Chapter 1: Purpose of and Need for Action

1.1 Introduction

This Environmental Impact Statement (EIS) for the West Davis Corridor (WDC) has been prepared according to the provisions of the National Environmental Policy Act (NEPA), the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU; Public Law 109-059), and corresponding regulations and guidelines of the Federal Highway Administration (FHWA), the lead federal agency. This document also conforms to the requirements of the Utah Department of Transportation (UDOT), the project sponsor and lead state agency.

FHWA and UDOT have joint responsibility for developing transportation infrastructure in Utah. As the lead agencies, FHWA and UDOT are responsible for supervising the preparation of the WDC EIS (23 Code of Federal Regulations [CFR] 771 and 40 CFR 1500–1508).

SAFETEA-LU also requires lead agencies to identify and involve cooperating and participating agencies, develop coordination plans, provide opportunities for the public and participating agencies to be involved in defining the purpose and need statement and determining the range of alternatives, and collaborate with participating agencies to determine methodologies and the level of detail for analyzing alternatives. Lead agencies must also provide oversight with regard to managing the NEPA process and resolving issues.

Table 1.1-1 below lists the cooperating and participating agencies for the WDC EIS.

<table>
<thead>
<tr>
<th>What are the lead agencies for the WDC project?</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Federal Highway Administration (FHWA) is the lead federal agency, and the Utah Department of Transportation (UDOT) is the project sponsor and lead state agency.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What are cooperating and participating agencies?</th>
</tr>
</thead>
<tbody>
<tr>
<td>A cooperating agency is any federal agency, other than a lead agency, that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposed project or project alternative (40 CFR 1508.5). A participating agency is a federal, state, tribal, regional, or local government agency that might have an interest in the WDC project.</td>
</tr>
</tbody>
</table>
Table 1.1-1. Cooperating and Participating Agencies for the WDC EIS

<table>
<thead>
<tr>
<th>Agency or Local Government</th>
<th>Type of Agency Involvement</th>
<th>Agency or Local Government</th>
<th>Type of Agency Involvement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Federal Agencies</strong></td>
<td></td>
<td><strong>Regional Governments or Agencies</strong></td>
<td></td>
</tr>
<tr>
<td>Advisory Council on Historic Preservation</td>
<td>Participating</td>
<td>Utah Transit Authority</td>
<td>Participating</td>
</tr>
<tr>
<td>Army Corps of Engineers</td>
<td>Cooperating and Participating</td>
<td>Wasatch Front Regional Council</td>
<td>Participating</td>
</tr>
<tr>
<td>Bureau of Indian Affairs</td>
<td>Participating</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Protection Agency</td>
<td>Cooperating and Participating</td>
<td>Davis County</td>
<td>Participating</td>
</tr>
<tr>
<td>Fish and Wildlife Service</td>
<td>Cooperating and Participating</td>
<td>Weber County</td>
<td>Participating</td>
</tr>
<tr>
<td>Utah Reclamation Mitigation and Conservation Commission</td>
<td>Cooperating and Participating</td>
<td>Centerville City</td>
<td>Participating</td>
</tr>
<tr>
<td>Bureau of Reclamation</td>
<td>Participating</td>
<td>Clearfield City</td>
<td>Participating</td>
</tr>
<tr>
<td>Federal Emergency Management Agency</td>
<td>Participating</td>
<td>Clinton City</td>
<td>Participating</td>
</tr>
<tr>
<td>Natural Resources Conservation Service</td>
<td>Participating</td>
<td>Farmington City</td>
<td>Participating</td>
</tr>
<tr>
<td><strong>Tribal Governments</strong>a</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>State Agencies</strong>b</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governor’s Office of Planning and Budget, Resource Development Coordinating Committee (RDCC)</td>
<td>Participating</td>
<td>Marriott-Slaterville City</td>
<td>Participating</td>
</tr>
<tr>
<td>Department of Environmental Quality</td>
<td>Participating</td>
<td>Ogden City</td>
<td>Participating</td>
</tr>
<tr>
<td>• Division of Air Quality</td>
<td>Participating</td>
<td>Roy City</td>
<td>Participating</td>
</tr>
<tr>
<td>• Division of Water Quality</td>
<td>Participating</td>
<td>Syracuse City</td>
<td>Participating</td>
</tr>
<tr>
<td>Department of Natural Resources</td>
<td>Participating</td>
<td>West Haven City</td>
<td>Participating</td>
</tr>
<tr>
<td>• Division of Wildlife Resources</td>
<td>Participating</td>
<td>West Point City</td>
<td>Participating</td>
</tr>
<tr>
<td>Utah Division of State History, State Historic Preservation Officer</td>
<td>Participating</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a Several tribes were invited to participate, but none responded to the invitation. Tribal representatives will also be contacted as part of the Native American consultation process associated with this EIS.
b This is not a complete list of state departments and divisions. All state agency participation will be coordinated through the Resource Development Coordinating Committee (RDCC), which is listed as a participating agency in this table.
c The Cities of Farr West, Plain City, Riverdale, and Sunset were also invited to become participating agencies but did not respond to the invitation.
1.2 Description of the Study Area

The study area for assessing the need for the WDC consists of an area of about 79,450 acres west of Interstate 15 (I-15) in Davis and Weber Counties. The study area contains parts of 15 incorporated cities in Davis and Weber Counties as well as unincorporated land in each county. The specific boundaries of the study area, which are shown in Figure 1-1, West Davis Corridor Study Area, are:

- Northern boundary: 12th South (1200 South or 12th Street) in Marriott-Slaterville
- Southern boundary: about Parrish Lane in Centerville
- Western boundary: just east of the Great Salt Lake
- Eastern boundary: I-15

The limits of the study area for the needs assessment were developed based on the projected travel demand in 2040. The travel demand in this area was developed using Version 6.0 of Wasatch Front Regional Council’s (WFRC) travel demand model, which is based on the expected population, employment, household, and land-use conditions in 2030 as described in the Wasatch Front Regional Transportation Plan 2007–2030 (WFRC 2007). The model was modified to account for the expected changes in these conditions between 2030 and 2040 based on projected population and employment data for 2040 from the Governor’s Office of Planning and Budget and additional roadway improvements projected by WFRC. (For more information about the travel demand modeling, see Section 1.4.2, Need for the Project.)

The West Davis Corridor Team established the northern boundary of the study area based on the projections of growth, development, and related travel in the region in 2040 and because this boundary would allow the northern end of the WDC to connect logically into the planned transportation system in 2040. The WFRC travel projections for 2040 predict that, north of 12th South in Marriott-Slaterville, the travel demand will drop considerably and the existing transportation system in that area will operate with minimal congestion.

The WDC Team established the southern boundary based on WFRC’s travel projections for 2040 and because this boundary would allow the southern end of the WDC to connect logically into the planned transportation system in 2040. The southern end of the study area in Farmington and Centerville has four major north-south transportation facilities—Legacy Parkway, I-15, US 89, and the FrontRunner commuter rail line—which would provide a logical connection point for the WDC.
The western boundary is based on the location of the Great Salt Lake and the sensitive habitats associated with the lake. The eastern boundary (I-15) is based on the projected transportation system and travel demand in the region in 2040. I-15 is the eastern boundary because transportation improvements east of this highway would have little effect on north-south or east-west travel west of I-15. For more information about the study area boundaries, see the *West Davis Corridor Technical Report 3, EIS Transportation Need Study Area* (UDOT 2009a).

### 1.3 Background of the West Davis Corridor

The idea of a north-south transportation facility west of I-15 between Salt Lake County and Weber County was first conceptualized in the 1960s. Since that time, UDOT and WFRC have conducted several planning studies in the WDC study area to evaluate and plan for future transportation needs. These studies made recommendations for the location and type of facility, and many of these studies have been adopted by the local municipalities in their plans and are considered in the alternatives development process for the WDC project. The WDC Team is aware of these studies and their recommendations. A summary of these previous planning processes is provided below.

#### 1.3.1 1995–1998 Western Transportation Corridor Major Investment Study (WTC-MIS)

In response to rapidly increasing congestion on I-15, in 1995 the Utah legislature appropriated funds for a Western Transportation Corridor Major Investment Study (WTC-MIS). The purpose of the WTC-MIS was to assess transportation alternatives and to determine if a major investment of public funds was warranted (WFRC 2001a).

The WTC-MIS study area included the area between I-15 and the Great Salt Lake and was bounded on the south by Interstate 80 (I-80) in Salt Lake County and on the north by 12th South in Weber County. In late 1996, Governor Mike Leavitt announced a long-range plan to build a “Legacy Highway” through western Weber, Davis, Salt Lake, and Utah Counties. By this time, the WTC-MIS Steering Committee had concluded that a north-south highway in southern Davis County would be part of a “locally preferred alternative.” UDOT then began working on an EIS for the southern Davis County segment.

The WTC-MIS final report identified a need to preserve a 200-foot-wide transportation corridor throughout the length of the study area. The WTC-MIS identified the locally preferred alternative based on public and agency input and an analysis of various alternatives. This preferred alternative included the following elements:

- Construction of a new road (identified as a principal arterial throughout its length in Davis and Weber Counties)
- Preservation of an eastern commuter-rail corridor for multimodal purposes
- Increased commuter bus service
In 2008, UDOT finished construction of the southern Davis County segment that was identified as the principal arterial in the study. This segment, which connects Salt Lake County and Farmington in Davis County, is now called the Legacy Parkway. UTA finished construction of its FrontRunner commuter-rail line along the eastern rail corridor between Salt Lake City and Ogden in 2007 and began service in 2008. For more information about improvements to the transit system in the study area, see Section 1.7.4, Transit Network.

### 1.3.2 North Legacy Corridor Study

WFRC sponsored a study in 2001 to refine the north-south corridor concept west of I-15 that was presented in the WTC-MIS. Although no actual designs were developed, the 2001 study evaluated options that could connect to Legacy Parkway and extend north into Weber County (WFRC 2001b).

The 2001 North Legacy Corridor Study identified a preferred option for Davis County. The Davis County segments made up the “Bluff Road Alternative,” and the Davis County communities generally agreed on a preferred corridor. In Weber County, the local governments agreed on a corridor from the county line to 12th South. However, they disagreed on a corridor north of 12th South, so the 2001 study report doesn’t discuss a corridor north of 12th South.

In 2009, WFRC and UDOT revisited the Weber County portion of the 2001 study. This supplemental study succeeded in identifying a preferred corridor for the Weber County communities west of I-15 (Hooper, West Haven, and Plain City) and for the unincorporated areas of Weber County (WFRC 2009).

### 1.3.3 North Legacy to Legacy Connection Corridor Preservation Study

In 2007, UDOT completed a study of a connection between the existing Legacy Parkway and the future North Legacy corridor studied by WFRC in 2001. The study was called the North Legacy to Legacy Connection Corridor Preservation Study (Horrocks 2007).

The study reviewed four options for the connector: (1) the Denver and Rio Grande (D&RG) rail corridor with split interchange configurations at I-15/Legacy North and Legacy Parkway, (2) an alignment west of the developed area of Farmington, (3) an alignment along the D&RG rail corridor using a combined interchange with I-15 and Legacy Parkway on the south end, and (4) an alignment that parallels I-15 closely and that has a combined interchange with I-15 and Legacy Parkway on the south end. In the study, Option 3 was identified as the preferred option.
UDOT received comments from the local community that UDOT’s study and the preferred option needed to consider a full range of alternatives, impacts, or issues important to Farmington residents. For these reasons, Farmington City commissioned an independent assessment of the study in 2007. The independent assessment reviewed UDOT’s projected traffic volumes based on its traffic model as well as corridor alignment options. The assessment also identified and assessed additional corridor alignment options. The assessment concluded that the City should wait to adopt UDOT’s preferred option until either an Environmental Assessment (EA) or Environmental Impact Statement (EIS) could be prepared and a thorough technical analysis and an established public process could be provided.

Farmington City continued to study regional transportation issues through its master transportation planning process and, in 2009, amended its Master Transportation Plan to reflect the City’s preferred alignment area.

1.3.4 Wasatch Choices 2040

During 2005, WFRC teamed with Utah County’s Mountainland Association of Governments (MAG), UDOT, FHWA, the Utah Transit Authority, and Envision Utah to complete Wasatch Choices 2040: A Four County Land-Use and Transportation Vision (WFRC and others, no date). MAG is the metropolitan planning organization for Utah County. The study, which included extensive public involvement, was intended to support an update of WFRC’s and MAG’s Regional Transportation Plans. The study identified goals or principles for the future growth along the Wasatch Front, reviewed how land use and transportation interact, developed a “vision” for the future, and identified strategies to implement that vision.

Four initial scenarios were developed: Business as Usual, Transit Station Villages, Interconnected Network of Complete Streets, and Centers of Employment. Based on these scenarios, a Vision Scenario was developed that was a blend of the four initial scenarios. The Vision Scenario included a balanced variety of transportation modes including walking and bicycling, auto travel, and transit. The Vision Scenario presents strategies for local governments to consider when planning their communities.

The Wasatch Choices 2040 report specifically identifies a north-south expressway as part of the Vision Scenario for the WDC study area. This north-south expressway is in the same location as the corridor shown in WFRC’s 2001 study (the North Legacy Corridor Study).

1.4 Summary of Purpose and Need

1.4.1 Purpose of the Project

The purpose of the WDC project consists of both primary purposes and secondary objectives. The WDC Team used the primary purposes as criteria to screen or eliminate alternatives that were not reasonable or practicable. In other words, if an alternative would not achieve the project’s primary purposes, it was eliminated from further consideration. The team used the secondary objectives to further compare and refine the project alternatives (for example, to make minor shifts to the alignments), but these secondary objectives were not used to determine whether an alternative was reasonable or practicable.
The WDC is intended to achieve the following purposes:

- **Improve Regional Mobility.** Improve regional mobility for automobile, transit, and freight trips by reducing user delay on the road system compared to the No-Action conditions through the consideration of all transportation modes. (For more information about the No-Action conditions, see Section 1.7, Needs Assessment.)

- **Enhance Peak-Period Mobility.** Enhance mobility during the AM and PM peak periods for the main travel direction (north-south) to help accommodate the projected travel demand in the study area in 2040. (For a detailed discussion of the peak-period travel direction, see Section 1.7.3, Travel Patterns)

The WDC project will also evaluate the following secondary objectives:

- **Increase the Interconnection between Transportation Modes.** Improve regional mobility by improving the connections between transportation modes such as automobile, transit, bicycle, and pedestrian travel compared to the No-Action conditions.

- **Support Local Growth Objectives.** Support the objectives of the adopted local land-use and transportation plans for communities west of I-15 in Weber and Davis Counties.

- **Increase Bicycle and Pedestrian Options.** Increase bicycle and pedestrian options consistent with the adopted local and regional plans in the parts of the study area in Weber and Davis Counties.

Chapter 2, Alternatives, lists the elements of the project’s purpose and objectives and the measures that were used to help develop and screen the project alternatives. For more information about the need for the WDC, see Section 1.7, Needs Assessment.

### 1.4.2 Need for the Project

The major transportation needs in the WDC study area are a result of rapidly growing population and employment projected for this area. The existing road network in the study area west of I-15 primarily consists of arterial streets that are not intended to accommodate a high volume of long-distance trips and freight movements. The existing transportation infrastructure west of I-15 and the FrontRunner commuter-rail line do not support efficient transit (rail and bus) use.
These conditions will result in the following deficiencies in 2040:

- Decreased mobility and increased traffic congestion in the AM and PM peak-period travel period (inadequate roadway capacity).

- Lack of adequate north-south transportation capacity to serve the main travel direction (north to south) in the AM and PM peak-period travel period. This will lead to increased east-west congestion.

- Increased user delay and lost productivity.

- Inadequate interconnection of transportation modes.

- Lack of continuous pedestrian/bicycle facilities.

These principal deficiencies were identified by comparing present and future levels of transportation service in the WDC study area and reviewing the goals and objectives of the 2030 Regional Transportation Plan (WFRC 2007). The deficiencies would occur even with all other anticipated 2030 transportation improvements (except the WDC) in the study area that are identified in the WFRC Regional Transportation Plan (see Section 1.6.1, Regional Transportation Planning by WFRC).

In addition, the need for transportation improvements is recognized by regional and local transportation and land-use plans (see Section 1.6, Regional and Local Transportation Planning). The WFRC Regional Transportation Plan documents the need for additional travel capacity in the study area. Furthermore, local community land-use plans in the study area as well as regional land-use and transportation plans show major planned transportation facilities in the study area.

The remainder of this chapter presents data that document the need for the WDC. The need for the project was determined by quantifying the change in anticipated travel demand and land use between existing (2009) and forecasted (2040) conditions in terms of measurements such as the amount of projected traffic, travel delays, and lost productivity.
1.5 Growth Trends

Population, employment, and household growth are all important factors in determining travel demand. Large increases in any of these factors over an extended period can cause substantial increases in future travel. This section summarizes the expected growth in the study area and in Weber and Davis Counties by 2040.

Data show that, by 2040, population and households are expected to increase by greater percentages in the study area than in the surrounding areas of Weber and Davis Counties. The reason for the higher growth rate in the study area is that much of the open land available for development in the two counties is within the study area. Although the WDC is being studied to meet projected travel demand in 2040, not all available open land in the study area is projected to be developed by 2040. Therefore, the growth in the study area could continue beyond 2040 if no other factors such as water availability or air quality limit this growth. The population, employment, and household projections in the following sections were obtained from the WFRC regional travel demand model (Version 6.0).

1.5.1 Population Growth

By 2040, population in Davis and Weber Counties is expected to increase by 33% and 63%, respectively, while population in the study area is expected to increase from 173,000 in 2009 to 311,000 in 2040 (an increase of 80%). Figure 1-2, Percent Population Growth 2009–2040, shows the percent population growth expected in the study area between 2009 and 2040 and Figure 1-3, Total Population Growth 2009–2040, shows the absolute population growth. Exhibit 1-1 shows the projected population, employment, and household growth in the study area.

Exhibit 1-1. Population, Employment, and Household Growth in the WDC Study Area
### 1.5.2 Employment Growth

Between 2009 and 2040, overall employment in Davis and Weber Counties is expected to increase by 45% and 72%, respectively. In the study area, employment growth is expected to increase from 69,000 in 2009 to 110,000 in 2040 (an increase of 59%). Figure 1-4, Percent Employment Growth 2009–2040, shows the percent employment growth expected in the study area, and Figure 1-5, Total Employment Growth 2009–2040, shows the absolute employment growth.

In the Davis County part of the study area, the main employers and employment areas are Lifetime Products, Smith’s Marketplace Distribution Center, Davis Hospital and Medical Center, and Utility Trailer Manufacturing Company (see Figure 1-4). In addition, Hill Air Force Base, another large employer, is just east of the WDC study area. In the Weber County part of the study area, the major employers are Autoliv, Focus Services, and William International Company (Utah Department of Workforce Services 2009).

### 1.5.3 Household Growth

Between 2009 and 2040, the number of households in Davis and Weber Counties is expected to increase by 51% and 73%, respectively. In the study area, household growth is expected to be higher and is projected to increase from 54,000 to 108,000 (an increase of 100%).

### 1.6 Regional and Local Transportation Planning

The anticipated growth in population, employment, and households by 2040 (see Section 1.5, Growth Trends) has led WFRC, the Counties, and the Cities to develop transportation and land-use plans that consider this growth. These plans identify specific transportation projects as well as general concepts about how the Cities expect their transportation network to operate. This section describes how planning officials considered the need for a north-south transportation facility in the WDC study area to help address population, employment, and household growth.

#### 1.6.1 Regional Transportation Planning by WFRC

WFRC is the metropolitan planning organization for the project region and develops the Regional Transportation Plan for the region. WFRC’s area of responsibility is Davis, Morgan, Salt Lake, Tooele, and Weber Counties.

WFRC’s most recent Regional Transportation Plan, which was adopted in 2007, includes a WDC but refers to it as “North Legacy” (WFRC 2007). WFRC is currently working on the next Regional Transportation Plan, which will be released in 2011. WFRC has been coordinating with UDOT and FHWA to ensure that the travel demand modeling for the WDC considers both WFRC’s 2007 plan and its expected 2011 plan during the WDC EIS planning process.

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**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.
This regional plan is a financially constrained, 20- to 30-year plan of the anticipated highway and transit projects that would be needed to meet travel demand in the WFRC planning area. Transportation needs are based on projected and planned socioeconomic factors and land use within a region. Under federal law, WFRC must update its Regional Transportation Plan every 4 years. WFRC is currently compiling the next version of its Regional Transportation Plan and expects to adopt the new plan in 2011.

The 2007 Regional Transportation Plan identifies three timeframes, or phases, for construction:

- Phase 1 – 2007 to 2015
- Phase 2 – 2016 to 2025
- Phase 3 – 2026 to 2030

The current Regional Transportation Plan includes a WDC as part of the “North Legacy Corridor.” The North Legacy Corridor improvements that are within the WDC study area include:

- Right-of-way acquisition (Phase 1), new construction of a two-lane road (Phase 2), and widening to a four-lane road (Phase 3) from US 89 to the Weber County line
- Right-of-way acquisition (Phase 1) and new construction of a two-lane road (Phase 2) from the Weber County line to 12th South
- Widening from two lanes to four lanes from the Weber County line to 5500 South (Phase 3)

Table 1.6-1 below summarizes the other projects listed in the Regional Transportation Plan that are in the WDC study area.
Table 1.6-1. Transportation Projects in the WDC Study Area

<table>
<thead>
<tr>
<th>Project Type</th>
<th>Project Location</th>
<th>Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-15 Corridor</td>
<td></td>
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</tr>
<tr>
<td>Widening</td>
<td>Hill Field Road to US 89</td>
<td>1</td>
</tr>
<tr>
<td>Widening</td>
<td>Davis/Weber County line to Hill Field Road</td>
<td>2</td>
</tr>
<tr>
<td>Widening</td>
<td>I-84 to Davis/Weber County line</td>
<td>2</td>
</tr>
<tr>
<td>Widening</td>
<td>US 89 (Farmington) to 500 South (Davis County; out of study area)</td>
<td>3</td>
</tr>
<tr>
<td>Interchange improvement</td>
<td>Parrish Lane (Centerville) and South Layton (Layton)</td>
<td>1</td>
</tr>
<tr>
<td>Interchange improvement</td>
<td>Hill Field Road (Layton), 24th Street (Ogden), and Riverdale Road (Riverdale)</td>
<td>2</td>
</tr>
<tr>
<td>New interchange</td>
<td>1800 North (Sunset)</td>
<td>2</td>
</tr>
<tr>
<td>New interchange</td>
<td>Lund Lane</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Davis County</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widening</td>
<td>1800 North (SR 37 in Clinton): Main Street (Sunset) to 2000 West</td>
<td>1</td>
</tr>
<tr>
<td>Widening</td>
<td>1800 North (SR 37 in Clinton): 2000 West to 5000 West</td>
<td>2</td>
</tr>
<tr>
<td>Widening</td>
<td>200 South/700 South connection (Clearfield)</td>
<td>1</td>
</tr>
<tr>
<td>Widening</td>
<td>200 South (Clearfield): 500 West to 2000 West</td>
<td>1</td>
</tr>
<tr>
<td>New construction</td>
<td>200 South (Syracuse): 2000 West to North Legacy Corridor</td>
<td>2</td>
</tr>
<tr>
<td>Widening</td>
<td>Syracuse Road (SR 108 in Clearfield): I-15 to Main Street</td>
<td>3</td>
</tr>
<tr>
<td>Widening</td>
<td>Syracuse Road (SR 108 in Syracuse): 1000 West to 2000 West</td>
<td>1</td>
</tr>
<tr>
<td>New construction</td>
<td>Hill Field Road Extension (Layton): 2200 West to 3200 West</td>
<td>3</td>
</tr>
<tr>
<td>New construction</td>
<td>700 South/900 South (Layton): I-15 to 2700 West</td>
<td>2</td>
</tr>
<tr>
<td>Restriping</td>
<td>200 North (Kaysville): I-15 to North Legacy Corridor</td>
<td>2</td>
</tr>
<tr>
<td>Widening</td>
<td>Parrish Lane (Centerville): I-15 to 1250 West</td>
<td>1</td>
</tr>
<tr>
<td>Widening</td>
<td>2000 West (SR 108 in Syracuse, West Point, Clinton, Roy, and West Haven): Weber County line to Syracuse Road</td>
<td>1</td>
</tr>
<tr>
<td>New construction</td>
<td>2700 West (Layton): Hill Field Road extension to North Legacy Corridor</td>
<td>3</td>
</tr>
<tr>
<td>Restriping</td>
<td>Main Street (Layton): I-15/Fort Lane to 200 North</td>
<td>1</td>
</tr>
<tr>
<td>Widening</td>
<td>Syracuse Road (SR 127): 200 West to North Legacy Corridor</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Widening</td>
<td>2000 West: Syracuse Road to North Legacy Corridor</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Weber County</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Widening</td>
<td>1200 South (Marriott-Slaterville): I-15 to North Legacy Corridor</td>
<td>2</td>
</tr>
<tr>
<td>New construction</td>
<td>Hinckley Drive Extension (Roy): 1900 West (SR 126) to Midland Drive (SR 108)</td>
<td>1</td>
</tr>
<tr>
<td>Widening</td>
<td>4000 South (SR 37 in West Haven): 1900 West to North Legacy Corridor</td>
<td>3</td>
</tr>
<tr>
<td>Widening</td>
<td>Midland Drive (SR 108): Hinckley Drive (West Haven) to 3500 West (Roy)</td>
<td>1</td>
</tr>
<tr>
<td>Widening</td>
<td>3500 West (Roy): Midland Drive (SR 108) to Davis County line</td>
<td>1</td>
</tr>
<tr>
<td>Widening</td>
<td>1900 West (SR 126 in Roy): 5600 South to Riverdale Road</td>
<td>1</td>
</tr>
<tr>
<td>Widening</td>
<td>5600 South (Roy): 1900 West (SR 126) to 3500 West</td>
<td>2</td>
</tr>
<tr>
<td>Widening</td>
<td>5500 South/5600 South: 3500 West (Roy) to 5600 West (Hooper)</td>
<td>2</td>
</tr>
<tr>
<td>Widening</td>
<td>2550 South: I-15 to 3500 West</td>
<td>Unfunded</td>
</tr>
<tr>
<td>New construction</td>
<td>4700 West: 4000 South to 5100 South</td>
<td>Unfunded</td>
</tr>
<tr>
<td>Widening</td>
<td>3500 West: 1200 South to Midland Drive (SR/108)</td>
<td>Unfunded</td>
</tr>
</tbody>
</table>

Source: WFRC 2007
1.6.2 Local Transportation Planning

Utah state law directs local Cities and Counties to set land-use and transportation policy in their jurisdictions. WFRC’s travel demand model and its outputs are based on the land-use assumptions of the individual Cities and Counties. Often, Cities and Counties will incorporate recommended transportation improvements that are identified in the Regional Transportation Plan into their city transportation plans. This section describes how some Cities in the study area have included segments of a new major north-south transportation facility in their transportation plans based on the 2001 North Legacy Corridor Study. The information in city transportation plans shows what the Cities anticipate for a future transportation network, but inclusion in a transportation plan does not necessarily mean that a project will be constructed.

1.6.2.1 Davis County

**Unincorporated Land in Davis County.** This area accounts for about 17% of the land in the study area. Most of this land is along the shore of the Great Salt Lake, and the County and WFRC have not planned for the construction of any major transportation corridors through this sensitive area. In their transportation plans, the Cities of Farmington, Kaysville, Layton, Syracuse, West Point, and Clinton have identified segments of the 2001 North Legacy Corridor in the study area. However, the Cities of Centerville, Clearfield, and Sunset do not identify any new major north-south corridors in the study area.

**Farmington.** The Farmington City Master Transportation Plan Addendum (Farmington City 2009) shows a “North Legacy Connector” starting at the Legacy Parkway and Glovers Lane. The proposed connector follows the east-west-running Glovers Lane to about 1525 West. At about 1525 West, the connector begins to angle northwest toward Kaysville.

**Kaysville.** The Kaysville Transportation and Traffic Circulation Plan (Kaysville City 2008) shows “SR 67” as a principal arterial starting at about Shepard Lane and I-15. SR 67 travels along the western edge of the city parallel to the shore of the Great Salt Lake into Layton.

**Layton.** The Layton City Master Street Plan (Layton City 2005) shows a “proposed expressway” running along the western edge of the city, also parallel to the shore of the Great Salt Lake, from Layton in the south to Syracuse on the north.

**Syracuse.** The Syracuse Right-of-Way Master Plan (Syracuse City 2009) shows a “proposed parkway” along the western edge of the city. From the southern city limit, the parkway would travel along Bluff Road to just north of Antelope Drive (SR 108). North of Antelope Drive, the parkway would continue northwest into West Point.

**West Point.** The West Point General Plan Land Use Map (West Point City 2008) shows a north-south corridor for the Legacy Parkway along Bluff Road/Old Bluff Road from Syracuse (about 700 South) to 300 North (SR 107). The parkway then travels parallel to and just west of 4000 West between 300 North and the northern city limit at about 2000 North.

**Clinton.** The 2006 Clinton City Transportation Master Plan map (Clinton City 2006) shows a short segment of a “future road” between the West Point–Clinton city boundary and the Clinton-Hooper city boundary. This segment runs north-south to the east of 4500 West.
1.6.2.2 Weber County

The Davis County–Weber County line is situated between Clinton and Hooper. In Weber County, the WDC study area includes unincorporated areas as well as incorporated cities. Most of the unincorporated area is within the county’s West Central Weber County planning area (Weber County 2003). The General Plan shows “planned improvements” along 4700 West (between about 3300 South in Hooper and 1500 North in Plain City) and along 5100 West (between about 3300 South in Hooper and 1150 South in West Weber).

The Cities of Hooper and West Haven have identified segments of the 2001 North Legacy Corridor in their transportation plans. Roy City does not identify any new major north-south corridors in the study area. Marriott-Slaterville City does not have a transportation plan.

**Hooper.** The *Hooper City Draft Transportation Master Plan 2005–2025* (J-U-B Engineers 2008) identifies a future Legacy Corridor. The plan notes that “5100 West is upgraded to the Legacy Highway, which is projected to be a four-lane, limited-access, divided highway from the south city limits to 5325 South. From that point north, the road will become a three-lane roadway that has more open access.”

**West Haven.** The *General Plan of West Haven City* land-use map (West Haven City 2005) identifies 5100 West as the future “Legacy Corridor” between 5100 South (Hooper) and 2900 South (unincorporated area of Weber County).

1.7 Needs Assessment

The regional and local plans in Section 1.6, Regional and Local Transportation Planning, have identified a need for a north-south transportation facility in the WDC study area. This section evaluates that need based on growth projections, travel demand data, and current transit and pedestrian facilities in the WDC study area.

This needs assessment is based on the No-Action conditions for the road and transit system in the study area in 2040 if no WDC is built. The No-Action travel demand conditions used in this EIS are based on Version 6.0 of WFRC’s regional travel demand model, as described in the *Wasatch Front Regional Transportation Plan 2007–2030* (WFRC 2007), with the population, employment, and household data updated to reflect predicted conditions in 2040 (WFRC 2009). Using Version 6.0 ensured that the modeling would be consistent with the expected No-Action conditions that will be included in the 2040 Regional Transportation Plan, which will be published in 2011. In addition, the WDC Team coordinated with WFRC on the projects that should be included as part of the 2040 WDC travel demand.

For the 2040 No-Action conditions, the WDC Team assumed that all funded and unfunded projects in the 2030 Regional Transportation Plan would be in place within the study area, with the only exception being a major transportation corridor in western Davis and Weber Counties (identified as North Legacy in the Regional Transportation Plan). The 2040 No-Action conditions in the study area also include major roads identified in the Cities’ transportation plans that have not already been included in the 2030 Regional Transportation Plan. Outside the study area, all funded and unfunded projects in the WFRC Regional...
Transportation Plan were assumed to be in place. Figure 1-6, Future (2040) No-Action Transportation Network, shows the planned 2040 No-Action roadway and transit network in the study area.

To be consistent with the upcoming 2040 Regional Transportation Plan (to be published in 2011), the WDC Team decided to use 2040 as the planning horizon for the development of the study area, the project’s purpose and need, and the project alternatives. For more information about the planning horizon used in this EIS, see the *West Davis Corridor Technical Report 1, EIS Planning Horizon* (UDOT 2009b).

### 1.7.1 Transportation Network and Modal Relationships

Figure 1-7, Current (2009) Transportation Network, shows the existing transportation system linkages and modal relationships in the study area and the adjacent transportation facilities that play a role in the overall system. Some of the existing major roads in the study area will be congested by 2040. According to traffic projections from the WFRC regional travel demand model (Version 6.0), work-based trips (trips between home and work during the morning and evening commutes) in the study area will increase from about 95,400 in 2009 to 178,000 in 2040—an increase of 87%—as a result of the growth in population, employment, and households described in Section 1.5, Growth Trends. Increased travel demand will result in congestion in the study area and user delays. In addition, much of the road network in the study area west of I-15 was designed primarily for local traffic. The numerous intersections and business and residential driveways on the arterials increase congestion.

The major transportation facilities in the study area are I-15, Legacy Parkway, and FrontRunner commuter rail. These facilities provide north-south travel in the eastern part of the study area between major employment centers including Salt Lake City, Ogden, and Hill Air Force Base. Express bus service also uses I-15 to provide a north-south connection between these employment centers. In addition, the facilities provide access to the Salt Lake City International Airport, which is south of the study area. Traffic in the study area travels east-west on local streets and arterials to access the major north-south transportation facilities.

The transportation network in the study area is used to move a substantial amount of freight. Each year, over 180 billion tons of freight are shipped to and from Utah with trucks accounting for 70% of the freight movement. These numbers do not reflect the considerable tonnage that passes through Utah (WFRC 2007). Within the study area, I-15 is the main trucking corridor. Near I-15 are several freight shipping centers such as Smith’s Distribution Center in Layton and the Freeport Center in Clearfield. The Freeport Center is a major manufacturing, warehousing, and distributing center with roughly 7 million square feet of warehousing in 78 buildings.

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**What are modal relationships?**

The term *travel modes* refers to different methods of travel, such as travel by bus, commuter rail, bicycle, and automobile. An analysis of *modal relationships* looks at how the modes interact to provide an efficient transportation network.
1.7.2 Regional Road Network

This section summarizes the needs assessment for the regional road network in the study area under the No-Action Alternative. To evaluate the road network, the WDC Team reviewed data about level of service, travel delay, and lost productivity. For this assessment, the “regional road network” includes roads classified as freeways, arterials, or collectors (for definitions of these terms, see Figure 1-7, Current (2009) Transportation Network).

Information regarding the regional transportation network and data used in this section was obtained from the WFRC regional travel demand model (Version 6.0).

1.7.2.1 Level of Service

Level of service (LOS) is a method of measuring the vehicle-carrying capacity of a street or freeway. When the capacity of a road is exceeded, the result is congestion, delay, and a poor level of service. Level of service is represented by a letter “grade” ranging from A for excellent conditions (free-flowing traffic) to F for failure conditions (extremely congested, stop-and-go traffic). LOS B through LOS E describe progressively worse traffic conditions. Typically, in urban areas, LOS E and F are considered unacceptable operating conditions and LOS D and above are considered acceptable operating conditions (see Exhibit 1-2).

Exhibit 1-2. Level of Service Categories

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Free flow, no delays</td>
</tr>
<tr>
<td>B</td>
<td>Stable flow, minimal delays</td>
</tr>
<tr>
<td>C</td>
<td>Stable flow, acceptable delays</td>
</tr>
<tr>
<td>D</td>
<td>Restricted flow, regular delays</td>
</tr>
<tr>
<td>E</td>
<td>Maximum capacity, extended delays</td>
</tr>
<tr>
<td>F</td>
<td>Forced flow, excessive delays</td>
</tr>
</tbody>
</table>

As shown in Table 1.7-1 below, some of the major north-south and east-west roads in the study area currently operate at LOS E or F in the PM peak period. By 2040, the congestion on these roads is projected to increase, even with the more than 30 planned roadway improvements identified in the WFRC Regional Transportation Plan for the study area (see Table 1.6-1 above, Transportation Projects in the WDC Study Area, and Figure 1-6, Future (2040) No-Action Transportation Network).

Table 1.7-1 and Exhibit 1-3 below summarize the total lane-miles of freeway, principal and minor arterials, and collector roads that will operate at LOS E or F during the PM peak period in 2009 and 2040 in the study area under the No-Action Alternative (that is, without the WDC). Figure 1-8, Current (2009) Level of Service Deficiencies, shows current road segments that operate at LOS E or F in the study area, and Figure 1-9, Future (2040) Level of Service Deficiencies, shows future road segments that are projected to operate at LOS E or F.
As shown in the figures, the number of lane-miles operating at LOS E or F is projected to increase by 165% from existing (2009) to future (2040) conditions. The main increase in the number of lane-miles operating at LOS E and F (congested, stop-and-go traffic) would be in the north-south direction, with a projected increase of 231% between 2009 and 2040. Much of the east-west congestion shown in the figures is a result of commuters from the west part of the study area having to travel east to the major north-south transportation facilities (FrontRunner commuter rail, I-15, and Legacy Parkway) on the east boundary of the study area.

### Table 1.7-1. Roadway Conditions and Daily User Delay During the PM Peak Period in the WDC Study Area under the No-Action Conditions

<table>
<thead>
<tr>
<th>Need Element</th>
<th>2009</th>
<th>2040</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total lane-miles of congestion(^a)</td>
<td>52</td>
<td>138</td>
<td>165%</td>
</tr>
<tr>
<td>East-west</td>
<td>26</td>
<td>52</td>
<td>100%</td>
</tr>
<tr>
<td>North-south</td>
<td>26</td>
<td>86</td>
<td>231%</td>
</tr>
<tr>
<td>Vehicle-miles traveled in congestion(^b)</td>
<td>112,500</td>
<td>389,800</td>
<td>246%</td>
</tr>
<tr>
<td>Average speed (mph)</td>
<td>42</td>
<td>38</td>
<td>–10%</td>
</tr>
<tr>
<td>User delay (hours per day)</td>
<td>4,080</td>
<td>10,110</td>
<td>148%</td>
</tr>
<tr>
<td>Lost productivity (per day)(^c)</td>
<td>$105,264</td>
<td>$260,838</td>
<td>148%</td>
</tr>
<tr>
<td>Vehicle-miles traveled (per day)</td>
<td>4,559,400</td>
<td>7,439,600</td>
<td>63%</td>
</tr>
</tbody>
</table>

Source: Based on results from the 2009 WFRC regional travel demand model (Version 6.0)

\(^a\) Includes roads with a volume-to-capacity 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 arterials, and collectors in the WDC study area.

\(^b\) Includes vehicle-miles traveled on roads with a volume-to-capacity 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 arterials, and collectors in the WDC study area.

\(^c\) Lost productivity is based on an aggregate user rate of $25.80 using $15.50/hour for passenger vehicles, $56.00/hour for box trucks, and $102.00/hour for tractor trailer trucks. Assuming an average traffic composition of 86% passenger vehicles, 4% box trucks, and 10% tractor trailer trucks, the average cost is $25.80/hour for travel time (Rasband 2010).
Exhibit 1-3. Lane-Miles of Congestion During the Peak Period in the WDC Study Area

Exhibit 1-4. Vehicle-Miles Traveled in Congestion During the Peak Period in the WDC Study Area

As shown in Exhibit 1-4, the amount of miles that vehicles travel in congestion is projected to increase from 112,500 miles in 2009 to 389,800 miles in 2040, an increase of 246%. These data show that there is a need to relieve roadway congestion and improve the level of service and mobility on the regional road network.
Exhibit 1-5 shows that, between 2009 and 2040, the daily vehicle-miles traveled within the study area will increase by 63% or about 2% per year, which will increase the congestion on the road system. As a comparison, vehicle-miles traveled in Davis and Weber Counties from 1989 to 2009 increased by 6.1% and 3.45% per year, respectively. Within the last 5 years (2004–2009), the growth in vehicle-miles traveled slowed in Davis and Weber Counties with an increase of 3.48% and 1.24% per year, respectively (UDOT 2010).

### Exhibit 1-5. Daily Vehicle-Miles Traveled in the WDC Study Area

<table>
<thead>
<tr>
<th>Year</th>
<th>Vehicle-miles Traveled (per day)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>4,559,400</td>
</tr>
<tr>
<td>2040</td>
<td>7,439,600</td>
</tr>
</tbody>
</table>

Increase of 63%

1.7.2.2 Travel Time and Lost Productivity (Regional Mobility)

Regional mobility addresses the need to develop a transportation system that improves access by reducing travel times for all transportation modes. The need for improved regional mobility is demonstrated by the forecasted travel times in 2040, which are projected to increase compared to 2009.

Table 1.7-1 above, Roadway Conditions and Daily User Delay During the PM Peak Period in the WDC Study Area under the No-Action Conditions, and Exhibit 1-6 below provide the projected travel delays in the study area and the resulting cost in terms of congestion delay for roadway users in the study area under No-Action conditions. The delay, measured in hours, is the additional time it takes to travel under congested conditions compared to free-flowing traffic conditions. A cost of $25.80 per hour is assigned to the delay to arrive at the total lost productivity.

What is regional mobility?

*Regional mobility* addresses the need to develop a transportation system that improves access by reducing travel times.
The travel delay in the study area resulted in lost productivity of $105,264 per day in 2009 (due to residents and commercial/freight vehicles spending time in traffic) and is expected to result in total lost productivity of $260,838 per day in 2040, an increase of 148% (in 2009 dollars) (see Exhibit 1-7). Within the study area, the average speed (for 178,000 trips) during the PM peak period is expected to decrease from 42 mph (miles per hour) in 2009 to 38 mph in 2040, a decrease of 10%.
In addition to total delay, Table 1.7-2 shows the PM peak period (3:00 PM to 6:00 PM) travel time for specific trips from Salt Lake City to the WDC study area in 2009 and 2040 under No-Action conditions compared to the travel time with no roadway congestion. Figure 1-10, West Davis Corridor Specific Trips, shows the location of each trip.

**Table 1.7-2. Travel Time in Minutes for Specific Trips into the WDC Study Area in the PM Peak Period under No-Action Conditions**

<table>
<thead>
<tr>
<th>From (South Temple St. and Main St. in downtown Salt Lake City)</th>
<th>To (West end of 100 North, Farmingtona)</th>
<th>Trip ID</th>
<th>Travel Time with No Congestion</th>
<th>2009</th>
<th>2040</th>
<th>Percent Change 2009–2040</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trip A</strong></td>
<td>West end of 100 North, Farmingtona</td>
<td>Trip A</td>
<td>21</td>
<td>26</td>
<td>31</td>
<td>19%</td>
</tr>
<tr>
<td><strong>Trip B</strong></td>
<td>Bluff Road and Antelope Drive, Syracuse</td>
<td>Trip B</td>
<td>34</td>
<td>43</td>
<td>50</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Trip C</strong></td>
<td>5900 West and 5500 South, Hooper</td>
<td>Trip C</td>
<td>40</td>
<td>52</td>
<td>60</td>
<td>16%</td>
</tr>
<tr>
<td><strong>Trip D</strong></td>
<td>4700 West and 12th Street, Weber County</td>
<td>Trip D</td>
<td>43</td>
<td>52</td>
<td>63</td>
<td>21%</td>
</tr>
</tbody>
</table>

Source: Based on results from the 2009 WFRC regional travel demand model (Version 6.0)
a See Figure 1-10, West Davis Corridor Specific Trips, for the endpoint of each trip.

**1.7.3 Travel Patterns**

The WDC Team conducted origin-destination travel demand modeling using the WFRC regional travel demand model to further evaluate the direction of travel in the study area (see Figure 1-1, West Davis Corridor Study Area) and to confirm whether the principal need for transportation improvements in Davis and Weber Counties is in the north-south direction as indicated by previous studies (WFRC 2001a, 2001b, 2007, 2009).

The most important period to examine for trip modeling is the period of the morning and evening work commutes, since these are the most congested travel times during the day. The morning and evening commutes are referred to as *home-based work trips*. Exhibit 1-8 below compares the travel patterns in 2009 and 2040 for home-based work trips. Figure 1-11, Home-Based Work Trips Originating in the WDC Study Area in 2040, shows the major work-based travel patterns in the study area.
Exhibit 1-8. Travel Patterns for Home-Based Work Trips During the Peak Period in the WDC Study Area

As Exhibit 1-8 above shows, the majority of work trips in 2009 and in 2040 are in a north-south direction, with 49% and 43% of the trips being in this direction, respectively. East-west trips in the study area accounted for 23% of the trips in 2009 and are projected to be 28% of trips in 2040. The reason that the north-south travel percentage is higher than the east-west travel percentage is that the main AM and PM peak commuter travel movements in the area are in a north-south direction to main employment centers including Salt Lake City, Ogden, and Hill Air Force Base.

Internal trips in the study area accounted for 28% of the work trips in 2009 and are projected to be 29% of trips in 2040. The projected decrease in the percentage in north-south work trips between 2009 and 2040 is the result of more employment opportunities within the study area. These numbers show that the majority of work trips originating in the study area are oriented north-south.

1.7.4 Transit Network

Current transit service in the study area consists of regular bus service, express and intercity bus service, commuter rail, and special services. Table 1.7-3 below and Figure 1-12, Current (2009) Transit Network, summarize the transit routes and services that are available in the study area. The Utah Transit Authority (UTA) provides all transit services in the area.
Table 1.7-3. Transit Service in the WDC Study Area

<table>
<thead>
<tr>
<th>Type of Service</th>
<th>Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commuter rail</td>
<td>Salt Lake City to Ogden FrontRunner</td>
</tr>
<tr>
<td>Express bus</td>
<td>UTA Route 456: Ogden to Rocky Mountain Power (Salt Lake City)</td>
</tr>
<tr>
<td>Intercity bus</td>
<td>UTA Route 470: Ogden to Salt Lake City Commuter</td>
</tr>
<tr>
<td>Express bus</td>
<td>UTA Route 472: Golden Spike Express (Ogden to Salt Lake City)</td>
</tr>
<tr>
<td>Express bus</td>
<td>UTA Route 473: Salt Lake City to Ogden Highway 89 Express</td>
</tr>
<tr>
<td>Express bus</td>
<td>UTA Route 474: Ogden–Roy–Salt Lake City Express</td>
</tr>
<tr>
<td>Express bus</td>
<td>UTA Route 476: Ogden–Clearfield–Salt Lake City Express</td>
</tr>
<tr>
<td>Regular bus service</td>
<td>UTA Route 477: PARC Center–Davis County Shuttle</td>
</tr>
<tr>
<td>Regular bus service</td>
<td>UTA Route 604: West Ogden–Roy</td>
</tr>
<tr>
<td>Regular bus service</td>
<td>UTA Route 606: Enable Industries–Monroe Blvd. (Ogden)</td>
</tr>
<tr>
<td>Regular bus service</td>
<td>UTA Route 626: West Roy–Weber State University</td>
</tr>
<tr>
<td>Regular bus service</td>
<td>UTA Route 640: Layton Hills Mall–Weber State Ogden Campus</td>
</tr>
<tr>
<td>Special service</td>
<td>Paratransit (arranged through UTA)</td>
</tr>
<tr>
<td>Special service</td>
<td>Seniors on the Go (arranged through UTA)</td>
</tr>
</tbody>
</table>

Source: UTA 2009

The transit system in Davis and Weber Counties also includes a series of park-and-ride lots along the commuter rail and some bus routes.

Within the study area, there is an extensive network of north-south transit service. This includes express and regular bus service routes that provide access to major employment centers between Ogden and Salt Lake City or to educational institutions such as Weber State University and the University of Utah (see Figure 1-1, West Davis Corridor Study Area). Many of the express routes use I-15 and have limited stops at stations along the highway. Many of these stations also serve the FrontRunner commuter-rail line that parallels I-15. The FrontRunner commuter-rail line, which provides service between Ogden and Salt Lake City, began operation in 2008. In March 2010, the FrontRunner line carried about 4,800 passengers per day. Ridership has been increasing an average of 1.8% per month since January 2009 (DeLoretto 2010). Additional capacity can be added to this existing north-south transit network by adding additional express buses or rail cars to FrontRunner.
The study area does not have any transit routes that run only east-west. However, segments of some routes provide access to areas between I-15 and the Great Salt Lake. These routes include:

- Route 477, which provides access as far west as the PARC School at about Main Street and 700 South in Clearfield
- Route 604, which provides access as far west as 3500 West between 4800 South and 5600 South in Roy
- Route 626, which provides access as far west as 2000 West (SR 108) between Antelope Drive in Syracuse and 6600 South in Roy
- Route 640, which provides access as far west as 1000 West between 1800 North and 200 South in northern Davis County

WFRC’s Regional Transportation Plan does not include any light-rail projects in the study area. The only transit enhancement in the Regional Transportation Plan is enhanced bus service along SR 108 in northern Davis County and southern Weber County and on SR 126 in Weber County. UTA is currently studying the long-term transit needs in southern Davis County (south of Farmington). Because Salt Lake City is expected to remain a significant regional employment center for south Davis County residents, travel between Davis and Salt Lake Counties will continue to increase. Similarly, because Ogden is also a major employment center, travel demand between parts of Davis and Weber Counties and Ogden will also increase over time. Table 1.7-4 shows the home-based work transit trips in the study area. The 2009 and 2040 home-based work transit trips were predicted using the WFRC regional travel demand model (Version 6.0). Within the study area, home-based work transit trips represent 2.7% of the trips in 2009 and 4.3% of the trips in 2040.

<table>
<thead>
<tr>
<th>Area</th>
<th>2009</th>
<th>2040</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weber County</td>
<td>4,500</td>
<td>12,000</td>
<td>167%</td>
</tr>
<tr>
<td>Davis County</td>
<td>5,700</td>
<td>13,000</td>
<td>128%</td>
</tr>
<tr>
<td>Study area</td>
<td>2,600</td>
<td>7,600</td>
<td>192%</td>
</tr>
</tbody>
</table>

Source: Based on results from the 2009 WFRC regional travel demand model, Version 6.0
Because of the lack of convenient east-west transit service and transit infrastructure such as park-and-ride lots, travelers in the western part of the study area who want to access the north-south transit network must drive to the transit stations. With the expected increases in travel demand, particularly for work trips, there is a need to improve access to the existing transit system.

Many of the roads in the study area were not developed to accommodate multiple travel modes such as buses and bicycles. Some of the roads lack shoulders to accommodate bus pullouts and pedestrians. In addition, the road network consists of discontinuous local roads and rural collectors that do not support an efficient connection to major transportation modes and facilities such as FrontRunner commuter rail, I-15, and express bus service on I-15. There is a need in the study area to improve regional connectivity to enhance the interconnection of all transportation modes and to allow the potential expansion of future transit systems such as bus service. WFRC’s Regional Transportation Plan notes that the most appropriate design for a public transportation facility balances the mobility needs of the people (motorists, pedestrians, bicyclists, or transit users) using the facility with the physical constraints of the corridor within which the facility is located.

1.7.5 Pedestrian and Bicycle Facilities

The existing pedestrian and bicycle facilities in the study area consist of bicycle lanes, multi-use paths, and sidewalks. Sidewalks are constructed as part of residential developments and are not generally planned on a regional basis. Many of the cities also have pedestrian and bicycle facilities within their city limits. However, bicycle lanes and multi-use paths often serve more than one neighborhood and, in many cases, travel through more than one city. Currently there are no continuous north-south or east-west pedestrian/bicycle facilities through the study area.

Expanded trail facilities are included in the WFRC Regional Transportation Plan (see Figure 1-13, Current (2009) and Future (2010) Bicycle and Pedestrian Trails). The regional plan notes that there is a need to incorporate pedestrian and bicycle facilities into transportation projects to balance the mobility needs of people using the facility. UDOT also considers adding trails or pedestrian facilities in order to be consistent with the adopted Regional Transportation Plan. Based on results from the WFRC regional travel demand model, predicted non-motorized trips (bicycle and walking trips) accounted for 2.6% of the 2009 daily home-based work trips. By 2040, non-motorized trips are predicted to account for 2.5% of the daily home-based work trips.
1.8 Public and Agency Involvement in Developing the Project’s Purpose and Need

The project’s purpose and need incorporated input from the public and various other sources during the EIS scoping process. Numerous commenters said that roads in the study area are congested and supported both roadway and transit improvements to alleviate the congestion.

FHWA and UDOT published a draft of the project purpose and need document for review by the SAFETEA-LU agencies on May 5, 2010, and for review by the public on May 7, 2010. The project team gathered comments on the draft document through June 7, 2010. Members of the public and agencies were encouraged to provide comments by e-mail, the project website, and regular U.S. mail. The team received a total of 47 comment submissions on the draft purpose and need.

The draft purpose and need document was also discussed at a combination SAFETEA-LU Agency–Stakeholder Working Group meeting on May 19, 2010.

In general, the comments on the project’s purpose and need focused on the following subjects:

- General agreement or disagreement that the project is needed
- Opinion that project goals should consider both transportation and environmental values
- Accuracy of assumptions about the future transportation system
- Accuracy of population and employment forecasts and associated assumptions
- Accuracy of land-use assumptions
- Transit and other needs for alternate transportation choices
- Corrections regarding the project history
- Local growth objectives
- Accuracy of the traffic modeling results
- Air quality

Most comment submissions focused on project alternatives. These comments were considered as the team began developing alternative concepts (see Chapter 2, Alternatives).

UDOT and FHWA made changes to the draft purpose and need document in response to these comments. However, the team did not receive any comments that resulted in major changes to the information supporting the project need or to the project purpose presented in this chapter.
The West Davis Corridor study area is projected to experience substantial growth in the next 30 years with an 80% increase in population, a 59% increase in employment, and a 100% increase in households. This growth will cause some of the major north-south and east-west roads in the study area to operate at LOS E or F (see Table 1.7-1, Roadway Conditions and Daily User Delay During the PM Peak Period in the WDC Study Area under the No-Action Conditions, on page 1-17) and will cause a 246% increase in the number of vehicle-miles traveled in congestion between 2009 and 2040. It will also create new demands for transit-related improvements and regional pedestrian and bicycle facilities.

This congestion will cause a 148% increase in travel delay, with the associated total lost productivity projected to increase from $105,264 per day in 2009 to $260,838 per day in 2040. With the expected increases in travel demand, particularly for work trips, there is a need to improve access to the existing transit system. Most of the roads in the study area were not developed to accommodate multiple transportation modes such as buses and bicycles. There is a need in the study area to improve regional connectivity to enhance the interconnection of all transportation modes and to allow the potential expansion of future transit systems such as bus service.

The local road network in the study area was primarily designed for local traffic. The numerous intersections and business and residential driveways on the principal arterials increase congestion. To accommodate the expected growth and resulting congestion, most of the state, regional, and local transportation and land-use plans in the study area identify a need for an improved transportation system.

Based on the above facts, transportation improvements are needed in the West Davis Corridor study area to meet the project purpose identified in Section 1.4.1, Purpose of the Project.
1.10 References

Clinton City
   2006 Clinton City Transportation Master Plan. March 21.

DeLoretto, Mary
   2010 Correspondence from Mary DeLoretto of the Utah Transit Authority to Vince Izzo of HDR Engineering regarding FrontRunner ridership in March 2010. May 6.

Farmington City
   2009 Farmington City Master Transportation Plan Addendum.

Horrocks
   2007 North Legacy to Legacy Connection Corridor Preservation Study. UDOT Project S-0067(13)0. June 14.

J-U-B Engineers, Inc.

Kaysville City

Layton City

Rasband, Eric
   2010 Correspondence from Eric Rasband of UDOT to Jayson Cluff of Horrocks Engineers regarding user cost. February 21.

Syracuse City

[UDOT] Utah Department of Transportation
   2010 1989–2009 Vehicle-miles traveled reported for each county by road ownership.

[UTA] Utah Transit Authority

Utah Department of Workforce Services

Weber County
   2003 West Central Weber County General Plan.
West Haven City
2005 General Plan of West Haven City, Weber County, Utah. October.

West Point City
2008 West Point City General Plan Land Use Map. March 14.

[WFRBC] Wasatch Front Regional Council
2001a Western Transportation Corridor Major Investment Study.
2001b North Legacy Transportation Corridor Study.
Approved August 28.
2009 North Legacy Transportation Corridor Supplemental Study. October.

[WFRC and others] Wasatch Front Regional Council, Mountainland Association of Governments, Utah Department of Transportation, Federal Highway Administration, and Utah Transit Authority
No date Wasatch Choices 2040: A Four County Land-Use and Transportation Vision.
Figure 1-1. West Davis Corridor Study Area
Figure 1-2. Percent Population Growth 2009–2040
Figure 1-3. Total Population Growth 2009–2040

Legend
- FrontRunner
- Legacy Parkway
- Highway/Interstate
- US Highway
- State Road

Total Population Growth (2009 – 2040)
Less Than/Equal To 100
> 100 - 500
> 500 - 1000
> 1000 - 2000
Greater Than 2000

Study Area Boundary
County Boundary

Total Population Growth 2009 – 2040
Figure 1-4. Percent Employment Growth 2009–2040

Legend
- FrontRunner
- Legacy Parkway
- Highway/Interstate
- US Highway
- State Road

Percent Employment Growth (2009-2040)
- Less Than/Equal To 25%
- > 25% - 100%
- > 100% - 200%
- > 200% - 300%
- Greater Than 300%

Major Employers in WDC Study Area
- A: Lifetim Products
- B: Davis Hospital and Medical Center
- C: Utility Trailer and Manufacturing Co.
- D: Agrovix
- E: Focus Services
- F: Smiths Distribution Center
- G: William International Company

Percent Employment Growth 2009 – 2040
Figure 1-5. Total Employment Growth 2009–2040

Legend
- FrontRunner
- Legacy Parkway
- Highway/Interstate
- US Highway
- State Road

Total Employment Growth (2009 – 2040)
- Less Than/Equal To 100
- 100 – 500
- 500 – 1000
- 1000 – 2000
- Greater Than 2000

Study Area Boundary
County Boundary

Major Employers in WDC Study Area
A. Lifetim Products
B. Davis Hospital and Medical Center
C. Utility Trailer Manufacturing Co.
D. AutoLiv
E. Focus Services
F. Smith's Distribution Center
G. William International Company

Total Employment Growth 2009 – 2040

Figure 1-5
Figure 1-6. Future (2040) No-Action Transportation Network
Figure 1-7. Current (2009) Transportation Network
Figure 1-8. Current (2009) Level of Service Deficiencies
Figure 1-9. Future (2040) Level of Service Deficiencies
Figure 1-10. West Davis Corridor Specific Trips

Legend
- FrontRunner Stop
- FrontRunner
- Trip A – 18 Miles
  - No-Action Travel Time: 2009 - 20 Minutes
  - No Congestion Travel Time: 21 Minutes
- Trip B – 31 Miles
  - No-Action Travel Time: 2009 - 33 Minutes
  - No Congestion Travel Time: 34 Minutes
- Trip C – 37 Miles
  - No-Action Travel Time: 2009 - 52 Minutes
  - No Congestion Travel Time: 60 Minutes
- Trip D – 42 Miles
  - No-Action Travel Time: 2009 - 52 Minutes
  - No Congestion Travel Time: 63 Minutes

Legend
- Legacy Parkway
- Study Area Boundary
- County Boundary

West Davis Corridor Specific Trip Travel Time

Figure 1-10

All trips start at South Temple and Main Street, Salt Lake City.
Figure 1-11. Home-Based Work Trips Originating in the WDC Study Area in 2040
Figure 1-13. Current (2009) and Future (2010) Bicycle and Pedestrian Trails
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