

CHAPTER 6 – COMPARISON OF ALTERNATIVES AND IDENTIFICATION OF PREFERRED ALTERNATIVES

This chapter provides a summary and comparison of the impacts and costs for each alternative. Based on this comparison, it also identifies the Preferred Alternatives. The Preferred Alternatives represent the alternatives that would generally result in overall fewer socioeconomic and natural resource impacts while minimizing costs and maximizing potential toll revenue.

6.1 SUMMARY OF IMPACTS

Table 6.1-1 summarizes and compares the impacts and costs for each alternative. The purpose of this analysis was to identify the most notable differences between the alternatives and to determine which would have the greatest and least impacts and costs. All the alternatives except the No Build Alternative would meet the project's purpose and need.

6.1.1 NO BUILD ALTERNATIVE

The No Build Alternative would not result in any impacts to natural, socioeconomic, or cultural resources. It would retain both of the historic US 41 bridges, but the 35-year roadway and bridge operation and maintenance costs of \$270 million would be higher than those of all the build alternatives (**Appendix O-1**). These future maintenance efforts would be carried out as separate projects and any potential impacts would be determined and addressed at that time. This alternative would not improve traffic congestion, safety, or provide cross-river system linkage for the National I-69 Corridor. As a result, it would not meet the project's purpose and need.

6.1.2 WEST ALTERNATIVE 1

Because West Alternative 1 would traverse residential neighborhoods west of and parallel to the US 41 commercial strip in Henderson, it would result in the highest number of residential relocations (242), compared to the number of relocations under West Alternative 2 (96) and Central Alternatives 1A and 1B (Preferred) (four). With the addition of the commercial and places of worship relocations (27), it would also result in the highest number of total relocations (269). As with each of the build alternatives, West Alternative 1 would include tolls on the new I-69 crossing. When comparing alternatives without US 41 tolls, West Alternative 1 would impact more noise receptors (180) than Central Alternative 1B (149). It would also impact more noise receptors than West Alternative 2 (140). Because the alternative would avoid most of the US 41 commercial strip, it would result in less than half of the commercial relocations compared to West Alternative 2 (62).

Table 6.1-1. Summary of Impacts

IMPACT CATEGORY	WEST ALTERNATIVE 1		WEST ALTERNATIVE 2	CENTRAL ALTERNATIVES 1A AND 1B (PREFERRED)		NO BUILD ALTERNATIVE
	With US 41 Bridge Tolls	Without US 41 Bridge Tolls	All Cross-River Traffic is Tolled	1A – With US 41 Bridge Tolls	1B – Without US 41 Bridge Tolls	No Cross-River Traffic is Tolled
SOCIOECONOMIC						
Relocations						
Residential (units)	242		96	4		0
Commercial (units)	25		62	0		0
Farm Building	1		1	0		0
Places of Worship	1		1	0		0
Total Relocations	269		160	4		0
New Right-of-way (acres)	333		298	420		0
Will Tolling or Traffic Impacts Likely Cause Environmental Justice Disproportionate and Adverse Effects? ¹	With US 41 Bridge Tolls	Without US 41 Bridge Tolls	All Cross-River Traffic is Tolled	1A – With US 41 Bridge Tolls	1B – Without US 41 Bridge Tolls	No Cross-River Traffic is Tolled
	Yes	No	Yes	Yes	No	No
Noise (number of receptors)	167	180	140	257	149	NA
Managed Lands (number/acres)	2/54.8		3/57.1	1/1.3		0
Aboveground Historic Resources	2		2	4		0
Section 4(f) Use						
Public Parks, Recreation Areas, and Wildlife/ Waterfowl Refuges	1		1	0		0
Historic Property	1		2	1		0
Recognized Environmental Condition (REC) Sites	13		21	4		0
Prime and Unique Farmland and Farmland of Statewide Importance (acres)	84.9		46.2	382.7		0
Active Farmland (acres)	182.6		168.9	347.9		0
NATURAL RESOURCES						
Wetlands (number/acres)	18/55.4		17/35.1	7/17.6		0
Streams (number/linear feet)						
Perennial	5/1,799		5/1,556	3/1,608		0
Intermittent	3/790		2/511	1/683		0
Ephemeral	39/20,886		37/19,085	49/16,036		0
Total	47/23,475		44/21,152	53/18,327		0
Open Water (number/acres)	6/9.6		3/2.8	1/12.7		0
Wellhead Protection Areas	2		2	0		0
Floodplain (acres)	105		89	190		0

IMPACT CATEGORY	WEST ALTERNATIVE 1	WEST ALTERNATIVE 2	CENTRAL ALTERNATIVES 1A AND 1B (PREFERRED)	NO BUILD ALTERNATIVE
Floodway (acres)	149	120	88	0
Forested Habitat	96.8	71.2	45.8	0
DESIGN/COSTS				
Length (miles)				
New Interstate	8.2	8.1	8.4	0
Existing US 41	2.9	2.9	2.8	0
Total	11.1	11.0	11.2	0
Cost (in millions, year of expenditure)				
Design, Approvals, Right of Way, Mitigation, Procurement, Construction Inspection ¹	\$312	\$352	\$200	\$17
Construction	\$1,245	\$1,221	\$1,062	\$0
Roadway/Bridge Operations and Maintenance (35 years)	\$252	\$107	\$234	\$293
Total	\$1,810	\$1,680	\$1,497	\$310
Potential toll revenue (in millions, year of collection)	\$1,100 - \$2,900	\$2,600	\$1,200 (1A) - \$2,600 (1B)	\$0

¹ Comparing traffic volumes and LOS under each of the build alternatives and with both tolling scenarios, all the alternatives would reduce traffic volumes and improve LOS on US 41 as compared with the No Build alternative, even with the removal of one or both of the US 41 bridges. Therefore, the EJ analysis did not identify any disproportionately high and adverse traffic related impacts to EJ populations.

² Each of the alternatives, including the No Build Alternative, includes costs associated with the completion of the NEPA process.

This alternative would result in the greatest impacts to wetlands (55.4 acres), open water (9.6 acres), total linear feet of streams (23,475 feet), floodways (149 acres), and forested habitat (96.8 acres), which would correlate to the highest impacts to potential habitat for the federally endangered Indiana bat and federally threatened northern long-eared bat. The Section 4(f) impacts would include the removal of the historic southbound US 41 bridge, and a *de minimis* impact to Atkinson Park associated with a drainage easement.

Unmitigated, the option of tolls on the US 41 bridge would likely result in disproportionate and adverse effects to environmental justice (EJ) populations, while the option without tolls on the US 41 bridge would not result in disproportionate effects and would provide a toll-free option for local cross-river traffic. Measures to mitigate tolling impacts to EJ populations have not been determined yet, but proposed options are identified in **Chapter 7**. Because the alternative would retain the northbound US 41 bridge in addition to providing a new I-69 bridge, it would provide cross-river route redundancy for the region.

West Alternative 1 would have the highest cost of the three alternatives at \$1,810 million, which is \$130 million more than West Alternative 2 and \$313 million more than Central Alternatives 1A

and 1B (Preferred). Without tolls on the US 41 bridge, the 35-year toll revenue (year of collection dollars) is estimated at \$1.1 billion; with tolls on the US 41 bridge, toll revenue is estimated at \$2.9 billion.

6.1.3 WEST ALTERNATIVE 2

West Alternative 2 would traverse the west side of the US 41 commercial strip and result in the highest number of commercial relocations (62). Due to the alternative's impacts to commercial development, it would correspondingly impact the highest number of sites (21) with recognized environmental conditions (RECs). It would also have the second highest number of residential relocations (96) and total relocations (160). Because the alternative would utilize most of the existing US 41 right-of-way, it would require the least amount of new right-of-way (298 acres).

As with each of the build alternatives, West Alternative 2 would include tolls on the new I-69 crossing. West Alternative 2 would remove both US 41 bridges and, therefore, would not provide a toll-free river crossing option. As a result, unmitigated, it would likely have a disproportionate and adverse effect on EJ populations. In addition, because the alternative would only include one new I-69 bridge, it would not provide cross-river route redundancy for the region. The Section 4(f) impacts would consist of the removal of both historic US 41 bridges as well as a *de minimis* impact to Atkinson Park associated with a drainage easement. As for managed lands, West Alternative 2 would result in the greatest impacts, with three sites totaling 57.1 acres.

This alternative would result in the least impact to prime and unique farmland and farmland of statewide importance (46.2 acres), active farmland (168.8 acres), linear feet of perennial (1,556 feet) and intermittent streams (511 feet), floodplains (89 acres), and noise receptors (140). Impacts to forested habitat would be 71.2 acres, which is more than Central Alternatives 1A and 1B (Preferred) (45.8 acres) but less than West Alternative 1 (96.8 acres).

Because the alternative would remove both US 41 bridges and shift all traffic over to the new I-69 bridge, it is anticipated that it would improve cross-river safety more than the other build alternatives. The alternative's cost at \$1,680 million would be \$130 million less than West Alternative 1 but \$183 million more than Central Alternatives 1A and 1B (Preferred). The 35-year toll revenue (year of collection dollars) is estimated at \$2.6 billion.

6.1.4 CENTRAL ALTERNATIVES 1A AND 1B (PREFERRED)

Central Alternatives 1A and 1B (Preferred) would have the fewest residential relocations (four) and no commercial relocations. As a result, they would have the fewest total relocations (four), which is fewer than West Alternative 1 (269) or West Alternative 2 (160). These alternatives also would impact the fewest sites with RECs (four). The only difference between Central Alternative 1A and Central Alternative 1B is 1A would include tolls on the US 41 bridge, 1B would not.

Because most of these alternatives cross new terrain and undeveloped farmland, they would require the greatest amount of new right-of-way (420 acres) and have the greatest impact to prime and unique farmland and farmland of statewide importance (382.7 acres) and active farmland (347.9 acres) compared to the other build alternatives. They would also have the greatest impacts to floodplains (190 acres). However, these alternatives would have the least impact to wetlands

(17.6 acres), streams (18,327 linear feet), managed lands (1.3 acres), floodways (88 acres), and forested habitat (45.8 acres), which correlates to the least impact to potential habitat for the federally endangered Indiana bat and federally threatened northern long-eared bat. The only Section 4(f) impact would be the removal of the historic southbound US 41 bridge.

As with each of the build alternatives, Central Alternatives 1A and 1B (Preferred) would include tolls on the new I-69 crossing. Similar to West Alternative 1, without mitigation, Central Alternative 1A, which would include tolls on the US 41 bridge, would likely result in disproportionate and adverse effects to EJ populations, while Central Alternative 1B, which would not toll the US 41 bridge would not result in disproportionate effects. Central Alternative 1A, with tolls on the US 41 bridge, would also impact the highest number of noise receptors (257).

Because both Central Alternatives 1A and 1B would retain the northbound US 41 bridge, they would provide cross-river route redundancy for the region. Central Alternatives 1A and 1B (Preferred) would shift through traffic farther away from the existing US 41 commercial strip than West Alternatives 1 and 2, thereby resulting in potentially greater economic impacts to businesses that depend on through traffic. The alternatives would have the lowest cost of the three alternatives at \$1,497 million which is \$313 million and \$183 million less than West Alternatives 1 and 2, respectively. With Central Alternative 1B, without tolls on the US 41 bridge, the 35-year toll revenue (year of collection dollars) is estimated at \$1.2 billion; for Central Alternative 1A, which would toll the US 41 bridge, the 35-year toll revenue is estimated at \$2.6 billion.

6.2 IDENTIFICATION OF PREFERRED ALTERNATIVES

Based on the comparison of the alternatives' impacts and costs in **Section 6.1**, Central Alternatives 1A and 1B, which both retain the northbound US 41 bridge, have been identified as the Preferred Alternatives for the following reasons.

- Fewest residential relocations
- No commercial relocations
- Fewest impacts to the following resources:
 - Wetlands
 - Linear feet of streams
 - Floodways
 - Forested habitat and potential habitat for the federally endangered Indiana bat and federally threatened northern long-eared bat
 - Managed lands
 - Section 4(f) resources (i.e., the historic southbound US 41 bridge)
 - Sites with RECs
- Cross-river route redundancy for the region
- Lowest total cost

The only difference between Central Alternative 1A and Central Alternative 1B is 1A would include tolls on the US 41 bridge, 1B would not. A decision has not yet been made regarding which tolling option is preferred. As a result, at this time, per 40 C.F.R. 1502.14, two Preferred Alternatives have been identified to be carried forward:

- Central Alternative 1A: With tolls on the US 41 bridge
- Central Alternative 1B: Without tolls on the US 41 bridge

The decision regarding a preferred tolling option will be made following the publication of the DEIS.

A preliminary financial plan will be developed based on the total cost of the project, the amount of money each state can contribute from traditional sources, the potential for receiving national grants or other awards, and the amount of remaining funding need to be filled by tolls. The decision to toll the US 41 bridge will be based on the financial analysis and comments received on the DEIS. Once a decision is reached on whether US 41 will be tolled or not, the public and agencies will be notified prior to publication of the FEIS/ROD.

Each states' traditional transportation funding programs must support thousands of projects each year statewide. The total costs for this project are significant when compared with the statewide program and require other funding sources to make the project financially feasible. Tolling only the I-69 bridge would support financing about \$250 million of the \$1.25 billion project capital costs. Tolling both I-69 and US 41 would support financing about \$500 million but would still leave a \$750 million funding gap. The type of procurement and project financing has not been determined, nor has the tolling policy, all of which would affect the net amount of toll revenue that could be used to offset project costs. After deducting for financing, which could be considerable when compared with total revenue, the net toll revenues remaining would be used to cover construction costs. Tolling is discussed further in **Section 4.8.2**.

General mitigation measures and environmental commitments that will apply to unavoidable impacts associated with the alternative that is selected for the project are presented in **Chapter 7**. Following the Draft Environmental Impact Statement (DEIS) public and agency comment period, if the Preferred Alternative is identified as the Selected Alternative for the project, the reasons for its selection and more detailed mitigation measures and environmental commitments will be provided in the Final Environmental Impact Statement (FEIS)/Record of Decision (ROD).