WEST DAVIS
CORRIDOR

Technical Memorandum 32: FHWA and UDOT Preferred Alternative

in support of the
Environmental Impact Statement

West Davis Corridor Project

Federal Highway Administration
Utah Department of Transportation

udot.utah.gov

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WEST DAVIS
CORRIDOR

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1.0 Introduction

This technical memorandum documents the process used by the Federal Highway Administration (FHWA) and the Utah Department of Transportation (UDOT) to identify its preferred alternative for the West Davis Corridor (WDC) Project in the Final Environmental Impact Statement (EIS). The process included reviewing how the project alternatives would meet the purpose of the project and how they would affect the human and natural environment, including Section 4(f) resources.

Transportation and environmental information was reviewed both at the regional scale (by the total alternative) and at the local level (by city or area). Local information was reviewed to ensure that FHWA and UDOT considered how specific cities or neighborhoods would be affected by the alternatives.

What is Section 4(f)?

Section 4(f) is part of an FHWA regulation that requires a project to avoid the use of eligible or potentially eligible historic properties and recreation and wildlife areas unless there is no feasible and prudent alternative to such use. Even then, all measures must be taken to minimize harm to these properties.

Section 2.0 of this memorandum summarizes the transportation performance, costs, and impacts of the WDC alternatives. Section 3.0 identifies the preferred alternative and the reasons for its identification. Section 3.2 summarizes the reasons for FHWA's and UDOT's identification of a preferred wetland avoidance option in Farmington and Layton, Section 3.3 summarizes the reasons for the identification of preferred northern alternatives north of Gentile Street, and Section 3.4 summarizes the reasons for the identification of a preferred northern option.

2.0 Summary of the WDC Alternatives' Transportation Performance, Costs, and Impacts

2.1 Alternatives Summary

As described in Chapter 2, Alternatives, of the Final EIS, a No-Action Alternative, four action alternatives, and wetland avoidance options were considered. The four action alternatives are Alternatives A1, A2, B1, and B2. The wetland avoidance options are in Farmington and Layton and can be implemented with any of the four action alternatives.

These alternatives and options are shown in Figure 1. They are also shown on individual maps in Figure 2-20 to Figure 2-23 in Volume IV of the Final EIS.

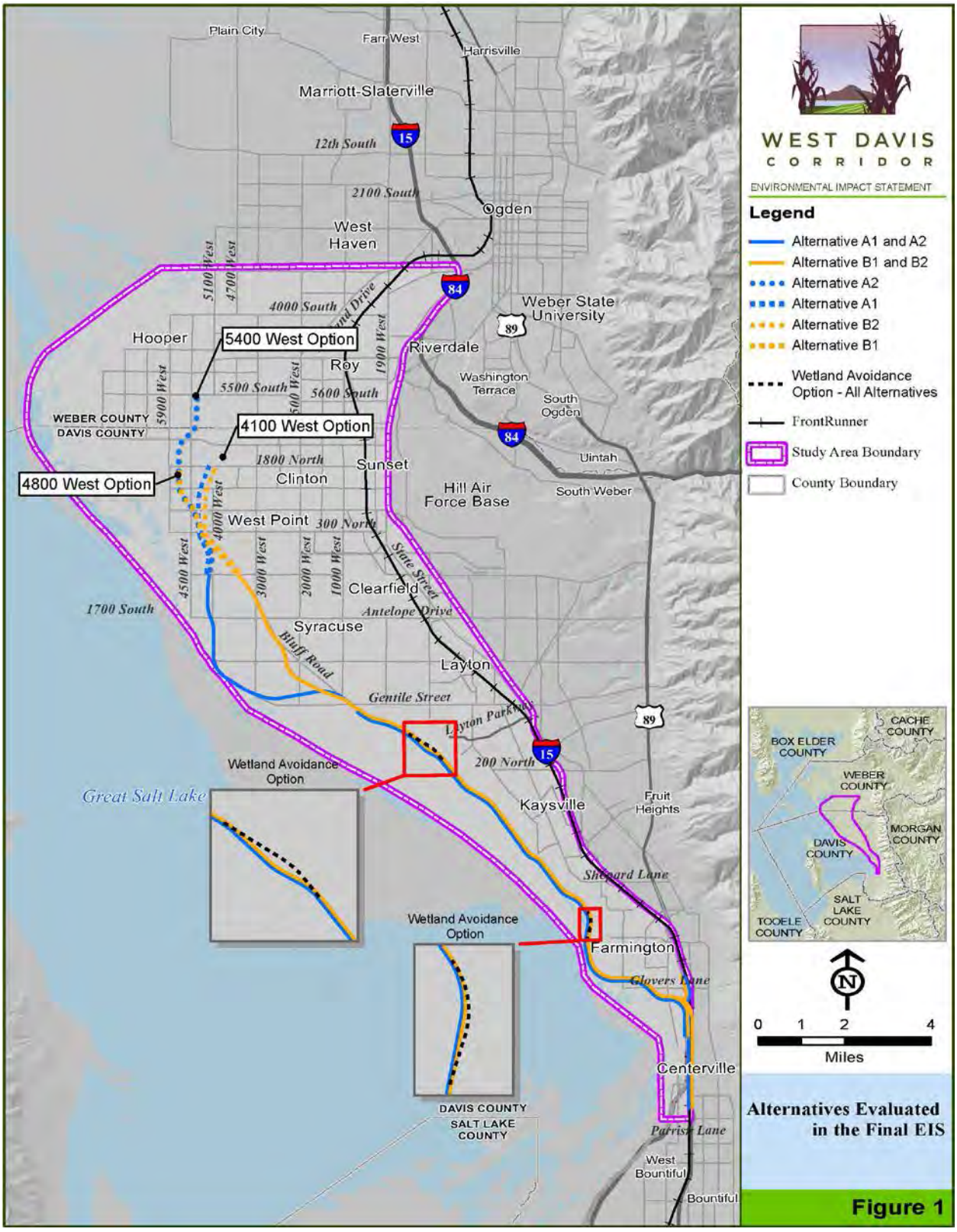
As shown in Figure 1 below, all of the action alternatives use the same connection of the WDC to Interstate 15 (I-15) and Legacy Parkway at Glovers Lane and following the same alignment to about 2000 West in Syracuse just north of Gentile Street. In this segment, wetland avoidance options are being considered in Farmington and Layton. North of Gentile Street in Syracuse, the A Alternatives (A1 and A2) use a western alignment in Syracuse and the B Alternatives (B1 and B2) use a more eastern alignment near Bluff Road in Syracuse. Alternatives A1, B1, and B2 have a northern terminus at 1800 North in West Point (Davis County), and Alternative A2 has a northern terminus at 5500 South in Hooper (Weber County).

As shown in Table 1 and Figure 1, both the A and B Alternatives have two possible northern options.

Table 1. Components of WDC Action Alternatives

Action Alternative	Southern Connection	Northern Alternative	Northern Option	North Terminus
A1	Glovers Lane	A Alternative (Western)	4100 West	4100 West 1800 North
A2	Glovers Lane	A Alternative (Western)	5400 West	5400 West 5500 South
B1	Glovers Lane	B Alternative (Eastern)	4100 West	4100 West 1800 North
B2	Glovers Lane	B Alternative (Eastern)	4800 West	4800 West 1800 North

Figure 1. Alternatives Evaluated in the Final EIS



2.2 Purpose and Need Performance

FHWA and UDOT analyzed the transportation performance of each alternative at both a regional and local level to determine how it would meet the purpose of and need for the project. The evaluation included the degree to which each alternative would meet the project purpose.

The regional transportation performance evaluation was based on the degree to which each alternative would improve regional mobility and enhance peak-period mobility. The evaluation also considered how much traffic each alternative would carry. The regional transportation performance evaluation is described in Section 2.2.1.

FHWA and UDOT also considered the local transportation performance. This evaluation considers how individual segments of the WDC would operate compared to other alternatives being considered

What are peak periods?

Peak periods are the periods of the day with the greatest amounts of traffic. The AM (morning) peak period is from 6 AM to 9 AM, and the PM (afternoon) peak period is from 3 PM to 6 PM. Peak periods are looked at by transportation officials when examining the need for a transportation improvement.

2.2.1 Regional Transportation Performance

The regional transportation performance of the alternatives was evaluated based on the following two project purposes:

- **Improve Regional Mobility.** Improve regional mobility for automobile, transit, and freight trips in the WDC needs assessment study area for automobile, transit, and freight trips by substantially reducing user delay on the road system compared to the No-Action conditions through the consideration of all transportation modes.
- **Enhance Peak-Period Mobility.** Substantially enhance mobility in the WDC needs assessment study area during the AM and PM peak periods for the main travel direction (north–south) to help accommodate the projected travel demand in the needs assessment study area in 2040.

What is the needs assessment study area?

The needs assessment study area is the area bounded on the north by 3000 South in Hooper and West Haven, on the south by about Parrish Lane in Centerville, on the east by I-15, and on the west just east of the Great Salt Lake.

What is travel demand?

Travel demand is the expected number of transportation trips in an area. Travel demand can be met by various modes of travel such as automobile, bus, commuter rail, carpooling, and bicycling.

Table 2 summarizes how the action alternatives compare in reducing regional daily delay and peak-period mobility in the WDC study area. As shown in the table, all of the action alternatives would substantially[1] reduce daily delay and peak-period congestion and, therefore, would meet the purpose of and need for the project. Charts 1–5 below illustrate the regional delay and congestion benefits by alternative.

What is the WDC study area?

The WDC study area is the same as the needs assessment study area.

Table 2. Comparison of Regional Delay and Congestion Benefits for the WDC Action Alternatives

Alternative	Hours of Daily Total Delay	Percentage Change from the No-Action Alternative in 2040 in the PM Peak Period[a]			
		Lane-Miles of North–South Roads in Congestion[b]	Lane-Miles of East–West Roads in Congestion[b]	Vehicle-Miles Traveled (VMT) in Congestion[c]	Vehicle-Hours Traveled (VHT) in Congestion[c]
A1 – Glovers Lane/1800 N	–27.9%	–32.8%	–45.2%	–35.5%	–38.4%
A2 – Glovers Lane/5500 S	–27.2%	–30.2%	–45.2%	–33.9%	–37.0%
B1 – Glovers Lane/4100 W	–32.2%	–31.0%	–51.6%	–35.3%	–40.0%
B2 – Glovers Lane/4800 W	–31.6%	–28.4%	–51.6%	–33.6%	–38.5%

[a] The PM peak period is between 3 PM and 6 PM. Volume to capacity, or V/C, is a measure of the actual traffic volume on a road compared with the traffic capacity for which the road was designed. A V/C ratio of 0.75 to 0.99 represents heavy congestion, and a V/C ratio of more than 1.0 represents severe congestion (the volume of traffic exceeds the capacity of the road). A V/C ratio greater than 0.90 is equivalent to level of service (LOS) E or F (congested, stop-and-go traffic).

[b] Includes reduction in congestion on roads with a V/C ratio greater than 0.90 (LOS E and F) during the PM peak period (between 3 PM and 6 PM). Roads include freeways (I-15), principal and minor arterial streets, and collector streets in the WDC study area.

[c] Includes reduction in congestion for VMT and VHT on roads with a V/C ratio of greater than 0.90 (LOS E and F) during the PM peak period (between 3 PM and 6 PM). Roads include freeways (I-15), principal and minor arterial streets, and collector streets in the WDC study area.

[1] To achieve substantial reduction, an alternative had to perform better than the No-Action Alternative for all five transportation criteria, perform better than the average value for all alternatives for all five criteria, and perform at or better than the first-quartile value for all alternatives for at least three of the five criteria. This process and these criteria are described in *Technical Memorandum 15: Alternatives Screening Report*.

Chart 1. Hours of Daily Total Delay in WDC Study Area, by Alternative

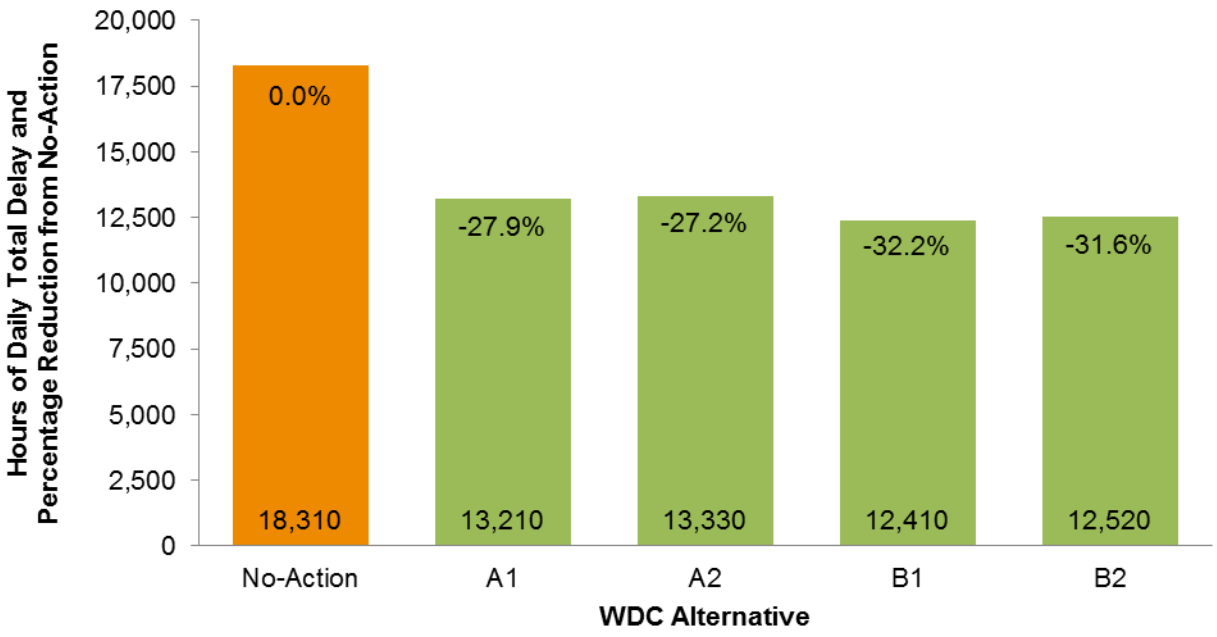


Chart 2. Lane-Miles of North–South Roads in Congestion, by Alternative

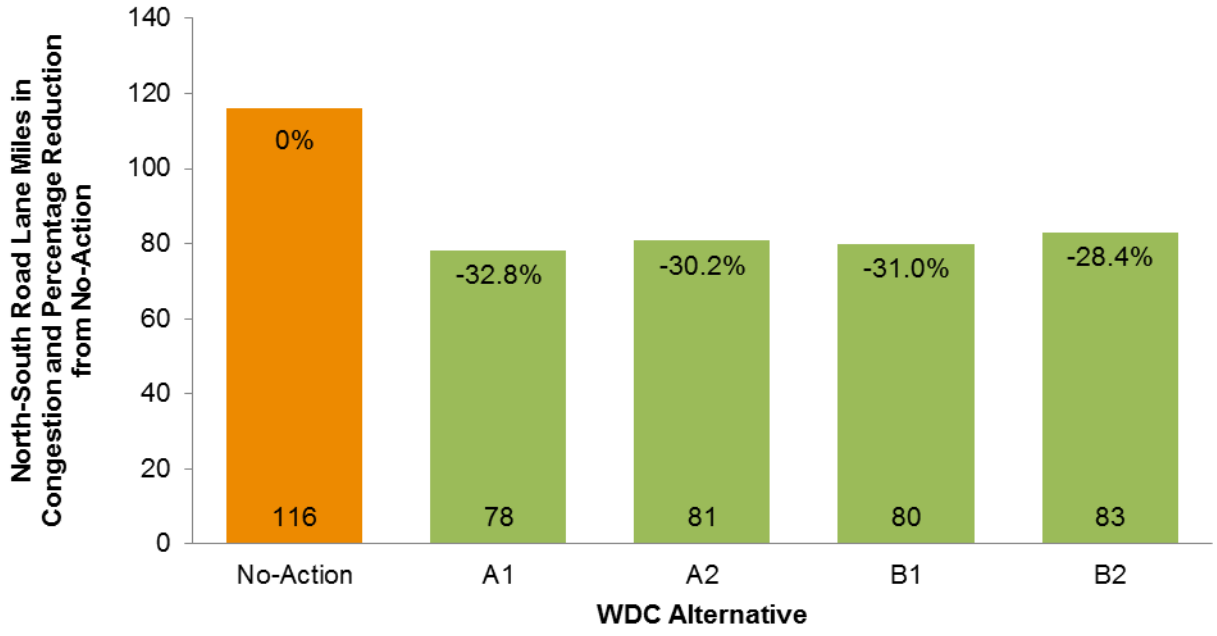


Chart 3. Lane-Miles of East–West Roads in Congestion, by Alternative

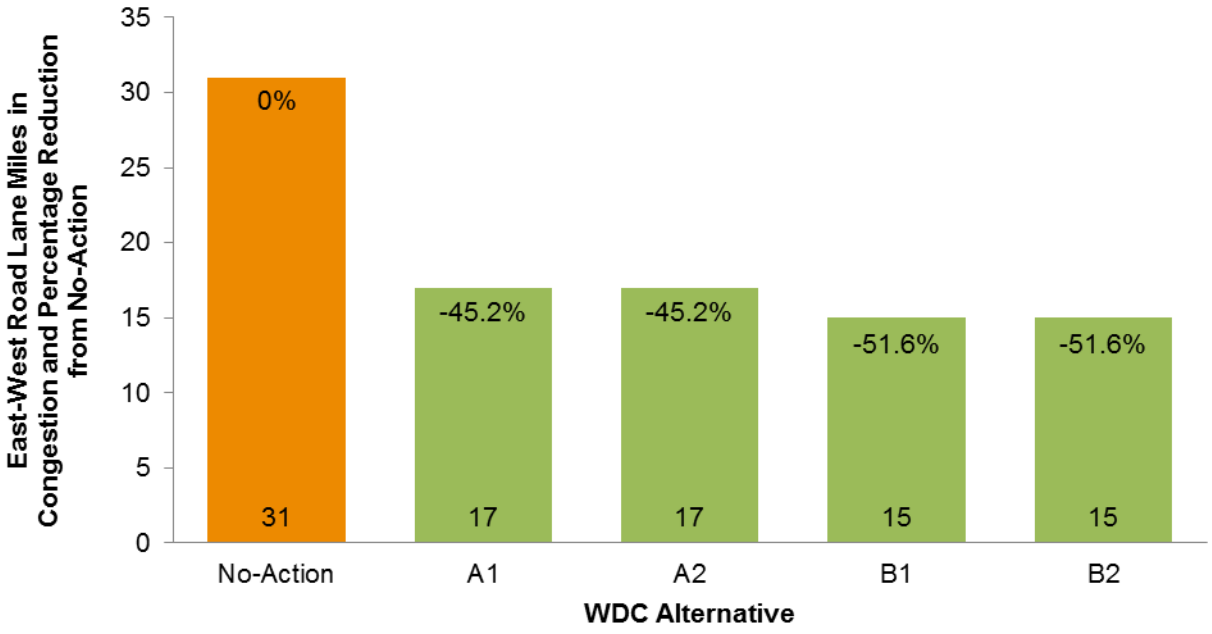


Chart 4. Vehicle-Miles Traveled in Congestion, by Alternative

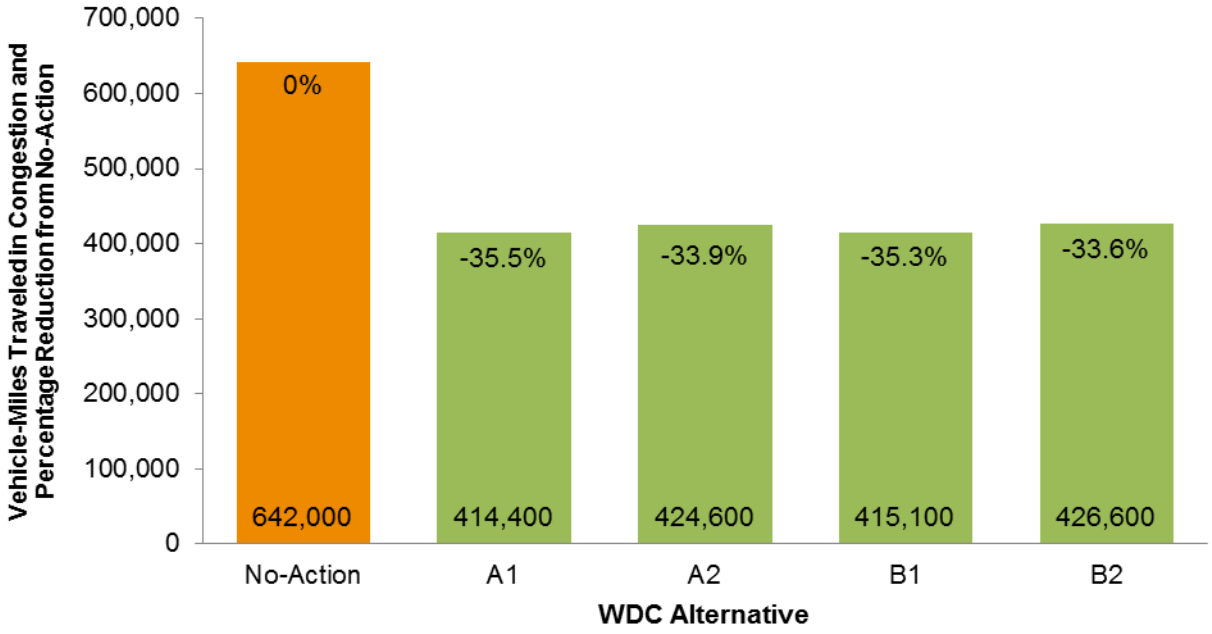
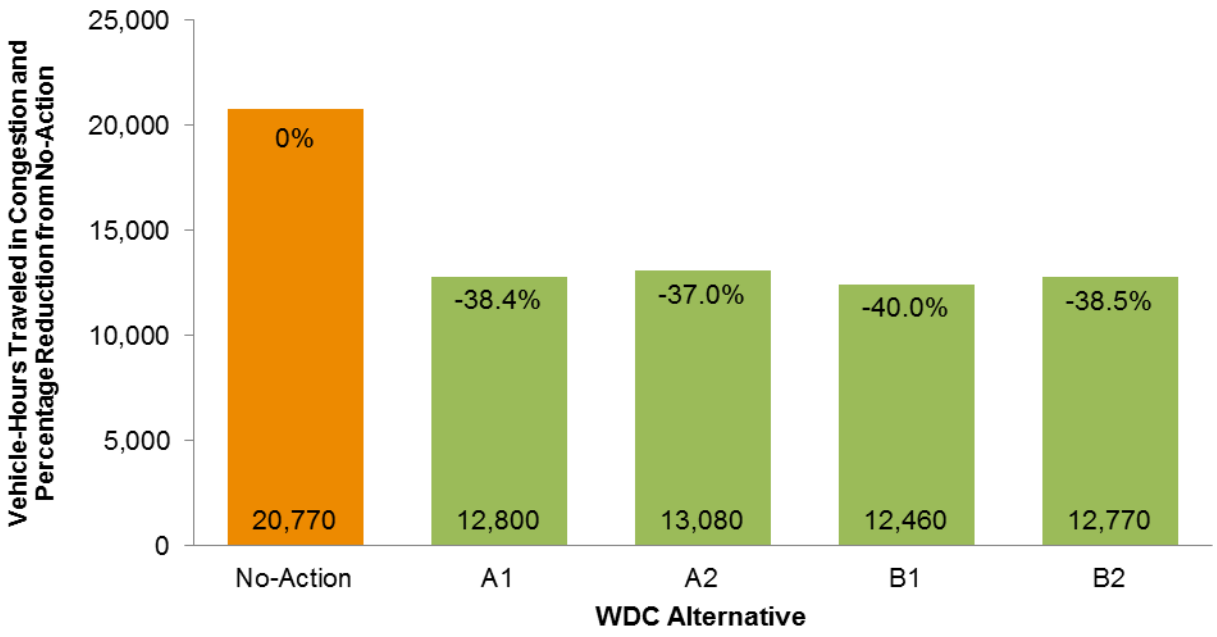


Chart 5. Vehicle-Hours Traveled in Congestion, by Alternative



When reviewing the regional transportation performance for each alternative, FHWA and UDOT also compared the daily traffic volumes. FHWA and UDOT consider alternatives with higher daily traffic volumes to perform better, since they carry more traffic, reduce the amount of traffic on other roads in the network, and represent a better return on the investment of public funds. Table 3 shows the average daily traffic volume for the WDC action alternatives.

Table 3. Comparison of Daily Traffic Volumes for the WDC Action Alternatives in 2040

Alternative	Daily Traffic Volume (vehicles per day)
A1	19,400
A2	18,900
B1	27,600
B2	26,000

As shown above in Table 3, the following observations can be made about the daily traffic volumes:

- Alternative B1 carries the most traffic of any of the WDC action alternatives (27,600 vehicles per day).
- Alternative A2 carries the least daily traffic of any of the WDC action alternatives (18,900 vehicles per day).
- The B Alternatives both carry more traffic than the A Alternatives.

Overall, at a regional level, Alternative B1 would provide the greatest reduction in daily delay and VHT in congestion and would carry the most traffic of any WDC action alternative. Therefore, Alternative B1 would provide the best overall traffic performance and has the highest degree of meeting the project purpose.

2.2.2 Evaluation of the Degree to which Alternative Meets the Project Purpose

Improve Regional and Peak-Period Transportation Performance

Section 2.2, Purpose and Need Performance, describes how the WDC action alternatives would meet the project purpose. As previously shown in Table 2, Comparison of Regional Delay and Congestion Benefits for the WDC Action Alternatives, all alternatives would improve regional mobility and enhance peak-period mobility to a similar level.

However, as previously shown in Table 3, Comparison of Daily Traffic Volumes for the WDC Action Alternatives, over the length of the whole alternative, both of the B Alternatives would carry between 34% and 46% more daily traffic than any of the A Alternatives, with Alternative B1 carrying the greatest traffic volumes. In addition, Alternative B1 would result in the greatest reduction in daily delay of any of the WDC action alternatives.

Increase Interconnection between Transportation Modes

All of the WDC action alternatives would equally support increased interconnection between transportation modes. The WDC would provide for interconnection of transportation modes by providing park-and-ride lots at proposed interchanges and providing a trail crossing of I-15 on Park Lane in Farmington. This trail would be located on the north side of Park Lane and would connect the Oakridge Preserve Trail to the Legacy Parkway Trail and the Farmington FrontRunner commuter rail station.

Support Local Growth Objectives

The criterion of supporting local growth objectives is based on to what degree a WDC action alternative is consistent with local and regional land-use plans. Alternative B1 is the only alternative that is consistent with all land-use and transportation plans of the cities through which the WDC action alternatives would pass. Alternative B2 is not consistent with one land-use plan, and the A Alternatives are not consistent with two local land-use plans.

Increase Bicyclist and Pedestrian Options

All of the WDC action alternatives would equally support increased bicyclist and pedestrian options by providing the following trail connections:

- A new trail segment along the WDC starting at I-15 in Farmington at the Legacy Parkway Trail extending north to the southern terminus of the Emigrant Trail in Jensen Park in Syracuse.
- A trail crossing of I-15 on Park Lane in Farmington. This trail would be located on the north side of Park Lane and would connect the Oakridge Preserve Trail to the Legacy Parkway Trail and the Farmington FrontRunner commuter rail station.
- Connection of the Kays Creek Trail from the Kays Creek subdivision to the WDC trail. The Kays Creek Trail would be connected to the WDC trail.
- Connection of the Emigrant Trail from 1300 North in West Point to 4500 West (Davis County), then following 4500 West from 1300 North (Davis County) to the Weber County border with Davis County.

2.3 Estimated Cost

Table 4 shows estimated costs of the WDC action alternatives. The cost estimates below include design, right-of-way, construction, utility relocations, and environmental mitigation. These cost estimates are based on unit prices for previously completed, similar projects that were escalated to 2017 dollars. The actual cost of construction will likely be higher because of inflation between 2017 and the year of construction but is expected to increase proportionally among the various alternatives. There is not a substantial cost difference among alternatives.

Table 4. Estimated Costs of the WDC Action Alternatives

Alternative	2017 Cost ($)
A1	682 million
A2	723 million
B1	725 million
B2	728 million

2.4 Summary Comparison of Resource Impacts, by Alternative

Table 5 below compares the resource impacts of the four WDC action alternatives both with and without the wetland avoidance options. This table provides a quantitative comparison among the alternatives for the resources evaluated in the Final EIS. Although impacts are

quantified for all of the impact categories below, not all resources listed favored one alternative or another.

As shown in Table 5, some resources would experience a substantial difference in impacts from the alternatives, while other resources would experience no difference or a very small difference in impacts from the alternatives. Thus, some resource impacts were more helpful than others in distinguishing among the alternatives. Additionally, some of the resources have avoidance requirements that must be considered.

Although Table 5 provides the quantitative information for each impact, it does not always provide the context and intensity of the impact. For some resources, the context and intensity of the impact provide relevant information for weighing alternatives. Impact context and intensity are included as appropriate in the following discussions of how FHWA's and UDOT's preferred alternative was identified.

Table 5. Summary Comparison of Cost and Resource Impacts by WDC Action Alternative

Impact Category	Unit	Alternative							
		Without Wetland Avoidance Option		With Wetland Avoidance Option		Without Wetland Avoidance Option		With Wetland Avoidance Option	
		A1	A2	A1	A2	B1	B2	B1	B2
Route length	Miles	20.37	22.28	20.38	22.29	19.21	19.31	19.22	19.32
Route cost (2017)	Million $	682	723	682	724	725	728	725	729
Land converted to roadway use	Acres	815	878	822	883	871	872	878	879
Direct impacts on the Great Salt Lake Shorelands Preserve	Acres	75	75	64	64	75	75	64	64
Direct impacts on land with a conservation easement[a]	Acres	91	91	91	91	77	77	77	77
Consistent with city plans (out of six cities for A1, B1, and B2 and seven cities for A2)[b]	Number	4	5	4	5	6	5	6	5
Direct impacts on prime farmland	Acres	134	138	125	129	104	104	94	94
Direct impacts on irrigated cropland	Acres	544	605	540	601	529	532	525	528
Direct impacts on non-irrigated cropland	Acres	85	85	84	84	79	79	78	78
Direct impacts on Agriculture Protection Areas	Acres	24	42	24	42	3	4	3	4
Indirect farmland impacts	Acres	41	50	40	49	28	36	27	35
Residential relocations	Number	25	29	32	36	18	19	25	26
Potential residential relocations[c]	Number	1	3	1	3	9	9	9	9
Residential plats affected[d]	Number	0	0	1	1	0	0	1	1
Business relocations	Number	5	6	5	6	4	5	4	5
Potential business relocations[c]	Number	5	5	5	5	5	5	5	5
Congestion cost savings compared to No-Action Alternative	Million $	48	47	48	47	56	55	56	55
Direct impacts on recreation areas	Number	3	3	3	3	4	4	4	4
Direct impacts on community facilities	Number	1	2	1	2	1	2	1	2
Environmental justice populations affected	Yes/no[e]	No	No	No	No	No	No	No	No
Existing trails relocated	Number	0	0	0	0	1	1	1	1
Existing trails crossed	Number	8	7	8	7	7	6	7	6
Consistent with air quality conformity regulations	Yes/no[f]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 5. Summary Comparison of Cost and Resource Impacts by WDC Action Alternative

Impact Category	Unit	Alternative							
		Without Wetland Avoidance Option		With Wetland Avoidance Option		Without Wetland Avoidance Option		With Wetland Avoidance Option	
		A1	A2	A1	A2	B1	B2	B1	B2
Residential noise receptors above criteria	Number	131	132	132	133	193	185	194	186
Stream/canal crossings	Number	6	7	6	7	6	6	6	6
Direct impacts on wetlands	Acres	28.1	26.9	21	19.9	47.9	46.6	40.9	39.6
• Category I wetlands[g]	Acres	15.9	15.2	13.7	13.1	15.7	15.1	13.6	13.0
• Category II wetlands	Acres	8.2	7.7	3.3	3.8	15.3	14.8	10.4	9.9
• Category III wetlands	Acres	4.0	4.0	4.0	4.0	16.9	16.7	16.9	16.7
Wetlands within 300 feet of the right-of-way	Acres	80.5	64.3	68.7	52.4	101.6	85.2	89.7	73.3
Direct impacts on high-quality wildlife habitat[h]	Acres	49.5	45.8	36.8	33.2	48.9	45.3	36.3	32.7
High-quality wildlife habitat within 300 feet of the right-of-way	Acres	119.4	107.8	105.0	93.4	98.4	86.7	84.0	72.3
Direct impacts on floodplains	Acres	187.7	187.7	183.7	183.7	187.7	187.7	183.7	183.7
Adverse effects on cultural resources	Number	3	3	5	5	5	5	7	7
Direct impacts on hazardous waste sites	Number	0	0	0	0	0	0	0	0
Visual changes	Category	Low-high	Low-high	Low-high	Low-high	Low-high	Low-high	Low-high	Low-high
Section 4(f) uses	Number	3	3	5	5	5	5	7	7
Section 4(f) *de minimis* uses	Number	13	17	12	16	13	14	12	13
Section 4(f) least overall harm	Rank[i]	7	8	5	6	3	4	1	2
Mode share (percent of all home-based work trips)	Percent	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8

Table 5. Summary Comparison of Cost and Resource Impacts by WDC Action Alternative

Impact Category	Unit	Alternative							
		Without Wetland Avoidance Option		With Wetland Avoidance Option		Without Wetland Avoidance Option		With Wetland Avoidance Option	
		A1	A2	A1	A2	B1	B2	B1	B2

[a] Conservation easements include Farmington City–held conservation easements and the Black Agriland conservation easement held by the Utah Department of Agriculture and Food.

[b] The adopted Farmington City Transportation Plan shows a future WDC on Glovers Lane (all action alternatives). However, city officials have passed a resolution supporting a WDC alignment on Shepard Lane; this alignment was eliminated after the release of the Draft EIS for not meeting design standards.

[c] A potential relocation occurs when the right-of-way required for the WDC would affect the property and would be between 1 foot and 15 feet away from the structure.

[d] A residential plat is a lot that has been approved for residential development by the local jurisdiction but has not been developed.

[e] Yes or no: Would the alternative have a disproportionately high and adverse effect on an environmental justice population?

[f] Yes or no: Is the alternative consistent with air quality conformity regulations under the Clean Air Act?

[g] Wetland quality was determined using the UDOT Functional Assessment. Category I wetlands have the highest quality and Category III the lowest. For more information, see Chapter 14, Ecosystem Resources, of the Final EIS.

[h] High-quality wildlife habitats were determined by evaluating parcels for their habitat suitability for eight different wildlife species representative of the WDC study area. For more information, see Chapter 14, Ecosystem Resources, of the Final EIS and *Technical Memorandum 9: Wildlife Assessment Methodology – Existing Conditions*.

[i] A Section 4(f) least overall harm analysis determines which alternative would have the least overall harm considering the seven factors listed in 23 CFR 774.3(c). In this table, a rank of 1 indicates the least overall harm and 8 indicates the greatest overall harm.

3.0 Identification of the FHWA and UDOT Preferred Alternative

The following sections identify and provide FHWA's and UDOT's basis for identifying the preferred alternative. The final selection of an alternative will be made by FHWA in the Record of Decision for the WDC Project. As part of the Clean Water Act permitting process, the U.S. Army Corps of Engineers will decide, when making a Clean Water Act permit decision, which alternative satisfies the Section 404(b)(1) guidelines.

FHWA and UDOT identified the preferred alternative based on its transportation performance, cost, and impacts to the natural and human environment while considering the Clean Water Act permitting process. As part of identifying the preferred alternative, FHWA and UDOT considered public and agency input during the scoping process; the alternatives-development, screening, and refinement process; comments made to the Draft EIS; and the project file.

What is scoping?

Scoping is an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action.

Note that there are strengths and weaknesses for each alternative. No alternative had the best transportation performance, had the lowest cost, and the fewest impacts to all resources. All of the action alternatives would affect Section 4(f) resources, wetlands, and farmland and would require residential and business acquisitions.

During the resource-identification process, FHWA and UDOT gave specific consideration to the resources with avoidance and minimization requirements under federal or state laws: Section 4(f) resources, wetlands and waters regulated by Section 404 of the Clean Water Act, wetlands regulated by Executive Order 11990, farmlands regulated by the Utah Agricultural Protection Act, and floodplains regulated by Executive Order 11988. All of these laws require that efforts be made to avoid impacts or uses of specific resources, except under specified conditions.

However, collective and individual avoidance of all of these resources was not possible. All of the action alternatives would affect Section 4(f) resources protected by the Department of Transportation Act, jurisdictional wetlands and waters of the U.S. regulated under the Clean Water Act, and Agriculture Protection Areas (APAs) as defined by the Utah Agricultural Protection Act.

3.1 FHWA and UDOT Evaluation of the Action Alternatives

FHWA and UDOT have identified **Alternative B1 with the wetland avoidance option** as the preferred alternative for the WDC Project.

As shown in Figure 1, Alternative B1 consists of a connection at Glovers Lane in Farmington and the 4100 West/1800 North northern option. FHWA's and UDOT's preferred alternative is based on the selection of the wetland avoidance option in Farmington and Layton. The rationale for these three decisions is described in the following Section 3.2 through Section 3.4.

3.2 Evaluation of the Wetland Avoidance Option

UDOT and FHWA have identified the wetland avoidance option as part of the preferred alternative. The reasons for this selection are primarily to reduce impacts to wetlands and the Great Salt Lake Shorelands Preserve. The wetland avoidance option would not change the transportation performance of Alternative B1. The primary benefits of the wetland avoidance option are:

- The wetland avoidance option would result in about 7 acres fewer total wetland impacts compared to the action alternatives without the wetland avoidance option. Of these 7 acres, 2.1 acres would be Category I wetlands (high quality), and 4.9 acres would be Category II wetlands (medium quality).
- The wetland avoidance option would result in about 12 fewer acres of wetlands within 300 feet of the right-of-way compared to the action alternatives without the wetland avoidance option.
- The wetland avoidance option would result in 13 fewer acres of wildlife habitat affected compared to the action alternatives without the wetland avoidance option. All of the habitat affected would be high-quality wildlife habitat.
- The wetland avoidance option would be about 200 to 250 feet farther from the Great Salt Lake Shorelands Preserve for about 0.4 mile in an area of high-quality wetlands and wildlife habitat. This location would slightly reduce wildlife impacts compared to the action alternatives without the wetland avoidance option.
- Within the Great Salt Lake Shorelands Preserve, the wetland avoidance option would result in 5 fewer acres of direct wetland impacts and 11 fewer acres of wetlands within 300 feet of the right-of-way compared to the action alternatives without the wetland avoidance option. The wetland avoidance option would result in 10 fewer acres of direct wildlife habitat affected compared to the action alternatives without the wetland avoidance option.
- The wetland avoidance option would avoid acquisition and use of 5.5 acres of the Utah Reclamation, Mitigation, and Conservation Commission (URMCC) property in this area. This property has been set aside for the preservation of wildlife and wetlands and is part of the Great Salt Lake Shorelands Preserve managed by The Nature Conservancy. The URMCC property is a Section 4(f) resource.

Compared to the action alternatives without the wetland avoidance option, the wetland avoidance option would require the acquisition of seven additional homes, one of which is a historic property that is eligible for listing on the National Register of Historic Places. In addition, a historic cabin listed on the National Register would be directly impacted (that is, it would be within the WDC right-of-way). The cabin was moved to its current location by the owner, so it is not in its original setting. UDOT would move the cabin to a new location as requested by the owner. The impacts to these two historic properties are also considered Section 4(f) uses.

UDOT and FHWA believe that the benefit provided by the avoidance of wetlands including high-quality wetlands, the reduction in impacts to high-quality wildlife habitat, avoidance of the URMCC property (a Section 4(f) resource) in this area, and less impacts to the Great Salt Lake Shorelands Preserve outweigh the additional home acquisitions and impacts to the two historic properties (which impacts are also Section 4(f) uses). This is consistent with the least overall harm analysis described in Section 27.6.7 Least Overall Harm Analysis in Chapter 27 of the Final EIS and would be a prudent and feasible alternative as defined in 23 CFR 774.17.

Because the eligibility of the historic cabin is not associated with its location and the cabin can therefore be moved, UDOT and FHWA determined that the wetland avoidance option would provide less overall harm because of the avoidance of the URMCC property in this area and less impacts to high-quality wetlands and wildlife habitat. The wetland avoidance option would be a practicable alternative under the Clean Water Act Section 404(b)(1) guidelines and would likely be selected by the U.S. Army Corps of Engineers during the Clean Water Act permitting process. The wetland avoidance option would also meet the intent of Executive Order 11990, Protection of Wetlands.

3.3 FHWA and UDOT Evaluation of Northern Alternatives

FHWA and UDOT identified the **B Alternatives (B1 and B2)** as their preferred northern alternatives.

As previously described in Table 1, Components of WDC Action Alternatives, and shown above in Figure 1, Alternatives Evaluated in the Final EIS, north of Gentile Street in Syracuse, all of the WDC action alternatives use one of two northern alternatives.

The A Alternatives (A1–A2) use a westerly alignment in Syracuse that parallels Gentile Street and the northern boundary of the Great Salt Lake Shorelands Preserve before turning north and crossing Antelope Drive at about 4000 West in Syracuse. The A Alternatives share a common alignment to 300 North in West Point in Davis County. From 300 North, Alternative A1 shares the same alignment as Alternative B1, heading northeast before terminating at 4100 West and 1800 North in West Point. Alternative A2 heads northwest, crossing 1800 North at about 4800 West before heading northeast and terminating at 5400 West and 5500 South in Weber County.

The B Alternatives use an eastern alignment in Syracuse that parallels the bluff in Syracuse and crosses Antelope Drive at about 2800 West in Syracuse. The B Alternatives share a common alignment to 300 North in West Point, use one of two northern options (4100 West Option B1 or 4800 West Option B2), and have a northern terminus at 1800 North in Davis County.

FHWA and UDOT identified the B Alternatives as the preferred northern alternatives because they would have the best transportation performance; were determined in the Section 4(f) evaluation to have the least overall harm; would have the lowest amount of impacts on APAs and other farmland, the most consistency with local land-use and transportation plans, the fewest relocations, and the lowest cost; and because they would not be located immediately adjacent to the Great Salt Lake Shorelands Preserve along Gentile Street.

The sections below summarize the reasons why FHWA and UDOT identified the B Alternatives as the preferred northern alternatives.

3.3.1 Evaluation of the Degree to which Alternative Meets the Project Purpose

Improve Regional and Peak-Period Transportation Performance

Section 2.2, Purpose and Need Performance, describes how the WDC action alternatives would meet the project purpose. As previously shown in Table 2, Comparison of Regional Delay and Congestion Benefits for the WDC Action Alternatives, all alternatives would improve regional mobility and enhance peak-period mobility to a similar level.

However, as previously shown in Table 3, Comparison of Daily Traffic Volumes for the WDC Action Alternatives, over the length of the whole alternative, both of the B Alternatives would carry between 34% and 46% more daily traffic than any of the A Alternatives. In addition, the B Alternatives would result in a greater reduction in overall delay.

Local Performance

At a local scale, the B Alternatives would carry about 10,600 more vehicles per day in Syracuse (a 78% increase), and about 1,500 more vehicles per day in West Point (a 17% increase), than the A Alternatives. Additionally, the overall length of the B Alternatives is about 1.2 to 3.1 miles shorter than the A Alternatives. The B Alternatives—with a shorter length and more vehicle use per day—would provide a better overall transportation benefit than the A Alternatives.

Increase Interconnection between Transportation Modes

All of the WDC action alternatives would equally support increased interconnection between transportation modes. See Section 2.2.1, Evaluation of the Degree to which Alternative Meets the Project Purpose, for more details.

Support Local Growth Objectives

The criterion of supporting local growth objectives is based on to what degree a WDC action alternative is consistent with local and regional land-use plans. The main cities north of Gentile Street through which the alternatives pass are Syracuse and West Point. The B Alternatives would be consistent with Syracuse and West Point Cities' land-use and transportation plans, which show the WDC in the general vicinity of the B Alternatives. The A Alternatives would not be consistent with these plans because of their westerly alignment.

Increase Bicyclist and Pedestrian Options

All of the WDC action alternatives would equally support increased bicyclist and pedestrian options. See Section 2.2.1, Evaluation of the Degree to which Alternative Meets the Project Purpose, for more details.

3.3.2 Resource Impacts

Table 6 summarizes the costs and impacts of the two northern alternatives between Gentile Street and the northern termini in Weber County. The data in Table 6 include only the impacts for the two northern alternatives, not for the complete lengths of the alternatives.

Table 6. Summary of Environmental Impacts from the Northern Alternatives (from Gentile Street to North Project Termini)

Impact Category	Unit	Alternative	
		A Alternatives	B Alternatives
Route length	Miles	8.4 to 10.7	7.2 to 7.3
Route cost (2017)	Dollars	171 to 213	213 to 217
Land converted to roadway use	Acres	247 to 310	299
Direct impacts on the Great Salt Lake Shorelands Preserve	Acres	0	0
Direct impacts on land with a conservation easement[a]	Acres	14	0
Consistent with city plans (2 Cities)	Number	0 to 1	1 to 2
Direct impacts on prime farmland	Acres	31 to 34	0
Direct impacts on irrigated cropland	Acres	170 to 232	145 to 157
Direct impacts on non-irrigated cropland	Acres	30	24
Direct impacts on Agriculture Protection Areas	Acres	24 to 42	3 to 4
Indirect farmland impacts	Acres	16 to 25	3 to 11
Residential relocations	Number	22 to 26	15 to 16
Potential residential relocations[b]	Number	1 to 3	9
Residential plats affected[c]	Number	0	0
Business relocations	Number	0 to 1	0 to 1
Potential business relocations[b]	Number	2	2
Direct impacts on recreation areas	Number	1	2
Direct impacts on community facilities	Number	0 to 1	0 to1
Existing trails relocated	Number	0	1
Existing trails crossed	Number	3 to 4	2 to 3
Residential noise receptors above criteria	Number	21 to 22	75 to 83
Stream/canal crossings	Number	1	0
Direct impacts on wetlands	Acres	7.8 to 8.8	27.3 to 28.6
• Category I wetlands[d]	Acres	0 to 1	4.5 to 5.4
Wetlands within 300 feet of the right-of-way	Acres	18.3 to 34.6	39.2 to 55.6
Direct impacts on high-quality wildlife habitat[e]	Acres	0.5 to 4	7 to 11
High-quality wildlife habitat within 300 feet of the right-of-way	Acres	31 to 42	9 to 21
Direct impacts on floodplains	Acres	0	0
Adverse effects on cultural resources	Number	0	2

Table 6. Summary of Environmental Impacts from the Northern Alternatives (from Gentile Street to North Project Termini)

Impact Category	Unit	Alternative	
		A Alternatives	B Alternatives
Direct impacts on hazardous waste sites	Number	0	0
Section 4(f) uses	Number	0	2
Section 4(f) *de minimis* uses	Number	4 to 9	3 to 5

[a] Conservation easements include the Black Agriland conservation easement held by the Utah Department of Agriculture and Food.

[b] A potential relocation occurs when the right-of-way required for the WDC would affect the property and would be between 1 foot and 15 feet away from the structure.

[c] A residential plat is a lot that has been approved for residential development by the local jurisdiction but has not been developed.

[d] Wetland quality was determined using the UDOT Functional Assessment. Category I wetlands have the highest quality and Category III the lowest. For more information, see Chapter 14, Ecosystem Resources, of the Final EIS.

[e] High-quality wildlife habitats were determined by evaluating parcels for their habitat suitability for eight different wildlife species representative of the WDC study area. For more information, see Chapter 14, Ecosystem Resources, of the Final EIS and *Technical Memorandum 9: Wildlife Assessment Methodology – Existing Conditions*.

Environmental Impacts

As shown above in Table 6, the A Alternatives are longer. They also would have greater impacts to conservation areas, APAs, other types of farmland, and prime farmland; would require more acquisitions; and would have greater harm according to the Section 4(f) evaluation. The A Alternatives are also less consistent with city plans. On the other hand, the B Alternatives would have more direct impacts to wetlands and would have more residential noise receptors above criteria. On balance, FHWA and UDOT consider the B Alternatives to have the lowest overall impacts on the natural and human environment. Specific regulatory requirements are discussed below.

Farmland. The A Alternatives would have greater impacts on APAs, prime farmland, irrigated cropland, and non-irrigated cropland. The A Alternatives would also have more indirect impacts to farmland. Some of the farmland that would be affected by the A Alternatives is in unincorporated parts of Davis and Weber Counties and is not planned for development.

Consistency with City Plans. The three cities in the northern part of the WDC study area (Syracuse, West Point, and Hooper) have all adopted the alignment identified in the 2001 *North Legacy Transportation Corridor Study* (NLTC study). This alignment is identified in the city plans. The B Alternatives would be more consistent with city plans than the A Alternatives because the B Alternatives are located close to the bluff in Syracuse, which was identified in the 2001 NLTC study as the preferred location for the North Legacy project. Therefore, the B Alternatives are more consistent with how the cities are planned to develop in the future.

Land with Conservation Easements. The A Alternatives would directly affect 14 acres of the 40-acre Black Agriland conservation easement located between 3000 West and 3500 West in Syracuse on the northern side of the Great Salt Lake Shorelands Preserve. This conservation easement is held by the Utah Department of Agriculture and Food and was designated with the intent of preserving agricultural use and providing an upland buffer to the preserve. Converting this conservation easement to roadway use with the A Alternatives would negate the intended use of the conservation easement.

Impacts to the Great Salt Lake Shorelands Preserve. Although the A Alternatives would not directly affect the Great Salt Lake Shorelands Preserve north of Gentile Street, they would be immediately adjacent to the northern boundary of the preserve for a distance of about 1 mile. The A Alternatives would directly affect 14 acres of the 40-acre Black Agriland conservation easement located between 3000 West and 3500 West in Syracuse on the northern side of the Great Salt Lake Shorelands Preserve. This conservation easement is held by the Utah Department of Agriculture and Food and was designated with the intent of preserving agricultural use and providing an upland buffer to the preserve. The B Alternatives would not affect the Black Agriland conservation easement and would not be close to the Great Salt Lake Shorelands Preserve north of Gentile Street. For more information, see the discussion of wildlife habitat below.

Relocations. The A Alternatives would involve acquiring 22 to 26 residences, and the B Alternatives would involve acquiring 15 to 16 residences. Most of the A Alternatives' acquisition and relocation impacts are associated with the Bridgeway Island subdivision.

Noise and Indirect Community Impacts. In addition to the direct relocation impacts to the Bridgeway Island subdivision, the A Alternatives would also cause noise and visual impacts to the remaining residents in the subdivision. The currently cohesive Bridgeway Island neighborhood would be bisected by the A Alternatives. Although roadway and pedestrian access would be moved and maintained, the remaining residents of the Bridgeway Island subdivision would experience some loss of neighborhood connection, noise impacts, and visual impacts.

By comparison, the B Alternatives would not have any direct impacts on subdivisions. However, as previously shown in Table 6, the B Alternatives would have 53 to 62 more residential noise receptors above criteria than would the A Alternatives.

Wetlands. The B Alternatives would fill about 18 to 19 acres more wetlands than would the A Alternatives (27 to 28 acres for the B Alternatives versus 7 to 8 acres for the A Alternatives).

Floodplains. Neither the A Alternatives nor the B Alternatives would affect any floodplains north of Gentile Street.

Wildlife Habitat. The B Alternatives would directly affect 7 to 11 acres of high-quality wildlife habitat. The A Alternatives would affect 0.5 to 4 acres of high-quality wildlife habitat. However, the A Alternatives are located immediately adjacent to rarer, more important high-quality wildlife habitat located in the Great Salt Lake Shorelands Preserve. Of the different wildlife habitat types, the marsh, playa, riparian, and water habitats are rarer and

more valuable in the WDC study area. The A Alternatives and B Alternatives would have comparable impacts on playa, riparian, and water habitats, but the A Alternatives would be immediately adjacent to a much higher acreage of high-quality marsh habitats in the Great Salt Lake Shorelands Preserve. On balance, FHWA and UDOT believe that the A Alternatives would affect more wildlife habitat. This determination is supported by comments received from the Utah Reclamation Mitigation Conservation Commission (URMCC) and The Nature Conservancy (TNC), the owners and managers of the Great Salt Lake Shorelands Preserve.

Other Resources. For the northern alternatives, any of the alternatives would have comparable impacts to community facilities, hazardous waste facilities, trail crossings, and stream or canal crossings. The number of platted lots affected, the number of potential business relocations, and the visual impacts would be similar between the northern alternatives, and the impacts on these resources would not provide a meaningful basis for differentiating between alternatives.

Regulatory Considerations

Section 4(f). As described in Chapter 27, Section 4(f)/6(f) Evaluation of the Final EIS, FHWA and UDOT anticipate that all alternatives would use Section 4(f) resources. Although the B Alternatives would uses more Section 4(f) resources, the evaluation of least overall harm determined that the B Alternatives would have the least overall harm of the alternatives. Therefore, FHWA and UDOT have determined that the selection of the B Alternatives is consistent with the requirements of Section 4(f).

Section 404 of the Clean Water Act. Both of the northern alternatives would affect wetlands and waters of the U.S. There are no practicable northern alternatives that would completely avoid impacts to all wetlands and waters of the U.S. Although the B Alternatives would fill a larger area (27 to 28 acres) of wetlands, the A Alternatives could have a greater overall impact on the ecosystem given their proximity to the Great Salt Lake Shorelands Preserve. The wetlands directly impacted by the B Alternatives are primarily surrounded by development and roads and have associated urban runoff and noise impacts. Some of these wetlands are considered isolated wetlands and do not fall under the regulatory jurisdiction of the Clean Water Act. The A Alternatives would be adjacent to important high quality wetlands and wildlife habitat associated with the Great Salt Lake Shorelands Preserve. The U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, and the U.S. Fish and Wildlife Service felt that the A Alternatives' proximity impacts to the Great Salt Lake Shorelands Preserve would result in a greater impact to the aquatic ecosystem than would the direct wetland impacts from the B Alternatives.

Executive Order 11990, Protection of Wetlands. As previously shown in Table 6, all of the WDC action alternatives would have some impacts to wetlands. There was no practicable WDC action alternative that would avoid impacts to wetlands. Although the B Alternatives would fill a larger area (27 to 28 acres) of wetlands, the A Alternatives could have a greater overall impact on the ecosystem given their proximity to the Great Salt Lake Shorelands Preserve.

Federal Executive Order 11988, Floodplain Management. Neither northern alternative would affect floodplains.

Utah Agricultural Protection Act. The Utah Agricultural Protection Act requires that designated APAs can be converted to highway use only if there is no feasible and prudent alternative to use of land in the APA.

As shown previously in Table 6, both of the northern alternatives would affect APAs. There was no prudent and feasible alternative that would avoid all impacts to APAs. However, the B Alternatives would affect only 3 to 4 acres from 1 to 2 APAs. The A Alternatives would affect a total of 24 to 42 acres from 6 to 11 APAs. The B Alternatives would have the fewest impacts on APAs. Therefore, FHWA and UDOT consider the selection of the B Alternatives to be consistent with the requirements of the Utah Agricultural Protection Act.

3.3.3 Summary

FHWA and UDOT identified the B Alternatives as the preferred northern alternatives because they would have the best transportation performance; were determined to have the least overall harm according to the Section 4(f) evaluation; would have the lowest amount of impacts to APAs and other farmland, the most consistency with local land-use and transportation plans, and the fewest relocations; and because they would not be located immediately adjacent to the Great Salt Lake Shorelands Preserve along Gentile Street.

3.4 FHWA and UDOT Evaluation of Northern Options for Alternatives B1 and B2

FHWA and UDOT identified the B Alternatives' **4100 West Option** at 1800 North as their preferred northern option.

As previously described in Table 1, Components of WDC Action Alternatives, and shown above in Figure 1, Alternatives Evaluated in the Final EIS, north of 700 South in West Point, the B Alternatives use one of two northern options. Alternative B1 uses the 4100 West northern option that ends at 4100 West 1800 North in Davis County. Alternative B2 uses the 4800 West northern option that ends at 4800 West 1800 North in Davis County.

FHWA and UDOT identified the 4100 West northern option as the preferred northern option because it would have the best regional and local transportation performance, the fewest uses of Section 4(f) resources, the fewest impacts to APAs, and the most consistency with local land-use and transportation plans.

The sections below summarize the reasons why FHWA and UDOT identified the 4100 West Option as the preferred northern option.

3.4.1 Evaluation of the Degree to which Option Meets the Project Purpose

Improve Regional and Peak-Period Transportation Performance

Section 2.2, Purpose and Need Performance, describes how the WDC action alternatives would meet the project purpose. The regional performance of the B Alternatives' northern options was similar for all five criteria. Alternative B1, which uses the 4100 West northern option, performed better than the other alternatives in reducing daily delay and reducing congestion on east-west roads. In addition, Alternative B1 was the best performing of the B Alternatives in all categories.

Over the length of the whole alternative, Alternative B1 would carry 1,600 more trips per day than Alternative B2.

Local Performance

At a local scale, the 4100 West Option would carry about 2,700 more vehicles per day in West Point (a 30% increase) than the 4800 West Option. Additionally, the 4100 West Option is about 0.1 mile shorter than the 4800 West Option, since the 4800 West Option goes farther to the west between 700 South in West Point and 1800 North in Davis County. With its shorter length and more vehicle use per day, the 4100 West Option provides a better overall transportation benefit than the 4800 West Option.

Increase Interconnection between Transportation Modes

Both northern options would equally support increased interconnection between transportation modes. See Section 2.2.1, Evaluation of the Degree to which Alternative Meets the Project Purpose, for more details.

Support Local Growth Objectives

The criterion of supporting local growth objectives is based on to what degree an option is consistent with local and regional land-use plans. Both northern options are consistent with Syracuse City's land-use and transportation plans. The 4100 West Option is consistent with West Point City's land-use and transportation plans. However, because the 4800 West Option is a more westerly alignment in West Point, it is not consistent with West Point City's plans.

Increase Bicyclist and Pedestrian Options

Both northern options would equally support increased bicyclist and pedestrian options. See Section 2.2.1, Evaluation of the Degree to which Alternative Meets the Project Purpose, for more details.

3.4.2 Resource Impacts

Table 7 summarizes the costs and impacts of the two northern options for the B Alternatives between 700 South in West Point and the northern terminus at 1800 North in Davis County. The data in Table 7 include only the impacts for these two northern options, not for the complete lengths of the alternatives.

Table 7. Summary of Environmental Impacts from the B Alternatives' Northern Options (from 700 South to 1800 North)

Impact Category	Unit	B Alternatives' Northern Options	
		4800 West Option (Alternative B2)	4100 West Option (Alternative B1)
Route length	Miles	2.9	2.8
Route cost (2017)	Dollars	$44 million	$41 million
Land converted to roadway use	Acres	70	70
Direct impacts to the Great Salt Lake Shorelands Preserve	Acres	0	0
Direct impacts on land with a conservation easement[a]	Acres	0	0
Consistent with city plans (1 City)	Number	0	1
Direct impacts on prime farmland	Acres	0	0
Direct impacts on irrigated cropland	Acres	46	43
Direct impacts on non-irrigated cropland	Acres	4	4
Direct impacts on Agriculture Protection Areas	Number	2	0
Indirect farmland impacts	Acres	11	3
Residential relocations	Number	4	3
Potential residential relocations[b]	Number	1	1
Residential plats affected[c]	Number	0	0
Business relocations	Number	1	0
Potential business relocations[b]	Number	0	0
Direct impacts on recreation areas	Number	0	0
Direct impacts on community facilities	Number	1	0
Existing trails relocated	Number	0	0
Existing trails crossed	Number	0	1
Residential Noise receptors above criteria	Number	0	8
Stream/canal crossings	Number	0	0
Direct impacts on wetlands	Acres	4.4	5.7
• Category I wetlands[d]	Acres	0	0.6
Wetlands within 300 feet of the right-of-way	Acres	25.5	42.0
Direct impacts on high-quality wildlife habitat[e]	Acres	0	3.6
High-quality wildlife habitat within 300 feet of the right-of-way	Acres	0	11.7
Direct impacts on floodplains	Acres	0	0

Table 7. Summary of Environmental Impacts from the B Alternatives' Northern Options (from 700 South to 1800 North)

Impact Category	Unit	B Alternatives' Northern Options	
		4800 West Option (Alternative B2)	4100 West Option (Alternative B1)
Adverse effects on cultural resources	Number	0	0
Direct impacts on hazardous waste sites	Number	0	0
Section 4(f) uses	Number	0	0
Section 4(f) *de minimis* uses	Number	2	0

[a] Conservation easements include Farmington City–held conservation easements and the Black Agriland conservation easement held by the Utah Department of Agriculture and Food.

[b] A potential relocation occurs when the right-of-way required for the WDC would affect the property and would be between 1 foot and 15 feet away from the structure.

[c] A residential plat is a lot that has been approved for residential development by the local jurisdiction but has not been developed.

[d] Wetland quality was determined using the UDOT Functional Assessment. Category I wetlands have the highest quality and Category III the lowest. For more information, see Chapter 14, Ecosystem Resources, of the Final EIS.

[e] High-quality wildlife habitats were determined by evaluating parcels for their habitat suitability for eight different wildlife species representative of the WDC study area. For more information, see Chapter 14, Ecosystem Resources, of the Final EIS and *Technical Memorandum 9: Wildlife Assessment Methodology – Existing Conditions*.

Environmental Impacts

As shown above in Table 7, the 4800 West Option is longer. The 4800 West Option also would have greater impacts on APAs and more residential acquisitions and would be less consistent with city plans. On the other hand, the 4100 West Option would have more direct impacts on wetlands and would have slightly more residential noise receptors above criteria. On balance, FHWA and UDOT consider the 4100 West Option to have the lowest overall impacts on the natural and human environment. Specific regulatory requirements are discussed below.

Farmland. The 4800 West Option would have greater impacts on APAs and irrigated cropland. The 4800 West Option would also have more indirect impacts on farmland.

Consistency with City Plans. The two cities in the northern part of the study area (Syracuse and West Point) have both adopted the alignment identified in the 2001 NLTC study. This alignment is identified in the city plans. Both northern options share the same alignment in Syracuse, and both are consistent with Syracuse City's land-use and transportation plans. The 4100 West Option would be more consistent with city plans than the 4800 West Option because the 4100 West Option is located closer to the bluff in West Point, which was identified in the 2001 NLTC study as the preferred location for the North Legacy project.

Land with Conservation Easements. Neither of the northern options would affect any land with conservation easements.

Relocations. The 4800 West Option would involve acquiring four residences and would potentially acquire one more. The 4100 West Option would involve acquiring three residences and would potentially acquire one more.

Noise and Indirect Community Impacts. The 4100 West Option would have eight residential noise receptors above criteria, the 4800 West Option would not have any residential noise receptors above criteria.

Wetlands. The 4100 West Option would fill about 1.3 acres more wetlands than would the 4800 West Option (4.4 acres versus 5.7 acres). The 4100 West Option's additional wetland impacts would occur near the 1800 North intersection along the bluff in West Point. The 4800 West Option would avoid these wetland impacts.

Floodplains. Neither the 4800 West Option nor the 4100 West Option would affect floodplains.

Wildlife Habitat. The 4100 West Option would directly affect 3.6 acres of high-quality wildlife habitat. The 4800 West Option would not affect any high-quality wildlife habitat.

Other Resources. Both northern options would have comparable impacts to community facilities, hazardous waste facilities, trail crossings, and stream or canal crossings. The number of platted lots affected, the number of potential business relocations, and the visual impacts would be similar between the northern options, and the impacts on these resources would not provide a meaningful basis for differentiating between options.

Regulatory Considerations

Section 4(f). As previously shown in Table 7, the 4100 West Option would not have any 4(f) uses. The 4800 West Option would have *de minimis* uses of two Section 4(f) resources. Therefore, FHWA and UDOT anticipate that the selection of either northern option is consistent with the requirements of Section 4(f).

Section 404 of the Clean Water Act. Both of the northern options would affect wetlands and waters of the U.S. There are no practicable northern options that would completely avoid impacts on all wetlands and waters of the U.S. The 4100 West Option would fill a larger area (5.7 acres) of wetlands than would the 4800 West Option (4.4 acres). However, the 4800 West option would be about 3,700 feet further west and thus closer to the Great Salt Lake wetlands. The closer proximity could potentially impact about 86 more acres of high quality wildlife habitat and associated wetlands based on the 3,900 foot buffer zone used in the EIS. In contrast, the 1.3 acres more of wetland impacts associated with the 4100 West option would be in an area surrounded by residential development. Based on this, UDOT and FHWA felt that the direct wetland impacts from Alternative B1 would result in a lesser overall impact to the aquatic ecosystem than Alternative B2, with its closer proximity to the Great Salt Lake.

Executive Order 11990, Protection of Wetlands. Both of the northern options would affect wetlands. There was no practicable WDC northern option that would avoid impacts to

wetlands. The 4100 West Option would fill a larger area (5.7 acres) of wetlands than would the 4800 West Option (4.4 acres).

Federal Executive Order 11988, Floodplain Management. Neither northern option would affect floodplains.

Utah Agricultural Protection Act. As previously shown in Table 7, only the 4800 West northern option would affect APAs. The 4100 West northern option would avoid all impacts to APAs. Therefore, FHWA and UDOT consider the selection of the 4100 West Option to be consistent with the requirements of the Utah Agricultural Protection Act.

3.4.3 Summary

FHWA and UDOT identified the 4100 West northern option as the preferred northern option because it would have the best regional and local transportation performance, the fewest uses of Section 4(f) resources, the lowest amount of impacts to APAs, and the most consistency with local land-use and transportation plans

3.5 FHWA's and UDOT's Preferred Alternative – Alternative B1 with Wetland Avoidance Options

As described in Sections 3.2., 3.3, and 3.4, Alternative B1 with Wetland Avoidance Options consists of a WDC connection at Glovers Lane, the segment common to all alternatives between the Farmington–Kaysville border and Gentile Street in Syracuse with the wetland avoidance option, the B Alternatives northern alternative, and the 4100 West northern option.

Compared with the other WDC action alternatives, Alternative B1 with Wetland Avoidance Options would have the best overall transportation performance because it uses a more efficient eastern alignment in Syracuse and West Point.

As previously shown in Table 5, Summary Comparison of Cost and Resource Impacts by WDC Action Alternative, Alternative B1 with the wetland avoidance options was also found to have the least overall harm according to the Section 4(f) evaluation and would have the least impacts to APAs. It would also have least residential and business relocations and community impacts, would be the most consistent with local plans, and would have the least impact to farmland and conservation easements

4.0 Conclusion

FHWA and UDOT identified Alternative B1 with Wetland with the wetland avoidance option as their preferred alternative for the WDC Final EIS. The final selection of an alternative will be made by FHWA in the project's Record of Decision. As part of the Clean Water Act permitting process, the U.S. Army Corps of Engineers will make the decision about whether the alternative submitted to the Corps in the permit application satisfies the Section 404(b)(1) guidelines.