Chapter 4: Draft Section 4(f) Evaluation

4.1 Introduction

Section 4(f) of the Department of Transportation Act of 1966, codified in 49 USC 303, declares that "it is the policy of the United States Government that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites."

Section 4(f) specifies that the Secretary [of Transportation] may approve a transportation program or project . . . requiring the use of publicly owned land of a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or land of an historic site of national, state, or local significance (as determined by the federal, state, or local officials having jurisdiction over the park, area, refuge, or site) only if:

1. There is no prudent and feasible alternative to using that land, and
2. The program or project includes all possible planning to minimize harm to the park, recreation area, wildlife and waterfowl refuge, or historic site resulting from the use.

Section 4(f) further requires consultation with the United States Department of the Interior (USDOI) and, as appropriate, the involved offices of the Departments of Agriculture and Housing and Urban Development in developing transportation projects and programs that use lands protected by Section 4(f). If historic sites are involved, then coordination with the SHPO is also needed.

The uses as defined in 23 CFR 771.135(p), are described as follows:

1. Direct use occurs when:
    a. The property is permanently incorporated into a transportation facility,
    b. There is a temporary occupancy of land that is adverse in terms of the statute's preservationist purposes as determined by the criteria in paragraph (p)(7) of this section, or
    c. There is a constructive use of land.

2. Constructive use occurs when the transportation project does not incorporate land from a Section 4(f) resource, but the project's proximity impacts are so severe that the protected activities, features, or attributes that qualify a resource for protection under Section 4(f) are substantially impaired. Substantial impairment occurs when the protected activities, features, or attributes of the resource are substantially diminished.

4.2 Proposed Action

The limits of this project extend along US-191, from 400 North in Moab to the recently improved section of US-191 near the junction of SR-279. The purpose of the project is to:

- Provide a bridge that accommodates US-191 traffic over the Colorado River and also meets current structural design standards,
- Improve safety throughout the project corridor,
- Meet the existing and projected travel demand through the design year 2030 and provide continuity between the four-lane sections on either end of the project limits, and
- Facilitate the movement of bicycle and pedestrian traffic along US-191.

The proposed action would construct a new bridge using staged construction that would provide four travel lanes, with median and shoulders. The proposed action satisfies the project objectives and goals because it would provide a bridge that accommodates US-191 traffic over the Colorado River and would also meet current structural design standards. Safety would be improved throughout the project corridor by upgrading shoulders and meeting design standards. The four lane section would meet the existing and projected travel demand through the design year 2030 and would provide continuity between the four-lane sections north and south of the project limits. Bicycle and pedestrian movements along US-191 would be facilitated by the addition of shoulders, sidewalks, and/or separated paths.

Chapters 1 and **2** provide further information regarding the proposed action, the purpose of and need for the proposed action, and alternatives considered. The proposed action has the potential to directly use six Section 4(f) properties including two parks, two trails, a wetland preserve, and a historic bridge. The parks, trails, and wetland preserve are addressed in **Section 4.3**, and the historic bridge is addressed in **Section 4.4**. No constructive use would occur as a result of the proposed action.

4.3 De Minimis Findings

Under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), FHWA can comply with Section 4(f) in a streamlined manner by finding that the program or project will have a de minimis impact on the area – i.e., there are no adverse effects of the project and the relevant SHPO or other official with jurisdiction over a property concurs. De minimis impacts related to historic sites are defined as the determination of either "no adverse effect" or "no historic properties affected," in compliance with Section 106 of the National Historic Preservation Act. De minimis impacts on publicly owned parks, recreation areas, and wildlife and waterfowl refuges are defined as those that do not "adversely affect the activities, features, and attributes" of the Section 4(f) resource, as noted in FHWA's guidance on applying the Section 4(f) de minimis impact criteria (FHWA, 2006b). The de minimis impact finding is based on the degree or level of impact including avoidance, minimization, and mitigation or enhancement measures that are included in the project to address the Section 4(f) use. In addition, the responsible official(s) with jurisdiction over the resource must agree in writing that the impact is de minimis.

For reasons explained in this section for each property, it is FHWA's opinion that the US-191 project would not adversely affect the activities, features, and attributes of the four recreation sites and the wetland preserve after taking into consideration mitigation and enhancement measures. These resources and their respective jurisdictional authorities include:

- Arches National Park – NPS
- Lions Park – Grand County
- Colorado River Bridge Underpass Trail – Grand County
- Courthouse Wash to Colorado River Bridge Trail – Grand County
- Scott Matheson Wetland Preserve – Division of Wildlife Resources

4.3.1 Arches National Park

Based on the General Management Plan Development Concept Plan for Arches National Park, the park is divided into four management zones: natural, cultural, development, and special use (NPS, 1989). Within the project area, only two management zones are present: natural and cultural, with natural making up all of the area potentially affected by the project. The plan states that the natural zone is managed to conserve the natural resources and processes of the park while

accommodating uses that do not adversely affect those resources and processes. Facilities in this zone are dispersed and limited to those that have little effect on scenic quality and natural processes. Examples of such facilities include foot trails, signs, and trailside information displays.

In 2004, UDOT was issued a highway easement deed with the purpose of maintaining and operating a public highway and adjacent bicycle path (FHWA, 2004). This easement typically extends about 200 feet from the centerline of the existing roadway. While the majority of the proposed improvements would avoid parklands by widening to the south, the park boundary near the Colorado River extends into the existing roadway section and is unavoidable. It is unclear as to whether the UDOT highway easement deed covers this section (T25S R21E Section 26). However, in accordance with the objectives of the UDOT highway easement, proposed improvements would provide for continued maintenance and operation of a public highway and adjacent bicycle path, and conditions outlined within the easement would be complied with. In addition, the proposed improvements are consistent with the park's management plans.

A total of 0.6 acres of Arches National Park is within the construction limits of the project, as shown in **Figure 4-1**. Most of this acreage is already occupied by the existing roadway section and an adjacent unimproved trail. Proposed work within the park boundary would include roadway and drainage improvements, re-establishing the approach to the access road to the river north of the US-191 Colorado River Bridge, and enhancements to the existing unimproved foot trail. The relationship of the park and this trail is explained further in the following paragraph. Nearby rock slopes and other resources important to the park would be protected with fencing during construction, and the design of the widened Courthouse Wash Bridge would continue to accommodate an informal foot trail to the nearby rock art panel.

The unimproved foot trail that parallels US-191 is known locally as the Courthouse Wash to Colorado River Bridge Trail. This trail starts at the US-191 parking area and Courthouse Wash Kiosk near the southern boundary of Arches National Park and continues to the Colorado River adjacent to US-191. FHWA has determined that Section 4(f) applies to this trail and that Grand County is the jurisdictional authority of this trail. Proposed improvements include upgrading the trail to a 10-foot wide paved path. The trail would be separated from the US-191 roadway, ensuring the safety of pedestrian and bicycle users. The trail provides access to the informal Courthouse Wash Trail within Arches National Park and serves as a link to the paved Moab Canyon Bike Path that ties into the entrance of Arches National Park. Once completed, this trail would formally connect the existing Moab Canyon Bike Path

with the planned Colorado River Non-Motorized Bridge crossing upstream of US-191. These enhancements would not only improve the safety of bicyclists and pedestrians visiting Arches National Park but would improve the connectivity of non-motorized trails within the area.

It is FHWA's opinion that the US-191 project's minor use of parklands would not adversely affect the activities, features, and attributes of the Arches National Park after taking into consideration mitigation and enhancement measures. FHWA is considering the impact to the resource to be de minimis as provided for under SAFETEA-LU and given that:

- The proposed use of Arches parkland is minimal,
- Efforts to avoid and minimize the use of parklands are incorporated into project design,
- Access to resources within Arches National Park would be enhanced via a paved trail, and
- The safety of bicyclists and pedestrians using the trail would be improved.

Impacts, avoidance, minimization, and mitigation measures have been developed in consultation with the official(s) with jurisdiction. Coordination with representatives from the NPS – Arches National Park has been on-going since the initiation of the NEPA study. A letter requesting concurrence in the above finding has been sent to the NPS – Arches National Park (see letter dated May 19, 2006 in **Appendix D**). Further consultation requirements of Section 4(f) and SAFETEA-LU will be completed following public review of the draft EA.

4.3.2 Lions Park

UDOT and Grand County own Lions Park. Grand County is responsible for operating and maintaining the park and is the jurisdictional authority for Lions Park. Per an agreement with Grand County, the Lions Club is responsible for day-to-day operations of the park.

Lions Park is bordered by US-191, SR-128, and the Colorado River, as shown on **Figure 4-1**. The Grand County General Plan Update states that available activities at the park include picnicking, meetings and reunions, trail hub, and parking (Four Corners Planning, 2004). The BLM described the park as follows:

> The Lions Park area is frequently used for highway rest purposes, picnics, Lions Club activities, special events, and general river access. An existing bike lane follows a dike along the river channel for the length of the park and allows

> cyclists, runners, and pedestrians to safely bypass the US-191/SR-128 intersection on a route that passes underneath the US-191 bridge. Other visitor use developments at Lions Park include a small building with kitchen facilities, a covered picnic area, additional picnic tables, a drinking water distribution system, interpretive exhibits, vault toilets, parking barriers, a large lower-level concrete parking and dancing area, a large upper level graveled parking area, and an asphalt road that connects the two parking areas . . . (BLM, 2004).

The BLM also reports that Grand County is working on plans to replace existing restrooms, picnic shelters, cookhouse, information exhibits, and drinking water systems, as well as install a new landscape watering system and shade trees. Additionally, the draft transportation plan for Arches National Park (recently released for public review and comment) includes a concessionaire-operated motorized tour program for Arches National Park (NPS, 2006). The tour would originate in Moab, and make intermediate stops between Moab and Arches, in locations such as Lions Park.

The proposed US-191 project would encroach into the portion of Lions Park owned by UDOT. A total of 0.25 acres paralleling US-191 is within the construction limits. Of this total, 0.09 acres would be occupied by fill, and 0.16 acres would be temporarily disturbed by construction activities associated with removing the old bridge and constructing the new bridge and approaches. Once construction is complete, the disturbed area would be revegetated. Avoidance of the park is not prudent because the proposed project involves replacing the existing bridge on essentially the same location, and there is a concurrent need to avoid or minimize impacts to the Scott Matheson Wetland Preserve (another Section 4(f) resource) on the west side of US-191. Shifting the alignment further to the west would also result in additional impacts to private property, wetland areas, and endangered species critical habitat associated with the Colorado River. Additionally, the park would still be temporarily disturbed by construction activities associated with the removal of the existing bridge.

Efforts to minimize impacts to Lions Park have been incorporated into the development of the proposed alternative. The proposed fill slope was not steepened and a retaining wall was not recommended to avoid encroachment into the park because the ability to landscape slopes is a desirable goal of the park.

It is FHWA's opinion that this minor use of park land would not adversely affect the activities, features, and attributes of Lions Park after taking into consideration mitigation and enhancement measures. As such, FHWA is considering the impact to the resource to be de minimis given that:

- The affected portion of the park parallels the existing US-191 facility and is owned by UDOT in order to operate and maintain US-191 and SR-128 and associated highway rest purposes,
- The public would still have access to the park,
- Parking would still be available for park facilities and trail hub parking, and
- The limited parking that is disturbed by construction activities would be restored once construction is complete.

Impacts, avoidance, minimization, and mitigation measures have been developed in consultation with the official(s) with jurisdiction. Coordination with representatives from Grand County has been on-going since the initiation of the NEPA study. A letter requesting concurrence in the above finding was sent to Grand County (see letter dated May 22, 2006 in **Appendix D**). Further consultation requirements of Section 4(f) and SAFETEA-LU will be completed following public review of the draft EA.

4.3.3 Colorado River Bridge Underpass Trail

A portion of the existing Colorado River Bridge Underpass Trail is located within UDOT right of way. The trail (shown in **Figure 4-1**) is currently maintained by the Grand County/City of Moab's Trail Mix Committee for Non-Motorized Trails. Since the trail is located in Grand County, Grand County is currently the jurisdictional authority of this trail. Since the city of Moab has plans to annex lands in this area, future jurisdiction of this trail may become Moab's responsibility.

The Colorado River Bridge Underpass Trail is an approximately 0.3 mile-long paved path that begins on the western side of US-191 (near the intersection of SR-128) and continues eastward under the US-191 Colorado River Bridge through Lions Park. The trail is an existing bike lane that follows a dike along the river channel for the length of the park and allows cyclists, runners, and pedestrians to safely bypass the US-191/SR-128 intersection on a route that passes underneath the US-191 Colorado River Bridge (BLM, 2004). No plans or formal agreements are in place between UDOT and Grand County regarding the specific location of the trail that is currently within UDOT right of way. In order to accommodate the bridge replacement and widening, the trail would need to be relocated approximately 15 feet to the west of US-191. Avoidance of the trail is not prudent because the proposed project involves replacing and widening the existing bridge on essentially the same location. Because the existing trail is adjacent to the existing roadway, avoidance is not possible.

Efforts to minimize impacts to the trail were incorporated into the development of the proposed alternative.

It is FHWA's opinion that the US-191 project's use of this trail would not adversely affect the activities, features, and attributes of the trail after taking into consideration mitigation and enhancement measures. The FHWA is considering the impact to the resource to be de minimis as provided for under SAFETEA-LU and given that:

- The proposed impacts to the trail involve a minor shift in location within UDOT right of way and full reconstruction of the trail with similar design features, and
- Following reconstruction, the trail would continue to provide a safe route that passes underneath the new US-191 Colorado River Bridge.

Impacts, avoidance, minimization, and mitigation measures have been developed in consultation with the official(s) with jurisdiction. Coordination with representatives from Grand County has been on-going since the initiation of the NEPA study. A letter requesting concurrence in the above finding was sent to Grand County (see letter dated May 22, 2006 in **Appendix D**). Further consultation requirements of Section 4(f) and SAFETEA-LU will be completed following the public review of the draft EA.

4.3.4 Courthouse Wash to Colorado River Bridge Trail

The unimproved foot trail (shown in **Figure 4-1**) that parallels US-191 is known as the Courthouse Wash to Colorado River Bridge Trail. This approximately 0.5 mile-long trail starts at the US-191 parking area and Courthouse Wash Kiosk near the southern boundary of Arches National Park and continues to the Colorado River adjacent to US-191. FHWA has determined that Section 4(f) applies to this trail and that Grand County is the jurisdictional authority of this trail. Proposed improvements include upgrading the trail to a 10-foot wide paved path. The trail would be separated from the US-191 roadway, ensuring the safety of pedestrian and bicycle users. The trail provides access to the informal Courthouse Wash Trail within Arches National Park and serves as a link to the paved Moab Canyon Bike Path that ties into the entrance of Arches National Park. Once completed, this trail would formally connect the existing Moab Canyon Bike Path with the planned Colorado River Non-Motorized Bridge crossing upstream of the existing US-191 Colorado River Bridge. These enhancements would not only improve the safety of bicyclists and pedestrians visiting Arches National Park but would improve the connectivity of non-motorized trails within the area.

In 2004, a highway easement deed was issued with the purpose of maintaining and operating a public highway and adjacent bicycle path. This easement typically extends about 200 feet from the centerline of the existing roadway. It is unclear as to whether the UDOT highway easement deed covers the area in T25S R21E Section 26. However, in accordance with the objectives of the UDOT highway easement, proposed improvements would provide for continued maintenance and operation of a public highway and adjacent bicycle path, and conditions outlined within the easement would be complied with. Avoidance is not prudent or necessary because part of the purpose of the project is to upgrade this trail. The easement, which refers to the trail as an adjacent bicycle path, does not identify a specific location for the trail. The proposed trail location avoids nearby rock slopes and protects other resources important to Arches National Park.

It is FHWA's opinion that the US-191 project's use of this trail would not adversely affect the activities, features, and attributes of the trail after taking into consideration mitigation and enhancement measures. The FHWA is considering the impact to the resource to be de minimis as provided for under SAFETEA-LU and given that:

- The impacts to the trail are beneficial and would enhance the safety and connectivity of the trail system within the area, and
- Following construction, the trail could be used not just by pedestrians but by cyclists as well.

Impacts, avoidance, minimization, and mitigation measures have been developed in consultation with the official(s) with jurisdiction. Coordination with representatives from Grand County has been on-going since the initiation of the NEPA study. A letter requesting concurrence in the above finding was sent to Grand County (see letter dated May 22, 2006 in **Appendix D**). Further consultation requirements of Section 4(f) and SAFETEA-LU will be completed following the public review of the draft EA.

4.3.5 Scott Matheson Wetland Preserve

The Division of Wildlife Resources jointly owns the Scott Matheson Wetland Preserve with TNC. Through an agreement signed in October 1994, TNC is responsible for the overall management of the preserve. Of the preserve's 875 acres, the Division of Wildlife Resources owns 425.8 acres in the northern half and TNC owns the remaining acreage. As the public land management agency, Division of Wildlife Resources is considered the official with jurisdiction over the property.

The Site Conservation Plan (DWR, 1994) identifies both ecological and programmatic goals for the preserve, as well as a protection, management, and implementation plan. As noted in the Site Conservation Plan:

> "The Preserve is an extremely rare ecosystem in an arid, desert region. It is vital to a number of rare species, as well as being an exceptional, highly diversified site for less unusual species. It is an integral part of the Colorado River flyway and represents the only high quality wetland habitat on the Colorado River in Utah. The Preserve operates as a collecting place, breeding site, and foraging area for what may be Utah's most diverse inventory of wildlife species, particularly migratory avian fauna."

The primary management goals of the preserve are to protect, enhance, and preserve the wetlands and associated habitat for rare and/or desirable species. In addition, opportunities for compatible scientific, educational, sporting, and recreational uses that help further the goals of TNC and the Division of Wildlife Resources are also promoted. The preserve is open year-round for visitors and offers a handicapped-accessible, mile-long loop trail for bird and wildlife viewing in the southern portion of the preserve. In addition, a wetlands teaching circle and map station provides bird and wildlife lists and brochures for self-guided tours. While the southern end of the preserve is closed to hunting, the northern end allows primitive weapons hunting (archery, muzzleloaders, and shotguns firing slugs or buckshot) for waterfowl, upland game, and deer.

Access to the southern portion of the preserve is provided via 400 North Street, Stewart Lane, and Kane Creek Road. The north access to the preserve is from the US-191 frontage road by way of a dirt road approximately 30 yards south of and parallel to the south fence of Moab Valley RV Resort (Colt, April 12, 2006). Motorized vehicles and bikes are not permitted beyond the gate located at the entrance to the preserve. Within the preserve boundaries, a dirt road turns and follows the western boundary of the Camp Park before turning west again along the northern boundary of the preserve.

During the development of the proposed alternative, every effort has been made to first avoid the preserve and, where avoidance was not prudent, to then minimize and mitigate potential uses of this resource. The **Figure 4-2** shows the boundaries of the preserve and details of the proposed involvement of the project with the preserve, which include:

- **Detail A** (land owned by Division of Wildlife Resources) – Just south of the US-191 Colorado River Bridge, the project design has incorporated the use of a 2:1 slope and retaining wall to avoid fill within the preserve. Runoff is

proposed to be discharged to a depressed area within the preserve via a piped system. Based on conceptual design, the peak flow for a 10-year 24-hour event is expected to increase by 1.61 cfs and the volume is expected to increase by 7,619 cubic feet per event. A drainage easement encompassing 1,312 sq ft is expected. Runoff would be treated using an in-line oil/sediment separator prior to discharge into a depressed area within the preserve. This controlled discharge is expected to provide improvement over existing conditions because it would allow for potential contaminants to be contained. In this area, runoff currently flows directly to the preserve untreated.

- **Detail B** (access easement - Division of Wildlife Resources) – South of the Moab Valley RV Resort, runoff would be discharged into an existing ditch that lies north of and parallel to the preserve's northern access road. Based on conceptual design, the peak flow for a 10-year 24-hour event is expected to increase by 3.28 cfs and the volume is expected to increase by 15,468 cubic feet per event. The ditch currently flows into the preserve and would provide natural treatment of the runoff prior to discharge to the preserve. No physical construction would occur within the preserve at this location.
- **Detail C** (land owned by TNC) – South of the Holiday Inn Express, the project requires a temporary construction easement consisting of a 12-ft linear strip parallel to US-191 and totaling 1,794 square feet to construct the roadway, curb, gutter, sidewalk, and slopes within the existing UDOT right of way. Once constructed, the disturbed area would be revegetated. There are no wetlands and no known sensitive wildlife or waterfowl habitat in this area given its proximity to existing US-191. In addition, no formal public activities would be impacted by this temporary disturbance.

It is FHWA's opinion that the US-191 project's minor use of the preserve would not adversely affect the activities, features, and attributes of the preserve after taking into consideration mitigation and enhancement measures. The FHWA is considering the impact to the resource to be de minimis as provided for under SAFETEA-LU and given that:

- The proposed use of the Scott Matheson Wetland Preserve is minimal,
- The wetland, plant, wildlife, and waterfowl preservation goals of the preserve would not be adversely affected by the proposed project,
- Hunting access and opportunities would not be adversely affected,

- Recreational, educational, and scientific opportunities within the preserve would not be adversely affected, and
- Efforts to avoid and minimize the use of the preserve have been incorporated into the project design.

Impacts, avoidance, minimization, and mitigation measures have been developed in consultation with the official(s) with jurisdiction. Coordination with representatives from Division of Wildlife Resources and TNC has been on-going since the initiation of the NEPA study. A letter requesting concurrence in the above finding was sent to Division of Wildlife Resources (see letter dated May 19, 2006 in **Appendix D**) and a copy of that letter was provided to TNC. A followup meeting was held with the Division of Wildlife Resources and TNC on June 21, 2006. On September 12, 2006, the Division of Wildlife Resources concurred with the above finding; therefore, consultation requirements of Section 4(f) and SAFETEA-LU have been satisfied.

4.4 Programmatic Section 4(f) Evaluation

4.4.1 Bridge Over Colorado River (Structure C-285)

4.4.1.1 Applicability

As shown in **Figure 4-1**, the proposed action would replace the US-191 Colorado River Bridge using federal funds. This bridge is formally named the Bridge Over Colorado River (Structure C-285). The project would require the use of this bridge, which is eligible for inclusion on the NRHP, because it would impair the historic integrity of the bridge as a result of demolition. Pursuant to Section 4(f) of the Department of Transportation Act of 1966, 49 USC 303, and Section 18(a) of the Federal-Aid Highway Act of 1968 23 USC 138, the Nationwide Programmatic Section 4(f) Evaluation for the use of historic bridges is applicable (FHWA, 1983). FHWA guidance on historic bridges covered by this Nationwide Programmatic Section 4(f) Evaluation states that historic bridges are unique because they are historic, yet also part of either a federal-aid highway system or a state or local highway system that has continued to evolve over the years. Even though the bridge is eligible for inclusion on the NRHP, it must perform as an integral part of a modern transportation system and must be replaced in order to assure public safety while maintaining system continuity and integrity.

4.4.1.2 Alternatives Considered

Alternatives have been considered to avoid the Section 4(f) use of the bridge, including:

- Do Nothing,
- Build on new location without using the old bridge at some distant alternate location,
- Build on new location to either side of the bridge without using the old bridge,
- Incorporate the bridge as a one-way couplet with a new structure, and
- Rehabilitate the bridge without affecting its historic qualities.

The Do Nothing alternative is not feasible and prudent since the safety and geometric deficiencies of the bridge cannot be addressed through normal maintenance. The bridge is too narrow, cannot support modern loads, has parapets that no longer meet current crash safety criteria, the bridge foundation is scouring, and concrete is seriously degraded. The existing bridge is also fracture critical because the two steel girders supporting the superstructure must be intact to support the bridge. If either girder gets damaged or develops fatigue cracks, the bridge could collapse.

Relocating the crossing to another point over the Colorado River some distance from the current crossing is not feasible and prudent. The bridge is already at the most logical crossing dictated by topography and the historical development of towns and roads in the region. This area is dissected by canyons and has great variation in surface elevation. The bridge is located on US-191, a major route that serves as the gateway into Moab. If the current crossing were closed, an approximately 110 mile detour along Interstate 70 and SR-128 would be required.

A new alignment would require constructing about 1.5 miles of new roadway, widening of existing roadways and city streets, and new right of way with residential and farmland relocations. The improvements would extend over 4.5 miles and would involve constructing at least three major intersections or interchanges to connect with existing roads. This alignment was not advanced because it would not provide for continuity of the US-191 system. Also, many existing businesses and residences, as well as planned development in the North Corridor, would not have immediate access to US-191 after the realignment.

Relocation to either side of the existing bridge is also not feasible and prudent. Arches National Park borders US-191 on the north and east, and there are steep cliffs along the highway throughout the project length until the city of Moab. Also, Section

4(f) cultural properties occur along the north side, including: 42GR190, 42GR2656.17, 42GR2923, 42GR3632, 42GR3634, and 42GR3667. Lions Park and the Scott Matheson Wetland Preserve, another Section 4(f) resource and habitat for sensitive species, borders either side of the highway south of the bridge. A substantial alignment departure would require a new structure over the Courthouse Wash as well. The added cost for new roadway and two new bridges would be substantial and it would expand adverse effects on the floodplain, riparian zone of the Colorado River, and impacts associated with hazardous waste from the Moab UMTRA site.

Incorporation as a one-way couplet also is not feasible and prudent since the safety and geometric deficiencies of the bridge cannot be addressed through normal maintenance. The bridge is too narrow, cannot support modern loads, has parapets that no longer meet current crash safety criteria, the bridge foundation is scouring, and concrete is seriously degraded. The existing bridge is also fracture critical. If either girder gets damaged or develops fatigue cracks, the bridge could collapse. Additionally, a new one-way bridge to the north or south of the existing bridge would still be required to provide adequate capacity. Although the new bridge would meet current structural design standards, the existing bridge would not.

Finally, rehabilitation without affecting the historic qualities of the bridge is not possible. The insufficient width, lack of shoulder, foundation and concrete deterioration, and substandard parapets cannot be addressed without affecting the historic design, materials, and workmanship that make the bridge eligible for the NRHP. The historic Colorado River Bridge cannot be preserved in place while maintaining its historic qualities. Other preservation alternatives often considered include marketing the bridge for relocation, retrieval of selected components, dismantling for storage, and documentation in advance of demolition. The bridge is a multi-plate steel Girder with concrete pilings and deck. The bridge is 1,000 feet long and has eight spans. The spans vary in length from 113 feet to about 127 feet and are quite heavy. The bridge cannot be relocated or dismantled for alternative use without affecting its historic qualities.

4.4.1.3 Measures to Minimize Harm

The measures proposed to minimize harm will be stipulated in the MOA between the FHWA, UDOT, SHPO, and consulting parties. The draft MOA is included in **Appendix C**. The MOA stipulates that the bridge receive detailed ILS archival documentation in advance of demolition. Marketing the bridge is not feasible.

4.4.1.4 Coordination

This Section 4(f) Evaluation has been developed in coordination with the SHPO and other interested parties (see letters in **Appendix D**). FHWA will notify the ACHP of the finding of an adverse effect, and the ACHP will decide if they will participate in the execution of the MOA.

4.4.1.5 Determination and Approval

The determination and approval of this Section 4(f) Evaluation will occur after the draft EA has been circulated. A draft of the FHWA Utah Division Programmatic Section 4(f) Determination and Approval form follows this section.

FEDERAL HIGHWAY ADMINISTRATION – UTAH DIVISION

PROGRAMMATIC SECTION 4(f) DETERMINATION AND APPROVAL
UNDER THE NATIONWIDE PROGRAMMATIC 4(f) EVALUATION
AND APPROVAL FOR FHWA PROJECTS THAT NECESSITATE
THE USE OF HISTORIC BRIDGES
(JULY 5, 1983)

Project #

Description/Location of Historic Property

Consult the Nationwide Section 4(f) Evaluation as it relates to the following items. Complete all items. Any response with an * requires additional information prior to approval. Attach any information. This determination will be attached to the applicable NEPA document.

APPLICABILITY

1.	Will the bridge be replaced and/or rehabilitated with Federal Funds?	Yes
2.	Will the project require the “use” of a historic bridge which is on or eligible for listing on the National Register of Historic Places?	Yes
3.	Will the project impair the historic integrity of the bridge either by demolition or rehabilitation?	Yes
4.	Has the bridge been determined to be a National Historic Landmark?	No

ALTERNATIVES CONSIDERED

Consult the Nationwide Programmatic Section 4(f) Evaluation for the generic reasons that might be addressed. The evaluation of alternatives for the subject project, however, must quantify those reasons as applicable and be supported by circumstances of the project. **All of the following alternatives must be evaluated.**

1.	The “Do Nothing” alternative has been studied and it has been determined for reasons of maintenance and safety not to be feasible and prudent.	Yes
2.	The build on a “New Location” without using the old bridge alternative has been studied and it has been determined for reasons of terrain, and/or adverse social, economic or environmental effects, and/or engineering and economy, and/or preservation of the old bridge, not to be feasible and prudent.	Yes
3.	Rehabilitation of the existing bridge without affecting the historic integrity of the bridge has been studied and it has been determined for reasons of structural deficiency and/or geometrics that rehabilitation is not feasible and prudent.	Yes

MEASURES TO MINIMIZE HARM

The following must include all possible planning to minimize harm.

1.	For bridges that are to be rehabilitated, the historic integrity of the bridge is preserved to the greatest extent possible, consistent with unavoidable transportation needs, safety and load requirements.**	Yes
2.	For bridges that are to be rehabilitated to the point that the historic integrity is affected or that are to be moved or demolished, the FHWA has ensured that fully adequate records are made of the bridge in accordance with the Historic American Engineering Record (HAER) or other suitable means developed through consultation.	Yes
3.	For bridges that are to be replaced, the existing bridge is made available for an alternative use, provided a responsible party agrees to maintain and preserve the bridge, and/or, it has been determined that marketing the bridge is not feasible.***	Yes
4.	For bridges that are **adversely affected**, the FHWA, SHPO, and ACHP have reached agreement through the Section 106 process on the Measures to Minimize Harm and those measures are incorporated into the project.	Yes

NOTES:

** This criterion and the provisions of Section 4(f) apply when it has been determined by FHWA in consultation with SHPO and ACHP through the Section 106 process that the rehabilitation work will result in an “adverse effect” on the historic integrity of the structures. When through the above consultation, it is determined the rehabilitation work will result in “no adverse effect” on the historic integrity of the structure, the provisions of Section 4(f) and the above Nationwide Programmatic Section 4(f) Evaluation do <u>not</u> apply.

*** This criterion will require the advertisement and marketing of the bridge in accordance with FHWA requirements. Marketing will be addressed in the Programmatic Section 4(f) Evaluation and by appropriate provisions in the Memorandum of Agreement entered into between the State or local agency, FHWA, the SHPO and the ACHP. Refer to Mr. Leather’s July 22, 1987 memorandum on the applicable requirements for preservation and marketing. Copies of the advertisement and results of the marketing efforts must be furnished to FHWA prior to replacement of the historic bridge. Marketing is <u>not</u> required when through the Section 106 consultation process between the State or local agency, FHWA, the SHPO and the ACHP, it is determined not a feasible option.

DETERMINATION AND APPROVAL

Based on the NEPA documentation/Programmatic Section 4(f) Evaluation approved by FHWA on _____ the results of the public and agency consultation and coordination as evidenced by the attachments to the Utah Department of Transportation’s letter attached, the FHWA has determined that:

- The project meets the applicability criteria set forth in the Nationwide

Programmatic Section 4(f) Evaluation and Approval for FHWA projects that Necessitate the Use of Historic Bridges dated July 5, 1983

- That all of the alternatives set forth in the Findings section of the above Nationwide Section 4(f) Evaluation have been fully evaluated. Based on those Findings, it is determined there is no feasible and prudent alternatives to the use of the historic bridge.
- That the project complies with the Measures to Minimize Harm Section of the above Nationwide Section 4(f) Evaluation and agreement between the FHWA, SHPO, and ACHP has been reached.

Accordingly, the FHWA approved the proposed use of the historic bridge for the construction of _____ under the above Nationwide Section 4(f) Evaluation issued on July 5, 1983.

Approved _____

FHWA Division Administrator Date