

**ENVIRONMENTAL ASSESSMENT
FOR PEAKS OF OTTER
PARKING LOT IMPROVEMENTS AND
TRAIL ACCESSIBILITY**

**Bedford County, Virginia
Blue Ridge Parkway
Milepost 86**



United States Department of the Interior * National Park Service

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May 3, 1999

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TABLE OF CONTENTS

PURPOSE AND NEED FOR AN ENVIRONMENTAL ASSESSMENT	1
BACKGROUND	1
USGS MAP OF PEAKS OF OTTER AREA	2
MAP OF EXISTING & PROPOSED PARKING/TRAIL	3
PURPOSE AND NEED FOR ASSESSMENT	4
ALTERNATIVES, INCLUDING THE PROPOSED ACTION (Parking)	4
NO ACTION ALTERNATIVE	4
ALTERNATIVE 1 - THE PROPOSED ACTION	4
ALTERNATIVES CONSIDERED BUT REJECTED	6
ALTERNATIVES, INCLUDING THE PROPOSED ACTION (Trail)	8
NO ACTION ALTERNATIVE	8
ALTERNATIVE 1 - THE PROPOSED ACTION	9
ALTERNATIVES CONSIDERED BUT REJECTED	13
AFFECTED ENVIRONMENT	14
PARKWAY-WIDE OVERVIEW	14
RIDGE DISTRICT OVERVIEW	15
PROPOSED PROJECT AREA OVERVIEW	15
Natural Environment	15
Cultural Environment	17
ENVIRONMENTAL CONSEQUENCES	18
IMPACTS - PARKING	18
No Action Alternative	18
Alternative 1 - The Proposed Action	18
IMPACTS - TRAIL	20
No Action Alternative	20
Alternative 1 - The Proposed Action	21
Secondary Impacts	22
Cumulative Impacts	22
MITIGATING MEASURES	23
NATURAL ENVIRONMENT MITIGATION MEASURES	23
CULTURAL ENVIRONMENT MITIGATION MEASURES	23
VISUAL ENVIRONMENT MITIGATION MEASURES	23
LITERATURE CITED	24
PLANNING TEAM/PREPARERS	24
CONSULTATION AND COORDINATION	24

PURPOSE AND NEED

BACKGROUND

Concession services at the Peaks of Otter developed area are operated by Virginia Peaks of Otter Company. This concessionaire is assigned three basic locations in the Peaks of Otter developed area. The first, and largest, is the location of the lodge where overnight accommodations, food services, and merchandise sales are provided. The second is the service station where gas, refreshments, and limited gift items can be obtained. And the last is the bus station. Here, a visitor can obtain tickets and access to the Sharp Top bus trip, which is also operated by the concessionaire. In addition, limited sandwiches, camping supplies, and gift items are provided here.

The concession contract has provisions for use of franchise fee dollars for special types of projects that will directly benefit the concessionaire visitors. One of these projects is the ADA rehabilitation of the trail around Abbott Lake and the addition of parking. The purpose of the parking will be to provide accessible access and parking for the trail, serve as an overflow parking area, a parking area for oversize vehicles such as buses and RV's, and employee parking. The parking area will provide handicapped access to the trail around the lake as well as access through a safe corridor to the lodge/restaurant building. These needs are broken down as follows:

Oversize Vehicles – 5 min, 10 max

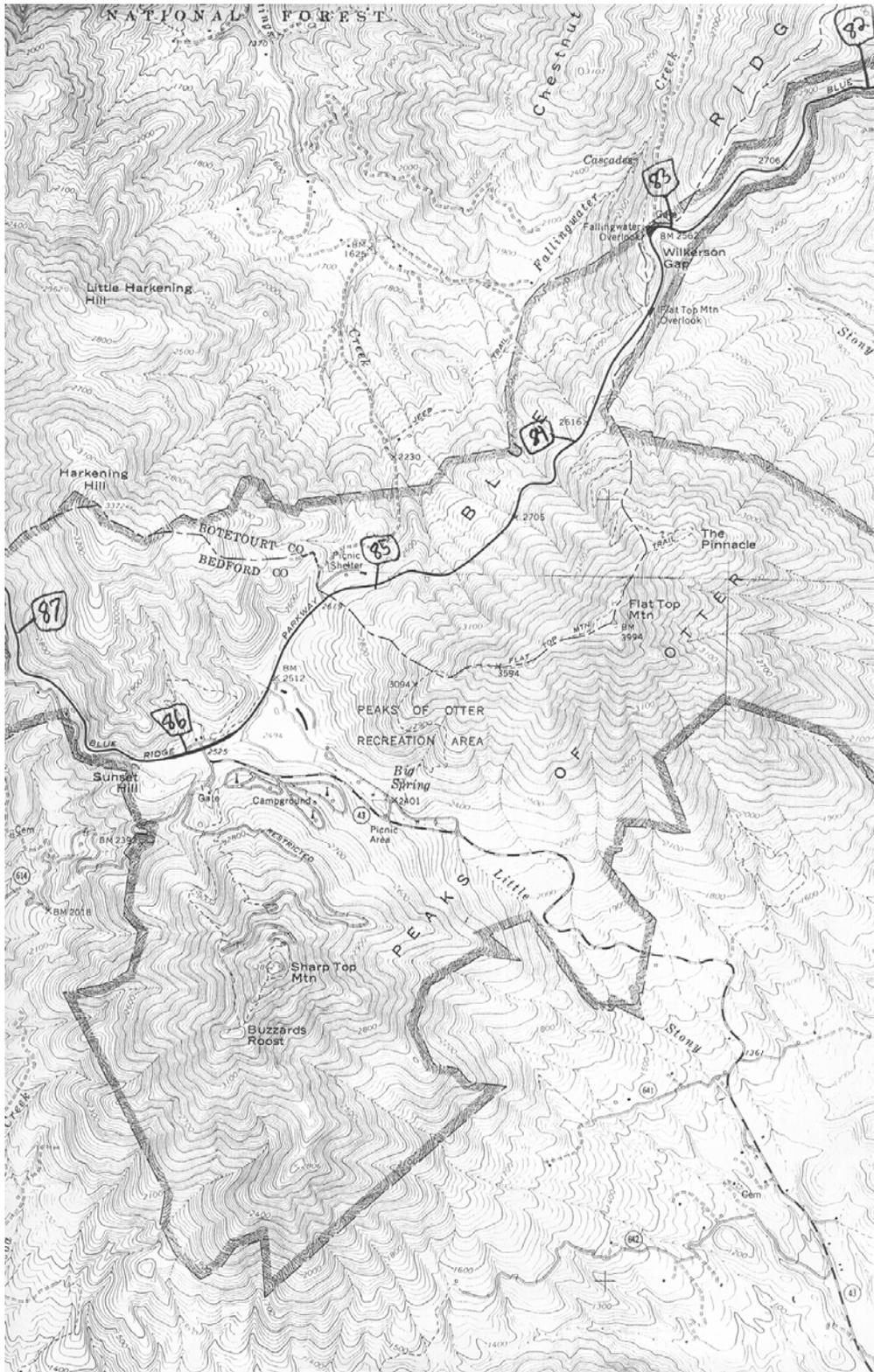
Overflow parking from restaurant – 30 – spaces

Trail head parking for Abbott Lake Loop Trail – 5-7 spaces

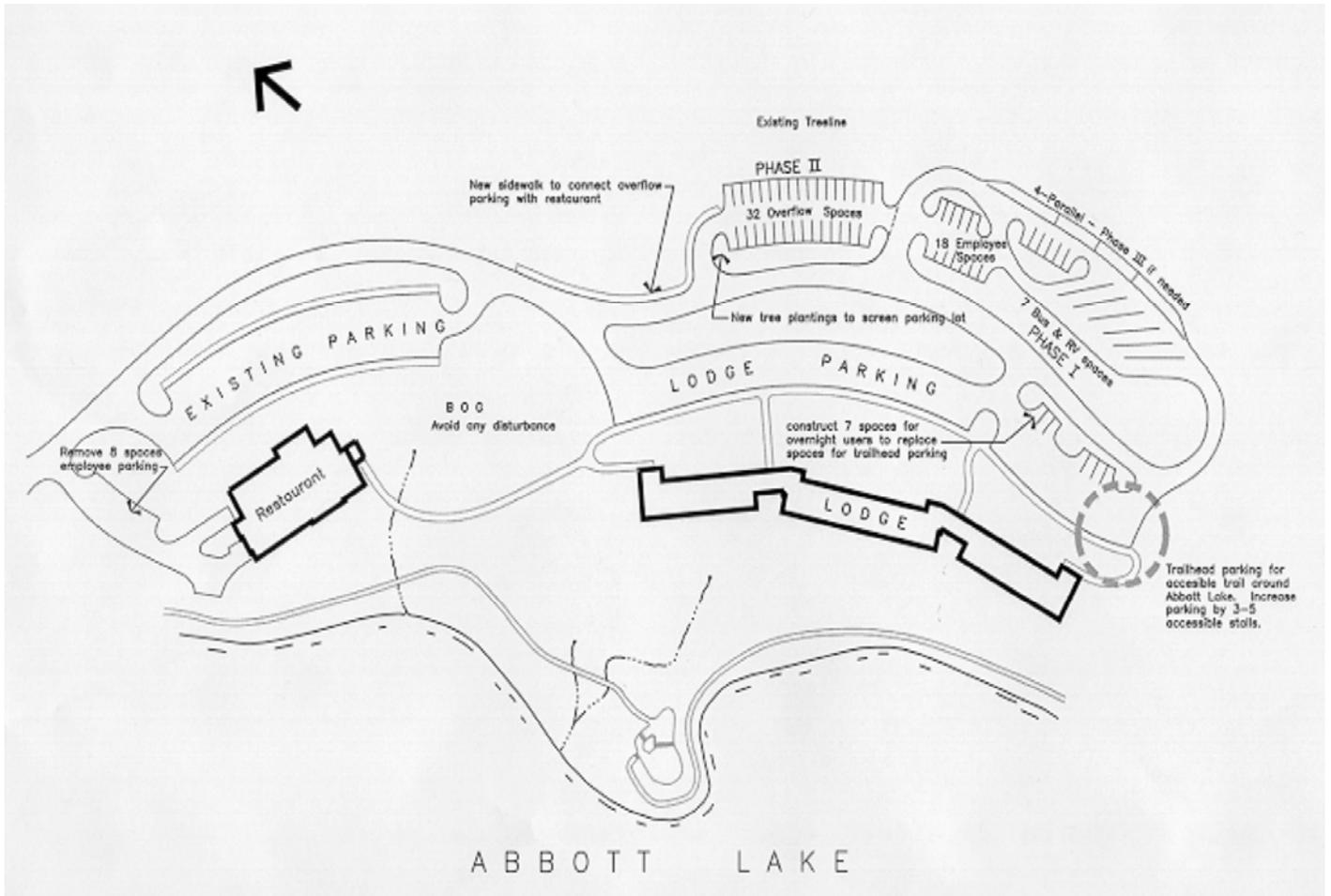
Re-locate employee parking – 15-20 spaces – The current location for employee parking is located at the west end of the restaurant and is visible from the Parkway.

This area is also difficult to manage during peak visitation as many visitors wish to park here. It is desirable to relocate the employee parking to improve the visual resources of the area as well as improve employee safety by separating delivery circulation from employee parking.

USGS 7.5 MINUTE QUAD MAP, PEAKS OF OTTER, VA



PEAKS OF OTTER RECREATION AREA LOCATION OF EXISTING AND PROPOSED PARKING LOT



PURPOSE AND NEED FOR ASSESSMENT

The purpose of this document is to evaluate the direct, secondary, and cumulative environmental consequences of constructing and maintaining expanded parking at the Peaks of Otter Recreation Area, and rehabilitating the trail around Abbott Lake to make it accessible, on Blue Ridge Parkway, National Park Service, United States Department of the Interior lands.

National Park Service (NPS) guidelines for compliance with the National Historic Preservation Act (NHPA) and National Environmental Policy Act (NEPA) require an analysis of potential impacts on the proposed activities on historic resources and the human environment.

ALTERNATIVES, INCLUDING THE PROPOSED ACTION

This section describes the two alternatives that are analyzed in this Environmental Assessment. The two alternatives are (1) no action, and (2) construct additional parking immediately to the north of the existing parking for the restaurant and lodge units (the proposed action).

PARKING LOT

NO ACTION ALTERNATIVE

Under the No Action Alternative, no new parking lots would be constructed. There would still be no provision for parking oversized vehicles. These vehicles would continue to park parallel in the main restaurant parking area, taking up to ten (10) parking spaces, or be directed to perform the same type of parallel parking in the parking area for the lodge units. During weekends and other high visitation periods, Blue Ridge Parkway staff and concessionaire staff will still be involved with directing traffic and parking operations. The main entrance road would still be used as a temporary parking solution. The same problem for visitor safety would exist with the creation of a de facto one-way road system that is very difficult to negotiate for vehicles and pedestrians.

ALTERNATIVE 1 - THE PROPOSED ACTION - CONSTRUCT ADDITIONAL PARKING IMMEDIATELY TO THE NORTH OF THE EXISTING PARKING FOR THE RESTAURANT AND LODGE UNITS

Under Alternative 1, additional parking would be constructed to the north of the existing parking lots for the restaurant and the lodge units across the main entrance road. The locations being evaluated are former pastures that are still mowed by the National Park Service. The site is moderately sloped. One site is

also previously disturbed as a borrow pit for the construction of the dam for Abbott Lake. The benefits to this alternative are that previously disturbed sites will be used and all parking will be centrally located. The centrally located parking lot will reduce the amount of required pedestrian circulation. In this alternative, oversized vehicle parking would be provided across from the parking for the lodge units. There is enough room here to provide for at least seven (7) sites for oversized vehicle parking with the potential for three (3) more additional sites. In addition, parking for employees would be relocated here as well. The site can accommodate at least 18 spaces for employees. Finally, some spaces for overflow parking from the restaurant can be provided. This site can accommodate up to 32 spaces. This parking area would be accessed off of the existing entrance road. No modifications except to the existing drainage ditch would be required for the entrance road. Grass islands would be constructed with stone curbs. The island would be planted with trees on order to help blend the new parking into the overall site development.

The area across from the restaurant will be evaluated for parking as well. This site is smaller, but may be required to provide for the entire parking program. This site could handle approximately 50 spaces. There is a small drainage located at the south end of this site that will most likely require a Corp of Engineers permit if this area were disturbed. It is the intent of the National Park Service to construct the parking area across from the Lodge Units first and monitor traffic pattern use. The overflow requirements for the restaurant vary widely with the seasons. During winter, spring and summer weekdays, the existing parking with the addition of the parking constructed across from the lodge units will adequately meet demand. However, during fall color season, demand for parking far exceeds demand. Constructing enough parking for the demand during this peak visitor season would require an additional 300 spaces. There are currently no plans to construct parking to meet the peak demand at this time.

The second action being evaluated in this Environmental Assessment is the rehabilitation of the loop trail around Abbott Lake. In order to provide trailhead parking for this trail, additional parking will be constructed in the existing lodge parking area. The parking spaces will be constructed within the existing grass island that separates the entrance road from the parking for the lodge units.

This is the preferred alternative based on the following attributes:

- 1) Least impact to natural resources,
- 2) no impact to known cultural resources,
- 3) best alternative for visitor safety,
- 4) best alternative for employee safety,
- 5) most flexibility in design implementation, and
- 6) least impact to visual resources.

ALTERNATIVES CONSIDERED BUT REJECTED FROM DETAILED STUDY

There were three alternatives considered, but rejected from detailed study: shuttle bus system, construct additional parking on the west side of the Parkway near the old Hotel Mons site, and restripe existing parking lot and create new parking across from lodge and from restaurant.

SHUTTLE BUS SYSTEM

Under this alternative, there would be a satellite parking system with a bus shuttle system to bring in visitors. This alternative was considered but rejected based on the following attributes:

1. Need for buses - While the current concessionaire does operate a bus to the top of Sharp Top Mountain, additional buses would be required. The concessionaire would have to develop a fairly complex purchasing and/or leasing arrangement to deal with the large flux of visitation. The Facility is open year round. While summer and fall visitation is quite high and would require several vehicles to meet demand, winter and spring visitation is substantially less.
2. Natural resources would still be disturbed - There would still be disturbance required to construct a satellite parking facility. There are no areas of existing disturbance near the Peaks of Otter that can handle the required parking program. The closest available land would either require disturbance of existing forest on National Park Service land or be located outside of the park. The nearest possible location would along Rt. 43 towards Bedford.
3. Impacts to visitor experience - Orienting visitors to the satellite parking facility would be difficult as there are three points of entry into the Peaks of Otter: North and South bound on the Blue Ridge Parkway and entrance from the east on Rt. 43. A new sign program would have to be established to direct visitors to the satellite location if parking was unavailable. The existing parking would remain. A potential visitor use pattern would develop whereby visitors would wait at the parking area closest to the restaurant and lodge for a parking space instead of using the satellite location. There could still be the problems for visitor safety with vehicles blocking circulation patterns creating an unsafe situation for visitors. A staffed presence may be required to direct traffic. Employee parking would most likely remain where it is located because the shuttle system may not be operating during all hours of operations. Based on these attributes, there would be no benefit from constructing this alternative compared to the no action alternative.

CONSTRUCT ADDITIONAL PARKING ON THE WEST SIDE OF THE PARKWAY NEAR THE OLD HOTEL MONS SITE

Under this alternative, the additional parking program would be constructed on the west side of the Parkway roadway. The area is comprised mostly of former pastures that have been mowed by the National Park Service. This area is gently sloping. Some of the area evaluated in this alternative is comprised of the former Hotel Mons site. The hotel is no longer in existence. In addition, there are several wetlands in the area that would have to be delineated in order to avoid direct impacts. One potential benefit of constructing parking here is that some trailhead parking for the Johnson Farm exhibit could be provided and might increase visitation to this site. However, under this alternative, there is a concern for transporting visitors safely across the Parkway roadway, as the majority of visitors using this parking area would want to access either the lodge or the restaurant.

This alternative was considered but rejected based on the following issues:

- 1) concern for employee and visitor safety,
- 2) potential adverse impacts to a known cultural resource, and
- 3) potential adverse impacts to a known natural resource.

REALIGN AND RESTRIPE EXISTING PARKING LOTS, CONSTRUCT ADDITIONAL SPACES, AND CONSTRUCT OVERSIZE VEHICLE PARKING ALONG ENTRANCE ROAD

This alternative would restripe the existing parking lot in front of the restaurant to make all spaces 9 feet wide. Current spaces are 10 feet wide. Restriping could create 12 additional spaces. At the lodge units, the existing islands separating the entrance road from parking at the lodge would be paved for parking. This could create approximately 18 new spaces. Bus and RV parking would be created along the entrance road in front of the restaurant by widening the road 15 feet into the hillside. This could create up to six spaces. Drainage would have to be reconfigured along the entrance road.

This alternative was considered but rejected based on the following issues:

Visitor Safety - The placement of oversize vehicles along the main travel route in to the restaurant and lodge creates a traffic hazard by requiring occupants of these vehicles to cross the entrance road. In addition, people exiting these vehicles will be opening their doors into traffic. Parallel parking along entrance roads has been attempted many times in parks in order to try and reduce impacts to resources. However, in almost every instance, conflicts arise between pedestrians and oncoming vehicles.

The re-striping of the parking lot to nine-foot stalls is also another common attempt to maximize use of existing parking. However, nine-foot stalls are not as easy to negotiate as ten-foot stalls. There is a concern for visitors as parking spaces would be tighter between vehicles and it would be more difficult to get in and out of cars. The National Park Service is aware of the changing demographics of our visitors and that our average visitor is getting older. Thus, it would be increasing the potential for risk for our visitors to shrink the size of the stalls to nine feet.

Visual Impacts - The placement of oversize vehicles along the entrance road would adversely effect the visual resources as the large vehicles would be blocking views along the entrance road and would be very visible from the mainline roadway. In addition, this alternative does not allow for the removal of staff parking behind the restaurant. These vehicles are presently visible from the mainline roadway.

REHABILITATE LOOP TRAIL AROUND ABBOTT LAKE

A second action that is being evaluated in this Environmental Assessment is the rehabilitation of the loop trail around Abbott Lake. The primary reason for rehabilitating this trail is to provide for accessibility and universal design. The trail is formally constructed on the north side of the lake between the lake and the restaurant and the lodge units. This section of the trail is paved with asphalt and generally meets the requirements for width of trail and slope of trail for accessibility. However, the trail needs minor improvements and new paving for the rest of the perimeter in order to make the entire trail accessible.

ALTERNATIVES, INCLUDING THE PROPOSED ACTION

NO ACTION ALTERNATIVE

Under the No Action Alternative, there would be no changes to the trail. The trail would be maintained as currently designed. While the trail near the lake is accessible, there are no accessible routes from the parking lots to the trail. Stairs and slopes exceeding an 8% grade are currently present. The only accessible route is by taking the elevator in the restaurant from the main floor to the lower level. This elevator is difficult to find in the building and is available only during hours of operation of the restaurant. Under this alternative, there are no trails that meet the minimum requirements for accessibility at the Peaks of Otter developed area.

ALTERNATIVE 1 – THE PROPOSED ACTION - MAKE IMPROVEMENTS TO THE TRAIL SUCH THAT THE ENTIRE TRAIL IS ACCESSIBLE

The remainder of the trail that is not paved with asphalt is generally located at a 5% grade or less. The 5% grade is desirable as the guidelines set forth in the ADA suggest that accessible route over 5% grade need handrails in order to aid mobility. While the loop trail is not a direct accessible route and is instead a recreation opportunity, there could be waivers granted for need for handrails. Alternative 1 is the preferred alternative based on the following attributes:

Provides best visitor experience and provides for greatest amount of visitor safety.

Following is a description of the work required to make the entire loop trail accessible:

SECTION A – 1600 Linear Feet (LF)

Section A consists of the existing asphalt trail in front of the lodge and restaurant. Minimal to no work is required here. Some examination of trail width will need to be made. Some passing areas may need to be added to this section. Slope of trail is almost all under 3%. A short section of trail from the restaurant to the loop trail will need to be constructed for people who want to access the trail using the elevator. The grade for the trail will be under 3% and should be paved with asphalt to match other trails in the area. Also, this section will need to have the same re-route of the trail around the arched bridge as described in Alternative I.

SECTION B – 200 LF

Section B consists of the wetland south of the underpass under the roadway. There will need to be a boardwalk constructed. An onsite investigation will need to be conducted to examine the best way to traverse this wetland and reduce the amount of boardwalk if possible. Slope of trail is almost all under 3%.

SECTION C – 1000 LF

Section C consists of the old pasture that is currently mowed by NPS. The cross slope in this section is very mild. Trail construction should be very easy and inexpensive here. There maybe opportunities to swing the trail closer to the waters edge in this section. Slope of trail is almost all under 3%.

SECTION C – SECTION D – BRIDGE

At the connection between Sections C and D, there will need to be a bridge constructed to cross the drainage leading into the Lake. This bridge should be constructed with the same details as used on the boardwalk for Section B.

SECTION D – 900 LF

Section D is very similar to Section C – gentle slopes and little vegetation. Same trail surface used for Section C should be used for Section D. Slope of trail is almost all under 3%. If an observation deck or accessible fishing pier were desired as a part of this project, Section D would be a good location. The area is very open and might be desirable for casting lines. A deck in this area would also provide an alternative recreation opportunity in that it would be located away from the lodge and the majority of foot traffic.

SECTION E – 200 LF

Section E will require a 150 linear feet re-route as this section of trail exceeds 5%. The trail re-route can be achieved by moving the trail downslope. This new area of disturbance is comprised of ferns and sapling vegetation. No mature trees would be required for removal.

SECTION F – 300 LF

Section F needs only minor improvements. The trail needs to be widened to meet the minimum standards for clearance and trail width. All roots and other projections in the trail should be removed to provide a smooth rolling surface.

SECTION G – 100 LF

Section G needs a turnpike constructed. A turnpike is a section of trail that is retained on both sides with logs or other materials and backfilled with gravel. This area has a lot of surface water and will always be an obstacle to providing accessibility. The turnpike will allow water to continue to flow under and through the turnpike while the trail will remain dry.

SECTION H – 700 LF

Section H will be the most difficult section to construct. Slope is very uneven with many large trees and some boulders. While this terrain provides for more of an “in the woods” hiking experience, keeping grades under 5% will require some disturbance. Some cut and fills will be required. Some trees will have to be removed in order to construct an accessible trail.

Options –The accessible trail could terminate at end of Section D. Remainder of loop trail to dam could become a higher challenge zone. This could mean tread of trail is no longer asphalt but gravel or crushed rock. Trail could become narrower – four feet or less, and grade could increase up to 8%, sometimes 12%. The benefits to constructing a higher challenge zone along the trail are primarily from a construction cost standpoint. Impacts to the natural environment would also be reduced. The negative aspect of a section of trail being a higher challenge zone is that it would create a barrier in the middle of the loop trail to some users.

If terminating the trail at Section D is not desirable, there are two locations where grade exceeds 5% in Section H that will have to be altered.

The first area that exceeds 5% is from the section break between G and H south to the area near the stone wall (see plan). There are several sections that approach an 8% grade. There are two options here. The first option is to make this entire section a 5% trail. This can be achieved by re-routing the entire section slightly upslope. The negatives to this alternative are that some mature trees would have to be removed (approximately 3 trees). Also, in order to achieve the 5% grade, the new trail would actually be very close to the existing trail, sometimes within 50'. The existing trail will have to be obliterated. Finally, re-routing the trail moves the trail further away from the lakeshore. There will be the potential for cross-cutting this area with social trails due to moving the trail away from the lake.

The preferred alternative for this section would be to keep the trail in its present location with required modification to meet the standard cross section. The sections of trail that exceed 5% do not exceed 8% and occur in runs of 50' or less. The areas between the steep sections are closer to 5% or below. This section of the trail could be marked as a slightly higher challenge level based on grade alone. The trail would still be 5' wide and have no projection in the trail tread.

The second area that exceeds 5% grade is at the approaches to the stone retaining wall. A small stone retaining wall was constructed at the shoreline that allows hikers to gain close access to the lake. There are several large boulders and mature trees directly upslope from the stone retaining wall. The trail drops down to this point in both directions. In order to make this section of the trail accessible, there are two options.

- 1) The trail could be re-routed above the rock wall and boulders. Several mature trees would have to be cut: 2 dead hemlocks (18" dbh+), 2 living hemlocks (6-8" dbh,) and one mature birch tree. The small boulder field would have to have some rocks removed to construct the trail tread as well as have a small rock retaining wall (less than 4 feet high) to retain the cut slope.

- 2) The trail would be left in its present location. The existing stone retaining wall would have approximately 3' to 4' added to its height with appropriate tapers at end walls. The overall length of wall would not exceed 30'. One mature birch (20" dbh) would have to be removed. The area would then be backfilled and the trail constructed. A short section of handrail would need to be constructed at the top of the wall. The rail should be constructed similar to the detail used for the boardwalk.

SECTION I – 250 LF

Section F is located on top of the existing dam. No work is required here. There is already enough gravel to make the path hard and accessible. However, whatever material is decided for the rest of the trail system should be used on the dam. The slope of the trail would be under 3%.

SECTION J – 350 LF

This section is a connector trail from the parking lot at the last lodge unit to the trail. Under another proposal for expanding parking behind the lodges, this area was identified as a possible location for an accessible trailhead. This area would also most likely be used by people just wanting to walk on the trail once it is constructed and accessible. This access trail will require a switchback to the existing asphalt trail in order to meet the minimum requirement of a 5% grade. This access trail will also have a connector to the dam. This trail connector will depart at the point where the trail switches back on itself. In addition, a trail system sign would need to be constructed and installed here along with any applicable rules, regulations or interpretive opportunities for the loop trail. Two benches would be needed along the trail for rest areas.

A potential secondary impact of making the loop trail around Abbott Lake accessible is that there would be an increased demand for all trails to be accessible. The three trails that would have the most demand would be the connection to the Polly Woods Ordinary. From the Polly Woods Ordinary, there might also be a request to continue and connect to the picnic area. The second area of concern would most likely be a connection between the loop trail and the campground located to the south of Rt. 43. Following are the requirements to make each of these sections accessible:

SECTION K – 200 LF

The connection between the dam and the Polly Woods Ordinary is under 5% grade. Modifications would be minor and would involve constructing the standard trail cross section. Around the Ordinary itself, some roots projecting above the surface would have to be removed and the surface of the trail would need to be evaluated

far any potential impacts to the cultural resource of the house. If a connection were desired from the Ordinary to the picnic area, a new trail would have to be constructed. The existing trail exceeds 15% grade. The new trail would have to enter the adjacent woods and switchback down the hill to access the picnic area.

There would most likely be a high demand for wanting to see the Ordinary, so making this connection accessible is preferred. However, most users of the picnic area do not travel up to the lodge or the restaurant. Visitor's surveys may be necessary to better understand desired accessible routes in this area before construction funds are allocated.

SECTION L – 1500 LF

Another potential request for accessibility would be the connection between the campground and restaurant. The attached map shows the number of switchbacks it would require to construct a trail at a constant 5% grade. The trail would connect near the intersection of the entrance to the campground and Rt. 43. This plan does not show how the accessible campsites would be connected. Given the length of trail required, the number of switchbacks required and the overall steepness of the site, this alternative is not preferred at this time. Most people needing assistance will not travel this route to the restaurant from the campground due to the overall length of trail (approximately 3600 LF). Instead, most people will most likely use their automobile to go back and forth between the campground and the restaurant.

SECTION M – 1200 LF

Section M is the existing trail connecting the campground to the dam. There are significant portions of this trail that exceed 15% grades. In order to make this trail accessible, many switchbacks would have to be constructed. This would require the removal of several mature trees and would likely require handrails constructed at the switchbacks to prevent cross cutting of the trails. Constructing this section of trail is not preferred either based on the same information presented for Section I.

ALTERNATIVES CONSIDERED BUT REJECTED FROM DETAILED STUDY

CONSTRUCT ACCESSIBLE ROUTE FROM PARKING TO TRAIL

An alternative considered but rejected was a new accessible route that would be constructed from the parking area located at the far east end of the lodge units to the loop trail. This access would be at a 5% grade or less. The trail can be constructed in a previously disturbed area that is currently being mowed by the National Park Service. Other modifications required are a 150 LF section of trail

built around the arched pedestrian bridge. The current bridge deck is arched and does not meet the requirements for ADA. The option for replacing this bridge with a flat deck that meets ADA was considered but rejected, as the arch bridge has become an icon of the area. The area of new trail construction is also currently mowed. This trail would be paved with asphalt to match the existing trail system. No other improvements would be made to the trail system. The only portions of the trail that would be accessible would be those portions currently paved with asphalt.

AFFECTED ENVIRONMENT

PARKWAY-WIDE OVERVIEW

The Blue Ridge Parkway follows the high crests of the central and southern Appalachians for 469 miles from Shenandoah National Park in Virginia to the Great Smoky Mountains National Park in North Carolina. Its breathtaking scenic beauty, unbridled natural resources, and unique historic sites make it the showpiece rural parkway of the National Park Service. But the Parkway is also notable as a remarkable landscape architecture and engineering achievement. Design of the Parkway began in 1934. More than 50 years in the making, the Parkway was completed in 1987 with the construction of a 7.5-mile section around the rugged and winding terrain of Grandfather Mountain.

The Parkway intersects three mountain provinces (ridge, plateau, and highlands) and extends almost 4 degrees in longitude and 2½ degrees in latitude, the third largest geographic range of any unit in the national park system. Yet, despite this extent, its width averages only 800 feet wide between developed areas.

The Parkway occupies 88,000 acres of lands within the socio-political boundaries of two states, six congressional districts, 12 counties in Virginia, 17 counties in North Carolina, 185 miles within two national forests, 11 miles within an Indian Reservation, two state parks, nine watershed basins, a dozen municipal watersheds, and three metropolitan areas. There are more than 1,200 miles of boundary and 4,000 adjacent property owners. Three interstates, 270 secondary roads, and 400 utility lines bisect natural features. Like beads on a necklace, 900 vistas, 275 paved overlooks, 18 recreational areas, 14 backcountry areas (ranging from 1,000 to 5,000 acres), and 13 maintenance facilities line the Parkway to accommodate visitors. With annual use approaching 20,000,000 people, it is the most highly visited unit in the National Park System.

Parkway natural resources include 300 streams (150 headwaters), 1,250 vascular plants species (50 rare or endangered), six rare or endangered animals, a variety of slopes (mostly steep) and exposures, possibly 100 different soil types, an elevation

range of 5,700 vertical feet, and 100 exotic plants. The Parkway also bisects 47 natural heritage areas, which includes more than half of the high-elevation wetlands known in North Carolina.

The primary activity is recreational driving, sight seeing and hiking. The Parkway also provides naturalist walks and talks, self-guided nature trails, roadside exhibits, picnicking, and camping.

RIDGE DISTRICT OVERVIEW

The 106-mile Ridge District is almost entirely surrounded by U.S. Forest Service lands, providing distant views of undeveloped mountain slopes and ridges. It is bounded on the northern end by Waynesboro, a town of approximately 25,000 people, and the metropolitan area of Roanoke (250,000 people) at the southern end. Several small towns whose primary economy is light industry and agriculture also occur along its length.

PROPOSED PROJECT AREA OVERVIEW

Natural Environment

Topography/Soils - The soils in the Peaks of Otter area are granitic-hypodenderite in origin, belonging to five Soil Series: Braddock, Edneytown, Edneyville, Porters and Tusquitee. All of these soils tend to be fine sandy or gravelly loams, which are stony, to extremely stony, depending on degree of slope.

In the area directly across from the motel units, the topsoil has been removed for landscaping around the restaurant and motel units and for building the earthen dam impounding Abbott Lake. Only mineral soil remains in this location. Several small springs and seeps exist in the area, and one small seep in the middle of the proposed development keeps the soil there “mushy” year-round (Maintenance staff, pers. comm. 1999).

The slopes near the front (access road side) of the proposed expansion area are relatively gentle, rapidly increasing in slope to the east near the treeline. Slope aspect is west.

Water Resources – The predominate water resource in the area of the lodge is Abbott Lake, a human-made lake of approximately 24 acres in size, impounded by an earthen dam on its south side. From the lake, Little Stoney Creek runs south, through two silt traps, out of the park boundary toward the city of Bedford. The creek contains a healthy population of native brook trout.

There are several small springs and seeps on the slopes above the area of proposed parking lot expansion. Only one small spring produces enough water to run into the lake before being absorbed into the ground. This spring comes to the surface in the vicinity of the underground water storage tank on the hill above the lodge, and exits the forest edge on the hill to the east of the restaurant. The water runs through a pipe under the entrance road into a small wetland located to the south of the restaurant, and then drains into Abbott Lake.

Plant Species - The forest overstory of the area surrounding the lodge and Abbott Lake is mixed hardwood, with less than one percent of the canopy consisting of softwood species--white pines and hemlocks. The predominant hardwood species are poplars, sassafras, and oaks (chestnut oaks and red oaks). Making up the remainder of the canopy are hickory, American chestnut, locust, and apple trees, which are historic remnants of orchards maintained by resident landowners prior to the lands being acquired by the Commonwealth of Virginia for the National Park Service in the 1940's.

The forest understory has low biological diversity. Much of this area was farm fields prior to being acquired for the park and has been allowed to grow over since that time.

Several plants that are on the Virginia Plants Watchlist or the Virginia Rare Plants List occur around Abbott Lake and/or around Stoney Creek. They include: *Plantanthera flava* var. *herbiola* (southern rein-orchid), *Panax quinquefolius* (American ginseng), *Leucothoe fontanesiana* (highland dog-hobble), and *Solidago patula* (round-leaved goldenrod) (Ramsey, 1994).

How many of these species still survive in the area and in what numbers is not known. Hikers and fishermen are known to have had an adverse impact on the populations of orchids around Abbot Lake, and mowing activities may also be impacting rare plant populations.

American ginseng was common until only about ten years ago (NPS staff, per. Comm. 1999). Since then, due to the overpopulation of deer in the area and possibly occasional plant poaching activities, the ginseng population has been significantly reduced. A deer enclosure located approximately 1,500 feet from the proposed parking lot expansion suggests that deer browsing is having a significant impact on the biological diversity of the understory in the area.

The grasses found in the developed area of the Peaks of Otter are nearly all non-native turf building species that are maintained by regular mowing (four to five times between April and September) by park staff. Native grasses are currently found only in and around those meadows and forest edge that are left uncut and natural.

Animal Species – The range of the Peaks of Otter Salamander (*Plethodon hubrichti*), recognized as a Species of Special Concern by the U.S. Fish and Wildlife Service in 1991, extends to within one mile or less of the proposed development area. A 1996 survey of the area from the tree line to approximately 30 feet inside the tree canopy for *Plethodon*, indicated that they probably not present in the immediate area (Mitchell, 1996).

The Peaks of Otter developed area currently has an overpopulation of white-tail deer, which because they are protected inside the park boundary, have become semi-tame. Bear frequent the area, and are also protected in the park. Other wildlife found in the area are those common to the region: groundhogs, chipmunks, squirrels, turkey, and grouse.

Cultural Environment

The Peaks of Otter area has been a focal point of human interest and activity for thousands of years. Archeological surveys in the area of Abbott Lake have yielded remains of fire pits left by wandering hunters which have been carbon-dated to approximately 5000 BC. A large American Indian prehistoric village site has been located underneath the ruins of the Mons Hotel. This great interest of native Americans in the Peaks area was quickly transferred to European settlers as they discovered or heard about the area. Tourist traffic commenced to the Peaks area in the late 18th century, and a brisk tourist and trade in the area gave rise to a hotel industry that continues to this day. In 1832 Polly Woods opened her "Ordinary" as a small overnight refuge for the weary traveler or tradesman seeking sustenance and shelter. Over the succeeding decades even larger and more grand accommodations were built at the Peaks of Otter to fill the needs of the many interested and devoted travelers.

The spacious and comfortable Mons Hotel, located just across the Parkway from today's Peaks Lodge, was a good example of the accommodations offered visitors to the area. It is particularly significant that the never-ending tourist traffic to the Peaks area and the various facilities built to house, feed and care for these travelers meant that local residents, many of whom never left the area, nevertheless were exposed to considerable outside economic and cultural influences. It was a difficult matter, even in mountainous Peaks area, to remain isolated from the many urban and regional influences of the businesses and visitors who regularly purchased your produce or provided you seasonal work in kitchens, dining halls and hotel facilities. Thus the rich cultural history of the Peaks area is a complex mix of cultures and peoples fascinated with the beauty and majesty of the mountains and seeking the benefits of the rich abundance of resources found here.

ENVIRONMENTAL CONSEQUENCES

IMPACTS

The principal impacts, including the unavoidable impacts, of the two alternatives would be as follows:

PARKING

No Action Alternative

There would be no direct impact to natural resources since no alterations to the natural environment would occur.

Parkway cultural resources would not be impacted since no new development would be planned under this alternative.

Parkway visual resources would not be impacted since no new development would be planned under this alternative

Alternative 1 – The Proposed Action- Construct additional parking immediately to the north of the existing parking for the restaurant and lodge units

Natural Resources

Both the area proposed parking for parking and the vegetation around Abbott Lake were surveyed in 1993 and 1994 by Dr. Gwynne Ramsey, then a Professor of Biology at Lynchburg College. In Dr. Ramsey's report entitled *Plant Diversity Survey of the Peaks Of Otter Backcountry Area, Blue Ridge Parkway, Virginia*, two sensitive sites were identified that are near, adjacent to, or within the area of the proposed project: (1) the wetland between the restaurant and first lodging unit and (2) the wetland on the northwest side of Abbott Lake between the entrance road and the Parkway motor road.

Since no development or expansion is proposed within or near the wetland between the restaurant and first lodging unit, so there should be no adverse impact to this site. No discharge will be made into the wetland or drainages above the site, so water quality should be adequately protected.

Although no inventory or study of the flora and fauna in Abbott Lake or Stoney Creek has ever been systematically undertaken, there should be no direct impact to water resources or water quality if adequate erosion control measures are taken

during construction, including but not limited to properly maintained sediment and erosion control barriers.

Cultural Resources

All the work proposed in this draft Environmental Assessment is exempt from further cultural resource compliance based on at least six (6) archeological surveys completed by National Park Service archeologists since 1940. These surveys have examined the area in and adjacent to Abbott Lake prior to its construction, the area north and adjacent to the existing lodge/restaurant parking areas, areas further from the lodge for proposed water and sewer line construction, and the general area of the old Mons Hotel. Except for the Mons Hotel site, which is not to be disturbed under this proposal, all other areas proposed for development in this parking lot improvement and trail accessibility project are cleared based on these previous cultural resource surveys. No further surveys are required for Section 106 cultural resource compliance and the project may proceed as described.

Visual Resources

The existing visual environment would change very little. The proposed parking lot would respect the current parking lot designs with a wide, turf separation between the entrance road and the parking lot. Stone will be used for curbing and asphalt will be used for paving to match the remainder of the site. The area that will be used for the proposed parking lot is currently an open field that is mowed by the National Park Service. There are generous islands in the proposed parking to accommodate plantings of trees. It is the intent of these plantings to help the parking lot blend in to the existing tree line. The proposed parking lot will be slightly visible from the mainline roadway travelling north. The plantings of the trees should help screen any views of the parking lot from the roadway. In a similar fashion, the proposed parking lot will be visible from the top of Sharp Top Trail. The current view is of the existing parking lots and buildings. The proposed parking lot would now be a part of this view. Once again, the plantings of trees should help the parking lot to blend in to the overall scene.

Recreational Resources

There will be no change to recreation resources with the proposed parking lot modifications.

Visitor Safety

Visitor safety will be enhanced by providing adequate parking for the existing parking demand. With the proposed parking, there should be a decrease of cars having to park on road shoulders and other locations. There will be significant

improvements to visitor safety by providing adequate spaces for oversize vehicles. These large vehicles are very difficult to negotiate without proper turning radii in the existing parking lot. The proposed parking area provides a safe location in terms of vehicle turning motions, driver visibility and vehicle storage. Dangerous turning motions are also lessened by relocating the employee parking at the proposed parking area. Currently, the access to the employee parking is very close to the intersection of the entrance road and the mainline roadway. Removing the turning motion of the employee's vehicles will lower the chance of an accident occurring here.

Employee Safety

Employee safety will be greatly improved with the proposed parking area because the demand for rangers to direct traffic during peak hours of use should be diminished. Currently, cars are parked along the entrance road shoulder and two-way traffic is changed to one way traffic. All these actions require traffic control by Park Rangers. The additional parking should lessen the demand for traffic control as these vehicles can park in the new parking area.

Operational Efficiency and Sustainability

Park operations will be improved with the addition of the proposed parking as there should be less of a demand for rangers to direct traffic and there should be fewer repairs to the road shoulders due to the overflow parking situation. Also, the proposed parking area provides flexibility to Park managers in the final implementation of the proposal based on ease of phasing construction. There is a need for additional parking at the Peaks of Otter. Placing this parking in the area of previous disturbance reduces the overall amount of impact a project like this could have to a natural area. In addition, the existing slope of the site is such that there should be minimal cut and fill required.

TRAIL

No Action Alternative

There would be no direct impact to natural resources since no alterations to the natural environment would occur.

Parkway cultural resources would not be impacted since no new development would be planned under this alternative.

Parkway visual resources would not be impacted since no new development would be planned under this alternative

Alternative 1 – The Proposed Action - Make improvements to the trail such that the entire trail is accessible

Natural Resources

The trail weaves through and around the second wetland where approximately 150-200 rare southern rein-orchid were observed in the early 1990's. According to Dr. Ramsey the rare southern rein-orchid occurs between the trail and lake, and widening the trail through this site should be possible with minimal to no adverse affect on the orchid if the trail widening occurs on the Parkway side rather than the lake side (Ramsey pers. comm., 1999). To further ensure protection of this plant, NPS staff will look for the orchid during spring emergence and development (generally April thru June) and propose a trail-widening route that eliminates or reduces impact(s) to the population.

Cultural Resources

As with the proposed parking lot expansion, at least six archeological surveys at varying sites around the Peaks area have cleared all sites except one for further development. The sole exception is the site of the old Mons Hotel, which has both historic remains from the old hotel as well as indications of a large prehistoric Indian village site beneath the hotel ruins. Much of the trail area has been heavily disturbed by construction of the Peaks Lodge as well as Abbott Lake. The likelihood of cultural resources remaining at these locations, particularly National Register eligible cultural resources, is extremely remote.

Visual Resources

For the proposed accessible trail, the visual experience would be altered from a walk along a primitive woods trail to more of an urban experience. The trail would be widened, made flatter and have a uniform surface of either crushed granite or asphalt. The views from the trail will not change. There will still be the visual experience of walking around the lake, walking in the woods, walking on top of the dam and seeing views of the Peaks of Otter restaurant and lodge across the lake. The change here will be that more people will have access to these views.

Recreational Resources

The accessible trail will greatly alter the recreational resources at Peaks of Otter. Currently, there are no accessible trails at the park. The conversion of the existing trail will add a new recreation opportunity that will be used by many visitors. The new trail will increase access to not only people with physical disabilities, but also to families with small children and strollers, people who have some difficulty walking and many other segments of the population.

Visitor Safety

The proposed accessible trail will improve visitor safety by providing a walking trail that is free of tripping hazards, has improved visibility of the trail tread and is easier to access from the restaurant and lodge.

Employee Safety

Employee safety will be improved only slightly with the improvements to the trail. Improvements will be achieved by reducing the amount of maintenance required to the trail after construction.

Operational Efficiency

The accessible trail will help with overall operations by meeting a need that has been identified for years. The existing trail will require minimal changes to grade and width in order to provide accessibility.

Secondary Impacts

There is a potential of increased use by people in the region of the accessible trail once it is constructed. This increased use could put a greater demand on the limited number of parking spaces at the Peaks of Otter. While there are spaces being created at the trailhead, increased use will have to be monitored and evaluated against available parking.

A potential secondary impact of making the loop trail around Abbott Lake accessible is that there would be an increased demand for all trails to be accessible. The three trails that would have the most demand would be the connection to the Polly Woods Ordinary. From the Polly Woods Ordinary, there might also be a request to continue and connect to the picnic area. The second area of concern would most likely be a connection between the loop trail and the campground located to the south of Rt. 43.

Cumulative Impacts

The maintenance of the water quality of Abbott Lake and Little Stoney Creek is a significant concern.

Converting open meadows to paved parking areas will result in the loss of absorption of rain and snowmelt that is now being absorbed by the soils. The runoff will be diverted into the existing ditch system that runs to the north side of the entrance road and then dissipate into the grass.

MITIGATING MEASURES

NATURAL ENVIRONMENT MITIGATION MEASURES

Landscaping associated with construction would use only native species, endemic to the region.

Any transportation of necessary fill from outside the park would come from approved sites, so as not to import exotic plant species into the park. Actions would be taken to prevent invasive exotic species establishment in disturbed sites.

The location of southern rein-orchid will be verified prior to trail placement to eliminate or minimize impact to this species.

Springs and seepages areas will be spanned with boardwalks or bridges to protect these areas (with consultation from the U.S. Army Corps of Engineers, if necessary).

Rain and snowmelt runoff will be dispersed in such a way as to not adversely impact the wetland between the restaurant and first lodging unit. In addition, there will be no direct drain or runoff into Abbott Lake.

CULTURAL ENVIRONMENT MITIGATION MEASURES

Construction would come to a halt and the Superintendent would be notified immediately upon discovery of archeological, paleontological, or historical findings.

The Superintendent would notify Parkway staff when work could be restarted.

VISUAL ENVIRONMENT MITIGATION MEASURES

In order to be sure that the proposed action does not adversely effect the existing visual resources of the Peaks of Otter, the following design guidelines should be adhered to. Curbing should be kept to a minimum. Where required, curbing shall be stone to match the existing stone curb on the site. All pedestrian walkways shall be asphalt in order to match existing walks in the area. In area of the proposed parking, all islands shall be planted with 2" dbh trees to match the species found in the area. These plantings are to help the overall site blend in to the forest edge behind the proposed parking lot.

For the accessible trail, all bridges and boardwalks should use a similar detail to provide consistency throughout the site. These structures should also be constructed of similar materials. Materials that would be suitable for this type of construction would be dimensioned lumber, dimensioned recycled plastic or a

combination of the two materials. The material for the trail tread should also be uniform. If a paved surface is required, it should be asphalt to match the remainder of the site. If asphalt is not used, then a compacted, crushed granite should be utilized that is dark gray in color.

LITERATURE CITED

Hammersten, Susan L. 1987. *An Archeological Overview and Assessment of the Blue Ridge Parkway*. Southeast Archeological Center Report.

Ramsey, Gwynn W. 1994. *Plant Diversity Survey of the Peaks of Otter Backcountry Area, Blue Ridge Parkway, Virginia*.
Final Report for #CA 5140-1-9002, SUB A #1.

PLANNING TEAM/PREPARERS

William S. Orr, Resident Landscape Architect
Allen R. Hess, Park Cultural Resource Management Specialist
Bambi Teague, Natural Resource Program Manager
Jim Basinger, Resource Management Specialist, Ridge District
Suzette Ramsey, Administrative Services Assistant

CONSULTATION AND COORDINATION

USDI, Fish and Wildlife Service, Abingdon, Virginia
USDD, Army Corps of Engineers, Howardsville, Virginia
USDA, Natural Resource Conservation Service, Bedford, Virginia
Virginia Department of Environmental Quality, Roanoke, Virginia
Virginia Department of Games and Inland Fisheries, Forest, Virginia
Virginia Department of Historic Resources, Richmond, Virginia
Virginia Natural Heritage Program, Richmond, Virginia
Southeast Archeological Center, National Park Service

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