

National Park Service
U.S. Department of the Interior

Denali National Park and Preserve
Alaska



Finding of No Significant Impact

Rehabilitation of the Park Road in the Porcupine Forest Area of Denali National Park

September 2010

Recommended: Paul R. Anderson 9/29/10
Superintendent, Denali National Park and Preserve Date

Approved: Ann G. Masler 10/5/2010
Regional Director, Alaska Date

FINDING OF NO SIGNIFICANT IMPACT

Rehabilitation of the Park Road in the Porcupine Forest Area of Denali National Park Denali National Park and Preserve, Alaska September 2010

The National Park Service (NPS) prepared an environmental assessment (EA) to evaluate construction of numerous improvements to the park road between Mile 50.8 and 52.4 on the Denali Park Road east of Toklat in Denali National Park (DNA), Alaska.

The NPS has selected Alternative 2, the preferred alternative, Rehabilitation of the Park Road in the Porcupine Forest Area, Mile 50.8 – 52.4, with the mitigation measures. Under this alternative, the NPS, in cooperation with the Federal Highways Administration (FHWA), will improve existing vehicle pullouts, add three new pullouts, replace culverts, replace poor subgrade materials, improve drainage, widen one interpretive pulloff, and add gravel wear surfacing material. Mitigation measures have been integrated into the proposal.

Responses to public comments are found in Attachment A.

ALTERNATIVES

Two alternatives were evaluated in the EA.

Alternative 1, No Action

Under Alternative 1, the existing situation would continue and the NPS and FHWA would not complete the proposed road rehabilitation between mileposts (MP) 50.8 and 52.4. Existing use and maintenance of the road would continue. Annual maintenance activities of adding crushed gravel or pit run material to maintain a safe driving surface would continue. Buses and other vehicles would follow the Rules of the Road regarding yielding, so that one bus (usually eastbound) would have the right of way and the other vehicle would need to find a place to safely pull over to let the bus pass. Brush crews would continue to clear brush alongside the road according to the directions in the Denali Road Maintenance Standards.

Alternative 2, Rehabilitation of the Park Road in the Porcupine Forest Area (Preferred Alternative).

Under Alternative 2, the NPS and FHWA will improve safety for all users of the park road between MP 50.8 and 52.4 through the improvement of existing pullouts, development of three new passing pullouts and widening of one interpretive pulloff, and through improvements to the road surface. Improvements to the road are based on the

park's Road Design Standards, which is a quantitative version of the Road Management summary given in the park's Entrance Area and Road Corridor Development Concept Plan/Environmental Impact Statement. The general concept is that the park road west of the Teklanika River will remain a variable width one lane rustic road with pullouts.

Of the 17 designed pullouts, three (about 18%) will be constructed where there presently is no pullout. The others will be constructed at sites where there is an existing pullout or where there is already a widened spot that is used for passing.

Intervisible Passing Pullouts

The NPS will rehabilitate the park road for 1.7 miles (8,900 feet), from MP 50.8 to MP 52.4. Seventeen intervisible passing pullouts will be formalized, 14 of them on top of existing wide spots. The pullouts will include a middle section typically 45 feet long and 24 feet wide. Pullouts will be intervisible, so that buses and other vehicles traveling the road up to the speed limit have a sufficient safety margin when meeting and yielding to or passing other vehicles. In many cases the sight distance issues for a west-bound bus are different than those for an east-bound bus, so that a standard distance between pullouts could not be used.

The road sections tapering into and out of the pullouts will generally change width at a 1 foot in 10 foot ratio. Thus, if the existing road segment is 18 feet wide, a pullout will start with a 60 foot long taper into a 45 foot long, 24 foot wide passing area and continue with a 60 foot long taper back to the existing 18 foot width. The existing road in the Porcupine Forest area is never narrower than 18 feet, so the longest individual pullout widening will be 165 feet including tapers, unless topographic limitations require otherwise. Pullouts can also safely be used for wildlife and scenery stops.

Pullouts and other improvements will be constructed with heavy equipment, such as 10 and 18 ton end-dumps and belly dumps, motor graders, and either large excavators, backhoes, or front-end loaders to excavate for culvert replacement and spill slope reconstruction and to feed material into the screening and crushing plants. The road work and associated gravel processing is scheduled for the summer of 2012.

Approximately 4,200 cubic yards (cy) of surfacing material (D-1 gravel) will be needed for the project, as will about 10,500 cy of select borrow (subbase), although these quantities may change somewhat with further refinements in design. This material will be loaded into dump trucks at the Toklat Road Camp and trucked to the project site. Reusable subexcavated material from the roadbed will be backhauled to the Toklat Road Camp for recycling and possible use as select borrow, surfacing binder additive, or topsoil for reclamation. Material determined as unusable will be hauled to an old pit at MP 56 and used to rehabilitate and re-contour the pit. Excess reject material may be hauled to the MP 70 pit for reclamation of that pit or backhauled out of the park by trucks delivering riprap to the Toklat Road Camp for a separate project. Some reject material may be used in pit rehab work at the Teklanika Pit.

Approximately 2,000 cy of material previously pushed off to the side of the road during flood events on Bugstuffer Creek (MP 51.9) will be hauled back to the Toklat Road Camp for further processing.

Interpretive Pulloffs

As part of the project, one additional interpretive pulloff will be constructed along the road. Pulloffs are defined as widened road sections onto which a bus can pull and be completely off the road travel surface. The pulloff will be at MP 50.8, where there is already a wide spot used as a hiker drop-off point and which provides a good view of the East Branch of the Toklat River and tributaries. The pulloff dimension will be 34 feet wide by 56 feet long.

Road Grader Pullouts

Two existing road grader pullouts at Culler's Creek (MP 51.3) and Bugstuffer Creek (MP 51.9) will be retained for the purpose of turning equipment around.

Road Surface Improvements

The road surface will be improved by adding a 6-inch wear layer in the project area, while reshaping the crown or superelevation and keeping the existing width of road travel surface. An average of ¼ inch of material wears off the road surface during each year. Superelevation is tilting the whole roadway to help offset inertial forces developed as the vehicle goes around a curve, and superelevations will be used on short radius corners that are now crowned. Superelevations and crowns are both limited to 6% slope for this segment of road, and 3% and 4% will typically be used in situations where a 6% superelevation will elevate the outside of the road too high and create a wider and deeper fill slope. The crown or superelevation will be varied as necessary to connect the curves and straight sections.

Road Structure Improvements

Seven sections of the project area will have about 24 inches of unsuitable material (silty organics mixed with clay and rocks) replaced. These sub-excavation areas will be approximately 2,000 feet long, 470 feet long, 165 feet long, 300 feet long, 450 feet long, 440 feet long, and 20 feet long. Oversteep outside edges will be excavated and replaced in lifts of select borrow material. Some outside edges will be widened at the same time using sliver fills that match the desired 1:1.5 fill slope.

Drainage Improvements

Approximately 1,250 feet of underdrain will be installed under the section of uphill ditch that is prone to weep all summer long. There will be a Blanket Drain installed under approximately 400 feet of the road bed in this same area. This will include installing a perforated pipe every 100 feet, perpendicular to the road at the bottom of the subbase,

which will allow water to drain through the road bed to the downhill side and away from the road through a ditch to a drainage window.

Culverts

All culverts in the project area (about 22, including 2 plugged culverts) will be replaced and two new ones will be added. The smallest replacement culvert will have a 24 inch diameter. The largest culvert (72 inch diameter) will be placed at the Culler's Creek crossing (MP 51.3). The replacement of deep culverts at the Bugstuffer (MP 51.9) and Culler's creek crossings will close the whole road for at least 6 hours and will be scheduled to be done at night. Using a standard of a minimum of 12 inches of select borrow over the smaller culverts will raise the road profile in eight of the low spots in the project area.

Gravel Sources

Gravel for the project will come from the Toklat River at MP 53, a site approved in the 2003 park Gravel Acquisition Plan, from material excavated from the park road during the project and reused, and from material excavated from project area road backslopes. Material from the last two sources will only be used if the material proves to be acceptable for processing into a product that meets specifications. Approximately 10,500 cy of select borrow will be needed and 4,200 cy of roadway aggregate will also be needed from Toklat. Approximately 817 six mile-long round trips will be needed to haul the gravel if 18 cy belly dumps are used. Gravel hauling will occur typically between 10:00 PM and 6:00 AM. Gravel processing will occur for this project at the Toklat Road Camp in 2012.

As part of an ongoing project, approximately 22,000 cy of gravel will be removed from the active floodplain of the Toklat River per the guidelines for that removal in the Gravel Acquisition Plan. The gravel will be stockpiled below the Toklat Road Camp and processed into road surfacing, select borrow, or other road maintenance material. The Porcupine Forest project will use about 14,700 cy of that material. Road surfacing material may have natural binders, such as bentonite, added to reduce the loss of road surface material.

Water Sources

The Toklat River will be used as the water source for this project. A gasoline-powered pump will be set up near the west end of the west bridge to pump into a 3,000 gallon water truck. Some water may be used to control road dust, and the rest will be used while compacting the lifts when rebuilding the sub-excavated part of the road.

PUBLIC INVOLVEMENT

The EA was issued for public review and comment from August 12, 2010 to September 13, 2010. Paper copies of the EA, or notices of the EA's availability, were sent by mail or email to over 200 government agencies, interest groups, and individuals. The EA was posted on the national NPS webpage for public review NEPA documents – Planning, Environment, and Public Comment (PEPC) – and on the park's webpage. The park issued a press release about the availability of the EA and the open comment period on August 12, 2010. Two written comments were received. One comment was generally against the preferred alternative and one comment was generally neutral to the project, but wanted the NPS to wait for a re-evaluation until a similar project already underway was completed.

The public comments received did not change the conclusions in the EA about the environmental effects of the action. The NPS responses to substantive public comments are found in Attachment A.

DECISION

The NPS decision is to select Alternative 2, Rehabilitation of the Park Road between MP 50.8 and 52.4, along with the mitigating measures.

Mitigating Measures

The following mitigation measures apply to the selected Alternative 2, Rehabilitation of the Park Road between MP 50.8 and 52.4.

Vegetation

Construction limits will be marked at all work areas to help insure that vegetation outside the areas to be rehabilitated does not get trampled or torn up during the work. Disturbed areas will be monitored for exotic plants. Silt fences will be installed to diminish erosion and turbidity where the larger culverts are being replaced and to protect wetland areas.

Air Quality

Dust will be produced by the additional truck and construction traffic on the gravel park road. These impacts will be partially mitigated by use of a water truck during construction activities to keep the dust down.

Wildlife and Habitat

The NPS will follow established guidelines in the park's bear-human conflict management plan. The plan requires contractors and staff to use bear-proof containers for food and refuse and sets up guidelines for temporary closures. Vegetation clearing

will be done outside of the May 1 to August 1 nesting season so as to not impact nesting or fledging. Any occupied nests discovered will be protected at all times. Shrubs within 16 feet 4 inches (5 meters) of the road edge are subject to road maintenance activities and are available for removal at any time under an agreement with the U.S. Fish and Wildlife Service.

Cultural Resources

Surveys for cultural resources have taken place in the road corridor over the past two decades. If previously unknown cultural resources are located during construction, the project will be halted in the discovery area until cultural resource staff can determine the significance of the finding. Mitigation standards will be established to limit any damage to the cultural information present at the site.

Visitor Use and Recreation

Visitors, Kantishna lodge owners, and bus drivers will be advised in park announcements, programs, and publications that there will be temporary inconveniences from construction work on the road. Culvert replacement or other work that will close the road for hours will be scheduled to be done at night.

Eastbound oversize vehicles bound for the worksite from Toklat may leave Toklat no earlier than the last eastbound bus leaves Toklat for park headquarters. Oversize vehicles working on the project must reach Toklat prior to the first eastbound bus reaching Toklat or the first westbound bus reaching the project location.

Oversize traffic to and from Toklat will travel in the normal 10:00 PM to 6:00 AM window.

Daytime project work that disrupts the road structure and surface within the project limits between MP 50.8 and MP 52.4 will be allowed. Accumulative maximum allowable traffic delays shall total no more than 5 minutes westbound and 5 minutes eastbound, not 5 minutes at each work site. The road shall be safe and passable for traffic.

Work throughout the project area off the road which does not disrupt the road surface, make the road structure unsafe, or cause bus delays, may be done at any time.

In all cases traffic control and safety will be maintained. The contractor will include proposed daytime work protocols in its Quality Control Plan and its Safety Plan to show how their monitoring and controls will be implemented.

Rationale for the Decision

The selected action (Alternative 2) will satisfy the purpose and need of the project better than other alternatives because it will improve safety on the park road and improve

draining water away from the road prism while retaining as much of the road's rustic character as possible.

Alternative 1 (No Action) would not accomplish the purpose and need of the project. It would continue the lack of sufficient intervisible pullouts between MP 50.8 and 52.4 on the park road which requires a high level of vigilance by all vehicle drivers. Alternative 1 would also not remove poor subgrade soils and install ditch underdrains to remove water from the subbase to reduce saturation of the road prism.

Significance Criteria

The selected alternative (Alternative 2) will not have a significant effect on the human environment. This conclusion is based on the following examination the significance criteria defined in 40 CFR Section 1508.27.

(1) Impacts that may be both beneficial and adverse. A significant effect may exist even if the Federal agency believes that on balance the effect will be beneficial.

The EA evaluated the effects of Alternative 2 on vegetation, wetlands and soils, wildlife and habitat, cultural resources, visitor use and recreation, and park management. As documented in the EA the effects of the proposed action will range from negligible to moderate depending on the resource. There will be no significant restriction of subsistence uses.

(2) The degree to which the proposed action affects public health or safety.

The selected alternative will have a minor beneficial impact on park management by providing visitors and employees with an additional safety margin while traveling this section of the park road. Providing intervisible pullouts for buses (the park road design vehicle) will not insure that all vehicle travel on the road will be safe. It will, however, provide a place for drivers to pull over when travelling the speed limit and not be surprised by a vehicle coming the other way. That vehicle could otherwise easily be hidden by the rolling landscape and rather than widen or straighten the whole road this alternative will provide those pullouts so that no drivers are surprised by oncoming traffic and have no place to pull over.

(3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetland, wild and scenic rivers, or ecologically critical areas.

The road improvements will be located in a national park. Most of the area adjacent to the project site is designated wilderness; however, the park road corridor is non-wilderness to a distance generally 150 feet from centerline. No project activities will occur in wilderness. The EA evaluated the effects of the road improvements and concluded that the impacts will be moderately beneficial to minor adverse.

(4) The degree to which effects on the quality of the human environment are likely to be highly controversial.

The effects on the quality of the human environment will not be controversial. The NPS sent the EA to over 200 agencies, organizations, and individuals for public review. Only two comment letters were received. The environmental analysis concluded that the proposed road improvements will have from moderately beneficial to minor adverse impacts on park resources. The commenters did not question these findings.

(5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.

The environmental effects of the selected alternative (Alternative 2) do not involve unique or unknown risks.

(6) The degree to which the action may establish a precedent of future actions with significant effects or represents a decision in principle about a future consideration.

The Mile 50.8 to 52.4 road improvement project represents a continuing section by section improvement of the park road safety and structural condition, as detailed in the 1997 DCP/EIS and 2007 Denali Park Road Design Standards.

(7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts.

The EA for the Mile 50.8 to 52.4 park road improvement project evaluated improvements to that section of the park road. Additional rehabilitation projects are planned for other sections of the park road as funding permits. The conceptual outline for this work was evaluated in the 1997 DCP/EIS, where the work was rated as less than a significant impact.

(8) Degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.

The selected alternative will not adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places. The park road has been determined eligible for the National Register and this project was evaluated as having no adverse impact on historic properties.

(9) The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973.

The selected alternative will not adversely affect an endangered or threatened species or its habitat.

(10) Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

The selected alternative (Alternative 2) will not violate any Federal, State, or local law.

FINDINGS

The levels of adverse impacts to park resources anticipated from the selected alternative will not result in an impairment of park resources that fulfill specific purposes identified in the establishing legislation or that are key to the natural or cultural integrity of the park.

The selected alternative complies with the NPS Organic Act and ANILCA. There will be no restriction of subsistence activities as documented by the ANILCA, Section 810(a) Summary Evaluation and Findings.

The NPS has determined that the selected alternative does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, in accordance with the National Environmental Policy Act of 1969 and regulations of the Council on Environmental Quality (40 CFR 1508.9), an environmental impact statement is not needed and will not be prepared for this project.

ATTACHMENT A

NPS RESPONSES TO PUBLIC COMMENTS AND ERRATA for the Denali National Park and Preserve EA for Rehabilitation of the Park Road in the Porcupine Forest Area of Denali National Park

In response to the environmental assessment, the NPS received two comment letters. Described below are the substantive comments and the NPS responses.

1. Comment #1. Individual: The road is fine as is and is safe to travel.

NPS Response #1: While the NPS believes that the park road is safe to drive, this section does not meet the standards for intervisibility of passing pullouts decided upon by the 1997 DCP/EIS and 2007 Road Design Standards.

2. Comment #2. Environmental Group A: The group wants to ensure that adequate measures (such as washing construction vehicles before they enter the park) are in place to reduce the risk of the spread of exotic species, especially if contractors from outside the park are used.

NPS Response #2: We concur. It is a normal part of our construction contracts that measures to prevent invasive plant colonization include pressure washing construction equipment and vehicles prior to entering the park. The gravel sources for this project are in-park sources and the park will continue its existing exotic plant eradication program, both at the gravel source areas and on the fresh slopes after construction, as necessary. An additional mitigation measure has been added.

3. Comment #3. Environmental Group A: "We wish we had the opportunity to view the current project at mile 80-84 before commenting on this EA. Nonetheless, it may be prudent for NPS to wait a year before finalizing this project. After using the new improvements at mile 80-84, drivers may have useful feedback on the size, number and placement of pullouts that is applicable to this project."

NPS Response #3: While we do not expect to change the number and placement of pullouts as part of this project, we are still monitoring whether the size of the designed pullouts, including the tapers, satisfies our safety requirements while generating the least impact on park resources. If results from the 80-84 construction show either a need to modify the design or an opportunity to reduce resource impacts, we will work with FHWA to modify the Porcupine Forest project design.

ERRATA

This errata section provides clarifications, modifications or additional information to the EA and to the selected alternative, Alternative 2. This modification does not significantly change the analysis of the EA and, therefore a new or revised EA is not needed and will not be produced.

1. Modification. Add to the language on page 20: Measures to prevent invasive plant colonization will include pressure washing construction equipment and vehicles prior to entering the park.

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