

Chapter S: Summary

The figure for this chapter is in Volume III of this EIS.

S.1 Description of Proposed Action

U.S. Highway 6 (US 6) is part of the national highway system and is a major east-west highway that serves an important statewide transportation function through Utah by linking two major interstates, Interstate 15 (I-15) and Interstate 70 (I-70). US 6 is also an important link between the rural communities of central and southeastern Utah and the populous Wasatch Front (see Figure S-1, Project Location).

Parts of US 6 were constructed over 60 years ago and, therefore, the highway does not meet current safety design requirements. The increased travel demand on US 6 from population growth along the Wasatch Front has resulted in a decreased level of service (LOS) that does not meet American Association of State Highway and Transportation Officials (AASHTO) guidance for a highway of this type. The highway design along with the increased travel demand have resulted in higher-than-expected accident rates for a roadway of this type along portions of the highway and an average of 13 fatalities a year.

The purpose of the Proposed Action on US 6 is to:

- Upgrade existing design elements to current design standards to improve safety as much as possible.
- Reduce fatal crossover accidents.
- Reduce traffic congestion by improving the level of service to at least LOS C from I-15 to Helper and LOS B from Helper to I-70. (See Section 1.3.2.1, Levels of Service, for an explanation of level of service.)
- Allow US 6 to efficiently function as part of the National Highway System by improving the highway so that it continues to adequately serve as the main highway for providing recreational, economic, and interurban and intraurban service for central and southeastern Utah.
- Improve the safety of and truck access to the Peerless port of entry.

Finally, the Proposed Action includes relocating the Peerless port of entry at milepost (MP) 231 because the current location requires westbound trucks to cross the highway to enter and exit the facility and also because the port of entry is located at the bottom of a long, steep downgrade. In addition, the current port of entry cannot handle a large amount of two-way truck traffic, which causes trucks to back up onto US 6.

S.2 Other Major Actions

The only other major governmental action along US 6 from I-15 to I-70 is the Central Utah Water Conservancy District water delivery project that includes a 72-inch to 108-inch water pipeline adjacent to US 6 from Diamond Fork Canyon Road to U.S. Highway 89 (US 89) at Moark Junction. The pipeline would be placed underground and would be contained within the US 6 right-of-way in any roadway construction areas identified for the US 6 project build alternatives. Therefore, the environmental impacts from constructing the water pipeline along US 6 are analyzed in this Environmental Impact Statement (EIS) as part of the roadway improvement impacts, since both sets of impacts would occur in the same area.

S.3 Alternatives Considered

The range of alternatives considered in this EIS was developed through the National Environmental Policy Act (NEPA) public and agency involvement process. During this process, both build and no-build alternatives were evaluated to determine whether they met the project's purpose and need. If the evaluation process showed that an alternative did not meet the project's purpose and need, the alternative was not carried forward for detailed analysis. Alternatives that were studied in detail are described in Section S.3.1, Alternatives Studied in Detail, and Section 2.2, Alternatives Considered for Detailed Study. Alternatives that were considered and rejected are described in Section 2.1.1, Summary of Alternatives Considered.

The following build and no-build alternatives were developed and evaluated against the project's purpose and need:

- No-build alternatives
 - No-Action/Transportation System Management (TSM) Strategies (carried forward for a baseline comparison)
 - Reduce truck traffic
 - Reduce speed limit
 - Mass transit
 - Combination of no-build alternatives
- Build alternatives
 - Passing lanes
 - Four lanes (Preferred Alternative)
 - Improvements to the Peerless port of entry (as part of the Passing Lane or Four Lane Alternatives)

As shown in Table S.3-1, there is no combination of the no-build alternatives that would meet the project's purpose and need. Although the No-Action/TSM Alternative does not meet the project's purpose and need, it was carried forward for detailed analysis and for comparison purposes as required by NEPA.

Table S.3-1. Evaluation of Alternatives Considered

Purpose and Need Element	Alternative						
	No-Action/ TSM	Reduce Truck Traffic	Reduce Speed Limit	Mass Transit	Combination of No-Build Alternatives	Passing Lane	Four Lane
Upgrade existing design elements to current design standards to improve safety as much as possible.	No	No	No	No	No	Yes	Yes
Reduce fatal crossover accidents.	No	No	No	No	No	Yes	Yes
Reduce traffic congestion by improving the level of service to at least LOS C from I-15 to Helper and LOS B from Helper to I-70.	No	No	No	No	No	Yes	Yes
Improve US 6 so that the highway continues to adequately serve as the main highway for providing recreational, economic, and interurban and intraurban service for central and southeastern Utah.	No	No	No	No	No	Yes	Yes
Improve the safety of and truck access to the Peerless port of entry.	No	No	No	No	No	Yes	Yes

S.3.1 Alternatives Studied in Detail

The EIS evaluates three alternatives in detail: the No-Action, Passing Lane, and Four Lane Alternatives.

S.3.1.1 No-Action Alternative

NEPA requires an analysis of the No-Action Alternative. This alternative serves as a baseline for comparison, enabling decision-makers to compare the environmental effects of the build alternatives.

Many substandard roadway design elements of US 6 were identified in the previously completed *US 6 Safety Improvement Study* (HDR 2002), including horizontal curves, geometric curves, shoulder widths, and inadequate clear zones. Improving these substandard design elements would not add capacity and, therefore, would not improve level of service in the corridor. However, they would help increase safety and thereby reduce some accidents, which is one of the major purposes of this project. Several safety improvements were identified in the US 6 safety study, including the following:

- Implementing Intelligent Transportation Systems (ITS)
- Better signing and striping of passing lanes
- Intersection improvements
- Better signing of horizontal curves
- Adding roadway barriers (either median or roadside)

It is likely that some improvements would be made to US 6 in the next 30 years under the No-Action Alternative. At a minimum, the TSM improvements listed above would probably be incorporated into the No-Action Alternative.

S.3.1.2 Passing Lane Alternative

The Passing Lane Alternative would add passing lanes at selected locations along the corridor. In addition, existing substandard design elements would be upgraded to current design standards to improve safety, and median barriers or other median treatments would be added where appropriate.

The Passing Lane Alternative would provide four-lane sections in areas where passing is required on both sides of the highway to improve the level of service. In Helper, Price, and Wellington, there would be a center turn lane without a median barrier to allow left turns in developed areas that require residential and business access. Other segments of the highway would be three lanes or two lanes. Using 2030 traffic projections, this alternative would improve the level of service to LOS C or better in all segments between I-15 and Helper, and LOS B

or better in the segments between Helper and I-70. The Passing Lane Alternative would include improvements to the Peerless port of entry as discussed below.

S.3.1.3 Four Lane Alternative (Preferred Alternative)

Under this alternative, there would be two travel lanes in each direction for a total of four travel lanes through the entire length of the corridor, except for certain areas near wetlands where the passing lane configuration would be implemented to minimize or avoid wetland impacts. In these areas, the alignment would consist of three or two lanes. Median barriers or other median treatments would be included as part of this alternative. In addition, this alternative includes upgrading existing substandard design elements to current design standards. Using 2030 traffic projections, this alternative would improve the level of service to LOS C or better in all segments between I-15 and Helper, and LOS B or better in the segments between Helper and I-70. The Four Lane Alternative would include improvements to the Peerless port of entry as discussed below.

Peerless Port of Entry

The Peerless port of entry would be relocated to improve safety as part of either of the build alternatives. By relocating the current port facility, US 6 could be reconstructed to meet current geometric and safety standards. The relocation would include implementing a transponder system (see Section 2.3, Port of Entry) at the new location to reduce the size of the new facility and allow trucks equipped with a transponder to bypass the facility. Proposed port of entry alternatives include a facility at MP 234.5 just south of Helper that would accommodate both eastbound and westbound trucks, or two separate facilities at MP 234.8 and MP 239.5 that would accommodate eastbound and westbound trucks, respectively. The impacts of the relocated port of entry have been included with both the Passing Lane and Four Lane Alternatives.

S.3.1.4 Level of Service Comparison of Passing Lane and Four Lane Alternatives

Both the Passing Lane and Four Lane Alternatives meet the purpose and need criteria established for the 2030 planning period for this EIS. However, there is one important difference between the Four Lane and Passing Lane Alternatives. The level of service for the Passing Lane Alternative would approach unacceptable levels at 2030, while the Four Lane Alternative would continue to provide an acceptable level of service beyond 2030. Although all segments of the Passing Lane Alternative would have acceptable levels of service (LOS C or better from I-15 to Helper, LOS B or better from Helper to I-70), several segments would be close to unacceptable level of service thresholds and could require improvements

shortly after the 2030 planning period. In contrast, the Four Lane Alternative would continue to provide an adequate level of service beyond the 2030 planning period.

S.4 Summary of Environmental Impacts

Table S.5-1, Comparison of Environmental Impacts, on page S-10 presents the major environmental impacts from each alternative evaluated. Provided below are the major advantages and disadvantages of each alternative. For detailed information about the environmental impacts of the alternatives, see Chapter 4, Environmental Consequences.

S.4.1 No-Action Alternative

S.4.1.1 Primary Advantages of the No-Action Alternative

The primary advantage of the No-Action Alternative compared to the build alternatives is that there would be few environmental impacts because no major improvements would be made to US 6 to meet safety, design, and level of service objectives.

S.4.1.2 Primary Disadvantages of the No-Action Alternative

The primary disadvantage of the No-Action Alternative is that it would not fully satisfy the project's purpose and need, which is to improve design elements to current design standards to improve safety and reduce fatalities as much as possible. The No-Action Alternative also would not reduce overall congestion, improve level of service, or maintain the highway as an important part of Utah's transportation network. The No-Action Alternative would also have the following other disadvantages:

- No improvements would be made to the design elements of US 6.
- No improvements would be made to wildlife crossings on US 6, which would continue to experience a high number of wildlife-related vehicle accidents.
- No improvements to fisheries or surface water quality would occur as a result of US 6 improvements.
- No improvements would be made to recreational access along US 6. This recreational access has resulted in safety issues.
- Increased congestion by 2030 on US 6 could reduce economic development of businesses in Helper, Price, and Wellington.
- The No-Action Alternative would have the greatest travel time (166 minutes) and user cost (value of motorists' time) in 2030 from I-15 to I-70.

S.4.2 Passing Lane Alternative

S.4.2.1 Primary Advantages of the Passing Lane Alternative

- Less permanent vegetation impacted (660 acres) than under the Four Lane Alternative.
- Less permanent wildlife habitat impacted (615 acres) than under the Four Lane Alternative.
- The increase in impervious surface and roadway runoff (68% compared to current conditions) would be less than under the Four Lane Alternative and would cause fewer water quality impacts.
- Improvement in emergency response times and safety over the No-Action Alternative.
- Lowest cost (\$595,758,000).

S.4.2.2 Primary Disadvantages of the Passing Lane Alternative

- Greater travel time (149 minutes) and less daily reduction in user cost (value of motorists' time) (\$98,340) in 2030 from I-15 to I-70 than the Four Lane Alternative.
- Although this alternative meets 2030 level of service objectives, a few segments would approach unacceptable level of service thresholds by the end of the 2030 planning period.

S.4.3 Four Lane Alternative (Preferred Alternative)

S.4.3.1 Primary Advantages of the Four Lane Alternative

- Shortest travel time (135 minutes), highest mobility, and greatest daily reduction in user cost (value of motorists' time) (\$168,029) in 2030 from I-15 to I-70.
- Improvement in emergency response times and safer responses as a result of the extra travel lane for the entire corridor. Greatest improvement in emergency response compared to other alternatives.
- Provides the greatest benefit to the overall function of US 6 by reducing congestion and improving recreational access, mining access, mobility, and commerce more than the Passing Lane Alternative.
- Greatest community support based on input at public meetings.
- This alternative would continue to meet level of service objectives beyond the 2030 planning period.

S.4.3.2 Primary Disadvantages of the Four Lane Alternative

- The most permanent vegetation impacts of all alternatives (767 acres).
- The most permanent wildlife habitat impacts of all alternatives (713 acres).
- The largest increase in impervious surface and roadway runoff (85% compared to current conditions), resulting in greater water quality impacts than the Passing Lane Alternative but an improvement in water quality over the No-Action Alternative due to improved stream crossings and erosion protection.
- Highest cost (\$678,400,000).

S.5 Basis for Selecting the Preferred Alternative

The Four Lane Alternative was selected as the Preferred Alternative based on public input during the scoping process and during the Draft EIS and Supplemental Draft EIS comment periods, the alternative's ability to meet the objectives of the project's purpose and need, and FHWA's desire to ensure that the highway investment can meet future travel demand requirements beyond the 2030 planning period. During the EIS process, about 95 comments were in favor of the Four Lane Alternative and 7 comments were in favor of a Passing Lane Alternative.

Both the Passing Lane and Four Lane Alternatives meet the purpose and need objectives described in Chapter 1, Purpose of and Need for Action. However, as noted in Section 2.6.3.1, Primary Advantages of the Four Lane Alternative, this alternative provides the greatest benefit to the overall function of US 6 because it would reduce congestion and improve recreation access, mining access, mobility, and commerce more than the Passing Lane Alternative would. In addition, emergency response providers have stated that the additional lanes provided by the Four Lane Alternative would decrease response times and make response runs safer (Esplin 2004).

It is expected that, with the continued population growth along the Wasatch Front, travel to the national parks and other recreation areas in southeastern Utah via US 6 will continue to increase beyond the 2030 planning period. As discussed in Section 2.1.1.9, Level of Service Comparison of Passing Lane and Four Lane Alternatives, both alternatives meet the 2030 level of service objectives. However, in 2030, some segments of the Passing Lane Alternative begin to approach unacceptable levels of service and would likely fail shortly after 2030. Therefore, if a highway investment is made, FHWA would prefer to provide one

long-term solution so that additional highway improvements are not needed in the future.

A comparison of the environmental impacts of the build alternatives shows that the impacts of the Four Lane Alternative would be similar to those of the Passing Lane Alternative.

Based on the information above, the Four Lane Alternative was selected as the Preferred Alternative for the following reasons:

- The Four Lane Alternative has greater public and community support than the Passing Lane Alternative.
- The Four Lane Alternative would provide a better long-term level of service solution given the initial cost investment.
- The Four Lane Alternative provides the greatest benefit to the overall function of US 6 because it reduces congestion and improves recreation access, mining access, mobility, and commerce more than the Passing Lane Alternative.
- Although the impacts to vegetation and wildlife habitat adjacent to the US 6 corridor would be slightly greater under the Four Lane Alternative, overall, when all resources are considered, the impacts of the Four Lane Alternative are similar to those of the Passing Lane Alternative. The Four Lane Alternative would impact 1% more vegetation and 1% more wildlife habitat and associated vegetation cover types than the Passing Lane Alternative. Both alternatives would impact an equal amount of big game seasonal use range (0.2%).

In addition, the port of entry associated with the proposed Spring Glen interchange in south Helper was selected as the Preferred Alternative based on the alternative's ability to meet the objectives of the project's purpose and need and because it avoids use of a Section 4(f) resource.

Table S.5-1 below presents the major environmental impacts from each alternative evaluated.

Table S.5-1. Comparison of Environmental Impacts

Resource Category	No-Action Alternative	Passing Lane Alternative	Four Lane Alternative (Preferred Alternative)
Land Use	Minor changes to the undeveloped nature of the land use along the corridor except in Spanish Fork, Helper, Price, and Wellington. The No-Action Alternative would be consistent with federal, state, county, and local land use plans. No impacts from continued US 6 maintenance activities.	Minor changes to the undeveloped nature of the land along the corridor except in Spanish Fork, Helper, Price, and Wellington. Few indirect impacts to land use expected within the cities as a result of US 6 improvements. Potential for residential zoning in Wellington to change to commercial. Overall, the Passing Lane Alternative would be consistent with federal, state, county, and local land use plans.	Same as Passing Lane Alternative.
Farmland and Grazing Allotments	No impacts to farmland or grazing allotments as a result of continued US 6 maintenance activities.	Direct impacts to 50 acres of prime farmland and less than 2 acres of state important farmland. Indirect impacts to 15 acres of prime farmland. Impacts to grazing allotments would eliminate 12 units of animal forage on BLM-administered public lands.	Same as Passing Lane Alternative.
Social Environment and Environmental Justice	Wheelchair users in Price currently experience difficulty crossing under US 6 to access Castleview Hospital due to the lack of sidewalks, crosswalks, or handicapped-accessible areas. This issue affects users of motorized wheelchairs within a low-income population in Price. Under the No-Action Alternative, these conditions would remain. Increased congestion would decrease the main function of US 6 as a community and recreation route. Without roadway safety improvements, the quality of life could decrease in Helper, Price, and Wellington. Increased congestion could reduce emergency service response times on US 6.	Improvements to US 6 would eliminate the No-Action environmental justice impact. Community cohesion impacts in Wellington as a result of widening US 6. Reduced congestion would improve the main function of US 6 as a community and recreation route. Two public facilities impacted in Wellington. Reduced congestion could improve emergency response times compared to the No-Action Alternative.	Same as Passing Lane Alternative except that Utah Highway Patrol officials stated that this alternative would improve emergency response times and would make the response runs safer compared to the Passing Lane Alternative.

Resource Category	No-Action Alternative	Passing Lane Alternative	Four Lane Alternative (Preferred Alternative)
Relocations	No relocations.	15 residential, 6 commercial, and 7 farmland parcel relocations. Farmland parcel relocations would be determined on a case-by-case basis.	Same as Passing Lane Alternative.
Economics	Increased congestion could translate into lower productivity because of lost time and could reduce the ability of communities along US 6 to attract new businesses. Travel time on US 6 between I-15 and I-70 would increase to 166 minutes, which would translate into a higher user cost (value of motorists' time).	Construction delays to highway users would cause short-term economic impacts. Long-term benefits to highway users by reducing congestion and travel time. An improved US 6 could strengthen the overall regional economy in southeastern Utah. Travel time from I-15 to I-70 would be about 149 minutes resulting in a daily savings in user cost (value of motorists' time) of \$98,340 compared to the No-Action Alternative. Minor impact to the economy of Wellington as a result of seven residential relocations.	Same as Passing Lane Alternative, except that construction delays to highway users would cause slightly greater short-term economic impacts. Travel time from I-15 to I-70 would be about 135 minutes resulting in a daily savings in user cost (value of motorists' time) of \$168,029 compared to the No-Action Alternative. Minor impact to the economy of Wellington as a result of seven residential relocations.
Joint Development	No joint development opportunities.	Improvements to US 6 would be coordinated with the proposed Central Utah Water Conservancy District water pipeline that would be located within the US 6 right-of-way.	Same as Passing Lane Alternative.
Considerations Related to Pedestrians and Bicyclists	No direct or indirect impacts to existing trails from continued US 6 maintenance activities.	No permanent impacts. Temporary construction restriction to the Price River Trail at the east Price interchange to ensure user safety.	Same as Passing Lane Alternative.
Air Quality	No change expected in current air quality attainment status. Modeled carbon monoxide concentrations from vehicles on US 6 are below applicable standards.	No change expected in current air quality attainment status. Modeled carbon monoxide concentrations from vehicles on US 6 are below applicable standards and are similar to No-Action Alternative conditions.	Same as Passing Lane Alternative.
Noise	Increased traffic volumes in 2030 would result in an impact to 63 sensitive receptors along US 6.	Increased traffic volumes in 2030 and roadway improvements would cause 96 sensitive receptors along US 6 to experience noise levels above UDOT's noise criterion.	Same as Passing Lane Alternative.

Resource Category	No-Action Alternative	Passing Lane Alternative	Four Lane Alternative (Preferred Alternative)
Water Resources	Continued high levels of erosion from existing substandard culvert and waterway designs under US 6. Existing culverts and drainage under US 6 would continue to provide poor fish passage.	68% increase in impervious surface and road runoff compared to the No-Action Alternative. Reduction in sediments and improved fish passage from improved stream crossings and erosion protection. Reduced sediments should improve the overall surface water quality adjacent to US 6. No impacts to groundwater. Relocation of a Spanish Fork drinking water source (Cold Springs).	85% increase in impervious surface and road runoff compared to the No-Action Alternative. Other impacts same as Passing Lane Alternative.
Wetlands/Waters of the U.S.	No impacts to wetlands.	Up to 7.77 acres of permanent wetland impacts and 3.84 acres of temporary impacts.	Same as Passing Lane Alternative.
Water Body Modification and Wildlife	No loss of wildlife habitat. High erosion levels in streams will continue to impact fisheries adjacent to US 6. Increase in travel volumes on US 6 will result in more wildlife-vehicle accidents involving big game (mule deer and elk).	Direct impact to 615 acres of wildlife habitat. No direct impact to streams and fisheries. Construction near streams could cause short-term sediment impacts. 62 acres of critical big game (mule deer and elk) habitat impacted. Increase in travel volumes on US 6 and additional lanes under this alternative would cause more wildlife-vehicle accidents involving big game. However, implementing big game and other wildlife crossings should reduce some of these impacts. No substantive effect on overall big game populations.	Direct impact to 713 acres of wildlife habitat. No direct impact to streams and fisheries. Construction near streams could cause short-term sediment impacts. 73 acres of critical big game (mule deer and elk) habitat impacted. Other impacts same as Passing Lane Alternative.
Floodplains	No change to the floodplains along US 6. Potential for flooding on US 6 at Clear Creek and the Price River bridge at Woodside.	No increase in flooding risk. Reduced flooding risk at Clear Creek and the Price River bridge at Woodside. Overall, there would be no significant encroachment on the floodplain from the Passing Lane Alternative.	Same as Passing Lane Alternative.

Resource Category	No-Action Alternative	Passing Lane Alternative	Four Lane Alternative (Preferred Alternative)
Threatened and Endangered Species	High suspended solid levels from erosion will continue to impact threatened and endangered fish species.	May affect but not likely to adversely affect federally listed Ute ladies'-tresses, clay phacelia, bonytail, Colorado pikeminnow, humpback chub, and razorback sucker. Potential disturbance to state-listed ferruginous hawk and peregrine falcon from construction activities. Measures to reduce sediment into streams may have a beneficial impact on fish species.	Same as Passing Lane Alternative.
Historic Architectural Properties, Archaeological Sites, Paleontological Resources, and Traditional Cultural Properties	No impacts from continued US 6 maintenance activities on archaeological or historic sites eligible for the National Register of Historic Places (NRHP). No impacts to paleontological sites.	Adverse effect to 9 NRHP-eligible archaeological sites and 3 eligible architectural properties. No adverse effect to 6 eligible archaeological sites and 8 eligible architectural properties. Impact to 1 important paleontological site.	Same as Passing Lane Alternative.
Hazardous Waste Sites	No impacts to existing hazardous waste sites from continued US 6 maintenance activities.	Potential to impact 11 hazardous waste sites.	Same as Passing Lane Alternative.
Visual Resources	No impacts from continued US 6 maintenance activities.	Temporary construction impacts. Changes to the visual environment would be consistent with the applicable Forest Service and BLM resource management plans. Strong visual impacts would occur in the Red Narrows area.	Same as Passing Lane Alternative.
Wild and Scenic Rivers	No impacts from continued US 6 maintenance activities.	No adverse impacts to the outstanding remarkable values of the proposed wild and scenic rivers adjacent to US 6.	Same as Passing Lane Alternative.
Section 4(f) Properties	No impacts to Section 4(f) properties.	There would be a Section 4(f) use to 11 architectural properties and 12 archaeological sites.	Same as Passing Lane Alternative.

S.6 Areas of Controversy

No areas of controversy for implementing the US 6 improvements have been identified.

S.7 Major Unresolved Issues

There are no major unresolved issues with government agencies.

S.8 Required Federal Actions

The following federal actions would be required for the proposed US 6 project:

- Clean Water Act Review, Section 404 (U.S. Army Corps of Engineers)
- Endangered Species Act Review, Section 7 (U.S. Fish and Wildlife Service)
- Approval of right-of-way access across public lands (Forest Service and Bureau of Land Management)
- Section 106 Agreement/Concurrence (Federal Highway Administration consultation with Utah State Historic Preservation Office)
- Section 309 Review (U.S. Environmental Protection Agency)