

FORT UNION TRADING POST NATIONAL HISTORIC SITE

ESTABLISH A VEHICLE ACCESS ROAD AT FORT UNION TRADING POST NHS



JUNE 2008

**ESTABLISH A SERVICE VEHICLE ACCESS ROAD AT
FORT UNION TRADING POST NHS**

**NATIONAL ENVIRONMENTAL POLICY ACT
ENVIRONMENTAL ASSESSMENT
AND
NATIONAL HISTORIC PRESERVATION ACT
ASSESSMENT OF EFFECT**

June 2008

Established by the American Fur Company, Fort Union Trading Post was active between 1826 and 1867. This fort was the company's principal outpost on the upper Missouri River. Here, European-Americans traded with local Indian Tribes, providing them with modern trade goods in exchange for animal furs. This was a time of peaceful co-existence as both Native Americans and the European traders benefited from the transactions. Following the deterioration of civil order on the northern Great Plains, the fort was sold to the United States Army. The structures were torn down and the materials used to expand neighboring Fort Buford, a military post.

In 1926, the State of North Dakota acquired the property as a state historic site. In 1966, the site was designated as a National Historic Site. Early interpretive efforts at the site included a temporary visitor center immediately north of the fort location and guided tours of the fort ruins. In 1986, the National Park Service embarked on a partial reconstruction of the historic fort, which was finished in 1991.

Prior to fort reconstruction, vehicles were able to access the site from the highway immediately north of the fort. Following reconstruction, this road was removed and re-vegetated to provide a more accurate cultural landscape for the area surrounding the fort. Following removal of the original entrance road, no formal service vehicle access to the fort was established. Vehicle access to the fort has since followed an unimproved farm trail that runs a quarter mile from the maintenance shop west to the fort. This unimproved road becomes impassable during inclement weather and has since been discovered to cross the Garden Coulee archeological site. Without this informal road, service vehicles can only drive within 475 feet of the fort from the closest parking area. Visitors also walk the final 475 feet to the front of the fort (river side, or south side) via a 6' wide sidewalk. The "Conceptual Plan" for park development (1986) indicated that this sidewalk would be 10' wide and double as a service road.

This Environmental Assessment presents the alternatives the park has considered for removing the resource impacts of the informal vehicle access route, and documents the impacts of each alternative on park cultural and natural resources.

Fort Union Trading Post National Historic Site welcomes your comments on this proposal and on the analysis contained within the document. Comments will be taken for 30 days after the release of this document, and can be sent by mail to Andy Banta,

Superintendent, Fort Union Trading Post NHS, 15550 Hwy 1804, Williston, North Dakota 58801 or by fax at 701-572-7321. Comments may also be submitted through the Planning, Environment, and Public Comment (PEPC) website by navigating to <http://parkplanning.nps.gov/>, and selecting Fort Union Trading Post NHS.

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INTRODUCTION

Fort Union Trading Post NHS



Figure 1 Fort Union Trading Post NHS

Fort Union Trading Post NHS, a management unit of the U. S. Department of the Interior's National Park Service, straddles the state line and the Missouri River. The park lies in northwestern North Dakota and northeastern Montana, with portions located in North Dakota's Williams and McKenzie Counties, and Montana's Roosevelt and Richland Counties.

Fort Union Trading Post NHS was authorized in 1966 (P. L. 89-458, 80 Stat. 211)
...to commemorate the significant role played by Fort Union as a fur trading post on the upper Missouri River.

The park was authorized in 1966 and expanded in 1978. It includes 443 acres, of which 307 are federally fee-owned, 121 privately owned but under a Federal easement, 11 privately owned without easement, and the remaining four publicly owned. The area around Fort Union Trading Post NHS is rural, agricultural land including farm fields and

mixed grass prairie. The nearest large (population over 5000) communities are Williston, North Dakota, 25 miles east of the park and Sidney, Montana, 25 miles southwest of the park.

The National Park Service Organic Act (16 U.S.C. 1) requires that Fort Union Trading Post NHS be promoted and regulated to conform to the Service's fundamental purpose, which is

...to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.

Background

The partially reconstructed Fort Union Trading Post stands on the north bank of the Missouri River, on the original location of the historic fort. To the extent possible, park support facilities including the main entrance roads, visitor parking lots, employee housing and maintenance facilities have been purposely located at a lower elevation, out of view of the fort. This setting prevents a negative visual impact. Visitors walk the final 475 feet from the parking area to the fort on a paved sidewalk. Motor vehicle access to the fort is often required; however, a service road was not included in the site plan when the partial reconstruction was completed. Currently, service vehicles accessing the fort utilize an unimproved dirt road that crosses the Garden Coulee archeological site.

Vehicle traffic is damaging this archeological site by compacting the soil, and potentially crushing artifacts. As tires cut into the soil they may also displace artifacts from their original position. This road becomes impassable when wet or covered with snow. When the road is muddy and vehicles pass each other or drive around puddles, they damage surrounding vegetation and possibly archeological resources alongside the road. At times when this route is impassable park staff use another route near the edge of the terrace, creating additional impacts to the vegetation and the archeological site.

Without this service road, vehicles can only reach a point 475 feet from the fort, in the main parking lot.

Currently, the unimproved road between the fort and the maintenance area is utilized by park staff daily for cleaning, maintenance, and winter snow removal. Occasional access is also required when loading or unloading supplies, recyclables, interpretive trunks, equipment for off site use, etc. Vehicle access to the fort is also needed by volunteers and service workers from the nearby communities. Commercial deliveries and service staff (plumbers, electricians, and painters, etc.) must also access the site on a weekly basis, to deliver tools and parts when repairing fort facilities.

During special events, access is needed by park volunteers and vendors to transport historic camping gear and supplies to the fort. Special events account for 25% of the

park's annual visitation. The Fort Union Rendezvous event includes over 100 people and 30-50 vehicles require access. The existing service route works well because it provides direct access and minimizes the intrusion of vehicles into the historic scene.

Emergency vehicles from the surrounding communities, including fire trucks and ambulances, must also have access to the fort site in case of an emergency. When the existing service route is unavailable, emergency vehicles must park 475 feet away and access the fort on foot using the sidewalk.

Vehicles are only allowed to parking at the fort for a short duration, usually less than an hour. There is no designated turn-around or parking area at the fort, but drivers typically turn around and park just outside the north gate. Without delineation, vehicles park and turn around randomly which impacts a larger area than would be affected if parking were confined. The result of this random area of travel is a larger area of compacted soil that supports little or no vegetation. Under wet conditions, tire tracks are left in the soil. This creates a negative visual impression, inconsistent with the historic character of the fort. Some of the area impacted by vehicles has not been cleared of archeological resources, and vehicles may be damaging buried cultural features. The establishment of a formal service road would include a designated area for vehicles to turn around.

The types of vehicles that need service access to the fort include large fire trucks, ambulances, delivery trucks, pick-up trucks, passenger cars, farm tractors, a skid-steer loader, riding lawn mowers and small off-road vehicles with soft tires.

Some of these vehicles, such as the skid loader, riding lawn mower and park utility vehicles, are not appropriate for use on paved roads. They lack proper safety equipment, their tires are not designed for pavement, and they are not designed for highway speeds.

Proposed Action

Fort Union Trading Post NHS desires to provide all-weather service vehicle access to the fort facilities in a manner that does not damage archeological features and has minimal impact on the landscape and natural environment.

The park developed a Project Management Information System (PMIS) project statement to document, restore and mitigate significant cultural sites while rehabilitating the existing road. This project was funded in July 2006 under the Recreation Fee Program, 20% Fee funding. The scope of the project was changed from the original plan in December of 2006 because an appropriate mitigation plan could not be agreed upon between the Fort Union Trading Post Superintendent and the North Dakota Historic Preservation Office. That plan called for stabilizing and maintaining the road in its current location.

Because the establishment of a formal vehicle service road has the potential to adversely impact park resources, this Environmental Assessment has been prepared.

PURPOSE AND NEED FOR THE PROPOSED ACTION

Need

The use of the current service road is damaging existing park archeological resources and the park must take action to relieve these impacts. However this service road is the only vehicle access road to the reconstructed fort. Removal of the existing route would create access problems to the fort for normal business needs, service vehicles and emergency vehicles.

The park needs to develop an alternate service vehicle access and confine the turn-around area to reduce impact to the site.

Purpose

The purpose is to provide an all-weather access for service vehicles to the reconstructed fort. This access road will serve park staff for normal business and maintenance activities such as deliveries, snow removal, trash removal, and the movement of staff and materials, vendors, special events volunteers, and emergency vehicles.

Specific goals for this project would be to:

- Protect sensitive park resources, including significant cultural resources, from vehicle damage.
- Protect visitor and employee health and safety by enhancing emergency response capabilities.
- Provide safe and efficient visitor access to the reconstructed fort for daily use and special events.
- Facilitate safe and efficient essential park maintenance access.

Scoping

A news release was placed in the local newspapers on April 15, 2007. (Appendix A). The news release requested that comments be submitted to Fort Union Trading Post NHS Superintendent. A total of 6 comments were received, one via telephone, one via fax, one via the PEPC web site, one in person and two by email. One comment encouraged us to protect the view and keep roads off of the upper terrace, one comment questioned the damage to the archeological site based on the years of farming that preceded the site becoming a protected site, and one commenter implored us to protect the archeological site. Two individuals suggested we build some type of bridge over the archeological site so we could continue to use the current road alignment.

The North Dakota State Historic Preservation Officer (SHPO) has been consulted about this project (Appendix B). The SHPO reviewed this project and determined that the road and parking area proposed near the fort and any roads that cross archeological sites would have an adverse effect on historic properties (e.g., resources eligible for the National Register).

The Three Affiliated Tribes (Mandan, Hidatsa and Arikara Tribes) was notified of this project.

The Tribal Preservation Officer for the Three Affiliated Tribes and the North Dakota State Historic Preservation Officer met with the Park Superintendent on June 8, 2006 and indicated that vehicles crossing the Garden Coulee Archeological site adversely affect the historic property. Their concerns included:

- the formal road would render the archeological resources inaccessible to future researchers,
- the cumulative effects on the archeological site, including short- and long-term negative impacts,
- additional impacts after road establishment, such as road maintenance, road upgrades, and utility maintenance were also a concern.

The U. S. Fish and Wildlife Service, on April 26, 2007, has determined that this project will not impact federally listed threatened or endangered species or designated critical habitats, per Section 7 consultation requirements (Appendix C).

A list of the parties consulted for this proposal is included at the end of this document.

National Park Service Policy and Regulations:

The “National Park Service Management Policies 2006” guides park managers in the management and development of park resources. The following policies were utilized when considering alternatives that could provide vehicle access to the fort. See <http://www.nps.gov/policy/mp/Index2006.htm>.

Section 1.4.3 Obligation to Conserve and Provide for Enjoyment of Park Resources and Values

Section 1.4.7.2 Improving Resource Conditions within the Parks

Section 5.3.5 Treatment of Cultural Resources

Section 5.3.5.1 Archeological Resources

Section 8.2.3 Use of Motorized Equipment

Section 8.2.5.1 Visitor Safety

Section 9.2 Transportation Systems and Alternative Transportation

Section 9.2.1.1 Park Roads

Additional Legal Obligations

Section 106 of the National Historic Preservation Act (NHPA), as amended (16 U.S.C. 460), requires that Federal agencies consider the effects of any undertaking on "any district, site, building, structure, or object that is included in the National Register." Section 110(a)(2)(B) of the NHPA directs Federal agencies to manage and maintain any properties that might be eligible for the National Register of Historic Places that considers preservation of their historic, archaeological, architectural, and cultural values. Park activities are carried out following the guidance of the programmatic agreement signed by the NPS, Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers.

Fort Union was designated a National Historic Landmark (NHL) on July 4, 1961. It was automatically listed on the National Register of Historic Places in October 1966, with passage of the National Historic Preservation Act. A National Register nomination was prepared and accepted on January 5, 1982. A revision and boundary expansion for the NHL is pending (2006).

Five Native American tribes are culturally affiliated with the Fort Union Trading Post NHS (Zendo 2006). They are the Mandan, Hidatsa, Arikara, Assiniboine and the Sioux. Given these tribes' affiliation with the park, Fort Union Trading Post NHS is particularly concerned with adhering to the requirements of, Executive Order (EO) 13007 (Indian Sacred Sites; 61 FR 26771), and EO 13175 (Tribal Consultation; 65 FR 67249), supplemented by Department of the Interior Departmental Manual (512 DM 2, 3) and Environmental Compliance Memorandum (ECM97-2), as well as the American Indian Religious Freedom Act (42 U.S.C. 1996). These directives require consultation with tribal representatives and the consideration of trust resources and spiritual values throughout the management process.

The proposed road relocation project may involve ground-disturbing activity that must comply with requirements of the Archaeological Resources Protection Act (ARPA; 16 U.S.C. 470aa). ARPA mandates the protection of information held by archeological sites. In addition, the Native American Graves Protection and Repatriation Act (NAGPRA, 25 U.S.C. 3001-3013) requires Federal agencies to consult with lineal descendants or culturally affiliated tribes concerning the discovery of cultural remains and objects, as defined by the Act.

Environmental Topics Relevant To the Proposed Action

Fort Union Trading Post NHS developed a plan for managing park resources in 1978 (FOUS GMP 1978). The proposed action to “establish a vehicle access road” will be conducted within the park’s Historic Zone, and the Landscape Management Sub-zone, (FOUS GMP, 1978, p.SFM-3). The Historic Zone is the parent land classification for Fort Union Trading Post. It includes the original fort site, the historic terrace and the Mondak trash dumps. The Landscape Management sub-zone includes the land surrounding the fort site to the north and east and the flood plain directly south and east of the fort site. In this sub-zone, hay is cut by special use permit. This is in keeping with the historic scene when the grassland surrounding the fort was heavily grazed.

The project will be evaluated with respect to the requirements of these management zones.

The proposed action will take place within the park-wide Cultural Landscape, so the project’s potential impacts on that landscape must also be considered. The proposed project involves excavation of a roadway to establish a road foundation, which would impact vegetation.

Issues and Concerns

The project has undergone a thorough screening process by park staff, the staff of the NPS Midwest Region and the Midwest Archeological Center, and by the public at large through public scoping.

Several environmental effects considered in developing this assessment were judged to be insignificant and have been dismissed. Those topics are as follows:

The proposed action would not affect the park’s water quality or wetlands since none of the proposed alternatives would come near enough to the Missouri River or any of its tributaries to have an impact. There would only be a short period of ground disturbance, thus little chance of sediment reaching the river.

None of the alternatives would be likely to impact wildlife. The size of the project is small and the duration of construction would be short. Nearly all wildlife that might be impacted would be expected to move away from the disturbance.

Dust would be raised for a short period of time during actual construction activities, causing negligible impacts. Vehicle exhaust would be increased during the construction activities.

Geological resources such as bedrock and soils are not likely to be affected by any of the alternatives. Some soils would be compacted by the use of construction

equipment, but would be expected to recover within one year. Erosion would be minimal. The total geological area disturbed by the establishment of a new service road would involve a very small percentage of park acreage.

No threatened or endangered species are expected to be affected by the proposed action, as determined through consultation with the U. S. Fish and Wildlife Service, (FWS) North Dakota Ecological Services Office, Bismarck (April 2007). While the project is in an area designated as “Critical Habitat” for Piping Plover, by the FWS; none of the alternatives will affect any constituent habitat.

No state-listed rare plants are in the project area and none would be affected by the proposed alternatives. The proposed project is not in an area of significant exotic plant infestation. New infestations of exotic plants would not be expected. Isolated exotic plants that might occur in the project area would be controlled by NPS staff when the overall park area is treated.

The proposed project would not affect any Native American sacred sites as none are known to exist in the park.

The proposed project does not involve issues of environmental justice since the project will not have a disproportionate effect on minority or low income populations.

The project area is not in a wild and scenic river corridor or a wilderness area.

The following environmental topics may be affected by this proposal as documented by the following discussion:

Natural Resources

Plant and Wildlife Habitat: This project would impact an area of reconstructed native prairie, and potentially a wooded riparian area along the Missouri River. Restoration of approximately 600 to 1400 feet of the existing unimproved road would allow this area to return to more natural conditions after establishment of native vegetation. Depending on the alternative selected, undisturbed areas could be impacted, the vegetation removed, and vegetation next to the new road would be impacted through construction activities. Therefore, impacts to vegetation and wildlife habitat will be considered in the analysis.

Cultural Resources

Fort Union Trading Post is primarily an archeological site. Nineteen archeological locations exist within park boundaries. In addition, the park is part of a National Register-eligible cultural landscape. Protection of all archeological sites is critical. Removal of the unimproved road would prevent further damage to an archeological site, but construction of a new road would potentially impact other cultural sites. Any

new access routes could impact the cultural landscape by imposing modern features on the historic nature of the landscape. There are no known Native American sacred sites or traditional cultural properties associated with the proposed project area. The analysis will consider impacts to extant cultural resources, specifically archeological sites and cultural landscapes.

Visitor Experience

Recreation, sightseeing, photography, and history study are among the recreational activities that exist in the park. These activities would be temporarily affected during construction of any new vehicle access road. Modifications to the access in and around the fort would impact visitors, and therefore are considered in this analysis.

Health and Safety

The National Park Service strives to protect visitors from natural hazards while maintaining opportunities for high-quality visitor experiences. Depending on the alternative selected, visitors may be exposed to additional vehicle traffic, and the park will have to manage these conflicts to reduce hazardous exposures. Impacts to health and safety issues will be considered in the analysis.

Park Operations

Park staff uses the unimproved road to accomplish daily tasks. However, during certain times of the year direct access is not available and staff has had to change work schedules and operations. Some alternatives would require additional management of employee actions and visitor access, with added concerns for the safety of both employees and visitors. Additionally, access may be less than direct under some alternatives causing additional planning and consideration of time and costs. For these reasons, the impact of each alternative on park operations is considered in this analysis.

ALTERNATIVES

Fort Union Trading Post has considered four alternatives to provide access to the fort facilities, including the no action alternative, in a manner that does not damage archeological features, and has minimal impact on the landscape or natural environment. The alternatives were developed following discussions among an interdisciplinary team of engineers, environmental specialists, park management staff, and with input from the public.

Alternative A: No Action, Continued Use of Existing Road

Current use of the existing, unimproved road would continue under the no action alternative. The road consists of little more than a two-track trail that crosses the ground surface without an improved driving surface or drainage ditches. Use averages between one and five trips per day by the park maintenance staff as they complete their daily tasks. Most of these trips are made using a soft tire, off-road vehicle. On average, one trip per day is made by a pick-up truck or sedan by park staff. Approximately once a week in the summer, and once a month in the winter, delivery or service work traffic is made by a heavy truck (delivery van or beverage truck). During special event weekends, there are 30-50 pick-up trucks or passenger vehicles using this road to deliver and retrieve camping gear and display material.

Actions Common to All Action Alternatives

(Alternatives B, C, and D)

Alternatives B, C, and D involve the establishment of a formal service road at a new location and re-vegetation of the existing road over the Garden Coulee archeological site. The following presents the factors and mitigation that are common to each of these action alternatives. Prior to construction activities of a new route the area would be surveyed for cultural resources and the exact route marked in the field to avoid any suspected cultural resources if possible. Under all alternatives an effort to recover all archeological materials would be undertaken. Recovered materials would be recorded and made available to researchers.

A new road would be 10 feet wide and consist of 9 inches of crushed gravel as the base and driving surface. It would be constructed using heavy equipment to remove the top three inches of soil from the road alignment. The road bed would be compacted and a geo-fabric laid down on the excavated surface. The gravel would be placed on top of the fabric and compacted. The excavated soil would be spread on each side of the gravel to form the road shoulder.

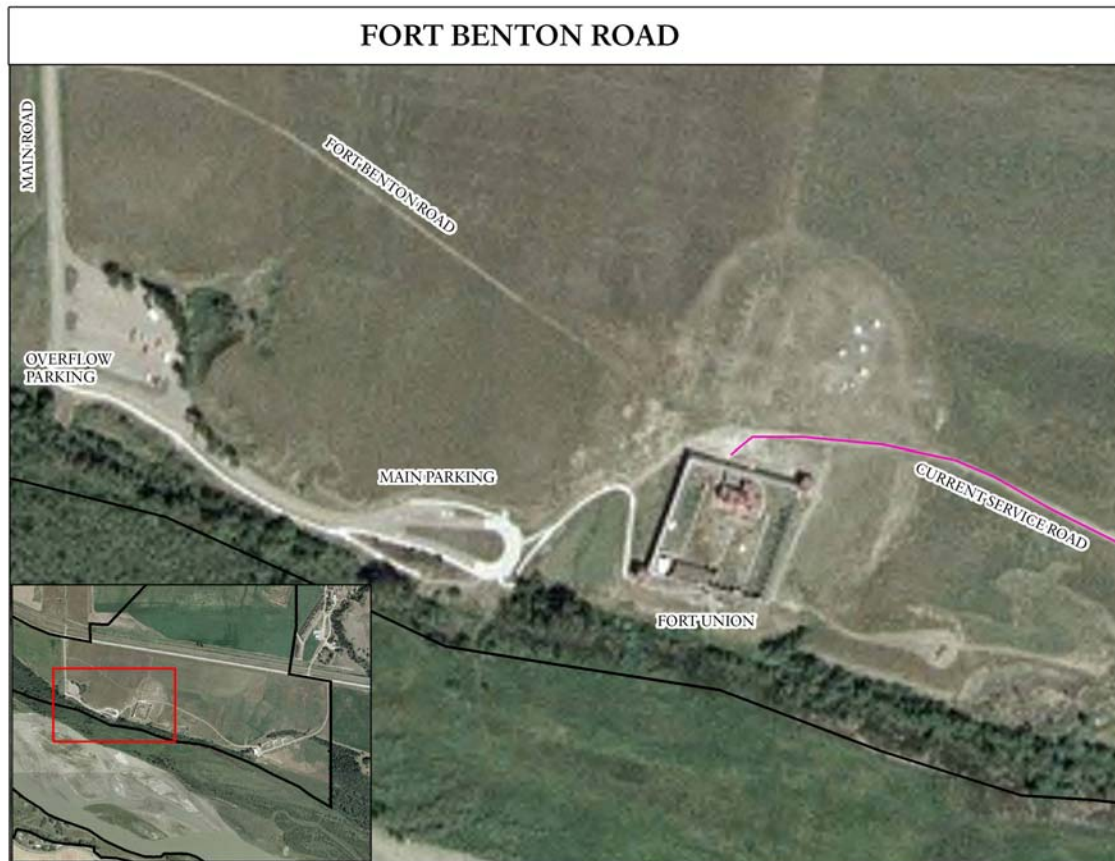
An area up to 12 feet on either side of the new road alignment would be impacted by the machinery building the road, making the initial impact from 22-34 feet wide. Every effort would be made to minimize the overall compaction of vegetation and soil outside the final road bed.

Seasonal maintenance of the road would require snow plowing and occasional grading to maintain the gravel surface. Long-term road maintenance, required approximately every two years, would be more extensive. The gravel in the road bed would need to be replaced as it gradually spread into the margins of the road through use and further compaction (estimated at every 10 years).

Under these three alternatives, re-vegetation of some or the entire existing unimproved road would take place to restore it to native prairie. Alternatives B and D would result in restoration of the full ¼ mile length of the existing unimproved road. Alternative C would only restore the section of road over the Garden Coulee site, and continue to use the remainder of the road.

Restoration of the existing road would include tilling the soil to a depth of 4-6 inches to help relieve compaction and prepare a seed bed. Native grass seed would be planted using a seed drill. The seed mixture would contain native prairie grass species, primarily green needle grass, blue grama, and buffalo grass.

Finally, alternatives B and D also consider an access route for special event traffic. An existing road trace extends from the fort to the northwest. This trace is thought to be the historic Fort Benton Road, which at one time led to the American Fur Company's Fort Benton on the Upper Missouri River in western Montana. The road trace had been part of a cultivated field prior to the acquisition of the land by the NPS, but the trace remains visible. This route is proposed as a route for traffic to the fort during special events, such as the annual Rendezvous, to isolate vehicle traffic from pedestrian traffic at a time when both uses are heavy and the potential for conflict is greatest. If conditions were wet enough to damage resources, it would not be used.



Alternative B: River Corridor Route:

This alternative would establish a new road along the river corridor, at an elevation below the terrace where the fort and the archeological site lie. The road would begin near the maintenance shop, travel west approximately one-quarter of a mile along the lower river terrace past the fort, and come to the top of the terrace at the pedestrian sidewalk on the west end of the visitor road.



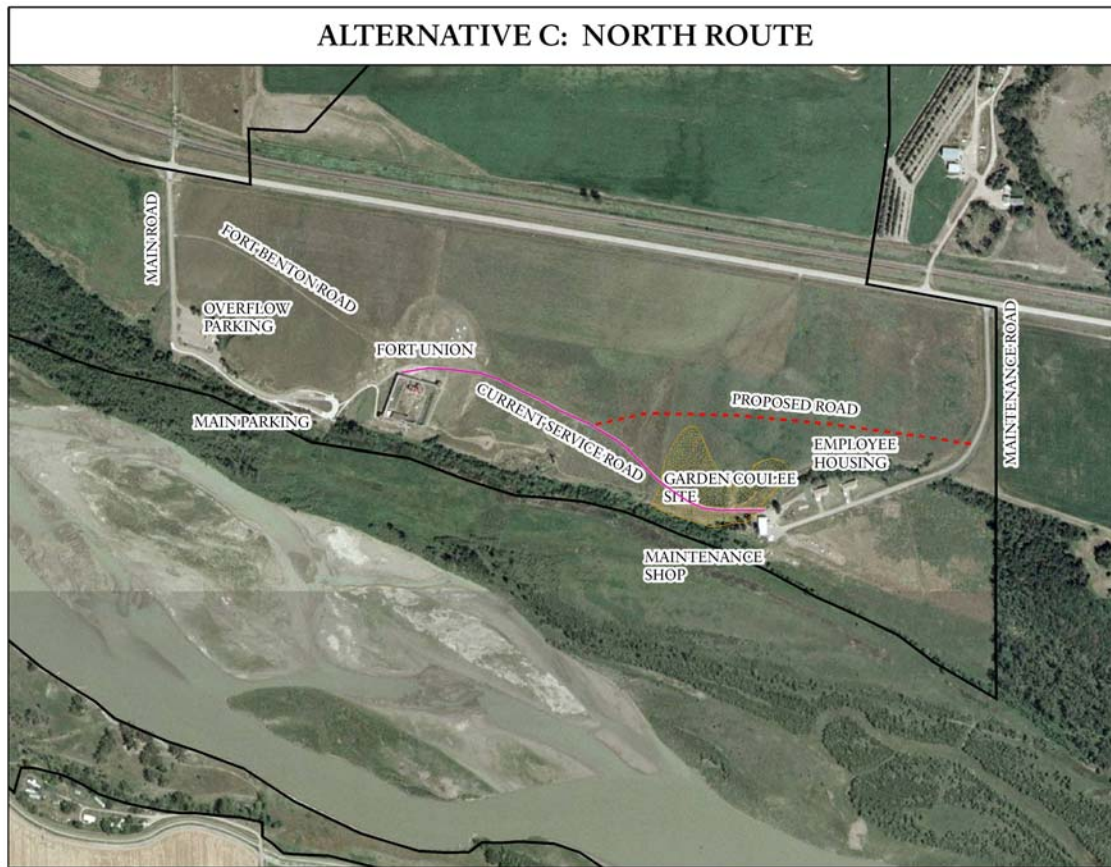
This alternative would require clearing a corridor at least 24 feet-wide through the riparian forest along the lower edge of the terrace, then utilize the alignment of the existing sidewalk west of the fort. The existing sidewalk near the fort would be upgraded and widened to support vehicle traffic. A 225-foot long gravel road would be required from the sidewalk to the north gate of the fort. A historic kiln located along the existing sidewalk would be avoided.

This road would remain largely hidden from the visitor's view because of its location below the edge of the terrace. But the location is susceptible to snow drifting, and its use would likely be lost for a portion of the winter due to heavy drifting. This route would not be adequate for larger delivery trucks because of the short turning radius required where the service road would join the sidewalk, but would provide seasonal access for smaller vehicles. Maintenance of the road would include plowing of snow and grading to maintain the road surface.

Alternative C: Establish a North Route.

This alternative would establish a new route extending from the fort to the paved maintenance entrance road (located along the east boundary of the park). This service

road would be approximately one half-mile in length and would use the western portion of the existing unimproved road, avoiding the Garden Coulee site.



The new segment of this route would be approximately 1300 feet long, in addition to the remaining portion of the currently unimproved road to the fort, for a total access road length of approximately 2600 feet. An archeological investigation of the proposed route would be required, including the use of electrical resistance or magnetic field gradient surveys, which would take approximately two weeks to complete. The goal would be to locate and avoid impacting historic resources associated with the Garden Coulee Site.

Alternative D Establish vehicle access from the existing parking area

This alternative would route all service vehicle traffic through the main park entrance, to the visitor drop off zone, which is located 475 feet west of the fort. The existing sidewalk at the visitor drop-off zone would be reconfigured to serve as both walking path and driving surface. Service vehicles accessing the fort would use the existing sidewalk for 250 feet, then would use a new gravel road for 225 feet, aligned over an existing walking path. The section of existing sidewalk to be used by vehicles would be replaced by a new sidewalk that is 10 feet wide. The gravel portion of the route would be constructed in a similar manner as the road bed, with 9 inches of gravel to support all

vehicle sizes. The small amount of construction gravel required by this alternative would be acquired from the old gravel pit east of the fort. This gravel is rounded and rust colored, typical of the gravel used when the fort was in operation.



This alternative would disturb an area of restored prairie from 22 to 34 feet wide for a distance of 475 feet in the areas that are not already part of the paved sidewalk or existing gravel walking path.

This alternative would require vehicles and visitors to use the same travel path.

Alternatives Considered but Dismissed

One alternative considered but dismissed would be to construct a formal road using the existing unimproved road alignment. The park well and waterline are located along a portion of this alignment and access may be required in the future if utility repairs are needed. In consultation with North Dakota SHPO, the park has determined that implementation of this alternative would have an adverse effect on the Garden Coulee site. Sites like Garden Coulee can be complex, with diverse feature types, numerous artifacts, and vast information potential. Through consultation it was determined that

even the mitigation of impacts would cause unacceptable impacts on the archeological site, as well as unacceptable costs.

A second alternative considered was to re-establish the original park entrance road. Before the reconstruction of the fort in the 1990's, visitors accessed the park's temporary visitor center and the fort ruins from the highway directly north of the fort. This road alignment would provide direct access and would not impact known archeological resources. This alternative was rejected because the visual intrusion of the road would be completely out of character with the cultural landscape of the historic fort.

Environmentally Preferable Alternative

The Council on Environmental Quality (CEQ) regulations (40 C.F.R. 1500-1508) and DO-12 Handbook require the NPS identify the alternative that best promotes the goals of section 101 of NEPA. The CEQ defines the environmentally preferred alternative as:

“...the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources” (CEQ 1981)

The environmentally preferred alternative is Alternative D, which would best meet this definition, and was selected based on the following reasoning.

- This alternative eliminates the existing unimproved service road that crosses the Garden Coulee Archeological site.
- This alternative facilitates emergency and service vehicle access that provides for the safety and well being of park staff and visitors.
- This alternative would impact known archeological resources near the northwest corner of the fort but is expected to have less impact than the other alternatives, based on the relative insignificance of those resources. Alternatives B and C may impact archeological resources, but a thorough evaluation of the routes has yet to be completed.
- This alternative results in the greatest amount of additional prairie reconstruction compared to the other alternatives. It would restore non-native vegetation on the existing route to native species, while disturbing only a small amount of the existing restoration effort.
- This alternative has the least amount of visual impact on the cultural landscape since it only impacts areas that already are used as a sidewalk or walking path.
- While this alternative increases the potential for visitor and vehicle conflicts on the pedestrian sidewalk, those situations can be managed to assure visitor safety.

Preferred Alternative

The preferred alternative is Alternative D. While each of the alternatives meets only some of the park needs, Alternative D was selected because it best met the greatest number of project goals.

Alternative D provides the same benefits to the archeological resources as Alternative B, and more benefits than the other alternatives.

Alternative D best protects the natural environment, resulting in the least amount of park acreage being impacted by a road. Both cultural landscape and vegetation are thus protected.

Alternative D provides the shortest, most dependable access to the fort by emergency vehicles.

Alternative D is not the best alternative for park operations as it requires visitors and vehicles to use the same travel routes when both are present, and puts vehicles in the visitors' view more than the other alternatives. It also requires additional travel time and fuel to complete park maintenance tasks. However, this disadvantage is outweighed by the advantages of alternative D in comparison to the other alternatives.

THE AFFECTED CULTURAL AND NATURAL ENVIRONMENT

Natural Resources

Vegetation (*General Flora*)

Fort Union Trading Post NHS has a relatively complete inventory of its plant community, which has been documented and mapped by the U.S. Geological Survey, (unpublished) and the lichens have been documented (Wetmore 1998). The flora of the park is a mixture of native grasses (green needle grass, western wheatgrass, blue grama); non-native grasses (smooth brome, crested wheatgrass, Kentucky bluegrass); native sedges (Penn sedge, threadleaf sedge, needleleaf sedge,); forbs (hairy goldaster, rush skeletonplant, gray sagewort); and shrubs (broom snakeweed, prairie rose, silver sage). Prairie is predominant at the site and occupies approximately 90 percent of the total surface. The remaining 10 percent is a rich riparian area along the active floodplain of the Missouri River, which includes thick growths of cottonwood, green ash, chokecherry, redosier dogwood, and willow (Redente, 1993). The USGS plant inventory has been completed but the report has not been finalized. When the report is finished it will be posted at: <http://biology.usgs.gov/npsveg/products/parkname.html>. A draft of the report is available from the park.

Wetland and riparian areas have been identified at Fort Union Trading Post, although their significance is questionable because they did not exist during the fort's occupation. At that time, the river channel was located just below the level terrace where the fort now stands. They do, however, represent vegetation that was present in surrounding areas that would have been observed by early travelers and traders.

A variety of species of exotic plants are of concern at Fort Union Trading Post. They include Canada thistle, Russian olive, leafy spurge, smooth brome, crested wheatgrass, cheat grass, foxtail barley, and tamarisk. Although these exotic plants occur as isolated plants or in small clumps throughout the park their cumulative impact has altered the cultural landscape of Fort Union Trading Post.

Cultural Resources

Archeological Sites

In 2000, Bauermeister published a report on the use of stone tools in the area that would become Fort Union. She summarizes the early history of the area:

“The lands within and around Fort Union Trading Post have probably been used by people for at least the past 12,000 years based on archeological materials and bison kill sites. Human presence on the northwestern plains goes back much further though, evidence for which begins with Paleo-Indians hunters and gatherers”(p.9-10) “In 1828 the American Fur Company established Fort Union Trading Post near the confluence

of the Yellowstone and Missouri Rivers....Trade flourished into the 1860's, when the social dynamics on the northern great plains changed. In 1867 the fort was sold to the U.S. Army, which tore the buildings down to obtain building materials to expand nearby Fort Buford." (p.20-21)

Eventually, the area west of the fort was mined for gravel, undermining the fort's southwest bastion. Most of the area around the fort was farmed and much of it was leveled in the 1960's. In the 1980's, work began to partially reconstruct the fort buildings. Historic artifacts still remain throughout the site, including objects such as broken dishes, spent cartridges and bullets. The National Park Service was able to create a reconstruction that accurately represents the original fort buildings.

The entire park has been inventoried for archeological sites; two known sites are in the proposed project area. The Fort Union Trading Post site consists of the remains of the original fort. The Fort Union "reconstructions" are managed as historical resources. However, the structures are not considered historic properties under Section 106 of the NHPA. Some historical and archeological artifacts are stored on site within the structures, but the historic structures will not be affected by this project.

The Garden Coulee Site (32WI18) is located a short distance east of Fort Union. Ethnographic accounts describe a substantial village with seven log cabins and twenty-three earth lodges. Archeological evidence in the form of numerous "bell shaped" storage pits similar to those commonly used by Plains Village tribes such as the Hidatsa and Mandan were also recorded by archeologists working at the Garden Coulee site" (NPS 19th Century Hidatsa Archeology: History). The Garden Coulee site was initially recorded in 1976 when historic artifacts were eroding from a terrace edge east of the fort. In 1977, a waterline excavation project also encountered historic material, and the features and characteristics of the materials found led researchers to believe this was a Native American site established after the primary Fort Union period, 1864 or later.

In 1982, further research established the Garden Coulee site as the location of the Crow-Flies-High band's late 19th-century camp near Fort Buford. Twenty years later, the NPS conducted an investigation to determine the spatial limits of the historic village. First the artifacts found on the surface of the ground were mapped, and later subsurface geophysical investigations using a magnetic gradiometer of a portion of the site revealed 50 subsurface anomalies (NPS, 19th Century Hidatsa Archeology: 2002 Research).

Both sites are considered eligible for the National Register of Historic Places, and have been determined to be in good condition as defined in the current NPS technical guidance for performance management.

Cultural Landscapes

The definition for ‘cultural landscape’ currently used by the National Park Service is “...a geographic area, including both cultural and natural resources and the wildlife or domestic animals therein, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. (Cultural Resource Management Guidelines, NPS-28)

The Cultural Landscape at Fort Union Trading Post was determined to be significant by consensus determination with the North Dakota State Historic Preservation Office (9/26/2001), with a landscape boundary coincident to the park's boundary. The landscape that contains and surrounds Fort Union Trading Post reflects how humans used and adapted to the natural environment in the broad expanse of rolling hills characteristic of the North Dakota prairie. This cultural landscape, much of which is remarkably intact, is one of the park's most impressive features. It is unique in that the landscape setting is very similar to the landscape present 200 years ago, with many archeological resources at the Fort and the surrounding landscape dating to multiple periods of significance and tied to both Native American and Euro-American history. The archeological remains of Fort Union Trading Post and its surroundings, including the information that it yields, are the basis for the site's historic significance. These resources are the tangible evidences of human occupation that verify the integrity of the cultural landscape and render it eligible for inclusion in the National Register of Historic Places.

The landscape is considered to be in good condition as defined in the Service's “Technical Guidance for National Park Service Strategic Goals FY 2005-2008”, Appendix E. The landscape shows no clear evidence of major negative disturbance and deterioration by natural and/or human forces, and its natural and cultural values are as well preserved as can be expected under the current environmental conditions. The site is also unique in that preservation and or restoration treatments for the cultural landscape are compatible with the treatments preferred by natural resources, including restoration of prairie and the removal of exotic and invasive species.

In the proposed project area there are no significant cultural landscape features dating to the period for which the Fort Union Trading Post NHS parkwide landscape is considered significant. However, attention will be given to sensitively addressing the broader, character-defining features of the cultural landscape including views, topography, spatial organization, vegetation, circulation, and archeology that are essential to the landscape's integrity.

Visitor Experience

Historic Scene

Visitors generally arrive at the fort by traveling from east to west on North Dakota Highway 1804. The access road brings them past the north side of the fort. From Hwy 1804, they initially observe five tepees, while looking across a quarter mile of reconstructed prairie and the river beyond. The view approximates what a band of

Indian people would have seen from a northern approach to the fort to trade their furs for cloth, blankets, beads, knives, metal pots and firearms between 1828 to 1867.

Turning south into the parking area, visitors park their cars west of the fort in one of two parking lots. They walk from 750 feet to nearly ¼ mile from their vehicles to the fort. As they approach the fort, the sheer size of the structure impresses people just as it did in the 1800's. The sidewalk leads visitors to the front (south) gate, between the fort and the Missouri River. The view of the river bottom includes mature cottonwood trees, willows, birds and other sights similar to the historic appearance of the 1800s.

Interpretation

As they enter the fort through the south gate, visitors first stop at the Indian Trade House where a park interpreter in living history costume greets them. Visitors learn about the history of the fort and see the furs and trade goods that were exchanged while the fort was in operation. The smells of a fire in the fireplace and coffee heating over the open flame further immerse the visitor in the experience of daily life at historic Fort Union.

Pamphlets guide the visitors in a self-directed tour of the other fort buildings. Visitors generally finish their visit in the Bourgeois House, where a uniformed park ranger greets them. Here they typically tour the museum exhibits, view a short film, browse the bookstore and use restroom facilities.

Following their visit inside the fort, most visitors leave by the north gate and some wander out to the five teepees that stand north of the fort. There, visitors unconsciously observe the reconstructed prairie and the historic landscape. The existing service road to the shop is readily visible. Since it is obviously not a wagon rut, it is an intrusion on the cultural landscape.

Visitors leave with an understanding of the peaceful co-existence that was enjoyed on the Upper Missouri River early in the fur trade. Both Native Americans and European Americans benefited from the items traded, which made their lives easier. Visitors also understand that as westward expansion by European Americans forced the Indian Tribes into smaller areas and compromised their traditional way of life, wars between the Indian people and the European Americans resulted.

Visitor Perceptions

Fort Union Trading Post is located on the state line in rural North Dakota and Montana. With a little imagination, visitors can visualize how this area appeared in the 1800's. The Missouri River is mostly lined with mature trees and there are enough remnants of prairie to convey a sense of early America. The fort stands alone on the river bank with few modern intrusions around it. It is this sense of time and place that the park aims to preserve.

For the most part, visitors rarely see a modern vehicle around the fort. The Park uses a golf cart-like vehicle to assist visitors who are mobility impaired. This cart is covered

with canvas and parked in or around the fort during the summer. During working hours when a vehicle is required at the fort, it approaches from the east largely out of public view. When maintenance work is being performed, vehicles are parked on the east side of the palisade to keep them out of sight. During special events, vehicle traffic is heavier, because a variety of materials are needed for these events. At these times, vehicles are more obvious.

Park Operations

Park staff utilizes the unimproved service road on a daily basis. Maintenance staff drive this road to access the fort before the park opens to conduct routine cleaning and maintenance activities. This access is generally with an off-road, soft-tire vehicle the size of a golf cart. In the winter, however, it is travelled with a full-sized vehicle. Throughout the day, one to five trips may take place as maintenance staff transport deliveries, conduct repairs, mow grass, deliver firewood or perform other work required around the fort. Some of these trips also utilize a full-sized pick-up.

For a week early and late in the visitor season more vehicle traffic is required as the fort prepares for the visitor season or winter. Many articles including the “Red River Cart”, the cannon, tipis and blacksmith equipment are transported to or from storage areas and the fort. The park interpretive staff accesses the fort via motor vehicle 15-20 times each summer to prepare for special events,

Vendor deliveries are made once a week at most. Vendors use the service road to bring their products as close as possible to the north gate. Other staff may use the service road to pick up heavy or awkward items including traveling interpretive trunks, recyclable materials or to pick up other staff members to work on projects. These types of trips occur less than once a week.

When the park requires the services of a plumber, electrician or other professional, the provider drives up the service road to the north gate. This allows convenient access to tools and materials required to make the repairs.

Following heavy rain, the service road is impassible until it dries. In the winter, snow must be cleared from the road to make it passable. In the spring when the ground thaws, it is impassible until it dries. At these times, park maintenance staff can only use the visitor parking area and must walk up to the fort. Any work requiring access to the fort buildings must wait, and all tools and supplies are carried to the fort manually or using the small golf cart vehicles. There is no emergency access to the fort during these periods, which consist of 10- 30 days per year.

Special Events are a significant feature of the park interpretive program. Four annual events and general activities include:

- Rendezvous

This four-day event in June introduces 30-50 vehicles to the fort, bearing up to 100 living history re-enactors in period dress. Re-enactors camp north of the fort in 1850's tradition white canvas tents or tipis. The re-enactors also dress in period costume, cook over open fires and live very much like people did in the mid-nineteenth century. Many of these campers also bring a large inventory of items consistent with the fur trade era to sell to park visitors. Campers begin arriving early in the week, with the majority arriving Thursday morning through Friday evening. Others come and go throughout the four day event. The majority of campers begin leaving Sunday morning and nearly all are gone by nightfall on Sunday night. The historically accurate tent, poles, iron cook ware and commercial items which are appropriate for the weekend are bulky and heavy. Vehicle access to the camping area behind the fort is required to both unload and load camping gear and inventory items.

In preparation for this weekend event, park staff mows the camping area north of the fort with a farm tractor and the vegetation along the park sidewalk with a riding lawn mower. Twenty large timbers (12" x 12" by 10' long) with 40 blocks used as benches, and several loads of firewood are delivered to the fort area using a pick-up and trailer. The timbers are placed with a skid steer loader. Four canvas awnings, poles and blacksmith supplies are driven up from the park shop. Following the event most of this material is returned to the shop and trash from the event is hauled away.

This is the busiest weekend of the year for park visitation. Visitor counts number between 3000 and 5000, comprising approximately 25% of the park's annual visitation. During the event, the park runs a shuttle service using a golf cart to transport visitors between the parking area and the fort. Most transported visitors are mobility impaired. The golf cart typically shares the road with visitors who are walking on the sidewalk, requiring one or the other to move off the sidewalk momentarily.

On Saturday morning the park hosts a "Fun Run" sponsored by a local bank. Bank volunteers block the main entrance road to the bank at the state line, where the race begins and ends. Set-up begins at 7:00 am and runners start arriving at 7:30. The parking area fills completely, requiring cars to fill all parking spaces, including in the small parking area nearest the fort. The road and parking areas from the state line east toward the fort are completely filled with people and vehicles for 3-4 hours.

A food caterer sets up a trailer near the smaller visitor parking lot for the entire four-day event.

- Indian Arts Showcase

This event is a two-day affair in mid August. Local Native American artisans demonstrate their craft and sell their art within the fort walls. 6-10 tables are set up for the craftspeople. Traditional musicians perform twice daily for visitors and a guest speaker gives a talk twice-a-day during this popular weekend.

To prepare for this event, park staff sets up four awnings in the fort grounds, and 10 large timbers (12" x 12" by 10' long) and 20 blocks are transported to the fort by pick-up and trailer to create benches. The crafts people use the park golf cart or drive their vehicles to the north side of the fort to transport materials and sales items to their respective tables. Following the event, the timbers are removed with a skid steer loader. Tables, chairs, awnings and trash are hauled back to the maintenance shop.

Visitation to this event ranges from 300 to 700 each day. Visitors generally park in the west parking area and walk up the sidewalk to the park. During the event the park runs a shuttle service using a golf cart to transport visitors between the parking area and the fort. Most transported visitors are mobility impaired. The golf cart typically shares the road with visitors who are walking on the sidewalk, requiring one or the other to move off the sidewalk momentarily.

During some years, a food caterer sets up a trailer near the smaller visitor parking lot.

- Labor Day Work Weekend

This is a three day event (Saturday –Monday) with living history re-enactors arriving Friday night. During the weekend the re-enactors work on projects using the same tools and methods that were used in the 1800's. Building projects have included a fur press, craftsman shops, a scale model keel boat, and furniture.

Visitation to this event ranges from 100 to 400 each day. Visitors generally park in the west parking area and walk up the sidewalk to the park. During the event the park runs a shuttle service using a golf cart for visitors to give them a ride between the parking area and the fort, primarily for those who are mobility impaired. Some of the time the golf cart and visitors are on the sidewalk at the same time which requires one or the other to step off the sidewalk to let the other pass.

In preparation for this event park staff uses vehicles to bring tools, lumber and firewood to the fort from the maintenance shop. Following the event, the tools, unused lumber and trash are taken to the shop.

- Engage's Christmas

This weekend event is scheduled for early December. Living history re-enactors live in the fort buildings, working and eating as they would have in the 1800's. The

re-enactors arrive Friday night and Saturday morning with warm camping gear, since night temperatures are often extreme, as low as -20 degrees Fahrenheit.

In preparation for this event, park staff use pick-up trucks to bring wood stove and firewood to the fort site.

Visitation to this event is generally light. The park does not run the golf cart for visitor transportation for the Engage's Christmas.

Health and Safety

The staff does not provide basic emergency services (ambulance or structural fire fighting), but relies upon services provided by the nearby town of Williston, North Dakota or Fairview, Montana. Should there be an injury or fire emergency; staff would attend to the stricken person and/or call to summon emergency services. Because there is no permanent vehicle access to the fort itself, emergency vehicles would use the existing unimproved road from the maintenance area to access the fort. In times of wet weather, these vehicles would have to stop in the visitor parking lot, and all equipment would need to be hand-carried to the fort.

Use of the existing sidewalk is impractical for motor vehicle access, because the curb where the sidewalk meets the parking area is 10" high. This is too high for emergency vehicles to negotiate, and the 6' wide sidewalk is narrower than a fire truck or ambulance wheel base. In wet weather, trucks could become stuck in the mud along the sidewalk. Although the existing distance of 475' is manageable for an ambulance crew with a gurney to walk, it would increase rescue time. The distance is not manageable for structural fire fighting. Response to a structural fire would require a hose to be laid from the fire truck in the parking area to the burning building. There is a 5000 gallon water storage tank on the north side of the fort, but it is only available to a fire truck that can park next to it. To date, emergencies such as fire or life threatening injuries have not occurred, but they must be anticipated nevertheless.

Summary Assessment of Alternatives and Associated Environmental Consequences

For ease in comparing the impacts of the proposed alternatives discussed above, the following table (Table 1) summarizes the environmental consequences associated with each alternative.

Table 1 Alternatives and Associated Environmental Impacts

Alternatives Affected Environment	Alternative A No Action Continued Use of Existing Road	Alternative B River Corridor Route	Alternative C Establish north route	Alternative D Establish vehicle access from the existing parking area [PREFERRED]
Archeological Sites	Moderate Adverse	Moderate Beneficial	Moderate Beneficial	Moderate Beneficial
Cultural Landscapes	Moderate Adverse	Minor Beneficial	Moderate Adverse	Moderate Beneficial
Vegetation	Negligible Adverse	Minor Adverse	Negligible Adverse	Moderate Beneficial
Health and Safety	Major Adverse	Major Adverse	Major Beneficial	Moderate Beneficial
Park Operations	Negligible Beneficial	Major Adverse	Major Beneficial	Moderate Beneficial

ENVIRONMENTAL CONSEQUENCES

Analysis Methods

The analysis below considers the intensity, duration, and timing of the potential adverse and beneficial impacts of each proposed action on the human environment. Definitions of impact evaluation factors vary according to the affected resource, but the following baseline terms have been applied across this evaluation.

Impact type:

- *Beneficial:* A positive change in the condition or appearance of a resource or a change that moves the resource toward a desired condition.
- *Adverse:* A change that moves the resource away from a desired condition or detracts from its appearance or condition.
- *Direct:* An effect caused by an action at the same time and place.
- *Indirect:* An effect caused by an action where the effect is later in time or removed in space, but is reasonably foreseeable.
- *Cumulative:* The CEQ regulations for implementing the National Environmental Policy Act require assessment of cumulative effects in the decision-making process for federal actions. Cumulative effects are defined as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions" (40 CFR 1508.7). Cumulative effects are considered for both the no action alternative and the preferred alternative. Cumulative effects were determined by combining the effects of the alternative with other past, present, and reasonably foreseeable future actions. Therefore, it was necessary to identify other past, ongoing, or reasonably foreseeable future actions within Fort Union National Historic site and in the surrounding region.

Impact Intensity Thresholds (either adverse or beneficial):

The criteria used to define the intensity of impacts associated with the analyses are presented for each resource, since impact intensities can vary according to the sensitivity of each resource. The impact analyses were based on professional judgment using information provided by park staff, relevant references, technical literature citations, and subject matter experts.

Context:

- *Site-specific:* Impact is limited to the area of the proposed action.
- *Local:* Impact extends beyond the area of the proposed action, generally to within a few miles of the specific site.
- *Regional:* Impact extends beyond the specific or local area of the proposed action, generally to within a hundred miles of the specific site.

Duration:

- *Short-term:* An effect would no longer be detectable in resource appearance or condition within a relatively short period of time, generally less than three years.
- *Long-term:* A change in the appearance or condition of a resource that, for all purposes, is permanent.

Impairment:

"... [A]n impact that, in the professional judgment of the responsible NPS manager, would harm the integrity of park resources or values, including the opportunities that otherwise would be present for the enjoyment of those resources or values. Whether an impact meets this definition depends on the particular resources and values that would be affected; the direct and indirect effects of the impact; the cumulative effects of the impact in question and other impacts" (*Management Policies 2006*: Section 1.4.5).

Cultural Resources

Archeological Resources

Impact Thresholds

Negligible: There would be either no impact or impacts at the lowest levels of detection, with neither adverse nor beneficial consequences. The determination of effect for §106 purposes would be no effect.

Minor: Adverse: There would be disturbance to a site(s) that results in little, if any, loss of integrity. The determination of effect for §106 would be no adverse effect.

Minor: Beneficial: This results in the maintenance and preservation of a site(s). The determination of effect for §106 would be no adverse effect.

Moderate: Adverse: disturbance of a site(s) would result in loss of integrity. The determination of effect for §106 would be adverse effect. A memorandum of agreement (MOA) is executed among the National Park Service and the North Dakota State Historic Preservation Officer, and, if necessary, the Advisory Council on Historic Preservation in accordance with 36 CFR 800.6(b). Measures identified in the MOA to minimize or mitigate adverse impacts result in a final determination of no adverse effect.

Moderate: Beneficial: stabilization of a site(s). The determination of effect for §106 would be no adverse effect.

Major: Adverse: disturbance of a site(s) results in a certain loss of integrity. The determination of effect for §106 would be adverse effect. Measures to minimize or mitigate adverse impacts cannot adequately mitigate for the loss of integrity.

Major: Beneficial: active intervention to preserve a site(s). The determination of effect for §106 would be no adverse effect.

Alternative A: No Action

If no action is taken, the continued use of the unimproved road would result in additional, direct damage to the Garden Coulee Site. Vehicle traffic would continue to compact the soil over the site during normal driving conditions. During wet road conditions, the driving surface would require vehicles to negotiate around mud puddles, impacting additional areas. The park and the SHPO have determined that the continued use of the unimproved road by full sized vehicles would result in an adverse effect.

Sites like Garden Coulee are usually complex, with many different feature types, numerous artifacts, and a huge information potential. Attempts to develop mitigation for the impacts to this site and continue to use the road alignment have proven to be difficult. One method proposed was to overlay the site with a geo-textile fabric, then place the road grade over the fabric. But covering archeological sites locks the information potential permanently, resulting in loss of data and an adverse effect. Routine road maintenance also has the potential to impact areas outside the designated corridor. In addition, without further testing, soils at the site may not be suitable for that treatment because constant use in all weather may continue to damage the buried resources, as well as cause modern gravels to migrate into cultural layers. Mitigation of the impacts by a complete archeological data recovery program, another way to mitigate road impacts, would cause irreversible impacts to the resource as well as unacceptable costs. Impacts to archeological resources under this alternative would be direct, moderate, adverse, site-specific, and long term.

Conclusions: The continued impacts to the archeological resources under the no action alternative are adverse, and it has been determined that mitigation of these impacts would neither relieve the adverse effect under § 106, nor be cost effective. This alternative would produce localized long-term adverse effects on archeological resources of at least a moderate intensity. The § 106 determination would be an adverse effect and require consultation with the Advisory Council on Historic Preservation.

Impairment: Alternative A would not produce major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park, (2) key to the natural or cultural integrity of the park or opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other National Park Service planning documents. Consequently, there would be no impairment of archeological resources or values as a result of the implementation of Alternative A.

Alternative B: River Corridor Route

New Travel route: There are no known archeological resources along the majority of this proposed route. Although as this alternative route nears the northwest corner of the reconstructed fort, it is expected that artifacts associated with the historic fort will be discovered. An agreement document has been initiated between the park and the ND-SHPO to properly consider the potential impacts to and mitigation for cultural resources. This agreement document includes provisions for systematic surface collections of materials within the area of potential effect prior to commencing surface-disturbing activities. Construction in the entire area would be monitored by a qualified archeologist to ensure that any finds are properly identified and protective actions taken to protect any significant archeological materials that might be discovered. Data recovery would commence for any subsurface features identified during the monitoring. Construction would be halted if necessary to protect such resources. The new construction of this alternative would have direct, minor to moderate, adverse, local, and long-term impacts to archeological resources. The § 106 determination would be an adverse effect.

Conclusions: The impacts to archeological resources under Alternative B would be adverse, but are tempered by the execution of an agreement document that would allow data recovery for the materials that may lie in the new road alignment and by the rehabilitation and restoration of the current unimproved road alignment. Mitigation of these impacts includes monitoring of the new route and the parking area for archeological materials, as well as removal of the old road.

Overall, this alternative would produce direct, moderate, beneficial, local, long term effects on archeological resources because it removes the moderate adverse effect of the existing road on the Garden Coulee site. The § 106 determination would be an adverse effect and require consultation with the Advisory Council on Historic Preservation.

Impairment: Alternative B would not produce major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park, (2) key to the natural or cultural integrity of the park or opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other National Park Service planning documents. Consequently, there would be no impairment of archeological resources or values as a result of the implementation of Alternative B.

Alternative C: Establish a North Corridor Route

New Travel route: There are no known archeological resources along this route but there would be an increased chance of encountering undiscovered resources during the establishment of this route. The park used magnetic resistance technology to remotely

search for buried features over most of the area that would be used by this alternative. Based on the results of this search, the boundaries of the Garden Coulee Site were identified.

This route was selected to avoid large, magnetically visible archeological features, but the surface scatter of historic material does extend into the area of the proposed alignment. There would likely be isolated artifacts and possibly small cultural features along this route, but the route would avoid large archeological features containing large amounts of cultural information. An agreement document would be initiated between the park and the ND-SHPO to properly consider the potential impacts to and mitigation for cultural resources. This agreement document would include provisions for systematic surface collections of materials and magnetic resistance surveys for subsurface features within the area of potential effect prior to commencing surface-disturbing activities. Data recovery would commence for any subsurface features identified during the remote sensing surveys. Construction in the area would then be monitored by a qualified archeologist to ensure that any finds are properly identified and protective actions taken to protect any significant archeological materials that might be discovered. Construction would be halted if necessary to protect such resources. The new construction of this alternative would have direct minor to moderate, adverse, local, long-term impacts to archeological resources. The § 106 determination would be an adverse effect and require consultation with the Advisory Council on Historic Preservation.

Conclusions: The impact to the archeological resources under the Alternative C are adverse, but it is tempered by the execution of an agreement document that would allow data recovery for the materials that may lie in the new road alignment, and by the rehabilitation and restoration of the current unimproved road alignment. Mitigation of these impacts will be paramount in consultation with the SHPO.

Overall this alternative would produce direct, moderate beneficial, local, long term effects on archeological resources because it removes the moderate adverse effect of the existing road on the Garden Coulee site.

Impairment: Alternative C would not produce major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park, (2) key to the natural or cultural integrity of the park or opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other National Park Service planning documents. Consequently, there would be no impairment of archeological resources or values as a result of the implementation of Alternative C.

Alternative D: Establish vehicle access from the existing parking area (Preferred)

The majority of this alternative route will be in areas that were previously disturbed by the gravel mining operation that preceded the public acquisition of the property, or by

the previous construction of the sidewalks, parking lot, and visitor walkways. However, as the alternative route nears the northwest corner of the reconstructed fort, it is expected that historic artifacts relating to the historic fort will be discovered. An agreement document has been initiated between the park and the ND-SHPO to properly consider the potential impacts to and mitigation for cultural resources. This agreement document includes provisions for systematic surface collections of materials within the area of potential effect prior to commencing surface-disturbing activities. Construction in the area would be monitored by a qualified archeologist to ensure that any finds are properly identified and protective actions taken to protect any significant archeological materials that might be discovered. Data recovery would commence for any subsurface features identified during the monitoring. Construction would be halted if necessary to protect such resources. The new construction of this alternative would have direct, minor to moderate, adverse, local, long-term impacts to archeological resources. The § 106 determination would be an adverse effect.

Conclusions: The impacts to archeological resources under the Alternative D are adverse, but would be tempered by the execution of an agreement document that will allow data recovery for the materials that may lie in the new road alignment and by the rehabilitation and restoration of the current unimproved road alignment. Mitigation of these impacts will be paramount in consultation with the SHPO. A Memorandum of Agreement with the SHPO and a corresponding archeological data recovery plan will be required.

Overall, this alternative would produce direct, moderate beneficial, local, long term effects on archeological resources because it removes the moderate adverse effect of the existing road on the Garden Coulee site. The § 106 determination would be an adverse effect and require consultation with the Advisory Council on Historic Preservation.

Impairment: Alternative D would not produce major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park, (2) key to the natural or cultural integrity of the park or opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other National Park Service planning documents. Consequently, there would be no impairment of archeological resources or values as a result of the implementation of Alternative D.

Cumulative effects

Prior to the establishment of the park, the area to the west of the fort, including the southwest bastion and a small area east of the fort was mined for gravel. The gravel mine destroyed any archeological resources in these areas. Considerable archeological excavation was done at the fort to determine the location of the historic walls, structures and other features prior to reconstruction. The reconstructed fort was then constructed on the original fort site. Visitor parking and an access road were built west of the fort in a portion of gravel-mined area. A maintenance facility and

employee housing were constructed 500 yards east of the fort away from archeological resources.

Each of the alternatives has the potential to have additional adverse impacts to archeological resources on the park.

Impacts as a result from Alternatives B, C and D would be mitigated through data collection and recovery under an agreement with the SHPO, resulting in moderate or minor new cumulative impacts to archeological resources. Selection of one of these alternatives would eliminate the ongoing damage to the Garden Coulee Archeological Site, resulting in an overall moderate beneficial effect.

There would be no mitigation possible for Alternative A, such that this alternative would result in long-term moderate cumulative adverse impacts on archeological resources.

Cultural Landscapes

Impact Thresholds

Negligible: There would be either no impact or impacts at the lowest levels of detection with neither adverse nor beneficial consequences. The determination of effect for §106 would be no adverse effect.

Minor: Adverse: alteration of a pattern(s) or feature(s) of the landscape that would not diminish the overall integrity of the landscape. The determination of effect for §106 would be no adverse effect.

Minor: Beneficial: preservation of landscape patterns and features in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes. The determination of effect for §106 would be no adverse effect.

Moderate: Adverse: alteration of a pattern(s) or feature(s) of the landscape that would diminish the overall integrity of the landscape. The determination of effect for §106 would be adverse effect. A MOA is executed among the National Park Service and the North Dakota State Historic Preservation Officer, and, if necessary, the Advisory Council on Historic Preservation in accordance with 36 CFR 800.6(b). Measures identified in the MOA to minimize or mitigate adverse impacts result in a final determination of no adverse effect.

Moderate: Beneficial: rehabilitation of a landscape or its patterns and features in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural

Landscapes. The determination of effect for §106 would be no adverse effect.

Major: Adverse: alteration of a pattern(s) or feature(s) of the landscape that would diminish the overall integrity of the landscape. The determination of effect for §106 would be adverse effect. Measures to minimize or mitigate adverse impacts cannot adequately mitigate for the loss of integrity.

Major: Beneficial: restoration of a landscape or its patterns and features in accordance with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for the Treatment of Cultural Landscapes. The determination of effect for §106 would be no adverse effect.

Alternative A: Continued Use of Existing Road

The no action alternative would not include any new construction of road facilities within the cultural landscape. Vehicle traffic would continue to compact the soil and crush vegetation along the existing route during normal driving conditions. During wet road conditions, the driving surface would extend out of the existing track as drivers negotiate around mud puddles, impacting additional areas. Existing use has left a scar on the landscape of the park that is not in keeping with the preservation of the historic landscape as it is visible from the fort. Continued use of the unimproved road would perpetuate that visual impact. There is no mitigation of the impacts other than abandonment and reseeding of the existing road. Impacts to the cultural landscape under this alternative would be direct, moderate, adverse, site specific and long term.

Conclusions: The continued impacts to the cultural landscape under the no action alternative are adverse, and it has been determined that mitigation of these impacts is not possible. This alternative would produce localized long-term adverse effects on the cultural landscape of at least a moderate intensity. The § 106 determination would be an adverse effect.

Impairment: Alternative A would not produce major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park, (2) key to the natural or cultural integrity of the park or opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other National Park Service planning documents. Consequently, there would be no impairment of cultural landscape resources or values as a result of the implementation of Alternative A.

Alternative B: River Corridor Route

This alternative would include new construction of road facilities within the cultural landscape, but in a location below the level of the river terrace where it would be less visible from the fort. This route would not be easily visible within the historic landscape, but would cause a long-term minor adverse impact to the landscape of the park. The impacts of the new construction to the cultural landscape under this alternative would be direct, negligible, adverse, and long term.

The restoration of the land impacted by the existing unimproved road would be a moderate beneficial impact.

Conclusions: The impacts to the cultural landscape under Alternative B would be both adverse and beneficial, because while the new road would be somewhat visible on the landscape, the removal of the existing unimproved road would have beneficial impacts. Overall this alternative would produce direct, minor, beneficial, local and long term, impacts on the cultural landscape. The § 106 determination would be no adverse effect.

Impairment: Alternative B would not produce major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park, (2) key to the natural or cultural integrity of the park or opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other National Park Service planning documents. Consequently, there would be no impairment of cultural landscape resources or values as a result of the implementation of Alternative B.

Alternative C: Establish a North Access Route

This alternative would replace the existing unimproved road with a new gravel road within the cultural landscape. The new road would prevent crushing of vegetation and soil compaction from vehicle traffic on the ground surface while improving the driving conditions during bad weather. The rehabilitation of the old road alignment along the archeological site would eventually erase the visual scar on the landscape. However, in its place would be a longer, more visible road, with defined shoulders and a gravel driving surface. Mitigation of the impacts would come in the form of the abandonment and reseeded of the existing road. Impacts to the cultural landscape under this alternative would be direct, minor to moderate, adverse, local, and long term.

Conclusions: The impacts to the cultural landscape under the Alternative C are adverse, but it is tempered by the rehabilitation and restoration of a portion of the current unimproved road scar. Mitigation of these impacts is limited to the removal of the old road. This alternative would produce localized long-term adverse effects on the cultural landscape of a moderate intensity. The § 106 determination would be an adverse effect.

Impairment: Alternative C would not produce major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park, (2) key to the natural or cultural integrity of the park or opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other National Park Service planning documents. Consequently, there would be no impairment of cultural landscape resources or values as a result of the implementation of Alternative C.

Alternative D: Establish vehicle access from the existing parking area (Preferred)

The majority of this alternative route would be in areas that were previously disturbed by the gravel mining operation that preceded the public acquisition of the property, or by the previous construction of the sidewalks, parking lot, and visitor walkways. It is expected that the construction of the facilities in this alternative would not look much different than the current conditions in this area, with the exception of a designated vehicle turn-around area being added near the north gate. Mitigation of some of the visual impacts can be achieved by using local gravel, and/or paving materials that allow vegetation to grow within the paving. The new construction of this alternative would produce direct, minor adverse, local, long term effects on the cultural landscape.

Conclusions: The new impacts to the cultural landscape under the Alternative D are adverse, but they are tempered by the rehabilitation and restoration of the current unimproved road scar, which is a much greater area. The removal of the old road would serve to mitigate the impacts of the new route by reducing the total area of impact.

Overall, this alternative would result in direct, moderate, beneficial, local, long term impacts on the cultural landscape. The § 106 determination would be no adverse effect.

Impairment: Alternative D would not produce major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park, (2) key to the natural or cultural integrity of the park or opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other National Park Service planning documents. Consequently, there would be no impairment of archeological resources or values as a result of the implementation of Alternative D.

Cumulative effects

Prior to the establishment of the park, the area to the west of the fort was mined for gravel, including the area of the southwest bastion. Much of the surrounding land has been tilled for farming activities, and the non-tilled pasture land is grazed annually by livestock. Disturbances surrounding the park include a railroad line and a county road which provides access for the park. Further from the park, the visible artifacts of petroleum development, including oil wells, pumping facilities and tanks, are visible

just beyond the south bank of the Missouri River and east of the park. On the property itself, considerable archeological excavation was done at the fort to determine the location of the historic walls, structures and other features. The reconstructed fort was then constructed on the original fort site. Visitor parking and an access road were built west of the fort in a portion of gravel-mined area. A maintenance facility and employee housing were constructed 500 yards east of the fort. However, efforts on the part of staff have been directed towards the restoration of native prairie within the boundaries of the park, in an effort to better portray a semblance of the historic visual setting. Overall, these efforts have enhanced the cultural landscape.

Each of these alternatives, with the exception of Alternative D, has the potential to increase the impacts to the cultural landscape by placing modern visible features (the new road) within that landscape, where they would be visible to the visitor. Alternative B, though located below the river terrace, would still be visible and appear out-of-place in the historic scene. These alternatives would have a long-term minor adverse cumulative impact on the cultural landscape. Alternative D would add a small amount of new features to the landscape in areas where the visitor might expect to find such features. Therefore, this alternative would result in long-term negligible cumulative impacts on the cultural landscape.

Vegetation

Impact Thresholds

Negligible: No native vegetation would be affected or some individual native plants could be affected as a result of the alternative, but there would be no effect on the viability of any native species populations. The effects would be short-term, on a small scale, and no species of special concern would be affected.

Minor: The alternative would affect some individual native plants and would also affect a small portion of that species' population. Mitigation to offset adverse effects, including special measures to avoid affecting species of special concern, could be required and would be effective.

Moderate: The alternative would affect some individual native plants and would also affect a sizeable segment of the species' population in the long-term and over a relatively large area. Mitigation to offset adverse effects could be extensive, but would likely be successful. Some species of special concern could also be affected.

Major: The alternative would have a considerable long-term effect on native plant populations, including species of special concern, and affect a relatively large area in and out of the monument. Mitigation measures to offset the

adverse effects would be required, extensive, and success of the mitigation measures would not be guaranteed.

Alternative A: Continued Use of Existing Road:

If the no action alternative is taken, the continued use of the unimproved road would result in negligible direct damage to the park's vegetation. Vegetation along the existing route has been eliminated by vehicle traffic, and minor additional negative impacts would occur when vehicles travel off of the existing route to avoid mud puddles or other traffic. Maintenance of the present road would also have negligible impact on vegetation. Attempts to mitigate damage to vegetation would be very difficult since continued soil compaction and vehicle traffic would prevent reestablishment of vegetation.

Conclusions: The continued impacts to the vegetation under the no action alternative are direct, adverse but negligible, local, and of long term duration. It has been determined that mitigation of these impacts would be ineffective.

Impairment: Alternative A would not produce major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park, (2) key to the natural or cultural integrity of the park or opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other National Park Service planning documents. Consequently, there would be no impairment of vegetation resources or values as a result of the implementation of Alternative A.

Alternative B: River Corridor Route.

Establishment of a new service road along the river would impact vegetation in an area approximately ¼ mile long by 22-34 feet wide. The area included in this alternative has no existing trails, and consists of primarily native vegetation. Some individual native plants would be affected as a result of the alternative, but there would be no effect on the viability of any native species populations. This alternative would require removal of several mature trees in the river corridor, which would require 20 years to replace. The proposed construction period of 90 days, followed by post-construction reseedling of disturbed ground with native grasses, would result in a minor impact. Once the service road is established the vegetation along the road side would be expected to recover and the area of long term impact would be 12' by ¼ mile. Implementation of this alternative would also include the re-vegetation of ¼ mile of the existing unimproved road; the net result of this alternative would be the same amount of disturbed vegetation.

Conclusions: Impacts to vegetation as a result of this alternative would be adverse but minor due to the loss of mature trees. Impacts to vegetation would be both short term and long term. The impacts to vegetation under the Alternative B are off-set by the rehabilitation and restoration of the current unimproved road alignment.

Overall selection of this alternative would result in a direct, minor, adverse, local, long term impact to the vegetation.

Impairment: Alternative B would not produce major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park, (2) key to the natural or cultural integrity of the park or opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other National Park Service planning documents. Consequently, there would be no impairment of vegetation resources or values as a result of the implementation of Alternative B.

Alternative C: Use a Route North of the existing road.

This alternative would require the establishment of approximately ¼ mile of new service road in an area that consists of restored native vegetation. Construction of this portion of the road will impact a new area 22' to 34' wide by ¼ mile long and continue to use a segment of the existing service road. Once the road proposed in this alternative joins the existing unimproved service road, there will be negligible impacts to vegetation. Some individual native plants would be affected as a result of the alternative, but there would be no effect on the viability of any native species populations. The proposed construction period of 90 days, followed by post-construction reseedling of disturbed ground with native grasses, would have a minor impact since all of the impacts would be limited to the construction zones and the re-vegetation would be complete in two to three years. Once the service road is established the vegetation along the road side would be expected to recover. The area of long term impact would be 10' by ¼ mile.

Conclusions: Impacts to vegetation as a result of new construction associated with this alternative would be direct, adverse but minor. Impacts to vegetation would be both short- and long-term. The impacts to vegetation under the Alternative C are tempered by the rehabilitation and restoration of 1/8 mile of the current unimproved road alignment. The net result would be an additional 1/4 mile of disturbed vegetation.

Overall, the impacts would be direct, negligible, adverse, local and long term.

Impairment: Alternative C would not produce major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park, (2) key to the natural or cultural integrity of the park or opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other National Park Service planning documents. Consequently, there would be no impairment of vegetation resources or values as a result of the implementation of Alternative C.

Alternative D: Establish vehicle access from the existing parking area. (Preferred)

If this alternative is selected there will be very little impact to vegetation, as the route is already largely covered by a concrete sidewalk or gravel walking path. The area of disturbance would be 475' by 34 feet wide (16,150 s.f.), of this 250' by 6' (1,500 s.f.) is covered by sidewalk and 225' x 3' (675 s.f.) is a gravel path. The area planned for vehicle turn-around is devoid of vegetation due to compaction of the ground from vehicle traffic. Some individual native plants would be affected as a result of the alternative, but there would be no effect on the viability of any native species populations. The proposed construction period of 90 days, followed by post-construction reseeding of disturbed ground with native grasses, would have a minor impact since all of the impacts would be limited to the construction zones. This alternative would have relatively short-term impacts on the vegetation, and the vegetation would be re-established in two to three years. Once the service road is established, the vegetation along the roadside would be expected to recover. The area of long term impact would be 12' by 475' (5,700 s.f.).

Conclusions: Impacts to vegetation as a result of this alternative would be adverse but negligible. Impacts would be both short-and long-term. The impacts to vegetation under Alternative D are tempered by the rehabilitation and restoration of the current unimproved road alignment.

Overall, the impacts under this alternative are direct, moderate beneficial, local, and of long term duration.

Impairment: Alternative D would not produce major adverse impacts on resources or values whose conservation is (1) necessary to fulfill specific purposes identified in the establishing legislation of the park, (2) key to the natural or cultural integrity of the park or opportunities for enjoyment of the park, or (3) identified as a goal in the park's general management plan or other National Park Service planning documents. Consequently, there would be no impairment of vegetation resources or values as a result of the implementation of Alternative D.

Cumulative effects

Prior to the establishment of the park, the area to the west of the fort was mined for gravel, which eliminated the existing vegetation. The surrounding park land was tilled for farming but has since been re-seeded with native prairie plant species. While the vegetation is far from a complete prairie ecosystem, it does portray a semblance of the historic visual setting compared to non-native vegetation.

Each of the alternatives, with the exception of Alternative A, has the potential to adversely impact new areas the vegetation, by placing a new road in an area that was previously undisturbed, or has had native vegetation restored.

Impacts would be offset under Alternatives B, C and D by replacement of the vegetation over the Garden Coulee Site, and the full length of the existing road under Alternatives B and D.

Health and Safety

Impact Thresholds

Negligible: Public health and safety would not be affected, or the effects would be at low levels of detection and would not have an appreciable effect on the public health or safety.

Minor: The effect would be detectable and would likely be short-term, but would not have an appreciable effect on public health and safety. If mitigation were needed, it would be relatively simple and would likely be successful.

Moderate: The effects would be readily apparent and long-term, and would result in substantial, noticeable effects to public health and safety on a park-wide scale. Mitigation measures would probably be necessary and would likely be successful.

Major: The effects would be readily apparent and long-term, and would result in substantial, noticeable effects to public health and safety on a park-wide or larger scale. Extensive mitigation measures would be needed, and their success would not be guaranteed.

Alternative A: Continued Use of Existing Road.

Use of the present service road would have an adverse impact on health and safety. The condition of the road is hazardous to drive on at times and impassible at other times. This hazard is considered major as at times when the road is impassable which prevents response by emergency vehicles, including fire trucks and ambulances. An ambulance would be handicapped when providing assistance to an injured person using the existing parking area, requiring emergency responders to walk 475' to the fort. A fire truck and crew would be at a much greater disadvantage if they had to lay hose and pump water at least 475' to reach a burning building. Laying fire hose would delay response to the fire as well as to any people trapped inside the buildings, and would delay the transmission of water to the fire.

Conclusion: For the majority of the year, continued use of the existing road would have a direct, moderate beneficial, local long term effect on human health and safety. For those times of the year when the road is impassable, continued dependence on the road would be direct, major adverse, local, and long term effects.

Overall continued use of the existing road would have direct, potentially major adverse, local and long term effects on the safety of park staff and visitors.

Alternative B: River Corridor Route.

Use of the river corridor route would have an adverse impact on health and safety. This hazard is considered major as at times this road would be impassable due to deep, drifted snow over its entire length. Lack of access would prevent response by emergency vehicles including fire trucks and ambulances. An ambulance and crew would be handicapped when providing assistance to an injured person using the existing parking area, requiring emergency responders to walk 475' to the fort. A patient in their care may need to be wheeled to the ambulance in a gurney, and the distance would slow the response effort. A fire truck would be at a much greater disadvantage if they had to lay hose and pump water at least 475' to reach a burning building. Laying fire hose would delay their response to the fire and to any people trapped inside the buildings.

Conclusion: the selection of the river corridor route alternative would have a direct, major, adverse, local, long term effect on the health and safety of park staff and visitors. This alternative is not expected to provide all-weather access. It would be impassible throughout the winter which would prevent response by emergency vehicles, including fire trucks and ambulances.

Alternative C: Establish a North Route.

Selection of this alternative would provide a safe, level route for vehicles to access the re-constructed fort under virtually all weather conditions. This route is the longest of the alternatives and would require more effort to keep it cleared of snow, but it is not as susceptible to drifting snow as Alternative B.

Conclusion: The selection of the North Route alternative would have a direct, major, beneficial, local, long term effect on the health and safety of park staff and visitors.

Alternative D: Establish vehicle access from the existing parking area (Preferred)

Establishment of this alternative would provide a short route for vehicle access from the existing parking area. This route is not level and may be difficult for heavy vehicles to negotiate if road conditions are slick. This route is susceptible to drifted snow over 150' of its length. Because this alternative is the shortest route the routine maintenance workload would be relatively minor.

This alternative also has adverse impacts on public health and safety. Because the vehicle traffic will be using the same route as pedestrian traffic, there is an increased risk to pedestrians. While vehicle traffic on this route will generally be minimal, and has not

been problematic when smaller vehicles it will be imperative for vehicle drivers to be aware of pedestrians. Park staff must consider new internal policies concerning the use of this route, to assure pedestrian safety.

Conclusion: The selection of alternative D will result in a moderate long term, beneficial effect to the health and safety of park staff and visitors.

Cumulative effects:

Alternatives B, C and D will have a long term, cumulative positive impact to the Health and Safety of Visitors and Employees of the park.

Park Operations

Impact Thresholds

Negligible: Park Operations would not be affected, or the effects would be at low levels of detection and would have no appreciable effect on the efficient operation of the park.

Minor: The effect would be detectable, but would not have an appreciable effect on park operations. If mitigation were needed, it would be relatively simple and would likely be successful. Visitors would not perceive the changes and they would not overburden the staff.

Moderate: The effects would be readily apparent, and would result in substantial, noticeable effects to park operations on a park-wide scale. Staffing levels and routine maintenance requirements may be altered. Mitigation measures would probably be necessary and would likely be successful.

Major: The effects would be readily apparent and long-term, and would result in substantial, noticeable effects to park operations on a park-wide or larger scale. Extensive mitigation measures would be needed, and their success would not be guaranteed.

Alternative A: Continued Use of Existing Road.

If no action is taken, the continued use of the unimproved road would result in no impact to Park Operations. This alternative is the most efficient for park operations because it is the shortest and most direct route. However this route is not available to park staff, service providers or emergency vehicles when the road is muddy or snow-covered.

This alternative serves the park well for visitor services and special event traffic. The alignment of this route largely keeps service traffic out of sight of park visitors and maintains separation of motor vehicles from pedestrians during special events.

Conclusions: Continued use of the existing unimproved road would have a direct, negligible, beneficial, local, short term effect. Over time, deterioration of the road may make it more difficult to use, resulting in a long term major negative effect.

Alternative B: River Corridor Route.

The selection of this alternative would result in a route that meets only some of the park needs. This alternative provides good access for park staff in soft-tire vehicles and pick-ups. This route would not meet the needs of larger trucks driven by some service providers and would only be available on a seasonal basis.

This alternative does not facilitate visitor services well, when park traffic and special event vehicle traffic would utilize the same pathway from the fort west to the parking area. Selection of this alternative may necessitate the use of the old Fort Benton Road during special events.

Conclusions: Selection of the River Corridor Route would have a direct, major, adverse, local, long term effect. It would only meet part of the park needs and the seasonal limitations would diminish overall usefulness of the route.

Alternative C: Establish a North Route.

Selection of this alternative would meet the overall needs of the park under all conditions. This route would be convenient for the park staff to use on a daily basis and for service providers and emergency vehicles. Its location would facilitate routine maintenance and snow removal. This route is also more level, avoiding the hill on the existing route, which can be hazardous when wet.

This alternative serves the park well for visitor services and special event traffic. The alignment of this route largely keeps service traffic away from park visitors and maintains isolation of motor vehicles and pedestrians during special events.

Conclusions: Selection of this alternative would provide direct, major, beneficial, local, long term effects to park operations as it would meet all of the park needs and provide convenient access to all users.

Alternative D: Establish vehicle access from the existing parking area (Preferred)

This alternative would provide a functional access to the fort; however it is not efficient for day-to-day operations. As most staff traffic originates at the maintenance shop, this alternative requires an extra mile of driving with each trip (2 miles round trip). This alternative will have a beneficial effect for service work or emergency vehicle access because it would be available year-around. The use of this route would not be limited under muddy road conditions, which would be an improvement over the current unimproved road.

Selection of this alternative will require a significant change in park operations. In requiring staff to drive around to the main parking lot, additional time and fuel would be consumed (5 trips per day). Motorized cart use will be increased in areas also used by the visitor, whereas now it is generally hidden from the visitors. The fuel efficient, soft-tired vehicles currently used for short trips and errands to the fort would no longer be practical, as they are not appropriate to use on the paved highway accessing the fort. The pop and candy machine vendors will be required to wheel products up to the fort, or be assisted by park staff with a cart.

Scheduling of work will be critical in order to limit full sized vehicle access to the fort to time periods when they will be least likely to conflict with visitors. A park staff person will be needed to serve as a spotter along the sidewalk to prevent accidents between visitors and vehicles, when vehicle access is needed on high visitor use days.

This access route will require park staff to manage access and drivers to be vigilant about the presence of pedestrians. This alternative would require the least amount of short- and long-term maintenance and snow removal as it is the shortest alternative route.

This alternative does not facilitate visitor services well, when park traffic and special event vehicle traffic would utilize the same pathway from the fort west to the parking area. Selection of this alternative would necessitate using the old Fort Benton Road in preparation for and during four special events each year.

Conclusions: The selection of this alternative would have a direct, minor adverse, local, short term effect as the park staff would be impacted by increased travel time and distance. The negatives are offset by the year-round access provided by the new access road.

In the long term there would be a direct, moderate, beneficial, local, effect because the new route would provide all-weather access and its short length would require the least amount of maintenance among the alternatives considered.

Cumulative Effects

There will be no change in cumulative effects with any of the alternatives suggested.

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APPENDICES

Appendix A Request of Public Input, News Release

Appendix B: North Dakota State Historic Preservation Response

Appendix C: Letter from U.S. Fish and Wildlife Service

Appendix A: A news release was placed in the local newspapers on April 15, 2007



National Park Service
U.S. Department of the Interior

Fort Union Trading Post
National Historic Site
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Fort Union Trading Post NHS News Release

Release date: Immediate

Contact(s): Andy Banta

Phone number: 701 572 9083

Date: April 13, 2007

Fort Union Trading Post Seeks Public Input

Fort Union Trading Post needs to improve vehicle access to the fort. Vehicle access is required at the fort at all times for emergency vehicles (ambulance and fire trucks), and is needed on a daily basis for maintenance activities, commercial deliveries, and service staff.

Following the reconstruction of the fort buildings beginning in the late 1980's the road that came directly to the fort from the highway to the north was removed. At that time visitor access was established from the west of the fort in order to preserve the visual landscape. A small parking area was constructed just west of the fort that provides visitor parking and access. There is no access from the parking area directly to the fort itself. An unimproved road provides the only vehicle access and it runs from the park shop to the fort. This road crosses a significant archeological site, is not available in inclement weather, and must be replaced.

Under the National Environmental Policy Act federal agencies are required to solicit public input into the management of their natural and cultural resources. Please submit any comments, suggestions, or questions to Park Superintendent Andy Banta at 701 572 9083, at Fort Union Trading Post NHS, 15550 Hwy 1804, Williston, ND 58801. You may also comment directly to the park on this proposal by utilizing the Planning, Environment, and Public Comment website (PEPC) at <http://parkplanning.nps.gov/>. Simply select Fort Union Trading Post NHS from the dropdown list. Comments received within the next 21 days would be most helpful.

In the coming months Fort Union Trading Post NHS will complete an Environmental Assessment and Historic Preservation Assessment of Effect evaluating the impacts of this proposed project and alternatives of the actions on the park's landscape. These documents will be made available for comment when the analysis is complete.

EXPERIENCE YOUR AMERICA

The National Park Service cares for special places saved by the American people so that all may experience our heritage.

Appendix B: North Dakota State Historic Preservation response to our letter requesting concurrence of an Adverse Impact and Data Recovery Plan for Alternative D.



**STATE
HISTORICAL
SOCIETY**
OF NORTH DAKOTA

RECEIVED JUL 16 2007

John Hoeven
Governor of North Dakota

July 13, 2007

North Dakota
State Historical Board

Marvin L. Kaiser
Williston - President

Albert I. Berger
Grand Forks - Vice President

Chester E. Nelson, Jr.
Bismarck - Secretary

Gerold Gernholz
Valley City

A. Ruric Todd III
Jamestown

Diane K. Larson
Bismarck

John E. Von Rueden
Bismarck

Sara Otte Coleman
Director
Tourism Division

Kelly Schmidt
State Treasurer

Alvin A. Jaeger
Secretary of State

Douglass Prchal
Director
Parks and Recreation
Department

Francis Ziegler
Director
Department of
Transportation

Merlan E. Paaverud, Jr.
Director

Accredited by the
American Association
of Museums

Andrew E. Banta
Superintendent
Fort Union Trading Post National Historic Site
15550 Highway 1804
Williston, ND 58801-8680

**NDSHPO REF. : 84-0085 NPS Fort Union NHS Alternative Maintenance
(Shop) Road Alignment Documentation, MOU, and Data Recovery Plan
H30(FOUS)**

Dear Andy:

We have reviewed correspondence regarding: "NPS Fort Union NHS Alternative Maintenance (Shop) Road Alignment." As presented in the July 12 e-mail attachments, we concur with an **"Adverse Effect"** determination.

The proposed "Data Recovery Plan" is acceptable. Pursuant to preparation of an EA of the project for compliance, the accompanying covering document (MOU) is acceptable for the undertaking as presently stated. Merlan E. Paaverud, Jr., as North Dakota State Historic Preservation Officer, will be the agency signatory.

Thank you for the opportunity to review and we look forward to further consultation on the project, including review of the report covering the investigations. If you have questions please contact either Paul Picha at (701) 328-3574 or Fern Swenson (701) 328-3574.

Sincerely,

Merlan E. Paaverud, Jr.
State Historic Preservation Officer (North Dakota)
and
Director, State Historical Society of North Dakota

Appendix B: North Dakota State Historic Preservation response to our letter requesting concurrence of an Adverse Impact and Data Recovery Plan for Alternative D.

MEMORANDUM OF AGREEMENT
BETWEEN
THE UNITED STATES DEPARTMENT OF THE INTERIOR, NATIONAL PARK
SERVICE
AND
THE NORTH DAKOTA HISTORIC PRESERVATION OFFICE

REGARDING
ARCHEOLOGICAL DATA RECOVERY AT
FORT UNION TRADING POST NATIONAL HISTORIC SITE

WHEREAS, the US Department of the Interior, National Park Service (NPS) is undertaking to mitigate the loss of cultural resources from construction of an emergency vehicle access route to the reconstructed trading post; and

WHEREAS, the reconstructed trading post encompasses and is surrounded by elements of archeological site Fort Union site (32WI18), and

WHEREAS, the Fort Union site (32WI18) is a National Landmark; and

WHEREAS, archeological investigations at the Fort Union site (32WI18) in 1986 and 1987 demonstrated that artifacts and features related to the 19th century occupation of Fort Union and visiting Native American traders exist in the proposed emergency vehicle parking area; and

WHEREAS, 53 m² of the the Fort Union site (32WI18) within that construction area has not been previously investigated archeologically; and

WHEREAS, the construction of the emergency vehicle access and parking area will likely destroy artifacts and features within this 52m² area; and

WHEREAS, the NPS has placed the proposed emergency vehicle access and parking area within a location expected to contain the least amount of archeological features and artifacts based upon data recovered during the NPS 1986 and 1987 excavations; and

WHEREAS, the NPS the proposed route between the parking lot west of the reconstruction to the northwest corner of the reconstructed trading post lies over a draw filled in 1986-1987; and

WHEREAS, the NPS finds that this undertaking will have an effect on resources that may meet criteria for listing on the National Register of Historic Places (NRHP); and has consulted with the North Dakota State Historic Preservation Officer (SHPO) pursuant to

36 CFR 800 regarding implementation of Section 106 of the National Historic Preservation Act {16 USC 470(f)}; and

WHEREAS, the data recovery effort at the Fort Union site (32WI18) is expected to take place during the fall of 2007; and

WHEREAS, to the best of our knowledge and belief, no human remains, associated or unassociated funerary objects or sacred objects of cultural patrimony as defined in the Native American Graves Protection and Repatriation Act (NAGPRA; 25 U.S.C. 3001) are expected to be encountered in the archeological work; and

NOW, THEREFORE, the NPS and the SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into the account the effect of the undertaking upon historic properties.

STIPULATIONS

The NPS will ensure that the following measures are carried out:

A. ARCHEOLOGY

The NPS shall complete the necessary archeological investigations in accordance with the plan entitled Draft Data Recovery Plan For Archeological Excavations: Emergency Access Road and Parking Lot, Fort Union Trading Post National Historic Site (FOUS) (attached as Appendix A). All archeological investigations will be conducted in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Archeological Documentation.

B. PUBLIC AND TRIBAL PARTICIPATION

1. The NPS will consult with the appropriate Native American tribal governments prior to commencement of the data recovery effort.
2. If human remains are inadvertently discovered during the data recovery effort, excavations will be discontinued and all appropriate Native American tribes will be consulted. Access to all material recovered will be provided upon request to identify any remains or objects subject to NAGPRA.
3. The public will be informed of the data recovery effort through media interest.

C. ADMINISTRATIVE PROVISIONS

1. Modification, amendment, or termination of this agreement as necessary shall be accomplished by the signatories in the same manner as the original agreement.
2. Disputes regarding the completion of the terms of this agreement shall be resolved by the signatories. If the signatories cannot agree regarding a dispute, any one of the signatories may request the participation of the Advisory Council on Historic Preservation (ACHP) to assist in resolving the dispute.

3. This agreement shall be null and void if its terms are not carried out within 5 (five) years from the date of its execution, unless the signatories agree in writing to an extension for carrying out its terms.
4. Should any party to this agreement object to any document provided for review the manner in which this agreement is being implemented, the responsible agency will consult with the objecting party. If the agency determines that the objection cannot be resolved, the parties will forward all documentation relevant to the dispute to the ACHP. Within forty-five (45) days after receipt of all pertinent documentation, the ACHP will provide comments, consistent with 36 CFR 800.7, which the agency or agencies will take into account. Any recommendation or comment provided by the ACHP will be understood to pertain only to the subject of the dispute.
5. In accordance with 36 CFR 800.6(c)(7), any signatory of this agreement may request that it be revised, whereupon the signatories will consult in accordance with 36 CFR 800 to consider such revisions.
6. Execution of this Memorandum of Agreement (MOA) and the implementation of its terms by NPS is evidence that NPS has afforded the ACHP opportunity to comment on the undertaking and its effect on historic properties, and that the NPS has taken into account the effects of the undertaking on historic properties.
7. This MOA is intended as the complete integration of all understandings among the parties, their successors and assigns with respect to the subject matter set out herein. No prior or contemporaneous addition, deletion, or other amendment thereto shall have any force or effect whatsoever, unless embodied herein in writing. No subsequent renovation, renewal, addition, deletion or other amendment hereto shall have any force or effect unless embodied in a written amendatory or other MOA executed by the parties and signed by the party of the original MOA. This MOA and any amendments shall be binding upon the parties, their successors and assigns.

NATIONAL PARK SERVICE AGENCY OFFICIAL:

Andy Banta, Superintendent
Fort Union Trading Post National Historic Site

Date

NORTH DAKOTA HISTORIC PRESERVATION OFFICE:

North Dakota Historic Preservation Office

Date

Appendix B: North Dakota State Historic Preservation response to our letter requesting concurrence of an Adverse Impact and Data Recovery Plan for Alternative D.

APPENDIX A
Draft Data Recovery Plan for Archeological Excavations:
Emergency Access Road and Parking Area
Fort Union Trading Post National Historic Site (FOUS)

Introduction

At present, the only hard surface access to the reconstructed fort is via a 6 foot wide sidewalk designed for pedestrian and utility cart traffic. This walk is too narrow and not constructed to bear the weight of emergency vehicles. As well, there is no hardened surface leading directly to the fort. In wet conditions, heavy emergency vehicles would likely sink into the ground while attempting to reach the post or in maneuvering to the post. In response, the park proposes to construct a wider walkway as an integral part and extension of the present concrete sidewalk extending northeast from the public parking lot to the reconstructed trading post (Figure 1). The walk will be widened to 10 feet to allow passage of emergency vehicles to the post. At the point where the concrete walk bends south, a 10 ft wide gravel road will be constructed to the fort's northwest corner whereupon the road will turn and parallel the palisade. An 1100 ft² parking area will be constructed at the terminus of this road west of the north entrance to the post.

In 1986 and 1987, archeological remnants of the north palisades of Fort Union trading post ruins were excavated along with an extensive area north of the fort site to provide a utilities corridor to the reconstruction (Figure 2). This work demonstrated that features and artifacts relating to the history of the fort and Native American occupations concurrent with and immediately following the post's abandonment exist for at least 40 m north from the palisade perimeter (Hunt and Peterson 1987, Peterson and Hunt 1988). Features identified during these excavations included fire hearths, wagon and animal tracks, remains of a small sawmill, a palisaded enclosure, and storage pits.

This data recovery plan and proposes the excavation of areas within the construction impact zone. Those excavations, associated analyses, and project reporting are designed to mitigate the impacts of construction upon intact archeological deposits. The work is proposed to be undertaken in the fall of FY2007. The goal of this project will be to thoroughly document all features and effect artifact recovery from the affected area.

Midwest Archeological Center (MWAC) Personnel: Archeologist William J. Hunt, Jr.
(402-437-5392 x 111)

Fort Union Trading Post National Historic Site (FOUS) Coordination Personnel:
Superintendent Andy Banta (701-572-9083)

Background & Plan

At the time this data recovery plan was prepared, only rough sketches for the parking lot design were available and its exact position on the ground had not been identified. Two possible locations for had been identified by Superintendent Andy Banta. One of these was east of the gate between the air conditioning unit and the north palisade. The other location was close to the north palisade and west of the north gate (Figure 3). Based on what is known archeologically about these two areas, fewer features and few artifacts are expected to be impacted by a parking area west of the north gate. This information and a rough sketch of the parking lot by MWR Civil Engineer Wayne Vander Tuin led to preparation of a placement of the lot based on minimum new ground disturbance (Figure 4). The red boundary represents the proposed parking lot area and the pink fill marks the portion of the site (approximately 53 m²) which has not been excavated but will be impacted by construction.

This plan proposes a four-person MWAC crew. As the investigation area has been impacted in the past by agricultural activity and vehicle traffic, it is proposed that the plow zone be removed mechanically using a front end loader. Excavators will monitor this removal, collecting artifacts and identifying any features that may exist as they are exposed. Features and artifact concentrations will be mapped in and excavated by hand. An excavation map will be prepared showing the position of the excavated area, features, and other information in relation to the reconstructed trading post. All feature fill will be passed through ¼" hardware cloth to effectuate artifact recovery. Charcoal and other samples will be collected as the field director requires. A GPS unit will be used to document the excavation location. Any materials recovered are assumed to be elements of Fort Union Trading Post National Historic Site (32WI18). The field excavation data will be documented utilizing MWAC excavation forms, a daily log of activity, black-and-white and color photographic film and digital photographs as necessary. Upon completion of the fieldwork, artifacts, data sheets, and collected samples will be taken to the MWAC archeological laboratory in Lincoln, Nebraska for processing and analysis.

The results of this investigation will be presented through a report describing the background of the project, previous archeology, field methods and goals, data analysis, conclusions and recommendations.

Schedule

Project scheduling is uncertain at this time. Superintendent Banta's estimate is for the work to take place in September or October of 2007.

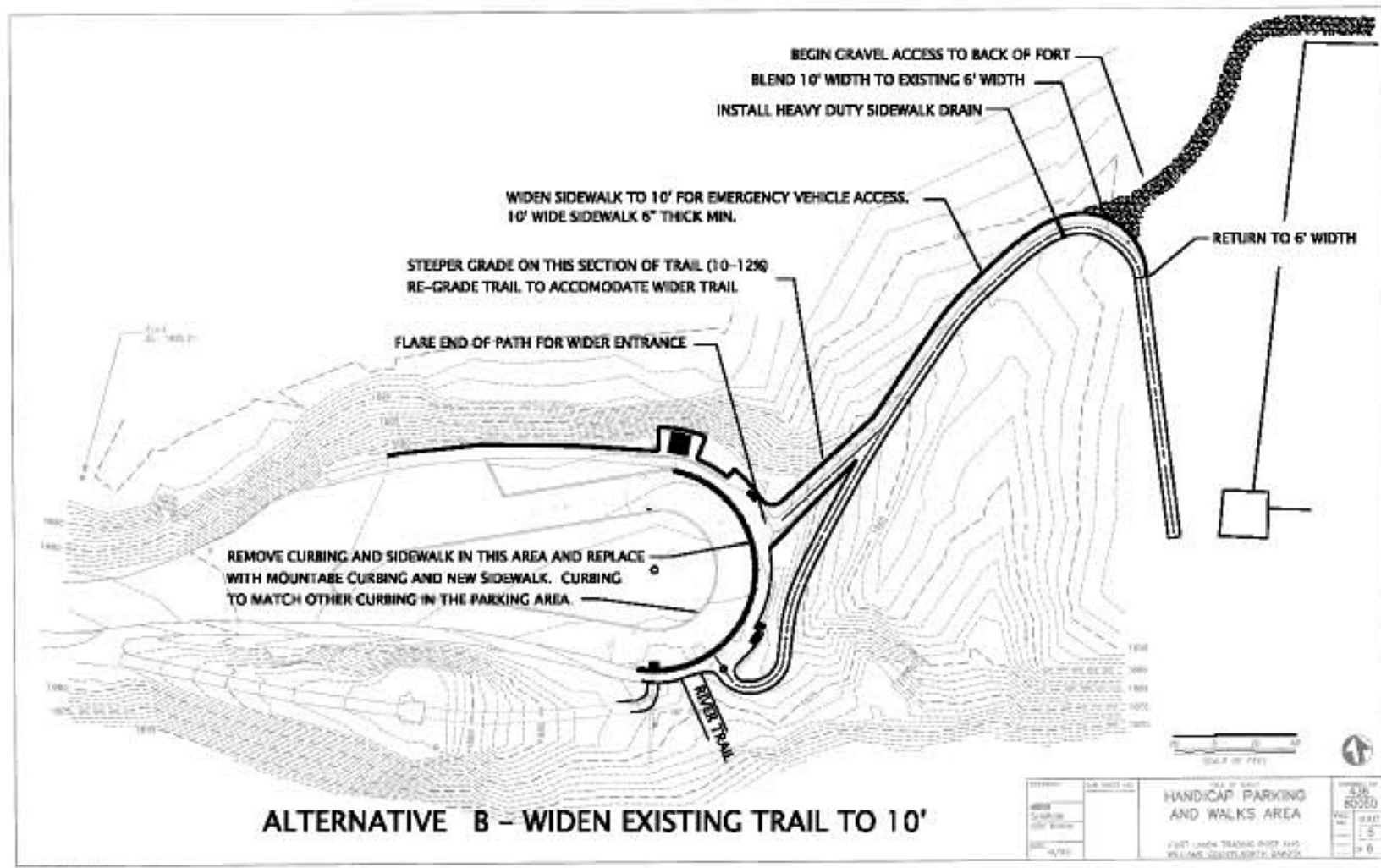


Figure 1. Draft Engineering plan for construction of emergency vehicle access route to reconstructed Fort Union.
(This is Alternative Design B, within the Environmental Assessments' Alternative D)

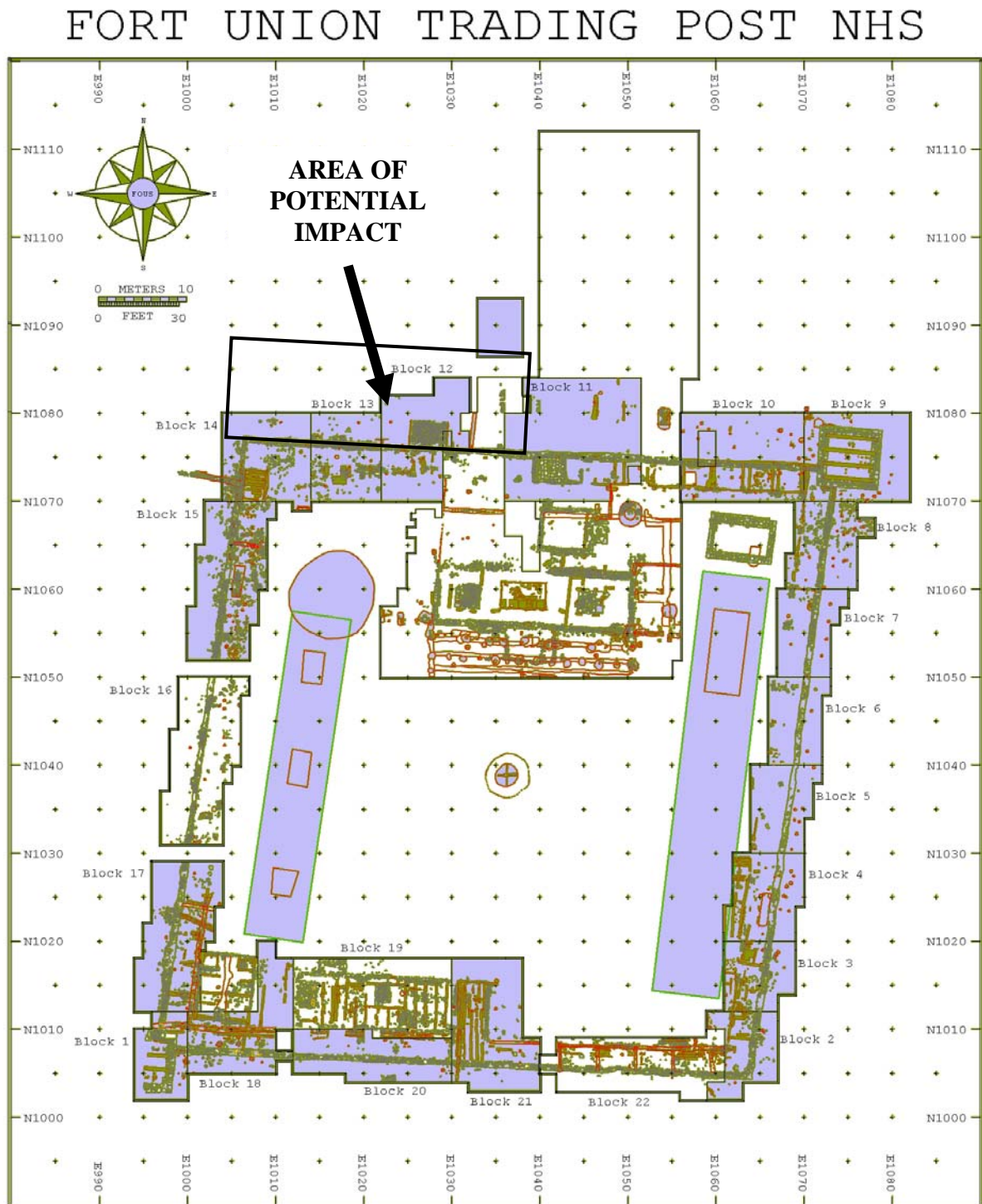


Figure 2. Excavated areas at the Fort Union site (32WI18) and general area of potential construction impact.

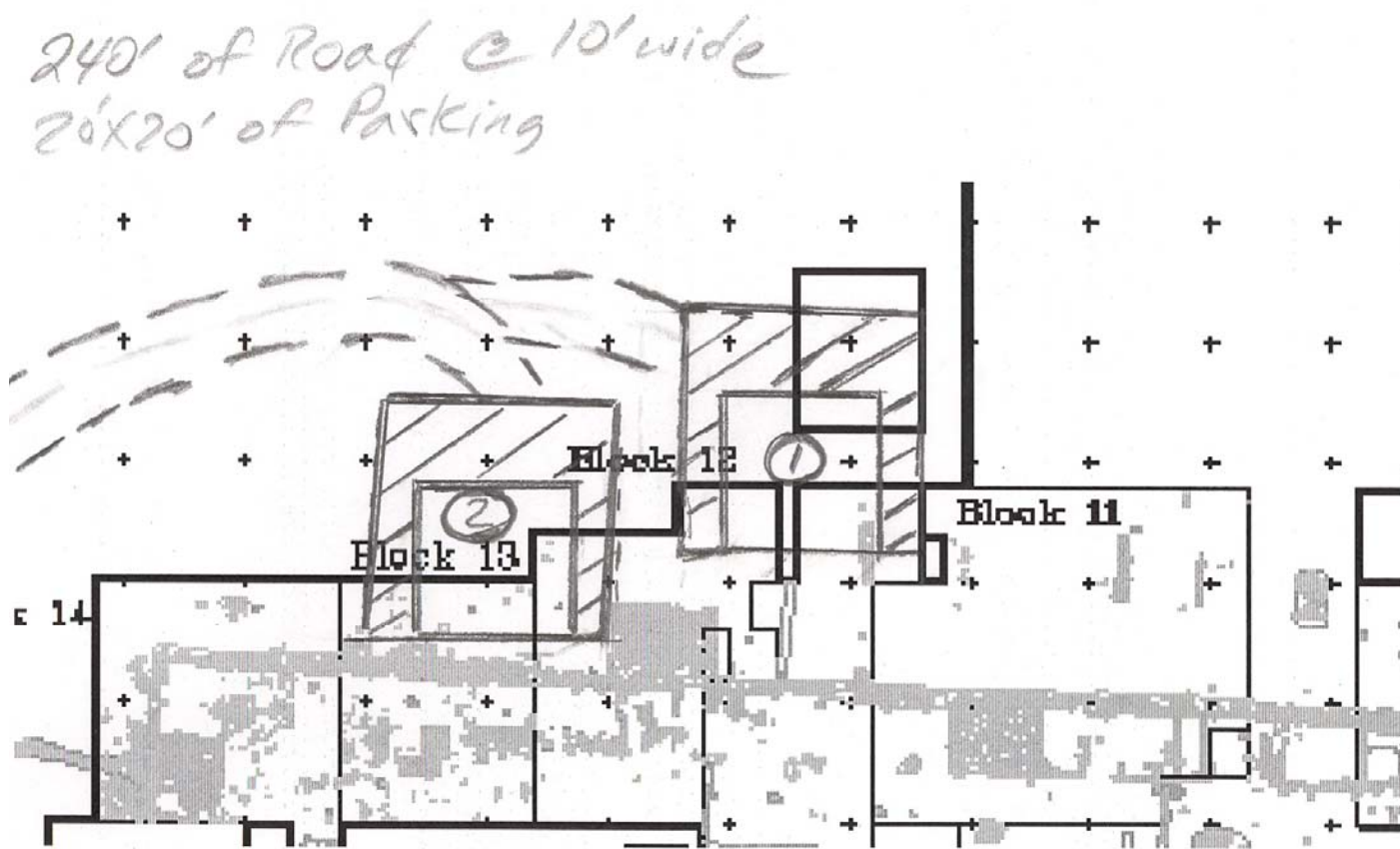
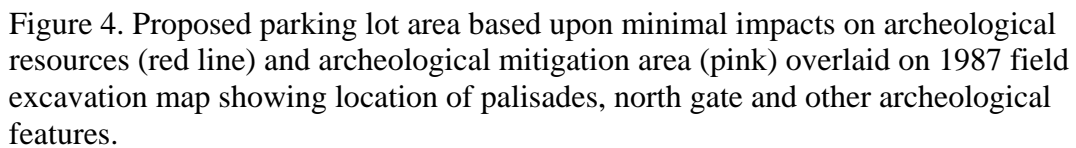


Figure 3. Schematic drawing of possible parking lot locations on the north side of the trading post.



Appendix C: Letter from U.S. Fish and Wildlife Service with concurrence of no impact on T&E Species.



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
3425 Miriam Avenue
Bismarck, North Dakota 58501

RECEIVED APR 30 2007



APR 26 2007

Mr. Andy Banta, Superintendent
Fort Union Trading Post
15550 Highway 1804
Williston, North Dakota 58801

Dear Mr. Banta:

The U.S. Fish and Wildlife Service (Service) has reviewed your letter of March 30, 2007, concerning the National Park Service's plans to provide all-weather vehicle access to the reconstructed fort. As part of this project, the existing unimproved road will likely be relocated as it currently crosses a significant archeology site. This project is scheduled to be completed during the late fall of 2007 or 2008. We offer the following comments in accordance with the provisions of the Endangered Species Act (16 U.S.C. 1531 et seq.) and Executive Order 11990 concerning the protection of wetland resources.

Three alternatives have been developed to meet the identified purpose and need for this project. They include:

Alternative II A - located in the floodplain along the bottom edge of the terrace.

Alternative II B - located north of the existing route, to avoid the archeologic site.

Alternative II C - located to share the existing visitor access route.

To assist with the project planning process, we are forwarding a list of federally threatened and endangered species that have been documented in Williams County. We have also enclosed a map showing critical habitat that has been designated for the piping plover. This list fulfills the requirements of the Fish and Wildlife Service under Section 7 of the Endangered Species Act.

If a Federal agency authorizes, funds, or carries out a proposed action, the responsible Federal agency, or its delegated agent, is required to evaluate whether the proposed action "may affect" listed species. If it is determined that the action "may affect" a listed species, then the responsible agency shall request formal section 7 consultation with this office. If the evaluation indicates that there will be "no affect" to listed species and designated critical habitat, further consultation is not necessary.

2

Based on the preliminary information provided concerning the project alternative, the Service recommends implementing an alternative that minimizes impacts to important wildlife habitats, including riparian/floodplain areas and native prairie grasslands.

The Service has no objection to the proposed project provided the recommendations in this letter are incorporated into the project plan. We appreciate the opportunity to review and provide comments on the National Park Service's plan to improve vehicle access at Fort Union. If additional information is needed, please contact Bill Bicknell of my staff at (701) 250-4481.

Sincerely,



Jeffrey K. Towner
Field Supervisor
North Dakota Field Office

Enclosures

cc: Director, ND Game and Fish Dept., Bismarck
(Attn: Mike McKenna)

FEDERAL THREATENED AND ENDANGERED SPECIES
AND DESIGNATED CRITICAL HABITAT FOUND IN
WILLIAMS COUNTY, NORTH DAKOTA
April 2007

ENDANGERED SPECIES

Birds

Interior least tern (Sterna antillarum): Nests along midstream sandbars of the Missouri and Yellowstone Rivers.

Whooping crane (Grus Americana): Migrates through west and central counties during spring and fall. Prefers to roost on wetlands and stockdams with good visibility. Young adult summered in North Dakota in 1989, 1990, and 1993. Total population 140-150 birds.

Fish

Pallid sturgeon (Scaphirhynchus albus): Known only from the Missouri and Yellowstone Rivers. No reproduction has been documented in 15 years.

Mammals

Gray wolf (Canis lupus): Occasional visitor in North Dakota. Most frequently observed in the Turtle Mountains area.

THREATENED SPECIES

Birds

Bald eagle (Haliaeetus leucocephalus): Migrates spring and fall statewide but primarily along the major river courses. It concentrates along the Missouri River during winter and is known to nest in the floodplain forest.

Piping plover (Charadrius melodus): Nests on midstream sandbars of the Missouri and Yellowstone Rivers and along shorelines of saline wetlands. More nest in North Dakota than any other state.

DESIGNATED CRITICAL HABITAT

Birds

Piping Plover - Alkali Lakes and Wetlands - Critical habitat includes: (1) shallow, seasonally to permanently flooded, mixosaline to hypersaline wetlands with sandy to gravelly, sparsely vegetated beaches, salt-encrusted mud flats, and/or gravelly salt flats; (2) springs and fens along edges of alkali lakes and wetlands; and (3) adjacent uplands 200 feet (61 meters) above the high water mark of the alkali lake or wetland.

Piping Plover - Lake Sakakawea - Critical habitat includes sparsely vegetated shoreline beaches, peninsulas, islands composed of sand, gravel, or shale, and their interface with the water bodies.