

7. Section 4(f) Evaluation

7.1 Purpose of Section 4(f) Evaluation

Section 4(f) of the U.S. Department of Transportation (U.S. DOT) Act of 1966, codified in Federal law at 49 U.S.C. § 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 land, 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 feasible and prudent 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.”

The use of Section 4(f) resources occurs when: (1) land from a Section 4(f) site is permanently acquired for a transportation project, (2) when there is a temporary occupancy of land that is adverse in terms of the statute’s preservation purpose, or (3) when the proximity impacts of the transportation project on the Section 4(f) site, without acquisition of land, are so great that the purposes for which the Section 4(f) site exists are substantially impaired. The latter type of use is also known as a “constructive use.”

Section 4(f) is applicable to historic structures, archaeological resources, and Traditional Cultural Properties (TCPs) when the resource is included on, or eligible for, the NRHP (23 CFR 771.135[e]). However, Section 4(f) does not apply to archaeological resources when it is determined after consultation with the SHPO that the resource is important chiefly because of what can be learned by data recovery and has minimal value for preservation in place. If compliance with Section 106 of the NHPA (16 U.S.C. § 470) and related regulations can be achieved through data recovery, resulting in a finding of “no effect” or “no adverse effect” (36 CFR 800.5), then Section 4(f) is not applicable. Section 4(f) requires consultation with appropriate Department of Interior (DOI) offices, and 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). Further, 23 CFR 771.135(d) notes that where public lands are managed for multiple uses, Section 4(f) applies only to those portions that function for “significant park, recreation, or wildlife and waterfowl purposes. The determination of which lands so function,” and their significance, is made by the agency having jurisdiction over those lands and is reviewable by the U.S. DOT.

Because the Boulder City/U.S. 93 Corridor would use Section 4(f) lands, this evaluation identifies Section 4(f) resources in the project area, describes the nature and extent of the use of these properties, evaluates alternatives that would avoid the use of Section 4(f) resources, and describes measures to minimize harm to the affected resources.

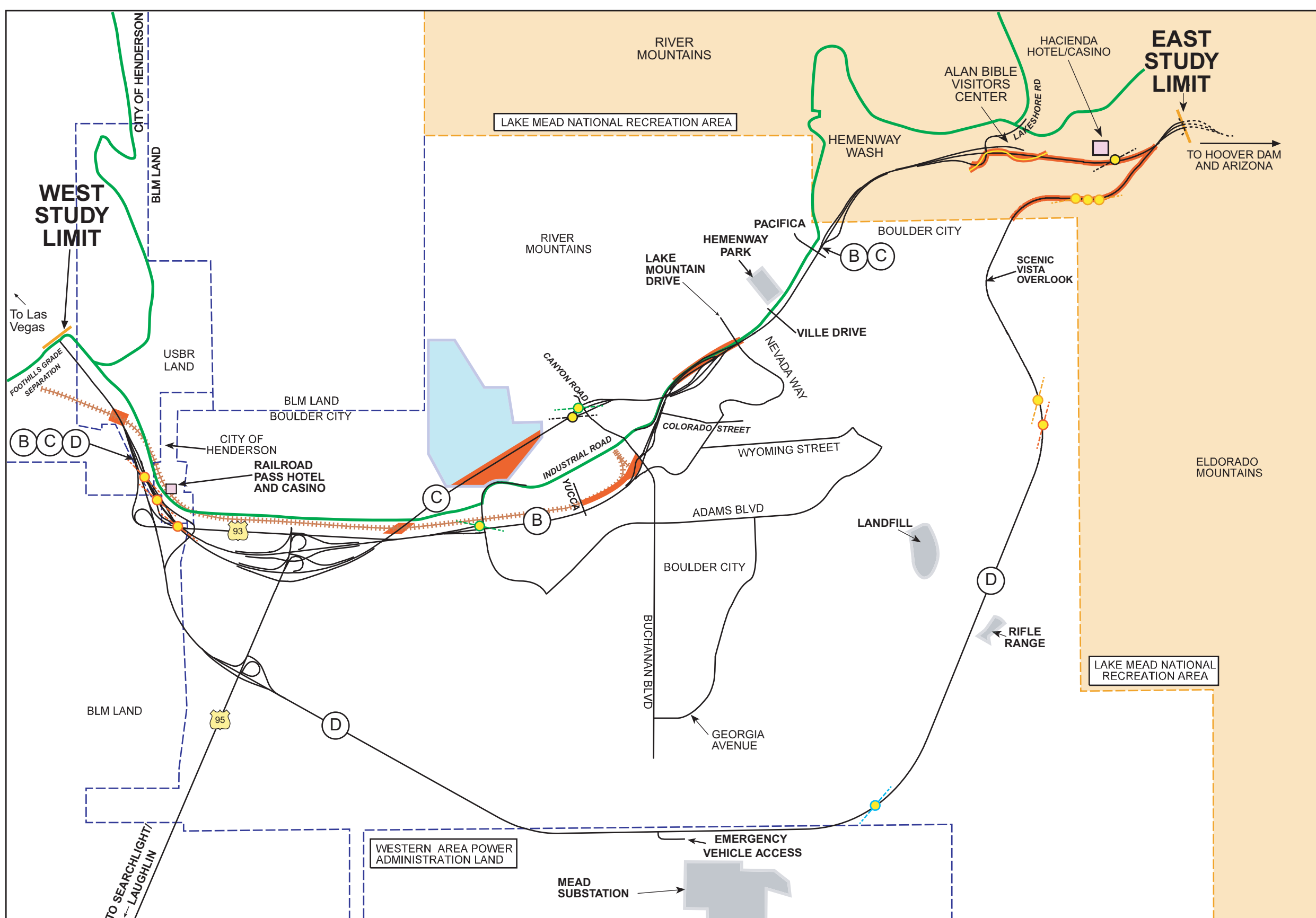
7.2 Proposed Project

Traffic on U.S. 93 in Boulder City has doubled over the last 15 years from 17,200 ADT in 1985 to approximately 30,000 ADT in 1999. This traffic increase in the vicinity of Henderson, Boulder City, and Hoover Dam has created congestion. The traffic growth is due to increased local traffic on U.S. 93 in Boulder City and Hemenway Valley, an increased stream of recreational traffic to Lake Mead, an increased flow of traffic to Hoover Dam with the completion of the new visitor's center, and increased interstate traffic. Increased truck traffic is expected with the development of the CANAMEX Trade Corridor, which extends from Mexico to Canada. This high-priority corridor is being developed chiefly to facilitate transportation distribution, commerce, and tourism throughout North America.

Corridor alternatives connecting the western and eastern study limits were developed from comments received as a result of the project's public outreach and scoping program, which includes public open forum and scoping meetings, and Project Management Team (PMT) meetings. The PMT included representatives of all agencies having jurisdiction over lands affected by this project. Initial alignments identified were reduced to viable corridor alternatives, which were evaluated and then reduced to three build alternatives plus a "no-build" alternative for future study in the preparation of this EIS.

The proposed project involves improvements to U.S. 93 in the Boulder City area, referred to as the U.S. 93 Corridor. The project limits are between a western boundary on U.S. 95 in Henderson, approximately 1.6 km (1 mile) north of the Railroad Pass Hotel and Casino where the present freeway ends at U.S. 95 MP 59, and an eastern boundary on U.S. 93, approximately 7.5 km (4.7 miles) east of downtown Boulder City at U.S. 93 MP 1.8, just east of the Hacienda Hotel and Casino (refer to Figure 7-1). The eastern boundary is coincident with the planned western end of the U.S. 93 Hoover Dam Bypass project being developed by FHWA, Central Federal Lands Highway Division (see Section 2.1). The study covers a total distance of approximately 16.7 km (10.4 miles) on the present route of U.S. 93. Within the study corridor, U.S. 93 varies from a four-lane divided roadway to a two-lane roadway with numerous business driveways and cross streets.

The project seeks to provide transportation improvements in the corridor to reduce traffic congestion and crashes, and to improve regional mobility while maintaining or improving local circulation and access to Boulder City businesses. Chapter 2 of the EIS provides a complete description of the range of alternatives.



- ALIGNMENTS**
- (B) ALTERNATIVE B - IMPROVEMENTS TO THE EXISTING U.S. 93
 - (C) ALTERNATIVE C - THROUGH TOWN
 - (D) ALTERNATIVE D - SOUTHERN BYPASS

--- CITY/PARK BOUNDARY

- 4(f) RESOURCES**
- [Orange line] LIMITS OF 4(f) IMPACTS
 - [Light orange area] LAKE MEAD NATIONAL RECREATION AREA
 - [Light blue area] BOULDER RIDGE GOLF COURSE
 - [Green line] RIVER MOUNTAINS LOOP TRAIL
 - [Dashed line] HISTORIC RAILROAD
 - [Orange line] 26CK6245, OLD HWY 93/ NEVADA HWY 41 ALIGNMENT
- TRANSMISSION TOWER IMPACTS¹**
- [Dashed line with orange dot] 26CK6251, HOOVER-BASIC SOUTH
 - [Dashed line with green dot] 26CK6249, SCE NORTH
 - [Dashed line with yellow dot] 26CK6250, SCE SOUTH
 - [Dashed line with blue dot] 26CK6240, METROPOLITAN WATER DISTRICT #1
 - [Dashed line with orange dot] 26CK6237 LABPL #2

NOTES:
¹ TRANSMISSION TOWERS CONSIDERED AS A COMPONENT OF HISTORIC TRANSMISSION LINE

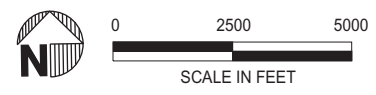


FIGURE 7-1
AFFECTED SECTION 4(f)
RESOURCES
 BOULDER CITY/U.S. 93 CORRIDOR STUDY

This page intentionally left blank.

7.3 Purpose and Need

A complete discussion of the purpose and need for the project is provided in Chapter 1 of this EIS and is incorporated herein by reference.

The purpose of the project is to provide overall transportation improvements in the corridor by reducing traffic congestion and crashes, and to improve regional mobility while maintaining or improving local circulation and access to Boulder City businesses. The proposed Boulder City/U.S. 93 transportation improvements will address:

- Resolving traffic problems in the vicinity of Boulder City
- Extending freeway status to the U.S. 93/95 interchange
- Improving operations at the junction of U.S. 93/95
- Creating a safer transportation corridor
- Accommodating future transportation demand
- Improving system linkage on U.S. 93 and maintaining route continuity

7.4 Project Alternatives Considered

A comprehensive review was done of a wide array (over 400 miles) of alternatives narrowed down to 16 build alternatives based on the evaluation process discussed in Sections 2.4 through 2.6 and incorporated herein by reference. Based on the evaluation process, all but four alternatives (three build alternatives plus Alternative A, the “no-build” alternative) were eliminated from further consideration during several workshop meetings between March and July 2000. The PMT concurred upon the following four alternatives to carry into detailed evaluation in the EIS:

- Alternative A – No Build
- Alternative B – Existing U.S. 93 Improved
- Alternative C – Through-Town Alignment, Corridor TA101
- Alternative D (preferred alternative) – Southern Alignment, Corridor SA101C (combination of SA101 and SA101A)

These alternatives as well as the Section 4(f) resources that would be affected by their construction are illustrated in Figure 7-1.

Alternative A

Alternative A is the No Build Alternative. Under this alternative, no Section 4(f) resources would be affected. As explained to some extent in other portions of this document, Alternative A fails to meet the purpose and need of this project.

Alternative B

This build alternative is proposed as a highway and arterial improvement combination that includes a general widening of existing U.S. 93 and other roadway improvements, including several new interchanges and grade separations, within the study limits.

The goal of the alternative is to make improvements to the present 17.7 km (11 miles) of roadway, mostly within the existing U.S. 93 corridor, in order to improve safety and capacity and to reduce congestion through Boulder City.

Alternative B would be essentially identical to Alternative C (below) east of the planned Lake Mountain Drive grade separation (Figure 7-1). This alternative would function as an urban arterial between Veteran's Memorial Drive and east of the proposed Buchanan Intersection. The development of Alternative B includes the features and improvements described in Table 2-3, and further displayed in the plan and profile drawings in Appendix A of the *Preliminary Engineering Report* (NDOT, March 2002).

Alternative C

Alternative C would be a new through-town highway connecting the western and eastern study limits of the project. It would consist of a continuous four-lane, limited-access divided roadway parallel to existing U.S. 93 (Figure 2-3). The current development of Alternative C includes the features and improvements described in Table 2-4, and further displayed in the plan and profile drawings in Appendix A of the *Preliminary Engineering Report* (NDOT, March, 2002). The alignment begins at the Foothills grade separation, continues through the Railroad Pass area, and crosses U.S. 95 approximately 0.8 km (0.5 mile) south of the overpass; the existing interchange would be replaced by a new, higher-capacity interchange; the alignment then turns north, crossing underneath U.S. 93 and runs parallel to and north of Industrial Road along the transmission line corridor. This alternative reconnects to existing U.S. 93 at the west end of Hemenway Wash. The highway would tie-in at the east end of the project to the Hoover Dam Bypass project's western study limits (see Section 2.1; Figure 7-1). The proposed highway would be approximately 17.7 km (11 miles) in length.

Alternative D (Preferred Alternative)

Alternative D is proposed as a southern bypass of Boulder City connecting the western and eastern study limits of the project. It would consist of a continuous four-lane, limited-access divided roadway bypassing the developed area of Boulder City to the south (Figures 2-4, 7-1). The alignment begins at the Foothills grade separation, crosses U.S. 95 approximately 1.9 km (1.2 miles) south of the existing U.S. 93/95 interchange, then the alignment continues south toward the Mead Substation. The new alignment, which would be developed as an undivided limited-access roadway, generally runs parallel to the transmission corridor between the landfill and the rifle range through the Eldorado Mountains east of Boulder City to the end of the project area just east of the Hacienda Hotel and Casino. The highway would tie-in at the east end of the project to the western study limits of the Hoover Dam Bypass project's Nevada Interchange (see Section 2.1; Figure 7-1). The proposed highway would be approximately 24 km (15 miles) in length.

Alternative D (the southern alternative) includes the features and improvements described in Table 2-5, and displayed in Appendix A of the *Engineering Report - Alternative D Southern Bypass (Preferred Alternative)* (NDOT, January 2003). Alternative D would remove through-traffic from the vicinity of Boulder City, and has the greatest capacity of the alternatives to resolve present and anticipated future traffic problems that impact Boulder City.

7.5 Description of Section 4(f) Properties

Comprehensive research, surveys, and expert analysis were used to identify existing and planned public parks and recreation areas, wildlife and waterfowl refuges, and historic sites potentially affected by the build alternatives. All build alternatives will result in impacts to Section 4(f) properties, as described below. No designated wildlife and waterfowl refuges were identified in the areas potentially affected by the build alternatives. The historic sites listed are only those determined to be eligible for the NRHP. Figure 7-1 depicts the three build alternatives and Section 4(f) properties in the study area. Table 7-1 provides a summary of impacts by property and alternative. There have been changes in impact estimates since the publication of the DEIS due to the continued refinement of resources affected and the alternative alignments, under the direction of the PMT. The following have led to the revision of estimates of Section 4(f) use for all build alternatives:

- 1) Update of the historic structures inventory report, and completion of the final report,
- 2) Completion of initial SHPO consultation, and receipt of SHPO determinations of eligibility,
- 3) Receipt of guidance from FHWA regarding which impacts constitute use under Section 4(f),
- 4) Receipt of guidance that existing right-of-way within the LMNRA is not considered part of that Section 4(f) resource, and
- 5) Refinement of alignment positions, their impacts to historic structures (including the Boulder City Branch Railroad), and cut and fill limits, of the alternatives.

In addition, Alternative D in the DEIS included acreage calculations for a swath of 328 feet from the LMNRA boundary to the east study limit. Additional acreage was included for a directional interchange with a large footprint at the east study limit. This original alignment and interchange footprint in the LMNRA totaled 85 acres. At the request of the PMT, the east limit of this alignment was modified to tie into the Hoover Dam Bypass diamond interchange. The acreage impacts were recalculated for each alternative to ensure greater accuracy of Section 4(f) use evaluations. These changes resulted in a net reduction in acreage impacts.

7.5.1 Public Park and Recreation Land

Lake Mead National Recreation Area

The LMNRA was established October 8, 1964, by Public Law 88-639 for “general purposes of public recreation, benefit, and use, and in a manner that will preserve, develop, and enhance...the recreation potential, and in a manner that will preserve the scenic, historic, scientific, and other important features of the area.” The LMNRA includes a wide variety of scenic and recreational resources, and is administered by the NPS. Most of the LMNRA is desert; rugged mountains, expansive alluvial fans, and dry washes dominate the landscape. The 1,495,664 acre LMNRA encompasses two reservoirs formed by the Colorado River: (1) Lake Mead, 110 miles long and formed by Hoover Dam, has approximately 162,670 acres of water surface and more than 822 miles of shoreline; and (2) Lake Mohave, 67 miles long and formed by Davis Dam, has approximately 28,800 acres of water surface and more than

254 miles of shoreline. This scenic area is famous for Hoover Dam, Lake Mead, the Colorado River, recreational activities, and wildlife. The recreational activities available in the LMNRA include sightseeing, hiking, camping, picnicking, backpacking, fishing, hunting, boating, river rafting, and bicycling. The LMNRA and Hoover Dam are popular tourist destination areas, both nationally and internationally. In 1997, there were 9.7 million visitors to the LMNRA.

Those portions of the build alternatives within the recreation area are located within the Boulder Basin Zone of the LMNRA General Management Plan. The land adjacent to the existing U.S. 93 corridor is located in the NPS-designated Natural Environment subzone and, within this subzone, there is an emphasis on conservation of natural resources and provision of environmentally compatible recreational activities.

As it contains the largest fresh-water body in the American southwest, and because of its proximity to major urban centers, the LMNRA is used by millions of visitors annually. Use of the portion of the LMNRA affected by this project includes utility vehicles servicing the numerous transmission lines in this area, occasional off-road vehicles using the same service roads, and hikers accessing trailheads.

In the Impairment Analysis prepared by the NPS to address the impacts of Alternative D (Appendix D), it is noted that

“Much of the acreage that would be utilized by implementing this alternative (Alternative D) has been previously impacted by the existing utility corridor and approved backcountry road.... The recreational use and value of the lands within and near the utility corridor is considered low.” (parentheses added)

Further, the Impairment Analysis notes that interstate traffic flow would be improved within the LMNRA, and that reduction in the traffic volume at the corner of Lakeshore Road and present U.S. 93 would improve the performance of that intersection. These changes are likely to improve visitor access to the LMNRA.

Section 4(f) Use

Evaluations of the acreage of LMNRA land that would be subject to Section 4(f) use under the build alternatives have been refined as a result of updated engineering plans, as well as the receipt of guidance from FHWA that existing, disturbed right-of-way is not considered part of a Section 4(f) resource, and therefore differ from those presented earlier.

Alternative B:

Alternative B would permanently use approximately 46.4 acres of NPS land to provide the necessary right-of-way near the east end of the corridor, based on a 100-m (328-ft) basic right-of-way width. This represents approximately 0.0031 percent of the surface area of the LMNRA. The required property parallels the existing alignment of U.S. 93 (Figure 7-1). Lands within the existing NDOT right-of-way are not included in the Section 4(f) acreage calculations.

Alternatives	Section 4(f) Use							
	Historic Railroad 26CK5414	Boulder Ridge Golf Course	River Mountains Loop Trail	Lake Mead National Recreation Area	Old Highway 41 26CK6245	Historic Transmission Lines	Summary	
A No Build	None	None	None	None	None	None	No Section 4(f) resources affected 0 ac.	
B Improve Existing U.S. 93	Use of 8.3 ac. at two locations- in Railroad Pass, and in between Yucca and the vicinity of Buchanan Interchange and Frontage Road (Figure 7-1).	None	Use of 1.9 ac. of trail.	Use of 46.4 ac. of Lake Mead National Recreation Area.	Use of 0.2 ac.	Use of 3 transmission lines, 4 historic towers. 26CK6251, 0.31 ac. 26CK6251, 0.31 ac. 26CK6250, 0.31 ac. 26CK6249, 0.31 ac.	Number of historic structures affected (transmission towers) Historic railroad Historic highway Park lands (Lake Mead National Recreation Area- 1,495,664 acres total area) Recreation lands (River Mountain Loop Trail)	4 (1.24 ac.) 8.3 ac. 0.2 ac. 46.4 ac. or 0.0031% of LMNRA 1.9 ac.
C Through-Town	Use of 0.6 ac. at two locations- in the Railroad Pass, and in the construction of a grade separation east of the U.S.93/95 Interchange (Figure 7-1).	Use of 47.8 ac. of recreation land.	Use of 1.9 ac. of trail.	Use of 41.0 ac. of Lake Mead National Recreation Area.	Use of 0.2 ac.	Use of 3 transmission lines, 6 historic towers. 26CK6251, 0.31 ac. 26CK6251, 0.31 ac. 26CK6251, 0.31 ac. 26CK6250, 0.31 ac. 26CK6250, 0.31 ac. 26CK6249, 0.31 ac.	Number of historic structures affected (transmission towers) Historic railroad Historic highway Park lands (Lake Mead National Recreation Area - 1,495,664 acres total area) Recreation lands (River Mountain Loop Trail, Golf Course)	6 (1.86 ac.) 0.6 ac. 0.2 ac. 41.0 ac. or 0.0027% of LMNRA 49.8 ac.
D Southern Bypass	Use of 0.3 ac. at one location, in the Railroad Pass.	None	None	Use of 58.9 ac. of Lake Mead National Recreation Area.	None	Use of 3 transmission lines, 7 historic towers. 26CK6251, 0.31 ac. 26CK6251, 0.31 ac. 26CK6240, 0.31 ac. 26CK6237, 0.31 ac. 26CK6237, 0.31 ac. 26CK6237, 0.31 ac. 26CK6237, 0.31 ac.	Number of historic structures affected (transmission towers) Historic railroad Park lands (Lake Mead National Recreation Area- 1,495,664 acres total area))	7 (2.17 ac.) 0.3 ac. 58.9 ac. or 0.0039% of LMNRA

This page intentionally left blank.

Alternative C:

Alternative C would permanently use approximately 41.0 acres of NPS land to provide the necessary right-of-way near the east end of the corridor. This represents approximately 0.0027 percent of the surface area of the LMNRA. Like Alternative B, the required property parallels the existing alignment of U.S. 93 (Figure 7-1), and lands within the existing NDOT right-of-way are not included in the Section 4(f) acreage calculations.

Alternative D:

Alternative D would permanently use approximately 58.9 acres of NPS land within the LMNRA, or 0.0039 percent of the surface area of the LMNRA. LMNRA land impacted by Alternative D is generally south of the Hacienda Hotel and Casino. The area contains several high-voltage transmission corridors from Hoover Dam, unpaved utility service roads, and the existing U.S. 93 corridor. (Figure 7-1).

The NPS, which administers the LMNRA, has prepared an independent Impairment Determination (Appendix D) evaluating effects of the Alternative D, pursuant to NPS Management Policies (2001). The findings of this impairment analysis included the following:

“The effects of the Preferred Alternative (Alternative D) will not impair Park resources or values necessary to fulfill specific purposes identified in the Park’s enabling legislation. Impacts documented in the EIS... will not affect resources or values key to the natural and cultural integrity of the Park or alter opportunities for enjoyment of the Park. The Preferred Alternative will not impair Park resources and will not violate the NPS Organic Act.” (parentheses added).

River Mountains Loop Trail

The 30-mile River Mountains Loop Trail is partially complete through the study area, and it is designed to encircle the River Mountains/LMNRA/Boulder City/Henderson area. The loop trail will serve as a link for communities within Boulder City and Henderson to recreational areas within LMNRA and Hoover Dam. Although the intent of the loop trail is a connection to recreational facilities, in certain areas (such as the western study limits), the trail could become an important link for pedestrian, bicyclist, and transit access.

The extent of the loop trail within the project limits is depicted in Figure 7-1. The planned trail corridor passes behind the Railroad Pass Hotel and Casino and parallels the railroad right-of-way on the north side of the railroad and existing U.S. 93 to the Railroad Museum and maintenance building on Yucca Street. From there the trail will follow Yucca Street and Industrial Road to existing U.S. 93. East of the intersection of Industrial Road and existing U.S. 93 the loop trail is open, where it proceeds to the River Mountains Trail trailhead as a 3.6-m (12-ft) asphalt multiuse trail parallel to U.S. 93. The trail through Hemenway Wash, from the River Mountains trailhead to Pacifica Way, is also complete, and it utilizes the concrete Hemenway Wash drainage channel paralleling U.S. 93 with numerous connections to side streets and to Hemenway Park. This trail segment was the first segment of the loop trail to be completed as part of a flood control project in 1993 (River Mountains Loop Trail, 2001). It is used for recreational purposes by Boulder City residents and visitors to the LMNRA on a daily basis.

Section 4(f) Use**Alternative B:**

An approximately 1.2-km (0.75-mile) segment of the trail in this area would conflict with Alternatives B and C. Construction of the new four-lane divided highway alignment, a grade separation at Lake Mountain Drive, and a realigned frontage road would require relocation of the Hemenway drainage channel containing the loop trail. A dual-use box culvert, used for storm flows and a pedestrian crossing along the River Mountains Loop Trail, /pedestrian crossing to the River Mountains Loop Trail would also require modification/extension near Ville Drive. Alternative B would require use of approximately 1.9 acres of Section 4(f) land represented by the River Mountains Loop Trail.

Alternative C:

Alternative B and C are similar in this area, so Alternative C would require the same use of Section 4(f) land represented by the River Mountains Loop Trail as Alternative B.

Alternative D:

No use of this Section 4(f) resource would be required under Alternative D.

Boulder Ridge Golf Course

This proposed 370-acre public golf course was originally scheduled to be constructed by December 31, 2001 (October 17, 2000, letter from John Sullard, City Manager, to Michael Lasko, CH2M HILL). The project has been delayed; however, it is still the intent of the City to complete the golf course on this site. The proposed Boulder Ridge Golf Course site presently contains primarily undeveloped lands. It is located north of the intersection of Industrial Road and Veterans Memorial Drive (Figure 7-1), and just northeast of the State Veterans Home. The golf course site is also bounded to the north by the River Mountains and a recreational study area preserved by Boulder City for mountain biking and hiking. This planned public golf course will be accessed by Veterans Memorial Drive (Figure 7-1).

This site is city-owned land that will be leased to a developer/operator of the golf course. According to the lease agreement, the parcel is zoned SR for Special Recreation, and it is intended to serve the growing need and demand for additional golf facilities in Boulder City. The goal of the SR zone is to create a zoning district that will permit publicly owned and operated courses and privately owned and operated courses, as well as other limited recreational uses (SR Zone, Sec. 11-9-2). Uses permitted within the SR Zone are golf courses, along with accessory uses, as well as pedestrian/bicycle trails, outdoor theaters, and public utility facilities as required to serve the golf courses (SP Zone, Sec. 11-9-3).

As a facility planned for the future, the Boulder Ridge Golf Course currently receives no use. When it is completed, it is anticipated that it will be used on a daily basis by local residents and visitors.

Section 4(f) Use**Alternative B:**

No use of this Section 4(f) resource would occur as a result of Alternative B.

Alternative C:

Alternative C would require use of 47.8 acres of the southern portion of the Boulder Ridge Golf Course development parcel (Figure 7-1). This impact would decrease the number of planned golf course holes from 36 to 27. Discussions with City staff indicate that the remnant parcel that would remain south of the roadway (Figure 7-1) would, in essence, be an isolated tract that would no longer be useful for this recreational facility. This impact would decrease the number of planned golf course holes from 36 to 27. The course developer's business plan is predicated on 36 holes, and the economic viability would be greatly reduced by limiting the number of holes that can be constructed, according to the City of Boulder City.

Alternative D:

No use of this Section 4(f) resource would result from Alternative D.

7.5.2 Historic Resources

Evaluation of the use of Section 4(f) historic resources is based on the archaeological and historical surveys of the Area of Potential Effect (APE) of Alternatives B, C and D, and on engineering design work.

In July of 2003 a Programmatic Agreement (PA) was executed between the FHWA, NDOT, other federal land management agencies, and the Nevada SHPO (Appendix E). Among other things, the PA calls for consultation among the appropriate agencies and the Nevada SHPO on a determination of effects, and the development of treatment plans to mitigate those impacts, under Section 106 of the NHPA (36 CFR 800.5). The formal determination of effects will occur once more detailed engineering design is completed. In accordance with Stipulation 1 of the PA, it is applicable to Alternative D, the Southern Alternative.

A description of the Section 4(f) historic resources affected by the build alternatives is presented below, and shown in Figure 7-1. As noted in Section 7.4, completion of the inventory of historic structures, receipt of SHPO determinations of eligibility, and refinement of engineering plans have in turn led to the refinement of the impacts analyses and Section 4(f) use, and these changes are reflected in the current document. These refinements include the assessment of Section 4(f) use of both historic linear resources (transmission lines, roadways) as well as structures.

For historic transmission lines, all transmission towers identified as being impacted are assumed to be (1) contributing elements to that historic resource, and (2) will be removed and replaced with a new tower. In consultation with WAPA it was determined that replacement is the most conservative assumption because transmission corridor realignments are likely to result in different structural requirements that would preclude original tower relocation.

Boulder City Branch Railroad (26CK5414)

The BCBRR is a standard gauge, single-track railroad that originally ran from Boulder Junction south of Las Vegas to Boulder City (Figure 7-1). The railroad includes some wood ties with original 1931-date rails, the original ballast, maintenance access roads paralleling both sides of the railroad, and V-shaped earthen drainage structures that direct runoff

through culverts under the railroad grade. The railroad is owned and maintained by the Nevada State Railroad Museum. The BCBRR was recommended as eligible for the NRHP under criterion A because of its association with the construction and operation of Hoover Dam and the development of the Boulder City and Basic/Henderson townsites (White, 1996a:59-60). In 1996, the Nevada SHPO concurred that the railroad was eligible for the NRHP under criterion A (White, 1998:68). In 2000, the BCBRR was subject to further study (Schweigert, 2001). A conclusion of that study is that the BCBRR remains eligible for the NRHP under criterion A, but that it is also eligible under criterion C as an element of a Hoover Dam railroads noncontiguous historic district.

Within the limits of this study, the railroad is owned by the City of Henderson in the west; by NDOT and the Nevada State Railroad Museum jointly in Railroad Pass; and, to the east of Railroad Pass, by the Nevada State Railroad Museum solely. The portion of the BCBRR within the Las Vegas Valley is maintained for industrial and commercial purposes, and plans exist for commuter use as well. The BCBRR in Railroad Pass is currently paved over and not in use. That portion of the BCBRR to the east of the Railroad Pass U.S. 93/95 right-of-way is kept in operation for educational and tourism purposes. Uses include historic railroad engine runs, handcar races during community festivals, and other similar activities (see Volume 2, Appendix A, Letter A-1).

Section 4(f) Use

All build alternatives would impact the BCBRR as a result of crossing it in the vicinity of Railroad Pass (Table 7-1; Figure 7-1), where roadway placement is constrained by topography. However, all build alternatives also incorporate a grade separation at the Railroad Pass crossing (Feature No. 3 in Tables 2-3 through 2-5, Section 2.7) to allow for the Nevada State Railroad Museum's planned re-establishment of railroad service. Additional impacts would result from either Alternatives B or C, and would be from track and embankment removal and railroad overpass construction. Additional impacts would result from either Alternatives B or C, and would be from track and embankment removal and railroad overpass construction, as described below.

Alternative B:

The Alternative B highway alignment would intersect the BCBRR in the vicinity of Railroad Pass, and then farther east (Figure 7-1). Due to the proximity of the existing U.S. 93 alignment to the BCBRR between Yucca Street and Buchanan Boulevard (Figure 7-1), impacts to this Section 4(f) resource from Alternative B construction would be the greatest of the build alternatives. Excavations associated with embankment, and track removal, and right-of-way encroachment would result in a total use of approximately 8.3 acres of railroad right-of-way ((Table 7-1).

Alternative C:

Alternative C would intersect the BCBRR at Railroad Pass and again at a crossing farther east (Figure 7-1), resulting in the total use of about 0.6 acre of this resource from excavation, embankment and track removal, and from overpass construction of a grade separation (Table 7-1). In the vicinity of Veterans Memorial Drive grade separation, the Alternative C alignment would be below that of the BCBRR.

Alternative D:

The Alternative D highway alignment would intersect the BCBRR in the vicinity of Railroad Pass resulting in the use of about 0.3 acre of the BCBRR (Table 7-1). Impacts in this area would be much the same as those resulting from the construction of Alternatives B or C. Because the Alternative D alignment diverges to the south as soon as topography permits, and no further encroachment on or crossing of this Section 4(f) resource would occur (Figure 7-1), there would be no impacts to this resource farther east.

Los Angeles Bureau of Power and Light (LABPL) Transmission Line 2 (26CK6237)

Three lattice-steel tower transmission lines run parallel to each other from the Los Angeles Switchyard at Hoover Dam to a point near the eastern end of the study area, then southwest over mountains on their route to southern California. LABPL, now the Los Angeles Department of Water and Power (LADWP), began construction of the first two of these transmission lines in June 1933, and they were completed as a pair in 1936. The LABPL transmission lines between Hoover Dam and the Basic Tap/Boulder City Tap Substation were determined by the SHPO to be eligible for the NRHP in 1994 under criterion A for their association with Hoover Dam. LABPL Line 1 (26CK6238; not subject to Section 4(f) use) and LABPL Line 2 (26CK6237) were formally nominated to the NRHP in 2000 under criteria A and C (Van Wormer and Dolan, 1999). The design of the steel towers is a major factor in the historical significance of these transmission lines.

Section 4(f) Use

As noted above, it is assumed that affected transmission towers are contributing elements to that historic resource, and that they will be removed and replaced with a new tower. Transmission corridor realignments are likely to result in different structural requirements that would preclude original tower relocation.

Alternative B:

Alternative B would not result in the use of this resource.

Alternative C:

Alternative C would not result in the use of this resource.

Alternative D:

Alternative D would require the removal and replacement of four towers of LABPL Line 2, resulting in the use of approximately 1.2 acres of Section 4(f) land (Figure 7-1; Table 7-1).

Structures Associated with The McKeeverville Camp

A number of houses in upper Hemenway Valley are associated with the Depression-era McKeeverville squatters' camp. The area became the Lakeview Subdivision after Boulder City was separated from federal ownership in 1960. McKeeverville is significant for its association with the construction of Hoover Dam and Boulder City. The community as a whole has lost integrity of setting, feeling, and association as a result of extensive post-1960 residential construction. However, the SHPO has indicated that a number of structures built during the late 1930s in this area are eligible for the NRHP, chiefly under criteria A and C.

McKeeversville structures, such as those at 12 Valley View Lane and 14 Valley View Lane, were initially evaluated as receiving Section 4(f) use under Alternative C in the DEIS but under further review they were determined to have no Section 4(f) use based on their location and their proximity to the alignment.

Metropolitan Water District Line 1 (26CK6240)

The Metropolitan Water District of Southern California (MWD) was one of the major contractors for Hoover Dam power, primarily for use in constructing and operating water delivery systems from the Colorado River to southern California. MWD constructed this 237-mile, 230-kV transmission line from December 1935 to July 1937. The MWD line employed familiar technology that had earlier been developed by SCE. Commercial delivery of electricity over the MWD line began on November 3, 1938 (Callister et al., 1983). From 1942 to 1944, the Basic Magnesium plant at Henderson, Nevada, absorbed some of MWD's excess capacity.

MWD Line 1 from Hoover Dam to the Mead Substation has been determined eligible for the NRHP under criterion A for its association with Hoover Dam.

Section 4(f) Use

Based on coordination with WAPA it is assumed that original tower relocations will not be feasible, and that the affected transmission towers will be replaced with new steel monopoles (see above).

Alternative B:

Alternative B would not result in any Section 4(f) use of this resource.

Alternative C:

Alternative C also would not result in any Section 4(f) use of this resource.

Alternative D:

Alternative D would require the removal and replacement of one transmission tower, and the use of approximately 0.3 acre of section 4(f) land (Figure 7-1; Table 7-1).

Old Nevada Highway 41/U.S. 93 Segment (26CK6245)

Nevada Highway 41 was a key element in the construction of Hoover Dam because it provided for the transportation of personnel and equipment from Boulder City to the dam construction site. This property is an approximately 2-mile-long segment of the historic roadway with intact drainage structures dating to its original construction in 1931-1932. The architectural features appurtenant to this roadway exhibit a construction style consistent with that employed by the enrollees to the Civilian Conservation Corps during the 1930s. This abandoned segment is the only portion of the roadway remaining that was part of the section known as the Black Canyon or Government Highway. It retains integrity of design and is therefore eligible for the NRHP under criteria A and C.

Section 4(f) Use

Alternative B:

Excavation for Alternative B would require removal through roadway excavation of the eastern portion of the road, and the use of approximately 0.2 acre of Section 4(f) land (Figure 7-1; Table 7-1).

Alternative C:

Alternative C would necessitate the use of the same portion of this Section 4(f) resource as Alternative B (Figure 7-1, Table 7-1).

Alternative D:

Alternative D would not affect this historic resource (Figure 7-1; Table 7-1).

SCE North and South Transmission Lines (26CK6249 and 26CK6250)

These two transmission lines were constructed with metal wedge A-frame and metal-waisted towers very similar to towers SCE had used in innovative high-voltage transmission in California. The two lines take different courses from the SCE switchyard at Hoover Dam to Hemenway Wash, but the lines then run parallel and near each other to the north of Boulder City and then to the southwest. SCE began constructing a 220-kV transmission line from Chino, California to Hoover Dam in 1936. The line was completed in May 1939 to the SCE switchyard on the south side of Black Canyon Highway. Hoover Dam generating units A-6 and A-7 were nearing completion at that time, and SCE began delivering power over the line on June 19, 1939. In response to anticipated growth in demand, SCE began construction of a second line before the first line was energized. The second 220-kV line was completed in November 1941, but not energized until near the end of 1942 (Reclamation, 1940:29, 71, 98; 1942:112-113; 1948a:106; Myers, 1983:190).

In addition to the direct association of these transmission lines with the early operation of Hoover Dam, the lines were extremely important for providing energy to war industries in California during World War II. The lines were also important in the post-war agricultural and municipal development in California. The significance of the SCE transmission lines is similar to that of the Hoover-Basic South, MWD, and LABPL transmission lines, which were determined to be eligible for the NRHP by the SHPO in 1994. The SCE transmission lines (26CK6249 and 26CK6250) were therefore recommended to be eligible for the NRHP under criterion A, for their association with events or broad patterns important in history, and the SHPO concurred with this recommendation.

Section 4(f) Use

For this as well as other historic transmission lines affected by one or more of the build alternatives, all affected transmission towers are assumed to be contributing elements to that historic resource. Their removal and replacement with a new tower is anticipated because transmission corridor realignments are likely to result in different structural requirements that would preclude tower relocation.

Alternative B:

Alternative B would require the removal and replacement of one transmission tower that is part of the SCE North Transmission Line (26CK6249), and one SCE South Transmission Line (26CK6250) tower, amounting to approximately 0.6 acre of Section 4(f) use (Table 7-1).

Alternative C:

Alternative C would require the removal and replacement of one transmission tower that is part of the SCE North Transmission Line (26CK6249), and two SCE South Transmission Line (26CK6250) towers, totaling approximately 0.9 acre of Section 4(f) use (Table 7-1).

Alternative D:

Alternative D would not require use of these Section 4(f) resources (Figure 7-1; Table 7-1).

Hoover-Basic South Transmission Line (26CK6251)

The Hoover-Basic South transmission line extends from the Arizona-Nevada Switchyard near Hoover Dam, to the Basic Substation at the Basic Magnesium plant in Henderson, Nevada. The conductors of this line are strung on metal wedge, A-frame-type steel towers. The Hoover-Basic South line is one of two transmission lines built to support the World War II defense industry. The two 230-kV transmission lines were constructed in 1941 to 1942 to carry power to the Basic Magnesium plant in Henderson, Nevada. The Hoover-Basic North line is outside the study area. The segment of the Hoover-Basic South line between Hoover Dam and the Basic Tap/Basic Substation was determined to be eligible for the NRHP by the SHPO in 1994 under criterion A for its association with Hoover Dam. The remainder of the line within the study area, excluding the 1960s/1970s tie circuits, has nearly identical physical nature, integrity, and historical associations as the portion determined to be eligible in 1994. Both intact segments of the line are therefore recommended to be eligible for the NRHP under criterion A, for their association with the Basic Magnesium plant and Hoover Dam.

Section 4(f) Use

As noted above, it was determined that tower replacement is the most conservative approach because transmission corridor realignments are likely to result in different structural requirements that would preclude the relocation of the original tower.

Alternative B:

Alternative B would require the relocation of two transmission towers, and the Section 4(f) use of approximately 0.6 acre (Figure 7-1; Table 7-1).

Alternative C:

Alternative C would require the relocation of three transmission towers, and the Section 4(f) use of approximately 0.9 acres (Figure 7-1; Table 7-1).

Alternative D:

Alternative D would require the relocation of two transmission towers, and the Section 4(f) use of approximately 0.6 acre (Figure 7-1; Table 7-1).

7.6 Avoidance Alternatives

It is not possible to avoid Section 4(f) resources with any of the three reasonable build alternatives, including the preferred alternative for two reasons:

- The eastern project limit is located several miles within the LMNRA. This includes those alternatives previously eliminated (see Chapter 2) as well as those studied in detail in this EIS.
- The historic resources affected by the project include long linear structures (historic transmission lines, roadways, a railroad) that cross all of the alternative alignments.

7.6.1 No Build Alternative

The No Build Alternative (Alternative A) would consist of leaving the existing roadway facilities along U.S. 93 through Boulder City as they presently are and would take no action to address any traffic congestion, traffic circulation, or safety problems found on the existing corridor. The existing three-lane roadway section between Buchanan Boulevard and Lakeshore Road on U.S. 93 would remain, but it is assumed the third westbound lane would be extended easterly to the study limit to tie in to the Hoover Dam Bypass (see Section 2.1).

The traffic forecasts show congestion will increase substantially without roadway improvements. Traffic volumes in the Boulder City/U.S. 93 corridor will continue to increase in the future, and most segments and intersections will reach LOS F within the next 10 years. Vehicles will have increasing difficulty making turns at the unsignalized intersections due to the high volume of conflicting through-traffic on U.S. 93. It is expected that there will be severe congestion at the Buchanan Boulevard/U.S. 93 intersection, and drivers will divert to parallel routes, further impacting the community.

The No Build Alternative would not meet the purpose and need for the project, which includes the goals of reducing corridor traffic congestion and crash rates while enhancing regional mobility, because:

- The numerous access points to adjacent businesses and neighborhoods will not be eliminated.
- The variation of U.S. 93 from a full-freeway section in the west segment to a two-lane section in the east segment will not be resolved.
- The three high-crash areas located at the intersections of the Railroad Pass Hotel and Casino, Buchanan Boulevard, and Lakeshore Road will not be resolved.
- Segments of U.S. 93 experiencing fatal crash rates equal to or greater than the statewide rates for similar facility type would not be fixed. The worst segment, from the west study limit to the U.S. 93/95 interchange, has a fatal crash rate approximately five times the state average.
- The hazardous materials incident rates at Railroad Pass, being nearly five times as high as the average for the entire state of Nevada, and at other critical corridor locations would not be corrected.

- U.S. 93 through Boulder City would continue to act as a bottleneck to regional and interstate commerce.

7.7 Alternatives and Measures to Minimize Harm

Section 4(f) requires that once it is established that there are no prudent and feasible alternatives that avoid the use of resources protected by this regulation, the harm-minimizing alternative among the remaining prudent and feasible alternatives, must be selected.

This evaluation shows that there is no build alternative that clearly minimizes harm to Section 4(f) resources. The acres of Section 4(f) use are intentionally not totaled in Table 7-1, but are specified by resource, because there is no accepted methodology for comparing the relative impacts on one resource (e.g., a historic structure) compared to another (e.g., a recreational area). For example, as summarized in Table 7-1, Alternative B impacts 8.3 acres of the Boulder City Branch Railroad, but only 46.4 acres from the LMNRA. Alternative D only uses 0.3 acre of the BCBRR, but 58.9 acres from the LMNRA. Alternative C impacts 0.6 acre of the BCBRR and 41.0 acres of the LMNRA. All three build alternatives have Section 4(f) impacts that are of the same relative magnitude; and, therefore because of this, there is no clear harm minimizing alternative that can be selected.

7.7.1 Measures to Minimize Harm

Measures to minimize harm resulting from the construction and operation of any of the build alternatives, including the preferred Alternative D, have been developed in consultation with the relevant resource management agencies, and will be incorporated as components of project design and construction.

Lake Mead National Recreation Area

During the initial alternatives screening (see Section 2.6) the LMNRA expressed concerns regarding impacts to lands within an “Outstanding Natural Feature Subzone” identified in LMNRA’s General Management Plan that would result from Alternatives SA102 and SA102A (Appendix A; letter dated June 2, 2000). In a response dated December 14, 2000, the FHWA indicated that these alternatives were dropped from further consideration. None of the alternatives carried forward for detailed analysis would use Section 4(f) lands within an Outstanding Natural Feature Subzone as designated by the LMNRA General Management Plan.

Alternatives B and C were developed to employ, to the maximum extent feasible, existing U.S. 93 right-of-way, therefore to minimize reducing the use of Section 4(f) acreage within the LMNRA. Alternative D impacts within the LMNRA would be largely within an area that receives a variety of uses, from the existing U.S. 93 corridor to disturbed areas where multiple transmission lines and access roads occur. In addition, the total area of the LMNRA subject to Section 4(f) use under any of the alternatives would be less than 0.004 percent of the total acreage of the LMNRA.

Construction and operation of Alternative D are expected to have negligible impact on the visitor use of, and access to the LMNRA. However, because construction of Alternatives B

or C would take place largely within the existing U.S.93 corridor, these alternatives would be expected to interfere with visitor access to the LMNRA during the construction phase. During the construction period for this project, certain recreation activity areas identified by NPS would be designated as construction safety zones, and recreation would be limited or restricted. Specifically during blasting operations, short periods would occur when recreation access to affected areas must be prohibited for protection of the public. Trail-use regulations within the LMNRA may need to be adjusted to accommodate construction activities and to assure the safety of trail users. Scheduling of these activities would be closely coordinated with NPS, and there would be ongoing public information provided.

Cuts, fills, and other land modification would be designed and constructed to minimize impact to scenic values, especially in undeveloped areas. Mitigation techniques would include rough cuts, feathering cut/natural environment interfaces, use of artificial desert varnish on rock cuts to match adjacent natural colors, colored concrete, and other state-of-the-art methods. Care would be taken to remove all construction debris and other trash from the work area as soon as construction is completed. Excavated topsoil would be stored during construction and replaced on appropriate disturbed areas outside the highway shoulders after construction to aid in re-establishing desert vegetation. Cactus, yucca, and candidate plant species would be removed and replanted or reseeded in consultation with NPS. NPS has provided NDOT and FHWA with specific measures to minimize harm in a list of *Restoration Considerations for Construction Activities* (see Appendix A). These and other measures appropriate for this project, including topsoil and plant salvage, revegetation with native selected.

Boulder Ridge Golf Course

Alternatives B and D would avoid impacts to this planned recreational facility. Alternative C would pass through the southern portion of the planned Boulder Ridge Golf Course, and, as a consequence, would use 47.8 acres (Table 7-1). Discussions with City staff indicate that the creation of a remnant parcel south of the roadway (Figure 7-1) would create an isolated tract that would no longer be useful for this recreational facility. The consequent reduction in golf course holes proportionate to a 47.8-acre reduction in size is calculated to be from 36 to 27 holes. There are no reasonable means of minimizing this harm.

River Mountains Loop Trail

Potential opportunities for trail enhancements through Hemenway Wash would be incorporated into the final design if either Alternative B or C were identified as the selected alternative. Existing trail infrastructure and ancillary facilities will be maintained if one of these alternatives is constructed. To mitigate the impacts of construction, trail detours would be designated during construction, and there would be ongoing public information provided. Relocation of the trail, with design features accommodating its multiuse intent, through and along the new highway facilities would also contribute to minimizing harm to this resource. The preferred alternative has no impact on the River Mountains Loop Trail, and no trail enhancements would be necessary.

Historic Resources

The measures that will be taken to minimize harm to historic resources subject to Section 4(f) use resulting from the build alternatives include the construction of an overpass

over the historic Boulder City Branch Railroad (in the case of Alternative C), recording structures that would receive use according to HAER standards, and consultations with management agencies, the SHPO, and other appropriate parties on measures to minimize harm.

The PA executed by the NPS, Reclamation, WAPA, the BLM, NDOT, FHWA, and the SHPO (Appendix E) stipulates the procedures that will be employed to mitigate the impacts of Alternative D, including the following:

- Consultation with relevant land management agencies and other appropriate parties
- Once engineering design is sufficiently developed, an assessment of effects to historic properties by qualified archaeologists and architectural historians
- Development of treatment plan(s) to mitigate potential impacts
- Implementation of the treatment plan(s)

Of the historic resources previously listed to which Section 4(f) applies and that would be used by at least one of the build alternatives, the following resources would *not* be used by Alternative D (see Table 7-1):

- SCE North Transmission Line (26CK6249)
- SCE South Transmission Line (26CK6250)
- Old Nevada Highway 41/U.S. 93 Segment (26CK6245)

Historic Transmission Lines

Impacts to the historic transmission lines that would result from the construction of the build alternatives have been discussed in Section 7.5, above, and summarized in Table 7-1. As noted there and in Figure 7-1, Section 4(f) use of these resources would result chiefly from the replacement of individual transmission towers that would conflict with roadway construction and operation. To minimize harm to the transmission lines, as well as other historic resources, the initial alignment of the alternatives included considerations of how the corridors might be oriented to minimize impacts at the of crossing linear features, or by avoiding them altogether. Documentation of historic electrical transmission line towers to HAER standards would be implemented to mitigate impacts to these Section 4(f) resources.

Old Nevada Highway 41/U.S. 93 Segment

Construction of either Alternatives B or C would require use of the same approximately 0.2 acres of this resource, through removal of the historic features and excavation for the new roadway. As noted above, documentation of contributing architectural features according to HAER standards would also be undertaken to mitigate impacts.

Boulder City Branch Railroad

Documentation according to HAER Standards will be undertaken to mitigate impacts to the BCBRR. Implementation of a new grade separation in the Railroad Pass area is a measure that will minimize harm incorporated in all build alternatives.

Alternative B

This alternative has the greatest impact to the BCBRR. The new grade separation in the vicinity of Railroad Pass would be a measure to minimize harm in that area. Further to the

east, Alternative B encroaches into the existing railroad right-of-way between Yucca Street and Buchanan Boulevard, and there is no practicable means to minimize this harm.

Alternative C

Measures that would be taken to minimize harm to the BCBRR from Alternative C construction in the vicinity of Railroad Pass are the same as those for Alternatives B and D. Further east, construction of a grade separation in the vicinity of Veterans' Memorial Drive would allow for continued use of this section of the railroad (Figure 7-1).

Alternative D

Construction of Alternative D would result in the least impacts to the BCBRR of the build alternatives. In the Railroad Pass area, measures to allow for the future use of this railroad would be the same as for Alternatives B and C.

7.8 Coordination

Several public agencies, all represented on the project's PMT, have jurisdiction over Section 4(f) lands crossed by the Boulder City/U.S. 93 Corridor build alternatives. NPS administers the LMNRA lands. The City of Boulder City owns the planned Boulder Ridge Golf Course property and the portion of the River Mountains Loop Trail through Hemenway Wash (includes easements for trail use). The Nevada State Railroad Museum owns the right-of-way planned for the Railroad Pass to Yucca Street portion of the loop trail in Boulder City. Reclamation has jurisdiction over properties within the Boulder City Historic District. WAPA owns the historic Hoover-Basic South Transmission Line, and the City of Los Angeles Department of Water and Power owns LABPL Transmission Line 3.

As noted above, during the initial alternative development the NPS requested that Corridors SA102 and SA102A be eliminated from further consideration because they pass through LMNRA lands designated as "Natural Zones" and "Outstanding Natural Feature Subzones." FHWA and the PMT agreed to remove them from consideration because there are other reasonable and prudent alternatives with more moderate Section 4(f) impacts (see NPS letter dated June 2, 2000, and FHWA December 14, 2000, response, Appendix A).

As described elsewhere in this FEIS (see Chapter 2), after consideration of the impacts and benefits that would result from the construction and operation of the build alternatives, including impacts to the environment of the City of Boulder City, Alternative D was recommended by the PMT as the preferred alternative.

Subsequent to the release of the DEIS for this project, the LMNRA prepared an Impairment Determination (Appendix D) evaluating effects of the action alternatives, pursuant to NPS Management Policies (2001) requiring the analysis of potential effects of the alternatives to determine whether they would impair park resources. This Impairment Determination found that Alternative D (the preferred alternative) will not impair Park resources and will not violate the NPS Organic Act.

There has also been ongoing coordination with Reclamation, WAPA, Boulder City, and the Nevada State Railroad Museum concerning potential avoidance alternatives, impacts to the Section 4(f) properties under their jurisdiction, and measures to minimize harm. This coordination has included discussion of the significance and primary use of each property.

NPS, Reclamation, WAPA, and Boulder City are members of the PMT, which was established to oversee project planning, environmental studies, and engineering. The PMT is an interagency project team composed of NDOT, FHWA, NPS, Reclamation, BLM, WAPA, Boulder City, the City of Henderson, Clark County, and the RTC. Representatives from these agencies attend monthly meetings, which began in January 2000 and extended through to the selection of the preferred alternative. This team has participated in reviews of the project area, development and screening of alternatives, environmental studies, and the EIS throughout the planning process. NPS, Reclamation, WAPA, Boulder City, the City of Henderson, and the RTC are also serving as cooperating agencies on the Boulder City/ U.S. 93 Corridor Study EIS.

7.9 Determination

Based on the information presented in this chapter, and on consultation with the PMT and other agencies, the FHWA has determined the following.

The No Action Alternative fails to meet the purpose and need, and would result in substantial negative environmental impacts to the City of Boulder City.

There is no feasible and prudent build alternative that minimizes Section 4(f) use. Each of the build alternatives involves the use of Section 4(f) resources and, while measures have been taken to minimize the harm that would result from their construction, none clearly involves less use of Section 4(f) resources than the others.

The proposed action, construction of the preferred Alternative D, includes all possible planning to minimize harm to the LMNRA and other Section 4(f) resources, and uses no other public parks and recreation lands. The selection of Alternative D as the preferred alternative is supported by the social and environmental considerations described elsewhere in this FEIS. In particular, it has been determined that the construction of Alternative B or C would result in significant, adverse social and environmental impacts on Boulder City that would be avoided with Alternative D.