Chapter 1: Purpose and Need

1.1 Introduction

The Utah Department of Transportation (UDOT) is proposing improvements to enhance existing and future mobility in the Heber Valley in Wasatch County, Utah, through 2050. This Environmental Impact Statement (EIS) for the Heber Valley Corridor Project has been prepared according to the provisions of the National Environmental Policy Act (NEPA) and other laws, regulations, and guidelines of the Federal Highway Administration (FHWA). This document conforms to the requirements of UDOT, the project sponsor and lead agency.

Who is the lead agency for the Heber Valley Corridor EIS?

The Utah Department of Transportation is the project sponsor and lead agency.

FHWA has assigned its responsibilities under NEPA and other federal environmental laws to UDOT for highway projects in Utah, pursuant to 23 *United States Code* (USC) Section 327, in a Memorandum of Understanding (MOU) dated May 26, 2022. In accordance with the assignment MOU, UDOT is carrying out the environmental review process for the Heber Valley Corridor Project in lieu of FHWA and serves as the lead agency in the NEPA process. The assignment MOU does not change the roles and responsibilities of any other federal agency whose review or approval is required for the project.

1.1.1 Cooperating and Participating Agencies

As part of the environmental review process, the lead agency is required 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 cooperating and participating agencies to determine methodologies and the level of detail for analyzing alternatives.[1] The lead agency must also provide over-sight with regard to managing the NEPA process and resolving issues.

Table 1.1-1 lists the cooperating and participating agencies for the Heber Valley Corridor EIS.

What are cooperating and participating agencies?

A cooperating agency is an 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.

A participating agency is a federal, state, tribal, regional, or local government agency that might have an interest in the project.

[1] These steps are required by 23 USC Section 139, which establishes an environmental review process that must be used when preparing an EIS for a highway or transit project.

Table 1.1-1. Cooperating and Participating Agencies for the Heber Valley Corridor EIS

Agency or Government	Type of Agency Involvement
Federal Agencies	
U.S. Army Corps of Engineers	Cooperating and participating
U.S. Environmental Protection Agency	Cooperating and participating
U.S. Bureau of Reclamation	Participating
U.S. Fish and Wildlife Service	Participating
Utah Reclamation, Mitigation and Conservation Commission	Participating
State Agencies[a]	
Resource Development Coordinating Committee/ Public Lands Policy Coordinating Office	Participating
Utah Division of Wildlife Resources	Participating
Regional Governments or Agencies	
Mountainland Association of Governments	Participating
Local Governments	
Heber City	Participating
Wasatch County	Participating
City of Midway	Participating

[a] This is a list of state divisions that accepted the participating agency invitation. State agency participation will also be coordinated through the Resource Development Coordinating Committee.

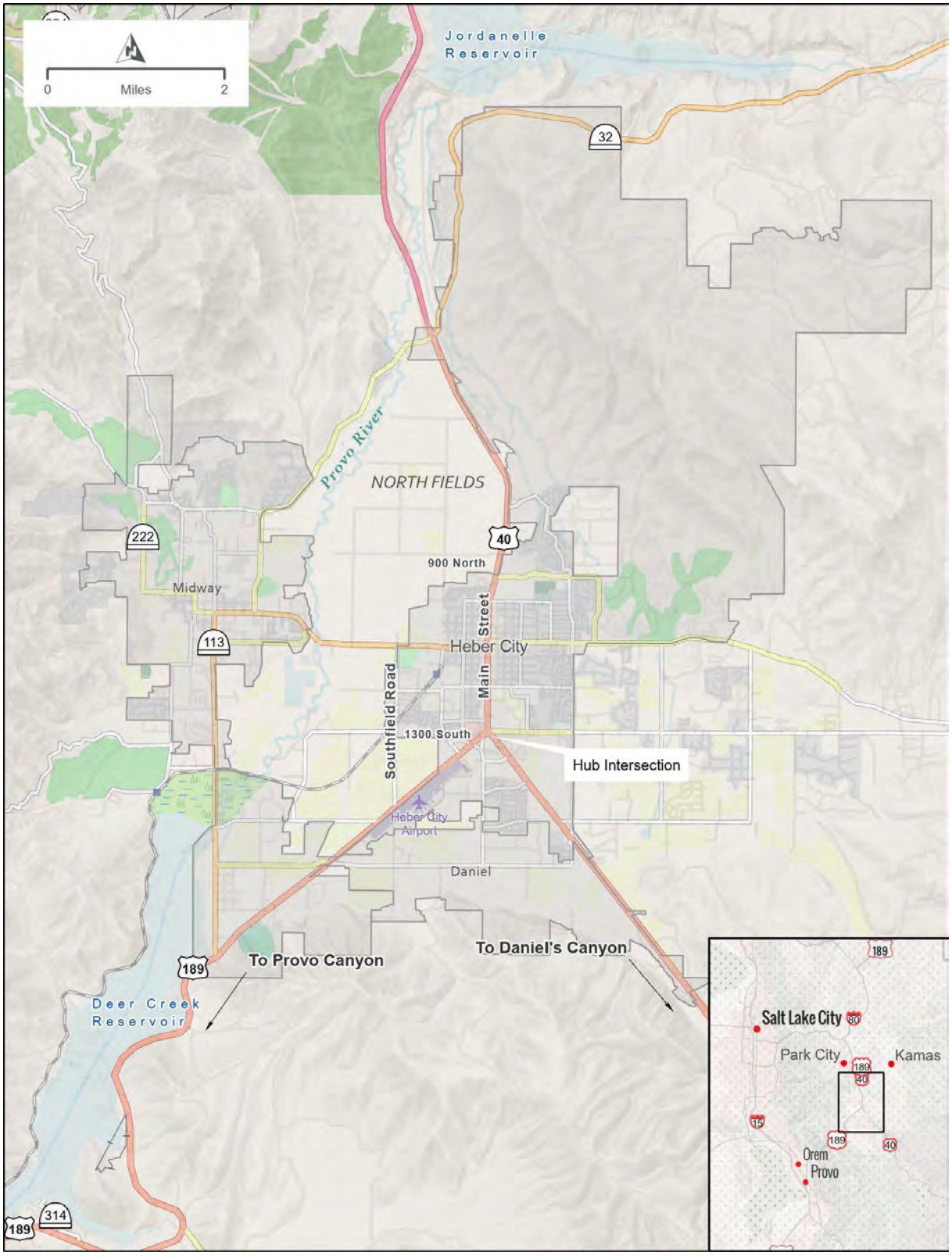
1.1.2 Description of the Needs Assessment Evaluation Area

The needs assessment evaluation area for the Heber Valley Corridor EIS is focused on U.S. Highway 40 (US-40) from its intersection with State Route (SR) 32 to its junction with U.S. Highway 189 (US-189) in Heber City. It also includes US-40 to the southeast and US-189 to the southwest of the hub intersection on the south end of Heber City (Figure 1.1-1). UDOT developed the needs assessment evaluation area to include an area that would influence the transportation operations and to provide logical termini for the project.

Logical termini are generally points of major traffic generation such as intersecting roads. Any vehicles that pass through the logical termini for this project are accounted for in the traffic analysis. It is possible that alternative solutions could require physical improvements extending beyond the logical termini. Different alternatives could begin and end at different points.

The intersection with SR-32 was selected as the northern logical terminus because it is a minor arterial and state route that provides a connection to communities east of Heber City as well as Midway to the west. In addition, access to US-40 changes at River Road/SR-32. North of River Road/SR-32, US-40 is a freeway facility that vehicles can enter and exit only at interchanges. Between River Road/SR-32 and 900 North in Heber City, US-40 is a principal arterial, which means that vehicles can enter and exit at signalized or unsignalized intersections and driveways (as long as minimum spacing criteria are met). The junction with US-189 (the hub intersection) was selected as the southern logical terminus because it is a principal arterial and U.S. highway that provides a connection to the Wasatch Front via Provo Canyon. Access also changes

Figure 1.1-1. Needs Assessment Evaluation Area



at the hub. South of the hub, more distance is required on US-189 and on US-40 between streets and driveways compared to north of the junction. For a description of different types of roads (for example, freeway, principal arterial, minor arterial), see Table 1.3-3, *Highway Functional Classifications*, on page 1-16.

1.1.3 Background of the Heber Valley Corridor Project

1.1.3.1 Corridor Planning

As communities grow, traffic and congestion increase in the center of town. Many Cities consider rerouting through-traffic from the center of town to the periphery to improve mobility, safety, and quality of life in the downtown area. Heber City and Wasatch County have been considering a bypass road around Heber City for more than 20 years. Both Heber City and Wasatch County passed resolutions of support to preserve a specific western bypass alignment (Heber City resolution 2007-05 passed on June 21, 2007; Wasatch County resolution 06-04 passed on August 9, 2006) and have been acquiring right-of-way. The local government preservation corridor is shown in Figure 1.1-2. It is important to note that the local government preservation corridor was identified without any consideration of the abundant wetlands in the northeast segment between 900 North (where the bypass ties into US-40) and SR-113.

A bypass has been identified in several previous planning documents including:

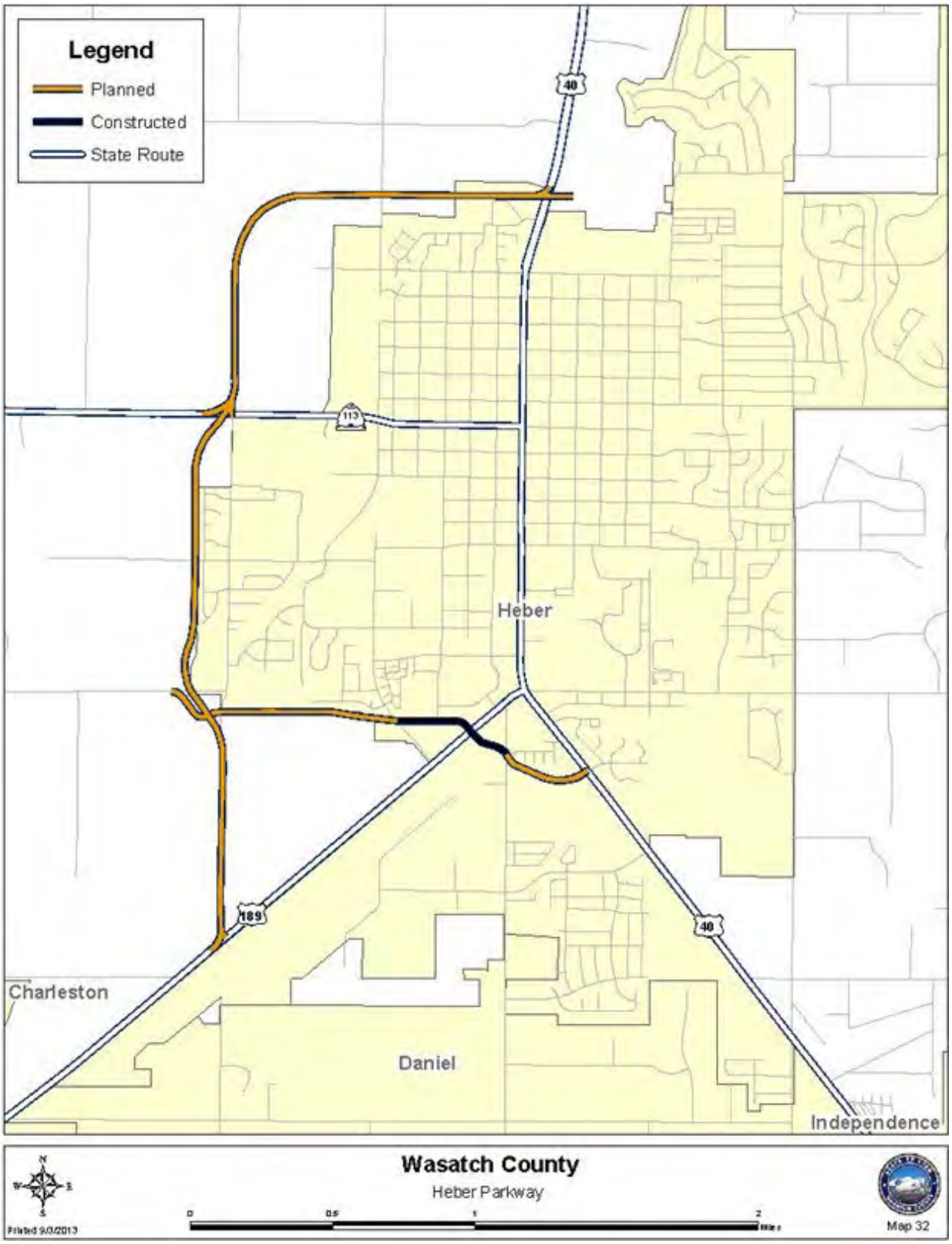
- *Heber City Highway Bypass Study* prepared for UDOT, Mountainland Association of Governments (MAG), Heber City, and Wasatch County (PEC 2008)
- *Wasatch County General Plan 2001–2016* (Wasatch County 2010)
- *Heber City General Plan*, Chapter 3: "Transportation Plan 2017" (Heber City 2017)
- *Heber Valley Parkway Planning Study* prepared for UDOT, MAG, Heber City, and Wasatch County (Avenue Consultants 2019)
- *Heber City Envision 2050 General Plan* (Heber City 2023)

These previous studies have focused on a western bypass generally running north-south along or west of Southfield Road between US-189 and SR-113 and connecting back to US-40 near 900 North. The most recent planning study, the 2019 *Heber Valley Parkway Planning Study*, did not include an aquatic resources delineation or agency coordination; it determined that no alignment recommendation could be made in the northeast segment between 900 North and SR-113 without a full wetland analysis as part of a future environmental study.

The 2019 study also identified a new concept that would realign US-189 along the west and north edges of the sewer farm; the western corridor would connect to the realigned US-189 at 1300 South. However, due to community concerns with the realigned US-189 concept, the study recommended evaluating both options in a future environmental process. The undeveloped area around downtown Heber City was rapidly developing, but Heber City and Wasatch County had unresolved questions regarding the alignment between 900 North and SR-113 and how US-189 would connect. In 2019, Heber City and Wasatch County asked UDOT to conduct an EIS to identify a final route for corridor preservation. The Utah Transportation Commission approved funding, and this EIS was initiated in 2020.

Although the needs assessment evaluation area is focused on US-40 from River Road/SR-32 to US-189, the effect that each project alternative would have on the local transportation network within the communities in the Heber Valley is evaluated in detail in this EIS.

Figure 1.1-2. Local Government Preservation Corridor



1.1.3.2 Regional Transportation Planning

In general, UDOT is responsible for transportation planning in rural areas that are not served by a metropolitan planning organization. MAG has entered into an MOU with UDOT to maintain the Wasatch Rural Planning Organization (RPO). The RPO addresses local needs and serves as an intermediary between state and local governments and is responsible for the regional transportation plan in the Heber Valley area, the *2023 Wasatch Back RPO Transportation Plan* (RPO RTP; MAG 2023).

What is a fiscally constrained LRTP?

Fiscally constrained means that a long-range transportation plan (LRTP) demonstrates that the listed projects can be implemented using committed, available, or reasonably available revenue sources, with reasonable assurance that the federally supported transportation system is being adequately operated and maintained.

The *Utah Long-range Transportation Plan 2023–2050* (LRTP; UDOT 2023a) includes a set of projects to address the transportation needs of rural Utah. The LRTP is a fiscally constrained 30-year plan of anticipated projects that would be needed to meet future travel demand. Transportation needs are based on projected and planned socioeconomic factors and land use within a region. UDOT updates the LRTP every 4 years.

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, carpooling, walking, and cycling.

The 2023–2050 LRTP identifies three timeframes, or phases, for construction:

- Phase 1: 2023 to 2032
- Phase 2: 2033 to 2042
- Phase 3: 2043 to 2050

The LRTP provides a comprehensive overview of planned projects on state routes. State routes are major roads that are under UDOT's jurisdiction. Fiscally constrained projects in the LRTP are on state routes and can be constructed with anticipated funding available to UDOT through 2050. These projects are phased based on when they are needed. However, there are more transportation needs than what can be constructed with available funding. Therefore, the needs phase might not (and often does not) match the funding phase. Because financial resources are limited, projects might be moved to a later phase or even moved beyond the planning time horizon and therefore considered "unfunded."

Local projects in the 2023 Wasatch Back RPO RTP are not included in UDOT's list of fiscally constrained projects because they would likely be constructed using local or other funds.

Recognizing the need for improvements, the LRTP includes three planned projects in the needs assessment evaluation area: a west bypass (identification number U2023031), widening of US-40 between SR-32 and 900 North (ID U2023033), and a new interchange between US-40 and SR-32 (ID U2023289). For more information, see Table 1.3-2, *Planned Highway Projects in the Needs Assessment Evaluation Area*; Figure 1.3-1, *Planned Highway Projects in Needs Assessment Evaluation Area*; and Section 1.3.1.4, *2050 No-action Conditions*.

1.1.3.3 Local Planning

Heber City created Envision Heber 2050, an initiative to address its community's need for a collaborative vision, and updated their general plan in 2023. This plan, the *Heber City Envision 2050 General Plan*, contemplates Heber City's long-term goals and imagines the desired future for the city with respect to economic and commercial development, housing, culture, education, and transportation. The excerpts from the general plan below are related to downtown Main Street because UDOT is solving a transportation problem on US-40 (including Main Street). Throughout the study, UDOT heard from the public and local governments that the general plan also demonstrates a desire to protect open space and the rural character. UDOT acknowledges that the general plan also includes other vision statements unrelated to transportation that are not part of the purpose of and need for this transportation project.

One of the general plan's principles is related to Main Street:

> Downtown, Heber [City]'s historic center, will develop into an even stronger center and remain the heart of the community. Main Street, together with surrounding blocks, is a local and regional destination.
>
> 1. Heber [City] preserves, enhances, and improves access to its valued places and buildings on Main Street.
> 2. Heber [City] improves pedestrian and bike accessibility, parking, and traffic conditions along Main Street. (page 6)

One of the strategies listed for the downtown district is:

> Create a unified pedestrian-friendly and bike-friendly streetscape for the entire Main Street District. Include wider sidewalks and bike lanes. (page 48)

In response to the general plan's vision for downtown Heber City, a Community Redevelopment Agency (CRA) was formed. The CRA allows Heber City to reinvest a portion of taxes collected within the downtown area to revitalizing downtown. Establishing a CRA for downtown Heber City helps the City meet the public's vision, including landscaping, aesthetic improvements, parking solutions, better infrastructure, a more walkable downtown, and enhanced shopping, dining, and entertainment opportunities.

Additionally, the general plan identifies commercial trucks and traffic as an impediment to meeting the City's vision for the historic town center.

> The community has relied on US-40 to handle major traffic flows to destinations beyond and within City boundaries. Over the years, traffic on US-40 has grown significantly with rapidly expanding development in Wasatch and Summit Counties. In addition, the oil industry in the Vernal and Duchesne areas to the southeast has brought oil tankers to Main Street, exacerbating congestion and increasing noise levels.
>
> Traffic on Main Street has grown to a point where a UDOT-sponsored western bypass alternatives study is underway. When a western bypass route is finalized and constructed, Main Street will see a significant reduction in large trucks and a reduction in vehicle traffic. A western bypass, where UDOT responsibility is shifted from Main Street to the new bypass, creates opportunities for Main Street to become a destination for business to grow and for placemaking to foster a pleasant street atmosphere. (page 72)

Throughout the study, UDOT has been asked whether it is possible to restrict commercial truck traffic from using Main Street. Based on the general plan and comments from and conversations with city officials, Heber City would like commercial truck traffic—especially oil tankers—to use the western corridor rather than Main Street. US-40 (including Heber City's Main Street) is included in the National Network. It is not possible to restrict truck traffic on a road that is included in the National Network. If a western corridor were to be constructed, and if the western corridor were to be designated as US-40, it would become the new National Network route. Main Street would no longer be part of the National Network; however, it is not possible to restrict commercial trucks from using Main Street even if it is not part of the National Network.

If jurisdiction of Main Street were transferred to Heber City, the City could implement changes that would make Main Street less desirable for trucks (changes such as slower speeds, more stops, and/or narrower lanes). Narrowing the travel lanes could provide some space for wider sidewalks or bike facilities; however, the City might also need to remove parking to realize their vision.

The decision to designate a future potential bypass as US-40 and transfer jurisdiction of Main Street to Heber City is not part of this EIS process. The decision to designate a western corridor as US-40 would be made by FHWA, not UDOT.

What is the National Network?

The National Network, authorized by the Surface Transportation Assistance Act of 1982, is a network of approved state highways and interstates for commercial truck drivers in the United States.

1.2 Summary of Purpose and Need

1.2.1 Purpose of the Project

The purpose of the Heber Valley Corridor Project is to improve regional and local mobility on US-40 from River Road/SR-32 to US-189 and provide opportunities for nonmotorized transportation while allowing Heber City to meet their vision for the historic town center.

Criteria[2] for the project purpose were used to screen or eliminate alternatives that are not reasonable or practicable. If an alternative did not meet the purpose of the project, it was eliminated from further consideration.

What is mobility?

In general terms, mobility is the ability to move freely and easily. In terms of this project, local mobility is ability to move freely and easily when making local trips using US-40, and regional mobility is the ability to move freely and easily when making regional trips on US-40 (including driving through Heber City).

1.2.2 Need for the Project

Needs are the problems to be solved by the project. In the Heber Valley, US-40 presents the greatest challenges for mobility today and in the future, particularly during peak traffic periods. The growth and mix of regional and local traffic on Main Street have outgrown the design and capacity of the transportation system. When traffic levels were low, one facility could accommodate the transportation needs of both regional and local travel. As Heber City and the surrounding region have grown, US-40/Main Street no longer functions well for either regional or local transportation, as demonstrated by increasing congestion levels and long travel times. With the Heber Valley Corridor Project, UDOT intends to improve conditions related to the following transportation needs through the project's design year (2050):

- The **regional mobility** and functionality of the National Highway System are hampered through downtown Heber City by increasing traffic, numerous traffic signals, and friction with side streets and driveways, resulting in congestion and long travel times. These conditions will get worse as population and the resulting traffic grow. Future regional mobility on US-40 north of Heber City is threatened by extensive ongoing and planned development.
- **Local mobility** is hampered by regional traffic on downtown streets. Heavy traffic and long lines of vehicles create congestion and make local trips along and across Main Street inefficient. Public comments indicate a high level of frustration in the community with increasing congestion and the need for improvements.

What is the National Highway System?

The National Highway System consists of roads important to the nation's economy, defense, and mobility. It includes the interstate highway system as well as other important roads such as US-40 and US-189. In the project area, US-40/Main Street is part of the National Highway System.

[2] More information regarding the criteria used in screening is provided in Table 3-3, *Level 1 Screening Criteria and Measures*, of Appendix 2A, *Final Alternatives Development and Screening Report*, and Section 1.2, *Additional Screening Criteria Detail Used in This Screening Addendum*, of Appendix 2B, *Addendum to the Final Alternatives Development and Screening Report.*

- Heber City has a **planned vision** for redeveloping their historic downtown to be a more walkable and bicycle-friendly destination. The downtown setting is adversely affected by regional traffic, which includes many oil tankers and other trucks, and congestion. The capacity needs of the National Highway System limit Heber City's ability to redevelop the streetscape to include wider sidewalks and bike facilities as envisioned in Heber City's general plan. There is not enough space to provide wider sidewalks and bike facilities without either impacting historic structures that are important to Heber City's historic center or removing or narrowing travel lanes, which are needed for mobility. Heber City's vision for the historic town center is taken from the *Heber City Envision 2050 General Plan*. For more information, see Section 1.1.3.3, *Local Planning*.

Section 1.3 below presents data that document the need for improvements in the needs assessment evaluation area. UDOT determined the need for the project by reviewing previous planning studies and general plans, through public and agency input, and by quantifying the change in anticipated travel demand between existing (2019) and future (2050) conditions. Existing conditions are represented by traffic data from 2019, when traffic counts were collected.

1.3 Needs Assessment

This section evaluates the need for the Heber Valley Corridor Project based on growth projections and travel demand data in the evaluation area.

1.3.1 Planning for Future Conditions

UDOT considered the planning horizon of the LRTP to establish a planning horizon for the Heber Valley Corridor EIS. The planning horizon is used to assess how well project alternatives would support future travel demand. A no-action condition (that is, the condition of transportation operations of the transportation system without the Heber Valley Corridor Project) is used to inform the needs assessment.

1.3.1.1 Planning Horizon

The planning horizon in UDOT's current LRTP is 2023 to 2050. In developing the evaluation area, the purpose and need statement, and alternatives for the Heber Valley Corridor EIS, UDOT aligned the EIS's planning horizon to match the current LRTP's planning horizon. This planning horizon also aligns with UDOT's timeline for preparing *Utah's 2023–2050 Unified Transportation Plan* (Cache MPO and others 2023) in partnership with the Utah Transit Authority and metropolitan planning agencies.

1.3.1.2 Projected Growth

The Heber Valley is rapidly developing, especially on the east side of US-40 north of downtown Heber City, but also south of the hub intersection and west of the existing urban area. The Kem C. Gardner Policy Institute produces long-term demographic and economic projections for the state of Utah and its counties. As shown in Table 1.3-1, Wasatch and Summit Counties are forecasted to have large increases in population, employment, and households by 2050 (Kem C. Gardner Policy Institute 2022). These forecasted increases are included in the 2023–2050 LRTP and are expected to result in continued increased travel demand on the transportation network including US-40. The population of Heber City is forecasted to double from 17,093 in 2019 to more than 30,000 in 2050 (Heber City 2023).

Table 1.3-1. Projected Regional Population, Employment, and Household Growth in Wasatch and Summit Counties

County	Population		Employment		Households	
	2019	2050 Projection (Percent Change from 2019)	2019	2050 Projection (Percent Change from 2019)	2019	2050 Projection (Percent Change from 2019)
Wasatch	34,242	69,483 (103%)	18,535	28,752 (55%)	10,802	26,856 (149%)
Summit	42,215	56,493 (34%)	44,098	59,582 (35%)	15,571	25,379 (63%)

Source: Kem C. Gardner Policy Institute 2022

1.3.1.3 Travel Demand Model

A travel demand model predicts future travel demand based on projections of land use, socioeconomic patterns, and transportation system characteristics. The travel demand model used for the Heber Valley Corridor Project—the Summit-Wasatch travel demand model—was developed through a multi-agency cooperative effort using resources from MAG, the Wasatch Front Regional Council, UDOT, and Summit County, and it is the official, adopted model for the area.

What is a travel demand model?

A travel demand model predicts future travel demand based on projections of land use, socio-economic patterns, and trans-portation system characteristics.

The model includes the socioeconomic forecast and LRTP approved projects through 2050 and was used to generate forecasted traffic in 2050 under the no-action conditions for this project (that is, the conditions in the Heber Valley if the Heber Valley Corridor Project is not implemented).

In fall 2023, as UDOT was preparing to publish the Draft EIS including a preferred alternative, an updated internal draft version of the Summit-Wasatch travel demand model became available. Regional travel demand models typically undergo comprehensive updates every 4 years coinciding with the 4-year long-range plan update cycle. Model updates included revisions to growth assumptions based on coordination between regional planning partners and local governments and considering statewide projections and locally approved developments and land use plans.

The project team for this EIS conducted a sensitivity analysis and found that the draft updated model projected substantially more traffic in 2050 compared to the previously approved model (v1.0) that had been used to prepare the Draft EIS. Typically, updates to the regional travel demand models that occur in the middle of the EIS process produce changes to traffic forecasts that are small enough to support relying on decisions made with the previous model. In this case, however, the new growth assumptions in the draft updated travel demand model resulted in a 30% increase in traffic volume on north US-40 compared to previous forecasts.

What is a sensitivity analysis?

In the context of this project, a sensitivity analysis is an analysis to determine how the change in projected growth would affect traffic volumes and how well an alternative could handle increased traffic volumes.

UDOT met with MAG, Wasatch County, and Heber City in winter 2023/2024 to discuss the differences between the models and understand why the projected growth had increased so substantially. In spring 2024, an official version of the updated travel demand model was

released. Through summer 2024, the project team validated the updated travel demand model and evaluated the changes between version 1.0 and version 2.1 of the updated model.

By fall 2024, UDOT had thoroughly reviewed the official, calibrated and finalized version the updated travel demand model (version 2.1 2024-03-28), and the project team confirmed the findings of the sensitivity analysis. The updated travel demand model (version 2.1) forecasts a 30% increase in traffic on north US-40 (US-40 between SR-32 and 900 North) and a 10% increase in traffic on Main Street (US-40 in downtown Heber City) compared to the travel demand model previously used. UDOT determined that the change was significant enough to require revising the traffic analysis using projections from version 2.1 of the model before publishing the Draft EIS. Traffic projections in this Draft EIS are based on version 2.1 of the model. For more information, see Appendix 1A, *Existing and 2050 No-build Traffic Report*.

1.3.1.4 2050 No-action Conditions

For the 2050 no-action conditions, UDOT used a socioeconomic forecast for 2050 and assumed that all funded roadway projects in the 2023–2050 LRTP would be in place, except for the improvements that are being evaluated in this EIS. Local projects in the 2023 Wasatch Back RPO RTP that would influence the traffic analysis are also assumed to be in place.

What are the 2050 no-action conditions?

The no-action conditions are the conditions that would be present in the evaluation area in 2050 if the Heber Valley Corridor Project were not implemented.

Table 1.3-2 lists and Figure 1.3-1 shows the planned highway projects in the UDOT 2023–2050 LRTP and the 2023 Wasatch Back RPO RTP that influence the Heber Valley Corridor EIS. Projects that would not influence the travel demand model are not included.

The projects listed in Table 1.3-2 and shown in Figure 1.3-1 are separated into two groups: (1) projects that are affiliated with the planned Heber Valley Corridor being evaluated in this EIS and (2) projects that are not affiliated with the planned Heber Valley Corridor but are assumed to be built by 2050. The projects in the second group are included in the 2050 no-action conditions, but projects in the first group are not.

Table 1.3-2. Planned Highway Projects in the Needs Assessment Evaluation Area

Projects in UDOT LRTP and Wasatch Back RPO RTP		Needs Phase	Funding Phase[a]
ID	Description		
Projects Affiliated with Planned Heber Valley Corridor; Not Included in the No-action Conditions			
LRTP U2023031	Western Bypass: Construct new four-lane expressway	3	Unfunded
LRTP U2023033	US-40: Widen to seven lanes (SR-32 to 900 North)	3	Unfunded
LRTP U2023289	US-40 and SR-32: Improve Interchange (MP 13.2)	2	3
Assumed Projects Included in the No-action Conditions			
RTP #23	East Bypass: New three-lane road (US-40 to Center Street)	NA	NA
RTP #38	North Village Connector: New road (SR-32 to Coyote Canyon Parkway)	NA	NA
Local Project	500 East: New road (600 South to 700 South)	NA	NA
LRTP U2023052	US-40: Widen to five lanes (US-189 to Center Creek Road)	1	Funded
LRTP U2023051	US-189: Widen to four lanes (Wallsburg to Charleston)	1	Funded
LRTP U2019092	SR-113: Widen to five lanes (River Road to Southfield Road)	1	3

Sources: MAG 2023; UDOT 2023a; Appendix 1A, *Existing and 2050 No-build Traffic Report*

Definitions: ID = identifier; LRTP = long-range transportation plan; MP = milepost; NA = not applicable; RPO = rural planning organization; RTP = RPO transportation plan

[a] The LRTP funding phase is when the money is allocated: Phase 1 (2023–2032), Phase 2 (2033–2042), and/or Phase 3 (2043–2050). The Wasatch Back RPO RTP does not include the funding phase.

Project LRTP U2023031, "Western Bypass: Construct new four-lane expressway," is affiliated with the planned Heber Valley Corridor. The project is in the unfunded phase of the LRTP. This means the project was identified as a need within the planning horizon of 2050. However, the fiscal forecast did not identify enough funds to include the project in a funded phase. A prioritization process is used in the development of the LRTP to identify projects that can be funded according to the fiscal forecast. Projects that are not prioritized enough to fit within the fiscal forecast are assigned to the unfunded phase. Projects in the unfunded phase are still needed, and funding priorities can change. Although there are projects affiliated with the Heber Valley Corridor that are currently unfunded, UDOT initiated an EIS in response to requests from Heber City and Wasatch County in 2019 to assist them with community planning and corridor preservation.

Traffic volumes in the Heber Valley are expected to increase with the growth described in Section 1.3.1.2, *Projected Growth*. UDOT used the Summit-Wasatch travel demand model to forecast traffic volumes in 2050 based on household, population, and employment estimates. Traffic volumes on US-40 are forecasted to increase by 89.4% north of downtown Heber City and by 44.8% in downtown Heber City. Traffic modeling projects that 50% of the traffic on Main Street in 2050 would be local (starting and ending in the Heber Valley), 25% would be regional (starting or ending in the Heber Valley), and 25% would be through traffic (starting and ending outside the Heber Valley). Figure 1.3-2 shows the changes in daily traffic volumes on key roads between the existing conditions (2019) and the 2050 no-action conditions (Appendix 2C, *Action Alternatives Traffic Memo*).

Figure 1.3-1. Planned Highway Projects in Needs Assessment Evaluation Area

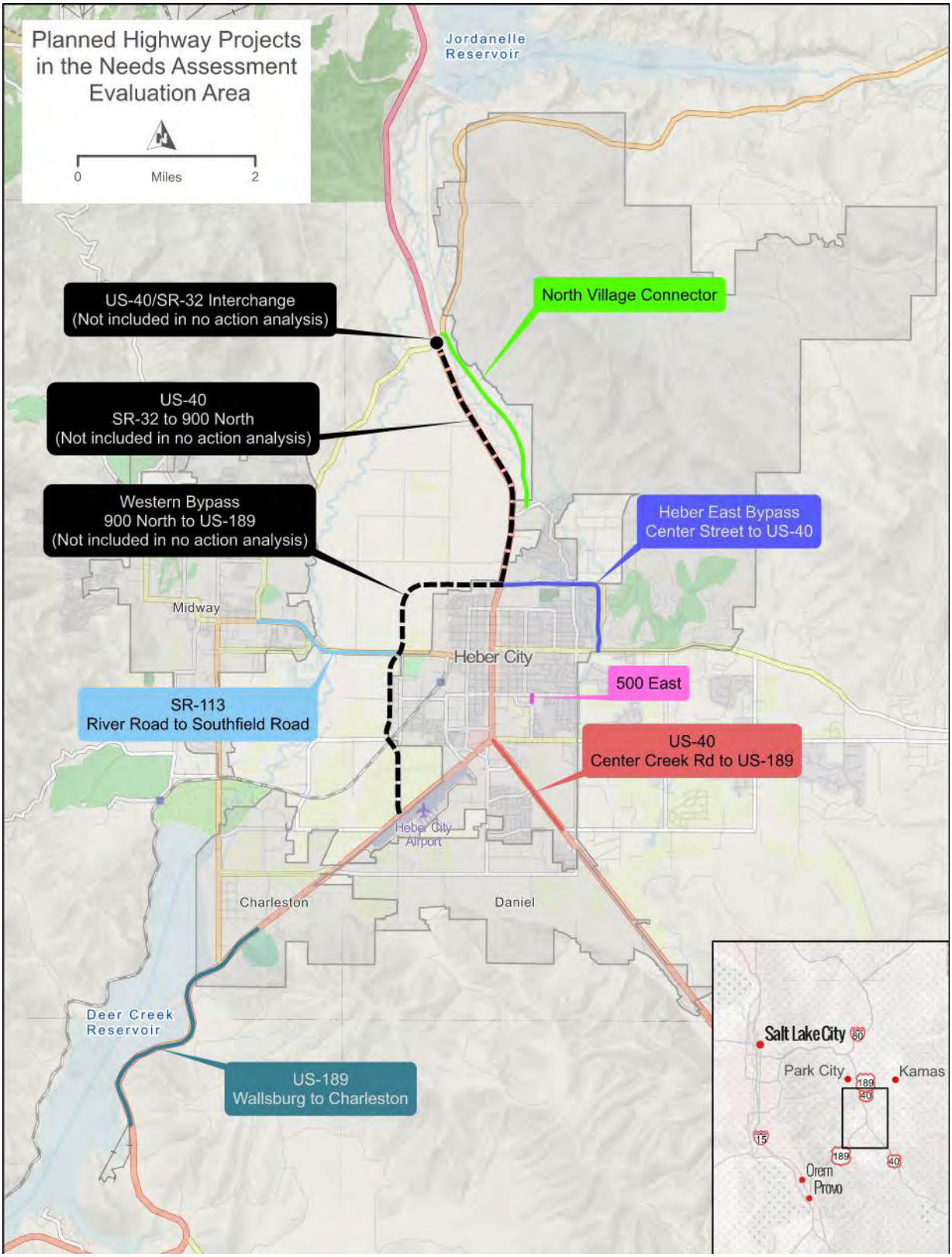
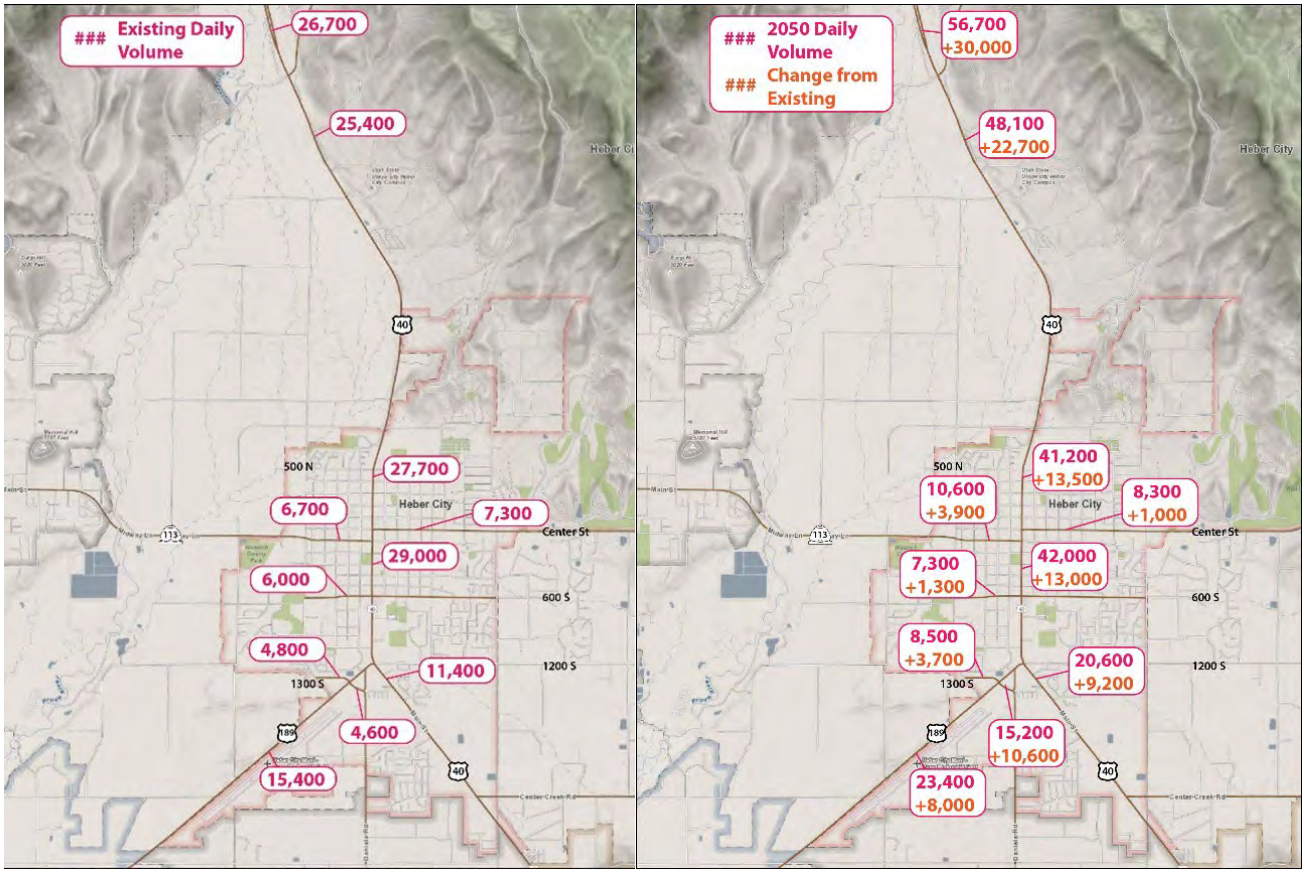


Figure 1.3-2. Existing (2019) and 2050 No-action Traffic Volumes



Source: Appendix 2C, *Action Alternatives Traffic Memo*

The increasing traffic in the needs assessment evaluation area is creating a demand for additional traffic signals on north US-40. Traffic signals are needed to safely provide access to the adjacent developments. The locations of future traffic signals on US-40 between River Road/SR-32 and 900 North are specified in the cooperative corridor access agreement among UDOT, Wasatch County, and Heber City (UDOT and Wasatch County 2008; UDOT, Wasatch County, and Heber City 2018, 2023a, 2023b). Three additional traffic signals are planned: at University Avenue, Commons Boulevard, and Coyote Canyon Parkway. The 2050 no-action conditions assume that these intersections have traffic signals.

UDOT is also conducting a separate safety project to evaluate installing a concrete median barrier on US-40 between SR-32 and 900 North. This project would improve safety by protecting travelers from oncoming vehicles crossing the center line and by consolidating left turns to specific intersections where traffic signals are planned (University Avenue, Commons Boulevard, and Coyote Canyon Parkway). However, it would not increase capacity as needed to meet the purpose of the Heber Valley Corridor Project. UDOT believes that a median barrier would provide immediate safety benefits regardless of the outcome of this EIS.

1.3.2 Importance of Mobility through the Heber Valley

1.3.2.1 Regional North-south Mobility

Mobility refers to the ease with which people can move from place to place using a transportation system. Impediments to mobility can include traffic congestion, friction caused by numerous accesses to properties, high accident rates, and other factors.

Typically, travelers will use a combination of arterial, collector, and local roads for their trips. Each type of road has a specific purpose or function. Arterials provide a high level of mobility for through traffic and limited access to adjacent properties, while local roads provide a high level of access to properties but a low level of mobility. Local roads are typically used for access to residential neighborhoods and have low speed limits. Collector roads provide a balance between mobility and property access. For a transportation system to operate efficiently, all three types of roads are needed. UDOT further classifies arterials and collectors as shown in Table 1.3-3.

Table 1.3-3. Highway Functional Classifications

Functional Classification	Characteristics
Arterials	
Interstates	Highest classification designed and constructed with mobility and long-distance travel in mind.
Freeways and expressways	Similar to interstates, they are designed to maximize mobility. Directional travel lanes are typically separated by some type of physical barrier, and access is limited to on- and off-ramp locations.
Principal arterials	Serve major centers of metropolitan areas with a high degree of mobility. In rural areas, provide a high degree of mobility with trip length and travel density characteristics indicative of substantial statewide or interstate travel. Can provide access to at-grade intersections with other roads and driveways to specific parcels. Provide similar service in both urban and rural areas, the primary difference being that there are usually multiple arterial routes in an urban area.
Minor arterials	Provide service for trips of moderate length and offer connectivity to the higher arterial system. In rural settings, minor arterials are typically designed to provide relatively high overall travel speeds, with minimum interference to through movement.
Collectors	
Major collectors	Serve primarily intra-county travel (rather than statewide) and constitute those routes on which predominant travel distances are shorter than on arterial routes.
Minor collectors	Similar to major collectors but are usually shorter in length, have fewer travel lanes and driveways, and have lower posted speeds. Provide more access and less mobility compared to major collectors.
Local roads	
Local roads	Provide direct access to adjacent land and are not intended for use in long-distance travel, except at the origin or destination end of the trip. They are often designed to discourage through traffic.

Source: FHWA 2013

There are only two principal arterials in the Heber Valley: US-40 and US-189. To the southeast, US-40 provides a connection to the Uinta Basin and continues as a major east-west highway to the East Coast. To the southwest, US-189 provides a connection to Utah County and Interstate 15 (I-15) through Provo Canyon. US-40 and US-189 merge into a single north-south principal arterial at the south end of Heber City

north to River Road/SR-32. North of River Road/SR-32, US-40/US-189 is classified as a freeway or expressway all the way to Interstate 80 (I-80). As described above in Table 1.3-3, these principal arterials are intended to provide a high degree of mobility. The additional traffic signals and traffic anticipated to access US-40 from proposed development are anticipated to degrade mobility on the highway.

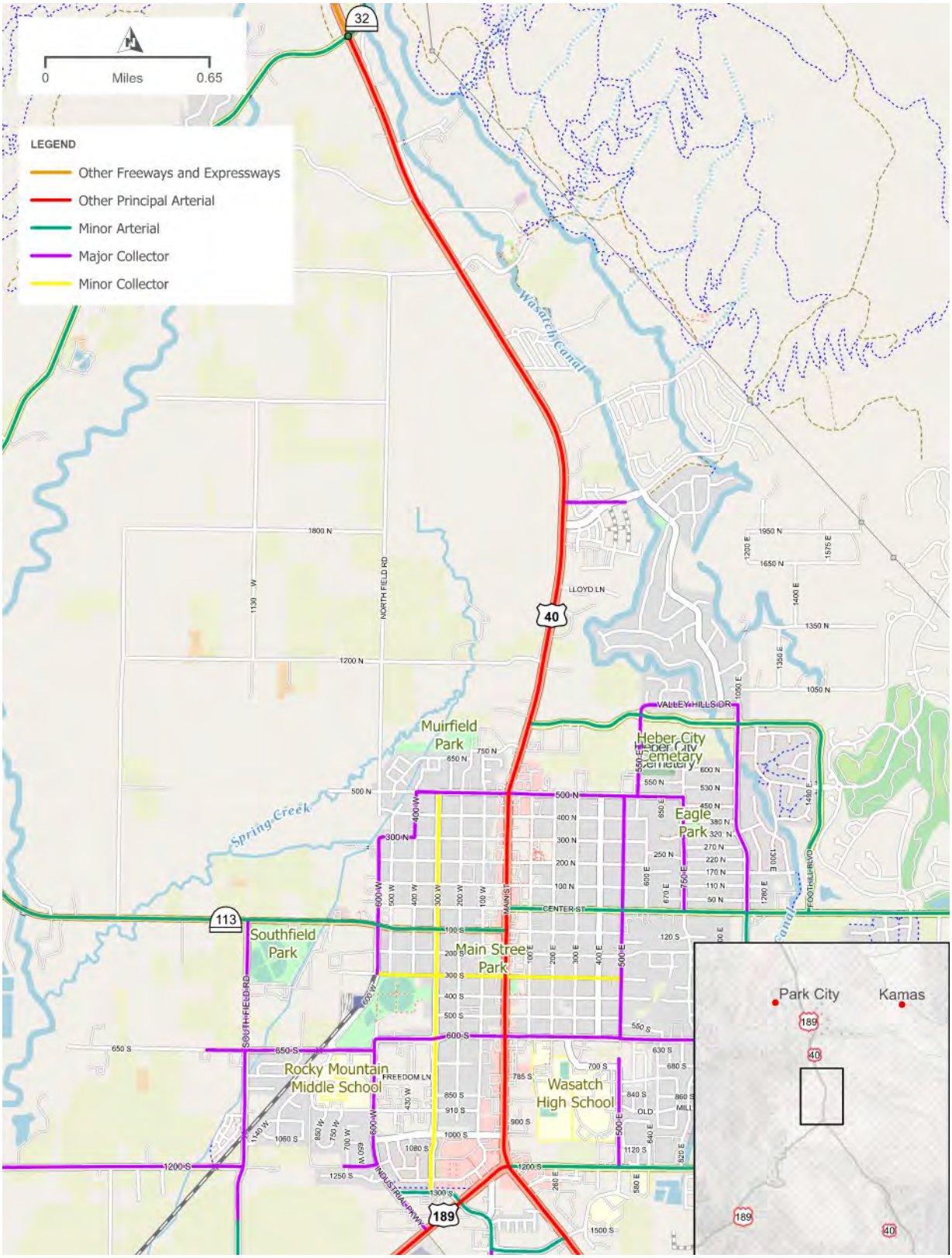
US-40 also serves as Main Street in Heber City from 750 North to the intersection with US-189. Through the downtown historic core, US-40 has two travel lanes in each direction and a center turn lane. It is lined with small businesses, public facilities, and historic buildings. There are traffic signals at 500 North, Center Street, 100 South, 600 South, and the intersection with US-189. In addition to the signalized intersections, two pedestrian-activated flashing beacons facilitate pedestrians crossing US-40 at 100 North and 250 South. Figure 1.3-3 below shows the road network and functional classification in Heber City. Where it travels through Heber City, US-40 both serves a local function (access to residences, businesses, and public facilities) and also serves a regional function (as a facility that maximizes mobility for through traffic and long-distance travel). It is becoming increasingly difficult for US-40 to adequately serve both local and regional traffic because vehicles turning onto and off of Main Street for local trips create friction and slow down drivers who want to travel through as quickly as possible.

The character and function of US-40 changes in Heber City. North of Heber City, from I-80 to River Road/SR-32, US-40 is a freeway designed to maximize mobility with a posted speed limit of 65 miles per hour (mph). Access is limited to grade separated interchanges and a median separates northbound traffic from southbound traffic. Between River Road/SR-32 and 750 North, US-40 has a posted speed limit of 55 mph with relatively few unsignalized at-grade intersections and limited access points. However, this area is rapidly developing; there is a new traffic signal at 900 North, and another signal is planned to be installed at Coyote Canyon Parkway in 2025.

In Heber City's downtown area, from 750 North to US-189, US-40 (Main Street) has a posted speed limit of 35 mph, several signalized intersections, and numerous driveways. South of its junction with US-189, US-40 transitions back to a 60-mph highway with fewer driveways and unsignalized intersections; however, a traffic signal is planned at 1500 South.

Throughput on US-40 is traded for increased access in Heber City's historic core, resulting in congestion and delay as well as compromised pedestrian comfort and safety. In addition to north-south through traffic, US-40 is also a primary route for local trips. Heber City's roads are laid out in a grid system centered on Main Street. As Main Street becomes congested, drivers use parallel roads such as 600 West, 300 West, 100 West, and 100 East. UDOT classifies 600 West as a major collector and 300 West as a minor collector. 100 West and 100 East are not classified by UDOT but are considered local residential roads by the City. Because of the congestion on Main Street, these streets are serving traffic beyond their intended purpose. With planned growth, the congestion and delay on Main Street will continue to worsen, and the local parallel road system will experience additional traffic that is bypassing that congestion.

Figure 1.3-3. Road Network and Functional Classification in Heber City



1.3.2.2 Freight Routes

As principal arterials, US-40 and US-189 are intended to be the facilities used for intercity freight movement. However, in downtown Heber City, the high volume of large trucks adversely affect local travel (by contributing to congestion) and conflict with the planned walkable, bikeable downtown destination vision expressed in adopted plans (because the trucks are large and loud, they create an atmosphere in which bicyclists and pedestrians do not feel safe, and they make it difficult to hear conversations when people gather downtown).

US-40 and US-189 converge into a single route for 18 miles from their junction at the south end of Heber City north to I-80. The *Utah Freight Plan* (UDOT 2023b) identifies US-40 and US-189 as secondary but important freight routes in Utah. Both US-40 and US-189 are included in the National Network of highways for large trucks. Aside from some light industry on the east side of Park City, on Heber City's southwest side, and in the Kamas area, little freight is generated in this area. Most freight traveling in the Heber Valley is passing through or providing deliveries to local supermarkets, home improvement centers, and local businesses.

US-40 is a major regional freight corridor and the primary route for tanker trucks carrying crude oil from the Uinta Basin to refineries along the Wasatch Front. About 600 to 700 large combination vehicles known as supertankers pass through Heber City on Main Street each day. The volume and percentage of tanker trucks varies throughout the day; these numbers are highest during the midday hours (about 60 trucks per hour, or 3% of the traffic) and lower during the PM (afternoon) peak hour (30 to 40 trucks per hour, or 1% of the traffic) (Appendix 1A, *Existing and 2050 No-build Traffic Report*). Oil field support equipment and supplies also travel on this highway. US-40 provides a connection to northwest Colorado, which contributes some regional truck traffic.

US-189 is a secondary freight route that connects US-40 with I-15 via Provo Canyon. US-189 currently has restrictions; vehicles and loads over 10 feet wide are prohibited. However, the restrictions will be removed when the planned widening of US-189 is implemented, and this widening could lead to increased truck traffic on this route.[3] Some trucks use the Provo Canyon route as an alternative to the steep grades on I-80 and US-40 when going to and from Salt Lake City.

I-80 is a national freight corridor, and all segments of I-80 in Utah carry some of the highest volumes and percentages of freight trips in the state. In Utah, trucking is the mode that carries the highest percentage of freight trips by both value and weight. UDOT anticipates that the amount of freight moved by trucks will increase by 98% by value and 40% by weight by 2050 compared to 2017 (UDOT 2023b).

This high volume of large trucks contributes to problems for local traffic movement, safety for people walking and biking, and adversely affects the setting the Heber City is trying to achieve for its historic downtown.

[3] The US-189 widening project is unrelated to the outcome of this EIS. It is a fully independent project and is part of the adopted regional transportation plan for the Heber Valley.

1.3.2.3 Recreation and Tourism Access

The Wasatch Back is an important area for recreation and tourism and the economy it generates. As the principal arterial in the Heber Valley, US-40 provides a north-south route that connects recreation areas with population centers. A substantial amount of regional recreation traffic travels on US-40 due to attractions such as the Heber Valley Historic Railroad and its proximity to multiple state parks (Jordanelle, Deer Creek, and Wasatch Mountain), Strawberry Reservoir, the Uinta-Wasatch-Cache National Forest, and year-round resorts (Park City and Deer Valley). About 65% of all travel and tourism jobs in Utah are part of the leisure and hospitality sector. In Wasatch County, about 21% of total private employment is in the leisure and hospitality sector, and this leisure and hospitality employment grew at a rate of 27.1% from 2014 to 2018 (Kem C. Gardner Policy Institute 2019).

What is the Wasatch Back?

The Wasatch Back sits on the eastern side of the Wasatch Range and includes Park City, Heber City, and the surrounding areas.

Although there are year-round recreation opportunities in the Heber Valley and surrounding area, recreation traffic is higher during the summer months. Traffic volumes are above the annual average for 5 months of the year (April through August) in downtown Heber City, which is likely related to the high amount of traffic in the area related to summer recreation.

What is the PM peak hour?

The PM peak hour is the 1-hour period in the afternoon (PM) during which there is the greatest number of vehicles on the road system. For the Heber Valley Corridor Project, the PM peak hour is from 5 to 6 PM.

Vehicle classification data on Main Street show that longer recreation-based vehicles (recreational vehicles [RVs] and campers, vehicles towing boats or off-highway vehicles, etc.) make up at least 2% of the traffic during the weekday PM peak hour. These longer vehicles affect traffic flow and operations (Appendix 1A, *Existing and 2050 No-build Traffic Report*). Longer vehicles take up more space and require more time to accelerate and decelerate compared to shorter vehicles. This means that, as additional traffic signals are added in the needs assessment evaluation area, travel time will increase because of the vehicle mix associated with recreational travel on US-40.

Salt Lake City has been selected to host the 2034 Olympic and Paralympic Winter Games. The Wasatch Back Mountain Zone Venue Master Plan identifies competition venues at the Soldier Hollow Nordic Center (in the Heber Valley) and Deer Valley Resort (which can be accessed via US-40 north of the Heber Valley). Although most athlete housing is planned for Salt Lake City, alternate athlete accommodation is planned for Heber City (IOC 2024). Although there is currently no funding for the Heber Valley Corridor as described in Section 1.3.1.4, *2050 No-action Conditions*, there is a desire to construct improvements in time for the Olympics and Paralympics.

1.3.2.4 Bicycle and Pedestrian Facilities

The existing active transportation (bicycle and pedestrian) infrastructure in the Heber Valley is inconsistent and lacks connectivity. The roadway design on north US-40 does not create a comfortable or safe environment for nonmotorized travel. In downtown Heber City, high traffic volumes exacerbated by regional traffic and heavy trucks, and the resulting congestion, similarly create undesirable conditions for people walking and biking. To remedy these conditions, Heber City's *Heber City Parks, Trails, and Open Space Master Plan* (Heber City 2021) and Wasatch County's *Heber Valley Nonmotorized Trail Plan* (Wasatch County 2024) call for developing improved bike and pedestrian infrastructure along US-40.

There are two existing paved multi-use trails running east-west outside Heber City's historic center. The Midway Lane multi-use trail is a combination of wide sidewalks and separated trails that runs along SR-113 between 600 West in Heber City and Midway. The Red Ledges multi-use trail runs along Center Street between the Red Ledges Trailhead and the Wasatch Canal (to almost 1200 East in Heber City). There are no existing continuous north-south multi-use trails in the Heber Valley.

Wasatch County's *Heber Valley Nonmotorized Trail Plan* shows many planned multi-use trails in the Heber Valley, including along US-40 north of 500 North and south of the Humbug Canal, along US-189 from 1300 South to the Deer Creek Dam, along the Heber Valley Historic Railroad, along a western bypass, and along several canals (Wasatch County 2024). Heber City's *Heber City Parks, Trails, and Open Space Master Plan* shows similar planned trails, with some variations (for example, it also shows a multi-use trail along Main Street, and on US-40 between 1300 South and the Humbug Canal, and these locations differ from Wasatch County's plan). Figure 3.8-2, *Proposed Pedestrian and Bicyclist Facilities*, shows the planned bicycle and pedestrian facilities.

Heber City's Main Street has contiguous sidewalks on both sides of the road from 900 North to 1000 South. Traffic signals at 900 North, 500 North, Center Street, 100 South, and 600 South allow pedestrians to cross Main Street at a signalized location. An additional traffic signal is planned at about 870 South. Additionally, a pedestrian-activated overhead flashing beacon is located at 100 North, and high-intensity activated crosswalk beacons are located at 250 South and 800 South. Beyond the vicinity of Center Street, east-west mobility for pedestrians is limited, and pedestrians need to make multiblock detours to get to designated crossing areas. These improvements help with nonmotorized travel but further hinder regional mobility.

Main Street has no designated bicycle infrastructure, and this lack of accommodations creates a low-comfort experience for all but the most confident riders due to the large traffic volumes and vehicles parallel parked on the shoulders. Crash data from 2016 to 2018 show three crashes involving bicyclists riding on the sidewalk, which might indicate that bicyclists are afraid to ride on Main Street. MAG conducted a detailed analysis of more recent crash data from 2018 to 2022 and recommended upgrading pedestrian and bicycle facilities on some segments of Main Street between Center Street and US-189 (Appendix 1A, *Existing and 2050 No-build Traffic Report*). For more information regarding safety, see Section 1.3.4, *Safety Conditions*.

1.3.3 Existing and Future Mobility Conditions

Existing traffic levels cause congestion, which is characterized by unacceptable levels of service, long travel times, and long queues of vehicles. Future growth will exacerbate these problems. These conditions contribute to the poor regional and local mobility on US-40 and create an environment in downtown Heber City that is inconsistent with the vision expressed in adopted plans.

1.3.3.1 Roadway Level of Service

Level of service (LOS) is a measurement of the vehicle-carrying capacity and performance of a street, freeway, or intersection. When the capacity of a road is exceeded, the result is congestion and delay, which is described as a poor level of service. Level of service is represented by a letter "grade" ranging from A for excellent conditions (free-flowing traffic and little delay) to F for failure conditions (extremely congested, stop-and-

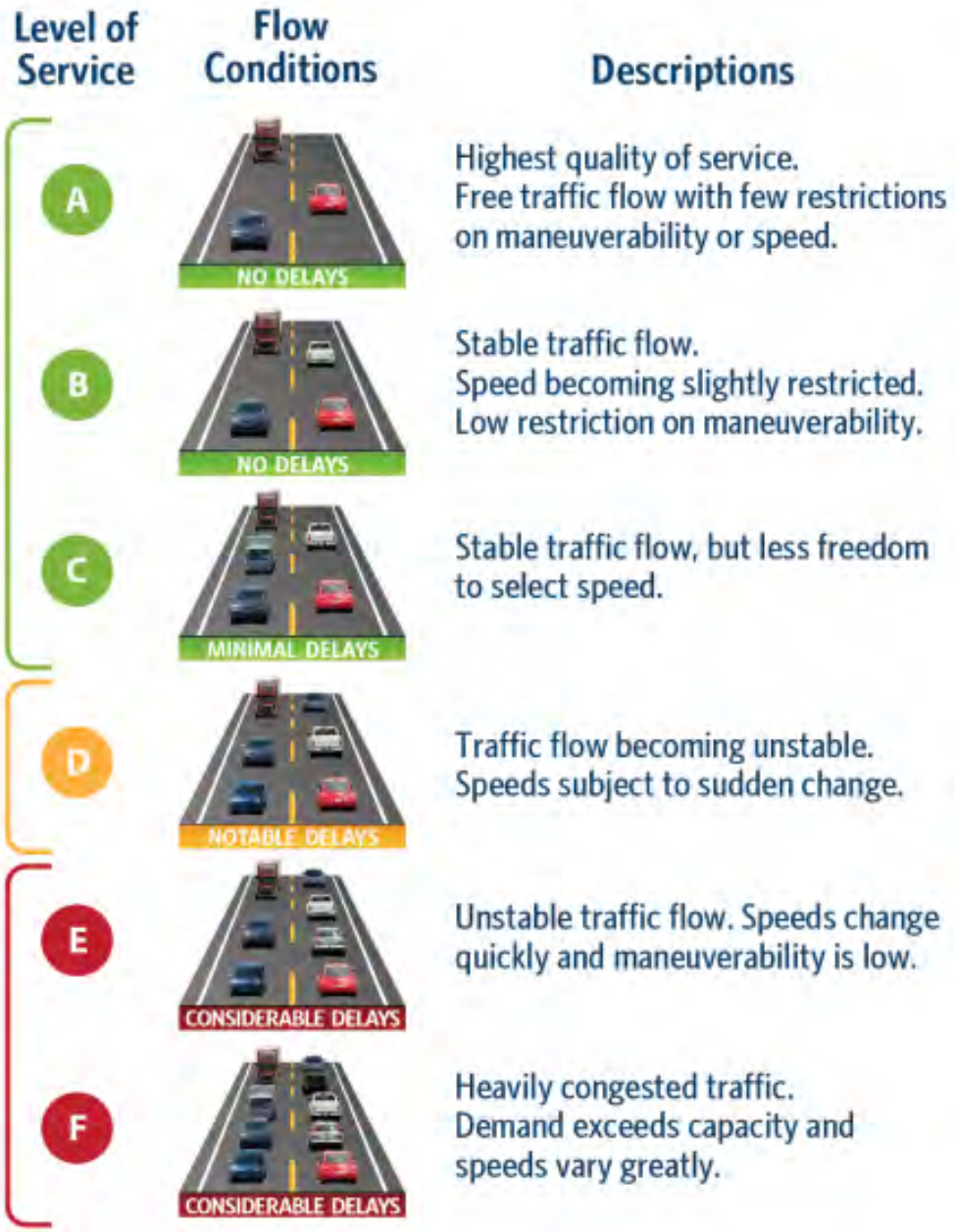
What is level of service?

Level of service is a measurement of the vehicle-carrying capacity and performance of a street, freeway, or intersection.

go traffic, and excessive delay). LOS B through LOS E describe progressively worse traffic conditions (Figure 1.3-4).

UDOT has set a goal of maintaining urban roads at LOS D or better during peak travel periods. Typically, in urban areas, LOS E and F are considered unacceptable operating conditions, and LOS A through D are considered acceptable operating conditions.

Figure 1.3-4. Levels of Service



A level of service analysis was conducted for US-40 that evaluated the traffic conditions during the weekday PM peak hour (5 PM to 6 PM) under existing conditions and under future no-action conditions in 2050. For the existing conditions, traffic data from 2019 were generally used. Congestion has likely increased since 2019 and is likely to continue to increase in tandem with UDOT's projections for 2050. Table 1.3-4, Table 1.3-5, and Figure 1.3-5 show the level of service for signalized intersections and arterial (road) segments in the needs assessment evaluation area under existing and 2050 no-action conditions.

The level of service at intersections is based on the average vehicle delay at each traffic signal. As shown in Table 1.3-4 and Figure 1.3-5, all of the intersections in the needs assessment evaluation area currently operate at acceptable conditions during the weekday PM peak hour. However, seven intersections on US-40 are projected to operate at unacceptable conditions if no improvements are made by 2050. At the intersections in downtown Heber City, drivers would likely wait through several cycles of the traffic signal.

Table 1.3-4. Level of Service at Intersections: Weekday PM Peak Hour (Existing and 2050 No-action)

Intersection	Existing (2019)		2050 No-action	
	Average Vehicle Delay (seconds/vehicle)	LOS	Average Vehicle Delay (seconds/vehicle)	LOS
US-40 / SR-32	18	B	>100	F
US-40 / University Avenue	NA[a]	NA[a]	63	E
US-40 / Potter Lane/College Way	32[b]	D[b]	NA[a]	NA[a]
US-40 / Commons Boulevard	14[b]	C[b]	50	D
US-40 / Coyote Canyon Parkway	14[b]	C[b]	57	E
US-40 / 900 North	NA[a]	NA[a]	51	D
Main Street (US-40) / 500 North	17	B	>100	F
Main Street (US-40) / Center Street	24	C	39	D
Main Street (US-40) / 100 South	30	C	>100	F
Main Street (US-40) / 600 South	18	B	>100	F
Main Street (US-40) / US-189	29	C	>100	F
1300 South / US-189	10	A	15	B

Source: Appendix 1A, *Existing and 2050 No-build Traffic Report*
Definitions: LOS = level of service; NA = not applicable
[a] There is no signal at this location under existing conditions.
[b] Unsignalized intersection, delay, and LOS are reported for the worst stop- or yield-controlled approach.

The level of service on arterial streets is based on the average speed a vehicle can travel in each road segment. Table 1.3-5 and Figure 1.3-5 show the arterial level of service for Main Street between 500 North and US-189 under existing (2019) and 2050 no-action conditions. Arterial level of service is not reported for north US-40 because the signals are farther apart, and travel time is considered to be a better measure of performance for this segment.

As shown in Table 1.3-5 and Figure 1.3-5, the southbound segments of US-40 from 100 North to 100 South and the northbound segment of US-40 from 100 South to Center Street currently operate at unacceptable conditions during the weekday PM peak hour (5 PM to 6 PM). Conditions are projected to deteriorate if no improvements are made by 2050. The southbound segments from 500 North to 100 South and the northbound segment from 100 South to Center Street are projected to operate at unacceptable conditions.

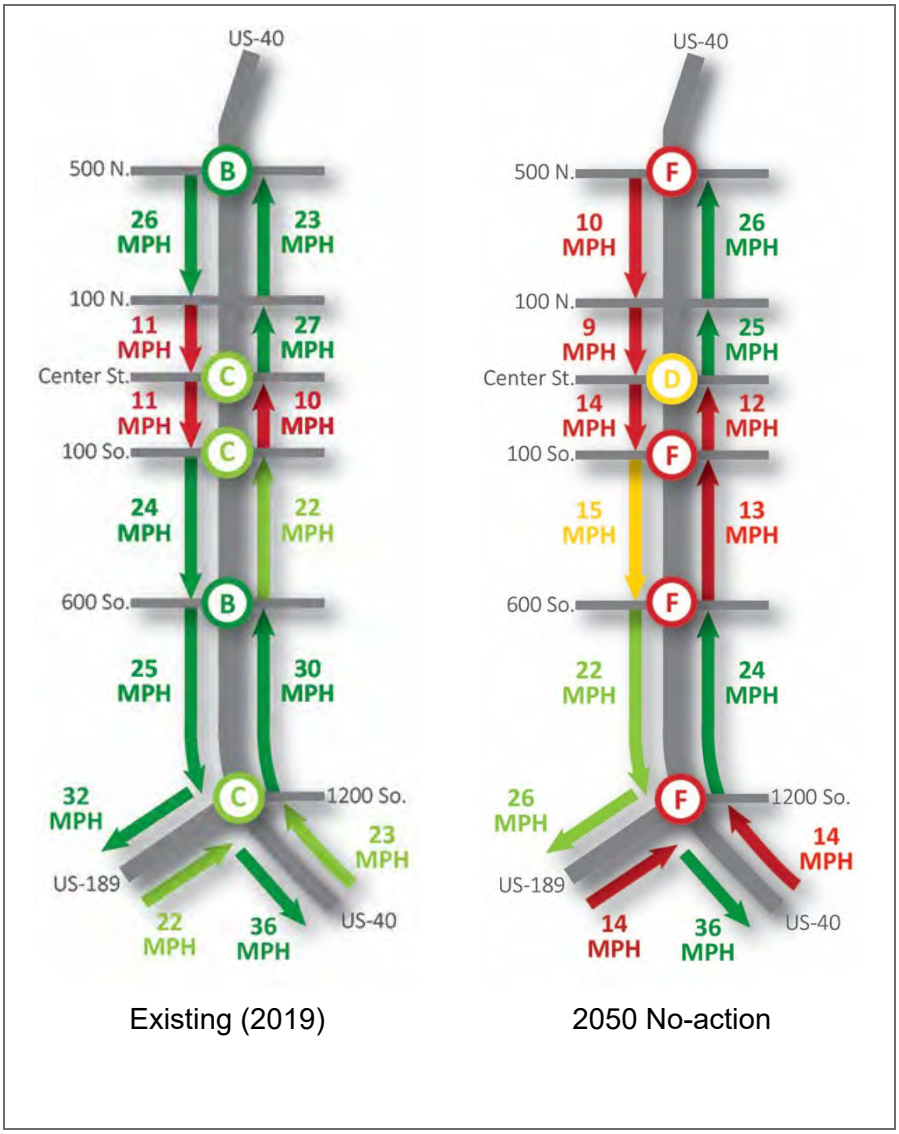
Table 1.3-5. Level of Service on Main Street: Weekday PM Peak Hour (Existing and 2050 No-action)

Street Segment	Posted Speed (mph)	Existing (2019)		2050 No-action	
		Average Segment Speed (mph)	LOS	Average Segment Speed (mph)	LOS
Southbound					
US-40: From 500 North to 100 North	35	26	B	10	F
US-40: From 100 North to Center Street	35	11	F	9	F
US-40: From Center Street to 100 South	35	11	F	14	E
US-40: From 100 South to 600 South	35	24	B	15	D
US-40: From 600 South to US-189	35–40	25	B	22	C
US-40: South of US-189	40–50	36	A	36	A
US-189 Southwest of US-40	40–60	32	B	26	C
Northbound					
US-189: Northeast to US-40	60–45	22	C	14	E
US-40: North to US-189	60–40	23	C	14	E
US-40: From US-189 to 600 South	40–35	30	A	24	B
US-40: From 600 South to 100 South	35	22	C	13	E
US-40: From 100 South to Center Street	35	10	F	12	E
US-40: From Center Street to 100 North	35	27	B	25	B
US-40: From 100 North to 500 North	35	23	B	26	B

Source: Appendix 1A, *Existing and 2050 No-build Traffic Report*
Definitions: LOS = level of service; mph = miles per hour

Figure 1.3-5 illustrates the level of service at intersections and on arterial segments of US-40 during the weekday PM peak hour (5 PM to 6 PM) under existing and 2050 no-action conditions in downtown Heber City.

Figure 1.3-5. Intersection and Arterial Level of Service on Main Street during the Weekday PM Peak Hour (Existing and 2050 No-action)



In summary, the existing and growing congestion, characterized by unacceptable levels of service, hinders both regional and local mobility, adversely affects nonmotorized travel downtown (by creating an environment in which bicyclists and pedestrians do not feel comfortable or safe), and creates a downtown with streets clogged by vehicles (including large trucks and diesel vehicles), all of which conflict with the vision of a walkable, bikeable historic Main Street setting.

1.3.3.2 Vehicle Travel Time

The heavy traffic and congested conditions, particularly in downtown Heber City, result in slow travel times. This is particularly an issue for regional travel on US-40, which is a highway intended for highly mobile intercity and freight travel.

Vehicle travel times were evaluated on road segments in the needs assessment evaluation area during the weekday PM peak hour (5 PM to 6 PM) for existing (2019) and 2050 no-action conditions. The results of the analysis are shown in Table 1.3-6 and Figure 1.3-6.

Table 1.3-6. Average Travel Time and Speed on Road Segments in the Needs Assessment Evaluation Area during the Weekday PM Peak Hour (Existing and 2050 No-action)

Road Segment	Prevailing Posted Speed Limit (mph)	Length (miles)	Existing (2019)		2050 No-action	
			Travel Time (mm:ss)	Average Travel Speed (mph)	Travel Time (mm:ss)	Average Travel Speed (mph)
Southbound						
US-40 from SR-32 to 500 North	55	3.2	3:50	50	13:05	15
Main Street (US-40) from 500 North to US-189	35	1.5	4:30	20	7:25	12
US-189 from US-40 to SR-113	60	4.1	4:30	56	4:40	53
Northbound						
US-189 from SR-113 to US-40	60	4.1	5:05	50	6:10	40
Main Street (US-40) from US-189 to 500 North	35	1.5	4:00	22	6:55	13
US-40 from 500 North to SR-32	55	3.2	3:55	49	9:00	21

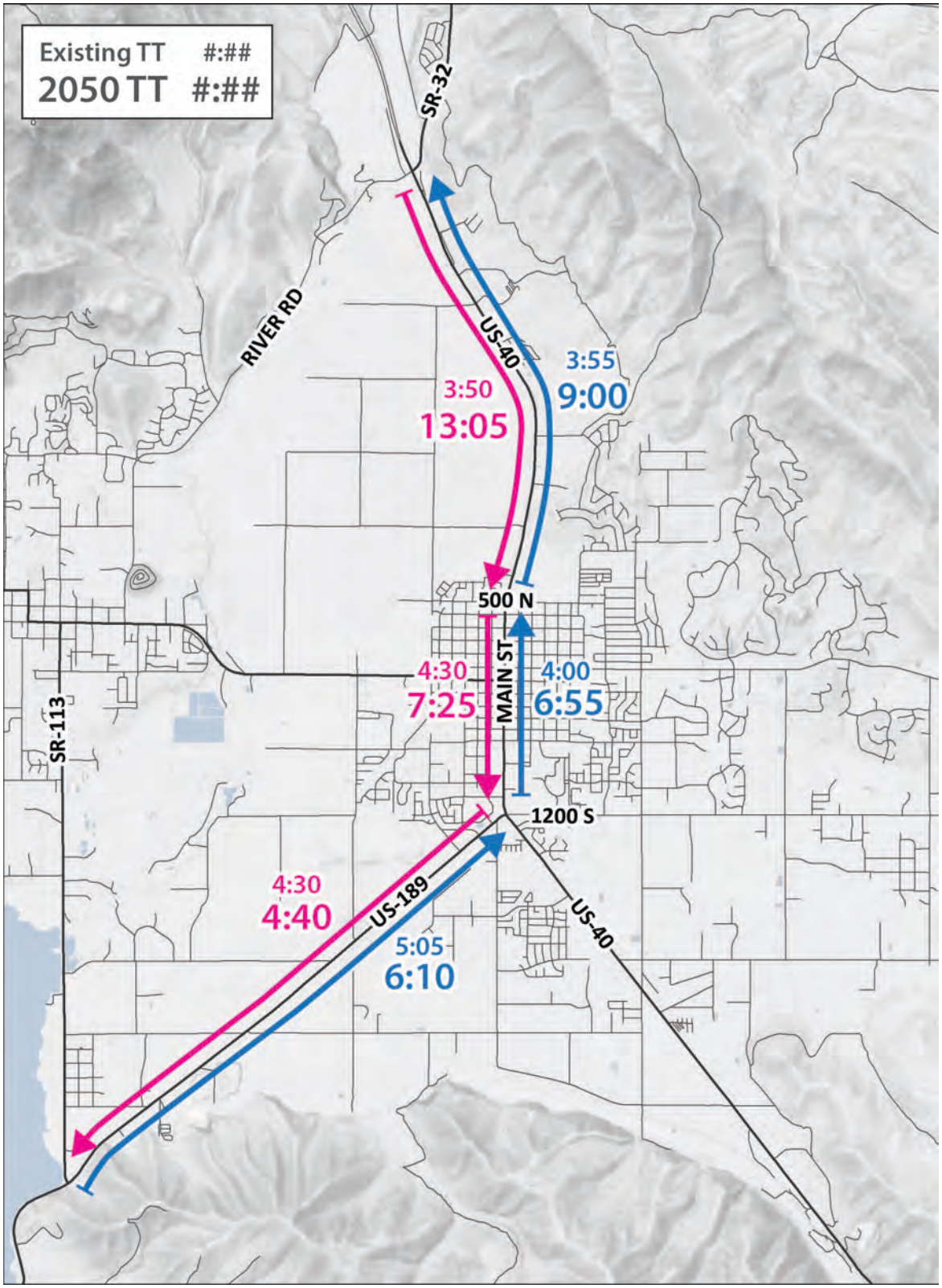
Source: Appendix 1A, *Existing and 2050 No-build Traffic Report*
Definitions: mm:ss = minutes:seconds; mph = miles per hour

As shown in Table 1.3-6 above and Figure 1.3-6 below, the average travel time for vehicles traveling southbound between River Road/SR-32 and 500 North is anticipated to increase from 3 minutes 50 seconds to over 13 minutes over the 3.2-mile segment. This increase would be caused primarily by vehicles being delayed at the 500 North intersection, which is anticipated to be unable to handle the forecasted southbound traffic. Additionally, drivers traveling southbound along Main Street are projected to experience nearly 3 minutes of additional travel time. The total travel time from River Road/SR-32 to US-189 is expected to increase by 146% (from 8 minutes 20 seconds to 20 minutes 30 seconds), as shown in Figure 1.3-6 below.

Along the other road segments, lesser increases in travel time are expected. However, note that many of these segments are not operating at their full traffic capacity due to the overcapacity conditions on north US-40. In other words, congestion on north US-40 is a bottleneck that limits the number of southbound vehicles that can proceed to downtown intersections.

In summary, both local and regional travel experiences poor mobility and slow travel times due to the heavy traffic and congestion downtown.

Figure 1.3-6. Travel Time between SR-32 and SR-113 (Existing and 2050 No-action)



1.3.3.3 Intersection Queuing (Vehicle Backup)

Another way to evaluate mobility is to look at vehicle queue length (length of the line of vehicles backed up waiting to get through an intersection). In addition to contributing to vehicle delays along US-40, queues of vehicles that extend through intersections also inhibit east-west mobility for vehicles and nonmotorized travelers trying to cross US-40/Main Street. The long queues of vehicles also create a setting in downtown Heber that is contrary to the adopted vision.

What is the 95th-percentile queue?

The queue length is the length of a line of vehicles backed up waiting to get through an intersection. The 95th percentile represents the typical longest vehicle queue during the PM peak hour. There is a 5% probability that this vehicle queue length would be exceeded during the PM peak hour.

Vehicle queue lengths were measured at intersections in the traffic simulation model for existing and 2050 no-action conditions during the weekday PM peak hour (5 PM to 6 PM). Figure 1.3-7 shows the vehicle queue lengths at the most congested intersections under existing conditions. The average queue length is shown in red, and the 95th-percentile queue length is shown in orange.

For drivers approaching the 500 North intersection in the southbound direction, the average vehicle queue length is 275 feet with a 95th-percentile vehicle queue length of 375 feet. At the 100 South intersection, average southbound queues were measured at 300 feet with the 95th-percentile vehicle queue backing through the Center Street intersection. When a queue of vehicles that is stopped at one intersection blocks adjacent intersections or driveways, it can result in safety concerns. When intersections and driveways are blocked by queues of vehicles, drivers can have difficulty finding gaps in the traffic stream to make turns.

Similarly, at the Center Street intersection, the average vehicle queue for the southbound through movement extends about 550 feet north of the intersection, while the 95th-percentile vehicle queue extends 750 feet from the intersection, or about 1.5 blocks.

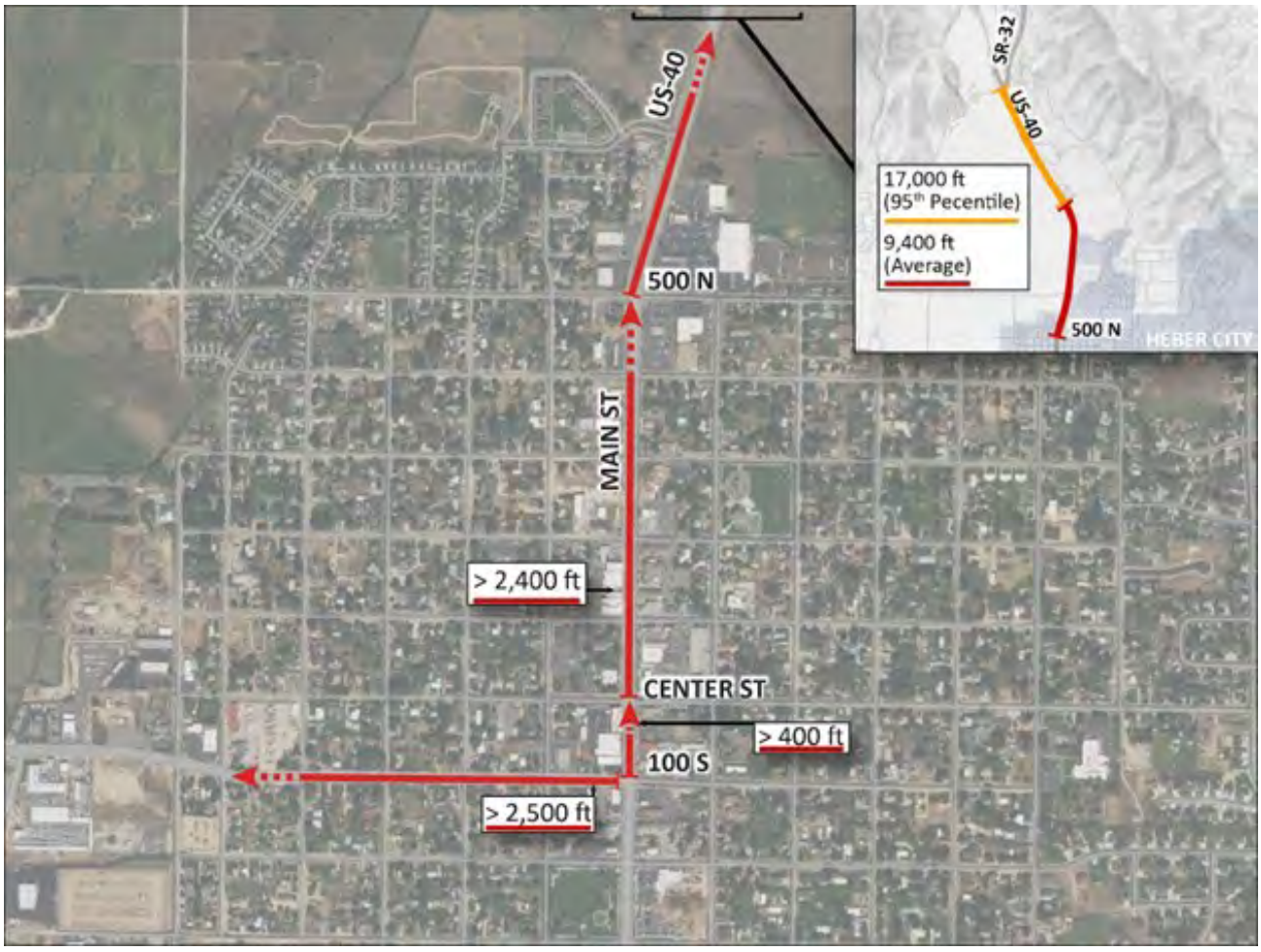
Figure 1.3-7. Vehicle Queue Lengths at Key Intersections in the Needs Assessment Evaluation Area during the Existing Weekday PM Peak Hour

Figure 1.3-8 shows the vehicle queue lengths at the most congested intersections during the weekday PM peak hour (5 PM to 6 PM) under the 2050 no-action conditions. Southbound vehicles are projected to back up substantially on US-40 because intersections on Main Street would be unable to meet the forecasted vehicle demand.

At 500 North, the average vehicle queue length would extend 9,400 feet (1.8 miles back to about Wasatch Commons), and the 95th-percentile queue would extend about 17,000 feet (3.2 miles back to the intersection with River Road/SR-32) during the weekday PM peak hour. In this situation, stopped vehicles would be backed up on US-40 in area where the posted speed limit is 55 mph, resulting in safety concerns. At Center Street, the average southbound vehicle queue would extend 2,400 feet back to 500 North. Traffic at the 100 South intersection would extend back into the Center Street intersection. Additionally, the eastbound vehicle queue would be greater than 2,500 feet long.

These intersections are expected to have inadequate capacity to handle the projected traffic. Given this lack of capacity, drivers would wait through several cycles of the traffic signals to make it through the intersections. In addition, east-west mobility would be hindered.

Figure 1.3-8. Vehicle Queue Lengths at Key Intersections in the Needs Assessment Evaluation Area during the 2050 No-action Weekday PM Peak Hour



1.3.4 Safety Conditions

UDOT conducted a crash analysis for 3 years of crash data (2016 to 2018) at the time of the original analysis of existing conditions (2019). This safety analysis based on 2016–2018 data is summarized in Section 1.3.4.1, *Crash Rates*, through Section 1.3.4.3, *Commercial Motor Vehicle Crashes*. MAG prepared a safety action plan based on 2018–2022 data in coordination with local governments and UDOT; this plan is summarized in Section 1.3.4.4, *MAG's Safety Action Plan*.

1.3.4.1 Crash Rates

Table 1.3-7 summarizes the crash rates and severe crash rates in the needs assessment evaluation area in 2016 to 2018 compared with the statewide averages for crashes and severe crashes on road segments of similar functional class and volume. Overall, crash rates on US-40 were generally lower than the statewide average range, except for the segment of US-40 from 500 North to 100 South and the segment of US-189 from US-40 to 3000 South, which had crash rates slightly higher than the statewide average. Severe crash rates were higher than the statewide average on several segments; these crash rates are shaded in red in

the table. There were two clusters of severe crashes on US-40 north of Heber City consisting of six total severe crashes. The cluster of severe crashes on US-40 north of Heber City is likely due to higher posted speed limits and the roadway geometry (curve) (Parametrix 2022).

Table 1.3-7. Crash Rates in the Needs Assessment Evaluation Area (2016–2018)

Route	Segment	Crash Rate[a]		Severe Crash Rate[b]	
		Actual	Statewide Average[c]	Actual	Statewide Average[c]
US-40	SR-32 to 1200 North	1.34	3.52 – 4.10	12.1	7.3 – 8.7
	1200 North to 500 North	2.37	3.52 – 4.10	7.4	7.3 – 8.7
	500 North to 100 South	4.11	3.52 – 4.10	12.3	7.3 – 8.7
	100 South to US-189	3.75	3.52 – 4.10	3.2	7.3 – 8.7
	US-189 to 3600 South	2.35	2.69 – 3.23	19.6	6.9 – 9.5
US-189	US-40 to 3000 South	3.50	2.69 – 3.23	18.1	6.9 – 9.5
	SR-113 to 3000 South	1.12	1.19 – 1.57	8.4	4.3 – 6.1

Source: Parametrix 2022
These data might be protected under 23 USC Section 409 (information gathered for safety reports cannot be used in a liability lawsuit).
[a] Crashes per year per million vehicle-miles
[b] Severe crashes per year per hundred million vehicle-miles
[c] UDOT statewide average for roads of similar volume and functional class

1.3.4.2 Bicyclist and Pedestrian Crashes

From 2016 to 2018, there were three crashes involving bicyclists and one crash involving a pedestrian in the Heber Valley. Of the three bicyclist crashes on Heber City's Main Street, two involved vehicles turning onto Main Street and colliding with a bicyclist in a crosswalk, and one involved a vehicle turning onto Main Street from an alley and colliding with a bicyclist on the sidewalk. The crash patterns on Main Street might indicate that Main Street is unfriendly to bicyclists, a sentiment that has also been expressed in public comments, as well as suggesting that bicyclists are choosing to ride on sidewalks rather than in the travel lanes on Main Street (Parametrix 2022).

1.3.4.3 Commercial Motor Vehicle Crashes

About 6% of the total crashes in the Heber Valley involved a commercial motor vehicle. On Heber City's Main Street, 21 commercial motor vehicle crashes occurred from 2016 to 2018; a little over half occurred at intersections. Six of the 21 crashes involved vehicles pulling onto Main Street from a side street or driveway and colliding with a commercial motor vehicle. In 7 of the 21 crashes, the crash was the fault of the commercial motor vehicle driver. Most of the crashes in which the commercial motor vehicle driver was at fault occurred at intersections and were the result of a commercial motor vehicle rear-ending vehicles at an intersection or turning too wide and hitting other vehicles (Parametrix 2022).

1.3.4.4 MAG's Safety Action Plan

In 2024, MAG prepared a safety action plan (SAP) that covers Utah, Wasatch, and Summit Counties. The SAP includes a detailed analysis of fatal and serious-injury crashes using recent crash data (2018–2022). One outcome of the SAP is a series of prioritized potential safety countermeasures based on crash analysis and agency coordination. The highest-priority locations (Tier 1) represent the combination of locations with the highest risk for fatal and serious injury crashes and the most effective and practical potential countermeasures.

The SAP identifies the following seven Tier 1 locations on US-40 between River Road/SR-32 and US-189:

- River Road/SR-32 intersection
- Curve near milepost 15
- Section between River Road/SR-32 and 500 North
- Main Street (Center Street to 200 South and 500 South to US-189)
- Center Street intersection
- 100 South intersection
- US-189 intersection

The recommended countermeasures in the SAP are specific to each location and include treatments such as intersection signal timing and phasing changes, treatments for pedestrians and bicyclists, roadway curve improvements, and median barriers. Many countermeasures relate to the need for pedestrian and bicyclist safety improvements in downtown Heber City and the high-speed conditions on US-40 north of downtown. For more information, see Appendix 1A, *Existing and 2050 No-build Traffic Report.*

1.4 Public and Agency Involvement in Developing the Purpose and Need Statement

As part of the environmental review process, the lead agency is required 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 cooperating and participating agencies to determine methodologies and the level of detail for analyzing alternatives.[4]

What is scoping?

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

UDOT used an early scoping process in 2020 to conduct a traffic and safety technical analysis and coordinate with agencies, stakeholders, and the public to identify transportation needs, preliminary alternatives, and potentially significant environmental issues. The public was notified of the scoping process through advertisements in the *Deseret News*, *The Salt Lake Tribune*, *Wasatch Wave*, and *Heber City Newsletter*; the project website; UDOT social media sites (Facebook, Instagram, and Twitter); email notices to the stakeholder email list; and a press release. A virtual

[4] These steps are required by 23 USC Section 139, which establishes an environmental review process that must be used when preparing an EIS for a highway or transit project.

public meeting was held on August 27, 2020. A public comment period was provided from August 6 (when materials were published on the project website) to October 3, 2020. UDOT received about 300 comments during this period. A draft purpose and need statement was developed based on the information gathered during early scoping as well as previous studies conducted by UDOT, Heber City, and Wasatch County.

UDOT conducted a formal scoping process in spring 2021. The public was notified of the formal scoping process using the same methods described in the paragraph above for the early scoping process, as well as printed flyers hung at local government offices, grocery stores, and convenience stores in Heber City. The *Draft Purpose and Need Technical Report* was published on April 30, 2021, and UDOT provided a 45-day comment period extending through June 14, 2021. UDOT received about 90 comments on the draft purpose and need statement during this period. A Notice of Intent to prepare this EIS was published in the *Federal Register* on May 11, 2021.

UDOT carefully reviewed all public comments before finalizing the purpose and need statement for the Heber Valley Corridor Project. Several commenters questioned the necessity of the project, but UDOT emphasized that traffic operations on Heber City's Main Street are projected to fail by 2050 without intervention. Although some requested broader regional focus and inclusion of environmental and open-space protection in the project's purpose, UDOT clarified that its mission is to address transportation-specific issues, though environmental impacts are considered when evaluating alternatives. Regarding truck traffic, UDOT noted its limited authority to restrict trucks on US-40 but acknowledged potential measures to discourage truck use of Main Street if a western corridor is built.

Wasatch County Council commented that, although the council members are not in agreement regarding a western corridor route, the Council is in agreement that, if a western corridor route is preferred, it should include a nonmotorized trail. The Utah Reclamation, Mitigation and Conservation Commission (URMCC), a participating agency with jurisdiction over the Provo River Restoration Project (PRRP), commented that active transportation should be incorporated into the primary purpose for the project because it would represent the best option for achieving the vision of a "lake-to-lake" trail identified in Heber City's general plan (Heber City 2023). In response to strong public and agency support for active transportation, UDOT revised the purpose and need statement after the formal scoping process in 2021 to elevate nonmotorized transportation from a secondary objective to a primary purpose.

For more information, see the *Early Scoping Summary Report* (https://hebervalleyeis.udot.utah.gov/wp-content/uploads/2020/11/HVC-EIS-Scoping-Summary-Report-Final-11-13-2020-full.pdf) and the *Scoping Summary Report* (https://hebervalleyeis.udot.utah.gov/wp-content/uploads/2021/09/HVC-EIS-Scoping-Summary-Report-Final_9-20-2021.pdf).

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