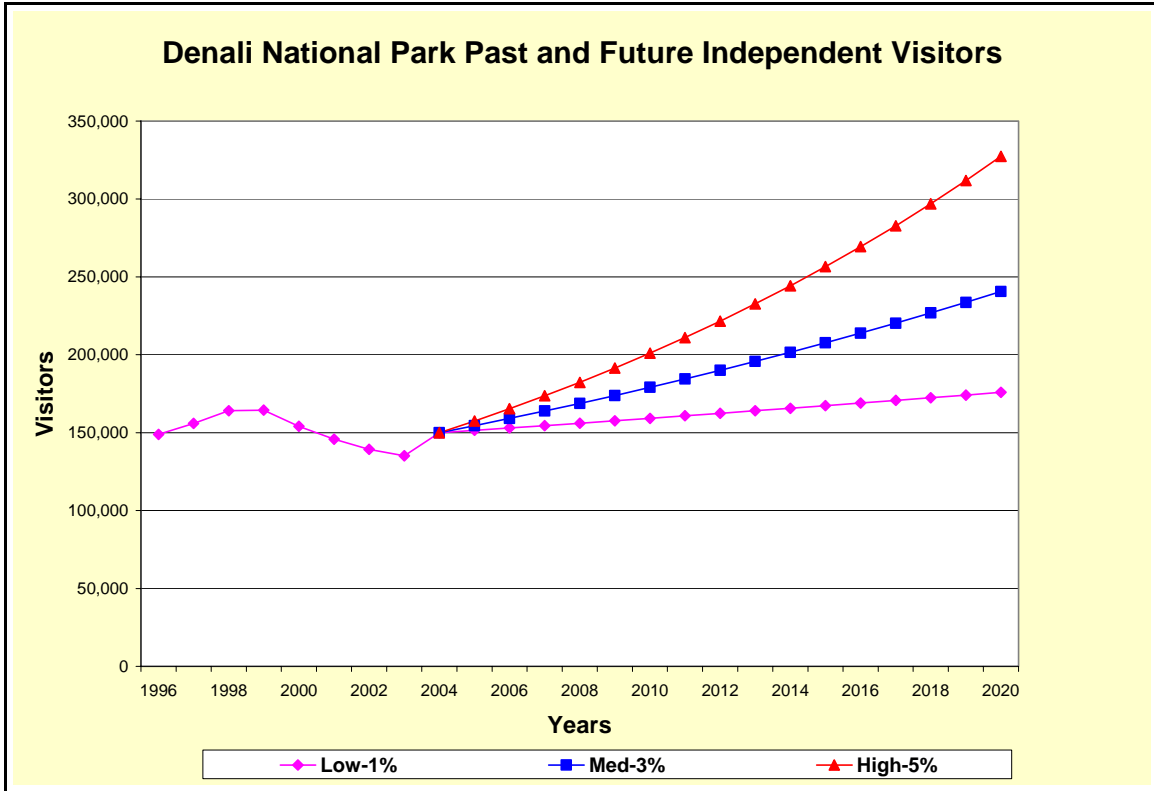
4.11 Summary All Sectors

Table 4-15 and Figures 4.17, 4.18, and 4.19 provide compilations of estimates for future total Denali visitation. Tour and VTS shuttle bus ridership information and rates of growth were used to estimate future visitation. The estimate of total annual visitors relies on the current Park formula for estimating visitor numbers.

Independent visitation is projected to continue to grow more slowly than cruise tour package visitation. The independent travel market is expected to continue to grow moderately as the U.S. economy improves. However, independent visitation to Alaska has generally suffered in recent years and there is no coordinated effort underway to reverse this trend. For a number of years the State of Alaska tourism marketing program has been poorly funded relative to other states and Canada. In addition, the program's emphasis is on marketing toward the tour segment rather than younger travelers and independent travelers. If anything, this tendency has increased in recent years and is reflected in the Denali visitation and VTS ridership numbers. However, in the ten year time horizon RV visitation is likely to increase as more baby boomers retire and have time for long haul driving to Alaska. Within Alaska, RV rentals grew by 5 percent in 2004 and this rate of growth is expected to continue. The new Backcountry Management Plan implementation is expected to increase backcountry use and educational programs.

The Kantishna properties are increasing day programs that cater to independent travelers and travelers with small tour companies. As a result of these improvements collectively, three ranges of growth are projected for all independent visitor sectors—from a low of 1 percent, middle range three percent, and a high growth estimate of five percent (Figure 4.17).

Figure 4.17. Denali National Park Past and Future Independent Visitors



The tour visitor forecast shows stronger growth than independent visitor growth. This reflects the continued robust market for cruise and cruise land tours to Alaska. This market segment has shown fairly consistent growth since the mid-90s, companies invest a tremendous amount in marketing, and U.S. demographics favored continued growth. The average annual growth in cruise passenger visitation to Alaska since the mid-1990s is approximately nine percent. Given road capacity constraints, it is unlikely that cruise land tour visitation to the Nenana Canyon entrance to Denali can grow at that rate. The 2%, 4.5%, and 7% tour visitor annual growth projections (Figure 4.18) are based on the assumption that as the Park road nears capacity, the visitor industry works diligently with the NPS to facilitate development of other venues to visit Denali National Park, such as the South Denali development near Talkeetna, and strives to shift some of their land tours to less visited parks in Alaska. The analysis also assumes that the State of Alaska tourism marketing program puts more effort into marketing to independent travelers, Denali National Park continues to implement user friendly reservation and management practices directed toward independent travelers, and aging baby boomers use their newfound retirement time to visit Alaska. If marketing continues to lag for this visitor segment, the low 1% growth category is the likely scenario for independent travelers.

Figure 4.18. Past and Future Denali Tour Visitors

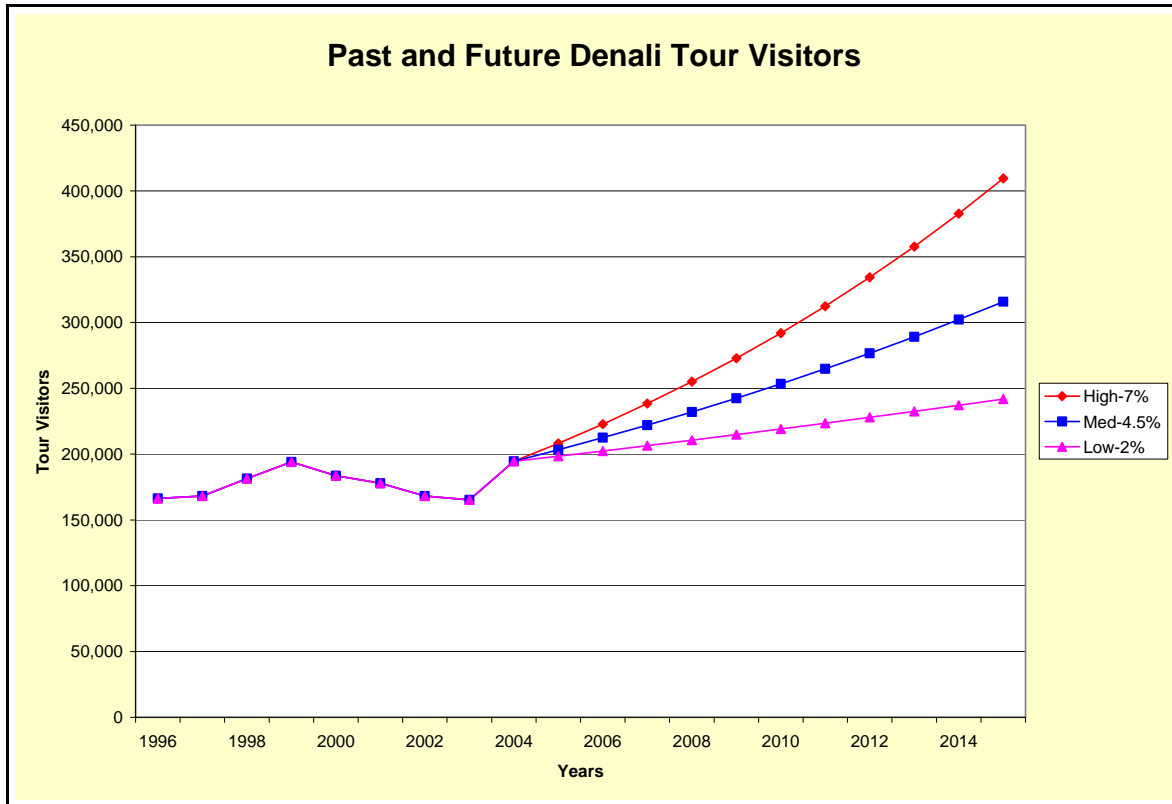
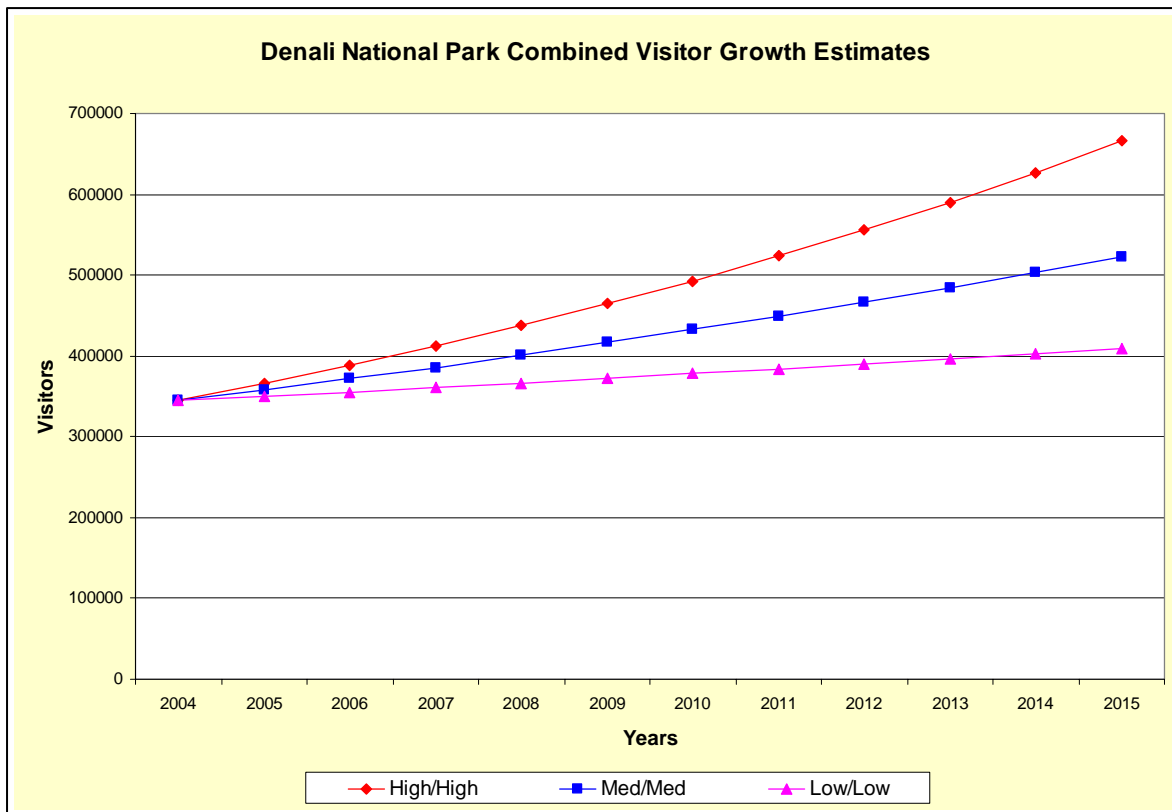


Table 4-15 and Figure 4.19 show the combined tour and independent future Denali National Park visitation. The area bound by the high/high and low/low lines in Figure 4.19 should be viewed as a probability curve that demarks the most likely level of future visitors coming to the Nenana Canyon entrance to Denali. In any given year, the numbers will fluctuate and the trend lines merely depict an annual average. Given the significant uncertainty with regards to the future state of the national economy, world political unrest, Alaska state and federal budgets to support tourism marketing and park operations, Alaska resident satisfaction with growing cruise visitors in major ports, and competition from other cruise destinations and markets, to name a few factors that will impact future visitor numbers, it is difficult at best to predict future Denali visitation. These estimates are a tool to use on an ongoing basis to facilitate the design of a community transportation system and to assist Park managers in park planning. Accordingly, they should be reviewed often by managers as events unfold in future years. The estimates are also handicapped by the lack of an on-going reliable system used to count total Denali National Park visitors, especially those who do not take a bus into the Park. Improvements in visitor counts would make future estimates considerably more reliable.

Table 4-15. Combined Denali National Park and Preserve Visitor Growth Estimates

Denali National Park Tour and Independent Visitor Growth Estimates									
Year	Independent Visitors			Denali Cruise Tour Visitors			Total Independent and Tour		
	high-5%	Med-3%	Low-1%	High-7%	Med-5%	Low-2%	High/High	Med/Med	Low/Low
2004	150,000	150,000	150,000	194,569	194,569	194,569	344,569	344,569	344,569
2005	157,500	154,500	151,500	208,189	204,298	198,461	365,689	358,798	349,961
2006	165,375	159,135	153,105	222,762	214,513	202,430	388,137	373,648	355,445
2007	173,644	163,909	154,545	238,356	225,238	206,479	412,000	389,147	361,024
2008	182,326	168,826	156,091	255,041	236,500	210,608	437,367	405,327	366,699
2009	191,442	173,891	157,652	272,894	248,325	214,820	464,336	422,216	372,472
2010	201,014	179,108	159,228	291,996	260,741	219,117	493,010	439,849	378,345
2011	211,065	184,481	160,820	312,436	273,779	223,499	523,501	458,260	384,319
2012	221,618	190,016	162,429	334,306	287,468	227,969	555,925	477,483	390,397
2013	232,699	195,716	164,053	357,708	301,841	232,528	590,407	497,557	396,581
2014	244,334	201,587	165,693	382,747	316,933	237,179	627,081	518,520	402,872
2015	256,551	207,635	167,350	409,540	332,780	241,922	666,091	540,415	409,273

Figure 4.19. Combined Denali National Park and Preserve Visitor Growth Estimates



5.0 DENALI BOROUGH VISITOR RELATED EMPLOYMENT

The objective of developing employment estimates for the Denali Borough related to Denali National Park and Preserve is to estimate potential seasonal employee travel demand. The vast majority of the seasonal employees in Denali National Park and surrounding businesses that serve park visitors are neither residents of Alaska nor of the local Denali area. It is estimated that at least 75 percent are non-residents/non-locals who arrive without their own personal vehicle for the visitor season (May through September). Many of those working at the major hotels in the “Nenana Canyon” area are housed on hotel property in housing provided by the hotel, but others must commute from housing in neighboring communities to work their shifts. These shifts run around the clock in area hotels and restaurants.

5.1 Summary

An annual average estimate of the five-month visitor season employment was developed. This annual average was then compared with annual Denali National Park and Preserve visitation and bus passenger estimates to determine the relationship between Denali-area visitation and employment. The primary purpose of development of this estimate is to assist in estimating the potential number of employees who could use the community transportation system. The growth in employment during the 1997-2004 period of analysis was greater than expected. As visitation grows and the services and amenities offered to visitors increase, employment per visitor is likely to grow. In addition, longer visitor stays – more than one day and one night and a bus ride into the Park—will also drive up the number of employees per visitor. Even so, for the period of analysis, the rate of growth in the number of employees increased at a rate significantly greater than the rate of increase in visitation.

As the visitor industry evolves and diversifies and continues to add more amenities and activities for visitors, employment is likely to continue to increase. This will be especially important as the Denali park road reaches capacity and more opportunities are offered for visitors who wait for or who cannot get a bus seat into the Park. In recent years, the majority of cruise land tour packages have shifted to two night stays in the Denali National Park area. The shift is likely to support a continued increase in the ratio of employees to visitors because the majority of Denali cruise tour visitors who previously spent only one day in the area—which was spent traveling into the Park—will have an additional day for frontcountry activities. Over the course of the next five years the rate of employee growth should equal or exceed the rate of growth in visitation. However, the increase in the employee to visitor ratio will not, and cannot, continue indefinitely. Locations of employee housing will also become more widespread as employee housing increasingly is moved from Nenana Canyon to other areas, including in particular the Healy area.

5.2 Methods

Estimating employment related to Denali National Park and Preserve was done using employment and earnings data from the Alaska Department of Labor and Workforce Development (DLWFD) for the years 1997 through 2004. These years were chosen because they correspond with the years for which Denali visitor data are believed to be most reliable. The National Park Service believed the previous method used to calculate the number of park visitors resulted in overestimates; the method was changed in 1996. As a result, visitor numbers prior to 1996 are not comparable to estimates for 1996 and subsequent years. The reason for using years with the most reliable visitor and employment data is to analyze the relationship between visitation and employment. This relationship can then be used to forecast employment as a function of expectations of future visitation, assuming this relationship remains consistent in the future.³²

To develop employment estimates, monthly employment and earnings data for each year for the Denali Borough were analyzed to determine which sectors or subsectors are attributable to Denali National Park visitation. First, public and private employment directly linked to either the Usibelli Coal Mine or the Clear Air Force base, the two other major sources of economic activity in the borough, were eliminated.

Beginning in 2000, DLWFD estimates for the Department of Defense jobs were subtracted from the federal government sector. In addition, employment sectors that are primarily services to local residents, such as education, that operate at relatively constant levels throughout the year or decline during the summer months, were also eliminated from the analysis. Similarly, sectors such as utilities were eliminated despite the fact that they do in part serve visitors. Visitors often make these sectors more cost effective and improve operating margins, but these services would occur without visitors, though the operations, employment levels and earnings might be lower. In the Denali Borough the number of jobs in the utility sector remains relatively constant throughout the year and there appear to be no increases in jobs attributable to summer visitors.

In contrast, some sectors are clearly visitor related, having employment only during the five-month Denali visitor season. Employment numbers for these sectors and subsectors were retained in their entirety. More challenging were sectors that serve both residents year round and visitors during the visitor season, such as retail outlets and gas and automotive service stations. For these, the average monthly base non-visitor season employment level was subtracted from the peak months of employment during the visitor season. This was done to capture the portion of employment in the sector attributable to the visitor industry. It is also assumed that the employees who commute to these jobs year round would have their own transportation and not necessarily be part of the

³² This is a crude method for analyzing employment and estimating future employment. The more accurate and usual method is use of an input-output model that better distinguishes between the various sectors of the economy, especially direct and indirect employment. For example, direct visitor related employment is in the scenic transportation and accommodation sectors, while indirect includes general retail and gasoline stations. The rate at which direct and indirect sectors change in response to changes in Park visitation is likely to be different. Simply analyzing total employment and visitation is likely to result in a reasonable range of estimates for bus planning purposes, but is unlikely to provide accurate future employment forecasts.

employee market for community transportation services. However, if sufficiently convenient and user friendly, it is possible that year-round residents in these jobs may choose to utilize the community transportation system in response to parking shortages in the Canyon and Park areas, and to reduce their own transportation costs.³³

Most challenging were sectors related to leisure and hospitality that primarily serve visitors but also provide year round services such as hotels and accommodations, various transportation services, and eating establishments. Most of these were treated similarly to other sectors that serve both residents and visitors, in that the “base” off-season employment levels were subtracted from the summer visitation monthly employment counts. The exception to this, however, was the hotels and accommodations sector. For this, the peak summer months’ employment counts were retained as this sector is believed to primarily be serving Denali National Park and Preserve visitors. In addition, in contrast to sectors such as utilities, hotels and accommodations would most likely not exist, or would operate at a much diminished level without the draw of the Park. Employment in the hotels and accommodations sector increases more than ten-fold during the summer months and accounts for most of the employment in that sector.

From a community transportation standpoint, hotel and accommodation employees represent a potential market for a bus system, because most do not have their own transportation and most of their places of employment have limited parking. From a planning perspective it makes sense to include all the employees in this potential community market for transportation rather than reducing the total by the low level of employment that occurs in the off-season. Therefore, all employment in this employment subsector during the 5-month summer period is attributed to Park visitation.

The results of calculations estimating monthly summer season visitor employment for each year are shown in Appendix E. Table 5-1 provides an annual summary of total visitor-related employment. Table 5-2 shows the visitor industry-related companies with the highest levels of employment for the Denali Borough.³⁴

5.3 Locations of Employment and Employee Housing

The number of visitors and employees serving the visitor industry in the Denali Borough far exceeds the population of the borough; 2003 Denali Borough population is estimated at 1,914 persons³⁵, compared to approximately 360,000 visitors to Denali annually and 3,400 employees at the summer peak. Table 5-3 shows the population change of the Denali Borough from 1990 to 2003. The total population growth from 1990 to 2003 was 150 people; the average annual population growth from 1990 to 2000 was 0.7%, or less than one percent per year during a period of significant visitor growth. This illustrates that many of the employees serving the visitor industry come from outside the local area for the summer visitor season. To support this large influx of employees, housing is

³³ Year-round employment in the leisure and hospitality and transportation sectors is provided in Appendix E.

³⁴ Caution is advised with these employment figures as there may be inconsistencies in reporting methods among large statewide businesses that have multiple locations and employees who may work in multiple locations.

³⁵ 2003 DLWFD and U.S. Census data

provided by most of the larger, and some of the smaller hotel properties, and other larger employers. Currently, this housing is typically offered on-site.

Table 5-1. Denali Borough Visitor Related Employment & Earnings, 1997-2004

Annual Summary: Denali Borough Visitor Related Employment & Earnings, 1997-2004							
	MAY	JUN	JUL	AUG	SEP	Average Summer Month Emp	Annual Average Monthly Earnings based on 12 months
YEAR	EMP	EMP	EMP	EMP	EMP		
2004	1,477	2,863	3,266	3,262	2,906	2,755	\$2,024
2003	2,163	2,930	3,285	3,351	3,079	2,962	\$2,711
2002	1,938	2,707	2,899	2,911	2,636	2,618	\$2,519
2001	1,717	2,486	2,573	2,697	2,464	2,387	\$2,656
2000	1,464	2,020	2,333	2,267	1,845	1,986	\$2,834
1999	2,182	3,039	3,021	2,975	2,737	2,791	\$2,585
1998	1,528	2,006	2,053	2,013	1,668	1,854	\$2,660
1997	1,413	1,861	1,923	1,923	1,605	1,745	\$2,432
Source: Alaska Department of Labor and Workforce Development, Employment and Earnings data.							
Notes: Indirect sectors adjusted to net out year round base employment levels. Direct services such as hotel and lodging places are not adjusted.							
Federal government adjusted for DOD.							

Table 5-2. Top Visitor Industry Related Employers, Denali Borough 2003

Top Visitor Industry Related Employers Denali Borough 2003													
Company Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Average Monthly Emp
Aramark Sports (Doyon/Aramark)	72	75	81	225	484	739	840	931	942	311	104	90	408
Royal Highway Tours/Princess Tours	64	97	154	230	551	613	632	620	534	93	69	60	310
DOI/National Park Service	86	83	102	113	172	212	216	211	226	94	91	99	142
Alaska Hotel Properties (Princess)	8	10	12	18	131	146	272	290	242	28	35	25	101
Grande Denali Lodge	0	0	1	1	92	157	154	140	119	105	3	2	65
Denali Bluffs Hotel	4	4	4	5	55	85	92	90	78	59	5	4	40
Denali NP Wilderness Center	12	12	11	13	42	50	46	46	38	13	42	50	31
Doyon Tourism Services LLC	0	0	0	0	15	66	84	82	71	0	0	0	27
McKinley Denali Salmon Bake	0	0	0	0	37	41	45	47	35	35	35	35	26
Totem Inn	13	14	15	16	23	27	23	34	30	17	13	15	20
Denali Cabins	0	0	0	0	0	49	48	49	40	0	0	0	16
Black Diamond Resort	0	0	1	3	22	31	39	34	25	24	1	0	15
Alaska Natural History Assoc.	2	3	3	5	18	20	16	15	10	2	2	4	10
Denali Raft Adventures	1	2	2	1	1	1	38	37	40	0	0	0	10
Denali Outdoor Center	3	2	0	1	14	23	24	24	21	0	0	0	9
Denali Foundation	6	6	5	6	1	15	16	14	14	8	6	4	8
Grizzly Bear Campground	0	0	0	4	4	5	21	24	21	10	3	0	8
Motel Nord Haven	4	3	3	5	8	10	11	11	9	7	7	3	7
Era Aviation Inc	1	1	1	1	10	15	16	15	14	1	1	1	6
Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section, 2004 data.													

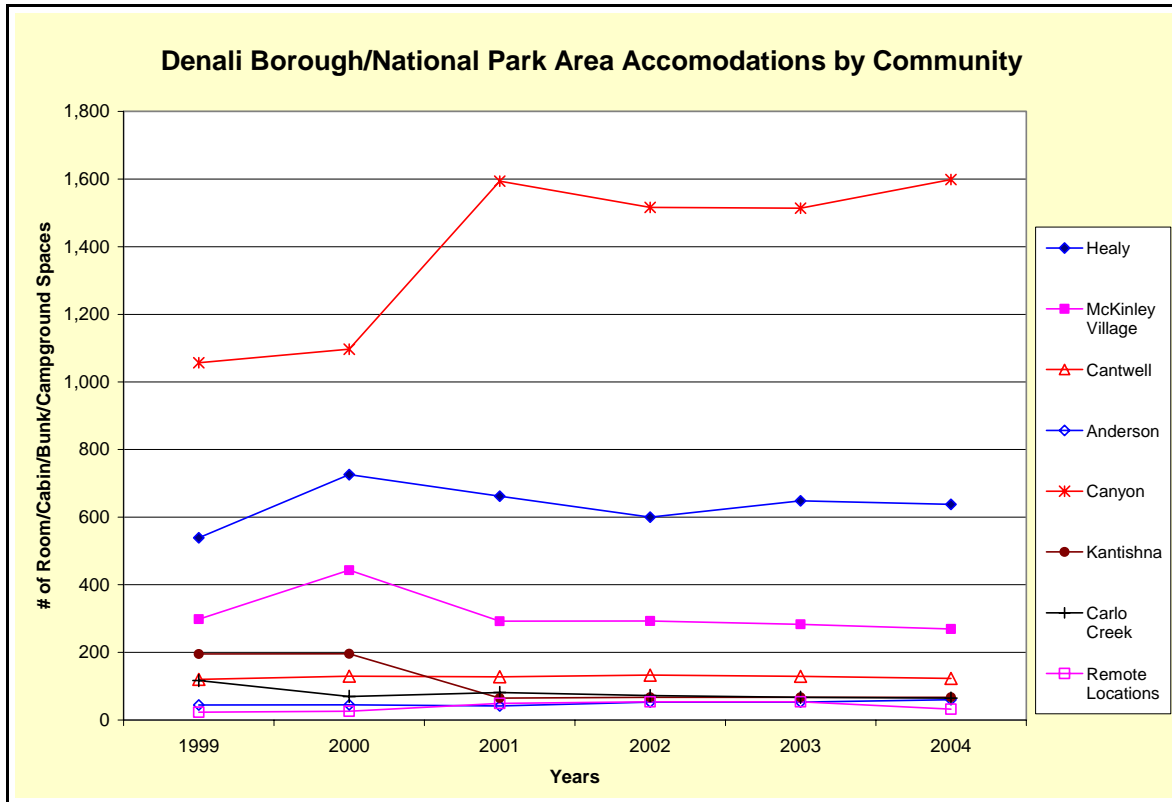
Table 5-3. Denali Borough Population, 1990-2003

Denali Borough Population, 1990-2003	
Year	Population
2003	1,914
2002	1,884
2001	1,908
2000	1,893
1999	1,871
1998	1,868
1997	1,895
1996	1,906
1995	1,836
1994	1,833
1993	1,793
1992	1,766
1991	1,781
1990	1,764
Change	
1990-2000	129
Average annual	
rate change	0.7
Source: Alaska Department of Labor and Workforce Development, 2004.	

As a result, the location of most employee housing is also the location of accommodations offered in the Denali National Park area. Figure 5.1 shows the number of visitor accommodations of all types (though predominantly hotel rooms) offered each year since 1999 for the major areas where accommodations are located. Table 5-4 shows the number of specific types of accommodation by sub area. Figure 5.2 shows the relative proportion of accommodations by location for 2004—66% of accommodations are located within the corridor from Nenana Canyon area (51%) to McKinley Village (9%) six miles south of the Park entrance. Another 21% are located in Healy, approximately 11 miles north of the Park entrance. Healy has a number of bed and breakfast accommodations plus small hotels and campgrounds for tents and recreational vehicles (RV). Carlo Creek, approximately 14 miles south of the Park entrance, has four properties that contain approximately 9% of the area’s guest accommodations; that proportion may grow in the future with planned expansions. Table 5-5 shows the number of rooms and employees for major properties in the Denali area.

In Figure 5.1, the increase in accommodations available in 2000 and 2001 is in response to the surge in visitors in 1999; Denali visitation declined after 1999 and only in 2004 surpassed 1999 levels. In 2001, the new Grande Denali hotel opened in Nenana Canyon and the Denali Park Hotel closed, which account for much of the 2001 “Canyon” spike as well as the decline in rooms inside the park entrance.

Figure 5.1. Denali Borough/Denali National Park Area Accommodations by Community



Additional guest rooms are being planned and constructed in the next three to five years and more employees are being moved from the Canyon area including:³⁶

- Princess is adding between 200 and 300 rooms to its present facility in Nenana Canyon.
- Holland America contracted for construction of 500 rooms over the next three to five years.
- Cook Inlet Region, Inc. purchased property in McKinley Village and is designing a 300 room facility to be built in the next five years.
- There is an 18 room unit under construction at Carlo Creek and a larger year-round lodge in the planning stages.
- Princess purchased the North Star Inn and began housing a portion of their employees there starting in summer 2005.
- Aramark purchased the Chevron Station and campground in Healy and began operating the Otto Lake Campground starting in summer 2005. They plan to use these facilities for their employees.

³⁶ Lynn, Elwood, Assistant Superintendent – Operations Denali National Park and Preserve, personal communication, March 28, 2005.

These planned new accommodations total approximately 1,100 additional rooms for construction in the next five years—over 50% increase and a further concentration of guest rooms in the Canyon and employee movement to Healy and other areas. Additional movement of employees and conversion of employee housing to guest rooms could easily increase this number to 1,500 additional guest rooms, or an almost 80% room increase. However, a significant portion of these new rooms will be needed to support the trend in longer stays by cruise land tour guests. It is estimated that over 60% of cruise land guests will spend two or more nights in the Denali area, which means that the major hotels in the Canyon would have to increase the number of rooms by a similar percentage to accommodate longer stays for the same number of guests.

Table 5-4. 2005 Denali Borough Accommodation Totals

	Room	Cabin	RV	Bunks	Totals
Healy	198	41	137	0	376
McKinley Village	213	117	81	0	411
Cantwell	85	7	81	8	181
Anderson	12	0	48	0	60
Canyon	1,225	63	149	0	1,437
Kantishna/Pk Campgrounds	20	56	0	0	76
Carlo Creek	3	63	24	25	115
Remote Locations	0	35	0	0	35
TOTAL	1,756	382	520	33	2,691
Units are the number of rooms, cabins, RV, or bunk spaces available.					
Source: Denali Borough mayor's office; National Park Service, Denali National Park.					

It is estimated that approximately 2,000 employees work in the Nenana Canyon during the summer season, May through September. The peak month of employment is generally July. The major concentrations of accommodation and restaurant employees housed on site are shown in Table 5-5.

Given the scarcity of land and the premium on accommodations adjacent to the Park entrance, over time more employee housing will be pushed out of the Canyon area. However, according to property managers or owners, four of the five major hotel properties in the Canyon and McKinley Village area currently have sufficient land to expand visitor rooms while still providing employee housing on site for the next 10 years or so. So it is assumed that only one property, the Denali Princess Lodge, which currently houses 100 of its 374 employees in Healy, will continue to shift employee housing out of the Canyon and most likely to Healy. The recent purchase of the North Star Hotel in Healy for more employee housing confirms this assumption. To get these employees to work in the Canyon, Princess currently runs a bus hourly from 4:00 a.m. to 2:00 a.m. daily.

Table 5-5. Denali Area Rooms and Employees

Denali Area Rooms and Employees			
Area and Principal Accommodations (partial list)	Guest Rooms	Employees on-site	Employees off-site
Healy*	239	-	60
McKinley Village			
McKinley Village Lodge	150	140	0
Cantwell	85	-	-
Anderson Canyon	12	-	-
McKinley Chalet	345	387	0
Princess	440	274	100
Denali Bluffs**	212	180	0
Grande Denali	160	180	0
Park area***	20	284	50
Carlo Creek			
McKinley Creek Side Cabins**	100	35	15
Carlo Creek Lodge	50	15	-
Perch	44	20	-
International hostel	35	10	-
Total	1,892	1,525	225
* Rough estimate based on the number of employees/room in Healy accommodations.			
** Includes rooms and employees expected to be added prior to 2007.			
*** Park area includes Aramark employees housed in the Park.			
Source: Property managers (2004) and Denali Borough accommodation records (2005).			

However, because employees are housed at their work locations does not mean that they would not use a community transportation system. During their off shift hours, many of these employees are “stranded” at their place of employment. Many would like to travel locally within the Park corridor area including to Healy for internet access at the library, the clinic, or retail outlets. Some travel as far as the Carlo Creek area, an up and coming gathering spot for young employees.

If a safe, convenient, and relatively low cost community transportation system were available it is highly likely that a large percentage of the approximately 3,400 peak season employees in the area would use the system. It is estimated that at least three quarters—approximately 2,550—of these employees do not have personal vehicles for transportation. Assuming the system will not charge a fare, the rate of use will likely be fairly high. In addition, if a reliable transportation system were available, more employers may choose to move some of their employee housing out of the Canyon area.

5.4 Employment Forecast

An annual average estimate of the five-month visitor season employment was developed based on monthly summer season visitor employment from 1997 to 2004. These in turn were plotted against annual Denali National Park and Preserve visitation and bus passenger estimates to determine the relationship between Park visitation and employment. This was done to assist in developing a forecast of the potential employee market for the community transportation system. The results of this analysis were

somewhat unexpected. As visitation grows and the services and amenities offered to visitors increase, employment per visitor is likely to grow. In addition, longer visitor stays—more than one day and one night and a bus ride into the Park—will also tend to cause employment per visitor to increase. However, for the period of analysis, growth in the number of employees increased at a rate significantly greater than the rate of increase in NPS estimates of Park visitation.

From 1997 to 2003, the average annual summer season visitor related employment increased from 1,745 to 2,962 while Park visitation grew from approximately 354,000 to 360,000, with a peak of 387,000 visitors in 1999. Summer season annual employment in 1999 also spiked to 2,790, supporting the hypothesis that employment is indeed influenced by Park visitation (Figure 5.2, Table 5-6). The ratio of visitors to employees declined by almost half from 203 visitors for each employee in 1997 to 122 visitors to each employee in 2003. The decline in the ratio was fairly steady throughout the period suggesting a fundamental shift.³⁷

Given the competitive nature of the visitor industry, especially during this time period, the additional employees would most likely be linked to additional services offered to and paid for by visitors. In recent years, some cruise land tour packages have moved to two night stays in Denali but that would only be reflected in the 2003 data and does not account for the steady shift seen during the seven year period examined. This shift became more widespread in 2005 and is likely to support a continued increase in the number of employees per visitor. However, this increase will not continue indefinitely. As the visitor industry evolves and diversifies and continues to add more amenities and activities for visitors, employment will grow. This will be especially important as the Denali park road reaches capacity and more opportunities need to be offered for visitors who have to wait for or who can not get a bus seat into the Park. Over the course of the next five years, however, the rate of employee growth should equal or exceed the rate of growth in visitation.

The core sectors that account for most of the private summer season employment related to Denali National Park are the leisure and hospitality and transportation sectors. Monthly employment information for each of these sectors is shown in Tables 5-7 and 5-8 below. More detailed information including subsector information is presented in Appendix E.

The decline in average summer employment from 2003 to 2004 is slightly misleading (Table 5-6), because employment in the core visitor sectors of leisure and hospitality and transportation increased (Tables 5-7 and 5-8). Peak months employment in 2004 was higher than 2003; the 2004 average was reduced primarily because employment in May 2004 was considerably lower than May 2003. This may well reflect difficulties finding

³⁷ According to Neal Fried, labor economist, DLWFD, there are also potential issues with the employment data. Reporting issues include reporting of employment and earnings for businesses that have multiple places of employment across Alaska, may move employees among properties, or have employees with multiple work sites and/or statewide responsibilities. In areas with relatively few employees and simple economies such as the Denali Borough, variations in how large employers handle these situations can have a significant impact on DLWFD reported employment figures. While caution is warranted, the DLWFD employment numbers for Princess Tours, one of the largest employers in the area, closely match the numbers quoted by their hotel managers.

employees rather than less need as the visitor industry often experiences labor shortages in Alaska.

Table 5-6. Comparison of Denali Borough Visitor Sectors Employment and Denali National Park and Preserve Visitation

Comparison: Denali Borough Visitor Sectors Employment and Denali National Park Visitation								
	1997	1998	1999	2000	2001	2002	2003	2004
Visitor Sector Average Summer Employment	1,745	1,745	2,791	1,986	2,387	2,618	2,962	2,755
Denali National Park Visitation (100s of visitors)	3,543	3,725	3,869	3,640	3,602	3,536	3,602	4,042
Bus Ridership (100s of riders)	2,741	2,929	3,045	2,874	2,744	2,617	2,557	2,874
Leisure and Hospitality sector average summer	1,015	1,078	1,980	1,166	1,557	1,677	1,646	1,877
Transportation sector average summer	463	515	544	588	592	638	644	606
Leisure and Hospitality and Transportation sectors	1,478	1,593	2,524	1,753	2,150	2,316	2,291	2,483
Ratio-Visitors to Direct Visitor Industry Employees	240	234	153	208	168	153	157	163
Ratio-Visitors to Employees	203	213	139	183	151	135	122	147
Ratio-Ridership to Employees	157	168	109	145	115	100	86	104
Regression line slope:relationship of employees to visitors	0.94							
Sources: Alaska Department of Labor and Work Force Development, Employment and Earnings Data, 1997-2004;								
Denali National Park and Preserve, Visitation Statistics, 1997-2004.								
Notes: Employment numbers are annual summer 5-month averages of direct and estimated indirect visitor related employment for the Denali Borough.								

Figure 5.2. Comparison of Denali Borough Summer Visitor Sector Employees to Denali National Park and Preserve Visitation and Bus Ridership

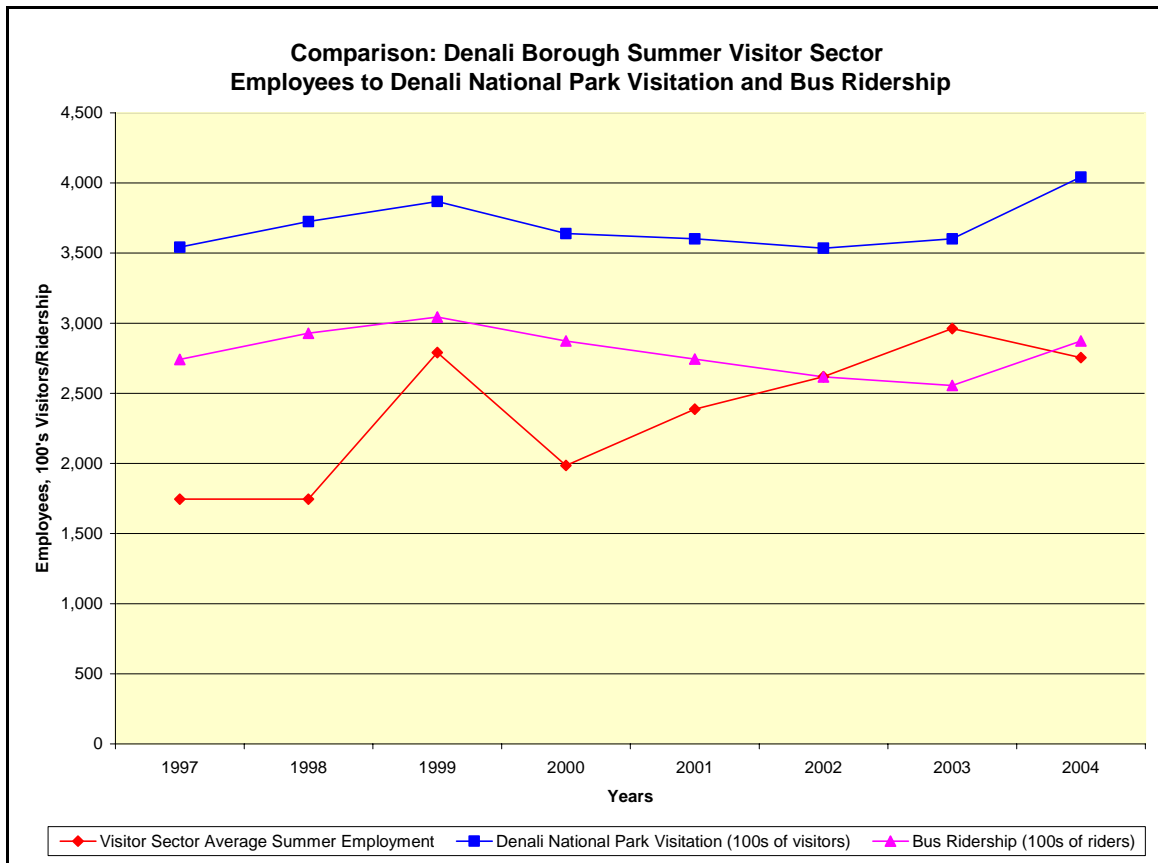


Table 5-7. Denali Borough Hospitality and Leisure Sector Employment, 1997-2004

Denali Borough Hospitality and Leisure Sector Employment 1997-2004												
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2004	150	152	154	236	714	1,915	2,276	2,314	2,098	N.A.	N.A.	N.A.
2003	125	133	146	318	977	1,551	1,885	1,987	1,831	626	253	232
2002	214	231	245	440	1,208	1,687	1,864	1,889	1,738	669	365	370
2001	119	122	140	217	1,048	1,594	1,693	1,791	1,661	639	381	379
2000	183	192	203	347	769	1,127	1,438	1,386	1,108	279	242	205
1999	381	385	407	590	1,475	2,166	2,157	2,105	1,996	772	675	645
1998	214	207	257	325	869	1,174	1,193	1,170	983	679	296	269
1997	223	236	296	327	796	1,084	1,124	1,116	954	640	267	270
Source: Alaska Department of Labor and Workforce Development, Employment and Earnings data.												
Notes: Indirect sectors adjusted to net out year round base employment levels. Direct services such as hotel and lodging places are not adjusted. N.A. = Not available.												

Table 5-8. Denali Borough Transportation Sector Employment, 1997-2004

Denali Borough Transportation Sector Employment 1997-2004												
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2004	73	89	182	330	605	698	621	592	514	---	---	---
2003	75	108	167	244	583	665	697	686	591	112	85	78
2002	67	113	165	220	510	707	703	695	577	638	76	75
2001	63	116	169	241	474	631	629	665	562	590	89	78
2000	64	105	173	237	494	640	638	628	538	561	73	62
1999	57	130	167	221	456	589	590	587	497	111	67	61
1998	64	127	163	208	418	550	584	561	462	492	58	64
1997	43	124	148	156	382	494	516	520	404	446	83	70
Source: Alaska Department of Labor and Workforce Development, Employment and Earnings data. --- = not available												

Another factor that may influence the number of employees in the future is the concentration of hotel and accommodation property management in the Denali area.³⁸ The effect of these actions is that more employees working multiple jobs during the summer months (a fairly common practice) become eligible for overtime pay. The effect of this change may be to encourage more companies to hire additional employees to avoid the higher costs of overtime pay. However, this will be balanced against the cost of housing employees and the common problem of worker shortage for these seasonal positions that are on the lower end of the Alaska wage scale.

Table 5-9 provides an estimate of potential future visitation to Denali National Park and Preserve through the main entrance on the Parks Highway. Table 5-10 provides a very simplistic estimate of direct and indirect employment in the Denali Borough of the estimate of the number of future visitors. It is based on the assumption that the ratio of

³⁸ Reiss, Jack, Vice President/Operations, Aramark Alaska Parks & Resorts, personal communication, September 28, 2004.

employees to visitors in 2004 remains into the future. As a result, it is probably an underestimate given the likelihood that the Denali visitor industry will continue to diversify and more businesses will be created to respond to more visitors. The primary purpose of this estimate is to help determine the likely number of employees who may take the Community Transportation System; for that purpose, they are reasonable estimates.

Table 5-9. Denali National Park and Preserve Tour and Independent Visitor Growth Estimates

Denali National Park Tour and Independent Visitor Growth Estimates									
Year	Independent Visitors			Denali Cruise Tour Visitors			Total Independent and Tour		
	high-5%	Med-3%	Low-1%	High-7%	Med-5%	Low-2%	High/High	Med/Med	Low/Low
2004	150,000	150,000	150,000	194,569	194,569	194,569	344,569	344,569	344,569
2005	157,500	154,500	151,500	208,189	204,298	198,461	365,689	358,798	349,961
2006	165,375	159,135	153,105	222,762	214,513	202,430	388,137	373,648	355,445
2007	173,644	163,909	154,545	238,356	225,238	206,479	412,000	389,147	361,024
2008	182,326	168,826	156,091	255,041	236,500	210,608	437,367	405,327	366,699
2009	191,442	173,891	157,652	272,894	248,325	214,820	464,336	422,216	372,472
2010	201,014	179,108	159,228	291,996	260,741	219,117	493,010	439,849	378,345
2011	211,065	184,481	160,820	312,436	273,779	223,499	523,501	458,260	384,319
2012	221,618	190,016	162,429	334,306	287,468	227,969	555,925	477,483	390,397
2013	232,699	195,716	164,053	357,708	301,841	232,528	590,407	497,557	396,581
2014	244,334	201,587	165,693	382,747	316,933	237,179	627,081	518,520	402,872
2015	256,551	207,635	167,350	409,540	332,780	241,922	666,091	540,415	409,273

Table 5-10. Estimate of Potential Employment Growth with Future Visitation

Estimate of Potential Employment Growth with Future Visitation									
Year	Visitors			Employees					
	Total Independent and Tour			Direct	Indirect	Direct	Indirect	Direct	Indirect
	High/High	Med/Med	Low/Low	High/High	Med/Med	Low/Low	High/High	Med/Med	Low/Low
2004	344,569	344,569	344,569	2,114	2,344	2,114	2,344	2,114	2,344
2005	365,689	358,798	349,961	2,243	2,488	2,201	2,441	2,147	2,381
2006	388,137	373,648	355,445	2,381	2,640	2,292	2,542	2,181	2,418
2007	412,000	389,147	361,024	2,528	2,803	2,387	2,647	2,215	2,456
2008	437,637	405,327	366,699	2,683	2,975	2,487	2,757	2,250	2,495
2009	464,336	422,216	372,472	2,849	3,159	2,590	2,872	2,285	2,534
2010	493,010	439,849	378,345	3,025	3,354	2,698	2,992	2,321	2,574
2011	523,501	458,260	384,319	3,212	3,561	2,811	3,117	2,358	2,614
2012	555,925	477,483	390,397	3,411	3,782	2,929	3,248	2,395	2,656
2013	590,407	497,557	396,581	3,622	4,016	3,052	3,385	2,433	2,698
2014	627,081	518,520	402,872	3,847	4,266	3,181	3,527	2,472	2,741
2015	666,091	540,415	409,273	4,086	4,531	3,315	3,676	2,511	2,784

In summary, the factors influencing employment and employee demand for community transportation service include:

- Increased diversification of the Denali-area business sector including additional activities and amenities offered to visitors (influence: increased employment per visitor).

- Shift to two night stays for an increasing percentage of cruise-land package visitors. The effect of this shift is to improve the market for businesses offering activities and amenities in the vicinity of the Park. This will lead to additional diversification and expansion of gateway business opportunities offering goods and services to visitors (influence: increased employment per visitor).
- Increased concentration of hotel properties ownership and management resulting in a larger number of jobs falling under fewer owners. Thus, more workers with multiple positions being qualified for overtime pay (influence: greater number of individuals required to fill the same number of positions).
- Increased pressure on land availability in the Nenana Canyon area for accommodating visitors will cause some hotel properties to move employees off-site to either convert employee housing to visitor lodging or use available land to construct visitor lodging rather than employee housing (influence: increased need for transportation to get employees to work).³⁹

It is likely that employment will continue to grow at a faster rate than visitation as the market diversifies and grows. However, because the employee market is relatively small compared to the number of visitors who will use the system, and also fairly price-sensitive, designing a flexible system that can accommodate employee numbers and demand as it increases is probably the wisest course of investment. Once developed, the demand from this market segment is likely to be fairly consistent using the transportation system, especially if it is part of an employee benefit system.

³⁹ There is also demand for community transportation to allow employees without personal vehicles to commute to destinations on their off hours. This is likely to increase as more employee housing is moved off site to more isolated areas.

6.0 LONG-TERM DEVELOPMENT PLAN

6.1 Introduction

This part of the report offers long-term perspectives on developing a consolidated shuttle bus/transit system serving Denali National Park, Nenana Canyon, McKinley Village and outlying communities along the Parks highway from Healy to Cantwell. The report follows the assumption that a new shuttle combining the Riley Creek Loop with various Nenana Canyon and possibly McKinley Village hotel bus services will begin operation in 2006 or 2007 as a demonstration, or trial service. Characteristics of the consolidated shuttle are discussed in the Short-term Improvements section, above.

Shuttle system management and operations likely will take an evolutionary path from the basic improvements recommended in the Short-term Improvements to something possibly larger and more complex during the next twenty years. Indications are that visitor accommodations, activities and services will continue to concentrate in Nenana Canyon and McKinley Village, while employees increasingly reside in Healy, Carlo Creek and ultimately Cantwell. These development trends will exert pressure on the transportation system to extend geographic coverage, increase schedule frequency, and acquire larger vehicles to accommodate changes in demand over time.

6.2 Operational Phases

Four development phases are suggested as a means of outlining the possible progression of long-term transportation system growth. The phases are sequential rather than mutually exclusive, and are distinguished primarily in terms of level of service offered (*e.g.*, geographic coverage and capacity), system ownership and financing responsibility, management, and service delivery approach. They are described briefly in the following paragraphs.

Phase 1: Consolidated Shuttle service in the Entrance Area and Canyon

During this initial phase beyond the short-term demonstration, the consolidated shuttle would continue to operate as recommended in Alternative B in the short-term improvement plan, offering transfer-free travel for visitors presently riding the Riley Creek Loop and selected hotel shuttles including those of the Denali Princess Lodge and McKinley Chalet Resort. The shuttle would operate with three vehicles in daily service providing a 15-minute schedule frequency. This phase likely would continue for an initial period of one year or more, during which time the system would develop an operating history and financial track record.

Phase 2: Add a Shuttle between the Entrance Area and McKinley Village

Extending the consolidated shuttle system to McKinley Village is a logical second step in the evolution of local transportation. Depending on willingness of McKinley Village area hotels and service businesses to participate in the consolidated shuttle concept, this step could be integrated into the initial service offering, or added at a later date. Various service configurations may be considered, including a two-route network with all trips operating within the Park and alternating trips heading north into Nenana Canyon or

south to McKinley Village, as described as Alternative C in the short-term improvement plan. Another option is to absorb McKinley Village into a single route that runs between McKinley Village and Nenana Canyon via the park entrance area. Supplemental service between the Park and the Canyon could be provided by the Canyon route, as proposed by short-term Alternative D. Serving the Grande Denali Lodge also could be considered assuming heavy-duty buses are used.

Practically speaking, existing shuttle service operated by McKinley Village Lodge using hotel staff as drivers likely costs less to operate per hour than it would as part of the consolidated system. However, the consolidated system could include additional sponsors from the McKinley Village area, resulting in a lower cost to the Lodge, or improved service frequency, if not both. Participating hotels and properties should consider both the financial and non-financial benefits of consolidation (*e.g.*, reduced management burden). These issues are discussed in the short-term improvement plan.

Phase 3: Extend Shuttle Service north to Healy

It is anticipated that further expansion of the shuttle system to areas not presently served will be induced by market conditions at a point perhaps three to eight years in the future. Regular service to Healy could be built around the current employee-oriented bus services operated by Princess and Aramark. An extension of the cost-sharing method used to organize the Canyon and Village shuttles should seek to involve the smaller hotels, bed & breakfast facilities and hostels that predominate in Healy. The service would need to be made available to both visitors and employees, since unlike the Canyon service, a substantial percentage of Healy riders are likely to be employees. As transportation needs grow and trip purposes proliferate over time, local governmental participation may be warranted to support a transition from a Park-focused shuttle system to a regional transit system. This option is discussed in the next section on system ownership.

Phase 4: Extend Shuttle Service south to Carlo Creek and Cantwell

One cannot be definitive about the timing for eventually extending the shuttle system south from McKinley Village to Carlo Creek or more distant Cantwell. At that point, however, the focus of the transportation system would clearly be transitioning toward a regional transit system.

6.3 System Ownership and Organization

Alternative Organizational Concepts

A new shuttle system funded and managed as a partnership between the National Park Service, the business community, and eventually local government will require a solid institutional framework to facilitate decision making and navigate any “bumps in the road.” As with any new enterprise, there must be a policymaking process and administrative structure to provide direction and monitor day-to-day operations. The short-term improvement plan recommends a public-private consortium comprised of Canyon area hoteliers and activity providers, commercial tour operators, and the National

Park Service. Key short-term responsibilities for the consortium include defining system service levels and marketing characteristics, but most importantly committing to an equitable approach to financing the system. Looking longer term, system ownership and organization should be further clarified to ensure service quality, cost efficiency, management stability and recapitalization of rolling stock and other capital assets. Three alternative organizational concepts are presented for discussion:

- Financial Cooperative – The consortium would function as a confederation of participants rather than as a distinct legal entity. Individual consortium members would pay on a pro rata basis for consolidated shuttle operating expenses, with annual amounts calculated based on number of rooms or beds available, customer volumes of non-lodging businesses, and possibly other factors to assure the broadest possible participation. A service contractor would be selected outside the scope of the National Park Service concession agreement, and individual funding agreements would be executed between individual consortium members and the contractor. Part-time administrative support would be provided by an employee of one of the participants, and presumably factored into the cost distribution.
- NPS Concession Service – The National Park Service would assume a lead coordinating role for the consolidated shuttle system, and would facilitate service delivery through the concession agreement. The National Park Service would pay any amount equivalent to the 2005 actual cost (inflation adjusted) of the Riley Creek Loop shuttle, and the hotels and other vendors would share the remaining costs on a pro rata basis. Consortium participants would work collaboratively with the National Park Service to define service levels, conduct marketing activities, procure replacement vehicles, and explore additional funding sources. In effect, this organizational option would make the shuttle a Park bus extending beyond the park boundary in order to provide better service to the user and meet National Park Service Alternative Transportation Program objectives. A somewhat similar model is used by Zion National Park in association with the Town of Springdale, Utah and area businesses (see Appendix F).
- Private, Not-for-Profit Entity – Either an existing or new private, not-for-profit entity would be designated to serve as a funding conduit for the shuttle system, and would either take responsibility for contractor solicitation and oversight, or alternatively operate service directly. Consortium participants, including the National Park Service, would develop direct relationships with the new entity and pay on a pro rata basis for consolidated shuttle operating expenses. The new transportation agency would seek grant funding from the Federal Transit Administration (FTA), the State of Alaska Department of Transportation and Public Facilities (ADOT/PF), and the private sector. Obtaining federal funds would effectively recast the shuttle system as public transit service. A somewhat similar model is used by Acadia National Park in association with the Mount Desert Island League of Towns (MDILOT), Maine Department of Transportation (MDOT) and the non-profit group Friends of Acadia (see Appendix F).

Start-up Issues

Independent of the organizational model selected, collectively the consortium partners must accomplish the following start-up tasks:

1. Define the level of service, including days and hours of operation, service frequency and number of buses;
2. Identify the level of financial participation by each participant, as well as the method and timing of payments;
3. Secure staff resources needed to accomplish marketing, administrative and other services;
4. Identify a process and criteria for assessing the perceived success of and satisfaction with the consolidated shuttle system;
5. Monitor system and contractor performance; and,
6. Establish a regular schedule of meeting dates to transact routine business and a process for addressing concerns or grievances forwarded by the participants during the course of the operating season.

Several concerns must be addressed to successfully transition the consolidated shuttle system from a short-range demonstration project to a stable, long-term institutional arrangement. Two key issues to be resolved in the next two to three years are contractor selection and vehicle replacement. Looking long-term, it will be beneficial to utilize a competitive procurement process to select a service contractor. This approach offers the best opportunity to achieve pricing stability over a three to five-year period. The present concession agreement provides Doyon-Aramark JV with considerable short-term cost advantages over potential competitors from outside of the immediate Denali region. This diminishes the likelihood that a meaningful competitive selection process can take place, and puts Doyon-Aramark in a favorable position from which to negotiate annual rate increases for shuttle operations. Alternatively, the shuttle contract could be separated from the concession agreement and bid as a free-standing contract. This would tend to “level the playing field” with respect to competition in contractor selection.

The issue of vehicle replacement is closely analogous to contractor selection. The high cost of vehicles required to operate the consolidated shuttle poses a significant entry barrier for service contractors that potentially would respond to a solicitation for competitive procurement. For example, a five-bus shuttle fleet of heavy-duty transit vehicles such as are recommended later in this report, would cost \$1.7 million or more if purchased in the next two to three years. A way to reduce this barrier would be for the National Park Service or a successor transit agency to own the buses and provide them to the selected service contractor. This reasoning similarly applies to an operating facility where the buses would be maintained and stored. With the recent passage of a new federal transportation funding package in August 2005, the possibility now exists for the Park Service to receive federal grant funds for capital improvements for alternative transportation systems in parks and public lands. This opportunity is discussed in detail later in this report.

Additionally, consortium participants should address the need for realistic goals and objectives early in the development of the consolidated system, including appropriate performance measures and standards to monitor progress and define success. These are necessary tools both for policy-making and for managing the shuttle system. Once adopted, they should provide the contractor with broad direction needed to operate in a manner consistent with defined preferences and expectations. Additionally, goals and objectives supply a framework for monitoring and evaluating system performance relative to established standards. The suggested structure is hierarchical with four levels:

- **Goals** are created by the consortium partners to establish a policy direction, organizational structure and management philosophy for the system. Goals typically are general and might not change dramatically during the initial five to ten years of system implementation and development.
- **Objectives** are specific targets or milestones that represent significant accomplishments toward each goal. Ideally, they should be formulated by the consortium partners in consultation others in the business community, Borough representatives, and the service contractor. Particular objectives should be accomplished generally within a time span of one to three years, and then revised or replaced as warranted by conditions.
- **Performance measures** provide the mechanisms needed to monitor and evaluate whether adopted objectives have been achieved. When possible, performance measures should include quantifiable indicators based on regularly reported operating statistics, such as total ridership, hours and miles operated, costs incurred accidents and incidents, and other parameters of local interest.
- **Standards** define the level of attainment desired or expected relative to each performance measure. Standards provide practical targets for the transit system to achieve and should be recalibrated annually to reflect changing circumstances in the service area, financial position and other factors. Appropriate standards should be embodied in the service contract to ensure the objectives desired by the consortium are met.

Performance measures and related standards or targets should be adopted by the consortium to manage shuttle system. Five measures are suggested initially:

Affordability - The cost of operating the shuttle is a concern common to all participants. Operating cost per passenger would be a common indicator used to gauge system affordability. Per unit costing also provides an equitable means for distributing costs among the funding partners.

Productivity – The shuttle system must be well utilized by visitors to justify continued investment by all funding partners. Passenger boardings per service hour would be a common indicator used to measure the productivity of bus service provided. An appropriate minimum productivity target should be developed on the

basis of recent ridership data and the total number of service hours provided. Loading standards are useful as a guide to determine when buses are too full and service needs to be added.

Safety – Operating safety is a critical concern for passenger bus systems. The number of accidents and incidents causing injuries or damage are a bottom-line indicator of system safety. Accidents should be minimized through active safety awareness programming in the workplace and formal driver training.

Reliability – Shuttle buses must run on predictable schedules at even intervals consistent with demand to be successful as an alternative to travel in private vehicles. On-time performance is a key indicator of service reliability. A common standard is for at least 95% of all trips to operate within an “on time” window of zero minutes early to five minutes late when departing any given bus stop. Operations should be monitored regularly to ensure that the standard is being met. A second reliability indicator is the number of in-service vehicle malfunctions that occur within a given time frame.

Customer Satisfaction – Creating a favorable overall experience for the over 400,000 annual visitors to Denali is a common objective of all consortium participants. The ratio of customer complaints and compliments is a basic indicator that reflects rider perceptions of driver courtesy, vehicle cleanliness and other aspects of the shuttle system. Many systems periodically conduct on-board surveys to develop a detailed profile of customer attitudes toward a range of service attributes.

Mid-Term Development Issues

Any of the three organizational options introduced in this report may be adequate to administer the consolidated shuttle during the first two operational phases. The least formal institutional approach (financial cooperative) could continue indefinitely on a year-to-year basis, subject to the mutual assent of the participants. The disadvantages of this approach may become more apparent over time, however. A key concern is that lack of a multi-year service contract and open-ended funding commitments by the partners will result in an indefinite deferral of procurement of new buses best suited for shuttle service. While the continued use of modified school buses from the existing Park Service fleet may keep costs down in the short term, these vehicles are not well suited to the short trips and frequent boarding/alighting activity associated with a community transportation service. Moreover, these buses are older buses that have been retired from service on the park road beyond Savage River. They will become increasingly expensive to maintain as they age, with increased likelihood of reliability and safety problems.

Without assurance that a service contract will be in place long enough to substantially depreciate the cost of new vehicles, it is doubtful that a service contractor would invest in heavy-duty transit buses to provide seasonal service for the consortium. These vehicles have a defined 12-year minimum useful life, but could last for 15 to 18 years in seasonal service with proper maintenance and winter storage. Alternatively, the National Park Service could seek federal funds to purchase the buses directly. The NPS Concession

Service option perhaps best supports an early acquisition strategy for replacement buses, both because the institutional structure already exists and the vehicles could be absorbed into the larger Park fleet if the consolidated shuttle proved unsustainable over time.

A second drawback of the year-to-year contracting approach is that there may be less control of the annual rise in contract operating costs than with a multi-year agreement. One-year contracts are almost always negotiated rather than awarded on the basis of competitive selection. The absence of competition may have a detrimental effect not only on price, but on service quality as well. Moreover, qualified contractors are less likely to respond to a competitive solicitation for a one-year contract, given the level of start-up costs associated with bus operations. It is preferable over time to issue a three-year contract with up to two one-year option years at pre-established prices, offering the potential for a five-year commitment to a reliable contractor. Alternatively, if the service is delivered under the NPS concession contract, the price would be set initially based on negotiation, and then become subject to the rebidding process for the larger concession agreement.

Stability and expandability of the funding partnership are likely to become more significant issues over time. If hotel employee transportation service between Healy and Nenana Canyon continues to grow, for example, there may be opportunities to fashion a service that is also open to the guests of smaller lodging properties and possibly the general public. It is likely that further geographic expansion of the transportation system beyond areas currently served would warrant consideration of the private, not-for-profit entity organizational structure. It is only logical that other stakeholders in the region assume greater responsibility as the shuttle system expands further away from the Park entrance area.

An intermediate step might be to add private and public partners to expand service coverage as well as the financial base of the system. However, as the number and diversity of business partners grows, the consensus-based relationship may become increasingly problematic, simply because a common direction is more difficult to achieve among a larger and more diverse group of participants. A more formalized decision-making process may also be required to address complex funding issues, such as how to apportion operating expenses between participants who are in different industries (*e.g.*, the accommodations business versus the excursions/activities business). Depending on the percentage of shuttle riders who are not underwritten by one or more of the funding partners, it may also be necessary to develop a method of collecting user fees from individual riders. While on-board collection of cash fares is not recommended, it would be possible for the National Park Service to charge a transportation fee to be collected along with the park entrance fee. This strategy is used by 11 or more NPS facilities, including Acadia National Park and Zion National Park (see Appendix F).

Long-Term Development Issues

As the economic imprint of the Park and outside commercial activities expand over time, it is reasonable to expect that the frontcountry transportation system will be drawn north to Healy and south to Carlo Creek or Cantwell. Market demand for transportation to

these outlying communities would denote a transition in system focus from an activity-oriented shuttle service to a public transportation system addressing broader needs for community transportation, including work trips and possibly medical, school and personal business travel. This would be the appropriate point at which the consortium partners would solicit participation of the individual communities, the Denali Borough, or the State of Alaska to take an active role in supporting the shuttle system. If either the Financial Cooperative or NPS Concession Service organizational option is chosen initially, this would be a point when the formation of a publicly supported entity to lead the transformation to a public transit system might be seriously considered.

Public transit systems are owned and operated in a variety of forms in Alaska and nationwide, including private, not-for-profit entities, municipal or borough (county) departments, special purpose districts or authorities established at the regional level, and even as state enterprises in some instances. Table 6-1 lists nine existing Alaskan public transit systems by organizational form and jurisdictions served. It is noteworthy that the four private, non-profit transit agencies represent the smallest rural systems in the state, while the city and borough-operated systems cover the three larger urban areas (Anchorage, Fairbanks, and Juneau). The Barrow system, which was a borough function, recently shut down in the face of declining Borough revenues. One reason for the apparent preference for private, not-for-profit organization is cost -- prevailing wages and benefits generally are lower than among governmental entities. This peer group experience suggests at least initially that a private, not-for-profit agency might provide the best institutional arrangement for a fledgling Denali public transit system. For additional reference, key operating statistics for the six smaller rural systems are summarized in Appendix G.

Table 6-1. Alaskan Public Transit Systems Organizational Structure, FY 2005

Organization Type	Service Area	System Name/ Operator
Private, not-for-profit	Kenai, Soldotna, western Kenai Borough	CARTS, Inc.
	Kodiak Island	Kodiak Senior Center
	Mat-Su Borough	MASCOT, Inc.
	Sitka	Center for Community, Inc.
Municipal	Anchorage	People Mover (Transit Dept.)
	Juneau	Capital Transit (Transit Dept.)
Borough	Barrow, North Slope	North Slope Transit (Public Works Dept.) (discontinued in FY 2006)
	Fairbanks, North Pole	MACS (Transportation Dept.)
	Ketchikan, Saxman	The Bus (Public Works Dept.)

From an organizational perspective, the prospect of implementing a public transit system in the Denali region presents both benefits and drawbacks. A significant benefit is that it would provide a conduit through which federal and state transit funding assistance could flow. Federal and state public transportation funding programs are highlighted in Appendix H. In Alaska, these funds are distributed by ADOT/PF in response to an annual application process. Based on FY 2004 funding levels distributed to the six

smaller systems, a Denali public transit system might expect to receive approximately \$40,000 to \$50,000 annually to assist with transit operations, and possibly additional capital funding as needed and available from year to year.

Among the drawbacks of creating a local public transit system are added costs and complexities associated with complying with federal and state grant requirements. Grant compliance guidelines could influence a range of local practices, including vehicle selection, purchasing, human resources practices, service distribution, planning, and data collection. Additionally, there are restrictions against using federally funded buses and other capital assets to provide non-transit services such as charters, school bus and other privately contracted services, except under certain conditions. Setting up a new entity to manage a transit system also would require administrative costs that might otherwise be minimized or avoided in the lesser organizational models, including a professional transit manager and support staff to handle accounting, personnel management, legal matters, insurance and other necessary functions for an independent agency.

Compliance with the Americans with Disabilities Act (ADA) is a critical concern of public transit systems. The ADA requires not only full accessibility of the public fixed route system, but also provision of complementary paratransit service (*i.e.*, “dial-a-ride vans) for persons who are unable to use the regular route network due to physical, mental or developmental disability.

While it may require several years from the point of conception to actually implementing public transit service, the process is reasonably well-defined. ADOT/PF has assisted a number of small communities with establishing local transit systems in recent years, including Kodiak, Mat-Su, Sitka and currently Bethel. The basic steps required to initiate the process toward implementing a public transit system are as follows:

1. Develop local consensus to investigate potential interest and conditions regarding public transportation needs.
2. Designate a lead agency to contact ADOT/PF and the Community Transportation Association of America (CTAA) to request planning funds to pay for part or all of the study through the federally funded Rural Transit Assistance Program (RTAP).
3. Conduct a competitive solicitation for a qualified consultant to conduct a feasibility study to determine whether public transportation is warranted and desired in the community. The feasibility study should address the following issues:
 - a. Current availability of, and unmet needs for local transportation;
 - b. Public and private sector stakeholders;
 - c. Financial resources;
 - d. System design (routes and service levels);
 - e. Five-year operating and capital plan.

4. Assuming a positive finding of feasibility, apply for start-up grant funding through ADOT/PF to hire a project implementation manager.

6.4 System Financing

The short-term improvement plan recommended cost-sharing between the National Park Service and individual businesses with a stake in transportation in Nenana Canyon and McKinley Village to fund a consolidated shuttle demonstration in 2006. This basic public-private partnership supplies a financial model that may be expanded upon as the shuttle system develops over time. For its part, the Park Service initially would contribute an amount equivalent to actual 2005 Riley Creek Loop shuttle operating expenses, presumably adjusted for inflation. Members of the business community presumably would participate in a transportation consortium that fairly allocates pro rata shares of remaining shuttle operating costs among the existing service providers, hoteliers and visitor activity providers.

Long-term Funding Stability

Four specific actions by the various stakeholders are suggested to secure the long-term financial stability of the consolidated shuttle:

1. Consortium partners should work to expand the funding base by involving large and small businesses operating in Nenana Canyon and McKinley Village. Increasing the number of funding partners will provide an effective hedge against year-over-year cost increases, and could even lower transportation outlays for the initial funding partners for a time.
2. The National Park Service should consider charging a Visitor Transportation Fee to visitors to Denali National Park & Preserve beginning in 2007 to provide a dedicated revenue source for the transportation system. Approximately 11 Park Service facilities currently charge transportation fees that dedicate funds for alternative transportation services.
3. The National Park Service should pursue capital funding for replacement buses through the newly created Alternative Transportation in Parks & Public Lands program, Section 3021 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Public ownership of the shuttle fleet would reduce recurring payments to the service contractor and eliminate a significant barrier to competitive contractor selection. Similar reasoning applies to eventual construction of a new operations facility in which to maintain and store the buses.
4. The National Park Service and the consortium should initiate discussions with the Denali Borough to explore local tax contributions for future service extensions to Healy, Carlo Creek and Cantwell.

While federal grants and other public funds could help to broaden the funding base for the consolidated shuttle system, it should be noted that there may be added expenses associated with public operation as well that must be considered before making the transition to public ownership. For example, administrative overhead expenses likely would increase if a separately incorporated entity were created to run the transportation system. A professional staff would be needed to oversee the operating contract or provide service directly, and handle grants management, accounting, regulatory compliance and board-related matters.

Expand Transportation Consortium

The short-term plan assumed financial participation by a limited number of large businesses already providing transportation between the Park entrance area, Nenana Canyon and McKinley Village. These include Princess, Holland-America, Aramark and Grande Denali Lodge, among others. Significant opportunities will exist to add large and small businesses to the funding base in the next few years. Increased consortium membership would dampen future cost increases for the founding members, as members would dilute pro rata shares of financial responsibility for all participants. A key challenge will be to devise a methodology for calculating equitable pro rata payments acceptable to the diverse array of business interests. At least three key relationships within the Denali business community must be reconciled to formulate an equitable distribution:

- ***Large and Small Businesses*** – Although several large businesses likely will contribute the bulk of the private sector share of shuttle demonstration expenses, these companies also will benefit to the extent that they can reduce or eliminate passenger transportation services currently provided for exclusive use of their customers. A mechanism is needed to engage smaller businesses that likely will benefit from the consolidated shuttle system. A progressive fee scale should be developed that is sensitive to the volume of passengers likely to be generated by each business.
- ***Frontcountry and Outlying Area Businesses*** – Even if the shuttle system expands to Healy, Carlo Creek or Cantwell, the bulk of system ridership will continue to be generated in the Park entrance area, Nenana Canyon and McKinley Village. Per passenger operating costs will be significantly higher on routes serving the outlying communities, due to longer distances and fewer beds and recreational activities to share the cost. A mechanism is needed to balance the cost differences inherent in the geography of service area with the ability to pay in proportion to the size of the business community in outlying areas.
- ***Lodging and Activity-based Businesses*** – The short-term plan suggested that the total number of accommodations available be used as a basis for distributing shuttle operating costs within the lodging industry. A mechanism is needed to reconcile “revenue per bed” disparities between luxury hotels, motels and lodges, hostels and campgrounds. A second mechanism is needed to engage recreational activity providers, possibly using customer volumes or passenger boardings by bus stop as a basis for cost distribution.

NPS Visitor Transportation Fees

The National Parks Omnibus Management Act (P.L. 105-391) permits national parks to collect a transportation fee from visitors to pay for shuttles and other alternative transportation systems provided at the park. Fees were introduced in 2000 at three parks on a demonstration basis. Eleven parks presently collect a transportation fee, including Acadia, Bryce Canyon, Grand Canyon, Yosemite and Zion among others. Nationally, transportation revenues were \$5.0 million in FY 2002, representing 3.4% of National Park Service total revenues of \$147.4 million.

Transportation fees typically are collected with entrance fees to simplify the visitor experience and minimize administration. However, they are accounted for separately from entrance fees, National Parks Pass revenues and recreational user fees, and may be retained to pay for alternative transportation expenses. For example, Acadia National Park charges a \$20 entrance fee during peak season when shuttles are operating, but only \$10 at other times. Similarly, Zion National Park charges \$20 for visitors arriving in personal vehicles throughout the year, but only \$10 for those arriving by bicycle or on foot.

The partnership should avoid the temptation to impose user fees (*i.e.*, cash fares) on passengers boarding consolidated shuttle buses. It is noteworthy that three highly successful park shuttles reviewed in this report (Appendix F) are fully or partly fare-free. Charging a cash fare likely would impede ridership growth, reduce customer satisfaction and increase passenger travel times. Onboard fare collection slows down passenger boarding significantly, makes the system more complex and daunting for visitors with limited past exposure to riding buses, and increases the number of on-board incidents and complaints. Moreover, the cost of cash handling and revenue accounting is significant, requiring installation of secure fareboxes on the buses, retention of bonded personnel and equipment to sort and count cash, make bank deposits and maintain records.

Alternative Transportation in Parks and other Federal Grants

Recent passage of SAFETEA-LU in August 2005 makes national parks and other federal land management agencies eligible for federal grant funding under Section 3021, Alternative Transportation in Parks and Public Lands. The section creates a new cooperative Federal Land Management Agency transit program managed cooperatively by the Departments of the Interior and Transportation. The nationwide program is authorized at \$96.9 million over four years, as distributed in Table 6-2. Alaska is assured of a minimum three percent of the nationwide authorization, or \$2.9 million over four years.

Alternative transportation is defined as bus, rail, or any other publicly or privately owned conveyance that provides general or special service on a regular basis to the public, including sightseeing service. Non-motorized transportation facilities and services for pedestrians, bicycles, and non-motorized watercraft systems are similarly defined. The legislation provides guidance on the final selection and funding of an annual program of qualified projects. Project considerations include geographical diversity, variety of project sizes, safety, pollution and congestion reduction, and improvement of mobility.

**Table 6-2. SAFETEA-LU Funding Authorizations
DOI/FTA Section 3021**

Fiscal Year	National Authorization	Alaska Authorization (minimum 3%)
2006	\$ 22,000,000	\$ 660,000
2007	23,000,000	690,000
2008	25,000,000	750,000
2009	26,900,000	807,000
Total	96,900,000	2,907,000

Eligible projects include the purchase or lease of equipment and facilities for use in public transportation, including rolling stock that incorporates clean fuel technology or replacement of buses of a type in use on the date of enactment of the Federal Public Transportation Act of 2005 with clean fuel vehicles. Planning projects also are eligible, as are any other alternative transportation projects that enhance the environment; prevent or mitigate an adverse impact on a natural resource; improve Federal land management agency resource management; improve visitor mobility and accessibility and the visitor experience; reduce congestion and pollution (including noise pollution and visual pollution); or conserve a natural, historical, or cultural resource (excluding rehabilitation or restoration of a non-transportation facility). Eligible recipients of Section 3021 grants include Federal land management agencies, tribal governments, and State or local governmental authorities with jurisdiction over land in the vicinity of the park.

The present cooperative relationship between Department of Interior (DOI) and Department of Transportation (DOT) stems from a 1997 Memorandum of Understanding signed by then-Secretaries Bruce Babbitt and Rodney Slater to foster coordination to improve transportation access to parks and public lands. SAFETEA-LU provides the first joint grant program, and administrative regulations have yet to be issued by either the Department of Interior or Department of Transportation. While the law gives the Secretary of the Interior final responsibility for Section 3021 grant awards, the Federal Transit Administration (FTA) will assume grant-making and administrative responsibilities on behalf of DOI.

A second possible source of FTA grant funding is the Section 3013 (Formula Grants for Other than Urbanized Areas). This and other FTA grant programs are explained in Appendix H. Section 3013 funds generally are available to assist with financing public transit systems operating in rural areas. A transition to a wholly public transit system should be done carefully, as it will be important to the overall financial well-being of the service to retain the interest and financial support of the private hotels and other participants. A third potential source of capital funding for a new publicly-owned bus operations facility is Section 3011 (Capital Investment Grants). These grants typically are secured via Congressional earmarks.

Borough Support

Virtually all U.S. public transit systems exist within a local institutional setting, either as a unit of local municipal or county government, a special district or authority, or a private, not-for-profit entity with public support. A successful evolution of the

consolidated shuttle system into a public transit system likely would necessitate active participation by the Denali Borough government. Two potential local revenue sources include an incremental increase in the existing bed tax collected by the Borough, or a possible seasonal sales tax in the future. The Borough bed tax could be used to channel collective support from the entire lodging industry in proportion to the revenue generated by each business, and would be an equitable way to fund service in the entire Healy-to-Cantwell corridor. Alternatively, a seasonal sales tax would effectively pass a major portion of shuttle system cost onto visitors and employees, who are the primary beneficiaries of the transportation system. Residents presumably would minimize major expenditures during the summer months to limit the amount of sales tax they pay over the course of a year.

6.5 Service Delivery

The short-term implementation plan assumed that the consolidated shuttle demonstration will be operated by the existing NPS concession contractor through a negotiated modification of the concession contract. As a practical matter, it is highly improbable that a demonstration of the consolidated approach could occur in 2006 if a suitable arrangement is not reached with the existing contractor. From a longer term perspective, however, it is recommended that a competitive procurement process be undertaken as soon as possible to lock in the most favorable operating rates possible under a multi-year agreement. For example, an agreement that incorporates an initial three-year term followed by two consecutive one-year options exercised at the discretion of the consortium partners would provide a good balance between pricing stability and management prerogative in the event of underperformance by the contractor. The multi-year contract would help to assure the lowest available operating cost over time within defined service quality parameters. Key contractor requirements that should be addressed in a long-term service contract include, but are not necessarily limited to the following:

1. Contractor staffing level, including general management, operations supervision, full and part-time operators, and formal training time committed to shuttle system operations;
2. Service quality standards (e.g., schedule adherence, vehicle cleanliness, safety awareness, accident reporting, timely submittal of operating statistics);
3. Vehicle maintenance and readiness standards;
4. Optional incentives for superior performance and liquidated damages for substandard performance; and,
5. Supply replacement vehicles per consortium specifications until federal grant funds are available to support public ownership of rolling stock.

Prudent contract monitoring and periodic reselection of the service contractor provide a practical and effective approach for system operations for an indefinite future. If the shuttle system grows to a point where a transition to a public transit system is contemplated, alternate service delivery methods may be explored. The principal alternative for a small system is direct operation by a public entity formed to manage the transit system, using its own employees. This could be a private, not-for-profit agency or a unit of local government, such as the Denali Borough. Some larger systems may

contract with two or more operators to facilitate bidding by local owner-operators on smaller pieces of the system, and to encourage competition among contractors.

6.6 Capital Requirements

Sustaining the consolidated shuttle system beyond the demonstration year will require significant investments in rolling stock, passenger amenities, and eventually a new operating facility. As noted earlier, recent passage of SAFETEA-LU makes it possible for the National Park Service to receive Section 3021 capital grants for these items. Moreover, the Park Service should explore partnering with ADOT/PF to obtain FTA Section 3013 non-urbanized area formula grants and Section 3011 capital investment grants supporting a future Denali public transit system. ADOT/PF may be a valuable administrative partner. In the Acadia National Park experience, for example, the Maine DOT acted as agent for Acadia in the purchase of the first eight buses used for Island Explorer service.

Vehicles

The short-term implementation plan assumed that buses already owned and operating in the frontcountry would be used for the consolidated shuttle demonstration. At least initially, the service requires three or four (with McKinley Village) buses in daily use, plus at least one spare. Given the age and condition of the existing equipment, action to acquire replacement buses should begin soon after the conclusion of the demonstration.

Aside from cost, a variety of non-financial factors should be considered in selecting replacement vehicles for the consolidated shuttle. Clearly the buses must be durable to withstand the rigors of an extended service day, high passenger volumes, stop-and-go operation and outdoor storage. A standardized fleet is recommended to simplify vehicle servicing, maintenance and repair, reduce operator training needs, and to elevate shuttle visibility and recognition for visitors.

Shuttle buses also should be convenient for passengers and generally consistent with the unique aesthetic aspects of the park experience. Newer low-floor models, which make it quicker and easier to board and alight due to single-step entry, should be considered for shuttle operations. Low-floor vehicle specifications can be found in Appendix I. As indicated in Table 6-3, commercial availability of low-floor models is limited to heavy-duty transit buses. Moreover, the buses should have large transit-type windows that enable passengers to view the surrounding areas along the route and at their stop location. These windows typically are available on small or large model buses. Ride quality should be acceptable on a wide range of roadway surfaces. Again, larger heavy-duty vehicles such as standard transit buses are more apt to generate a comfortable riding experience for passengers. Currently, the larger hotels experience sizeable variation in demand for the individual shuttle trips, from a handful of passengers to an entire 45-passenger bus. Substantial fluctuation in demand for individual shuttle trips would also suggest a full-sized bus would accommodate the peaks in demand more easily.

Table 6-3. Passenger Vehicle Characteristics

Type	Length (feet)	Seated Capacity	Life Expectancy	Low Floor Models
Small light-duty bus/van	20-25	12-15	4 yrs /100,000 mi	No
Mid-size light-duty transit	25	18-22	5 yrs /150,000 mi	No
Mid-size medium-duty	30	20-25	7 yrs /200,000 m.	No
Mid-size heavy-duty	30	27-32	10 yrs /350,000 mi	Yes
Large heavy-duty	35'/40'/45'	38-45	12 yrs /500,000 mi	Yes
Large heavy-duty Over-the-road	40'/45'	45 – 50	16 yrs /750,000 mi	No

Another increasingly important consideration in vehicle selection is fuel type. While the vast majority of buses in use today are diesel or gasoline powered, alternative fuel buses are increasingly an option. Currently, compressed natural gas (CNG), liquefied natural gas (LNG), propane, ethanol, methanol, fuel cell, pure battery electric, and hybrid electric bus models are commercially available.

As reported in three case studies (Appendix F), Acadia National Park, Yosemite National Park and Zion National Park all utilize alternative fuel vehicles in shuttle operations. Most of the vehicles at Acadia and Zion were put into service in 2000 and are propane-powered. Two hybrid electric buses are also in use at Zion. Yosemite put new 40-foot hybrid electric-diesel transit buses in April 2005 to replace the diesel shuttle fleet operated since 1986. Key factors in the decision included the promise of 50-60% fewer emissions than diesel buses, increased fuel economy and reduced engine noise. An additional benefit of the hybrid electric-diesel model is that expensive modifications to existing bus maintenance facilities generally are not required.

The current Park transportation concessionaire is participating in a demonstration project with the Federal Department of Energy on a natural gas to diesel fuel synthetic process alternative fuel. The process produces low-sulfur fuel with lower emissions than standard diesel fuel. Data is collected for three buses running on regular fuel, and three running on the gas-to-diesel fuel.

Considering the range of factors, it is recommended that Denali shuttle service ultimately be provided with full-size (40-foot) heavy-duty transit buses with extra wide front and rear doors to expedite passenger boarding and alighting. Buses should be a low floor design and equipped with pull-out wheelchair ramps, and two wheelchair securements on board each vehicle. In addition, using heavy-duty transit buses would allow service to be provided to the Grande Denali Lodge without unduly shortening the life of the buses. The decision as to whether to serve the hotel should turn on issues of convenience to riders, schedules and service frequency.

Given the lead times required to procure heavy-duty transit buses using federal grant funds, it is recommended that preliminary grant application activities begin in 2006.

1. Contact DOI and FTA to determine when further guidance concerning Section 3021 grant application procedures and award criteria, including local match requirements.
2. Survey the experiences of other national parks with the use of alternative fuel vehicles. Two commercially viable alternatives to diesel power used in other national parks are natural gas and hybrid fuel-cells. Natural gas requires additional investment in storage and dispensing facilities for compressed (CNG) or liquid (LNG) fuel.
3. Develop a vehicle specification as part of a formal competitive bidding process. Submit to ADOT/PF for pre-bid review and approval.

Assuming a grant award in FY 2007, it is estimated that buses could be ordered, manufactured and delivered in time to begin service in May 2009.

Bus Stops and Passenger Shelters

It is recommended that all bus stops be developed with a common “look” and be highly visible to potential users. Bus stops should be equipped with signage and street furniture. A bus stop sign with distinctive system logo and telephone information number should be mounted on a pole or affixed to a passenger shelter side wall. Shelters should be constructed with a roof and at least two side walls to provide reasonable protection from rain and wind for waiting customers. A current route map and daily timetables should be installed in free-standing kiosks or mounted on passenger shelter side walls. Examples of commercially available shelter and kiosk designs are provided in Appendix J.

Operating Facility

The present facility, which is owned by Doyon-Aramark JV, poses a significant obstacle to competitive contractor selection in the future. Since comparable facilities are not generally available in the frontcountry, it would be difficult for a potential contractor other than Doyon-Aramark to be price-competitive operating the shuttle system. Therefore, the National Park Service or a successor transit agency should evaluate the feasibility of constructing a public-funded facility that could be provided for use by whichever service contractor is selected in the future. The long-term reasons for public ownership of an operating facility are much the same as for the vehicles: reduced contractor overhead charges, and ease of transition between contractors if competitive selection leads to replacement of the current or a subsequent future contractor.

6.7 Marketing

Long-term conditions may have limited effect on marketing requirements of the shuttle system. The basic elements are discussed in the short-term improvement plan. Since shuttle customers typically will not be members of the general public, but rather a combination of visitors and employees, a broad approach (“shotgun”) should not be needed for years to come. Both groups can be reached directly and inexpensively via focused (“rifle”) marketing activities conducted at major visitor accommodations, commercial businesses, and within the park itself.

The most important concern in marketing the consolidated shuttle is public information that is easily understood and pervasively disseminated. Unlike conventional bus systems that develop a sizeable base of core riders who ride the bus frequently, the Denali shuttle attracts a very large percentage of new riders virtually every day. The large majority of visitors with one or two-night stays planned in Denali require almost immediate access to shuttle route and schedule information upon arrival at their point of accommodation for it to be useful. As most visitors come from communities in the United States with limited exposure to convenient public transit services, some may resist trying the shuttle unless they know it is readily available, simple to use and free of charge.

Marketing efforts should focus on the business destinations outside the Park, potentially with staff assistance in the form of an account representative who would work with each of the businesses to gain and keep support for the system. It is recommended that all hotels, lodges, hostels and other larger accommodations should maintain a supply of printed timetables in display racks in building lobbies, or supply them to individual guestrooms. The route map and timetables should be available continually via in-room cable television where available. Public information should also be posted at all bus stops, as noted earlier.

The shuttle vehicles themselves also provide an important conduit for public information. A dedicated shuttle bus fleet would give the system a distinctive and consistent appearance, in effect “branding” the system as an integrated part of the larger Denali experience. Bus exterior designs should incorporate the system logo to visually link them to the bus stop signs throughout the park and Nenana Canyon. The telephone information number should also be plainly visible on bus exteriors (see Appendix C).

The buses should be equipped with public address equipment allowing bus drivers to call out approaching bus stops, point out business establishments and other destinations, and make interpretative comments about passing landmarks, wildlife and other matters of interest. As noted earlier, the use of low-floor heavy-duty bus models powered by alternative fuels is recommended as soon as possible after 2007.

APPENDICES

Appendix A

Where does this bus go???

- A Denali Bus Glossary -

There are so many kinds of buses and destinations out of the front doors of our hotels here at Denali, that things are bound to get confusing....

“It’s Tuesday, my voucher says this must be Denali.”

“I came here by bus,” means they probably came from Anchorage or Fairbanks by a **“Highway Bus”**, also known by snobs as a **“Motorcoach”**. Their drivers may like to be called **“Motorcoach Commanders”**. This may have been part of something called a **“Land Package”** which is just an afterthought to a cruise up the Inside Passage.

“I just came from the depot by bus,” means they just got off the train from Anchorage or Fairbanks - a trip that took twice as long as coming by **“Motorcoach”** (well at least they got to eat two meals between here and Fairbanks- and best of all they got to ride in a **“school bus”** called a **“Train Bus”** from the depot. (In the good old days they said either McKinley or Denali, just to confuse them further.)

“How do I get to my room?” means they are ready for another bus ride. Point out the **“Bear Bus”** (aka: **“Forest Chalet Loop Bus”**) out front that looks like a billboard. After doing this for 8 hours a day, it is called the **“Looney Loop Bus”** ... respectfully named after a legendary Denali Tour Driver.

“Thank goodness, finally at my room!” means they are ready to get back on the **“Looney Loop Bus”** to get up to the Lobby to get on the **“Park Tour Bus”**. It may be a **“Tundra Wildlife Tour Bus”** for a 6-7 hour trip into the Park, or a 3 hour **“Natural History Tour Bus”**... they probably don’t know which one and will either complain that the trip is too long or too short, anyway.

“How do I get to the Visitor Center?” is another sign that they want to get on a bus. These are usually referred to as a **“Shuttle Bus”** which is totally confusing. A **“Shuttle Bus”** usually just goes back and forth in little loops, no doubt also known in airport driver lingo as **“Looney Loop Bus”**. Here at Denali, our drivers are so polite that these buses that go back and forth between hotels and VC’s are known as **“Courtesy Buses”**. The reason they want to go to the Visitor Center is to get on a **“Park Shuttle”** or, in bureau-crateze, **“Visitor Transportation Service Bus”**. (Even those in high places - thin air - will call these **“VTS Buses”**.) Depending where they go, the kind of people they carry, and how long they stay will have different names, such as **“Savage River Shuttle”**, **“Toklat Bus”**, **“Eielson Bus”**, **“Wonder Lake Bus”**, **“Kantishna Bus”**, **“Over Nighter”** (Not what you think) or **“Camper Bus”**. This does lead to some confusion so many visitors decide to skip it all and do some other activity while at Denali.

“Which Raft Trip would you recommend?” is how they say, *“I’ve had it with buses, let’s go do something natural!”* ... yet another sign that they are ready to hop on a bus. Get this, one raft trip includes two bus rides! Of course, to go rafting you must take a **“Raft Bus”**. Some are Blue, some are Brown, some look like Billboards, but they all have at least three Rafting Company names stenciled on or magnetized to their sides. (While on a **“Tour Bus or Shuttle**

Bus”, one of the highlights is the reststop, so they won't; on a **“Raft Bus”** the idea is to have so much fun they will wet their pants. OK, time for dinner...

“Tell me about Cabin Nite,” ... you guessed it, time for the **“Cabin Nite Bus”**. One meal takes two bus rides. (Have you been counting?) With only 24 hours at Denali, no wonder they have no time to take another bus to go flightseeing (**the “Flightseeing Bus” ...or “Van”**) or any other number of vans, buses, cars or planes. Perhaps it's not surprising that many guests just watch TV in their rooms and count the remaining vouchers, instead of taking another chance.

By the time they take the **“Train Bus”** back to the depot to continue their journey, they can't believe that anything here is not a bus stop. In fact, we once had to place a sign on a structure that said, **“Not a Bus Stop”** so people wouldn't wait there for days with their bags as the buses went round and round. (Ask a **“Looney Loop Bus”** Driver where that was... he probably hasn't heard that one today!)

And now to confuse matters even further, vans might be used instead of buses to provide **“Courtesy Transportation”**. So, at closing time, don't just go to sleep in a bus waiting for that ride home; you may discover that **“The Last Bus of the Night”** is a van.

Thankfully, there is more to vacations than buses. Watch for the next installment....

“Where does this line go?”

Appendix B

Draft Running Times

Alternative B: Consolidated Route DNP Visitor Center to Canyon

Location	Time	
	Arrive	Depart
Visitor Center /Alaska Railroad Station	--	0:00
Wilderness Access Center (WAC)	0:02	0:06
Riley Creek Mercantile Shelter	0:08	0:09
Riley Creek Campground Shelter	0:10	0:11
DNP Post Office	0:12	0:13
Kingfisher Creek Wayside	0:15	0:16
Denali Bluffs Hotel	0:19	0:20
Lynx Creek Store	0:23	0:24
McKinley Chalet Resort	0:26	0:29
Denali Princess Lodge	0:31	0:34
Kingfisher Creek Wayside	0:36	0:37
DNP Post Office	0:40	0:41
Riley Creek Campground Shelter	0:42	0:43
Riley Creek Mercantile Shelter	0:44	0:45
Wilderness Access Center (WAC)	0:47	0:51
Horseshoe Lake Stop	0:53	0:54
Visitor Center / Alaska Railroad Station	0:55	1:00

Appendix B

Draft Running Times

Alternative C: Canyon + Village Shuttle DNP Visitor Center to Canyon and to McKinley Village area

Location	Time			
	VC - Canyon		VC - McKinley Village	
	Arrive	Depart	Arrive	Depart
Visitor Center /Alaska Railroad Station	--	0:00	--	0:00
Wilderness Access Center (WAC)	0:02	0:06	0:02	0:05
Riley Creek Mercantile Shelter	0:08	0:09	↓	↓
Riley Creek Campground Shelter	0:10	0:11	↓	↓
DNP Post Office	0:12	0:13	↓	↓
Kingfisher Creek Wayside	0:15	0:16	↓	↓
Denali Bluffs Hotel	0:19	0:20	↓	↓
Lynx Creek Store	0:23	0:24	↓	↓
McKinley Chalet Resort	0:26	0:29	↓	↓
Denali Princess Lodge	0:31	0:34	↓	↓
Kingfisher Creek Wayside	0:36	0:37	↓	↓
DNP Post Office	0:40	0:41	↓	↓
Riley Creek Campground Shelter	0:42	0:43	↓	↓
Riley Creek Mercantile Shelter	0:44	0:45	↓	↓
Grizzly Bear Cabins	↓	↓	0:15	0:17
McKinley Village Lodge/Denali River Cabins	↓	↓	0:18	0:20
Wilderness Access Center (WAC)	0:47	0:51	0:30	0:33
Horseshoe Lake Stop	0:53	0:54	0:35	0:35
Visitor Center / Alaska Railroad Station	0:55	1:00	0:37	0:40

Appendix B

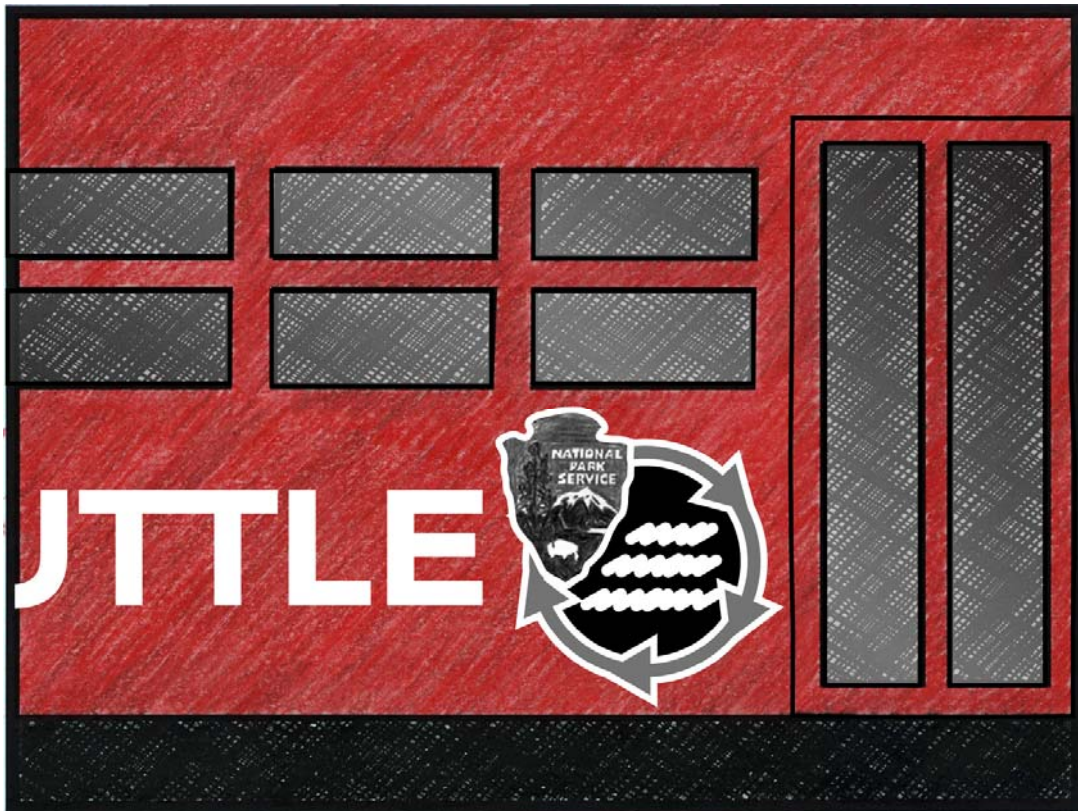
Draft Running Times

Alternative D - Village to Canyon Shuttle DNP Visitor Center to Canyon plus Village to Canyon via DNP

Location	Time			
	VC - Canyon		Village - Canyon	
	Arrive	Depart	Arrive	Depart
Visitor Center /Alaska Railroad Station	--	0:00	--	0:00
Wilderness Access Center (WAC)	0:02	0:06	0:02	0:05
Riley Creek Mercantile Shelter	0:08	0:09	↓	↓
Riley Creek Campground Shelter	0:10	0:11	↓	↓
DNP Post Office	0:12	0:13	↓	↓
Kingfisher Creek Wayside	0:15	0:16	0:08	0:09
Denali Bluffs Hotel	0:19	0:20	0:12	0:14
Lynx Creek Store	0:23	0:24	0:17	0:18
McKinley Chalet Resort	0:26	0:29	0:20	0:23
Denali Princess Lodge	0:31	0:34	0:25	0:28
Kingfisher Creek Wayside	0:36	0:37	0:30	0:31
DNP Post Office	0:40	0:41	↓	↓
Riley Creek Campground Shelter	0:42	0:43	↓	↓
Riley Creek Mercantile Shelter	0:44	0:45	↓	↓
Wilderness Access Center (WAC)	0:47	0:51	0:34	0:37
Horseshoe Lake Stop	0:53	0:53	0:39	0:39
Visitor Center / Alaska Railroad Station	0:55	1:00	0:41	0:46
Wilderness Access Center (WAC)	↓	↓	0:49	0:52
Grizzly Bear Cabins	↓	↓	1:02	1:03
McKinley Village Lodge/Denali River Cabins	↓	↓	1:04	1:07
Wilderness Access Center (WAC)	↓	↓	1:17	1:20
Horseshoe Lake Stop	↓	↓	1:22	1:22
Visitor Center / Alaska Railroad Station	↓	↓	1:24	1:30

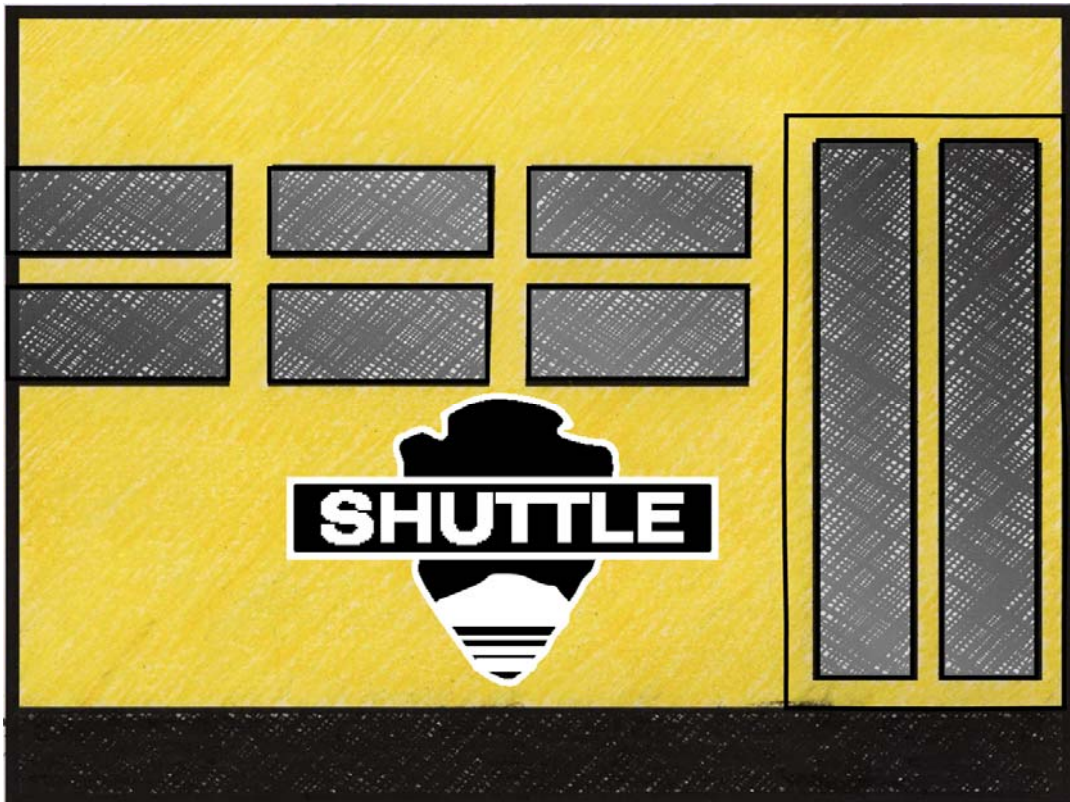
Appendix C

Illustrative On-bus and at Bus Stop Graphics



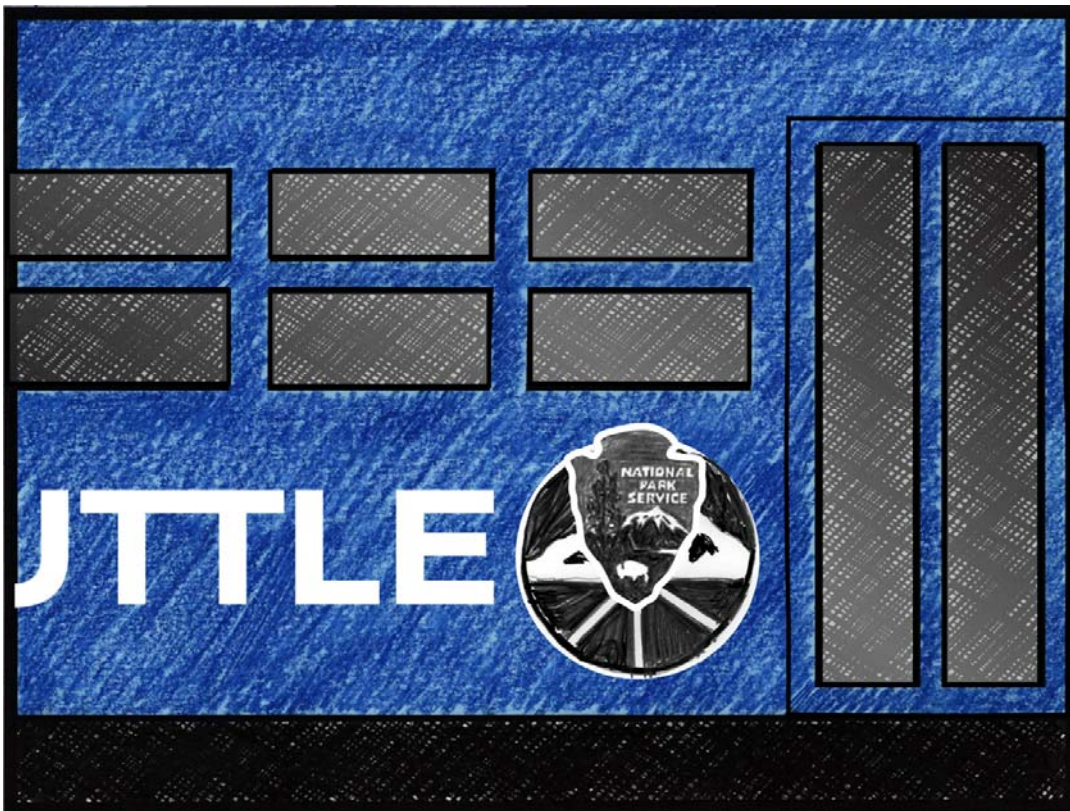
Appendix C

Illustrative On-bus and at Bus Stop Graphics



Appendix C

Illustrative On-bus and at Bus Stop Graphics



Appendix D

Draft Service Agreement

Community Transportation Service Denali National Park and Environs Summer Season 2006

The objective of this agreement is to clearly lay out the responsibilities of each of the organizations who are helping to sponsor and fund the operation of a Community Transportation System (CTS) for the Denali Park entrance area and its environs. The parties to the agreement are the hotels and visitor venues in the Nenana Canyon and McKinley Village areas who shuttle guests to and from the Park entrance area and who will sponsor the shuttle, the Doyon/Aramark Joint Venture, who operates a variety of Park shuttle services as a concessionaire for the National Park Service (NPS) and who will operate the shuttle service, and the NPS, Denali National Park and Preserve who will help sponsor the service by contributing the bus service hours to the shuttle that in past summers have been used to operate the Riley Creek Loop shuttle service.

The purpose of establishing and operating an improved, consolidated shuttle service is to quickly implement transportation system enhancements that will improve the visitor experience without requiring significant additional capital or operating expense, and to reduce the cost of operating shuttle service on the part of individual hotels and venues through consolidation of existing services.

The operation of the service will be overseen by a managing committee. The committee:

- Is composed of a single representative of each contributor to the community transportation system;
- Oversees schedule, routes, and marketing materials;
- Will meet as necessary to oversee operation of the system, and at a minimum once in the fall of 2005 to set service parameters, once in the winter of 2006 to approve logo and marketing materials, once in early summer 2006 to review performance and resolve problems, and once in the fall 2006 to evaluate performance and plan for succeeding years.
- Will make decisions by consensus to the degree possible. If necessary, decisions will be made by voting, with each committee member having one vote.

The undersigned agree to:

1. Jointly fund the creation and operation of a Community Transportation System in the vicinity of Denali National Park and Preserve;
2. Participate as one of the committee of owners in establishing routes and schedules for the service, in assisting in the distribution of route and schedule information, and in overseeing the delivery of the service to the public.
3. Pay the service operator – Doyon/Aramark Joint Venture – a proportionate share of the cost of operation of the service for the 2006 summer season based on the

size of the undersigned's operation. The attached Appendix A lays out the cost of the summer service and an approach to apportioning the cost among members.

4. Take any concerns about service quality (schedule adherence, vehicle cleanliness, driver demeanor and other similar issues) directly to the Doyon/Aramark Joint Venture, and to the designated staff person at the NPS.

Cost Apportionment

Service to be operated: Alternative B, C, or D in the Park's "Short-term Improvements Report."

Cost will be borne by individual members in proportion to the number of rooms and campsites offered to the public for the summer of 2006 (with campsites valued in proportion to the rooms based on revenue per night potential); and whether the property is on the route and close to a bus stop, or off the route. Cost will be divided by total "equivalent on-route rooms" or a similar mechanism in order to determine the portion of the total cost that is each member's responsibility.

Appendix E

Employment Data

Employment and Earnings in Denali Borough Visitor Sectors during the Summer Season, May through September 1997-2004

Summary Tables for the Transportation and Hospitality and Leisure Sectors 1997-2004

Denali Borough							
1997 Employment & Earnings Denali Borough Visitor Sectors							
	MAY	JUN	JUL	AUG	SEP	Average Summer	Annual Average
INDUSTRIAL CLASSIFICATION	EMP	EMP	EMP	EMP	EMP	Mo Emp	Mo Earnings <small>based on 12 months</small>
TOTAL INDUSTRIES	1,413	1,861	1,923	1,923	1,605	1,745	\$2,432
PRIVATE OWNERSHIP	1,173	1,610	1,679	1,682	1,379	1,505	\$2,245
FEDERAL GOVERNMENT	240	251	244	241	226	240	\$3,535
CONSTRUCTION	4	4	5	6	5	5	\$1,687
15 General building contractors	4	4	5	6	5	5	*
17 Special trade contractors	-	-	-	-	-	-	*
TRANS., COMM. & UTILITES	342	454	476	480	364	423	\$1,986
41 Local & interurban passenger transit	328	421	443	445	336	395	*
42 Trucking & warehousing	3	3	2	3	2	3	*
44 Water transportation	11	12	12	14	13	12	*
45 Transportation by air	-	18	19	18	13	14	*
TOTAL TRADE	89	144	157	163	118	134	\$1,083
RETAIL TRADE	89	144	157	163	118	134	\$1,083
53 General merchandise stores	-	3	3	3	2	2	*
54 Food stores	7	7	9	8	9	8	*
55 Automotive dealers & service stations	7	4	2	4	3	4	*
56 Apparel & accessory stores	-	15	13	14	9	10	*
58 Eating & drinking places	66	85	94	96	73	83	\$1,019
59 Miscellaneous retail	9	30	36	38	22	27	\$1,213
FINANCE, INS. & REAL ESTATE	7	6	8	8	8	7	*
67 Holding & other investment offices	7	6	8	8	8	7	*
SERVICES	731	1,002	1,033	1,025	884	935	\$1,727
70 Hotels & other lodging places	702	941	960	955	836	879	\$1,537
79 Amusement & recreation services	28	58	70	65	45	53	\$1,372
80 Health services	-	3	3	3	-	2	\$1,645
83 Social services	1	-	-	2	3	1	*
FEDERAL GOVERNMENT	240	251	244	241	226	240	\$3,535
<small>Source: Alaska Department of Labor and Workforce Development</small>							
<small>Notes: Indirect sectors adjusted to net out year round base employment levels. Direct services such as hotel and lodging places are not adjusted.</small>							
<small>Federal government not adjusted for DOD.</small>							

Denali Borough							
1998 Employment & Earnings Visitor Sectors							
	MAY	JUN	JUL	AUG	SEP	Average Summer	Annual Averg Mo Earnings
INDUSTRIAL CLASSIFICATION	EMP	EMP	EMP	EMP	EMP	Mo Emp	based on 12 months
TOTAL INDUSTRIES	1,528	2,006	2,053	2,013	1,668	1,854	\$2,660
PRIVATE OWNERSHIP	1,275	1,739	1,787	1,752	1,433	1,597	\$2,529
FEDERAL GOVERNMENT	253	267	266	261	235	256	\$3,691
TRANS., COMM. & UTILITIES	358	490	524	501	402	455	\$2,168
41 Local & interurban passenger transit	352	445	467	450	363	415	*
42 Trucking & warehousing	4	5	6	5	5	5	*
44 Water transportation	2	16	21	18	13	14	*
45 Transportation by air	0	24	30	28	21	21	\$2,161
TOTAL TRADE	108	176	168	176	130	152	\$1,030
RETAIL TRADE	108	176	168	176	130	152	\$1,030
53 General merchandise stores	2	2	2	2	2	2	*
54 Food stores	10	9	9	14	10	10	\$993
55 Automotive dealers & service stations	6	8	0	2	3	4	*
56 Apparel & accessory stores	0	4	5	7	0	3	*
58 Eating & drinking places	72	119	121	119	99	106	\$1,011
59 Miscellaneous retail	18	34	31	32	16	26	\$1,190
FINANCE, INS. & REAL ESTATE	5	10	14	14	14	11	*
67 Holding & other invest. offices	5	10	14	14	14	11	*
SERVICES	804	1,063	1,081	1,061	887	979	\$2,379
70 Hotels & other lodging places	760	987	991	971	835	909	\$1,568
72 Personal services	6	7	7	7	3	6	*
79 Amusement & recreation services	37	68	81	80	49	63	\$1,456
80 Health services	1	1	2	3	0	1	\$1,564
FEDERAL GOVERNMENT	253	267	266	261	235	256	\$3,691
Source: Alaska Department of Labor and Workforce Development							
Notes: Indirect sectors adjusted to net out year round base employment levels. Direct services such as hotel and lodging places are not adjusted.							
Federal government not adjusted for DOD.							

Denali Borough
1999 Employment & Earnings Visitor Sectors

	MAY	JUN	JUL	AUG	SEP	Average Summer	Annual Average
INDUSTRIAL CLASSIFICATION	EMP	EMP	EMP	EMP	EMP	Mo Emp	Mo Earnings <small>based on 12 months</small>
TOTAL INDUSTRIES	2,182	3,039	3,021	2,975	2,737	2,791	\$2,585
PRIVATE OWNERSHIP	1,943	2,800	2,785	2,748	2,510	2,557	\$2,486
FEDERAL GOVERNMENT	239	239	236	227	227	234	\$3,686
CONSTRUCTION	6	9	11	10	9	9	*
15 General building contractors	6	8	10	8	7	8	*
17 Special trade contractors	-	1	1	2	2	1	*
TRANS., COMM. & UTILITIES	399	532	533	530	440	487	\$2,680
41 Local & interurban passenger transit	393	490	496	493	413	457	*
42 Trucking & warehousing	2	4	7	6	4	5	*
44 Water transportation	2	13	1	2	1	4	*
45 Transportation by air	2	25	29	29	22	21	\$2,136
TOTAL TRADE	708	1,215	1,180	1,138	1,189	1,086	*
RETAIL TRADE	708	1,215	1,180	1,138	1,189	1,086	*
53 General merchandise stores	2	2	2	2	1	2	*
54 Food stores	15	16	12	13	10	13	*
55 Automotive dealers & service stations	15	18	20	21	15	18	\$973
56 Apparel & accessory stores	-	8	10	14	10	8	*
58 Eating & drinking places	660	1,141	1,103	1,055	1,134	1,019	*
59 Miscellaneous retail	16	30	33	33	19	26	\$1,218
SERVICES	830	1,044	1,061	1,070	872	975	\$2,668
70 Hotels & other lodging places	742	942	971	965	807	885	\$1,764
72 Personal services	4	6	7	8	3	6	*
73 Business services	8	12	-	5	7	6	*
79 Amusement & recreation services	73	83	83	85	55	76	\$1,390
80 Health services	-	-	-	7	-	1	\$1,842
83 Social services	3	1	-	-	-	1	*
Federal Government	239	239	236	227	227	234	\$3,686
<small>Source: Alaska Department of Labor and Workforce Development</small>							
<small>Notes: Indirect sectors adjusted to net out year round base employment levels. Direct services such as hotel and lodging places are not adjusted.</small>							
<small>Federal government not adjusted for DOD.</small>							

DENALI BOROUGH							
2000 Employment & Earnings Visitor Sectors							
						Average	Annual Averg
	MAY	JUN	JUL	AUG	SEP	Summer	Mo Earnings
INDUSTRIAL CLASSIFICATION	EMP	EMP	EMP	EMP	EMP	Mo Emp	based on 12 months
Total Industries	1,464	2,020	2,333	2,267	1,845	1,986	\$2,834
Private Ownership	1,282	1,820	2,127	2,064	1,661	1,791	\$2,714
Federal Government	182	200	206	203	184	195	\$3,950
Construction	1	13	1	-	-	3	\$4,488
16 Heavy Constr. Contractors	1	13	1	-	-	3	*
Transportation, Comm & Utilities	432	578	576	566	476	526	\$3,289
41 Local&Interurban Transp.	416	538	535	529	442	492	*
42 Trucking and Warehousing	2	5	3	3	3	3	*
44 Water Transportation	-	11	13	11	11	9	*
45 Transportation by Air	14	24	25	23	20	21	*
Total Trade	439	681	777	729	583	642	*
Retail Trade	439	681	777	729	583	642	*
53 General Merchandise Store	2	2	2	1	1	2	*
54 Food Stores	15	5	5	2	2	6	*
55 Auto. Dealers & Serv.Stat	16	18	25	27	19	21	*
56 Apparel&Accessory Stores	-	9	10	10	6	7	*
58 Eating & Drinking Places	397	618	704	656	535	582	*
59 Miscellaneous Retail	9	29	31	33	20	24	\$1,226
Finance, Insurance & Real Estate	7	6	3	4	4	5	*
67 Holding & Other Invest.	7	6	3	4	4	5	*
Services	403	542	770	765	598	616	\$1,731
70 Hotels & Other Lodging	327	443	640	638	505	511	\$1,782
72 Personal Services	6	7	10	9	3	7	*
73 Business Services	1	2	1	2	1	1	*
79 Amusement and Recreation	45	66	94	92	68	73	*
80 Health Services	1	2	6	4	3	3	\$1,864
Federal Government	182	200	206	203	184	195	\$3,950
Source: Alaska Department of Labor and Workforce Development							
Notes: Indirect sectors adjusted to net out year round base employment levels. Direct services such as hotel and lodging places are not adjusted.							
Federal government adjusted for DOD.							

DENALI BOROUGH							
2001 Employment & Earnings for Visitor Sectors							
	MAY	JUN	JUL	AUG	SEP	Average	Annual Averg
INDUSTRIAL CLASSIFICATION	EMP	EMP	EMP	EMP	EMP	Summer	Mo Earnings
						Mo Emp	based on 12 months
Total Industries	1,717	2,486	2,573	2,697	2,464	2,387	\$2,656
Private Ownership	1,531	2,261	2,357	2,489	2,241	2,176	\$2,540
Federal Government	186	225	216	208	223	212	\$3,720
Construction	2	3	4	6	6	4	*
15 Bldg. Const-Genl & Operat	2	3	4	6	6	4	*
17 Special Trade Contractors	-	-	-	2	1	1	*
Transportation, Comm & Utilities	403	560	558	594	491	521	\$3,273
41 Local&Interurban Transp.	394	522	520	558	460	491	*
42 Trucking and Warehousing	3	5	5	5	4	4	*
44 Water Transportation	6	12	13	12	11	11	*
45 Transportation by Air	-	21	20	19	16	15	*
Total Trade	619	1,005	1,049	1,151	1,130	991	\$1,544
Retail Trade	619	1,005	1,049	1,151	1,130	991	\$1,544
53 General Merchandise Store	1	1	1	1	1	1	*
54 Food Stores	1	1	2	-	-	1	*
55 Auto. Dealers & Serv.Stat	13	12	8	9	9	10	*
58 Eating & Drinking Places	566	931	974	1,078	1,075	925	*
59 Miscellaneous Retail	15	37	41	40	23	31	\$1,494
Finance, Insurance & Real Estate	7	7	5	6	7	6	*
67 Holding & Other Invest.	7	7	5	6	7	6	*
Services	500	686	741	732	607	653	\$1,745
70 Hotels & Other Lodging	438	592	600	600	510	548	\$1,795
72 Personal Services	8	10	7	7	8	8	*
73 Business Services	8	8	8	8	8	8	*
79 Amusement and Recreation	44	71	119	113	76	85	*
80 Health Services	2	5	7	4	5	5	\$1,903
Federal Government	186	225	216	208	223	212	\$3,720
Source: Alaska Department of Labor and Workforce Development							
Notes: Indirect sectors adjusted to net out year round base employment levels. Direct services such as hotel and lodging places are not adjusted.							
Federal government adjusted for DOD.							

Denali Borough								
2002 Employment & Earnings Visitor Sectors								
		MAY	JUN	JUL	AUG	SEP	Average Summer	Annual Average
NAICS	INDUSTRIAL CLASSIFICATION	EMP	EMP	EMP	EMP	EMP	Mo Emp	Mo Earnings
								<small>based on 12 months</small>
000000	TOTAL INDUSTRIES	1,938	2,707	2,899	2,911	2,636	2,618	\$2,519
920010	FEDERAL GOVERNMENT	180	221	232	242	262	227	\$3,360
100000	PRIVATE OWNERSHIP	1,758	2,486	2,667	2,669	2,374	2,391	\$2,424
300000	GOODS-PRODUCING	2	4	9	6	4	5	
230000	CONSTRUCTION	2	4	9	6	4	5	
400000	SERVICE-PROVIDING	1,756	2,482	2,658	2,663	2,370	2,386	
500000	TRADE, TRANS. & UTILITIES	537	784	783	762	624	698	
440000	Retail Trade	35	85	89	75	54	68	\$1,376
444000	Building Material & Garden	5	4	0	0	0	2	
445000	Food & Beverages	4	4	4	3	4	4	
447000	Gasoline Stations	15	35	36	30	23	28	\$1,314
451000	Sporting goods, Books, Music, etc.	8	16	19	14	11	14	
452000	General Merchandise	0	0	1	1	0	0	
453000	Miscellaneous	0	18	19	14	11	12	
454000	Nonstore Retailers	3	8	10	13	5	8	
480000	Transportation & Warehousing	502	699	694	687	570	630	
485000	Transit & Ground Passenger	7	9	12	15	11	11	
487000	Scenic & Sightseeing	495	690	682	672	559	620	
900000	LEISURE & HOSPITALITY	1,208	1,687	1,864	1,889	1,738	1,677	\$1,611
710000	Arts, Entertainment & Recreation	79	82	120	118	81	96	
711000	Performing Arts	7	8	8	9	9	8	
713000	Amusements, Gambling, Rec.	72	74	112	109	72	88	
720000	Accommodation & Food Svcs.	1,129	1,605	1,744	1,771	1,657	1,581	
721000	Accommodation	534	783	818	804	699	728	
722000	Food Services & Drinking Places	595	822	926	967	958	854	
810000	OTHER SERVICES	11	11	11	12	8	11	
813000	Membership Organizations, etc.	11	11	11	12	8	11	
Source: Alaska Department of Labor and Workforce Development, Employment and Earnings data.								
Notes: Indirect sectors adjusted to net out year round base employment levels. Direct services such as hotel and lodging places are not adjusted.								
Federal government adjusted for DOD.								

Denali Borough								
2003 Employment & Earnings Visitor Sectors								
		MAY	JUN	JUL	AUG	SEP	Average Summer	Annual Averg
NAICS	INDUSTRIAL CLASSIFICATION	EMP	EMP	EMP	EMP	EMP	Mo Emp	Mo Earnings
								based on 12 months
000000	TOTAL INDUSTRIES	2,163	2,930	3,285	3,351	3,079	2,962	\$2,711
920010	FEDERAL GOVERNMENT	187	220	225	219	236	217	\$3,812
100000	PRIVATE OWNERSHIP	1,976	2,710	3,060	3,132	2,843	2,744	\$2,560
230000	CONSTRUCTION	9	22	23	21	12	17	
236000	Construction of Buildings	1	6	8	7	2	5	
238000	Specialty Trade Contractors	8	16	15	14	10	13	
400000	SERVICE-PROVIDING	1,657	2,348	2,707	2,795	2,533	2,408	
500000	TRADE, TRANS. & UTILITIES	679	782	807	794	688	750	
440000	Retail Trade	42	61	58	55	42	52	\$1,274
444000	Building Material & Garden	3	3	1	0	0	1	
445000	Food & Beverages	8	8	5	5	5	6	
447000	Gasoline Stations	9	8	8	7	3	7	
451000	Sporting goods, Books, Music	18	20	16	15	9	16	
452000	General Merchandise	0	0	1	1	0	0	
453000	Miscellaneous	0	16	20	20	20	15	
454000	Nonstore Retailers	4	6	7	7	5	6	
480000	Transportation & Warehousing	583	665	697	686	591	644	
481000	Air Transportation	9	15	16	16	15	14	
485000	Transit & Ground Passenger	13	10	17	19	18	15	
487000	Scenic & Sightseeing	561	640	663	650	557	614	
488000	Support Activities	0	0	1	1	1	1	
900000	LEISURE & HOSPITALITY	977	1,551	1,885	1,987	1,831	1,646	\$1,807
710000	Arts, Entertainment & Recreation	54	78	134	129	117	102	
711000	Performing Arts	11	12	13	12	10	12	
712000	Museums, Zoos, Parks	0	0	6	5	6	3	
713000	Amusements, Gambling, Rec.	43	66	115	112	101	87	
720000	Accommodation & Food Svcs.	923	1,473	1,751	1,858	1,714	1,544	
721000	Accommodation	367	629	798	801	668	653	\$1,794
722000	Food Services & Drinking Places	556	844	953	1,057	1,046	891	
813000	Membership Organizations, etc.	1	15	15	14	14	12	
Source: Alaska Department of Labor and Workforce Development, Employment and Earnings data.								
Notes: Indirect sectors adjusted to net out year round base employment levels. Direct services such as hotel and lodging places are not adjusted.								
Federal government adjusted for DOD.								

Denali Borough								
Preliminary 2004 Employment & Earnings Visitor Sectors								
		MAY	JUN	JUL	AUG	SEP	Average Summer	Annual Averg
NAICS	INDUSTRIAL CLASSIFICATION	EMP	EMP	EMP	EMP	EMP	Mo Emp	Mo Earnings <small>based on 12 months</small>
000000	TOTAL INDUSTRIES	1,477	2,863	3,266	3,262	2,906	2,755	\$2,024
920010	FEDERAL GOVERNMENT	184	228	233	226	200	214	\$3,115
100000	PRIVATE OWNERSHIP	1,293	2,635	3,033	3,036	2,706	2,541	\$1,896
230000	CONSTRUCTION	10	9	11	6	4	8	\$2,189
236000	Construction of Buildings	3	0	0	2	0	1	
238000	Specialty Trade Contractors	7	9	11	4	4	7	
400000	SERVICE-PROVIDING	1,283	2,626	3,022	3,030	2,702	2,533	\$1,747
500000	TRADE, TRANS. & UTILITIES	561	701	737	708	596	661	
440000	Retail Trade	28	57	58	58	41	48	\$1,109
444000	Building Material & Garden	8	9	3	0	0	4	
445000	Food & Beverages	2	1	1	2	1	1	
447000	Gasoline Stations	4	6	7	8	8	7	
451000	Sporting goods, Books, Music	8	19	20	22	9	16	
452000	General Merchandise	1	1	1	1	1	1	
453000	Miscellaneous	5	21	26	25	22	20	
480000	<i>Transportation & Warehousing</i>	<i>505</i>	<i>587</i>	<i>621</i>	<i>592</i>	<i>514</i>	<i>564</i>	
481000	Air Transportation	8	13	14	13	12	12	
485000	Transit & Ground Passenger	11	7	4	3	8	7	
487000	Scenic & Sightseeing	486	567	603	576	494	545	
900000	LEISURE & HOSPITALITY	714	1,915	2,276	2,314	2,098	1,863	\$1,469
710000	Arts, Entertainment & Recreation	94	122	164	168	147	139	\$1,298
711000	Performing Arts	14	15	15	15	13	14	
712000	Museums, Zoos, Parks, etc.	4	5	4	8	3	5	
713000	Amusements, Gambling, Recreation	76	102	145	145	131	120	\$1,200
720000	<i>Accommodation & Food Svcs.</i>	<i>526</i>	<i>1,671</i>	<i>1,948</i>	<i>1,978</i>	<i>1,804</i>	<i>1,585</i>	<i>\$1,614</i>
721000	Accommodation	433	716	776	837	708	694	\$1,036
722000	Food Services & Drinking Places	93	955	1,172	1,141	1,096	891	
810000	OTHER SERVICES	8	10	9	8	8	9	
813000	Membership Organizations, etc.	8	10	9	8	8	9	
Source: Alaska Department of Labor and Workforce Development, Employment and Earnings data.								
Notes: Indirect sectors adjusted to net out year round base employment levels. Direct services such as hotel and lodging places are not adjusted.								
Federal government adjusted for DOD.								
Data is preliminary and subject to change								
Blanks in Total Earnings and Average Mo Earnings columns due to confidentiality; data is suppressed								

Denali Borough														
Hospitality and Leisure Sector Employment 1997-2004														
NAICS	INDUSTRIAL CLASSIFICATION	YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
			EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP
900000	LEISURE & HOSPITALITY	2004	150	152	154	236	763	1,936	2,276	2,314	2,098	---	---	---
710000	Arts, Entertainment & Recreation	2004	9	8	5	12	94	122	164	168	147	---	---	---
711000	Performing Arts	2004	3	3	1	5	14	15	15	15	13	---	---	---
712000	Museums, Zoos, Parks	2004	2	2	1	1	4	5	4	8	3	---	---	---
713000	Amusements, Gambling, Rec.	2004	4	3	3	6	76	102	145	145	131	---	---	---
720000	Accommodation & Food Svcs.	2004	141	144	149	224	669	1,814	1,948	1,978	1,804	---	---	---
721000	Accommodation	2004	42	44	45	98	476	759	776	837	708	---	---	---
722000	Food Services & Drinking Places	2004	99	100	104	126	193	1,055	1,172	1,141	1,096	---	---	---
900000	LEISURE & HOSPITALITY	2003	125	133	146	318	977	1,551	1,885	1,987	1,831	626	253	232
710000	Arts, Entertainment & Recreation	2003	6	6	5	19	54	78	134	129	117	28	3	2
711000	Performing Arts	2003	2	2	2	3	11	12	13	12	10	2	2	2
712000	Museums, Zoos, Parks	2003	0	0	0	0	0	0	6	5	6	0	0	0
713000	Amusements, Gambling, Rec.	2003	4	4	3	16	43	66	115	112	101	26	1	0
720000	Accommodation & Food Svcs.	2003	119	127	141	299	923	1,473	1,751	1,858	1,714	598	250	230
721000	Accommodation	2003	28	32	38	51	367	629	798	801	668	221	91	84
722000	Food Services & Drinking Places	2003	91	95	103	248	556	844	953	1,057	1,046	377	159	146
900000	LEISURE & HOSPITALITY	2002	214	231	245	440	1,208	1,687	1,864	1,889	1,738	669	365	370
710000	Arts, Entertainment & Rec.	2002	1	0	0	8	79	82	120	118	81	24	8	8
711000	Performing Arts	2002	0	0	0	0	7	8	8	9	9	2	2	2
713000	Amusements, Gambling, Rec.	2002	1	0	0	8	72	74	112	109	72	22	6	6
720000	Accommodation & Food Svcs.	2002	213	231	245	432	1,129	1,605	1,744	1,771	1,657	645	357	362
721000	Accommodation	2002	116	125	132	74	534	783	818	804	699	401	120	124
722000	Food Services & Drinking Places	2002	97	106	113	358	595	822	926	967	958	244	237	238
	Subtotal	2001	119	122	140	217	1,048	1,594	1,693	1,791	1,661	639	381	379
	58 Eating & Drinking Places	2001	83	90	95	111	566	931	974	1,078	1,075	262	242	236
	70 Hotels & Other Lodging	2001	36	32	45	105	438	592	600	600	510	355	135	138
	79 Amusement and Recreation	2001	-	-	-	1	44	71	119	113	76	22	4	5
	Subtotal	2000	183	192	203	347	769	1,127	1,438	1,386	1,108	279	242	205
	58 Eating & Drinking Places	2000	142	145	155	270	397	618	704	656	535	176	170	168
	70 Hotels & Other Lodging	2000	41	47	48	71	327	443	640	638	505	103	47	36
	79 Amusement and Recreation	2000	-	-	-	6	45	66	94	92	68	-	25	1
	Subtotal	1999	381	385	407	590	1,475	2,166	2,157	2,105	1,996	772	675	645
	58 Eating & drinking places	1999	149	151	165	281	660	1,141	1,103	1,055	1,134	481	411	402
	70 Hotels & other lodging	1999	232	234	241	306	742	942	971	965	807	283	251	242
	79 Amusement & recreation	1999	-	-	1	3	73	83	83	85	55	8	13	1
	Subtotal	1998	214	207	257	325	869	1,174	1,193	1,170	983	679	296	269
	58 Eating & drinking places	1998	24	21	18	30	72	119	121	119	99	25	22	19
	70 Hotels & other lodging places	1998	190	186	239	289	760	987	991	971	835	654	274	250
	79 Amusement & recreation	1998	0	0	0	6	37	68	81	80	49	0	0	0
	Subtotal	1997	223	236	296	327	796	1,084	1,124	1,116	954	640	267	270
	58 Eating & drinking places	1997	22	25	26	29	66	85	94	96	73	26	26	22
	70 Hotels & other lodging	1997	201	211	270	296	702	941	960	955	836	608	241	248
	79 Amusement & rec. services	1997	-	-	-	2	28	58	70	65	45	6	-	-

Source: Alaska Department of Labor and Workforce Development, Employment and Earnings data.

Notes: Indirect sectors adjusted to net out year round base employment levels. Direct services such as hotel and lodging places are not adjusted. --- = not available.

Denali Borough														
Transportation Sector Employment 1997-2004														
			JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
NAICS	INDUSTRIAL CLASSIFICATION	YEAR	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP	EMP
480000	Transportation & Warehousing/Subtotal	2004	73	89	182	330	605	698	621	592	514	---	---	---
481000	Air Transportation	2004	1	1	1	5	8	13	14	13	12	---	---	---
485000	Transit & Ground Passenger	2004	11	10	12	12	11	18	4	3	8	---	---	---
487000	Scenic & Sightseeing	2004	61	78	169	313	586	667	603	576	494	---	---	---
480000	Transportation & Warehousing/Subtotal	2003	75	108	167	244	583	665	697	686	591	112	85	78
481000	Air Transportation	2003	1	1	1	1	9	15	16	16	15	3	1	2
485000	Transit & Ground Passenger	2003	10	10	12	11	13	10	17	19	18	14	13	15
487000	Scenic & Sightseeing	2003	64	97	154	232	561	640	663	650	557	94	70	61
488000	Support Activities	2003	0	0	0	0	0	0	1	1	1	1	1	0
480000	Transportation & Warehousing/Subtotal	2002	67	113	165	220	510	707	703	695	577	638	76	75
485000	Transit & Ground Passenger	2002	7	7	7	9	14	16	19	22	18	9	10	11
487000	Scenic & Sightseeing	2002	59	105	157	210	495	690	682	672	559	629	66	64
	Subtotal	2001	63	116	169	241	474	631	629	665	562	590	89	78
	41 Local&Interurban Transp.	2001	62	115	168	234	464	592	590	628	530	577	84	73
	42 Trucking and Warehousing	2001	1	1	1	2	4	6	6	6	5	5	4	4
	44 Water Transportation	2001	-	-	-	5	6	12	13	12	11	7	-	-
	45 Transportation by Air	2001	-	-	-	-	-	21	20	19	16	1	1	1
	Subtotal	2000	64	105	173	237	494	640	638	628	538	561	73	62
	41 Local&Interurban Transp.	2000	63	104	171	236	476	598	595	589	502	556	70	59
	42 Trucking and Warehousing	2000	1	1	2	1	4	7	5	5	5	4	3	3
	44 Water Transportation	2000	-	-	-	-	-	11	13	11	11	-	-	-
	45 Transportation by Air	2000	-	-	-	-	14	24	25	23	20	1	-	-
	Subtotal	1999	57	130	167	221	456	589	590	587	497	111	67	61
	41 Local & interurban pass. transit	1999	57	130	167	218	450	547	553	550	470	104	64	58
	42 Trucking & warehousing	1999	-	-	-	-	2	4	7	6	4	2	1	1
	44 Water transportation	1999	-	-	-	2	2	13	1	2	1	3	2	2
	45 Transportation by air	1999	-	-	-	1	2	25	29	29	22	2	-	-
	Subtotal	1998	64	127	163	208	418	550	584	561	462	492	58	64
	41 Local & interurban pass. transit	1998	61	124	161	204	412	505	527	510	423	486	55	62
	42 Trucking & warehousing	1998	0	0	0	1	4	5	6	5	5	2	1	0
	44 Water transportation	1998	3	3	2	3	2	16	21	18	13	3	2	2
	45 Transportation by air	1998	0	0	0	0	0	24	30	28	21	1	0	0
	Subtotal	1997	43	124	148	156	382	494	516	520	404	446	83	70
	41 Local & interurban pass. transit	1997	40	121	145	154	368	461	483	485	376	442	82	66
	42 Trucking & warehousing	1997	-	-	-	-	3	3	2	3	2	2	-	-
	44 Water transportation	1997	2	2	2	2	11	12	12	14	13	2	1	4
	45 Transportation by air	1997	1	1	1	-	-	18	19	18	13	-	-	-

Source: Alaska Department of Labor and Workforce Development, Employment and Earnings data. --- = not available.

APPENDIX F

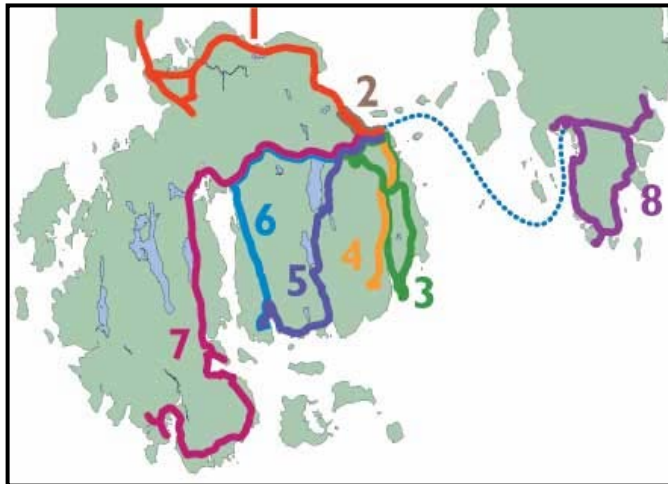
CASE STUDIES

1. Acadia National Park

The Island Explorer provides seasonal shuttle service through Acadia National Park and neighboring gateway communities in southeastern Maine. The eight-route bus system is operated by Downeast Transportation, a private, not-for-profit agency that serves as the public transit provider in Hancock County. Island Explorer service is funded by a partnership consisting of the National Park Service, the Mount Desert Island League of Towns, Downeast Transportation, Inc., Friends of Acadia, L.L.Bean and other local businesses, as well as the Federal Transit Administration (FTA) and Maine Department of Transportation (MDOT). The Acadia Deputy Superintendent is a voting member of MDILOT

Island Explorer operates fare-free service on eight routes (Figure F-1) linking hotels, inns, and campgrounds to Acadia National Park, neighboring village centers, and Mount Desert Island. Service began in

1999, utilizing public funding and a \$420,000 grant from Friends of Acadia, a 3,000-member private non-profit organization that supplements government support for the park with financial contributions, recruits and directs park volunteers, and advocates before Congress and the Maine Legislature. In 2002, a \$1.0 million corporate donation by L.L. Bean funded an extension of the operating season from the traditional Labor Day end to Columbus Day. Acadia National Park funding stems from park entry permit revenues. Park visitors are required to purchase a \$20 entry permit or a \$40 season pass.



The shuttle buses (Figure F-2) are propane-powered vehicles and are equipped with global positioning satellite (GPS) location technology. Vehicle location information is transmitted to a dispatch center in Bar Harbor Village and displayed on maps using geographic information systems (GIS) software. The maps are updated every three minutes, and any time a bus departs a scheduled stop. The maps also display estimated arrival times for the next bus due at each location. This equipment was acquired through a technology demonstration project sponsored by FTA and the U.S. Department of

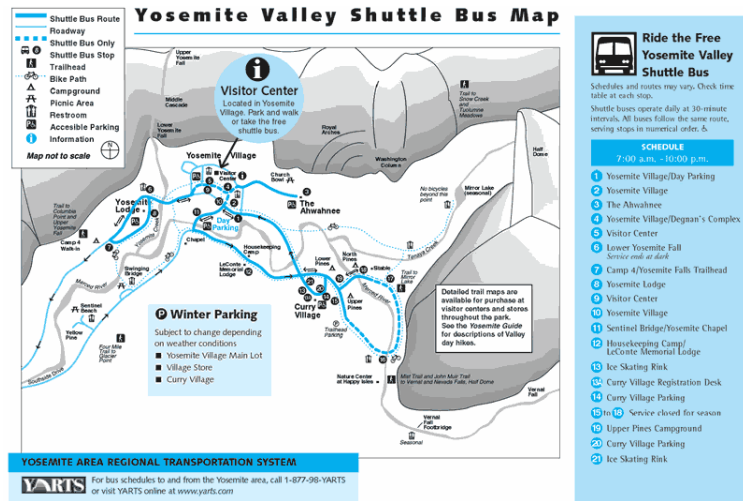
Interior. Project procurement and administrative oversight was provided by the Maine Department of Transportation.



In 2004, the local funding partnership was recognized by U.S. Environmental Protection Agency (EPA) for innovative air quality improvement efforts.

2. Yosemite National Park

An extensive bus system operates in and around Yosemite National Park, including four National Park Service-sponsored routes within the park, two additional fee-for-service routes serving hikers and backpackers, and the Yosemite Area Regional Transportation System (YARTS), the public transit provider for the neighboring counties of Mariposa, Merced and Mono.



Yosemite Area Regional Transportation System (YARTS), the public transit provider for the neighboring counties of Mariposa, Merced and Mono. The primary internal route is the Yosemite Valley Shuttle, which provides convenient access around eastern Yosemite Valley all year. (See Figure F-3) The bus stops at or near all overnight accommodations, stores, and major vistas in eastern Yosemite Valley.

Other internal park shuttles serve Wawona-Mariposa Grove and Tuolumne Meadows during the summer season, and the Badger Pass ski area during winter months.

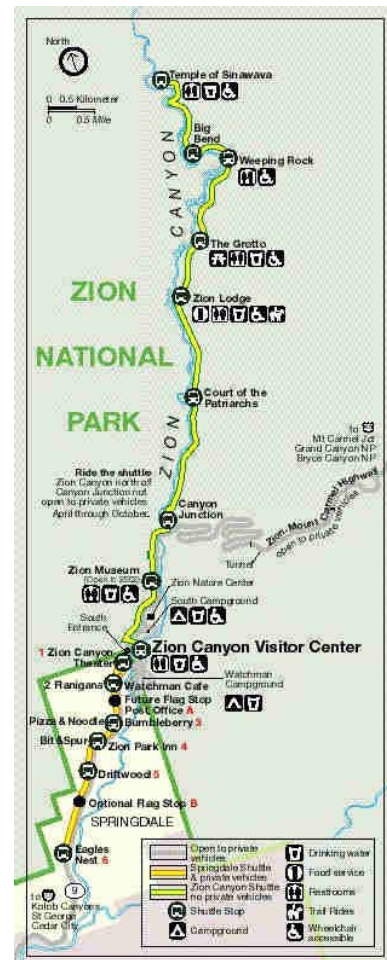
Two additional routes operate on a fee-for-service basis primarily for the benefit of hikers and backpackers. These include the Tuolumne Meadows Hikers' Bus running along the Tioga Road, and the Glacier Point Hikers' Bus. Visitors may ride the bus to Glacier Point and hike down, or hike up and return by bus.

YARTS operates public transit service on a fee-for-service basis, with one-way fares ranging from \$1.00 to \$10.00 depending on distance traveled. All fares include the gate fee to enter Yosemite National Park. The system began operating in May of 2000 and links the Yosemite Valley to Merced and Mammoth to via Tuolumne Meadows. Buses operate on Highway 140 and Highway 120 east (summer only). The service is designed to offer visitors an alternative to driving into the Park, and marketed as “voluntary” for those who choose to leave their cars parked in nearby communities. YARTS serves all major activity centers in the Park, and provides seamless transfer connections to the Park Service-funded internal shuttles. Service levels vary by season and day of week to meet demand. Fare tickets are available at local lodging establishments, visitors’ bureaus, and YARTS bus drivers at time of boarding.

Yosemite National Park received permission in 2003 to use donated funds, funds collected from user fees, or appropriated funds to pay for construction of facilities outside the boundaries of the park that serve Yosemite and its visitors. This provision, which is similar to authority that has existed since 1996 for Zion National Park, would facilitate the development of the Yosemite Area Regional Transportation System (YARTS) by allowing the National Park Service to help pay for the costs of YARTS facilities outside the park.

3. Zion National Park

Fare-free shuttle bus service operates on Zion Canyon Scenic Drive from early April through the end of October. Private vehicles are not allowed in the area covered by the shuttle during the summer season, but may access other parts of the Park. The system was inaugurated in May 2000 to provide convenient access to numerous hiking trails, scenic points, picnicking, horseback riding and the Zion Canyon Lodge. Shuttle service is provided through a concession agreement with Parks Transportation, Inc., a subsidiary of McDonald Transit Associates of Fort Worth, Texas.



Buses run on two loops; one making six stops in the Town of Springdale and the other making eight stops at points of interest in the Park (Figure F-4). The transfer point between loops is at the Zion Canyon Visitor Center in the Park (Figure F-5).

The shuttle fleet consists of 28 propane-powered buses, 27 trailer units that bring capacity up to 66 passengers per bus, and two electric trams each with capacity for 36 passengers. All are fully accessible and equipped with bicycle racks that carry two bicycles. Interior space is provided for backpacks, coolers, baby strollers and similar items. Vehicle operations and maintenance are performed by a service contractor.



The system was conceived in 1993 with National Park Service advocacy of a shuttle system to relieve traffic congestion in the upper portion of Zion Canyon. Park access traffic was also impacting area roads, including the narrow main street in downtown Springdale, Utah. The Town of Springdale, a community of 450 residents located near the south entrance to the Park, proposed extending the shuttle system being planned by the Park Service with the intention of encouraging visitors to leave their personal vehicles in Springdale. Mutual benefits were perceived to be increased economic activity for the Town and a reduced parking requirement at the new Visitor Center for Park Service. This led to a partnership comprised of the National Park Service, the Town of Springdale, Zion Natural History

Association, Utah Department of Transportation (UDOT), Federal Highway Administration, Zion Canyon Visitors Bureau, the local business community and the Park concessionaires. The partnership was brought together through the joint efforts of the Parks Superintendent and Town Mayor, who formed a ten-member committee to develop a transportation plan to address the needs of both the community and the park. The Zion Natural History Association and UDOT pursued joint funding for the project, which was combined with National Park Service funding for the portion of the shuttle operating inside the Park.

Initial capital costs included \$9.4 million for shuttle buses and trailers, and \$2.6 million for an operating facility. Annual system operations cost about \$2.5 million to carry 2.5 million passengers. The Utah DOT provided over \$1.0 million of federal enhancement funds to construct street, sidewalk and landscaping improvements around the shuttle stops.

**APPENDIX G
ALASKA RURAL TRANSIT SYSTEMS
RIDERSHIP AND OPERATING CHARACTERISTICS, FY 2004**

System ----- Characteristic	Central Area Rural Transit System (CARTS)	Ketchikan Borough Transit (The Bus)	Kodiak Area Transit (KATS)	Mat-Su Transit (MASCOT)	North Slope Public Transit	Community Ride – Sitka
Lead Agency	CARTS, Inc.	Borough Public Works Dept.	Kodiak Senior Center	Mat-Su Community Transit, Inc.	Borough Public Works Dept.	Center for Community, Inc.
Organizational Structure	501(c)3 private non-profit	Government	501(c)3 private non-profit	501(c)3 private non-profit	Government	501(c)3 private non-profit
Service Area Population	30,000	15,000	7,000	35,000	4,500	8,900
Service Design	Paratransit Brokerage	Fixed route & ADA paratransit	Paratransit	Deviated fixed route; & paratransit	Fixed route & ADA paratrans	Contract fixed route and paratransit
Rider Eligibility	General Public	General Public	General Public	General Public	General Public	General Public
Vehicles in Peak Service	4 CART plus contractor vehicles	Fixed route – 4 Paratransit – 1	1	Fixed route – 4 Paratransit – 1	NR	Fixed route – 2 Paratransit – 2
Total Fleet	5 CART, plus 17 contractor vehicles	Fixed route – 5 Paratransit – 1	2	7	NR	Fixed route – 3 Paratransit – 3
Fleet Composition	3 vans 2 minivans	2 large buses 4 small buses	2 small buses	1 school bus 6 small buses	NR	3 small buses 3 vans
Days of Service	Mon – Fri	Mon – Sun	Mon – Fri	Mon – Fri	Mon – Fri	Mon – Fri 1st Sat of month
Operating Hours	7:00a – 11:00p	M-Sa: 5:45a– 10:00p Sun: 8:45a – 3:45p	6:30a – 6:30p	5:00a – 8:00p	6:00a – 6:00p	6:30a – 6:30p Sat – 10:00a – 4:30p
Cash Fares (one-way)	\$2 per zone (13 zones)	\$1.50 – \$2.25	\$2	\$2 base; plus \$2 per dev./ \$1 per mi	NR	\$2 adult \$1 senior/dis/child
Discount Passes	5, 10 & 20-punch cards – no discount	Day - \$8 / \$6.50 Month - \$50 / \$40 25-ride pass - \$30/25	Month - \$85	Day - \$5 Month - \$85	NR	Day: \$5 / \$3 Month: \$50 / \$25 12-ride pass \$20/10

APPENDIX H

FEDERAL TRANSIT ADMINISTRATION FUNDING PROGRAMS

Five federal grant programs authorized by SAFETEA-LU potentially could help to pay for public transportation services in the Denali region, including one that National Park Service could be the grant recipient. The others would require the formation of a public transit entity.

Section 3021 - Alternative Transportation In Parks and Public Lands –establishes a new cooperative Federal Land Management Agency transit program to be managed cooperatively by the Departments of the Interior (DOI) and Transportation (DOT). The nationwide program is authorized at \$96.9 million over four years, as shown in Table H-1. Alaska is assured a minimum 3% of the nationwide authorization in the legislation, or \$2.9 million over four years.

**TABLE H-1
SAFETEA-LU FUNDING AUTHORIZATIONS
DOI/FTA SECTION 3021**

Fiscal Year	National Authorization	Alaska Authorization (minimum 3%)
2006	\$ 22,000,000	\$ 660,000
2007	23,000,000	690,000
2008	25,000,000	750,000
2009	26,900,000	807,000
Total	96,900,000	2,907,000

While the law gives the Secretary of the Interior final responsibility for Section 3021 grant awards, the Federal Transit Administration may assume grant-making and administrative responsibilities on behalf of DOI. The National Park Service is an eligible grantee.

Section 3013 Non-Urbanized Area Formula Grants - provide formula funding to assist public transportation systems operating in areas of less than 50,000 population. Funds are apportioned by Congress in proportion to each State's non-urbanized population. Funding may be used for capital, operating, and administrative assistance to local public bodies, tribal governments, nonprofit organizations and operators of public transportation services. The state must use 15 percent of its annual apportionment to support intercity bus service, unless the Governor certifies that these needs of the state are adequately met. Projects to meet the requirements of the Americans with Disabilities Act, the Clean Air Act, or bicycle access projects, may be funded at 90% Federal match. The maximum FTA share for operating assistance is 50% of the net operating costs. Based on FY 2004 funding levels distributed to the six smaller systems, a Denali public transit system might expect to receive approximately \$40,000 to \$50,000 annually to assist with transit operations, and possibly additional capital funding as needed and available from year to year.

Section 3011 Capital Investment Grants - provide 80% funding for new and replacement buses and facilities used to provide public transportation service. Eligible purposes are acquisition of buses for fleet and service expansion, bus maintenance and administrative facilities, transfer facilities, bus malls, transportation centers, intermodal terminals, park-and-ride stations, acquisition of replacement vehicles, bus rebuilds, bus preventive maintenance, passenger amenities such as passenger shelters and bus stop signs, accessory and miscellaneous equipment such as mobile radio units, supervisory vehicles, fareboxes, computers, shop and garage equipment, and costs incurred in arranging innovative financing for eligible projects. Funds are allocated on a discretionary basis.

Section 3012 Formula Grants for Elderly/disabled Special Needs - provide capital assistance to organizations that provide specialized transportation services to elderly persons and to persons with disabilities. These funds are apportioned based on each State's share of population for these groups of people, and distributed through an annual program of projects included in a statewide grant application. In Alaska, ADOT ensures that local applicants and project activities are eligible and in compliance with Federal requirements, that private not-for-profit transportation providers have an opportunity to participate as feasible, and that the program provides for as much coordination of federally assisted transportation services as feasible.

Section 3018 Jobs Access & Reverse Commute Formula Grants – provide discretionary grants for development and implementation of strategies to ensure that welfare recipients have access to employment and employment training. States, local governments, and private non-profit organizations are eligible for discretionary grants for planning, service coordination, operating and capital expenses for service start-up, promotion of employer-provided transportation, developing financing strategies, and administrative expenses.

APPENDIX I

LOW-FLOOR VEHICLE SPECIFICATIONS

Current specifications for low-floor heavy-duty diesel or CNG-powered buses may be found at:

<http://www.apta.com/research/info/online/>

APPENDIX J

EXAMPLES OF COMMERCIALY AVAILABLE
SHELTERS AND KIOSKS



