WEST JORDAN
UTAH

TRANSPORTATION MASTER PLAN

ADOPTED
September 11, 2024

WCG
WALL CONSULTANT GROUP

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I. INTRODUCTION

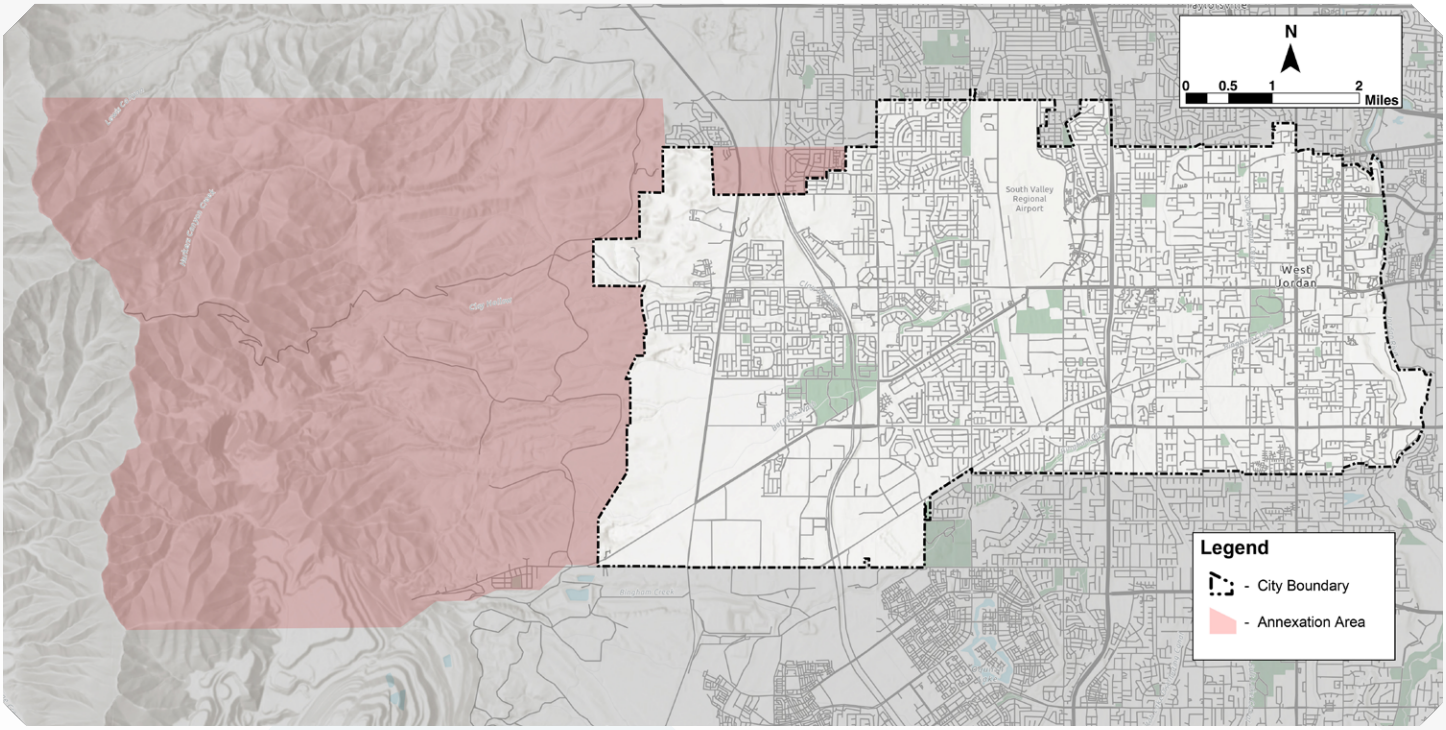
A. Overview

West Jordan and the surrounding communities have experienced significant growth and development over the last several years. The most recent 2020 census shows that West Jordan had a population of 116,691 and had experienced a population increase of approximately 13,250 since the previous 2010 survey. This significant growth is expected to continue.

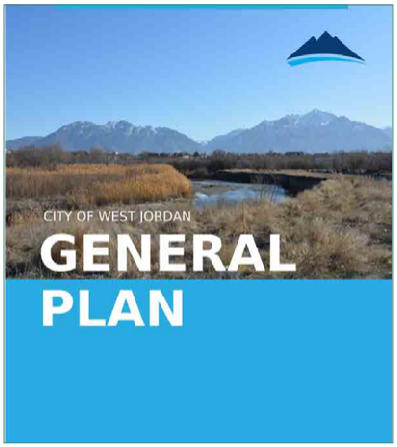
This Transportation Master Plan (TMP) guides transportation infrastructure investments for the future by addressing several goals identified by West Jordan City (City). Key to planning for West Jordan's transportation needs is an understanding of the roadway network's existing and future operation. Once existing conditions are established, roadway conditions are forecasted to future year 2033 and 2050 to identify deficiencies in the roadway network that may occur due to land development and the resulting population growth.

This TMP also covers City transportation management-related best practices, such as access management standards, a safety analysis, traffic calming, connectivity, traffic impact study standards, and truck routes. An interactive online mapping website has been created to summarize this TMP.

Figure 1: West Jordan City Boundary



B. Previous Studies

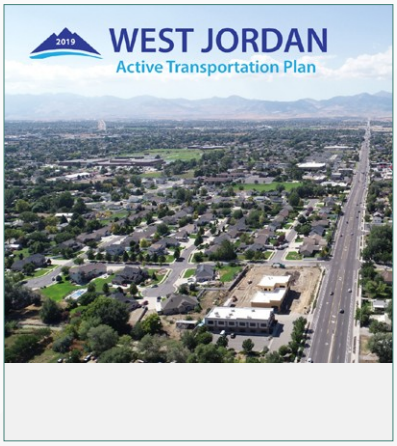


West Jordan General Plan (2023)

The 2023 West Jordan General Plan provides information regarding the status of transportation, housing, growth, demographics, land use, and economic development within the City. Included in this document is a map of potential development and annexation plans. Growth management strategies are presented, as well as land use guiding principles. The transportation guiding principles in the General Plan are to "provide a safe and efficient multi-modal transportation system" and "improve the aesthetic quality of the City's streets." The guiding framework of the General Plan is sustainability with a balance between social health and opportunity, economic opportunity, and environmental stewardship.

West Jordan Transportation Master Plan (2014)

The 2014 West Jordan Transportation Master Plan is the previous transportation master plan for the City. This document contains the existing and envisioned future roadway network, alternative modes of transportation, a capital facilities plan, and an impact fee facilities plan. Traffic volumes are projected through the year 2040 in this plan. Access management, traffic calming measures, and a transportation improvement program are all discussed.



West Jordan Active Transportation Plan (2019)

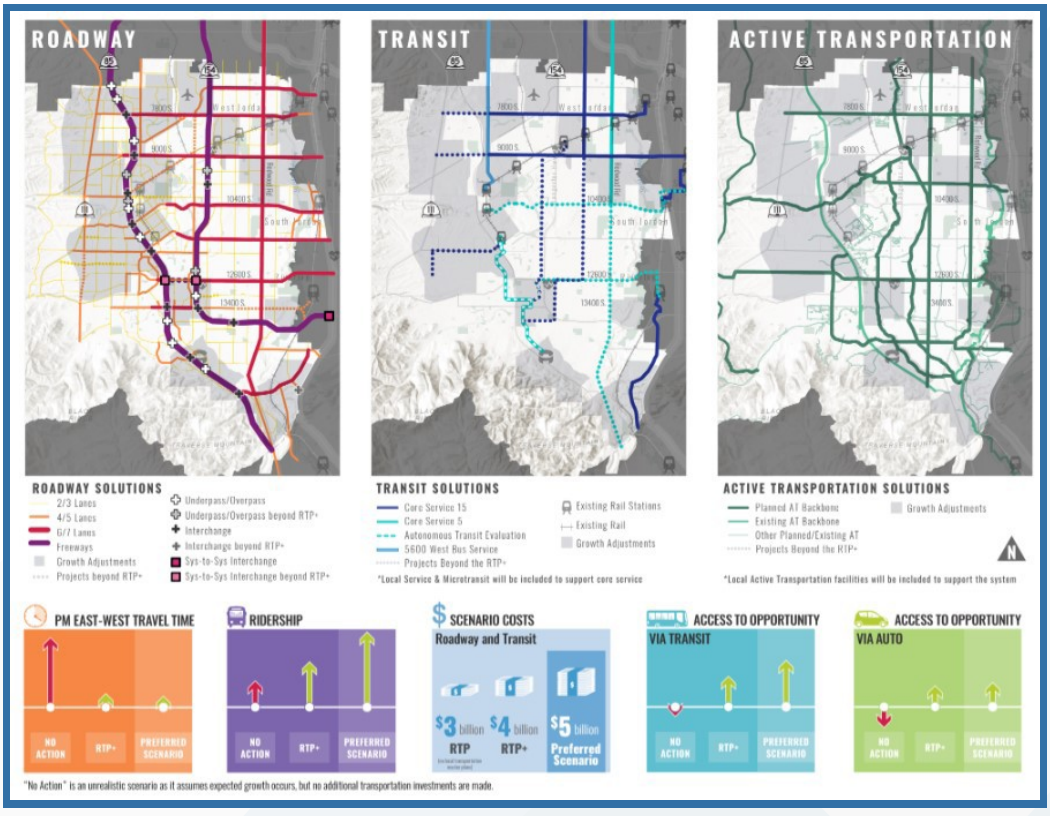
The 2019 West Jordan Active Transportation Plan was created in a joint effort between West Jordan and South Jordan. This document discusses the existing active transportation infrastructure, how West Jordan residents feel about active transportation, existing plans, and planned projects. A prioritized list of active transportation projects in West Jordan and South Jordan is included. Pedestrian and bicycle data is also included, demonstrating which intersections have higher pedestrian volumes. Crash data involving pedestrians and bicyclists is provided. A concept design for buffered bike lanes on 2700 West is also provided.

West Jordan Parks, Recreation, Trails & Open Space Master Plan (2019)

The 2019 West Jordan Parks, Recreation, Trails, & Open Space Master Plan provides comprehensive updates regarding parks as well as priorities related to open space for the next 10 years and beyond. West Jordan socioeconomic data is provided, as well as the vision statement and goals from the previous West Jordan General Plan (2012). Maps of the existing parks, service area of the parks, existing trails, proposed trails, and proposed parks are included. Different types of trails are discussed, as well as priorities, acquisition, and construction costs. An action plan is provided, as well as various funding sources for these projects.

Southwest Salt Lake County – Transportation Solutions Story Map

The findings of the Southwest Salt Lake County Transportation Solutions study reveal the current and anticipated transportation challenges in the region, along with suggested measures to address them. Traffic trends and the top-traveled routes are identified, and three alternative scenarios are presented. The scenarios include connectivity-focused development, freeway-focused development, and transit-focused development. The preferred scenario is a combination of each, but the planning level costs are greater than the adopted Wasatch Front Regional Council (WFRC) Regional Transportation Plan (RTP).



C. TMP Development

To help ensure existing and future needs are met while providing a clear vision for West Jordan to grow and improve the transportation network, Wall Consultant Group (WCG) facilitated a TMP project team, provided neighboring jurisdiction coordination, and met with private developers, the planning commission, and the city council. Each of these efforts are summarized below.

Project Team

A project team was established with city personnel and the consultant group. This group met throughout the planning process and conducted a kickoff meeting, monthly coordination meetings, neighboring jurisdiction coordination, and planning commission / city council coordination.

Neighboring Jurisdiction Coordination

The process of putting together this Transportation Master Plan involved a meeting with stakeholders in West Jordan and the surrounding region. This included a neighboring agency coordination meeting that occurred on Tuesday, September 26th, 2023, and included the following organizations: WCG, West Jordan City, South Jordan, Copperton, Sandy, Midvale, Murray, Kearns, Taylorsville, West Valley, Jordan School District, WFRC, UTA, and Salt Lake County. Meeting topics included future roadway plans in neighboring cities, coordinating cross section dimensions on regional roadways, outlining regional transit plans, discussing the regional active transportation network, and discussing plans for future schools in the city.

During the process of identifying future West Jordan transportation projects, which is discussed in greater detail below, additional coordination meetings were held with representatives from Midvale, South Jordan, and Rio Tinto to ensure projects identified in the West Jordan TMP are consistent and reasonable at City boundaries and generally align with expectations for large-scale development patterns west of the presently developed areas of West Jordan.

Midvale

The project team met with representatives from Parametrix, the consulting firm producing the Midvale TMP, on Tuesday, January 9, 2024. The purpose of this meeting was to discuss existing and possible future transportation connections between West Jordan and Midvale. Both cities have identified a need to upgrade the existing bridge across the Jordan River at 7800 South.

Another connection had been identified on the WFRC RTP, which would cross the Jordan River at approximately 8200 South, connecting 1300 West in West Jordan to Main Street (700 West) in Midvale. Both cities decided that the cost of constructing this connection, as well as acquiring the necessary right-of-way, make pursuing this connection untenable.

Rio Tinto

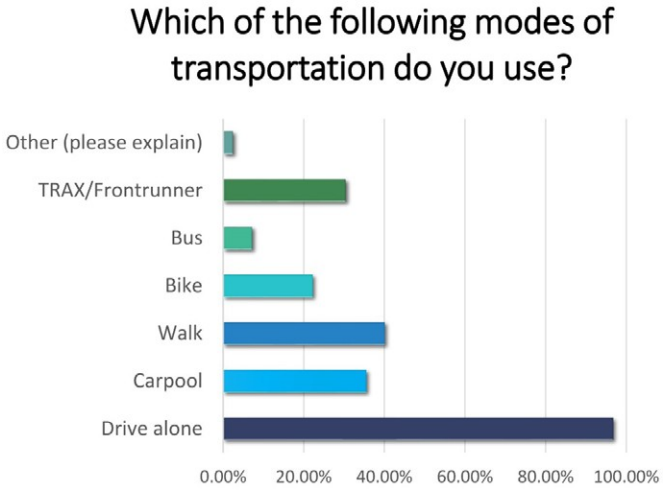
The TMP project team met with Rio Tinto on Thursday July 20, 2023. The purpose of this meeting was to understand the latest development plans and project phasing for Rio Tinto properties west of West Jordan and South Jordan and how this may impact the city plans for future transportation facilities in this area. Additionally in this meeting, Rio Tinto's internal roadway network and signal/access locations were discussed. Information provided by Rio Tinto was included in the travel demand modeling effort for the TMP. An additional follow-up coordination meeting with Rio Tinto was held on Monday December 4, 2023.

South Jordan

The project team completed the most recent update of the South Jordan TMP and special attention was given towards coordinating the future roadway plans on the border between West Jordan and South Jordan. Detailed travel demand model adjustments to household and employment forecasts in South Jordan were incorporated in the travel demand model for this transportation master plan.

Public Involvement

Kimley Horn engaged the community be organizing a public survey regarding transportation in West Jordan. The survey was made public at tabling events at West Jordan First Friday and at Jordan Landing, targeted postcards, social media posts, and through the city website and newsletter. The survey had 707 responses in total with a confidence level of 99% and a 5% margin of error. The survey produced results that helped inform the Transportation Master Plan, the full survey results can be seen in Appendix C. A public meeting was held on April 25, 2024 and was a chance for the public to learn more about the future of transportation in West Jordan and to ask questions regarding the TMP. The public meeting summary report can be found in Appendix D.



Planning Commission and City Council

To assist West Jordan with the adoption process of the TMP, WCG has presented the analysis and findings of the transportation master planning process and impact fee calculations to the planning commission twice and to city council twice.

D. West Jordan Characteristics

The purpose of this section is to discuss the existing and future land use and demographics of West Jordan City. The land use and demographic characteristics are used in the travel demand modeling process to project traffic volumes and determine future transportation needs.

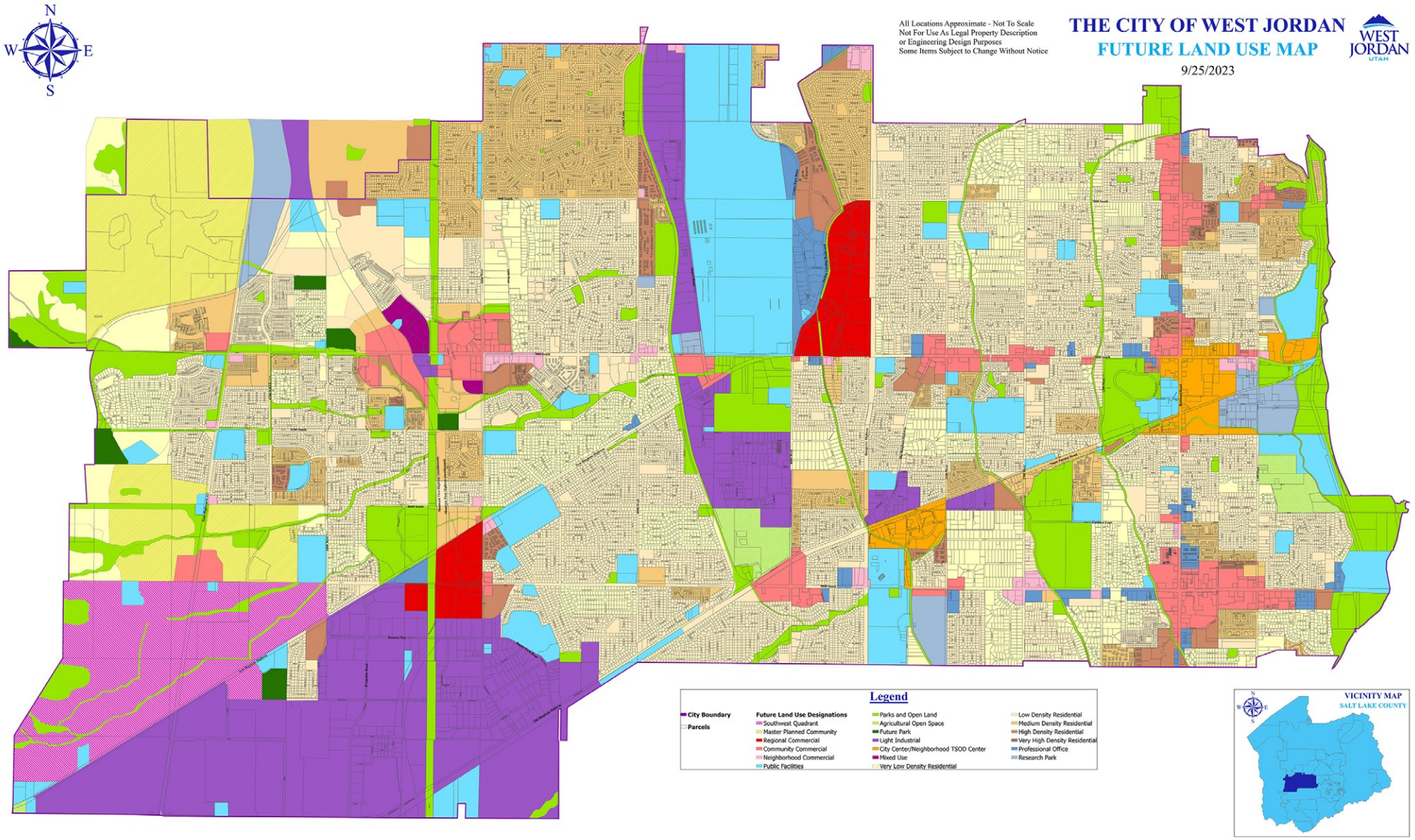
Land Use

Because the composition of land-use development directly affects the demand for travel within and between geographic areas, land-use also directly informs requirements of the transportation network on which that travel occurs. As new areas develop and existing areas redevelop over time, changes to the transportation network are often needed to accommodate the associated growth and changes in travel demand.

Given West Jordan's location in the Wasatch Front, direct access to Mountain View Corridor, Bangerter Highway, and the South Valley Regional Airport, and potential for significant development on the western side of the City, it is primed for development. The WFRC RTP 2023-2050 forecast the number of households in West Jordan will increase by approximately 20,000 by 2050, which is more than a 50% increase from 2023.

West Jordan City includes a diverse mix of residential, commercial, and industrial uses that are projected to grow in the future. The West Jordan Future Land Use Map below illustrates the projected future land-use composition in the city.

Figure 2: City of West Jordan Future Land Use Map



Demographics

This section discusses the demographics of West Jordan City and provides statistical characteristics of human populations, such as age, race, gender, income, education, and employment. These characteristics have a direct impact on the transportation needs of the City.

Population and Households

West Jordan has experienced steady population growth over the past 40 years. The most recent 2020 census shows that West Jordan had a population of approximately 117,000, which was an increase of approximately 13,000 since the previous 2010 survey. Table 1 and Table 2 present historic population data and projected population growth derived from the 2023 West Jordan General Plan. As of the 2020 census, there were an average of 3.22 persons per household. Additionally, the median income for each household in 2022 was $99,002 (in terms of 2022 dollars).

TABLE 1: HISTORIC POPULATION GROWTH

Year	Population
1980	27,192
1990	42,892
2000	78,174
2010	103,712
2020	116,530

Population growth from **2010 to 2020** = **12.4%**

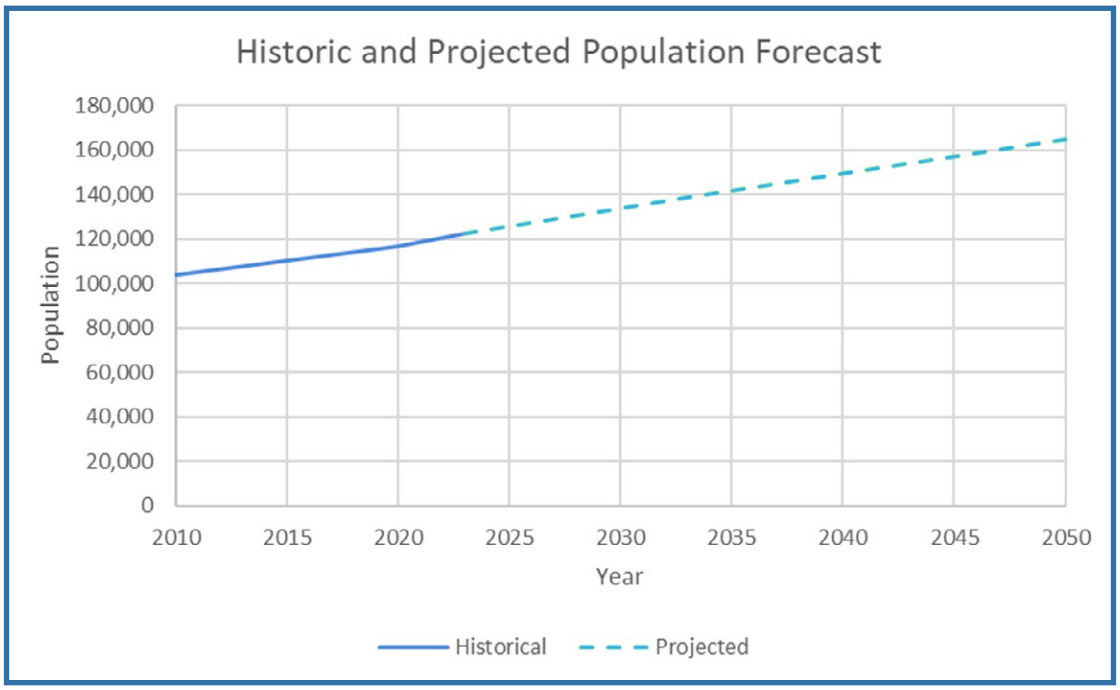
The population of West Jordan is expected to increase by 35 percent from 2023 to 2050. Table 2 below shows the breakdown of expected population growth between 2023 and 2050.

TABLE 2: PROJECTED POPULATION FORECAST

Year	Population	% Change
2023	122,500	-
2033	138,500	13%
2050	165,000	19%

Total estimated Population growth from **2023 to 2050** = **35%**

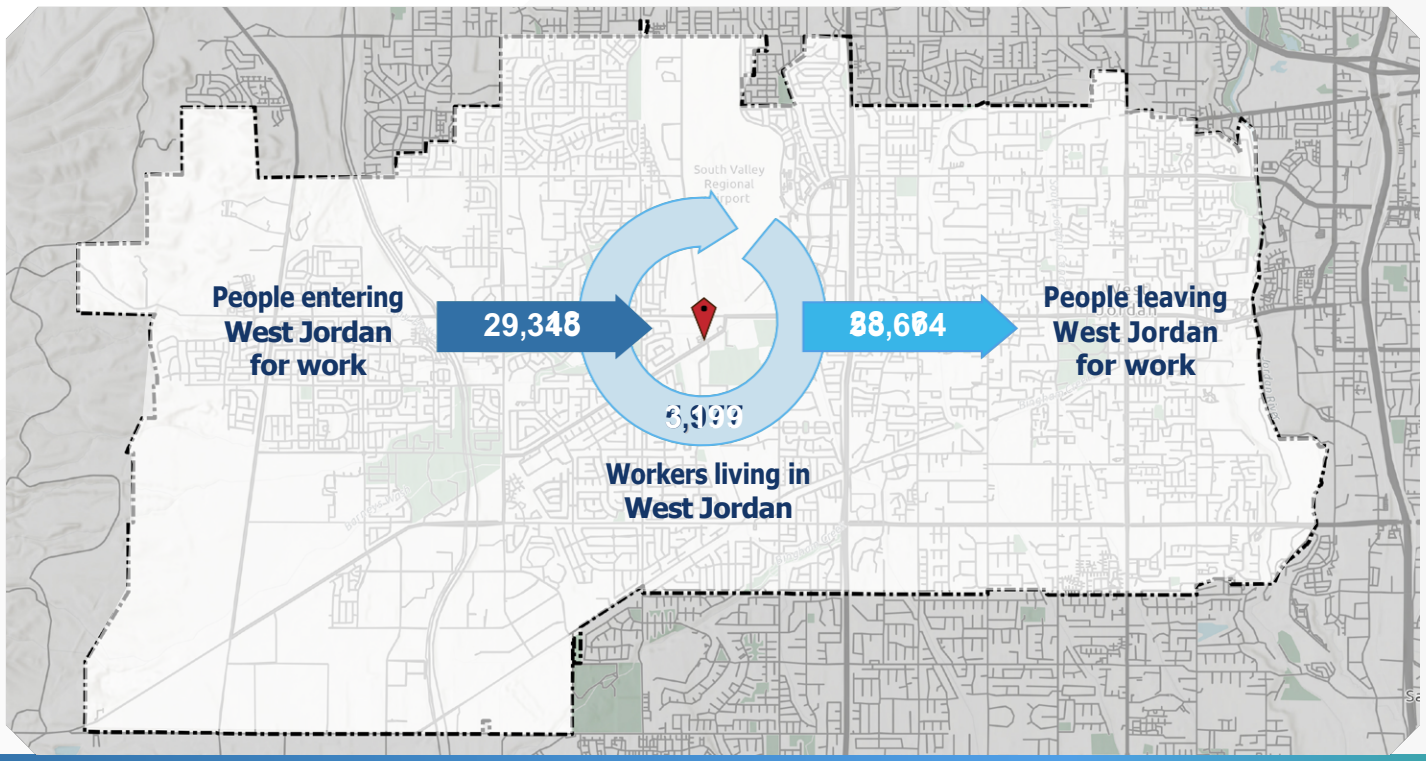
Figure 3: Historical and Projected West Jordan Population



Employment & Journey to Work

The image below represents the worker in-flow and out-flow for West Jordan in 2020. This data is from the US Census Bureau's Center for Economics. The number of workers who live in West Jordan and travel elsewhere for work is just under double the number of workers who live outside of West Jordan and enter the city for work. 6.7% of the West Jordan City workforce both live and work in West Jordan. The average travel time to work for those who are 16 and older was 24.6 minutes.

Figure 4: Worker In-Flow and Out-Flow (2021)

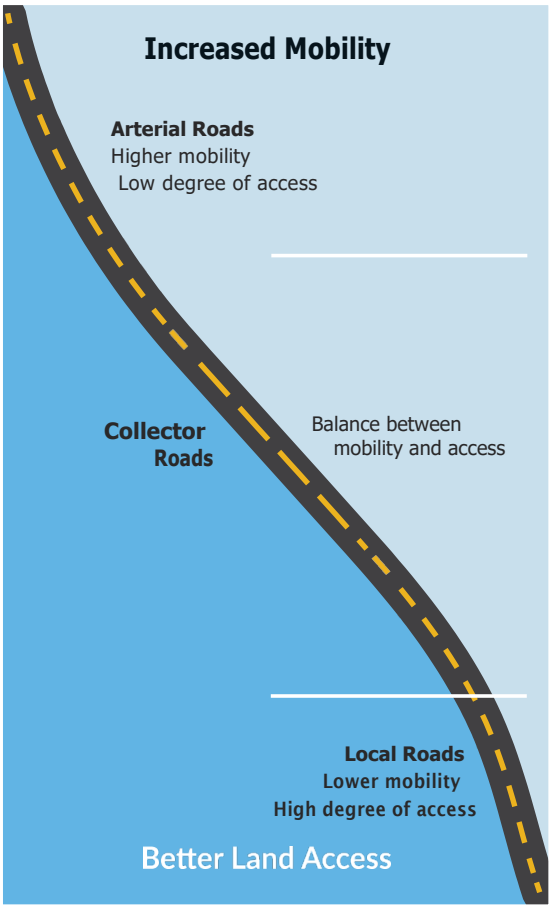


II. TRANSPORTATION NETWORK ANALYSIS

A. Purpose

The purpose of the transportation network analysis is to identify existing and future deficiencies in the roadway network that may occur due to increased vehicular traffic associated with land development and population growth. Traffic conditions are examined for the base year (2023) and two future years (2033 and 2050), and recommendations for future improvements are discussed.

Figure 5: Functional Classification Definitions



B. Roadway Functional Classification

Roads are categorized into a hierarchal system based on roadway attributes such as speed, access and right-of-way (ROW) width. The higher a street classification, the more vehicular mobility it provides with limited access. Lower street classifications have less mobility, but more access. The functional classification of a roadway indicates the road's role within the transportation system, which in turn helps determine when increased travel demand or change in the road's use could lead to negative impacts on its intended function in terms of speed, capacity, and relationship to existing and future land use (FHWA, 2013).

The functional classifications of West Jordan roadways used in this TMP are major arterial, minor arterial, major collector, minor collector, and residential. Key cross sectional elements for each of these classifications are summarized in Table 3 and are shown in the figures below. The existing and future functional classification maps for West Jordan are shown below in Figures 14 and 15 respectively.

TABLE 3: WEST JORDAN KEY CROSS SECTION ELEMENTS

Functional Classification	# Lanes	ROW Width (ft)	Asphalt Width (ft)
Major Arterial	7/6	162	107
Minor Arterial	5/4	111	84
Major Collector	3	85	58
Minor Collector	2	71	44
Residential	2	55	28

Figure 6: Major Arterial

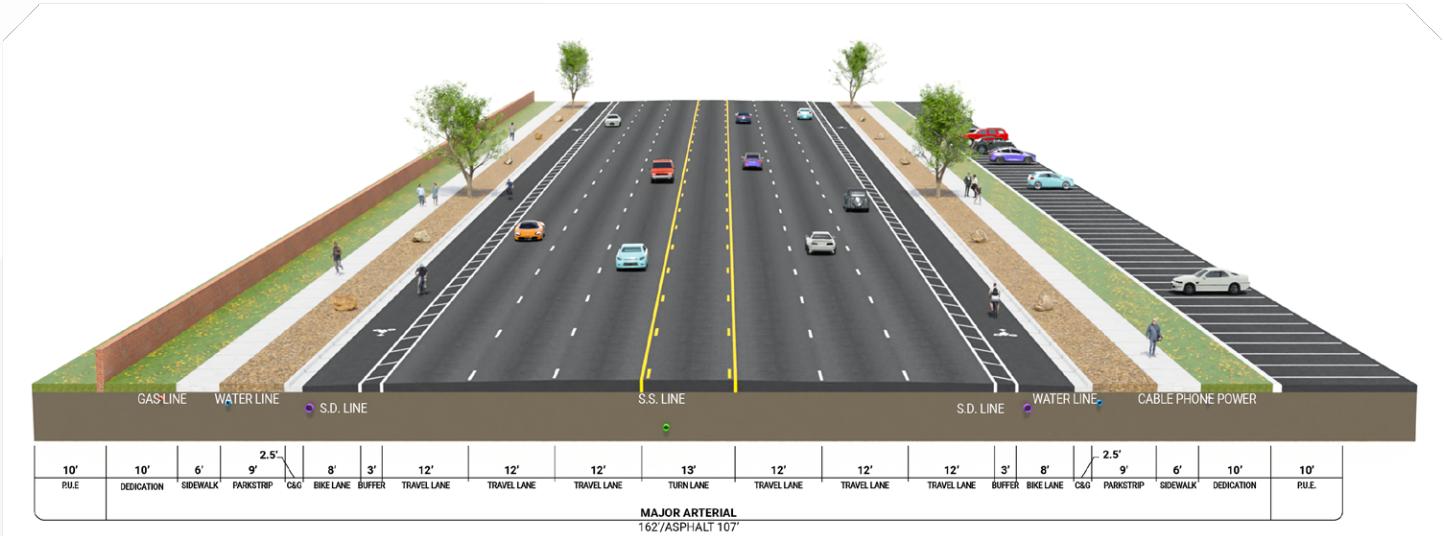


Figure 7: Minor Arterial Cross Section (Existing as of 2006)

Figure 8: Minor Arterial Cross Section (West of Bangerter Highway)

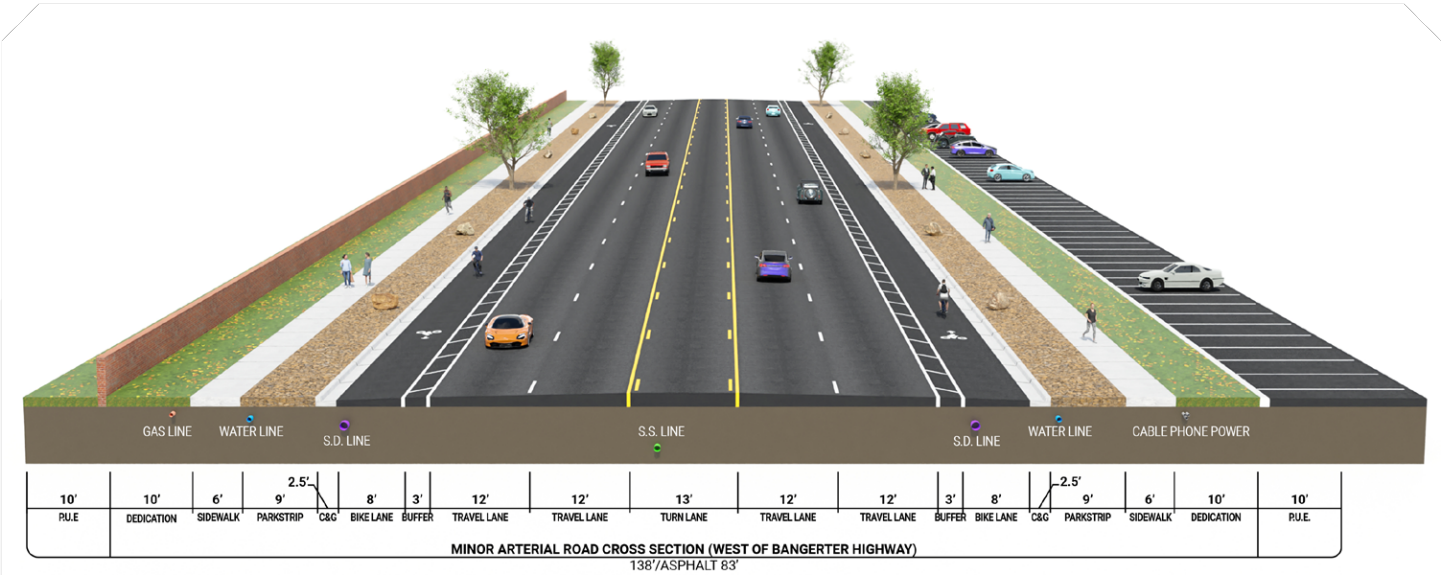


Figure 9: Three-Lane Collector Cross Section

Figure 10: Two-Lane Collector Cross Section

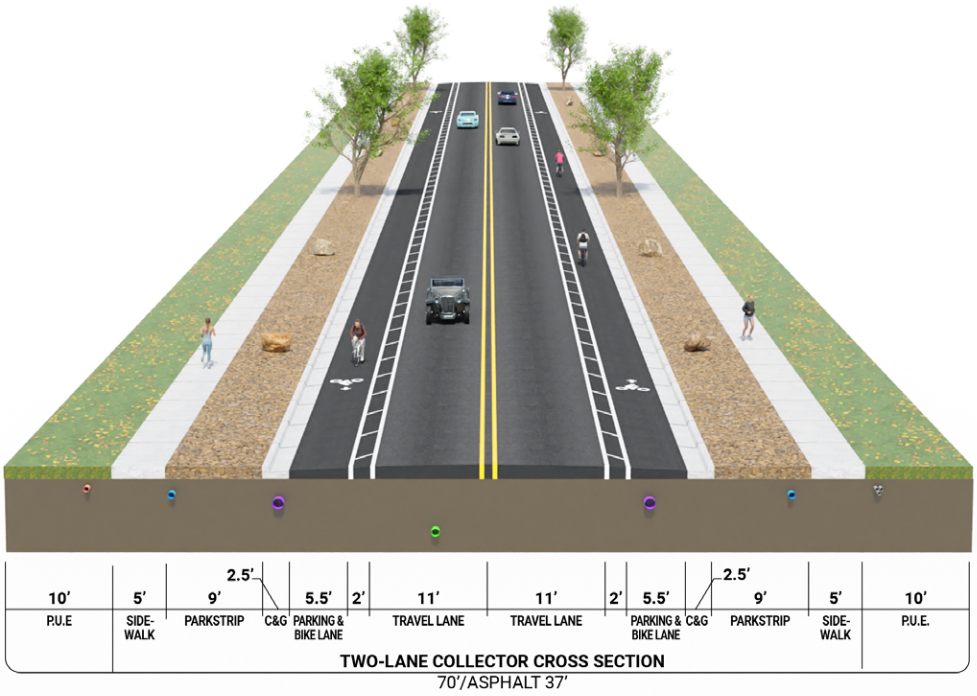


Figure 11: Residential Collector Cross Section

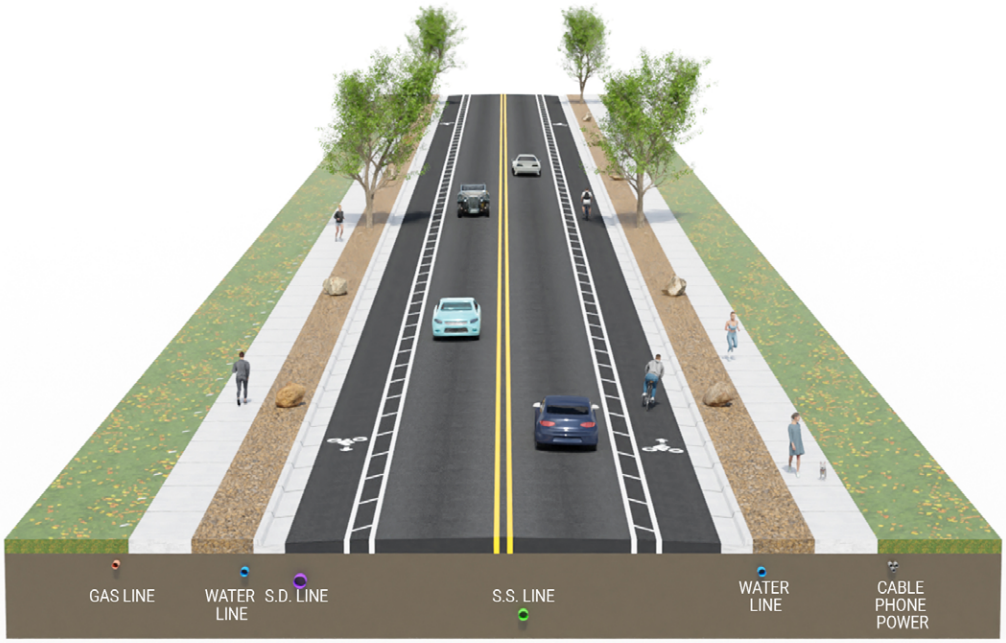


Figure 12: 53' Local Cross Section

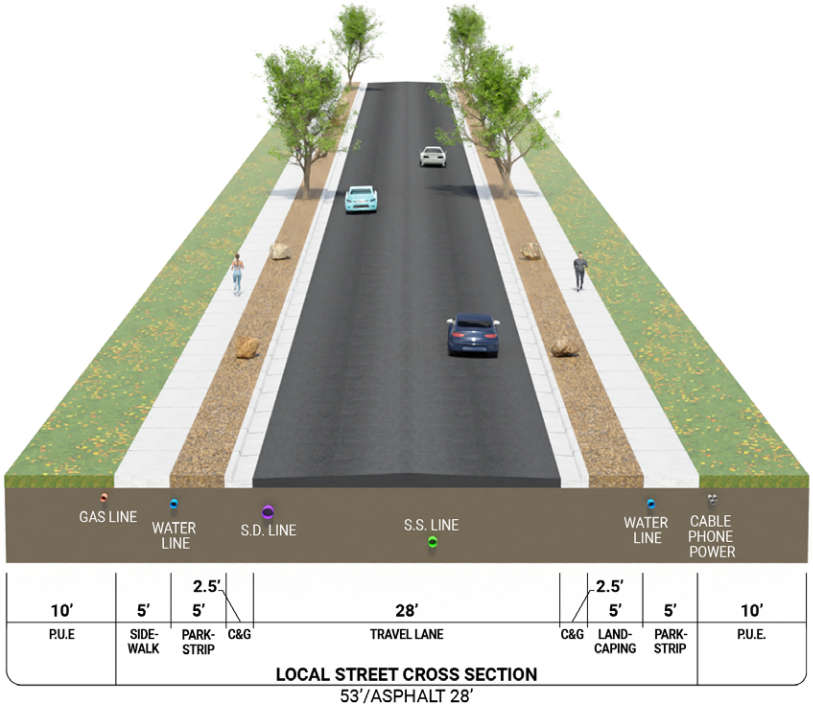


Figure 13: 50' Local Cross Section

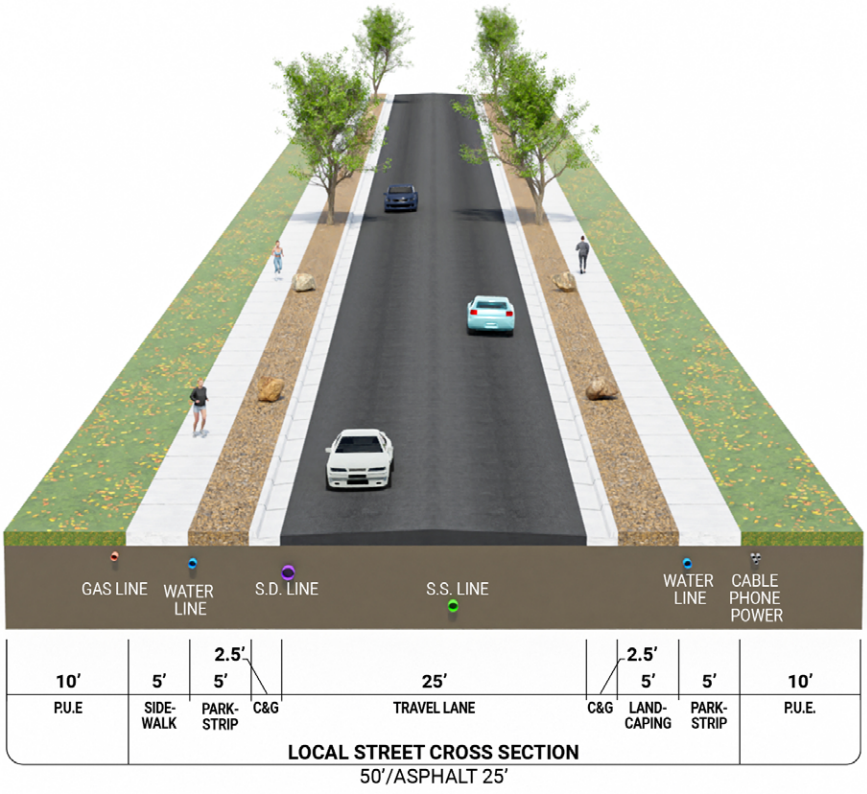


Figure 14: Existing Functional Classification

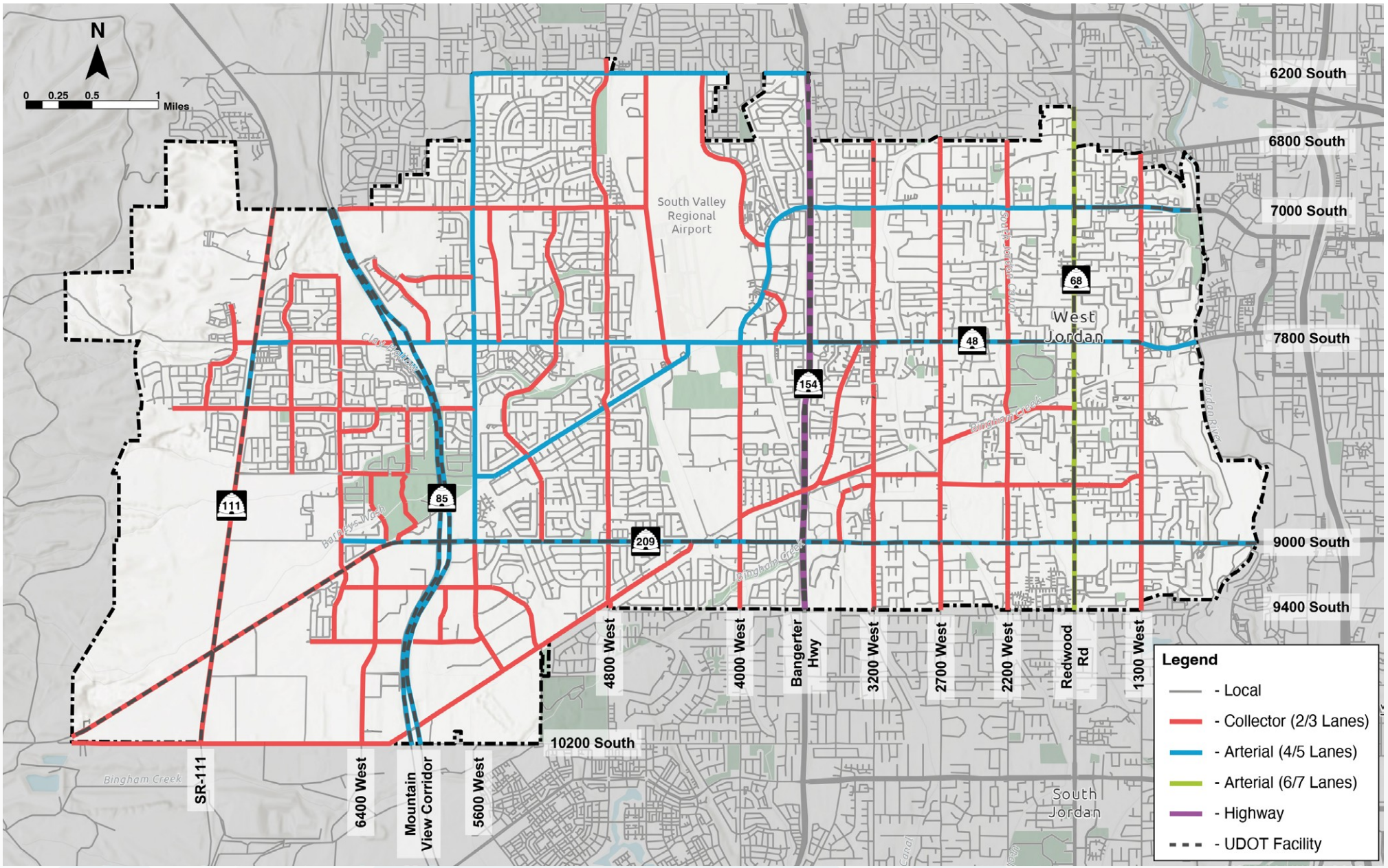
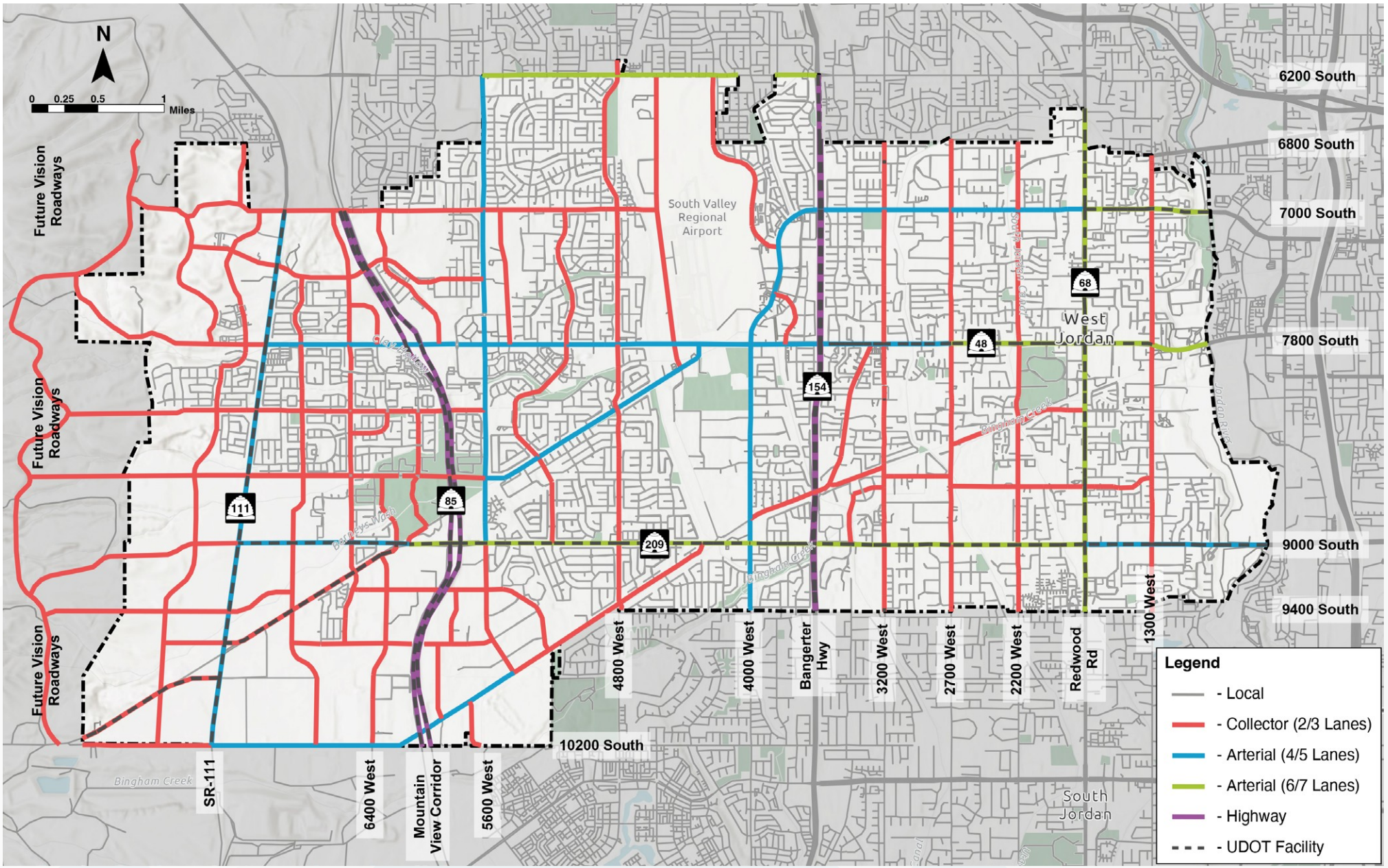


Figure 15: Future Functional Classification



C. Level of Service Definitions

Roadway traffic congestion is reported using Level of Service (LOS), which is a planning term that describes the roadway's operating performance. LOS for roadway segments is a categorical classification of roadway conditions assigned to degrees of congestion calculated quantitatively based on the density of flow on a roadway, or the volume-to-capacity (VC) ratio. LOS is reported on a scale from A to F, with A representing free-flow conditions and F representing traffic congestion. For this analysis daily LOS is calculated for study roadway segments using the projected Average Daily Traffic (ADT) for the given roadwaysegments and capacities informed by lane count, and functional classification. Level of service descriptions for each LOS letter designation (Figure 16) and the accompanying range of volume-to-capacity ratios are shown below (Table 4)[1].

For the purposes of this study, a minimum overall roadway performance of LOS D is considered acceptable. If LOS E or F for a roadway is calculated, explanations and/or mitigation measures are presented.

Figure 16: Level of Service Definitions

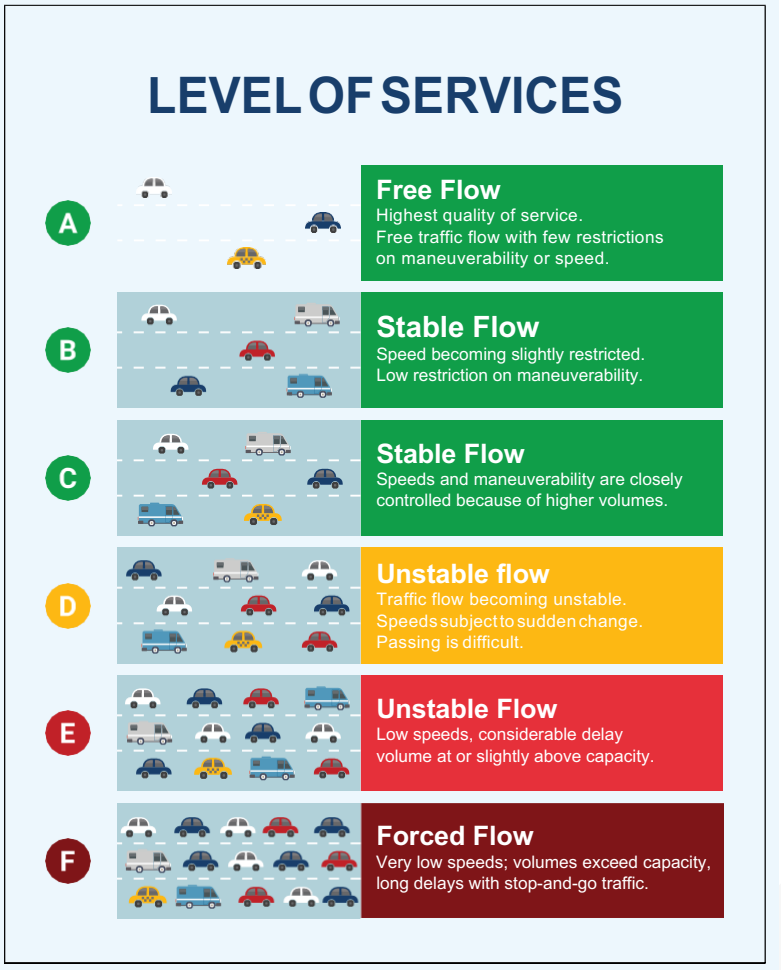


TABLE 4: LEVEL OF SERVICE CAPACITY RANGES

Functional Classification	Lanes	LOS A-C	LOS D	LOS E	LOS F
Collectors & Arterials	2	< 9,375	9,375 to 10,625	10,625 to 12,500	> 12,500
	3	< 13,350	13,350 to 15,130	15,130 to 17,800	> 17,800
	5	< 28,500	28,500 to 32,300	32,300 to 38,000	> 38,000
	7	< 43,500	43,500 to 49,300	49,300 to 58,000	> 58,000

[1]Level of service volume ranges reflect assumed capacity levels for typical sections of the roadway type and cross-section indicated. In select locations, capacity adjustments are applied for this analysis based on local conditions including the presence of turn lanes, intersection spacing, access management, and engineering judgment.

D. Travel Demand Model

The transportation network analysis was performed using a locally refined version of the latest Wasatch Front Regional Council (WFRC) model (v9.0.0, dated September 20, 2023). The WFRC model was updated to include greater transportation analysis zone (TAZ) and roadway network detail, and more refined base and future-year socio-economic data for West Jordan and neighboring South Jordan. Travel demand modeling was performed in Bentley Cube version 6.5.0.

Details regarding modeling specifics such as roadway network, demographics, and scenario testing are described in the sections below.

E. WFRC Roadway Projects

The 2023 WFRC RTP lists the following roadway projects for West Jordan City:

PHASE #1 (2023 - 2032)

- **9000 South Widening** from Bangerter Highway to Redwood Road – A five-lane to seven-lane roadway widening project
- **4000 West Operations** from 9000 South to 11400 South - An operational improvements project
- **7000 South New Construction** from Oquirrh View Boulevard to 6101 West - A new three-lane roadway
- **7800 South Widening** from SR-111 to 5600 West - A three-lane to five-lane roadway widening project
- **8600 South New Construction** from Oquirrh View Boulevard to 5600 West - A new three-lane roadway
- **9000 South New Construction** from SR-111 to New Bingham Highway - A new five-lane roadway
- **10200 South Widening** from Bacchus Highway to Mountain View Corridor - A two-lane to five-lane roadway widening project
- **SR-111 / Bacchus Highway Widening** from 5400 South to South Jordan Parkway (11000 South) - A two-lane to five-lane roadway widening project

PHASE #2 (2033 - 2042)

- **6200 South Widening** from Mountain View Corridor to Redwood Road - A four-lane to seven-lane roadway widening project
- **7000 South Widening** from Bangerter Highway to Redwood Road - A four-lane to five-lane roadway widening project
- **7000 South / 7200 South Widening** from Redwood Road to Bingham Junction Boulevard - A five-lane to seven-lane roadway widening project
- **7400 South New Construction** from Oquirrh View Boulevard to Mountain View Corridor - A new three-lane roadway
- **7800 South Widening** from Redwood Road to Bingham Junction Boulevard - A five-lane to seven-lane roadway widening project
- **7800 South Widening** from Jaguar Drive to Redwood Road - A five-lane to seven-lane roadway widening project
- **7800 South Operations** from 5600 West to Jaguar Drive - An operational improvements project
- **8200 South New Construction** from 1520 West to Bingham Junction Boulevard - A new two-lane roadway
- **9000 South Widening** from New Bingham Highway to Bangerter Highway - A five-lane to seven-lane roadway widening project
- **Mountain View Corridor Widening** from SR-201 to Old Bingham Highway - A four-lane to eight-lane roadway widening and freeway conversion project

PHASE #3 (2043-2050)

- **Redwood Road Operations** from 6200 South to 9000 South - An operational improvements project
- **Bangerter Highway Operations** from SR-201 to 2700 West - An operational improvements project
- **4000 West Widening** from Old Bingham Highway to 7800 South - A three-lane to five-lane roadway widening project
- **6700 West New Construction** from 8600 South to Old Bingham Highway / 10200 South - A new three-lane roadway
- **New Bingham Highway Operations** from 10200 South to 9000 South - An operational improvements project

A map of the 2023 WFRC regional transportation planned projects listed above can be seen here. The WFRC roadway projects were accounted for in the creation of the project lists in this TMP.

F. Existing (2023) Conditions

An existing conditions level of service analysis, based on existing land use, has been performed using various data sources explained below to produce existing ADT estimates.

a. Existing Roadway Network

The local roadway network was reviewed and updated to ensure it reflected existing (2023) conditions, including recently constructed roadway connections and current lane configurations in the city. Additionally, centroid loading locations in the TDM were modified where necessary to better represent local vehicle loading locations, particularly where additional zone density was added.

b. Existing Socioeconomic Data

Base year (2023) household and employment estimates were developed by WFRC for the Wasatch Front 2023 RTP. The Wasatch Front land-use estimates were combined with detailed local land-use refinements including those recently developed for the 9000 South Corridor Study and refinements made in neighboring South Jordan. Estimates were adjusted to match 2023 West Jordan City population control totals. Existing 2023 land-use densities (combined households and employment) are generally highest in the eastern half of West Jordan.

c. Existing Volumes and LOS

Average daily traffic count data provided by West Jordan City were used to inform local study area calibration. Figure 18 presents a map of traffic counts on major West Jordan roadways that were used for model calibration. Additional count data from the UDOT Automated Traffic Signal Performance Measures (ATSPM) [2] and neighboring South Jordan traffic counts (on roads that cross the City boundary) were referenced in model calibration.

Base year ADT estimates from the refined travel model were compared with the recent count data. Where the travel demand model over- or under-predicted current traffic volumes, adjustment factors were identified and applied to both base-year and future traffic projections to account for inherent imperfections in the travel demand model and to provide the best possible future traffic volume projections.

Base-year (2023) levels of service have been calculated for study area roadways using criteria from Table 4 and are presented below in Figure 19. All roadways in West Jordan are currently operating at an acceptable LOS D or better, other than:

- U-111 (Bacchus Hwy); 7400 South to 7000 South
- 7000 South; Bangerter Highway to Redwood Road
- 7800 South; 6400 West to Copper Rim Drive
- 7800 South; Bangerter Highway to Eastern City Border
- 9000 South; Old Bingham Highway to Eastern City Border

[2] https://udottraffic.utah.gov/atspm/

Figure 17: 2023 Combined Household and Employment Density

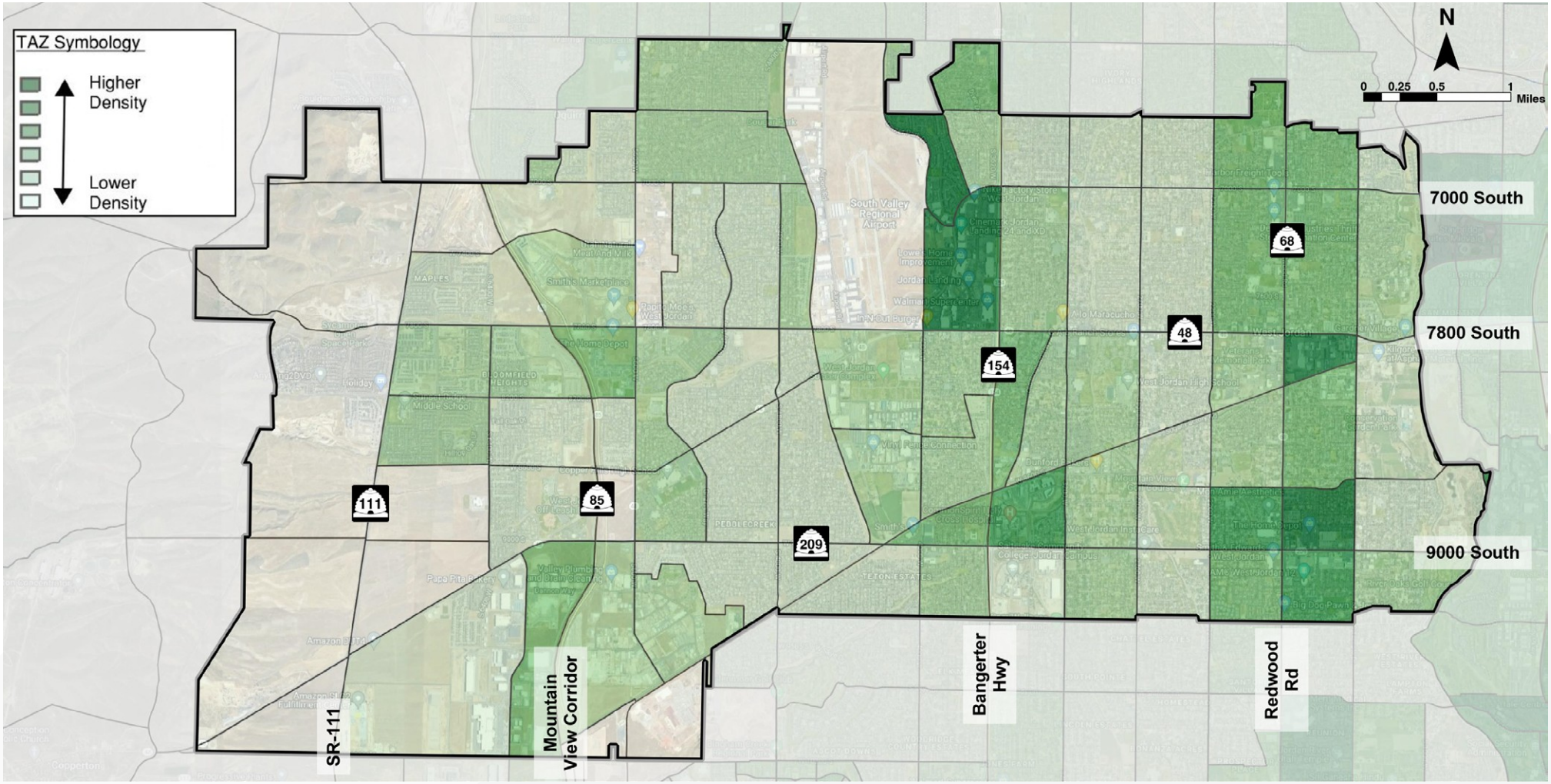


Figure 18: West Jordan Traffic Count Coverage

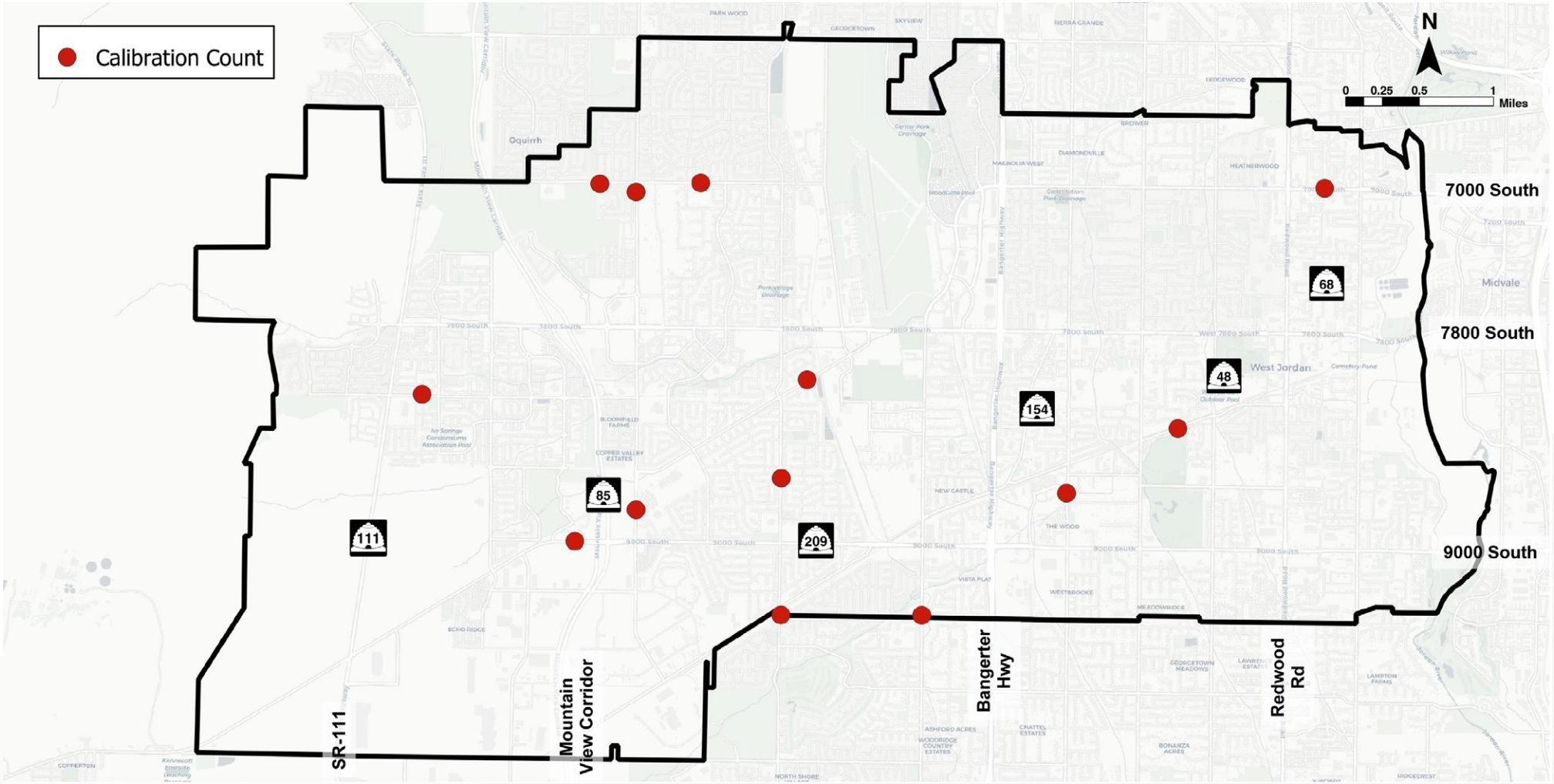
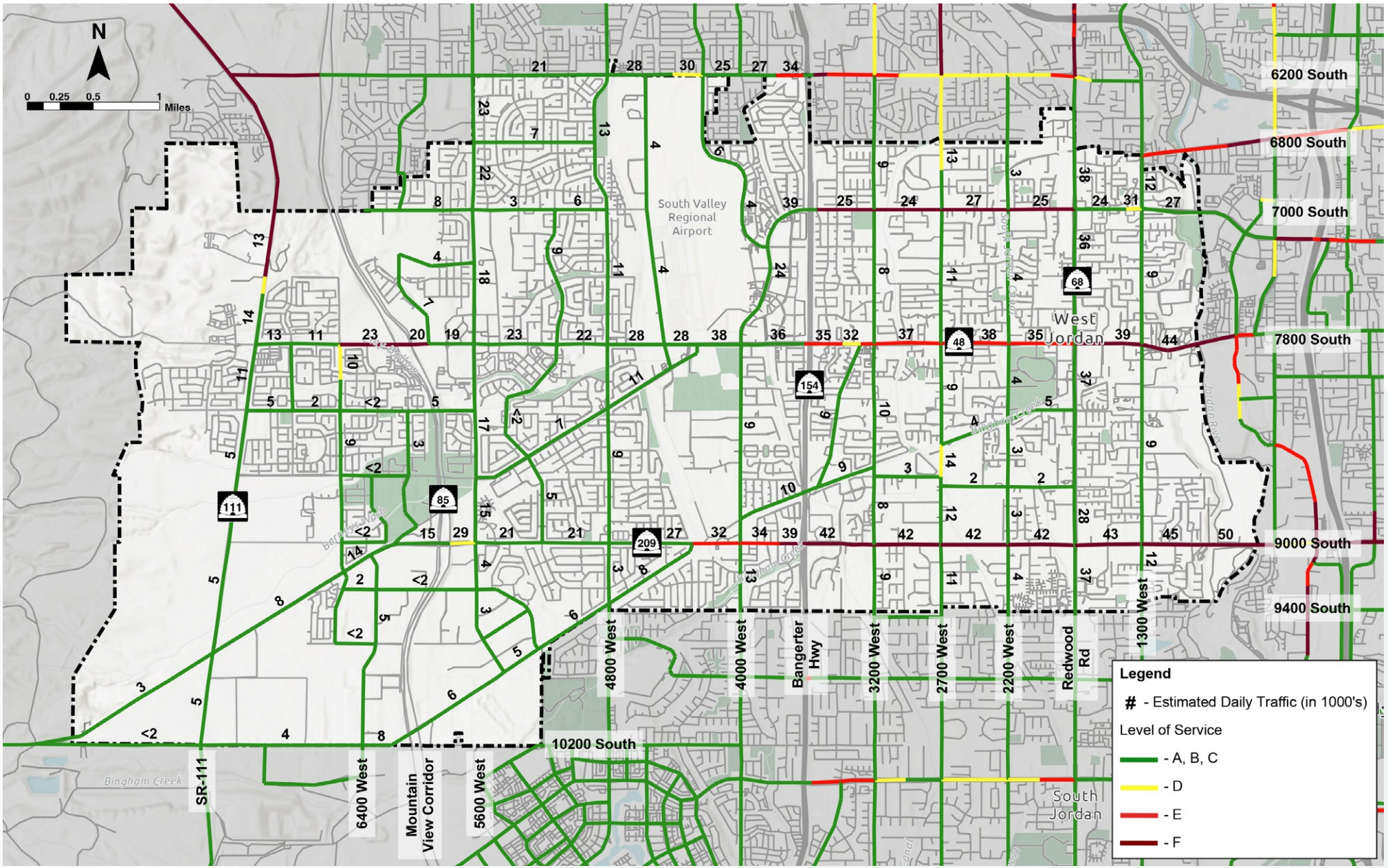


Figure 19: Existing (2023) Roadway LOS



G. Future (2033) Conditions

This section discusses the future (2033) roadway conditions in West Jordan City. Future roadway projects and network updates to the travel demand model are discussed. A no-build scenario LOS is completed. The LOS of each major road is analyzed, improvements are recommended, and a build scenario LOS analysis is completed.

a. 2033 Roadway Network

The local roadway network was updated for the 2033 analysis to reflect improvements planned to occur within West Jordan during the 10-year planning window.

Both the no-build and build analyses include new UDOT roadways outside of West Jordan Jurisdiction, including the access-controlled Mountain View Corridor and continued grade-separation of Bangerter Highway. The build scenario adds roadway improvement projects identified to address future congestion and new West Jordan roadway connections.

a. 2033 Socioeconomic Data

The population in West Jordan is projected to be approximately 138,500 by 2033 and approximately 7,000 new households are expected to accommodate the population growth in this time frame.

Future land-use growth in the 2033 travel model scenario was informed by the 2033 WFRC version 9 land-use forecasts and was refined to reflect permitted and planned projects and local planning expertise. Large, planned developments including Jones Ranch and Wood Ranch were incorporated into future land-use estimates and growth projections were reviewed with City staff and adjusted to reflect their best understanding of future growth patterns. Future-land use estimates also include detailed projections for large planned developments from Rio Tinto, Larry H. Miller (Daybreak), and Doug Young (Shoreline) in neighboring South Jordan.

After distribution of forecast growth to study TAZs, overall projected households were found to be within 1% of West Jordan projections from the latest general plan. However, higher populations were projected in the general plan. Populations were adjusted to match the city-wide 2033 West Jordan projection of approximately 138,500, and similar proportional adjustments to employment were applied.

Figure 20 and Figure 21 present the change in combined household and employment densities from 2023 to 2033 and the final 2033 combined household and employment densities, respectively. As can be seen below, 10-year projected growth includes both areas of infill development and areas of new growth along and west of Mountain View Corridor.

Figure 20: 2023 to 2033 Combined Household and Employment Density Growth

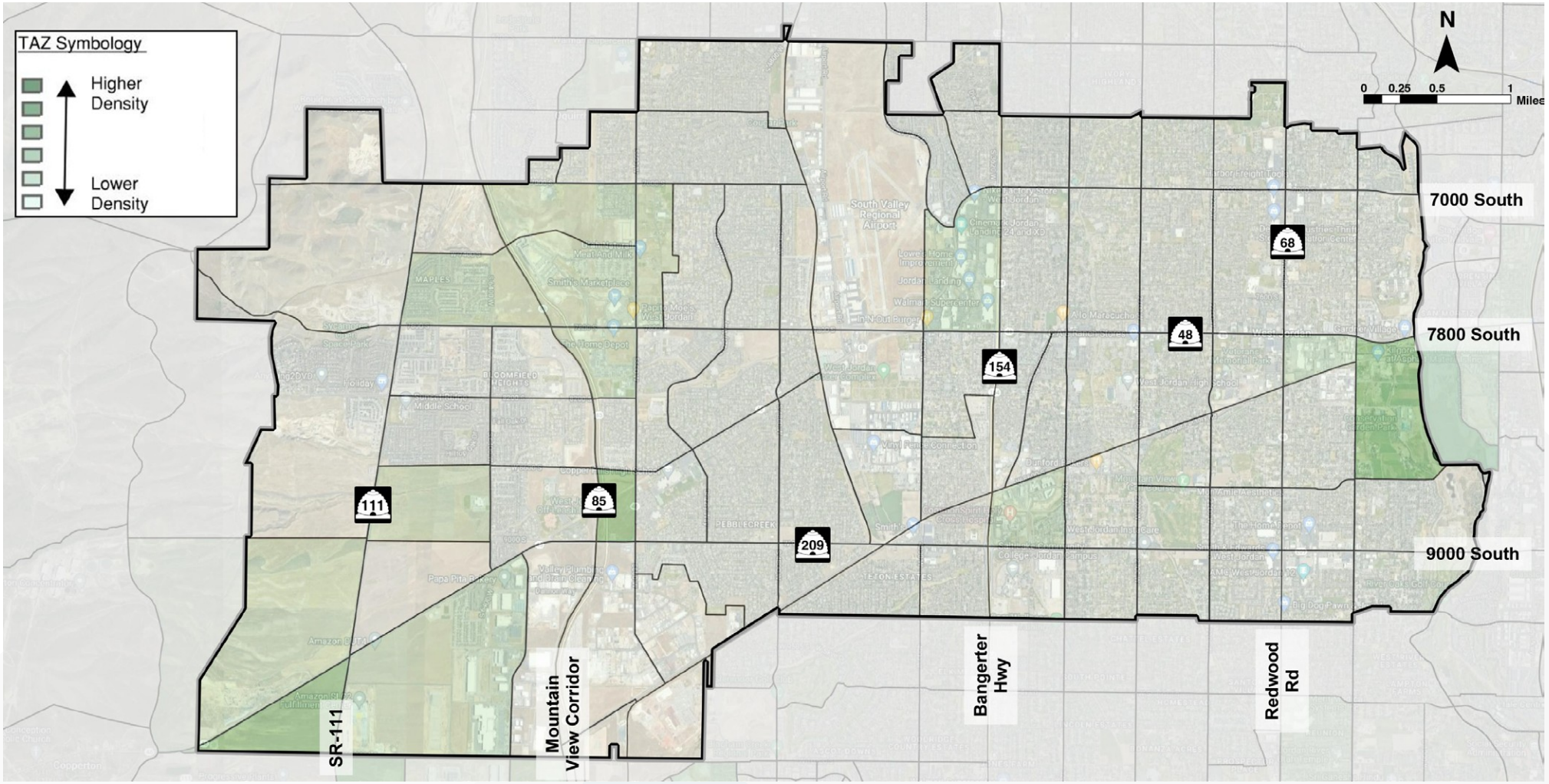
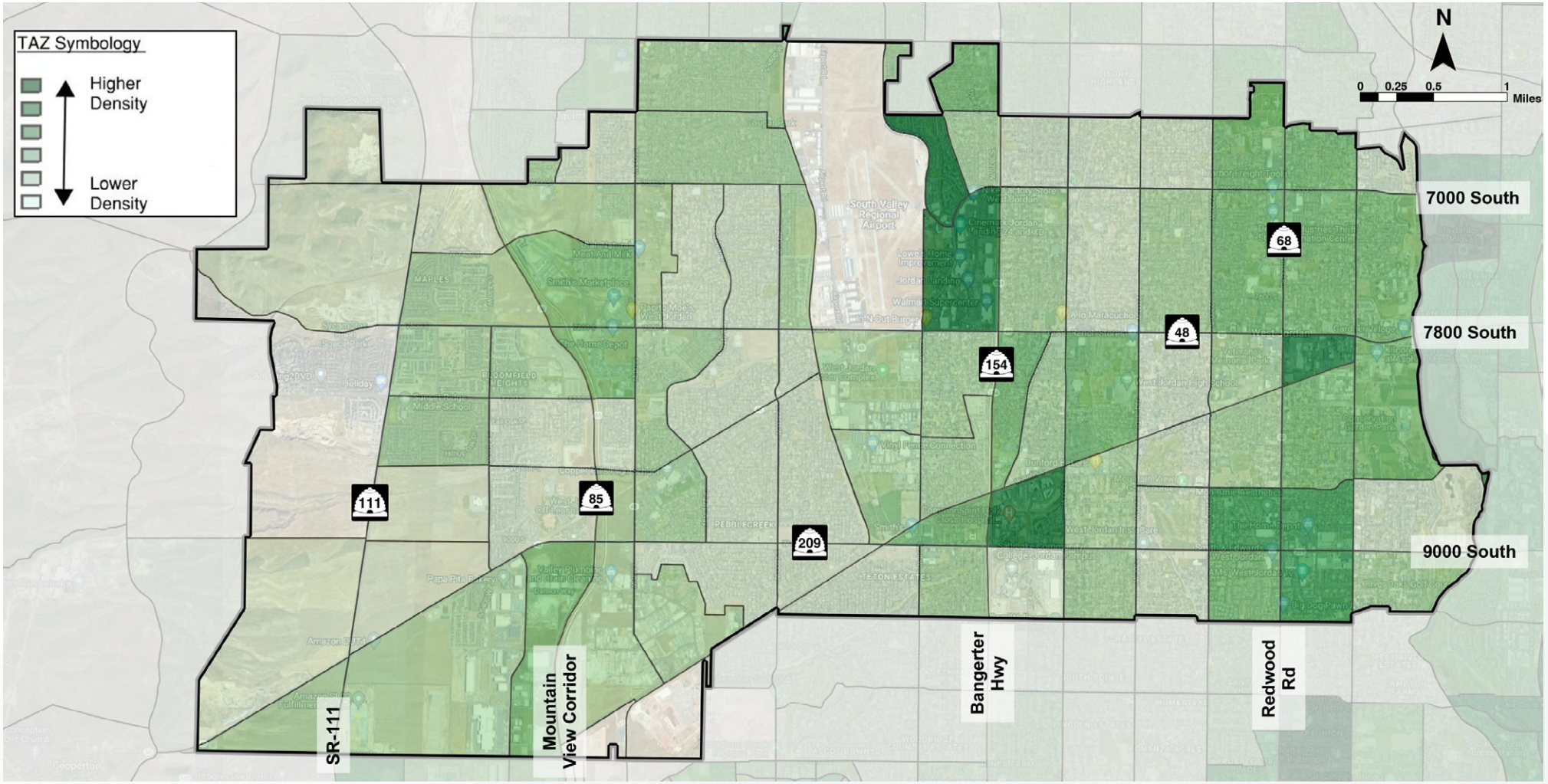


Figure 21: 2033 Combined Household and Employment Density



b. 2033 No-Build Scenario

The no-build scenario provides an analysis of traffic conditions without any roadway improvements. Traffic volumes from the 2033 no-build travel demand model have been compared to the LOS thresholds in Table 4. LOS results from the analysis are shown below in Figure 22.

As shown in Figure 22, the following roadway segments are expected to operate at unacceptable levels of service (LOS E or worse):

- U-111 (Bacchus Hwy); 7400 South to 7000 South
- U-111 (Bacchus Hwy); Old Bingham Highway to 9200 South
- Old Bingham Highway; 6200 West to Mountain View Corridor
- Old Bingham Highway; Mountain View Corridor to 5600 West
- New Bingham Highway; 6500 West to 6200 West
- 6200 South; 4390 West to Center Park Dr
- 6200 South; 3800 West to Bangerter Highway
- 7000 South; Bangerter Highway to Redwood Road
- 7000 South; Columbia Drive to Temple Drive
- 7800 South; New Sycamore Drive to U-111
- 7800 South; Bangerter Highway to Eastern City Border
- 9000 South; Mountain View Corridor to 5600 West
- 9000 South; Old Bingham Highway to Redwood Road
- 9000 South; Hidden Peak Dr to Eastern City Border

c. 2033 Build Scenario

The build scenario provides an analysis of traffic conditions with the roadway improvements listed below. Due to the unacceptable LOS expected to occur in the 2033 no-build scenario, the projects shown below in Table 5 are recommended to increase roadway capacity and accommodate future development. The project number listed in the table is for identification only and is no indication of project prioritization. Cost estimates are in 2024 dollars and do not take inflation into account. Right-of-way is included in the project cost estimates on developer owned property. The 2033 build scenario LOS is shown below in Figure 23. As shown in the 2033 build scenario, all roadways are expected to operate at an acceptable LOS D or higher with the exception of 9000 South from Redwood Road to the West Jordan / Sandy City boundary and 7800 South near the West Jordan / Midvale City boundary which operate at an unacceptable LOS E or F.

TABLE 5: FUTURE ROADWAY PROJECTS (PHASE #1)						
Project ID	Description	Responsibility	Improvement Scope	# of Lanes		Estimated Cost
				2023	Proposed	
PHASE #1 (2023–2032)						
1-1	7000 South Widening from Bangerter Highway to Redwood Road*	WFRC, WJC	Widening	4	5	$43,280,000
1-2	7800 South Widening from Redwood Road to Bingham Junction Boulevard*	WFRC, WJC, Midvale	Widening	5	7	$19,632,000
1-3	7800 South Widening from SR-111 to 5600 West*	WFRC, WJC	Widening	3	5	$18,904,081
1-4	9000 South New Construction from SR-111 to New Bingham Highway*	WFRC, WJC, Developer	New Construction	0	5	$38,340,000
1-5	9000 South Widening from New Bingham Highway to Bangerter Highway	WFRC, UDOT	Widening	5	7	$65,950,000
1-6	9000 South Widening from Bangerter Highway to Redwood Road	WFRC, UDOT	Widening	5	7	$56,970,000
1-7	10200 South Widening from Bacchus Highway to Mountain View Corridor*	WFRC, WJC	Widening	2	5	$19,410,000
1-8	SR-111 / Bacchus Highway Widening from 5400 South to South Jordan Parkway (11000 South)	WFRC, UDOT	Widening	2	5	$156,590,000
1-9	Mountain View Corridor Widening from Old Bingham Highway to Porter Rockwell Boulevard	WFRC, UDOT	Widening	2 NB, 2 SB	2Fr+2Fwy NB, Fr+2Fwy SB	$490,000,000
1-10	7000 South New Construction from WJC Limits to 6100 West*	WFRC, WJC, Developer	New Construction	0	3	$29,390,000
1-11	8600 South New Construction from WJC Limits to 5600 West*	WFRC, WJC, Developer	New Construction	0	3	$42,320,000
1-12	7200 West New Construction from 8200 South to 9000 South*	WFRC, WJC, Developer	New Construction	0	3	$27,690,000
1-13	6700 West New Construction from 8600 South to Wells Park Rd*	WFRC, WJC, Developer	New Construction	0	3	$26,550,000
1-14	9000 South New Construction from City Limits to SR-111*	WFRC, WJC, Developer	New Construction	0	3	$18,990,000
1-15	7800 South Operations from Bangerter Highway to Jaguar Drive	WFRC, UDOT	Operations	5	5	$3,500,000
1-16	7800 South Widening from Jaguar Drive to Redwood Road	WFRC, UDOT	Widening	5	7	$21,550,000
1-17	9400 South New Construction from SR-111 to 6700 West*	WFRC, WJC, Developer	New Construction	0	3	$9,696,000
1-18	7800 South New Construction from SR-111 to Tracks*	WFRC, WJC, Developer	New Construction	1	3	$15,300,000
1-19	Old Bingham Highway: 5600 West to Mountain View Corridor*	WJC, Developer	Widening	2	3	$7,053,889
1-20	5600 West: Park and Ride to 10200 South*	WJC	New Construction	0	2	$3,207,544
1-21	Wells Park Road Extension to 6700 West*	WJC, Developer	New Construction	0	2	$2,865,472
1-22	Verdigris Drive New Construction*	WJC, Developer	New Construction	0	2	$2,853,078
1-23	Copper Rim Drive: 7000 South to Verdigris Drive*	WJC, Developer	New Construction	0	2	$4,593,183
1-24	Wood Ranch Collector	Developer	New Construction	0	2	$14,867,735
1-25	New Sycamore Drive; 7000 South to 7800 South	Developer	New Construction	0	2	$11,000,835
1-26	6200 South; 4800 West to Bangerter*	WFRC, WJC, Taylorsville, Kearns	Widening	4 / 5	7	$34,120,000
1-27	4000 West; Old Bingham Hwy to South Jordan Border*	WJC	Widening	3	5	$17,367,169
1-28	6600 West; Wells Park Rd to Old Bingham Hwy*	WJC, Developer	New Roadway	0	2	$11,052,889
1-29	7400 South; SR-111 to Wood Ranch Collector*	WJC, Developer	New Roadway	0	2	$8,737,707
1-30	New Bingham Highway*	WJC, UDOT	Widening	3	5	$3,604,577
1-31	7400 South from 6700 West to SR-111*	WJC, Developer	New Construction	0	3	$2,751,955
1-32	7400 South New Construction from Brook Maple Way to Verdigris Drive*	WFRC, WJC, Developer	New Construction	0	3	$5,780,000
1-33	Haven Maple Drive to Fallwater Drive*	WJC, Developer	New Construction	0	2	$5,949,077

Figure 22: 2033 Roadway LOS - No-Build

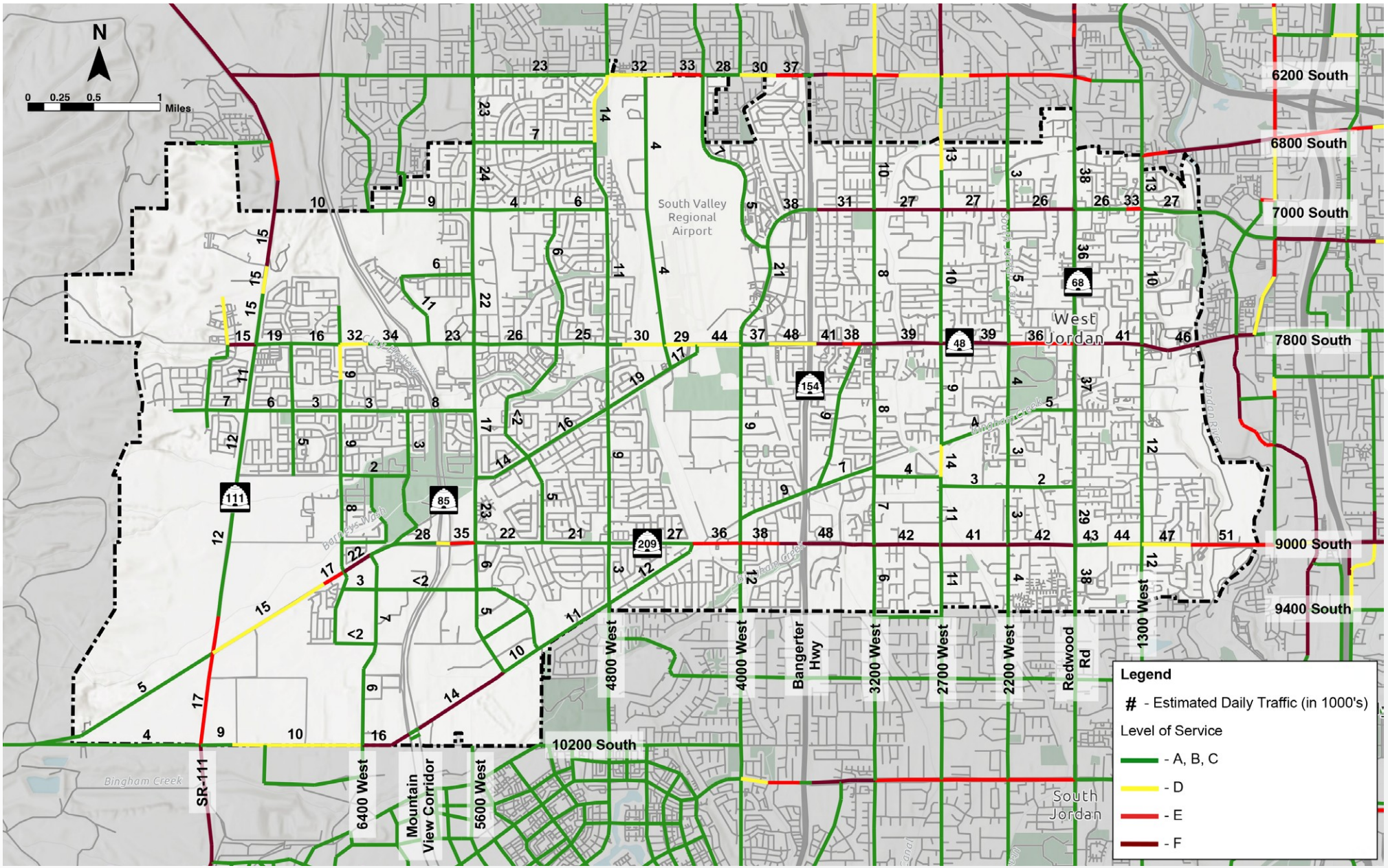
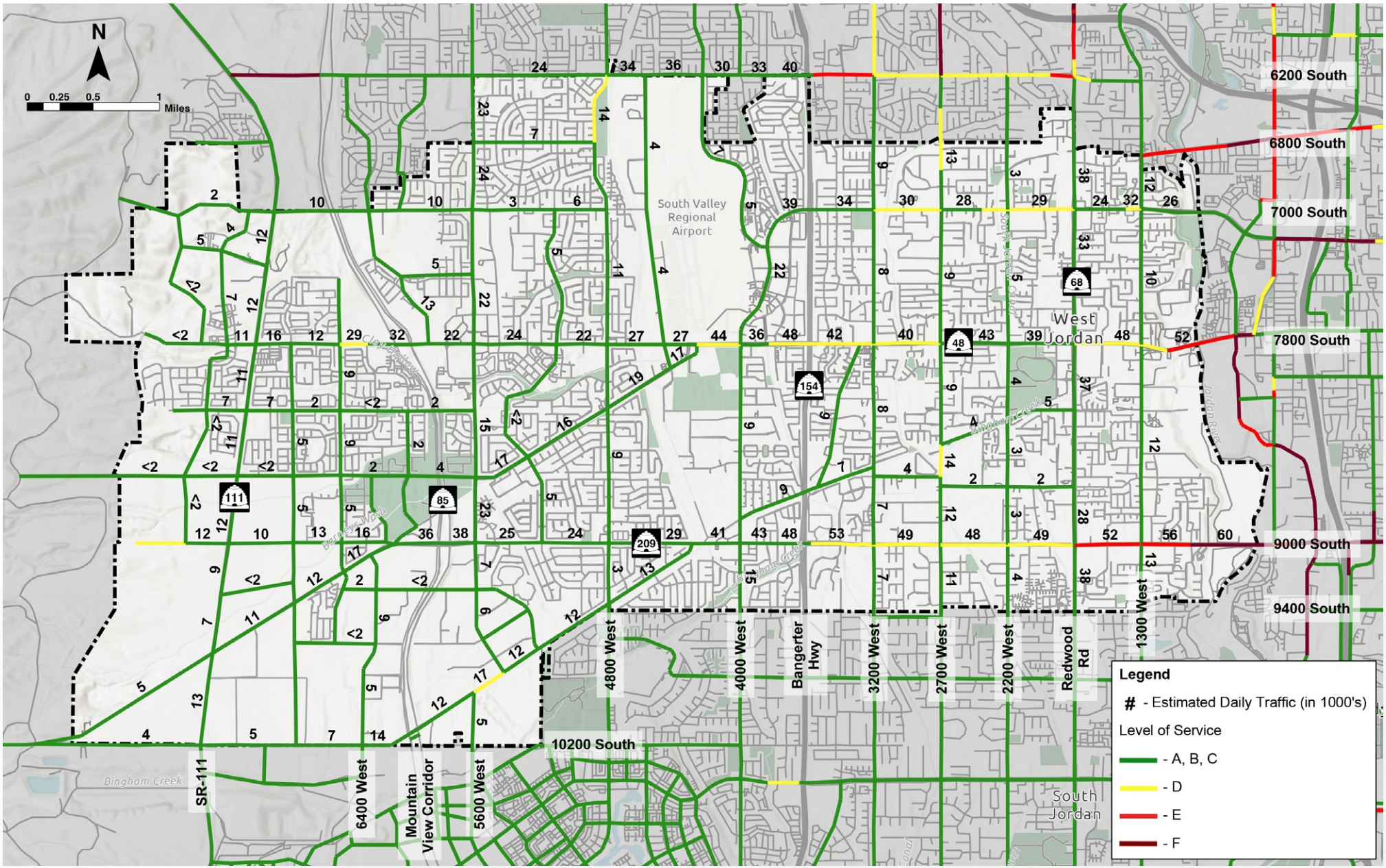


Figure 23: 2033 Roadway LOS - Build



H. Future (2050) Conditions

This section discusses the future (2050) roadway conditions in West Jordan City. Future roadway projects and network updates to the travel demand model are discussed. A no-build scenario LOS is completed. The LOS of each major road is analyzed, improvements are recommended, and a build scenario LOS analysis is completed.

a. 2050 Roadway Network

The local roadway network was updated for the 2050 analysis to reflect improvements planned to occur within West Jordan during the planning window.

Both the no-build and build analyses include new UDOT roadways outside of West Jordan Jurisdiction, including the access-controlled Mountain View Corridor and continued grade-separation of Bangerter Highway. The build scenario adds roadway improvement projects identified to address future congestion and new West Jordan roadway connections.

b. 2050 Socioeconomic Data

The population in West Jordan is projected to be approximately 165,000 by 2050 and approximately 20,000 new households are expected to accommodate this population growth.

Future land-use growth in the 2050 travel model scenario was informed by the 2050 WFRC version 9 land-use forecasts and was refined to reflect permitted and planned projects and local planning expertise. Large, planned developments including Jones Ranch and Wood Ranch were incorporated into future land-use estimates and growth projections were reviewed with City staff and adjusted to reflect their best understanding of future growth patterns. Future-land use estimates also include detailed projections for large planned developments from Rio Tinto, Larry H. Miller (Daybreak), and Doug Young (Shoreline) in neighboring South Jordan.

As with the 2033 analysis, after distribution of forecast growth to study TAZs, overall projected households were found to be within 1% of West Jordan projections from the latest general plan. However, higher populations were projected in the general plan. Populations were adjusted to match the city-wide 2050 West Jordan projection of approximately 165,000, and similar proportional adjustments to employment were applied.

Figure 24 and Figure 25 present the change in combined household and employment densities from 2023 to 2050 and the final 2050 scenario densities, respectively.

Figure 24: 2023 to 2050 Combined Household and Employment Density Growth

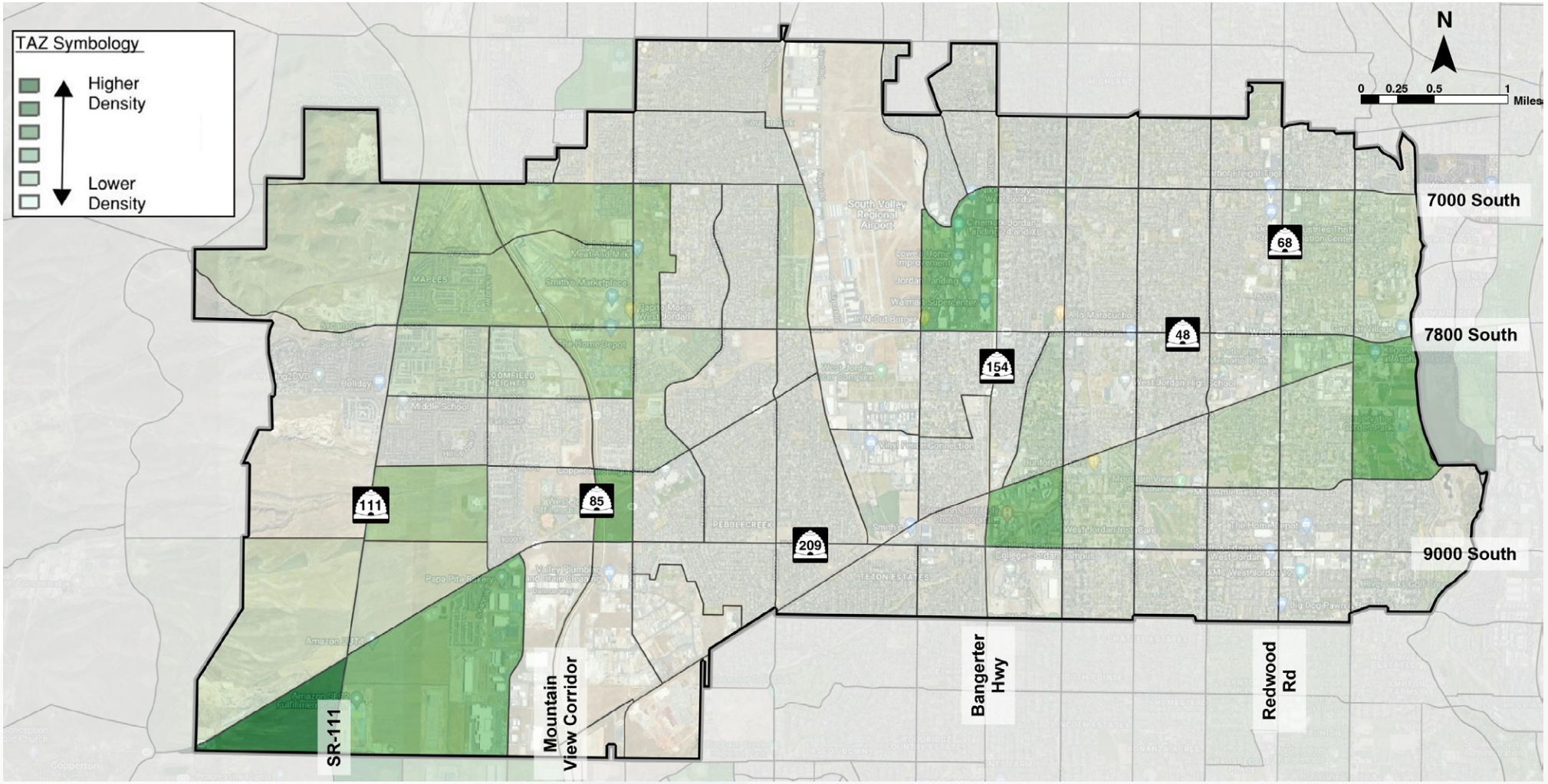
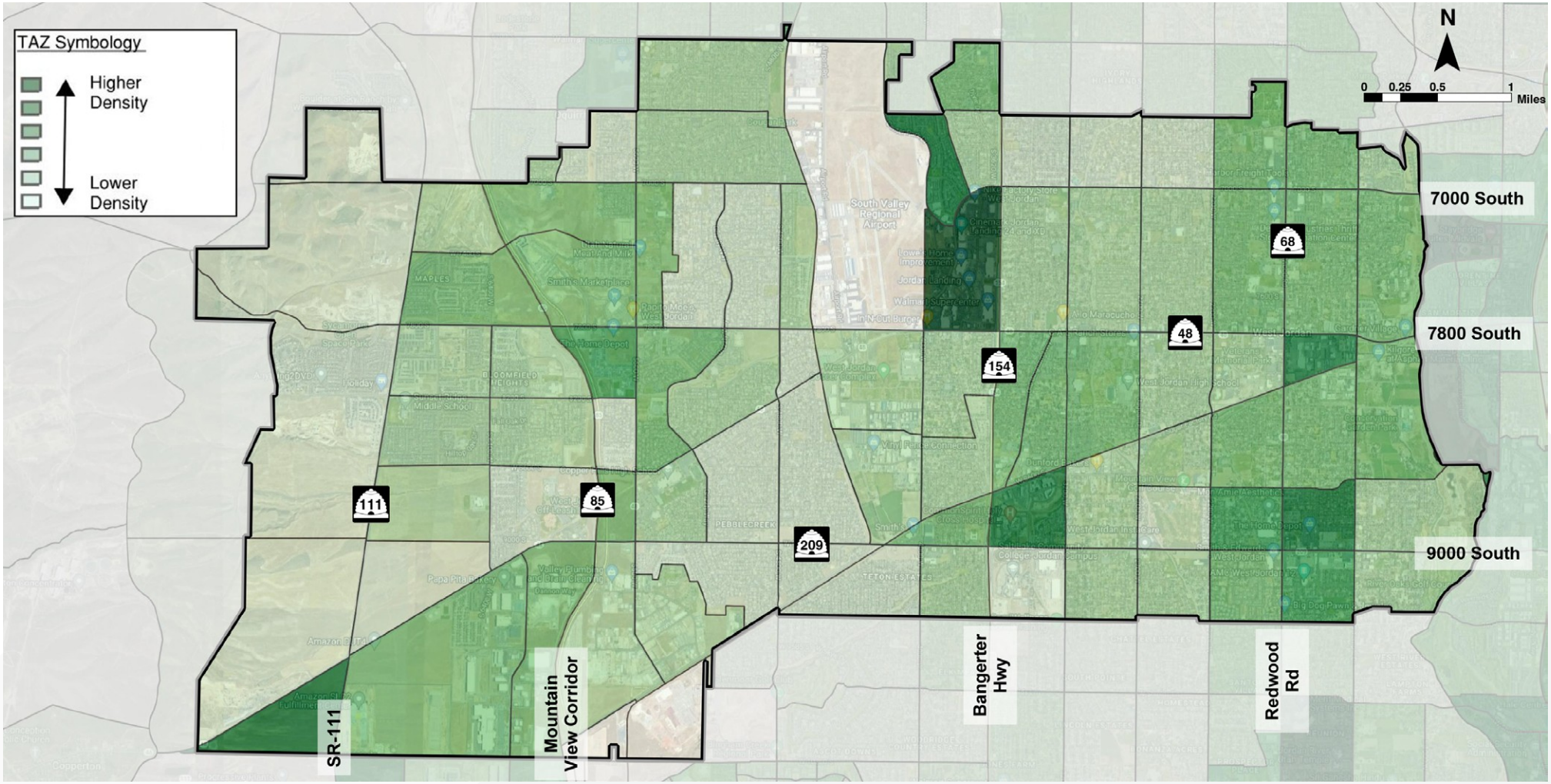


Figure 25: 2050 Combined Household and Employment Density



c. 2050 No-Build Scenario

The no-build scenario provides an analysis of traffic conditions without any roadway improvements. Traffic volumes from the 2050 no-build travel demand model have been compared to the LOS thresholds in Table 4. LOS results from the analysis are shown below in Figure 26.

As shown in Figure 26, the following roadway segments are expected to operate at unacceptable levels of service (LOS E or worse):

- U-111 (Bacchus Hwy); 7400 South to 7000 South
- U-111 (Bacchus Hwy); Old Bingham Highway to 8600 South
- Old Bingham Highway; U-111 to Mountain View Corridor
- Old Bingham Highway; Mountain View Corridor to 5600 West
- New Bingham Highway; U-111 (Bacchus Hwy) to 9000 South
- 9000 South; New Bingham Highway to 5600 West
- 9000 South; Old Bingham Highway to Redwood Road
- 9000 South; Temple Drive to Eastern City Border
- 7800 South; New Sycamore Drive to U-111
- 7800 South; 6400 West to Mountain View Corridor
- 7800 South; 4800 West to Eastern City Border
- 7000 South; Bangerter Highway to Redwood Road
- 7000 South; Columbia Drive to Temple Drive
- 6200 South; 4800 West to Center Park Dr
- 6200 South; 3800 West to Bangerter Highway

d. 2050 Build Scenario

The build scenario provides an analysis of traffic conditions including the roadway improvements listed below. Due to the unacceptable LOS expected to occur in the 2050 no-build scenario on select roadways, the following projects in Table 6 are recommended between 2033 and 2050 to increase roadway capacity and accommodate future development. The 2050 build scenario LOS is shown below in Figure 27. Cost estimates are in 2024 dollars and do not take inflation into account. Right-of-way is included in the project cost estimates on developer owned property. The project number listed in the table is for identification only and is no indication of project prioritization. As shown in the 2050 build scenario, all roadways are expected to operate at an acceptable LOS D or higher with the exception of 9000 South from Bangerter Highway to the West Jordan / Sandy City boundary and 7800 South from Redwood Road to the West Jordan / Midvale City boundary which operate at an unacceptable LOS E or F.

e. Roadway Projects Summary

Figure 28 below summarizes the planned roadway improvement projects discussed in this transportation network analysis.

TABLE 6: FUTURE ROADWAY PROJECTS (PHASES #2 AND #3)						
Project ID	Description	Responsibility	Improvement Scope	# of Lanes		Estimated Cost
				2023	Proposed	
PHASE #2 (2033-2042)						
2-1	7000 South / 7200 South Widening from Redwood Road to Bingham Junction Boulevard	WFRC, WJC	Widening	5	7	$41,580,000
2-2	7800 South Operations from 5600 West to Bangerter Highway	WFRC, WJC	Operations	5	5	$8,750,000
2-3	Mountain View Corridor Widening from SR-201 to Old Bingham Highway	WFRC, UDOT	Widening	2 NB, 2 SB	3+HOT NB, 3+HOT SB	$148,200,000
2-5	9400 South New Construction from 7500 West to SR-111	WFRC, WJC, Developer	New Construction	0	3	$7,366,848
2-6	7500 West New Construction from 9000 South to Old Bingham Highway	WFRC, WJC, Developer	New Construction	0	3	$22,040,000
2-7	6200 South; 5600 West to 4800 West	WFRC, WJC, Kearns	Widening	4 / 5	7	$23,030,000
2-8	5800 West Extension: Dannon Way to Old Bingham Hwy	WJC	New Construction	0	2	$7,394,207
2-9	6700 West; 7000 South to 7400 South	WJC, Developer	New Construction	0	2	$6,873,663
2-10	7400 West; 6600 South to 7000 South	WJC, Developer	New Construction	0	2	$6,016,004
PHASE #3 (2043-2050)						
3-1	New Bingham Highway Operations from 10200 South to 9000 South	WFRC, UDOT	Operations	2 / 3 / 4	2 / 3 / 4	$10,500,000
3-2	Redwood Road Operations from 6200 South to 9000 South	WFRC, UDOT	Operations	7	7	$12,250,000
3-3	Bangerter Highway Operations from SR-201 to 2700 West	WFRC, UDOT	Operations	6	6	$58,100,000
3-4	4000 West Widening from Old Bingham Highway to 7800 South	WFRC, WJC	Widening	3	5	$29,700,000
3-5	Old Bingham Highway Widening from Bagley Park Road to Old Homestead Lane	WFRC, WJC	Widening	2	3	$26,450,000
3-6	New Bingham Highway & U-111 Roadway Realignment	WFRC, WJC, Developer	New Construction	0	3	$7,539,153
3-7	7800 South New Construction from Oquirrh View Boulevard to Tracks	WFRC, WJC, Developer	New Construction	0	3	$15,300,000
3-8	Mountain View Corridor Widening from Old Bingham Highway to Porter Rockwell Boulevard	WFRC, UDOT	Widening	2Fr+2Fwy NB, 2Fr+2Fwy SB	2Fr+3Fwy+ HOT NB, 2Fr+ 3Fwy+HOT SB	$156,360,000
3-9	9400 South; 7500 West to WJC Limits	WFRC, WJC, Developer	New Roadway	0	3	$3,084,087
3-10	Old Bingham Highway: 5600 West to Mountain View Corridor	WJC	Widening	3	5	$10,614,276
3-11	9800 South from U-111 to 7500 West	WJC, Developer	New Roadway	0	2	$5,949,077

* Impact Fee Eligible Project

Figure 26: Future (2050) ADT and LOS - No Build

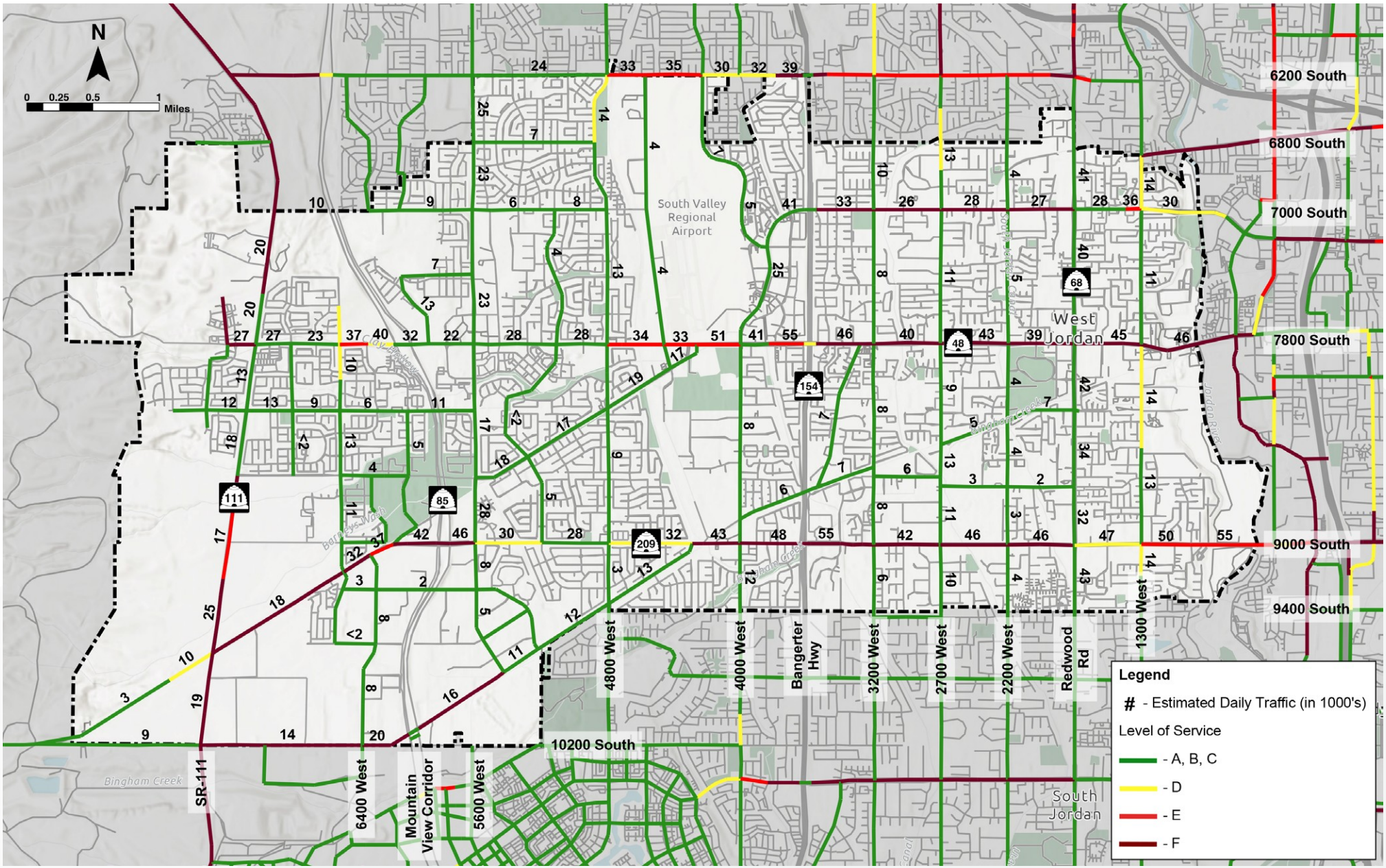


Figure 27: Future (2050) ADT and LOS - Build

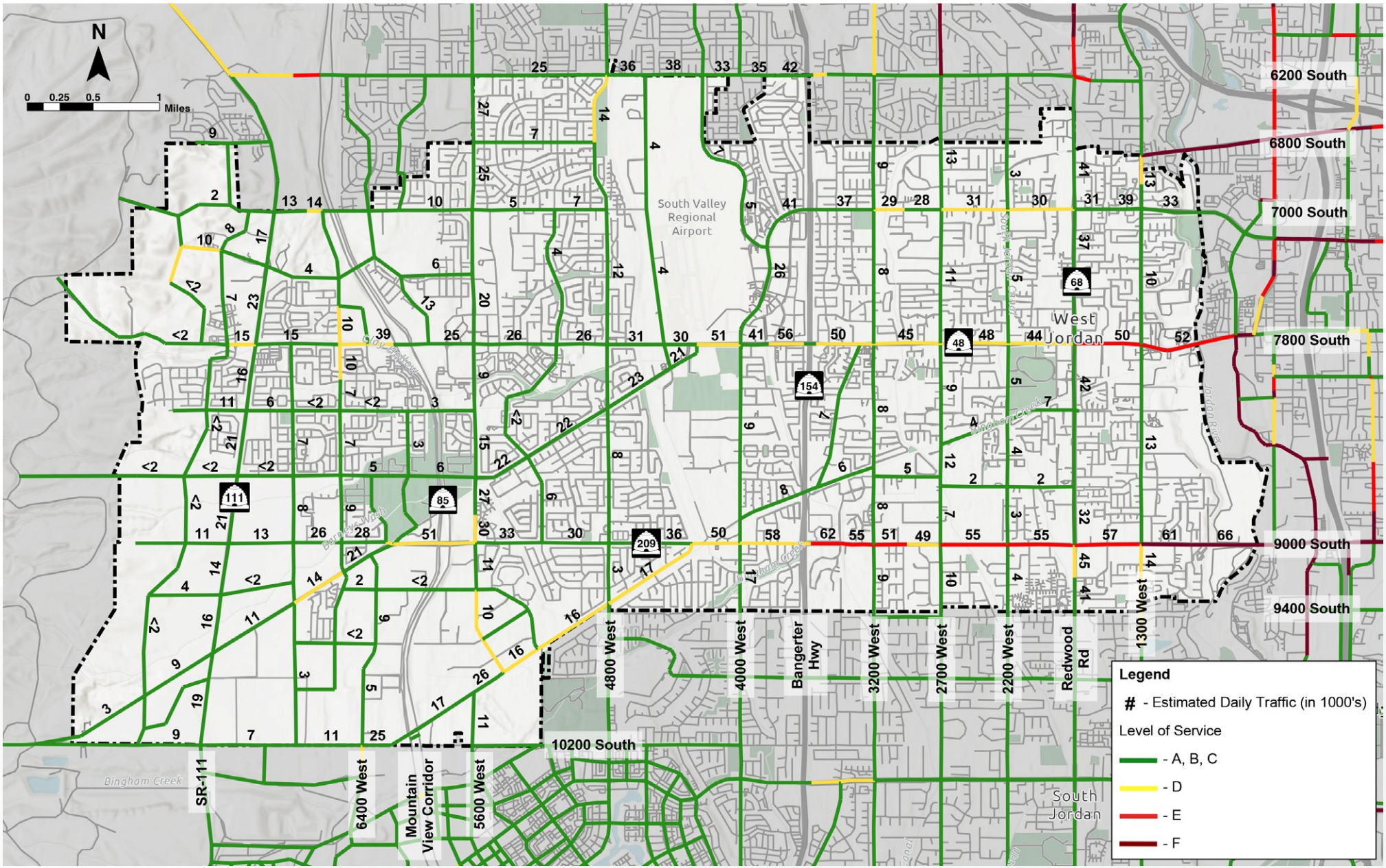
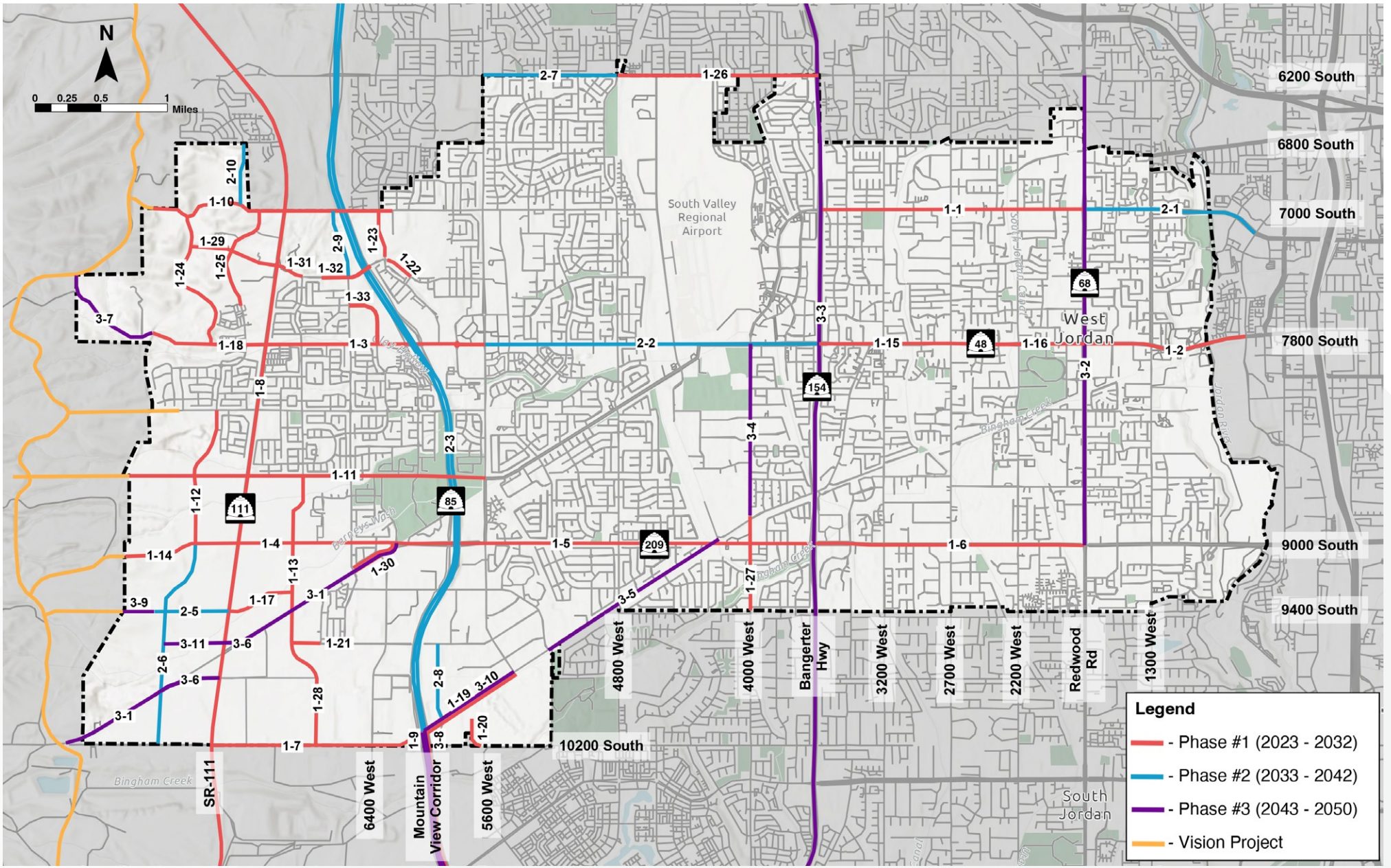


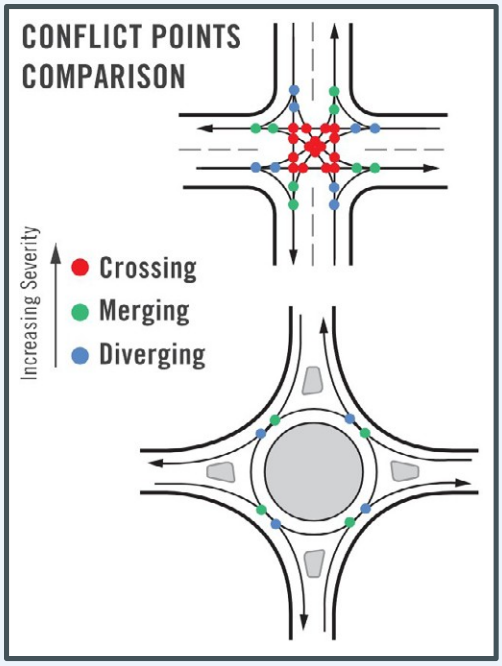
Figure 28: Roadway Projects



J. Intersection Improvements

Roundabouts

At unsignalized intersections that are projected to operate at a poor level of service, West Jordan City recommends evaluation of a roundabout as a mitigation measure over the installation of traffic signals. According to FHWA, many international studies have found that one of the most significant benefits of a roundabout installation is the improvement in overall safety performance. Specifically, it has been found that single-lane roundabouts operate more safely than two-way stop-controlled intersections. The frequency of crashes might not always be lowered at roundabouts, but the injury rates are reduced.



UDOT Safety Countermeasure Fact Sheets (February 2021)

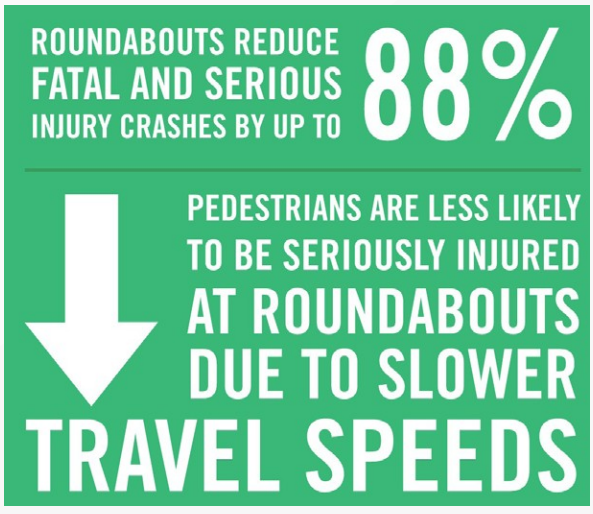
WHY IS IT IMPORTANT?

Intersections are consistently the most dangerous locations on a roadway, accounting for 23% of all fatal crashes. A traditional 4-leg intersection has 32 conflict points where a crossing, turning, or merging maneuver may result in a collision. Traditional intersections do little to reduce speeds, increasing the likelihood of severe crashes.

WHAT DOES IT DO?

Roundabouts reduce the number of conflict points at a typical intersection from 32 to just 8. The 8 remaining are merge or diverge type conflicts that very rarely result in severe crashes. In addition, roundabouts require users to slow down, reducing the severity of crashes that may occur.

Roundabouts excel in areas where traffic is evenly dispersed in all directions due to their design, which promotes a continuous flow of vehicles without the need for traffic signals or stop signs. When traffic is evenly distributed, vehicles can enter and exit the roundabout smoothly, minimizing congestion and delays. However, if one direction experiences significantly higher traffic volume than the others, it can overwhelm the roundabout, disrupting the flow and causing congestion. This occurs because vehicles from the high-traffic direction need more time to enter and exit the roundabout, leading to longer queues and delays for other directions. As a result, the efficiency of the roundabout diminishes, and traffic may come to a standstill, resulting in failure.



Mini-roundabouts are a type of roundabout characterized by a small diameter and traversable islands (central island and splitter islands). Mini-roundabouts offer most of the benefits of regular roundabouts with the added benefit of a smaller footprint. As with roundabouts, mini-roundabouts are a type of intersection rather than merely a traffic calming measure, although they may produce some traffic calming effects. They are best suited to environments where speeds are already low and environmental constraints would preclude the use of a larger roundabout with a raised central island. West Jordan City will consider the application of mini-roundabouts in the future.

Traffic Signals

The need for new traffic signals will be based on warrants contained in the Manual on Uniform Traffic Control Devices (MUTCD) and any additional warrants established by the National Committee on Uniform Traffic Control Devices. In determining the location of a new signal, traffic progression is of paramount importance. Generally, a minimum spacing of one-half mile for all signalized intersections should be maintained. This spacing is usually desirable to achieve good speed, capacity, and optimum signal progression. The one-half mile signal spacing standard may be relaxed on lower volume collector streets where an engineering study shows that traffic progression can be maintained. Pedestrian movements must be considered in the evaluation and adequate pedestrian clearance provided in the signal cycle split assumptions. To provide flexibility for existing conditions and ensure optimum two-way signal progression, an approved traffic engineering analysis must be made to properly locate all proposed accesses that may require signalization. The section of roadway to be analyzed for signal progression will be determined by the city and will include all existing and possible future signalized intersections.

A traffic control signal should only be installed if and when the warrant criteria outlined in Chapter 4C of the MUTCD are met. It is, however, possible to predict where traffic control signals may be warranted in the future based on projected traffic volumes and roadway functional classifications. A traffic control signal may be warranted where an arterial meets an arterial and may sometimes be warranted where an arterial street meets a collector street. They are rarely warranted where a collector street meets a collector street and almost never warranted where local streets connect. For these intersection types, other traffic control such as modern roundabouts or mini-roundabouts are typically recommended.

Stop Control

Wherever possible, the City is encouraged to use roundabouts to control traffic on low to medium volume roadways. In cases where this is not feasible, due to financial constraints or sight distance concerns, stop-control may be an appropriate intersection treatment. A four-way stop-control should be avoided on Collector streets and prohibited on Arterial streets where possible. In all cases, stop-controlled intersections should follow the guidelines and warrants set forth in the MUTCD.

Intersection Improvement Projects

As part of the West Jordan capital facilities plan, it is recommended the City begin planning for the proposed intersection improvements shown below in Table 7. The project number listed in the table is for identification only and is no indication of project prioritization. Figure 29 depicts the locations of the proposed intersection improvements. As an additional summary, Figure 30 below shows the future (2050) intersection control map of West Jordan.

TABLE 7: FUTURE INTERSECTION PROJECTS				
Project ID	**Description**	**Responsibility**	**Improvement Scope**	**Estimated Cost**
PHASE #1 (2023–2032)				
1-A	4000 West & Old Bingham - Realignment to North*	WJC	Realignment	$5,000,000
1-B	Prosperity & 10200 South*	WJC / SJC	Signal	$400,000
1-C	5490 West & 7800 South*	WJC	Signal	$450,000
1-D	3200 West & Jordan Line Parkway*	WJC	Signal	$375,000
1-E	7200 West & 8200 South*	WJC	Roundabout	$1,499,551
1-F	7200 West & 8600 South*	WJC	Roundabout	$1,253,248
1-G	6700 West & 8600 South*	WJC	Roundabout	$1,458,767
1-H	Airport Rd & 7000 South*	WJC	Signal	$375,000
1-I	Mountain View Corridor Interchange	WFRC	New Interchange	$50,000,000
1-J	Mountain View Corridor Interchange	WFRC	New Interchange	$50,000,000
1-K	Gardner Lane and Redwood Road*	UDOT, WJC	Intersection Improvements	$600,000
1-L	7600 South and Redwood Road*	UDOT, WJC	Intersection Improvements	$600,000
1-M	7300 West and 9000 South*	WJC, Developer	Roundabout	$1,253,248
1-N	6400 West and 7800 South*	WJC	Roundabout	$1,565,329
1-O	9000 South and Old Bingham Highway*	WJC, UDOT	High-T Intersection	$1,000,000
1-P	9000 South & New Bingham Hwy*	WJC, UDOT, WFRC	Realignment and Signal	$4,705,308
1-Q	9000 South & 6400 West*	WJC, Developer	Signal	$400,000
1-R	9000 South & 6700 West*	WJC, Developer	Signal	$400,000
1-S	6400 West & New Bingham Highway*	UDOT, WJC, Developer	Signal	$400,000
1-T	8600 South & Bacchus Highway*	WJC, UDOT, Developer	Signal	$450,000
1-U	9000 South & Bacchus Highway*	UDOT, WJC, Developer	Signal	$450,000
1-V	9400 South & SR-111*	UDOT, WJC, Developer	Signal	$450,000
1-W	7400 South & SR-111*	UDOT, WJC, Developers	Signal	$400,000
1-X	7000 South & SR-111*	WJC, UDOT, Developer	Signal	$450,000
1-Y	Old Bingham Hwy & SR-111*	WJC, UDOT, SJC	Signal	$400,000
1-Z	7000 South & High Bluff Drive*	WJC, Taylorsville, Developer	Roundabout	$1,541,551
1-AA	7000 South Rail Crossing Improvement*	WJC	Rail Crossing Improvement	$3,000,000
1-BB	New Sycamore Drive Rail Crossing Improvement*	WJC, Developer	Rail Crossing Improvement	$2,000,000
1-CC	Wood Ranch Collector Rail Crossing Improvement*	WJC, Developer	Rail Crossing Improvement	$2,000,000
1-DD	Old Bingham Hwy & Mountain View Corridor Interchange	UDOT, WFRC, WJC	New Interchange	$60,000,000
1-EE	7800 South & Jordan River Bridge Replacement*	WJC	Bridge Replacement	$20,000,000
1-FF	6400 West & 7400 South*	WJC	Roundabout	$1,246,032
1-GG	6200 West & 7800 South*	WJC	Roundabout	$1,556,551
1-HH	6400 West & 7600 South*	WJC	Roundabout	$1,437,910
1-II	7400 South Rail Crossing Improvement*	WJC	Rail Crossing Improvement	$2,000,000

* Impact Fee Eligible Project

TABLE 7: FUTURE INTERSECTION PROJECTS (continued)				
Project ID	**Description**	**Responsibility**	**Improvement Scope**	**Estimated Cost**
PHASE #2 (2033-2042)				
2-A	6400 West & Wells Park Road	WJC	Signal	$450,000
2-B	6700 West & 10200 South	WJC / SJC	Signal	$450,000
2-C	Old Bingham Hwy & Hawley Park Rd	WJC	Signal	$450,000
2-D	Bagley Park Rd & Hawley Park Rd	WJC	Signal	$400,000
2-E	1530 West & 7800 South	WJC	Signal	$450,000
2-G	6700 West & 8200 South	WJC	Roundabout	$1,783,780
2-I	5600 West & 7400 South	WJC	Roundabout	$1,859,457
2-J	5600 West & 8000 South	WJC	Roundabout	$1,963,965
2-K	Grizzly Way & 7000 South	WJC	Roundabout	$1,701,835
2-M	9400 South & 7500 West	WJC, Developer	Roundabout	$1,253,248
2-N	7500 West & New Bingham Hwy	UDOT, WJC, Developer	Signal	$400,000
2-O	7500 West & 10000 South	WJC, Developer	Roundabout	$1,253,248
PHASE #3 (2043-2050)				
3-A	7800 South and Redwood Road	UDOT, WFRC, WJC	Innovative Improvement	$15,000,000
3-B	9000 South and Redwood Road	UDOT, WFRC, WJC	Innovative Improvement	$15,000,000
3-C	7800 South Rail Crossing Improvement	WJC	Rail Crossing Improvement	$2,000,000

* Impact Fee Eligible Project

Figure 29: Intersection Projects

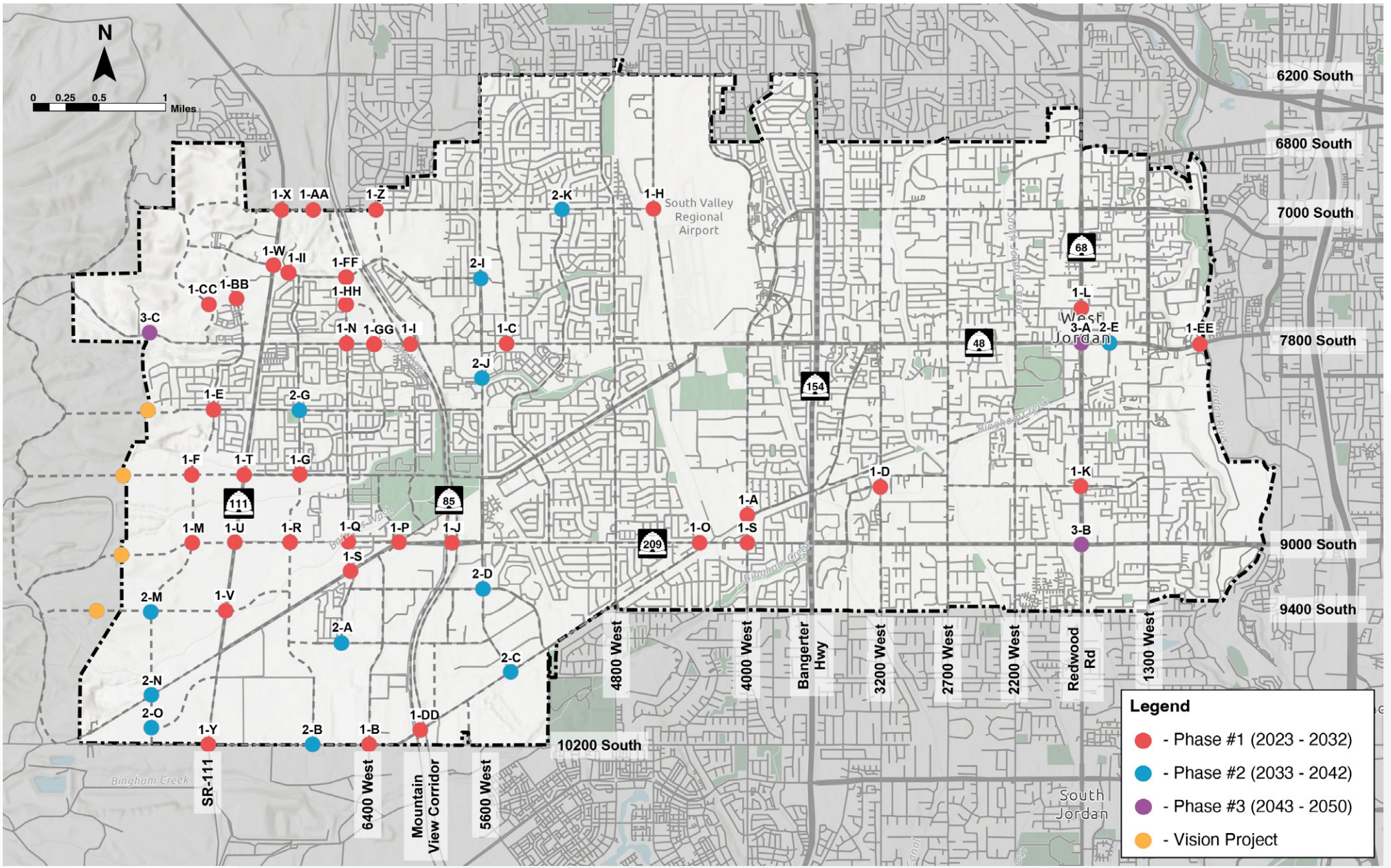
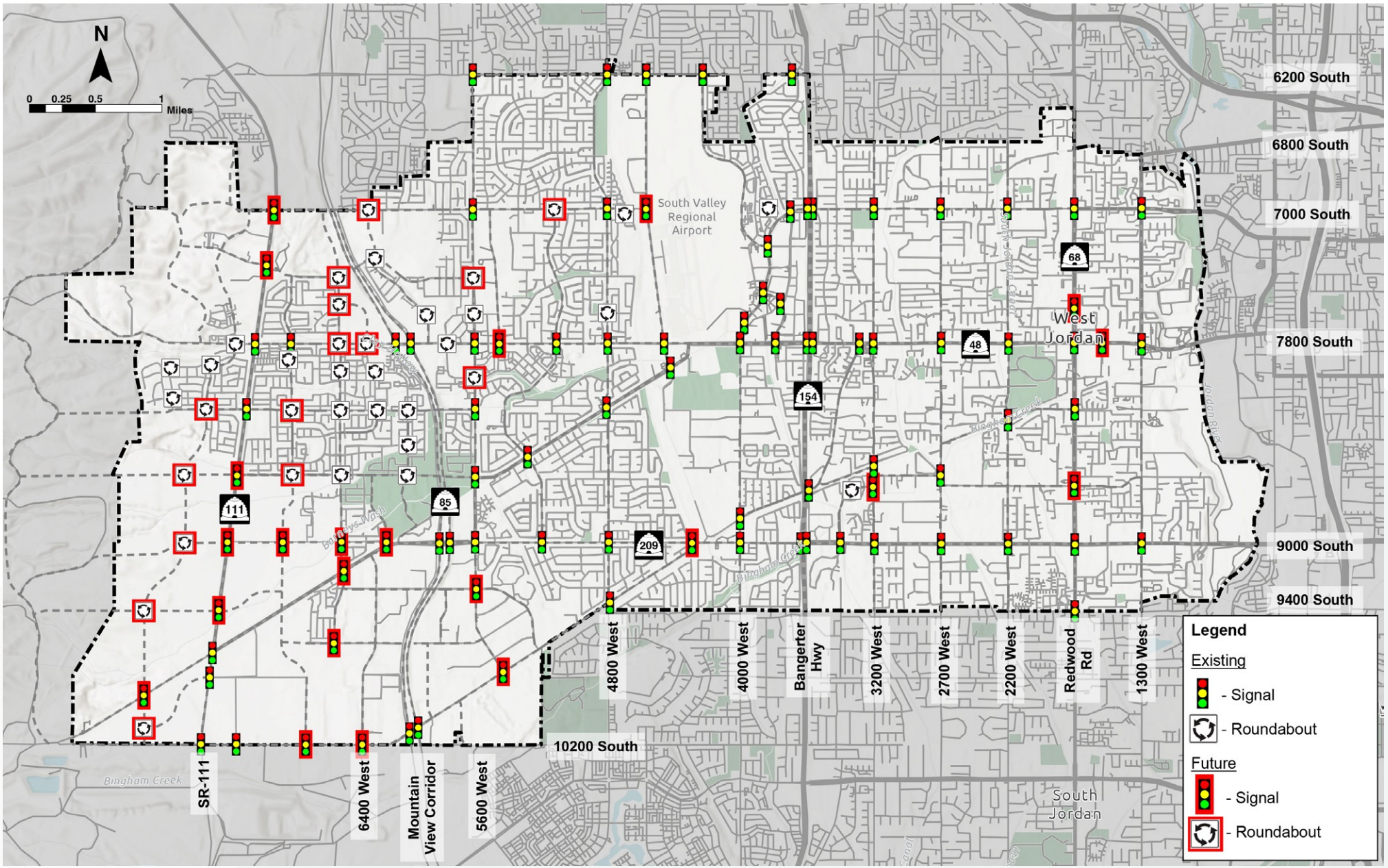


Figure 30: Future (2050) Intersection Control



K. West Jordan Transportation Project Metrics

West Jordan City understands that transportation projects greatly impact the surrounding neighborhoods, businesses, and residents. Transportation projects occasionally result in negative impacts, thus it is important that the project provides an overall positive benefit to the community and City as a whole. Therefore, it is recommended that West Jordan City review and address the following items for every transportation project during planning and/or design to ensure an overall positive benefit to the community. These metrics include:

- → Pedestrian & Bicycle Safety
- → Vehicle Safety
- → Connectivity
- → Access to Opportunities
- → System Reliability & Resiliency
- → Congestion Mitigation
- → Multimodal Integration
- → Transportation and Land Use Integration
- → Environmental Care / Sensitivity & Air Quality
- → Public Engagement
- → Preservation & Maintenance
- → Economic Development
- → Right-of-Way Impacts
- → Induced Traffic Demand
- → Aesthetics

Metrics are evaluated on a community or city- wide level as localized impacts may not paint an accurate picture of the project as a whole.[3]

[3]An example of this is roadway connectivity. Improved connectivity could have negative impacts on the street that is connected, but benefits to the city as a whole significantly outweigh the downsides.
https://wasatchchoice.org/wp-content/uploads/2023/05/UtahStreetConnectivityGuide-FINALAndAppendix5192023.pdf

III. ALTERNATIVE TRANSPORTATION MODES

A. Purpose

Alternative transportation modes, such as transit and active transportation, are an important part of the overall transportation system. Public transit typically includes buses, light rail, and shuttle routes. Active transportation includes any form of non-motorized transportation such as walking or biking. Both transit and active transportation are essential parts of an active and vibrant community that add quality of life elements that can not be achieved with only automobile access.

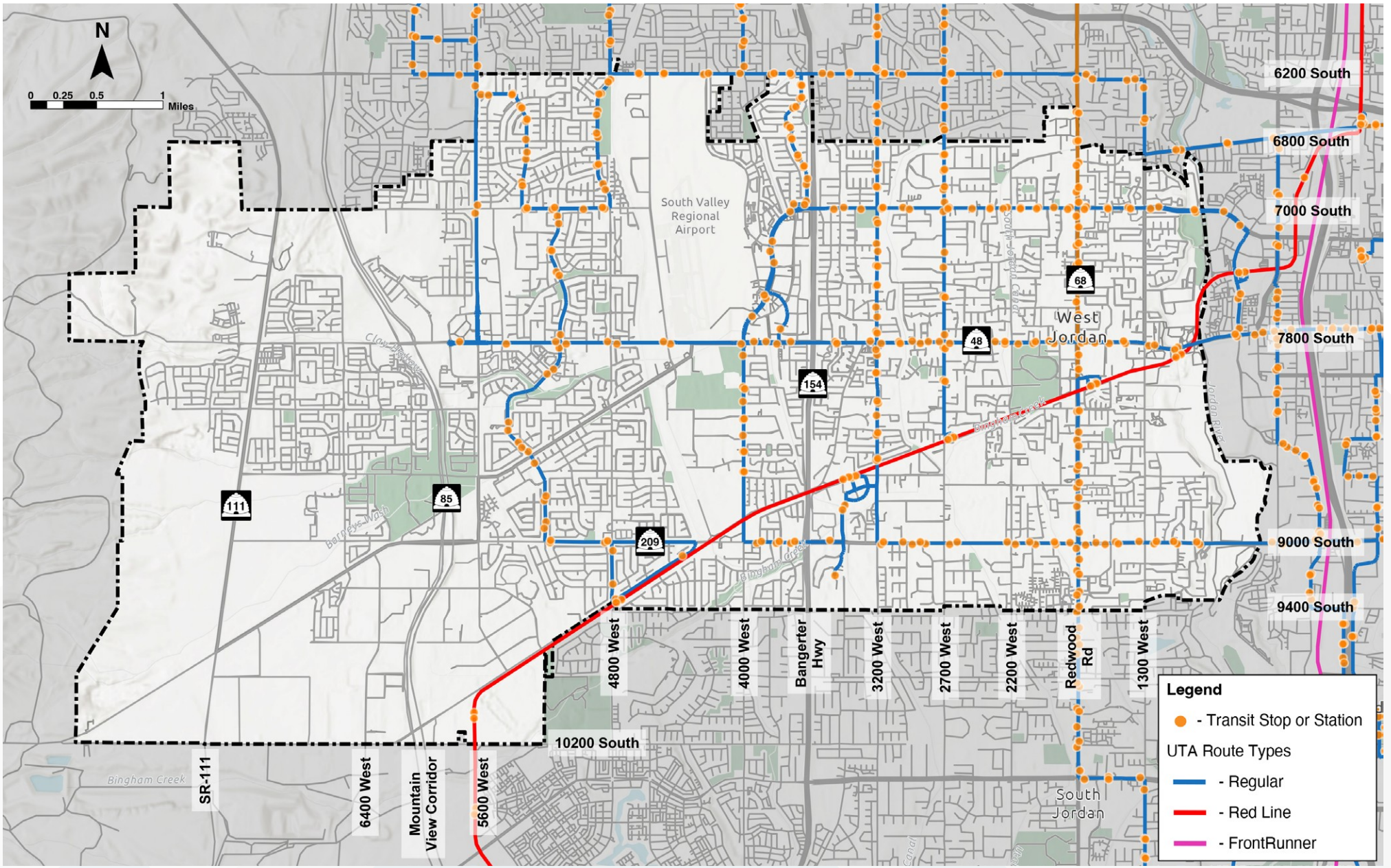
B. Public Transit

Existing Transit Service

Public transportation in West Jordan City is served by the Utah Transit Authority (UTA). Public transit typically includes buses, light rail, and shuttle routes. According to the American Community Survey (2022), 1.7% of Salt Lake County residents reported using public transit as their transportation mode to commute to work. This is compared to 1.4% of Utahns and 3.1% of people in the United States who use public transit as their transportation mode to commute to work. Some opportunities to improve transit service and use in West Jordan as an attractive mode for residents, especially in north eastern areas of the City that have lower socioeconomic status.

Currently, UTA bus routes 62, 217, 218, 227, 240, 248, F232, F556, F570, F578, and F590 serve West Jordan City. All buses operate at a frequency of 30 minutes other than the route 217 on Redwood Road to the West Jordan City Center, which has 15 minute headways. The TRAX Red Line passes through West Jordan and has stops at Historic Gardner, 2700 West Sugar Factory Road, Jordan Valley, and 4800 W Old Bingham Hwy and runs at a frequency of 15 to 30 minutes. UTA's current Salt Lake County transit map can be viewed here.

Figure 31: Existing Transit Routes and Stops



Future Transit Service

West Jordan City should be actively involved in working with UTA, UDOT, and WFRC to support transit as a viable and efficient transportation mode in the City. Planning and lobbying efforts will help procure funds to support the development and maintenance of a sustainable transit system. With the construction of new major transportation corridors such as the Mountain View Corridor and SR-111, there may be opportunities for additional new transit services.

UTA's Via On Demand Service is planned to begin operating within the next five years in West Jordan City. UTA On Demand is an innovative form of transportation that connects riders with other transit services like TRAX, FrontRunner, or bus, as well as to other destinations in the community. The app-based technology matches multiple riders headed in a similar direction into a single vehicle, allowing for quick and efficient shared trips. More information about UTA On Demand managed by Via can be found here.

The UTA regional transportation plan lists the following transit projects in their 2024-2050 long-range transit plans:

PHASE 1 PROJECTS:

1. 5600 West Corridor Core Route (15 min service) from Downtown Salt Lake City to 5600 W Old Bingham Highway TRAX Station. This project is funded and in design now.
2. Redwood Road Corridor Core Route (10 min service) from North Temple FrontRunner Station to West Jordan City Center TRAX Station.
3. 5400 South Corridor Core Route (15 min service) from 5600 West to 3900 South & Wasatch Boulevard.
4. Existing TRAX Red Line improvement is in phase 1 for the existing TRAX red line.

PHASE 2 & 3 PROJECTS:

1. Cottonwood - Midvale Corridor Core Route (15 min service) from 5600 West to Bingham Junction TRAX Station (phase 2).
2. 6200 South Core Route (15 min service) from 5600 West to Big Cottonwood Canyon Park-and-Ride (phase 3).
3. A new Frequent Service (15 min service) route connecting Salt Lake and Utah Counties (phase 3).

The WFRC RTP lists the following transit improvements in their 2023-2050 long-range transit plans:

PHASE 1 PROJECTS:

1. 5600 West Corridor Core Route (15 min service) from Downtown Salt Lake City to 5600 W Old Bingham Highway TRAX Station.
2. Redwood Road Corridor Core Route (10 min service) from North Temple FrontRunner Station to West Jordan City Center TRAX Station.

PHASE 2 & 3 PROJECTS:

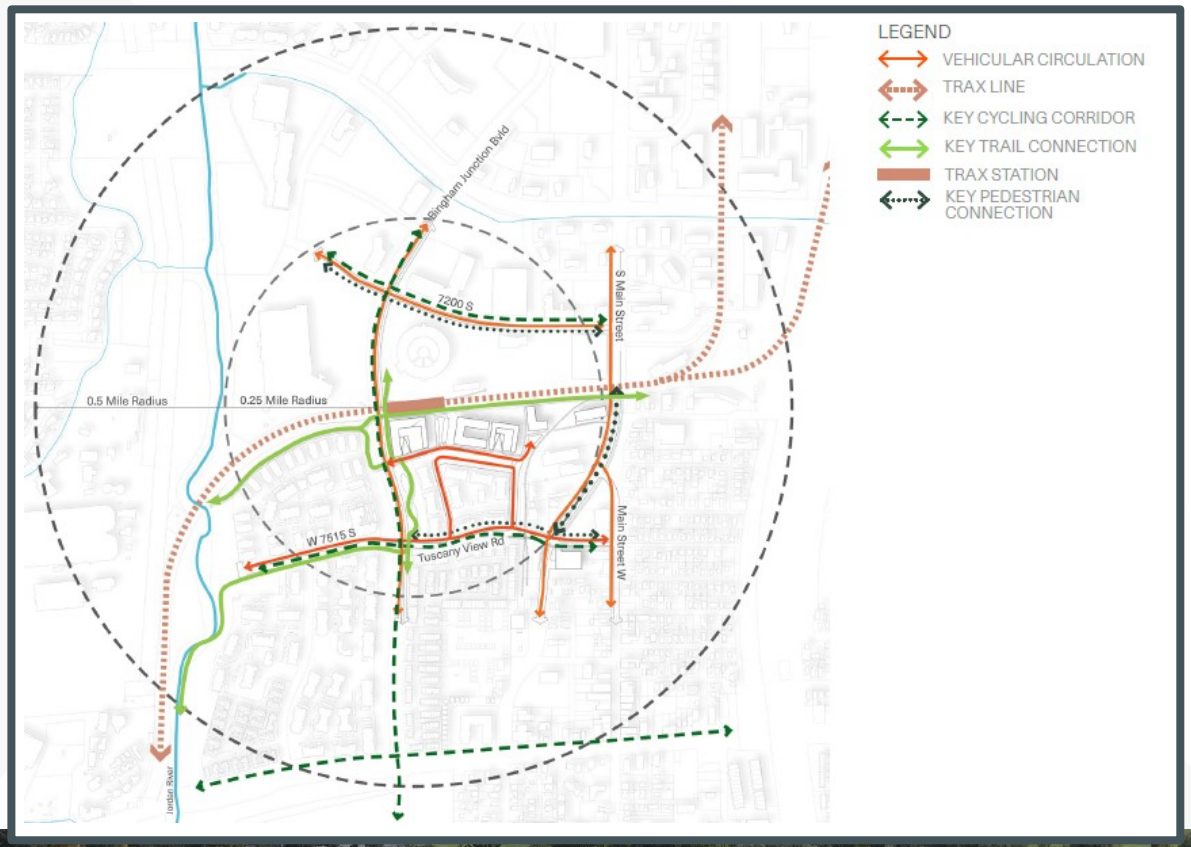
1. Cottonwood - Midvale Corridor Core Route (15 min service) from 5600 West to Bingham Junction TRAX Station (phase 2).
2. Mid-Jordan TRAX Maintenance Facility (phase 2).
3. 6200 South Core Route (15 min service) from 5600 West to Big Cottonwood Canyon Park and Ride (phase 3).
4. 7800 South Bus Maintenance Facility (phase 3).

Included in UTA's phase I projects is an enhanced bus service line that will travel from 5600 West & Old Bingham Highway TRAX station to downtown Salt Lake City. This project is anticipated to be completed prior to 2032. It is anticipated that the bus line will eventually extend to Daybreak Parkway in South Jordan. It's required to be built by UTA before UDOT can add lanes to Mountain View Corridor. UTA will build and operate it.

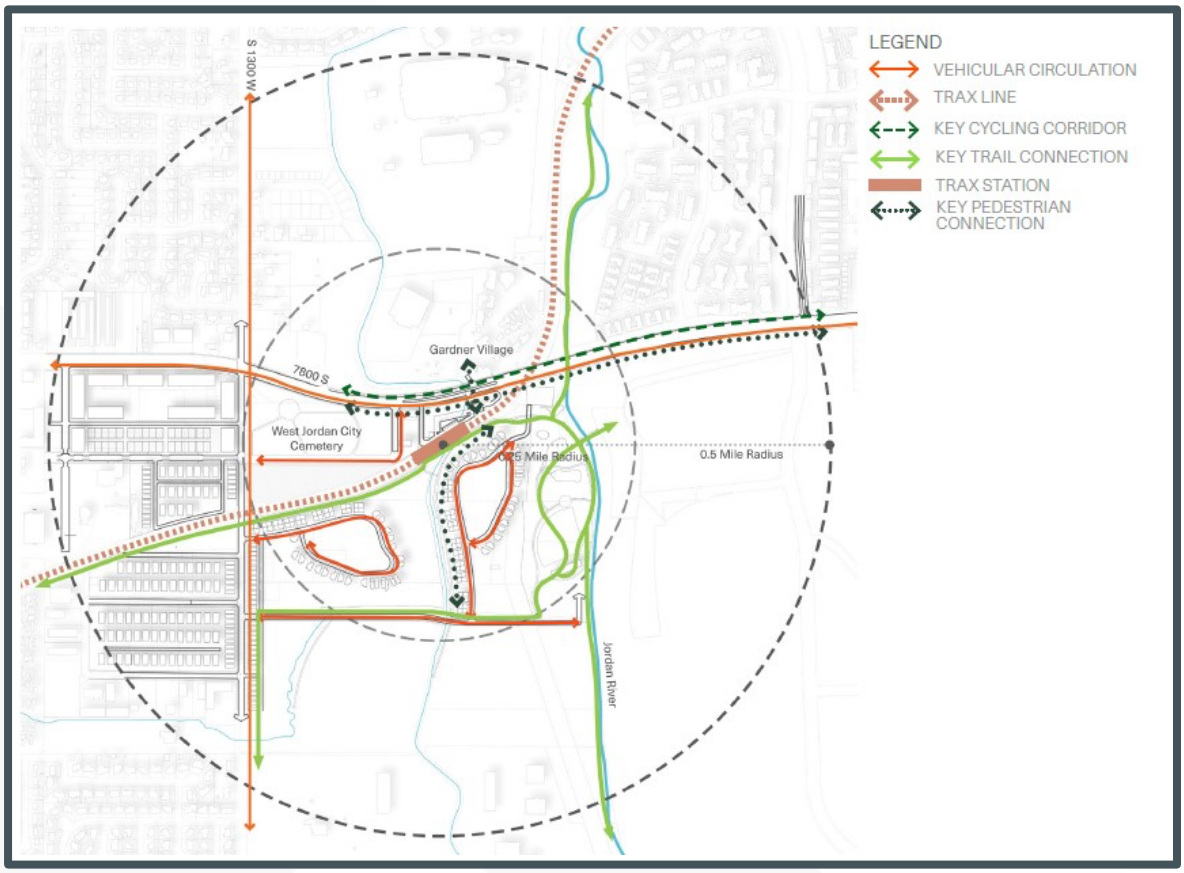
Station Area Plans

The West Jordan & Midvale Station Area Plans were adopted in November 2023. The City of West Jordan and Midvale City, in partnership with WFRC and UTA worked together to develop station area plans for three adjacent stations: City Center, Historic Gardner, and Bingham Junction. A Station Area Plan (SAP) is intended to advance shared goals by maximizing development potential around transit stations through a collaborative planning approach. Per Utah House Bill 462 (HB462), cities with fixed-guideway public transit stations such as FrontRunner, TRAX, or BRT, are required to develop a SAP for that station. The goals of HB462 are to increase the availability and affordability of housing, including moderate income housing; promote sustainable environmental conditions; enhance access to opportunities; and increase transportation choices and connections. The West Jordan & Midvale Station Area Plans can be seen here.

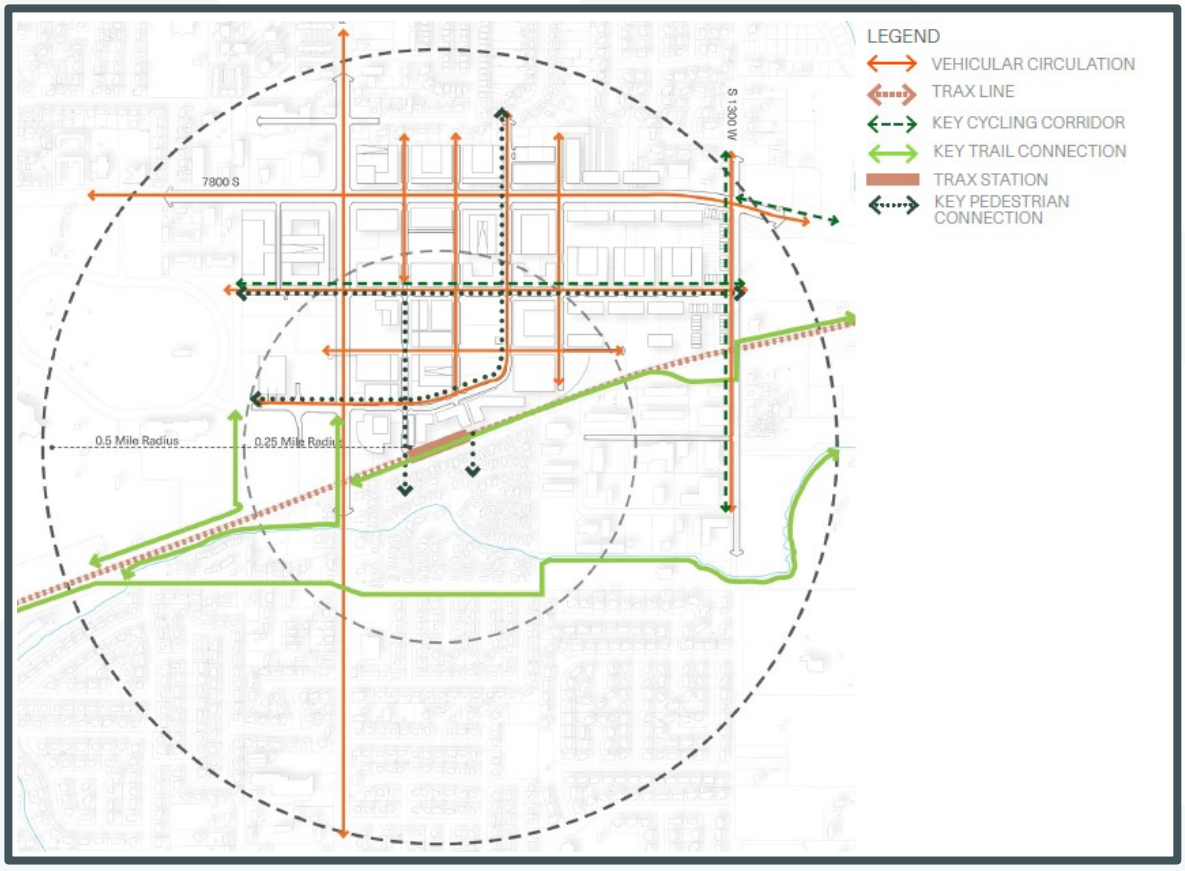
Bingham Junction Boulevard Circulation Diagram



Gardner Village Circulation Diagram



West Jordan City Center Station



Transit Oriented Development Feasibility Study

Given the documented limitations to east/west travel, even after significant roadway expansions, creative and ambitious solutions may still be needed to accommodate future growth. New transit-oriented development in West Jordan could help accommodate additional growth with reduced impact to the City roadway network.

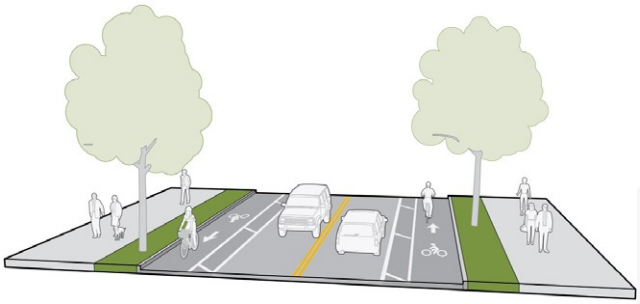
Building off the recently adopted Historic Gardner and West Jordan City Center station area plans, it is recommended the City consider further evaluation of transit oriented development and associated transportation and access improvements southwest of the West Jordan City Center station near the 9000 South & Old Bingham Highway intersection. This area, west of Bangerter Highway, has the potential for significant future development/redevelopment that could be well served by the adjacent Trax line, and could be developed along with thoughtful roadway and access improvements that could benefit overall travel within the City.

C. Active Transportation

The West Jordan City Active Transportation Plan (ATP) was recently updated in 2020 by Avenue and Fehr & Peers. The ATP allowed the City of West Jordan to take a detailed look at bicycle and pedestrian facilities in the city. The plan is designed to lay the groundwork for enhancing active transportation (AT) in the community by presenting a vision for future AT projects and how to see them realized. The West Jordan City ATP is a separate document and can be found here. Figure 33 below shows the proposed AT facilities recommended in the plan.

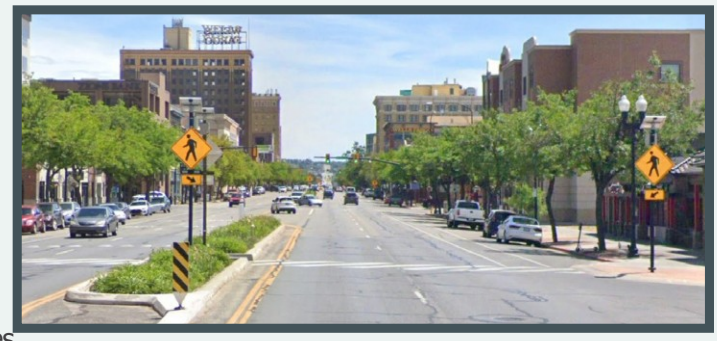
The RTP sets the regional long-term strategy for our region's future transportation system. The 2023-2050 RTP outlines investments for all modes of transportation and forms the transportation element of the Wasatch Choice Vision. WFRC, in partnership with local governments, transportation agencies, community organizations, local stakeholders, and residents, adopted the 2023-2050 RTP in May 2023. The WFRC RTP includes active transportation projects planned between 2023 and 2050 and can be viewed here.

Funding has recently been acquired to construct the Bingham Creek Regional Trail. The draft alignment for the trail corridor is shown in Figure 34 below. The significance of this corridor both as a riparian and open space opportunity and as an east-west connector make it an important piece in the active transportation system for Salt Lake County and West Jordan City.



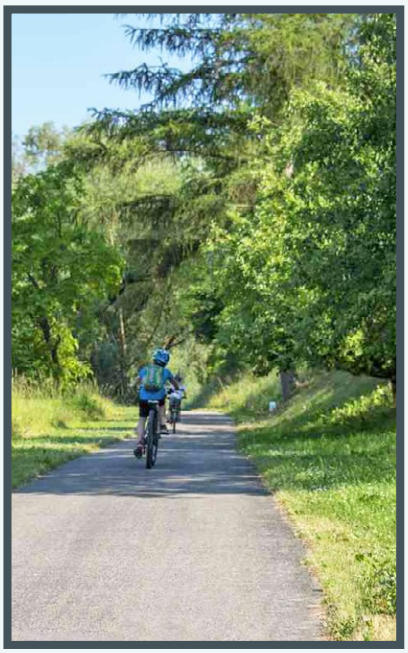
As part of West Jordan City's commitment to enhancing its transportation infrastructure, priority is placed on the inclusion of buffered bike lanes in the City's roadway cross-sections. Buffered bike lanes provide a safer environment for cyclists by increasing visibility of cyclists and increasing separation between cyclists and vehicles. West Jordan City emphasizes the integration of buffered bike lanes in all new construction, widening, or restriping projects throughout the city.

Pedestrian crossing treatments aim to enhance safety and accessibility for pedestrians at intersections and crossings. Some common examples include:



- **Pedestrian Islands:** These are raised or refuge areas in the middle of roadways, allowing pedestrians to cross one direction of traffic at a time.
- **RectangularRapidFlashBeacons(RRFBs):**RRFBsaresmall rectangular yellow flashing lights that are deployed with pedestrian crossing warning signs. They are typically actuated by a pedestrian push button and flash for a predetermined amount of time, to allow a pedestrian to cross the roadway, before going dark.
- **Pedestrian Overpasses/Underpasses:** These structures provide pedestrians with a safe way to cross busy roads without interacting with vehicular traffic.
- **HAWK Beacon:** It's actuated by a pedestrian push button and uses a combination of circular yellow and red traffic signal displays to first warn motorists of a pedestrian that is about to cross the street, then require the motorist to stop for the pedestrian crossing, and then release the motorist to proceed once the pedestrian has cleared the crossing. The Beacon is a hybrid between a pedestrian traffic signal and a stop sign.
- **Curb Extensions:** A roadway edge treatment where a curbline is bulged out toward the middle of the roadway to narrow the width of the street. Curb extensions are sometimes called "neckdowns", and are often used at the location of a pedestrian crosswalk to minimize the distance and time that a crossing pedestrian must be in the roadway.

West Jordan City has expressed interest in converting the abandoned Rio Tinto rail line shown in Figure 32 below to a non-motorized shared-use path/trail. There are several local and national advocacy groups that may be able to assist the City in acquiring funding for these projects or other major active transportation projects. WFRC has technical planning and construction implementation funds available for the City to apply for regional active transportation connections.



The Rails to Trails Conservancy advocates for investments in the infrastructure communities need to safely walk and bike where they live. The Rails to Trails advocacy group has acquired billions of dollars for projects that connect trails and other walking and biking infrastructure.

The National Park Service – Rivers, Trails, and Conservation Assistance program (NPS-RTCA) supports locally-led conservation and outdoor recreation projects across the United States. NPS-RTCA assists communities and public land managers in developing or restoring parks, conservation areas, rivers, and wildlife habitats, as well as creating outdoor recreation opportunities and programs that engage future generations in the outdoors. Although the NPS-RTCA does not provide financial assistance they do provide professional services to help cities achieve their conservation and outdoor recreation vision.

Figure 32: Concept Rail Trail Alignment

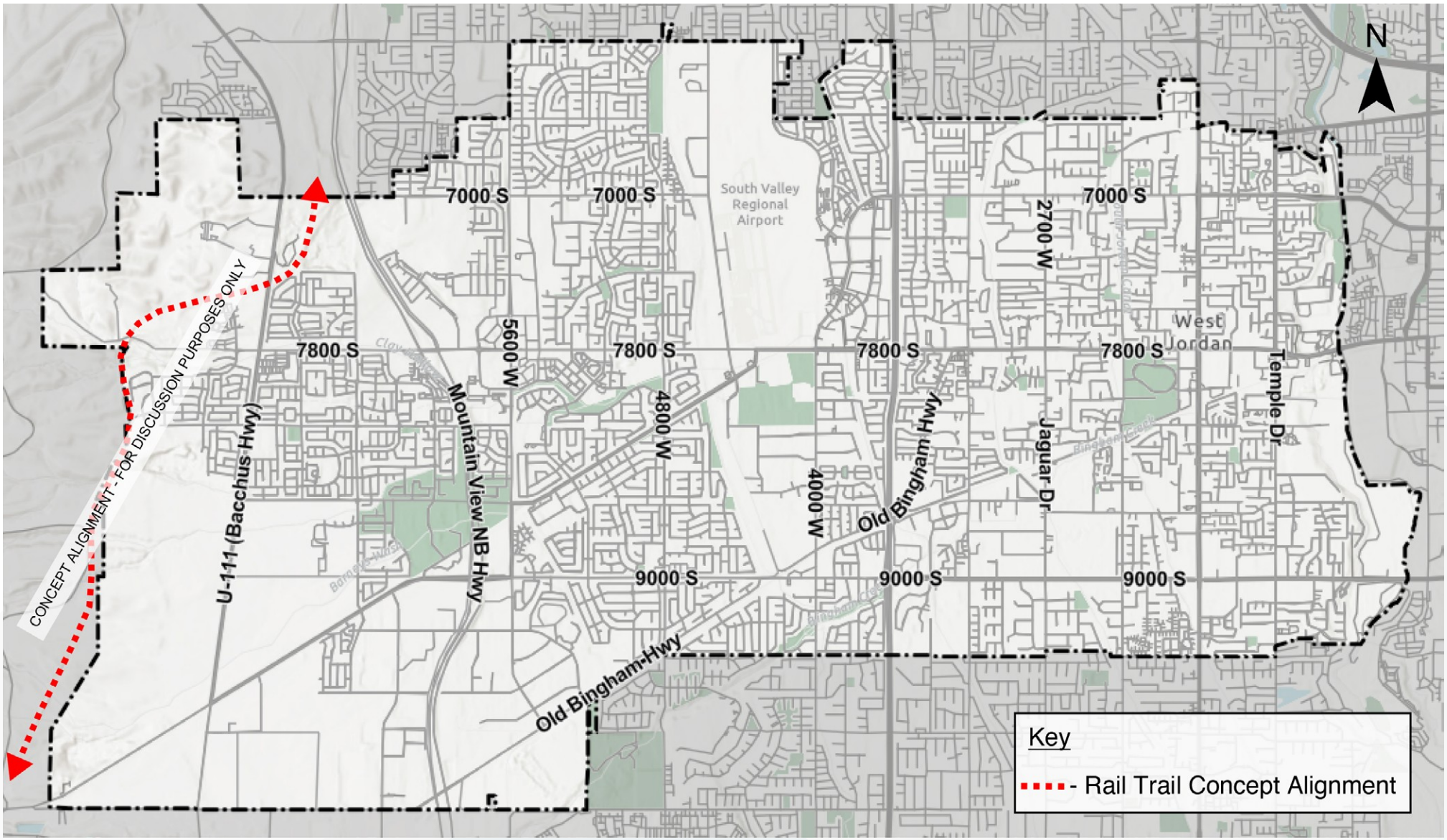


Figure 33: Active Transportation Projects

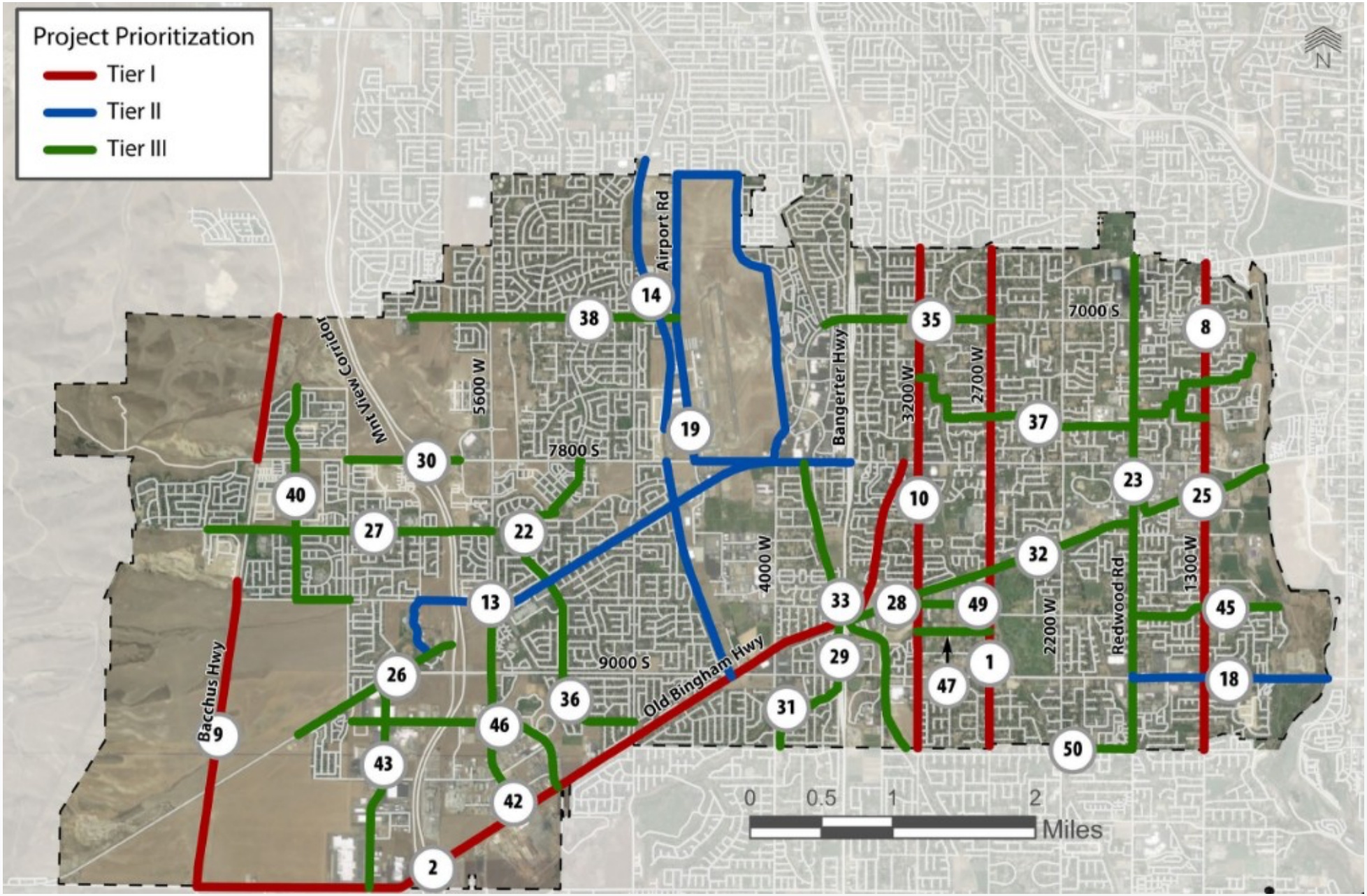
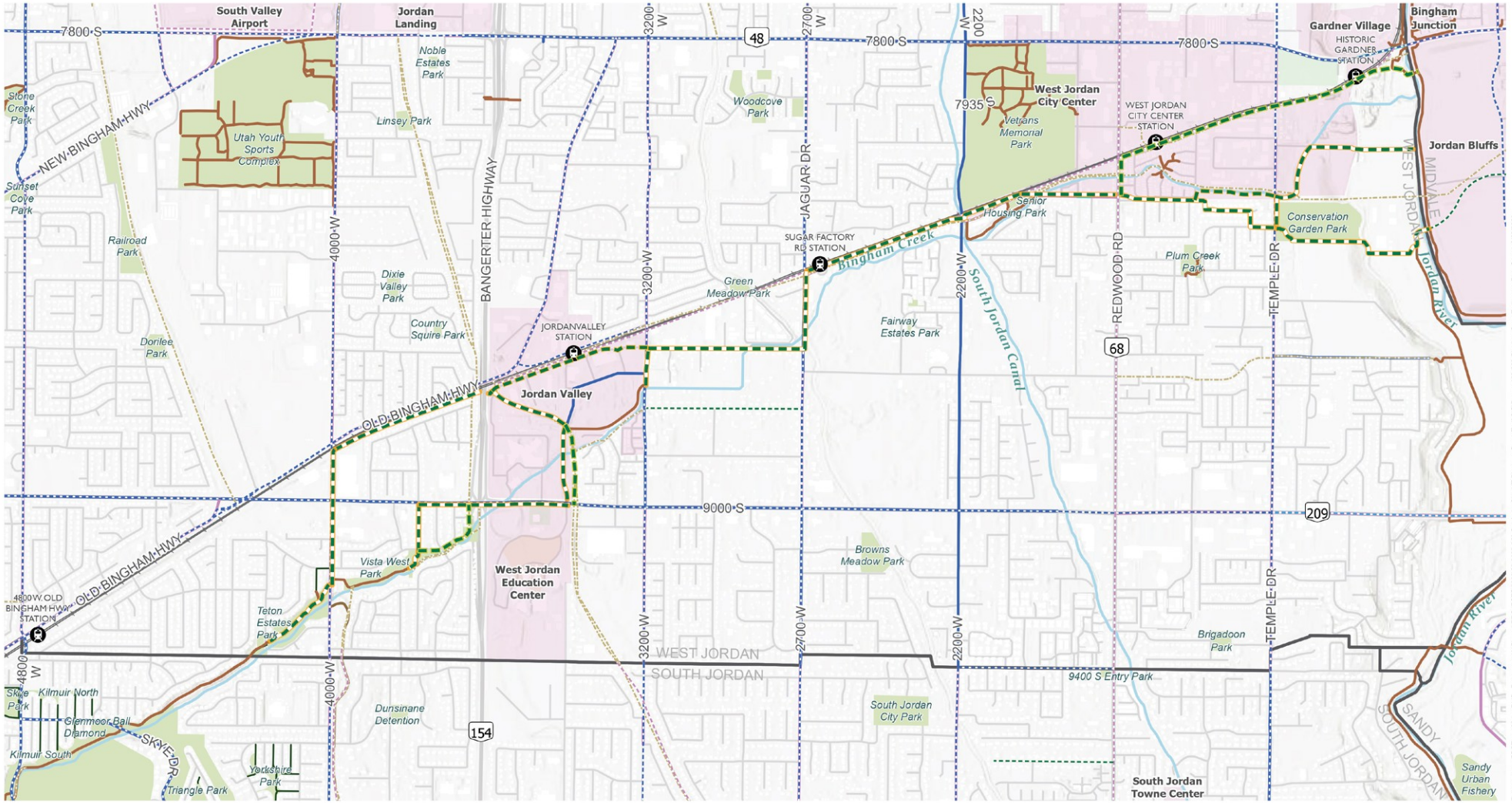


Figure 34: Bingham Creek Trail Alignment



IV. CITY TRANSPORTATION MANAGEMENT

A. Purpose

The City Transportation Management section discusses best practices to ensure the City develops and maintains a safe and efficient transportation network. This section includes the following:

- Transportation Safety analysis
- Traffic Calming
- Access Management
- Connectivity
- Traffic Impact Studies
- East/West Visioning Study
- Transit Oriented Development Feasibility Study
- Areas of Concern (RFP)
- Truck Routes
- Traffic Signal Coordination
- Corridor Preservation

B. Transportation Safety Analysis

A safety analysis was performed for all roadways within West Jordan City. The most recent five full years of available crash data (January 1, 2018 to December 31, 2022) from UDOT Traffic & Safety were used to perform a safety analysis. Historic crash patterns were analyzed within West Jordan City to develop project and policy recommendations.

In total, there were 9,271 crashes reported within West Jordan City between January 1, 2018 and December 31, 2022. Preliminary 2023 crash data were also analyzed. All of the 2023 severe crashes are validated, while non-severe crashes are not yet fully validated. Therefore, 2023 non-severe crashes are not included in the chart below. Of these 9,271 crashes reported, 255 involved suspected serious injuries, and 23 were fatal. Crashes have been steadily decreasing in West Jordan City since 2019. There was a large decrease in crashes in 2020 since fewer drivers were on the roads due to the COVID-19 pandemic. There were fewer fatal and severe injury crashes in 2022 and 2023 than previous years. There was a 38 percent reduction of severe crashes between 2021 and 2022.

Figure 35: 2018 to 2023 Crash Trends

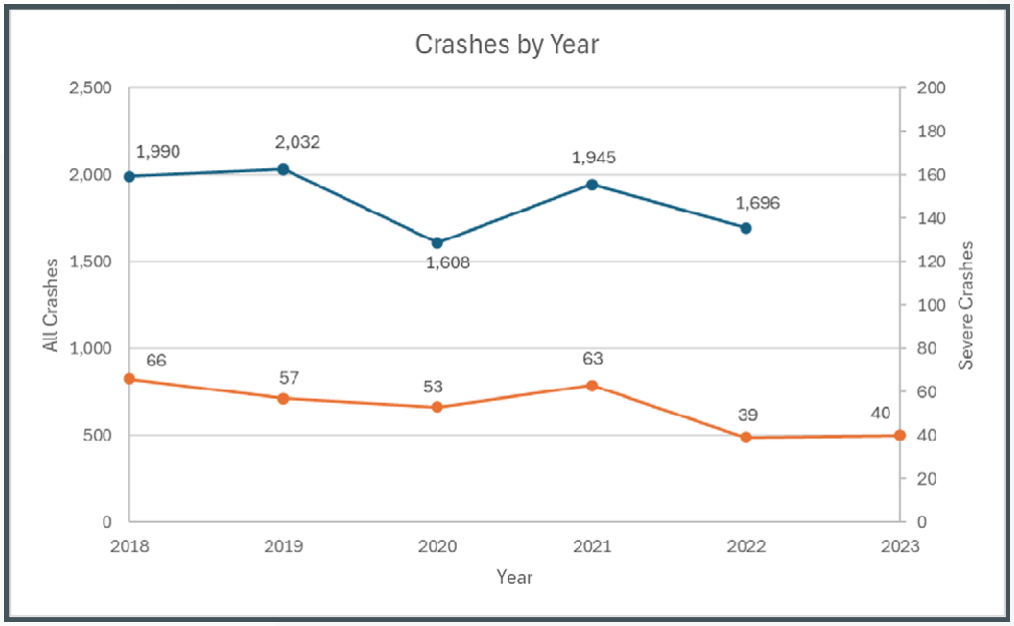
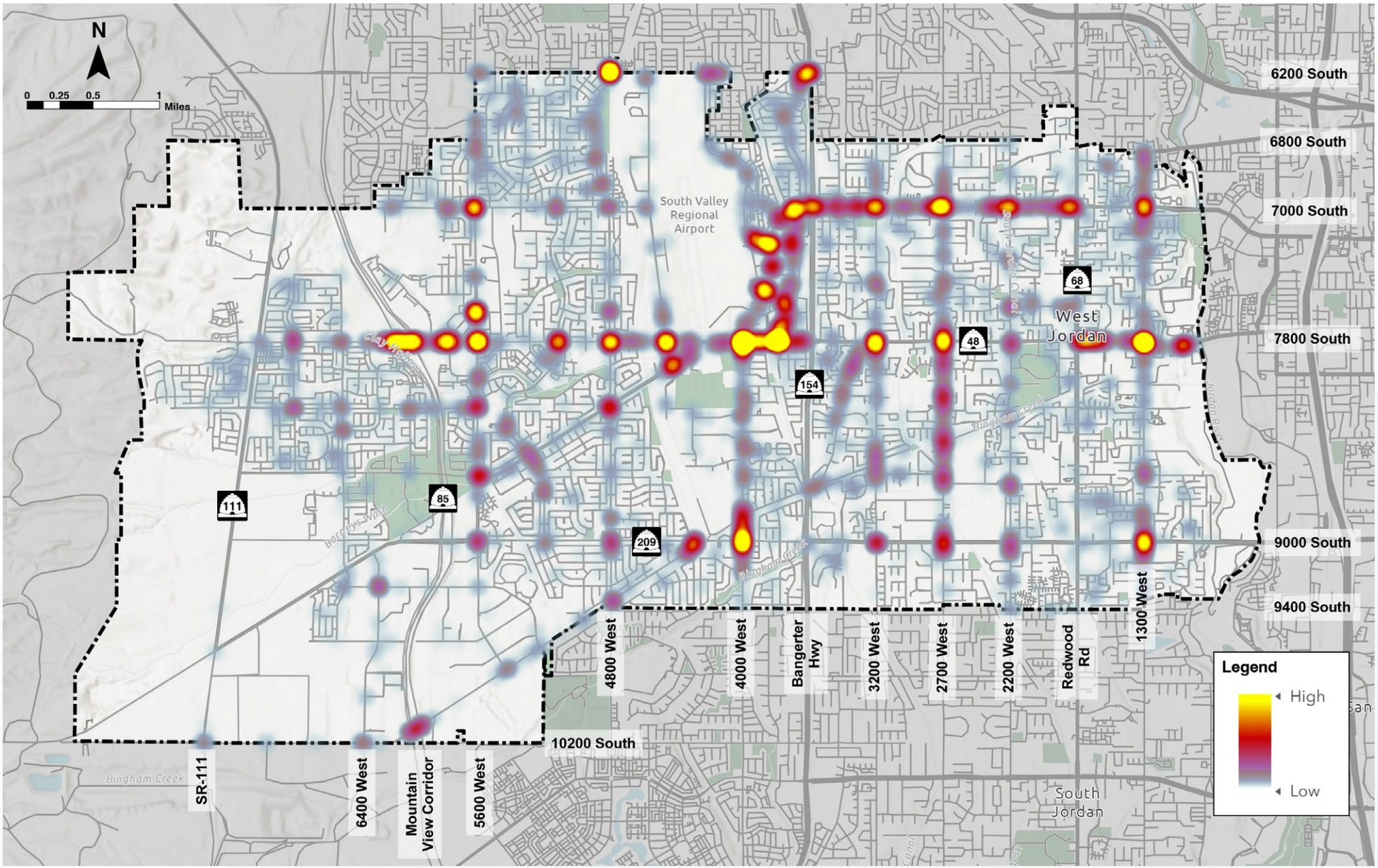


Figure 36: 2018 to 2022 Crash Frequency Summary



Crash severity is reported according to a five-category scale ranging from no injury to fatality. UDOT, like many other places, has taken on the goal of Zero Fatalities [3]. This zero fatalities approach is guided by the Safe System Approach framework. The Safe System Approach consists of the five elements presented below [4].

Given these goals, and the very significant cost of severe crashes (both fatal and serious injury), these crash types are the focus of the analysis.

Safe Road Users

The Safe System approach addresses the safety of all road users, including those who walk, bike, drive, ride transit, and travel by other modes.

Safe Vehicles

Vehicles are designed and regulated to minimize the occurrence and severity of collisions using safety measures that incorporate the latest technology.

Safe Speeds

Humans are unlikely to survive high-speed crashes. Reducing speeds can accommodate human injury tolerances in three ways: reducing impact forces, providing additional time for drivers to stop, and improving visibility.

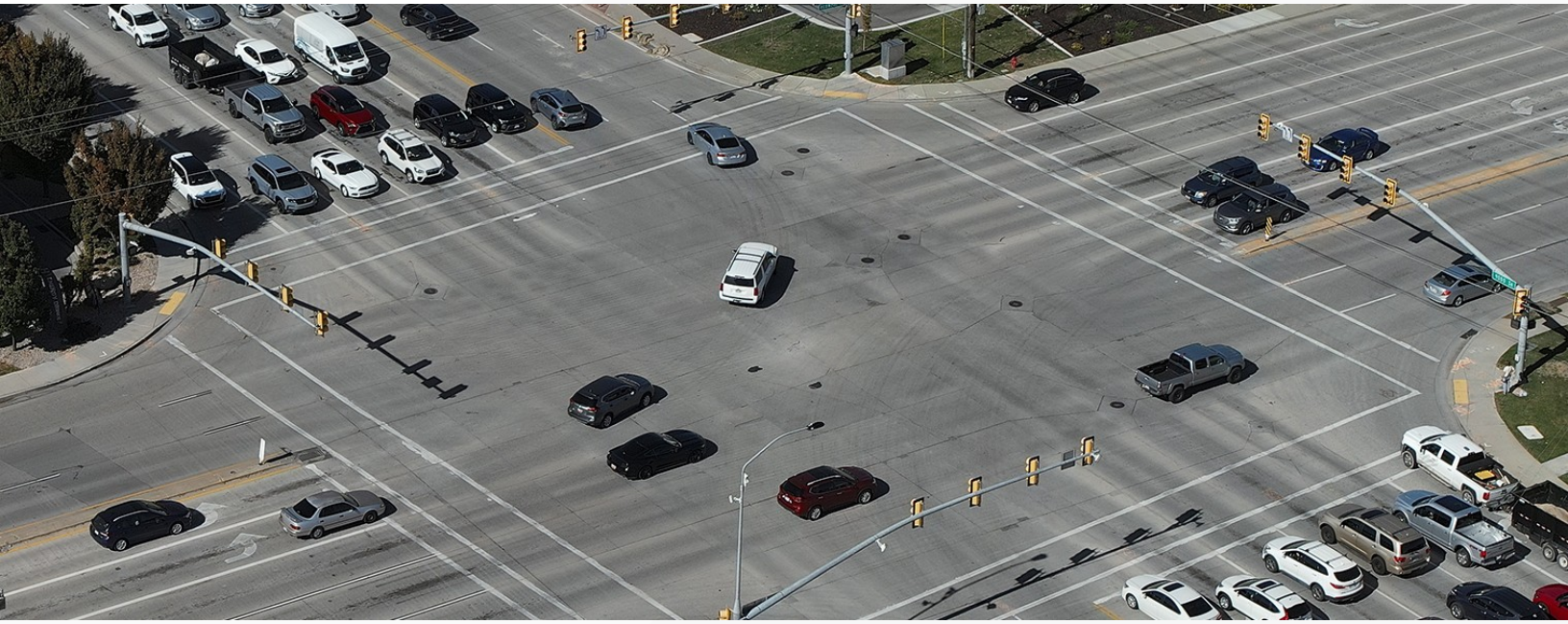
Safe Roads

Designing to accommodate human mistakes and injury tolerances can greatly reduce the severity of crashes that do occur. Examples include physically separating people traveling at different speeds, providing dedicated times for different users to move through a space, and alerting users to hazards and other road users.

Post-Crash Care

When a person is injured in a collision, they rely on emergency first responders to quickly locate them, stabilize their injury, and transport them to medical facilities. Post-crash care also includes forensic analysis at the crash site, traffic incident management, and other activities.

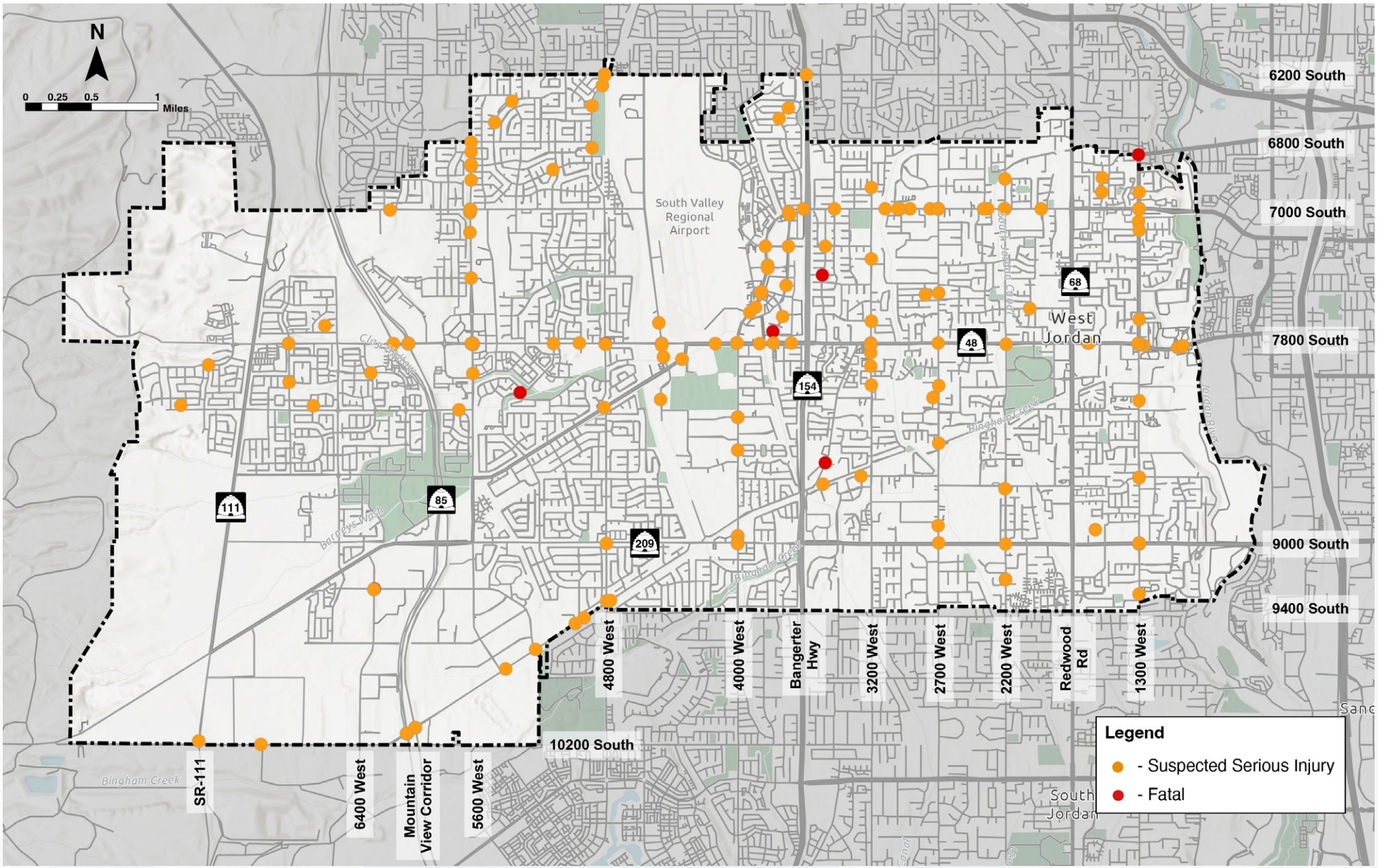
The figure below illustrates the fatal and serious injury crashes in West Jordan City. For the analysis period, there were 23 crashes with a fatality and 255 serious injury crashes. The number of fatal and serious injury crashes in West Jordan City as a percentage of total crashes is 2.99 percent, which is above the Salt Lake County average of 1.9 percent during the same time frame. Of these 278 severe crashes, 136 were on a UDOT roadway and 142 severe crashes occurred along a West Jordan City roadway.



[3] https://zerofatalities.com/

[4] https://safety.fhwa.dot.gov/zerodeaths/docs/FHWA_SafeSystem_Brochure_V9_508_200717.pdf

Figure 37: 2018 to 2022 Severe Crashes



A summary of these 278 crashes is provided below:

- 255 serious injury crashes, and 23 fatal crashes
- 136 were on a UDOT roadway, 142 were on a West Jordan City road
- 193 crashes wereintersection-related
- 43 crashes involved motorcycles (including 6 fatalities)
- 38 crashes involved cyclists or pedestrians (including 3 fatalities)
- The following seasonal crash trends were observed
  - 2.7 percent of crashes in the spring are severe or fatal
  - 3.8 percent of crashes in the summer are severe or fatal
  - 3.0 percent of crashes in the fall are severe or fatal
  - 2.4 percent of crashes in the winter are severe or fatal
- Approximately 26 percent of crashes in West Jordan City involve a left or U-turn movement.

Based on this review, the following recommendations are made:

- **Roundabouts/Signals:** Approximately 16 percent of severe crashes in West Jordan can be potentially mitigated by a roundabout or a signal. West Jordan may have too many uncontrolled side streets. Signal warrant and roundabout studies can be done. In almost all cases, installing a roundabout will increase safety. However, signals do not necessarily always improve safety. It is important to recognize that when signals are installed without a warrant or installed at a location with a low history of crashes, signals can increase the number of crashes at these locations. Additionally, raised medians can be installed to reroute vehicles away from uncontrolled intersections.
- **1300 West & 7800 South:** Four severe left-turn crashes have occurred at this intersection since 2018. One of them involved a pedestrian. Therefore, protected left-turn phasing is recommended at this intersection.
- **3200 West & 7800 South:** Seven severe crashes have occurred at this intersection since 2018. Two of them involved a pedestrian and two of them involved left-turns. Protected left-turn phasing is recommended at this intersection.
- **2700 West & 7800 South:** Two severe left-turn crashes have occurred at this intersection since 2020. This intersection is located near West Jordan High School where there is a larger number of inexperienced drivers. Therefore, protected left-turn phasing is recommended at this intersection.
- **Jordan Landing Boulevard:** 10 severe crashes have occurred at the intersections along Jordan Landing Boulevard since 2018. From review of crash narratives there is a common theme of high speeds. Due to this, reducing the speed limit and providing traffic calming along this roadway is recommended.
- **5600 West & 7000 South:** Five severe crashes have occurred at this intersection since 2019. Four of them are due to vehicles traveling straight along 5600 West. A roundabout is a possible mitigation measure at this location to reduce speeds and reduce the severity of angle crashes.

C. Traffic Calming

The Institute of Transportation Engineers (ITE) has established a definition for traffic calming that reads, "Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users." Altering driver behavior includes lowering of speeds, reducing aggressive driving, and increasing respect for non-motorized street users.

Traffic calming provides many benefits to pedestrians and to the creation of livable neighborhoods. Traffic calming and slower traffic enhances pedestrian safety by:

- Decreasing the chances of a car-pedestrian collision
- Reducing the severity of injuries should a collision occur
- Making it easier and less intimidating for pedestrians to cross streets

Traffic calming and slower traffic encourage more walking and bicycling by improving the ambiance of the neighborhood and create more livable streets by:

- Producing less traffic noise
- Reducing the level of air pollution

Street patterns are typically developed at the time of construction. In Utah, the history of using a grid system for planning and development purposes started with the first settlers and has proven efficient for moving people and goods throughout a network of surface streets. However, the nature of a grid system with wide and often long, straight roads can result in excessive speeds. For that reason, traffic calming measures (TCM) can be implemented to reduce speeds, particularly on residential roadways. West Jordan follows the Utah grid system with some interruptions due to the airport, existing state highway layout, terrain, and railroad tracks. Traffic calming is applicable to many neighborhood and local streets and should be given consideration on a case-by-case basis.

Traffic calming may be applied to existing City streets when requested by the neighborhood but should always be included during the development of new neighborhood streets and subdivisions. West Jordan City has adopted the Neighborhood Traffic Management Program (NTMP) that addresses the desire of residents and City leaders to organize a method for addressing high speeds through residential neighborhoods. Additionally, West Jordan is currently developing a Safe Streets Study and Implementation Plan. This project aims to provide guidance on how to install traffic calming in both existing and future neighborhoods. It is anticipated that the Safe Streets Study and Implementation Plan will be completed at the end of 2024.

The NTMP for local residential streets represents the commitment of the City of West Jordan to the safety and livability of residential neighborhoods. The program provides a process for identifying and addressing problems related to speeding, excessive traffic volume, and safety on streets classified as "local residential streets." Under the program, the engineering department will work with residents within neighborhoods to evaluate the type and severity of traffic problems. If the required approval by residents and the city council is obtained, the City will install traffic management devices, such as traffic circles, diverters, traffic signs, crosswalks and speed humps, to manage the pattern and flow of neighborhood traffic.

More information on the NTMP can be found on the West Jordan City website.

D. Access Management

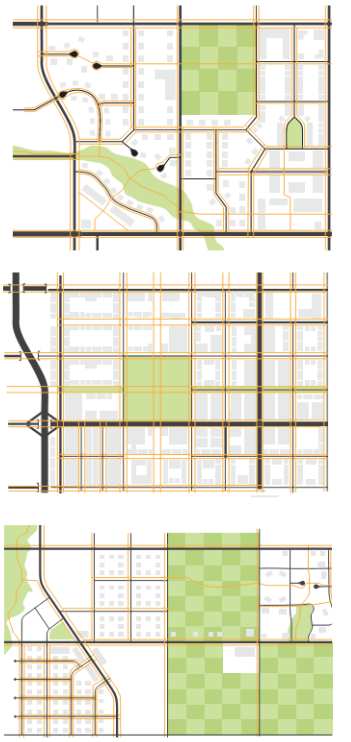
Access management is a term that refers to providing and managing access to land development while maintaining traffic flow and being attentive to safety issues. It includes elements such as driveway spacing, signal spacing, and corner clearance. Access management is a key element in transportation planning, helping to make transportation corridors operate more efficiently and carry more traffic without costly road widening projects. Access management offers local governments a systematic approach to decision-making — applying principles uniformly, equitably, and consistently throughout the jurisdiction.

An access management program must address the balance between access and mobility. While the functional classification of roads implies the level priority for access versus mobility, access management does much the same thing. Freeways move vehicles over long distances at high speeds with very controlled access and great mobility. Conversely, residential streets offer high levels of access but at low speeds and with little mobility. Access management standards must account for these different functions of various facilities. The access management standards followed by the city are based on the FHWA access guide and are outlined in detail in the West Jordan City Road and Bridge Standards. It is recommended that the City update the West Jordan City Road and Bridge Standards to require that any new driveway within 350 feet of an intersection be restricted to right-in right-out, which may or may not include a raised median based on traffic volumes.

E. Connectivity

A roadway system with excellent connectivity allows people multiple options when traveling between points within a City. Strong collector and arterial road connectivity distributes traffic between corridors, and a well-connected local street network allows short-trips to be completed on local roadways rather than relying on regional collectors and arterials. A connected road network improves access and reduces travel times for all users and can reduce the need for future roadway widening. Good network connectivity also improves emergency access and response times, and allows multiple exit routes in the event of emergencies.

West Jordan City has very good grid connectivity in the north-south direction with frequent collector or arterial north-south roadways. However, there are fewer east-west connections, which may be due in part to the many canals that run north-south in the City.



Utah Street Connectivity Guide

The City requires a connected street system with all new developments, minimizing the use of cul-de-sacs. Infill parcels will be required to provide future street stubs to adjacent parcels with the potential for development. Retail and office development must provide cross access easements to create circulation patterns to adjacent properties to eliminate multiple accesses to the major street system. This is to reduce travel time and congestion by allowing people to make shorter and more direct trips. Connectivity also allows people the option of walking or bicycling because the routes to schools, parks and businesses are shorter. Connectivity allows emergency vehicles like police, fire and ambulances to respond faster and use alternate routes if one is blocked. Connectivity also reduces overall fuel consumption and pollution by shortening trips.

It is recommended that east-west connectivity be improved in the City as development continues. Along with this, it is recommended that the use of cul-de-sacs be minimized where possible and that infill projects connect to all possible stub roads. Disconnected streets, which oftentimes include cul-de-sacs and dead ends, are a major factor in increasing auto dependency and increasing traffic on collectors and arterials. Figure 38 below shows a map of all cul-de-sacs and dead ends in West Jordan City.

In addition to new collector and arterial grid streets identified as future City projects in the preceding sections, the City may also look for opportunities to improve local street connectivity for vehicles and/or pedestrian travel where possible. Appendix A presents several examples of potential local street connections the City may want to consider for local vehicle and/or pedestrian travel in the future. While not specifically recommended as TMP projects, these represent the type of connections that could benefit local travel.

The following criteria are to be considered when deciding if a connection is to be made.

1. Is it required for underground utility connection?
    a. Sanitary sewer
    b. Culinary water
    c. Storm drainage
2. Is it required for active transportation?
    a. Bike lanes
    b. Trails
    c. Access to open spaces and recreational facilities
3. Does it improve the Safe Route To School?
    a. Elementary school
    b. Middle school
    c. High school
4. Does it improve emergency response time?
    a. EMT
    b. Police
5. Does the International Fire Code require the road connection?
    a. 30 single residential units
    b. 200 multi-family units
6. Is it going to improve snow plowing operations?
7. Is it going to improve garbage collection operations?

It is also recommended that the City develop and adopt a more detailed connectivity standard to guide future connections and developments. Lehi City recently adopted a connectivity standard that has been a case study in implementing elements from the Utah Street Connectivity Guide, sponsored by the Wasatch Front Regional Council, and is a good example of what a connectivity standard may contain. It is recommended the City review Lehi's connectivity standard and the Utah Street Connectivity Guide and discuss what may be appropriate for West Jordan City. A good connectivity standard may require the following:

- A circulation plan to be provided as part of a preliminary subdivision plat application
- A connectivity index calculation that benefits developments that provide trail connections or access to green space such as open space, parks, or natural areas
- A residential connectivity standard that requires a connectivity index, block length, and cul-de-sac length based on development density
- Pedestrian connectivity standards for residential and non-residential developments that focus on providing access to existing and planned trails
- Nonresidential connectivity standards that require nonresidential subdivisions containing the dedication of public roads to meet a connectivity index and block length standard

F. Traffic Impact Studies

As growth occurs throughout West Jordan, the City will evaluate the impacts of proposed developments on the surrounding transportation networks prior to giving approval to build. This will be accomplished by requiring that a Traffic Impact Study (TIS) be performed for any development in the City based on City staff recommendations. A TIS will allow the City to determine the site specific impacts of a development including internal site circulation, access issues, and adjacent roadway and intersection impacts. In addition, a TIS will assist in defining possible impacts to the overall transportation system in the vicinity of the development. The area and items to be evaluated in a TIS include key intersections and roads as determined by the City Traffic Engineer on a case-by-case basis.

Each TIS will be conducted by a qualified Traffic Engineer chosen by the developer at their cost and approved by the City. A scoping meeting will be required by the developer/traffic engineer with the City Engineer to determine the scope of each TIS. West Jordan TIS Requirements are included in Appendix B - Traffic Impact Study Requirements of this report.

Included in the West Jordan City Road and Bridge Standards are guidelines for developers to complete a TIS and submit it to the City. The requirements include when a TIS will be required and what level of effort must be established in the study, who may or may not perform a TIS, and when certain elements must be included. The City reserves the right to waive any and all TIS requirements and may require extra information at the discretion of the City Traffic Engineer.

G. East/West Visioning Study

As presented above, projected future traffic volumes suggest the need for significant improvements to east/west capacity in West Jordan, and widening to seven lanes is recommended for at least portions of all three of the major east/west arterials running through the City (7000 S, 7800 S, and 9000 S). Of these three east/west corridors, only 9000 S provides a continuous connection between U-111 and I-15 and this primarily serves properties in the southern portion of the City.

WCG has recommended the city pursue funding to complete an East/West Visioning Study to identify long-term solutions to accommodate east/west travel with improvements focusing on central and northern West Jordan along 7000 S and/or 7800 S. Elements to examine should include, but not be limited to, expanded vehicle capacity, enhanced transit service, strategic use of reversible lanes, and overcoming the airport gap.

In addition to having the least existing east/west connectivity, central and northern West Jordan are also areas with higher concentrations of low-income and minority populations. Figure 40 and Figure 41 present the WFRC designated low-income and minority equity focus areas in West Jordan, respectively.[5]

[5] WFRC defines low-income focus areas as census block groups with greater than 20% of households with income less than or equal to the federal poverty threshold and minority focus areas as census block groups with greater than 40% population reported as Black or African American alone, American Indian and Alaska Native alone, Asian alone, Native Hawaiian and other Pacific Islander alone, some other race alone, or two or more races, or of Hispanic or Latino origin. (https://data.wfrc.org/datasets/wfrc::equity-focus-areas-2023/about).

Figure 38: Immediate Dead End Streets

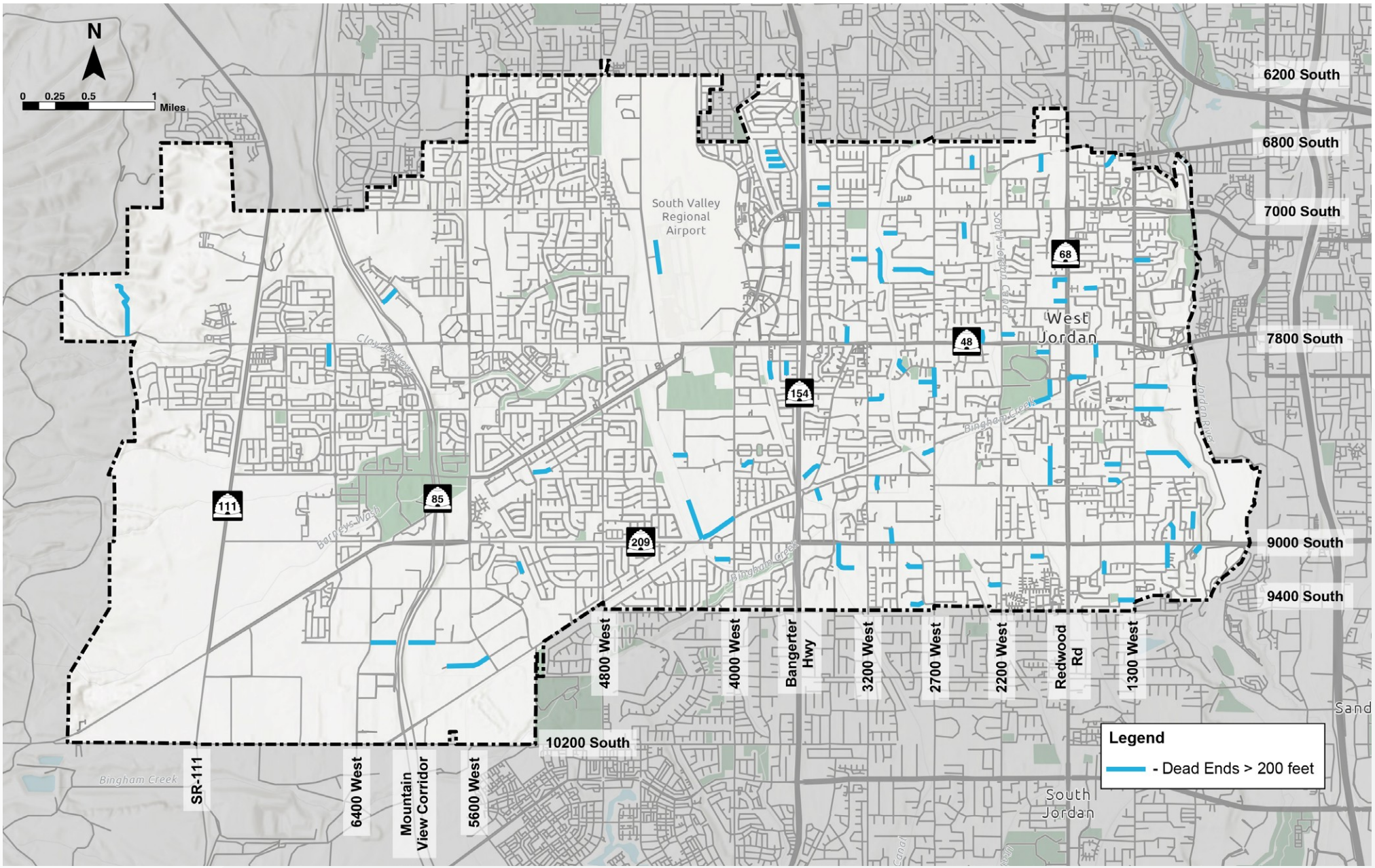


Figure 39: West Jordan East/West Arterial Connectivity

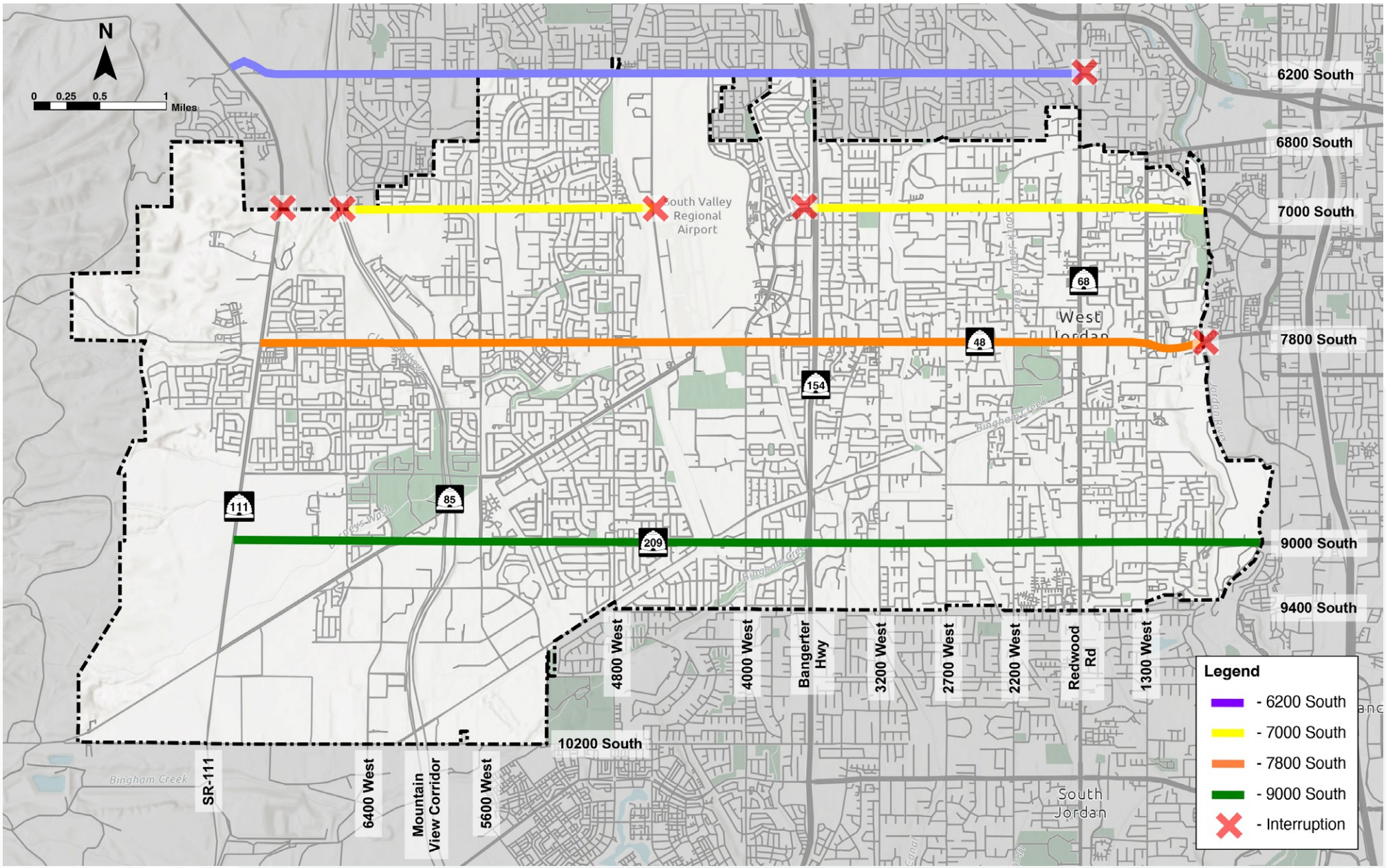


Figure 40: WFRC Low-Income Equity Focus Areas

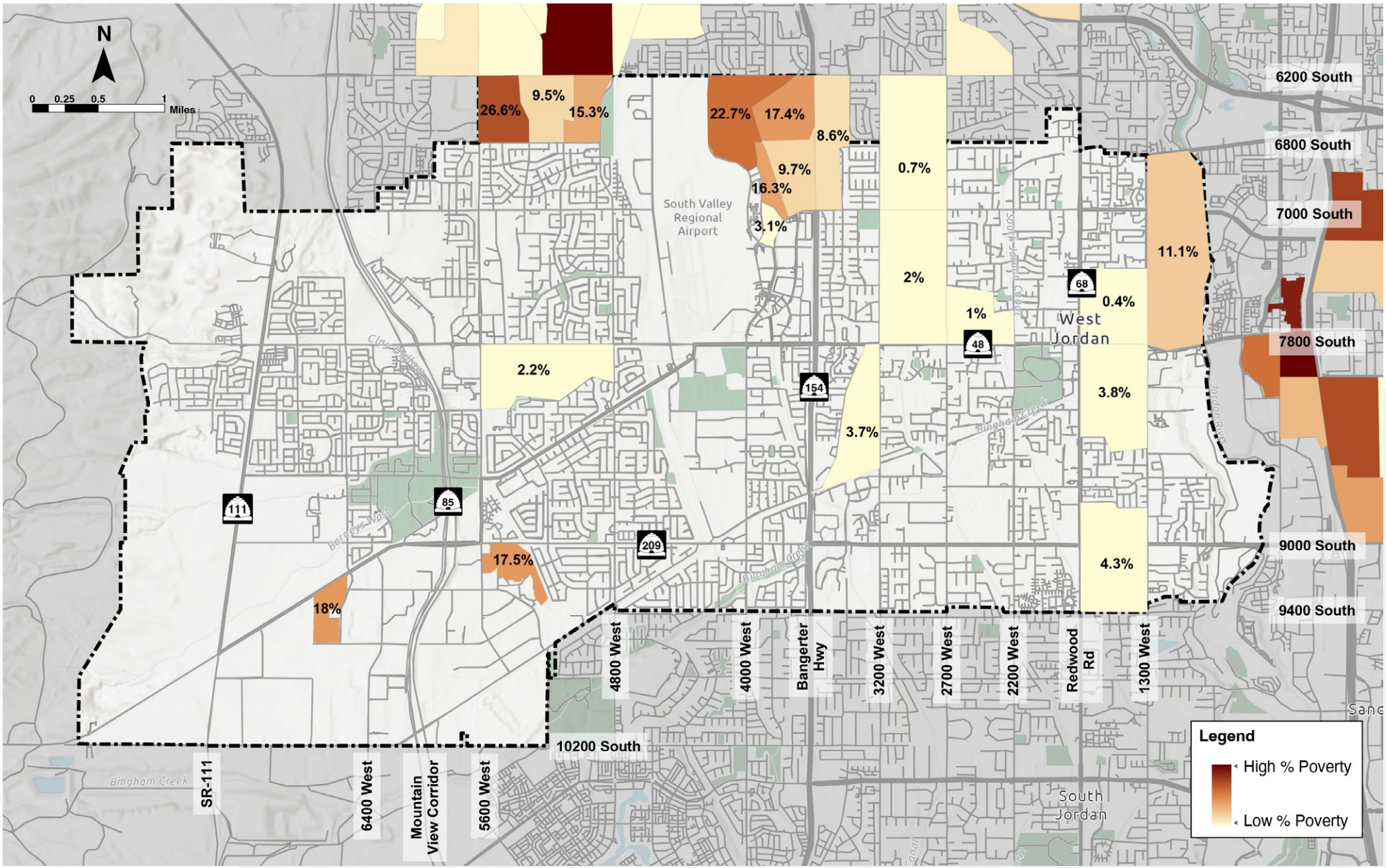
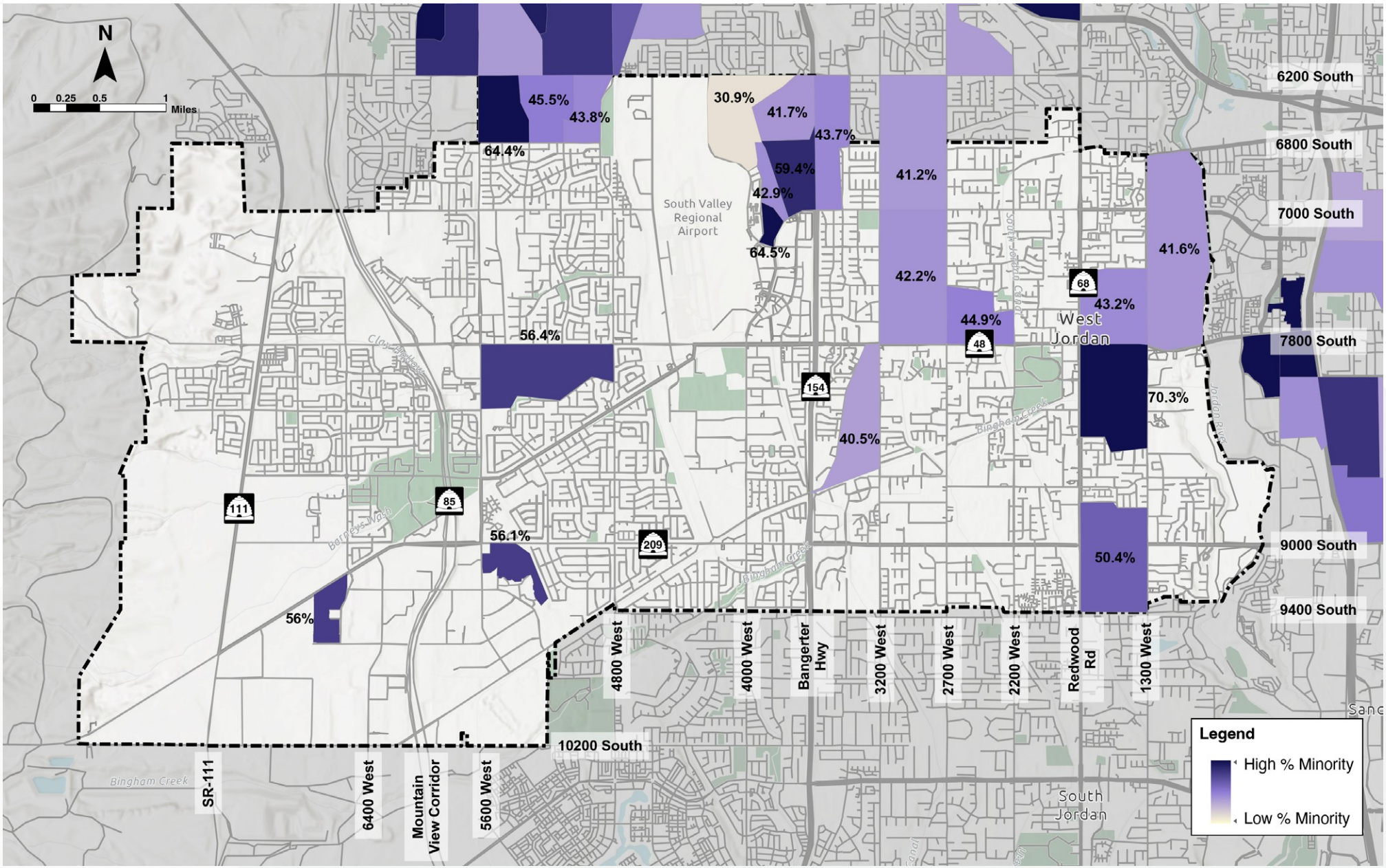


Figure 41: WFRC Minority Equity Focus Areas



H. Areas of Special Concern

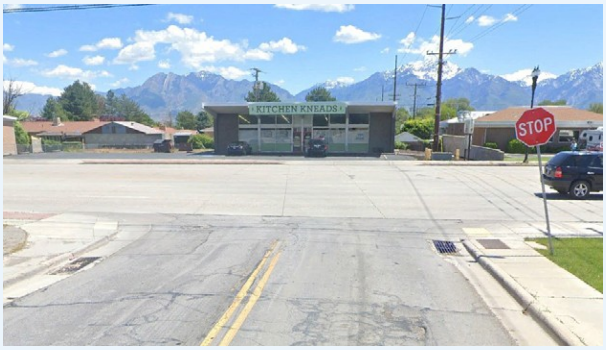
West Jordan City identified seven areas of special concern that needed to be addressed either through the TMP or otherwise. These areas are as follows:

- 7600 South & Redwood Road
- Gardner Lane & Redwood Road
- U-111 Corridor
- New Bingham Highway – 5600 West to U-111
- 10200 South / Old Bingham Highway
- 7000 South – Redwood Road to U-111
- Jordan River Bridge over 7800 South

Each area is discussed below, including the specific concerns and what is being done or planned to address such concerns.

7600 South & Redwood Road

The intersection of 7600 South and Redwood Road has been studied, and it has been determined that a traffic signal is warranted at this location. The traffic signal for this intersection is currently in design and will be installed in the near future.



Gardner Lane & Redwood Road

The intersection of Gardner Lane (8600 South) and Redwood Road has been studied and it has been determined that a traffic signal is warranted at this location. The traffic signal for this intersection is currently in design and will be installed in the near future.

U-111 Corridor

U-111, also known as SR-111 or Bacchus Highway, is a state-maintained arterial roadway that stretches along the west bench of the Salt Lake Valley. As development on the west side of the valley continues, this road that was originally a rural two-lane highway will serve as an important north/south corridor in the region. West Jordan City wants to ensure that sufficient right-of-way is preserved along this corridor to accommodate the widening of U-111 and the necessary lane configurations on all intersection approaches.

WCG used the TDM forecasts to estimate the needed right-of-way along the corridor as well as on the side street intersection approaches.

New Bingham Highway - 5600 West to U-111

With all of the projected growth on the west side of West Jordan, staff wanted to be sure that this section of New Bingham Highway was best suited to accommodate future traffic demands. Three locations in particular were identified: the 9000 South / New Bingham Highway intersection, the 9400 South / 6700 West / New Bingham Highway intersection, and the SR-111 / New Bingham Highwayintersection.

The 9000 South / New Bingham Highway intersection was a large focus of the 9000 South Corridor study that was completed by WCG in 2023. New Bingham Highway will be realigned to create a 90-degree intersection at 9000 South. 9000 South will transition from a five-lane cross section to a seven-lane cross section starting at this new intersection.

The 9400 South / 6700 West / New Bingham Highway intersection is a future five-leg intersection that is shown on the WFRC RTP and previous editions of the TMP. Five-leg intersections are less desirable from an operations standpoint, so alternative alignments were considered that would result in more traditional intersection layouts as well as possibly better contribute to the regional roadway grid network. One option included realigning 9400 South to intersect with 6700 West at a to-be-determined location north of New Bingham Highway. This would result in traditional three- or four-leg intersections, but would require cooperation from one or more landowners/developers.

Another option was to realign New Bingham Highway on the east side of SR-111 to become 9400 South, and realign New Bingham Highway on the west side to become 9800 South. This not only eliminates the five-leg intersection at 9400 South and 6700 West, but would also eliminate the skewed SR-111 / New Bingham Highway intersection. Assuming that the new intersections at 9400 South and 9800 South were signalized, this would result in consistent half-mile signal spacing from 7000 South to 10200 South. The existing right-of-way would need to remain with the city for utility access.

It was determined that the city will pursue realigning 9400 South to connect to 6700 South at a location north of New Bingham Highway. The city will work with the landowners/developers to determine the location of this intersection when the land redevelops.

10200 South / Old Bingham Highway

10200 South constitutes part of the border between West Jordan and South Jordan. City staff expressed concerns about preserving the needed right-of-way in this high-growth area of the city, as well as coordinating with South Jordan on elements of this roadway including locations of future traffic signals as well as roadway cross sections. WCG reviewed the drafts of the West Jordan and South Jordan TMPs to ensure that each is congruent with the other.

7000 South - Redwood Road to U-111

7000 South is one of two east/west corridors in West Jordan with direct connections to I-15. Unlike the other corridor, 9000 South, 7000 South does not connect to SR-111 or MVC, and is interrupted by the South Valley Regional Airport. Also, many of the underserved communities in West Jordan are concentrated along 7000 South. The City wishes to improve access and mobility along this corridor to benefit these underserved communities as well as the city at large.

WCG has recommended that the City pursue funding to complete an East/West Visioning Study to identify long-term possibilities for this corridor including, but not limited to, expanded vehicle capacity, enhanced transit service, and overcoming the airport gap.

Jordan River Bridge over 7800 South

7800 South is a major east/west corridor in West Jordan connecting to Midvale and pointing east at the Jordan River. Replacing the bridge crossing the Jordan River has been identified as a need by both West Jordan and Midvale. Improvements to increase capacity on 7800 South as well as improve active transportation at this location have been identified as a planned project in this TMP.

I. Truck Routes

Trucks are an important component of the transportation system of any economy and are vital to the movement of goods throughout an area. However, trucks also have some negative characteristics in terms of traffic flow, safety, and noise. In order to reduce these impacts it is recommended that trucks travel along arterials and major collectors as much as possible as opposed to minor collectors or local streets. To accomplish this goal, several recommended truck routes through the city have been identified and a map showing these is given as Figure 42. The City can work with industrial or large commercial businesses that have a large amount of truck traffic to encourage their trucks to use these routes within West Jordan.

It is recommended that the current truck routes ordinance be updated to include 7000 South east of the South Valley Regional Airport, as well as the industrial roads that have been built between 9400 South and 10200 South between 6400 West and SR-111 as shown in the truck routes figure below.

J. Traffic Signal Coordination

Traffic signal coordination is a traffic management method that is used to improve traffic operations and efficiency. Traffic signal timing and phasing improvements generally improve all traffic flow but can also be used to favor high-occupancy vehicles or buses. Some ways in which signal timing can be used to favor transit include transit preemption and priority. Transit preemption means that as a transit vehicle approaches an intersection the signal timing is interrupted to accommodate the transit vehicle. This interrupts the signal coordination of a corridor or network and as such is generally not recommended. Transit priority allows traffic signals to adjust their phasing to give priority to transit vehicles without interrupting the overall traffic signal timing plan.

Anywhere where two or more signals are located in close proximity to each other, signal coordination practices should be put in place. This is particularly necessary in areas where heavy peak hour directional traffic occurs such as on Redwood Road, 9000 South and 7800 South. In each case, traffic signal timings and coordination should be monitored and adjusted annually or when traffic patterns change. Coordination with the UDOT Traffic Operations Center (TOC) is imperative to providing an efficient, coordinated signal system.

K. Corridor Preservation

Corridor preservation is an important transportation planning tool that agencies should use and apply to all future transportation corridors. There are several new transportation facilities that have been identified in the Transportation Master Plan. In planning for these future facilities, corridor preservation techniques should be employed. The main purposes of corridor preservation are to:

- Preserve the viability of future options
- Reduce the cost of these options
- Minimize environmental and socio-economic impacts of future implementation

Corridor preservation seeks to preserve the right-of-way needed for future transportation facilities and prevent development that might be incompatible with these facilities. This is primarily accomplished by the community's ability to apply land use

controls, such as zoning and approval of developments. Adoption of the Transportation Master Plan by West Jordan City is a commitment to citizens and future leaders in the community that the identified future corridors will be the ultimate location for transportation facilities.

Perhaps the most important elements of corridor preservation are ensuring that the future transportation corridors are preserved in the correct location and that they meet the applicable design and right-of-way standards for the ultimate buildout facility being preserved. As the master plan does not define the exact alignment of each future corridor, it becomes the responsibility of the city to make sure that the corridors are correctly preserved. This will have to be accomplished through the engineering and planning reviews done within the city as development and annexation requests are approved that involve properties within or adjacent to the future corridors.

The Salt Lake County Corridor Preservation Fund and The Local Highway and Transportation Corridor Preservation Fund shall only be used to preserve a highway or public transit corridor. Corridor preservation corridors may include active transportation projects provided that they are associated with a road. The application deadline occurs yearly in April.

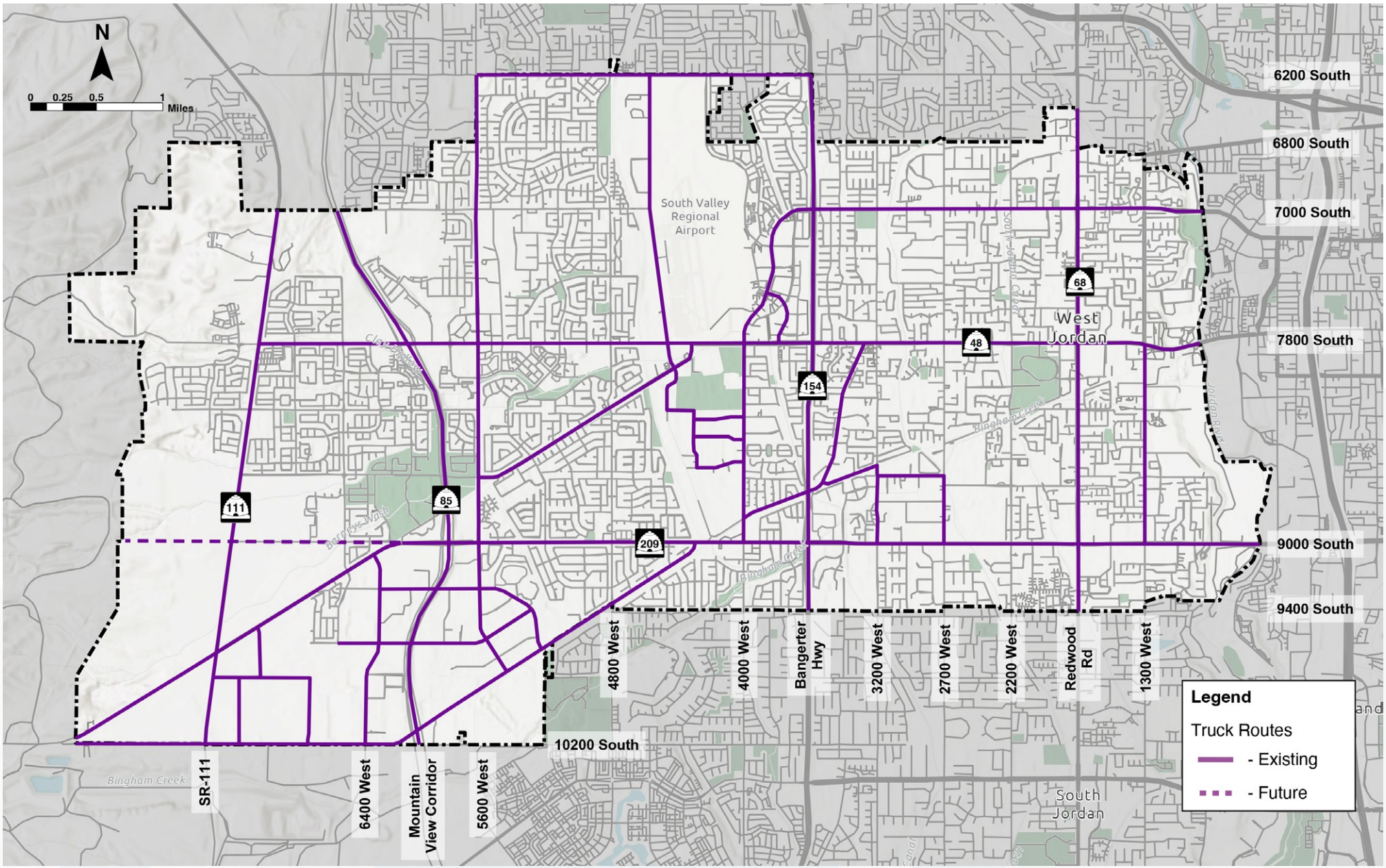
UDOT also hosts a Statewide Corridor Preservation Advisory Council. The Council provides recommendations to the Transportation Commission for the use of Transportation Corridor Preservation Revolving Loan Fund monies.

Corridor Preservation Techniques

Some examples of specific corridor preservation techniques that may be most beneficial and easily implemented include the following:

- **Developer Incentives and Agreements:** Public agencies can offer incentives in the form of tax abatements, density credits, or timely site plan approvals to developers who maintain property within proposed transportation corridors in an undeveloped state.
- **Exactions:** As development proposals are submitted to the city for review, efforts should be made to exact land identified within the future corridors.
- **Fee Simple Acquisitions:** This is a voluntary transaction full ownership of a land parcel, including the underlying title, is transferred from the owner to the city via either purchase or donation.
- **Transfer of Development Rights and Density Transfers:** Government entities can provide incentives for developers and landowners to participate in corridor preservation programs using the transfer of development rights and density transfers. This is a powerful tool in that there seldom is any capital cost to local governments.
- **Land Use Controls**: This method allows government entities to use its policing power to regulate intensity and types of land use. Zoning ordinances are the primary controls over land use and the most important land use tools available for use in corridor preservation programs.
- **Purchase of Options and Easements:** Options and easements allow government agencies to purchase interests in property that lie within highway corridors without obtaining full title of the land.

Figure 42: Truck Routes



L. Transportation Funding Opportunities

Potential funding strategies and grant opportunities should be explored by City staff. If the City has a dedicated grant writer, the staff should develop relationships with these organizations and become familiar with these funding sources.

UDOT Safe Routes to School (SRTS) Program - The main goal of the SRTS Program is to assist and encourage students living within 1.5 to 2.0 miles of school to walk or bike. Available funding can be used for both non-infrastructure and infrastructure projects (physical improvements – primarily new sidewalks, but also school pavement markings, signage, bicycle parking, etc.). The deadline occurs yearly in October.

UDOT Transportation Alternatives (TAP) - Eligible projects include: Bike facilities (on and off-road), Trails, Sidewalks (off-state routes), Vehicle-caused wildlife mortality reductions, Other qualifying transportation alternative projects Region Two will consider contributing up to 60 percent of the project cost, with a maximum Department-paid cost of $300,000. The application deadline occurs yearly in March.

UDOT Active Transportation Investment Fund (ATIF) AKA Utah Trails Network Fund (UTN) - To be used for the planning, design, construction, maintenance, reconstruction, or renovation of paved pedestrian or paved non-motorized trail projects that are prioritized through the Utah Transportation Commission. The use of the funds are also required to serve a regional purpose, and are required to be part of an active transportation investment plan. These projects require a 40% match. The match can be non-UDOT managed state funding, federal funding, local funding (including MPO, or county, etc.), or in-kind / right-of-way contribution. The application deadline occurs yearly in March.

UDOT TTIF First & Last Mile - An eligible project must be a pedestrian or non-motorized transportation project that provides connection to a public transit system, be maintained by the local government or district, and have a 30% match. The match can be non-UDOT managed state funding, federal funding, local funding (including MPO, or county, etc.) or in-kind / right-of-way contribution. The application deadline occurs yearly in March.

Utah Transit Authority - Capital Improvement Program (UTA CIP) - UTA has a history of partnering with local governments and UDOT to improve first mile/ last Mile access to UTA facilities.

Salt Lake County Transportation Choice Fund (4th quarter) - is managed by the Regional Planning & Transportation division of the Salt Lake County Office of Regional Development. This fund provides opportunities for the County to partner with Local Governments on regional transportation studies and capital outlay projects.

WFRC Funding Programs - The WFRC is responsible for administering and assisting with programs that provide funding and resources for local governments like West Jordan. City Staff should build relationships with WFRC staff that administer these programs and apply for funding on an annual cycle.

The Surface Transportation Program (STP) provides funding that may be used for projects on federal-aid eligible highways, transit capital improvements, and active transportation projects. The application deadline occurs yearly in December.

The Congestion Mitigation Air Quality (CMAQ) program provides funding for transportation projects that improve air quality. The Carbon Reduction Program (CRP) provides funding for transportation projects that reduce on-road carbon dioxide emissions. The application deadline occurs yearly in December.

The WFRC MPO Transportation and Land Use Connection (TLC) supports local governments with technical assistance to integrate land use planning and regional transportation, implementing the Wasatch Choice Vision. The TLC program is made available through a partnership with Salt Lake County, the Utah Transit Authority, and the Utah Department of Transportation. The application deadline occurs yearly in December.

The Carbon Reduction Program (CRP) provides funding for transportation projects that reduce on-road carbon dioxide emissions. The application deadline occurs yearly in December.

The Community Development Block Grant (CDBG) Small Cities Program provides funding to local governments and public service providers for a variety of housing, infrastructure, public service, and community development projects that principally benefit low to moderate-income persons. The application deadline occurs yearly in January.

The Wasatch Front Economic Development District (WFEDD) is a federally recognized Economic Development District created to foster regional economic developments and assist eligible entities in developing competitive grant applications from the U.S. Department of Commerce Economic Development Administration. The application deadline is ongoing.

MPO Transportation Alternatives Program (TAP) - TAP is a federal program administered by Wasatch Front Regional Council for the Salt Lake urbanized area. TAP funds are used to build bicycle and pedestrian facilities. Eligible projects include construction, planning, and/or design of these facilities, and can be expanded to include traffic calming, lighting, and ADA accessibility projects. Many of the station area improvements outlined in this report could be candidates for TAP funds. The application deadline occurs yearly in December.

SAP funding. HB462 asks cities to complete a transit station area plan in order to advance shared goals by maximizing development potential in appropriate areas through a collaborative city-led planning approach, allowing cities to determine how best to meet shared objectives without mandating a specific approach or zoning. In order to help cities accomplish this work, the Governor's Office of Economic Opportunity (GOEO) awarded $5 million to the MPOs. The application deadline occurs every other month.

The Community Impact Board Program (CIB) provides grants and low interest loans to communities that have federally leased land used for mineral extraction to help make up for a loss of tax revenue that cannot be collected on that leased land. Application deadlines occur in February, June, and October.

V. CAPITAL FACILITIES PLAN

As shown in Section III (Transportation Network) of this report, future growth due to new development requires West Jordan to make improvements to provide residents with a safe and efficient transportation network and maintain an acceptable Level of Service. Specific intersection and roadway improvements are listed below in Table 8 and 9 and are shown below in Figure 43. The project number listed in the table is for identification only and is no indication of project prioritization. Project cost estimates represent 2024 dollars and are not adjusted for inflation; therefore, estimates will need to be regularly updated by the City as project scopes may change as development occurs. Only roadway improvements to arterials and collectors are identified, as local roads are typically built by future development. Details for each project cost estimate can be found in the Appendix C.

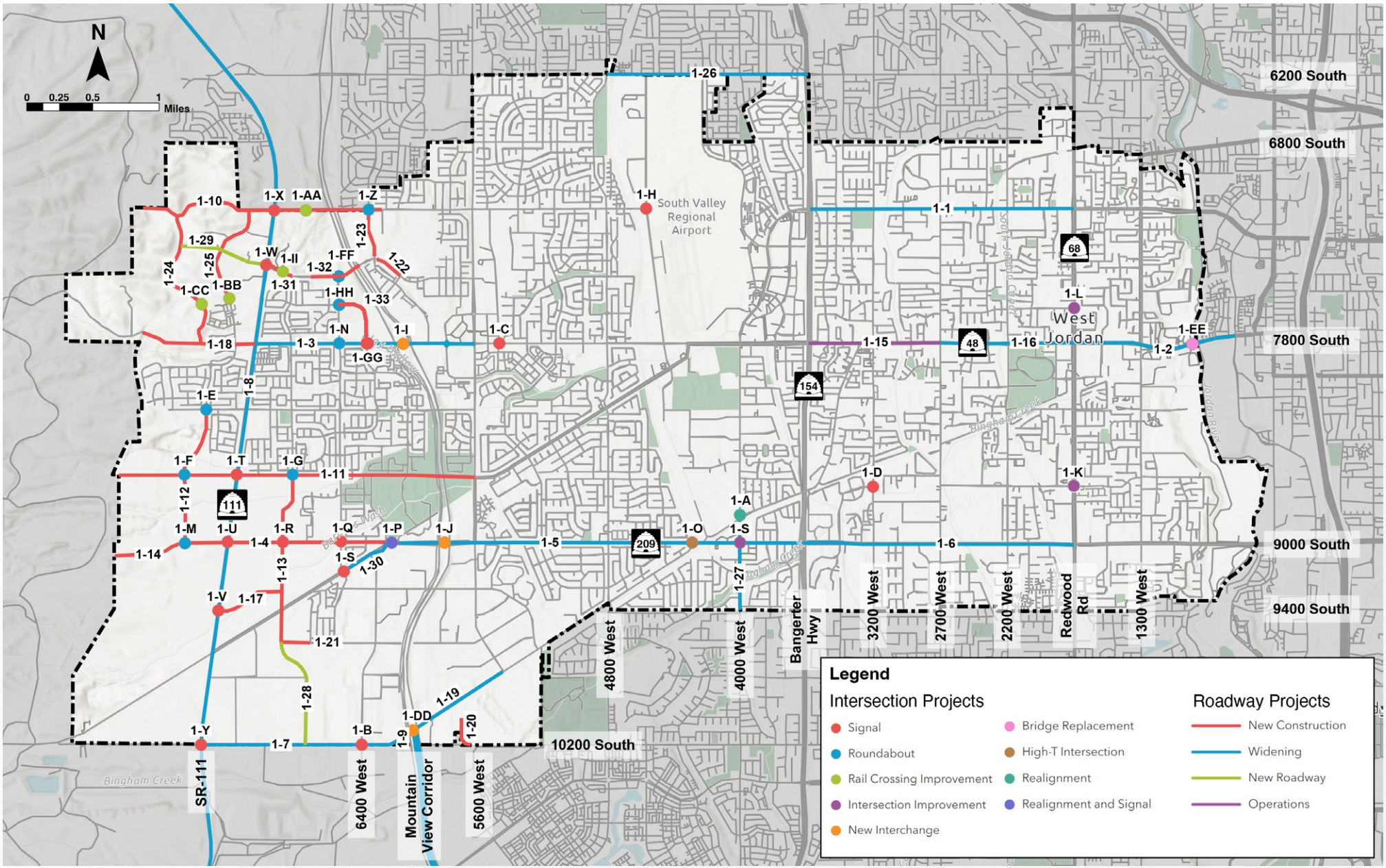
TABLE 8: CFP FUTURE ROADWAY PROJECTS						
Project ID	Description	Responsibility	Improvement Scope	# of Lanes		Estimated Cost
				2023	Proposed	
PHASE #1 (2023–2032)						
1-1	7000 South Widening from Bangerter Highway to Redwood Road*	WFRC, WJC	Widening	4	5	$43,280,000
1-2	7800 South Widening from Redwood Road to Bingham Junction Boulevard*	WFRC, WJC, Midvale	Widening	5	7	$19,632,000
1-3	7800 South Widening from SR-111 to 5600 West*	WFRC, WJC	Widening	3	5	$18,904,081
1-4	9000 South New Construction from SR-111 to New Bingham Highway*	WFRC, WJC, Developer	New Construction	0	5	$38,340,000
1-5	9000 South Widening from New Bingham Highway to Bangerter Highway	WFRC, UDOT	Widening	5	7	$65,950,000
1-6	9000 South Widening from Bangerter Highway to Redwood Road	WFRC, UDOT	Widening	5	7	$56,970,000
1-7	10200 South Widening from Bacchus Highway to Mountain View Corridor*	WFRC, WJC	Widening	2	5	$19,410,000
1-8	SR-111 / Bacchus Highway Widening from 5400 South to South Jordan Parkway (11000 South)	WFRC, UDOT	Widening	2	5	$156,590,000
1-9	Mountain View Corridor Widening from Old Bingham Highway to Porter Rockwell Boulevard	WFRC, UDOT	Widening	2 NB, 2 SB	2Fr+2Fwy NB, Fr+2Fwy SB	$490,000,000
1-10	7000 South New Construction from WJC Limits to 6100 West*	WFRC, WJC, Developer	New Construction	0	3	$29,390,000
1-11	8600 South New Construction from WJC Limits to 5600 West*	WFRC, WJC, Developer	New Construction	0	3	$42,320,000
1-12	7200 West New Construction from 8200 South to 9000 South*	WFRC, WJC, Developer	New Construction	0	3	$27,690,000
1-13	6700 West New Construction from 8600 South to Wells Park Rd*	WFRC, WJC, Developer	New Construction	0	3	$26,550,000
1-14	9000 South New Construction from City Limits to SR-111*	WFRC, WJC, Developer	New Construction	0	3	$18,990,000
1-15	7800 South Operations from Bangerter Highway to Jaguar Drive	WFRC, UDOT	Operations	5	5	$3,500,000
1-16	7800 South Widening from Jaguar Drive to Redwood Road	WFRC, UDOT	Widening	5	7	$21,550,000
1-17	9400 South New Construction from SR-111 to 6700 West*	WFRC, WJC, Developer	New Construction	0	3	$9,696,000
1-18	7800 South New Construction from SR-111 to Tracks*	WFRC, WJC, Developer	New Construction	1	3	$15,300,000
1-19	Old Bingham Highway: 5600 West to Mountain View Corridor*	WJC, Developer	Widening	2	3	$7,053,889
1-20	5600 West: Park and Ride to 10200 South*	WJC	New Construction	0	2	$3,207,544
1-21	Wells Park Road Extension to 6700 West*	WJC, Developer	New Construction	0	2	$2,865,472
1-22	Verdigris Drive New Construction*	WJC, Developer	New Construction	0	2	$2,853,078
1-23	Copper Rim Drive: 7000 South to Verdigris Drive*	WJC, Developer	New Construction	0	2	$4,593,183
1-24	Wood Ranch Collector	Developer	New Construction	0	2	$14,867,735
1-25	New Sycamore Drive; 7000 South to 7800 South	Developer	New Construction	0	2	$11,000,835
1-26	6200 South; 4800 West to Bangerter*	WFRC, WJC, Taylorsville, Kearns	Widening	4 / 5	7	$34,120,000
1-27	4000 West; Old Bingham Hwy to South Jordan Border*	WJC	Widening	3	5	$17,367,169
1-28	6600 West; Wells Park Rd to Old Bingham Hwy*	WJC, Developer	New Roadway	0	2	$11,052,889
1-29	7400 South; SR-111 to Wood Ranch Collector*	WJC, Developer	New Roadway	0	2	$8,737,707
1-30	New Bingham Highway*	WJC, UDOT	Widening	3	5	$3,604,577
1-31	7400 South from 6700 West to SR-111*	WJC, Developer	New Construction	0	3	$2,751,955
1-32	7400 South New Construction from Brook Maple Way to Verdigris Drive*	WFRC, WJC, Developer	New Construction	0	3	$5,780,000
1-33	Haven Maple Drive to Fallwater Drive*	WJC, Developer	New Construction	0	2	$5,949,077

* Impact Fee Eligible Project

TABLE 9: CFP FUTURE INTERSECTION PROJECTS				
Project ID	**Description**	**Responsibility**	**Improvement Scope**	**Estimated Cost**
PHASE #1 (2023–2032)				
1-A	4000 West & Old Bingham - Realignment to North*	WJC	Realignment	$5,000,000
1-B	Prosperity & 10200 South*	WJC / SJC	Signal	$400,000
1-C	5490 West & 7800 South*	WJC	Signal	$450,000
1-D	3200 West & Jordan Line Parkway*	WJC	Signal	$375,000
1-E	7200 West & 8200 South*	WJC	Roundabout	$1,499,551
1-F	7200 West & 8600 South*	WJC	Roundabout	$1,253,248
1-G	6700 West & 8600 South*	WJC	Roundabout	$1,458,767
1-H	Airport Rd & 7000 South*	WJC	Signal	$375,000
1-I	Mountain View Corridor Interchange	WFRC	New Interchange	$50,000,000
1-J	Mountain View Corridor Interchange	WFRC	New Interchange	$50,000,000
1-K	Gardner Lane and Redwood Road*	UDOT, WJC	Intersection Improvements	$600,000
1-L	7600 South and Redwood Road*	UDOT, WJC	Intersection Improvements	$600,000
1-M	7300 West and 9000 South*	WJC, Developer	Roundabout	$1,253,248
1-N	6400 West and 7800 South*	WJC	Roundabout	$1,565,329
1-O	9000 South and Old Bingham Highway*	WJC, UDOT	High-T Intersection	$1,000,000
1-P	9000 South & New Bingham Hwy*	WJC, UDOT, WFRC	Realignment and Signal	$4,705,308
1-Q	9000 South & 6400 West*	WJC, Developer	Signal	$400,000
1-R	9000 South & 6700 West*	WJC, Developer	Signal	$400,000
1-S	6400 West & New Bingham Highway*	UDOT, WJC, Developer	Signal	$400,000
1-T	8600 South & Bacchus Highway*	WJC, UDOT, Developer	Signal	$450,000
1-U	9000 South & Bacchus Highway*	UDOT, WJC, Developer	Signal	$450,000
1-V	9400 South & SR-111*	UDOT, WJC, Developer	Signal	$450,000
1-W	7400 South & SR-111*	UDOT, WJC, Developers	Signal	$400,000
1-X	7000 South & SR-111*	WJC, UDOT, Developer	Signal	$450,000
1-Y	Old Bingham Hwy & SR-111*	WJC, UDOT, SJC	Signal	$400,000
1-Z	7000 South & High Bluff Drive*	WJC, Taylorsville, Developer	Roundabout	$1,541,551
1-AA	7000 South Rail Crossing Improvement*	WJC	Rail Crossing Improvement	$3,000,000
1-BB	New Sycamore Drive Rail Crossing Improvement*	WJC, Developer	Rail Crossing Improvement	$2,000,000
1-CC	Wood Ranch Collector Rail Crossing Improvement*	WJC, Developer	Rail Crossing Improvement	$2,000,000
1-DD	Old Bingham Hwy & Mountain View Corridor Interchange	UDOT, WFRC, WJC	New Interchange	$60,000,000
1-EE	7800 South & Jordan River Bridge Replacement*	WJC	Bridge Replacement	$20,000,000
1-FF	6400 West & 7400 South*	WJC	Roundabout	$1,246,032
1-GG	6200 West & 7800 South*	WJC	Roundabout	$1,556,551
1-HH	6400 West & 7600 South*	WJC	Roundabout	$1,437,910
1-II	7400 South Rail Crossing Improvement*	WJC	Rail Crossing Improvement	$2,000,000

* Impact Fee Eligible Project

Figure 43: Future Projects – Capital Facilities Plan



VI. CONCLUSION

A. Overview

The purpose of the West Jordan TMP is to plan the future transportation needs of West Jordan City. The following tasks were completed as part of this TMP:

- Traffic data was analyzed to help establish existing conditions in the City.
- Future traffic volumes were developed for future planning years 2033 and 2050.
- A travel demand analysis based on existing and future land use was performed.
- A list of needed future roadway and intersection projects was created.
- City street functional classifications were updated based on the future roadway projects.
- A safety analysis was performed.
- Connectivity improvement opportunities were identified.
- Traffic calming, access management, and TIS standards are described.
- Truck routes were identified and mapped.
- An ArcGIS Online Story Map was created that summarized the analysis performed in this TMP.

B. Next Steps

As a result of this TMP, there are several opportunities for West Jordan City staff to apply the recommendations of this TMP in the coming months and years. It is recommended that West Jordan City complete the following when possible:

- Continue to monitor and collect traffic data to inform transportation planning decisions.
- Work to get funding for projects that are not currently funded.
- Monitor crash trends to find discernible patterns.
- Implement the following safety improvements:
  - Roundabouts/Signals: Approximately 16 percent of severe crashes in West Jordan can be potentially mitigated by a roundabout or a signal. West Jordan may have too many uncontrolled side streets. Signal warrant and roundabout studies can be done. In almost all cases, installing a roundabout will increase safety. However, signals do not necessarily always improve safety. It is important to recognize that when signals are installed without a warrant or installed at a location with a low history of crashes, signals can increase the number of crashes at these locations. Additionally, raised medians can be installed to reroute vehicles away from uncontrolled intersections.
  - 1300 West & 7800 South: Four severe left-turn crashes have occurred at this intersection since 2018. One of them involved a pedestrian. Therefore, protected left-turn phasing is recommended at this intersection.
  - 3200 West & 7800 South: Seven severe crashes have occurred at this intersection since 2018. Two of them involved a pedestrian and two of them involved left-turns. Protected left-turn phasing is recommended at this intersection.
  - 2700 West & 7800 South: Two severe left-turn crashes have occurred at this intersection since 2020. This intersection is located near West Jordan High School where there is a larger number of inexperienced drivers. Therefore, protected left-turn phasing is recommended at this intersection.
  - Jordan Landing Boulevard: 10 severe crashes have occurred at the intersections along Jordan Landing Boulevard since 2018 From review of crash narratives there is a common theme of high speeds. Due to this, reducing the speed limit and providing traffic calming along this roadway is recommended.
  - 5600 West & 7000 South: Five severe crashes have occurred at this intersection since 2019. Four of them are due to vehicles traveling straight along 5600 West. A roundabout is a possible mitigation measure at this location to reduce speeds and reduce the severity of angle crashes.

- Update the West Jordan City Road and Bridge Standards to require that any new driveway within 350 feet of an intersection be restricted to right-in right-out, which may or may not include a raised median based on traffic volumes.
- Improve connectivity in the City with a focus on east-west travel by:
  - Minimizing the use of cul-de-sacs
  - Connect infill projects to stub roads
  - Look for opportunities to improve local street connectivity for vehicles and/or pedestrian travel where possible by making local street connections such as the ones listed in Appendix A.
  - Develop and adopt a connectivity standard to guide future connections and developments using the resources provided in the 'Connectivity' section of this TMP.
- Pursue funding to complete an East/West visioning study to identify long-term solutions to accommodate east/west travel with improvements focusing on central and northern West Jordan along 7000 S and/or 7800 S.
- Update the current truck routes ordinance to include 7000 South east of the South Valley Regional Airport, as well as the industrial roads that have been built between 9400 South and 10200 South between 6400 West and SR-111.
- Follow the best practices as outlined in section III. City Transportation Management

VII. APPENDIX

Appendix A – Potential Local Street Connectivity Examples

Appendix B – Traffic Impact Study Requirements

Appendix C – Survey Results

Appendix D – Public Meeting Summary

Appendix E – Cost Estimates

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APPENDIX A

Potential Local Street Connectivity Examples

Potential Local Street Connectivity Examples

Examples of potential local street connections the City may want to consider for local vehicle and/or pedestrian travel in the future are presented below. While not specifically recommended as TMP projects, these represent the type of connections that could benefit local travel in the City.

1. Extending Hayden Peak Drive east to 4800 W,
2. Connecting Bridle Creek Drive to 5490 W, and
3. Extending 1950 W to 8900 S.

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APPENDIX B

Traffic Impact Study Requirements

Traffic Impact Study Requirements

When a Traffic Impact Study is required the study must be prepared according to the appropriate TIS level as shown below. The traffic study shall, at a minimum, incorporate West Jordan City principles and standards and national practices. Additional requirements and investigation may be imposed upon the applicant as necessary.

Traffic Study level I
Project ADT < 100 trips

No proposed modifications to traffic signals or roadway elements or geometry.

1. Study Area.

The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary.

The study area may be limited to or include property frontage and include neighboring and adjacent parcels. Identify site, cross, and next adjacent up and down stream access points within access category distance of property boundaries.

2. Design year.
Opening day of project

3. Analysis Conditions and Period
Identify site traffic volumes and characteristics.
Identify adjacent street(s) traffic volume and characteristics.

4. Identify right-of-way, geometric boundaries and physical conflicts.
Investigate existence of federal or state, no access or limited access control line.

5. Generate access point capacity analysis as necessary.
Analyze site and adjacent road traffic for the following time periods: weekday A.M. and P.M. peak hours including Saturday peak hours if required by the City Engineer. Identify special event peak hour as necessary (per roadway peak and site peak).

6. Design and Mitigation.
Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

Traffic Study Level II
Project ADT 100 to 500 trips

1. Study Area.

The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary. Intersection of site access drives with state highways and any signalized and unsignalized intersection within access category distance of property line. Include any identified queuing distance at site and study intersections

2. Design Year

Opening day of project

3. Analysis Period

Identify site and adjacent road traffic for weekday A.M. and P.M. peak hours (Saturdays if required by the City Engineer).

4. Data Collection

Identify site and adjacent street roadway and intersection geometries.
Identify adjacent street(s) traffic volume and characteristics.

5. Conflict / Capacity Analysis

Diagram flow of traffic at access point(s) for site and adjacent development.
Perform capacity analysis as determined by the City Engineer.

6. Right-of-Way Access

Identify right-of-way, geometric boundaries and physical conflicts.
Investigate existence of federal or state, no access or limited access control line.

7. Design and Mitigation

Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

Project ADT 500 to 3,000 trips or peak hour < 500 trips.

1. Study Area

The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary. An acceptable traffic study boundary is 1/4-1/2 mile on each side of the project site per the City Engineer.

Intersection of site access drives with state highways and any signalized and unsignalized intersection within access category distance of property line. Include any identified queuing distance at site and study intersections.

2. Design Year

Opening day of project and five year after project completion.
Document and include all phases of development (includes out pad parcels).

3. Analysis Period

Analyze site and adjacent road traffic for weekday A.M. and P.M. peak hours including Saturday peak hours if identified as a high Saturday use.. Identify special event peak hour as necessary (adjacent roadway peak and site peak).

4. Data Collection

a. Daily and Turning Movement counts.
b. Identify site and adjacent street roadway and intersection geometries.
c. Traffic control devices including traffic signals and regulatory signs.
d. Traffic accident data

5. Trip Generation

Use equations or rates available in latest edition of ITE Trip Generation. Where developed equations are unavailable for intended land use, perform trip rate study and estimation following ITE procedures or develop justified trip rate agreed to by the Department.

6. Trip Distribution and Assignment

Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding network of study area.

7. Conflict / Capacity Analysis

Diagram flow of traffic at access point(s) for site and adjacent development.
Perform capacity analysis for daily and peak hour volumes

8. Traffic Signal Impacts

For modified and proposed traffic signals:
a. Traffic Signal Warrants as identified.
b. Traffic Signal drawings as identified.
c. Queuing Analysis

9. Design and Mitigation.

Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

Traffic Study Level III

Project ADT 3,000 to10,000 trips or peak hour traffic 500 to 1,200 trips.

1. Study Area

The study area, depending on the size and intensity of the development and surrounding development, may be identified by parcel boundary, area of immediate influence or reasonable travel time boundary.

An acceptable traffic study boundary should be based on travel time or by market area influence. Intersection of site access drives with state highways and any intersection within 1/2 mile of property line on each side of project site.

2. Design Year

Opening day of project, five years and twenty years after opening.
Document and include all phases of development (includes out pad parcels).

3. Analysis period

For each design year analyze site and adjacent road traffic for weekday A.M. and P.M. peak hours including Saturday peak hours if identified as needed per the City Engineer. Identify special event peak hour as necessary (adjacent roadway peak and site peak).

4. Data Collection

a. Daily and Turning movement counts.
b. Identify site and adjacent street roadway and intersection geometries.
c. Traffic control devices including traffic signals and regulatory signs.
d. Automatic continuous traffic counts for at least 48 hours.
e. Traffic accident data.

5. Trip Generation

Use equations or rates available in latest edition of ITE Trip Generation. Where developed equations are unavailable for intended land use, perform trip rate study and estimation following ITE procedures or develop justified trip rate agreed to by the Department.

6. Trip Distributions and Assignment

Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding network of study area.

7. Capacity Analysis

a. Level of Service (LOS) for all intersections.
b. LOS for existing conditions, design year without project, design year with project.

8. Traffic Signal Impacts. For proposed Traffic Signals:

a. Traffic Signal Warrants as identified.
b. Traffic Signal drawings as identified.
c. Queuing Analysis.
d. Traffic Systems Analysis. Includes acceleration, deceleration and weaving.
e. Traffic Coordination Analysis

10. Accident and Traffic Safety Analysis

Existing vs. as proposed development.

11. Design and Mitigation

Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

Traffic Study Level IV

Project ADT greater than 10,000 trips or peak hour traffic > 1,200 vehicles per hour.

1. Study Area

The study area, depending on the size and intensity of the development, will include the surrounding roadways ½ mile from the parcel boundary or reasonable travel time boundary.

2. Design Year

Opening day of project, five years and twenty years after opening.
Document and include all phases of development (includes out pad parcels).

3. Analysis period

For each design year analyze site and adjacent road traffic for weekday A.M. and P.M. peak hours including Saturday peak hours as needed per the City Engineer. Identify special event peak hour as necessary (adjacent roadway peak and site peak).

4. Data Collection

a. Daily and Turning movement counts.
b. Identify site and adjacent street roadway and intersection geometries.
c. Traffic control devices including traffic signals and regulatory signs.
d. Automatic continuous traffic counts for at least 24 hours or obtain ADT from local or state agencies
e. Traffic accident data.

5. Trip Generation

Use equations or rates available in latest edition of ITE Trip Generation. Where developed equations are unavailable for intended land use, perform trip rate study and estimation following ITE procedures or develop justified trip rate agreed to by the Department.

6. Trip Distributions and Assignment

Document distribution and assignment of existing, site, background, and future traffic volumes on surrounding network of study area.

7. Capacity Analysis

a. Level of Service (LOS) for all intersections.
b. LOS for existing conditions, design year without project, design year with project.

8. Traffic Signal Impacts. For proposed traffic signals:

a. Traffic Signal Warrants as identified.
b. Traffic Signal drawings as identified.
c. Queuing Analysis.
d. Traffic Systems Analysis. Includes acceleration, deceleration and weaving.
e. Traffic Coordination Analysis.

9. Accident and Traffic Safety Analysis. Existing vs. as proposed develop

10. Design and Mitigation

Determine and document safe and efficient operational design needs based on site and study area data. Identify operational concerns and mitigation measures to ensure safe and efficient operation pursuant to appropriate state highway access category.

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APPENDIX C

Survey Results

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Transportation Master Plan

WCG
WALL CONSULTANT GROUP

Kimley»Horn

PUBLIC SURVEY RESULTS SUMMARY || FEBRUARY 27, 2024

How We Engaged the Community

Tabling Events at West Jordan First Friday and at Jordan Landing.

Targeted Postcards

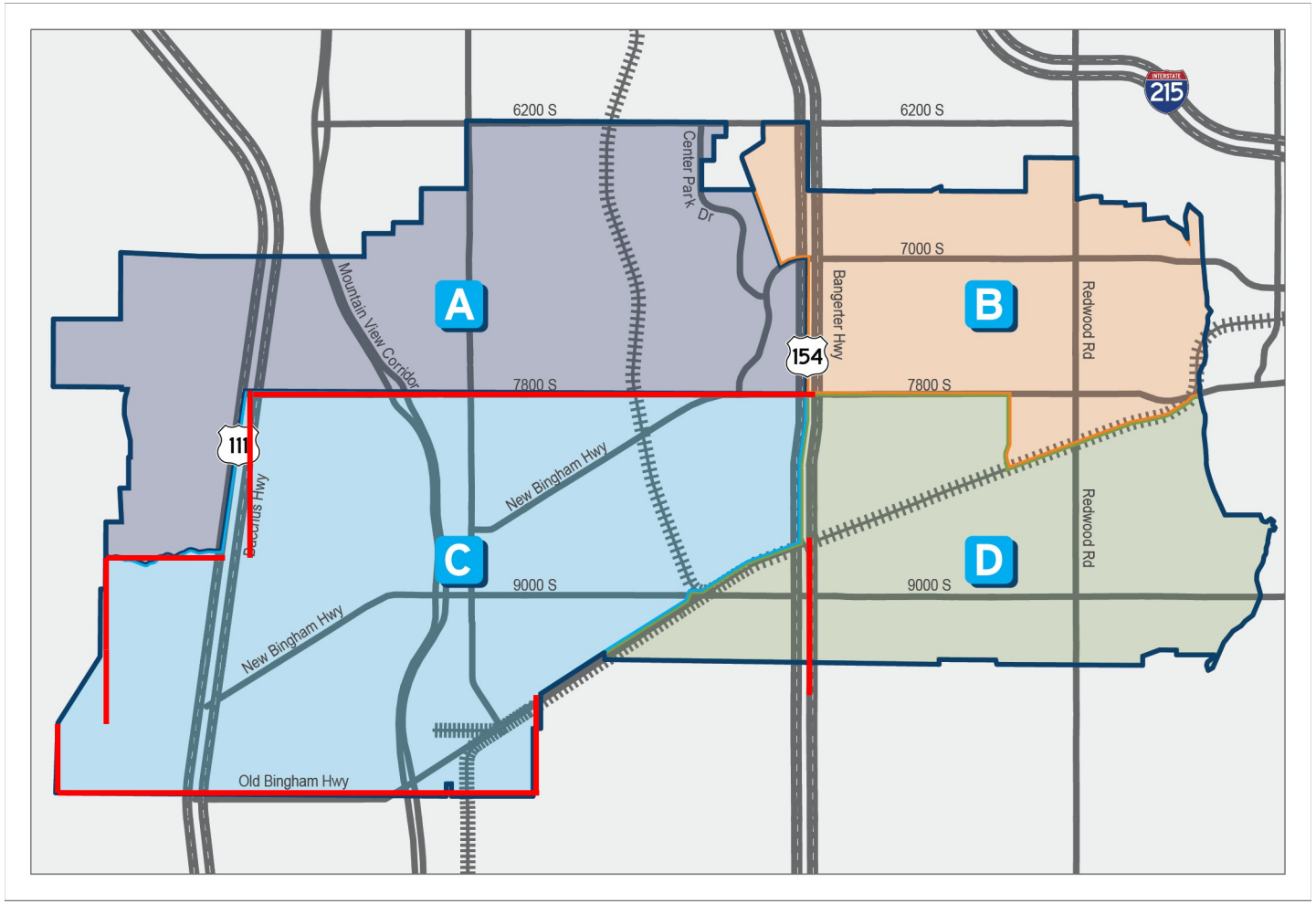
Social Posts

City Website and Newsletter

Survey Results Overview

707 survey responses in total

- *98% of respondents live in West Jordan*
- *49.43% of West Jordan residents are from the southwest*
- *145 responses in October 2023*
  - *First social media posts*
- *3 responses in November 2023*
- *267 responses in December 2023*
  - *Pop-up events*
- *287 responses in January 2024*
  - *Postcards*
- *5 responses in February 2024*



Survey Targets

Assumed population size: 120,000

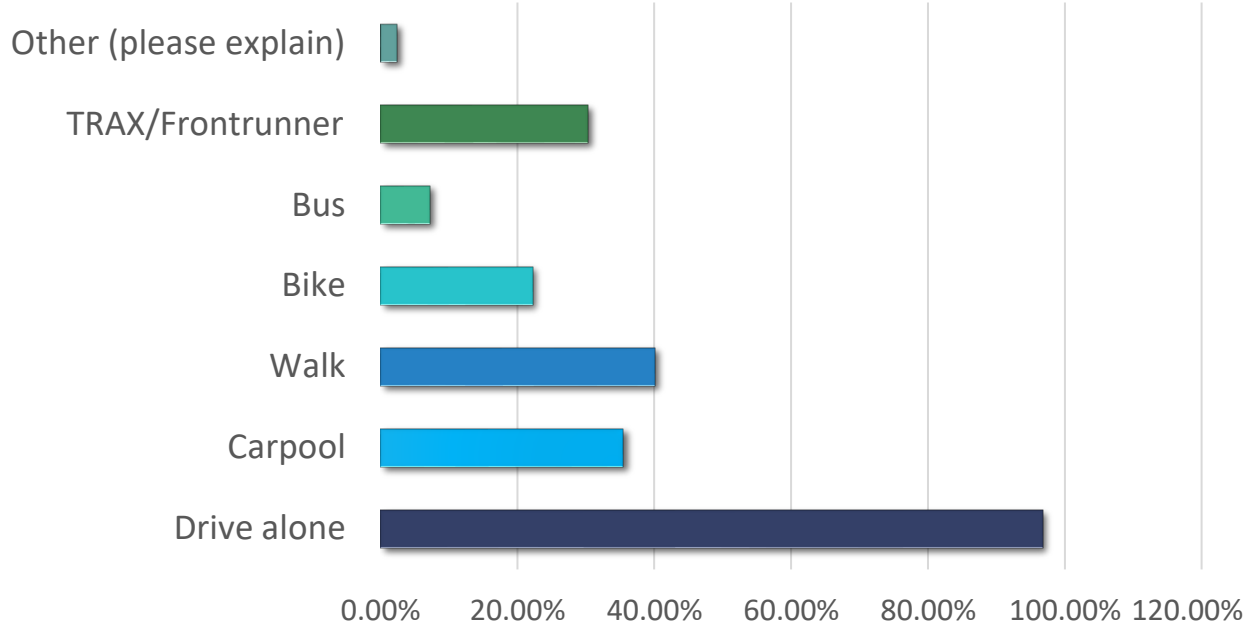
Target Minimum Goal: 383 responses

Confidence Level (%)	Margin of Error (%)	Sample Size
90	5	272
95	5	383
99	5	707

Modes of Transportation

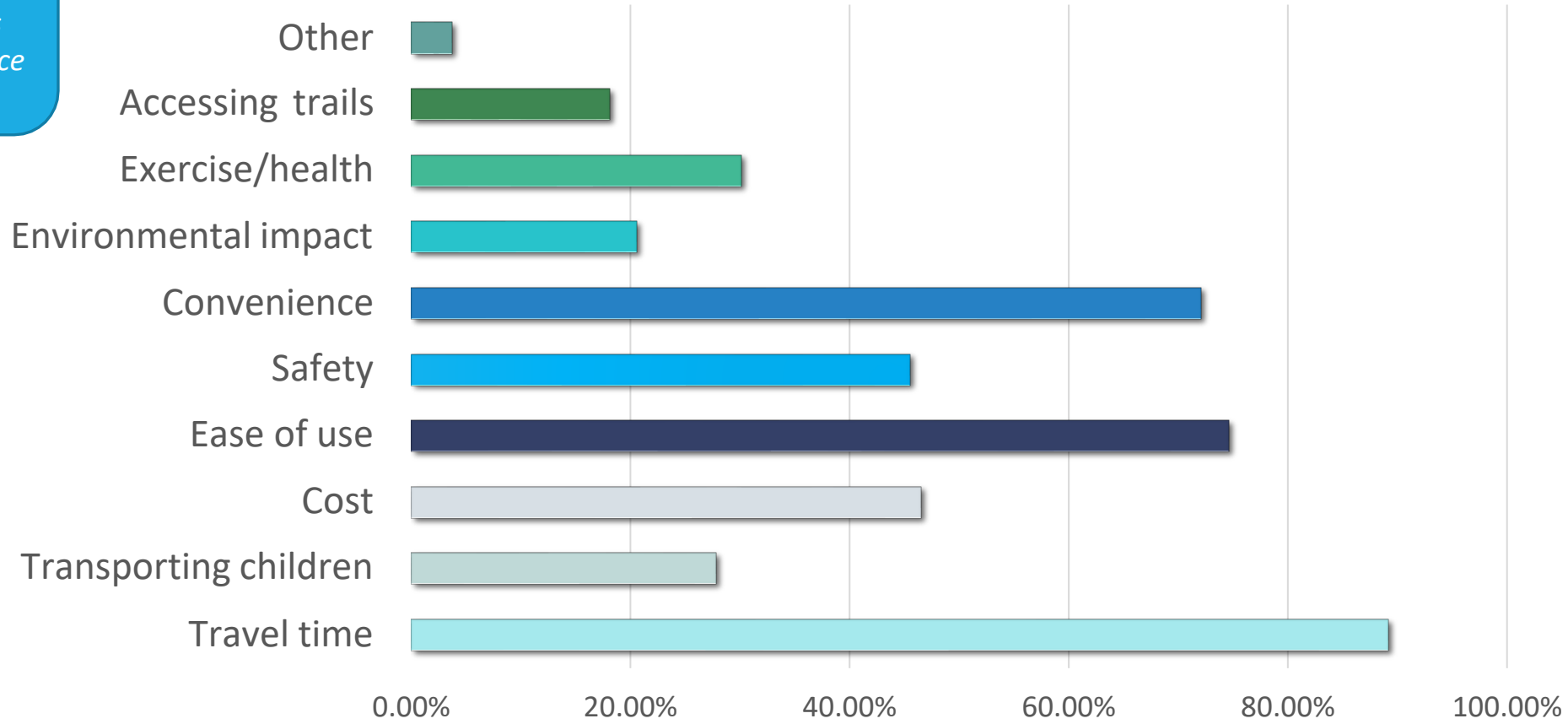
- *96.71% of respondents drive alone*
- *77.30% of participants drive alone daily*
- *7.15% of respondents use the bus*
- *85.82% of participants never use the bus*

Which of the following modes of transportation do you use?



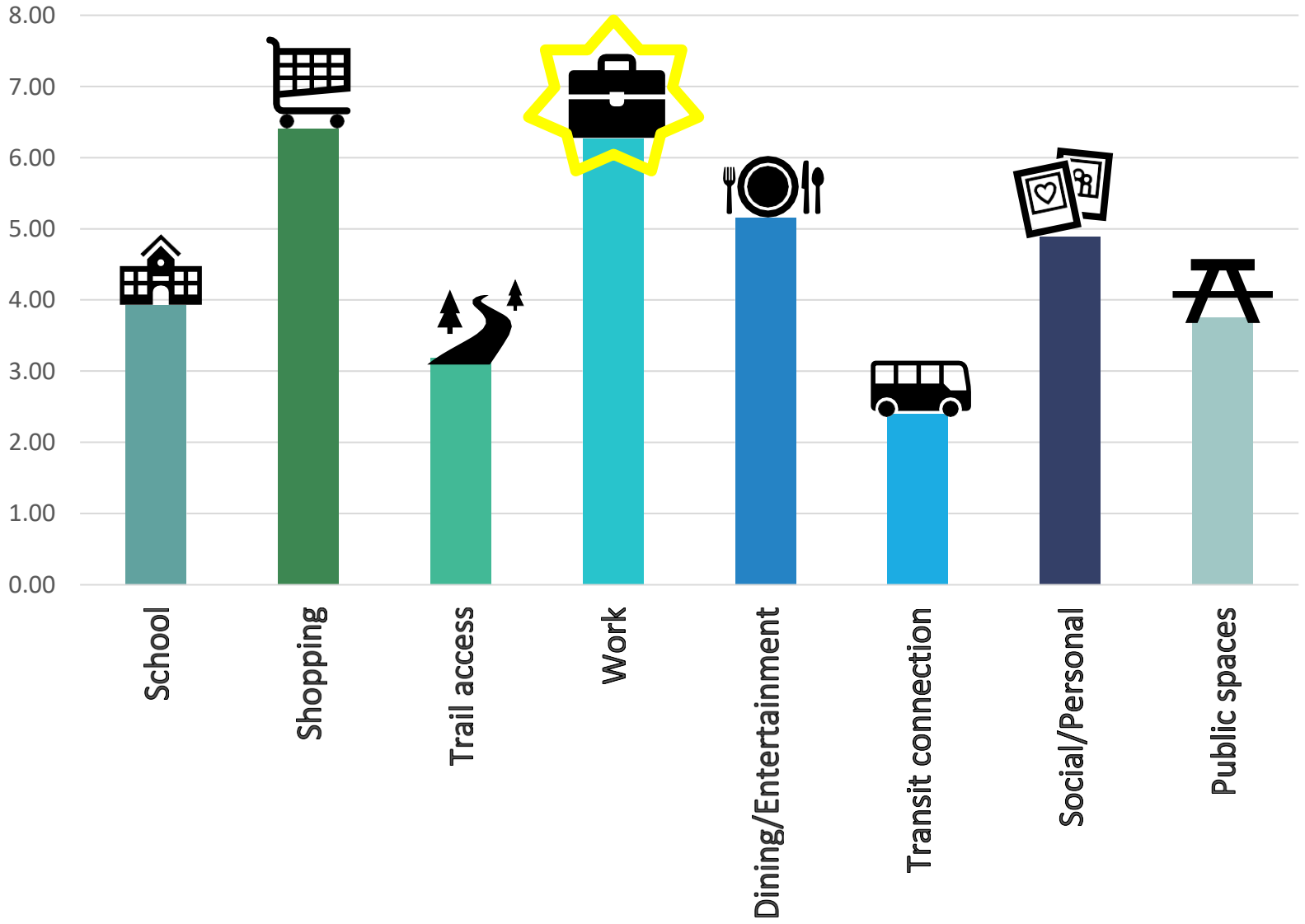
What factors are most important to you when selectinga mode of transportation?

"Safety and convenience outweigh environmental impact. I might walk or bike more if there were more (safe) trails that linked places of importance to me."

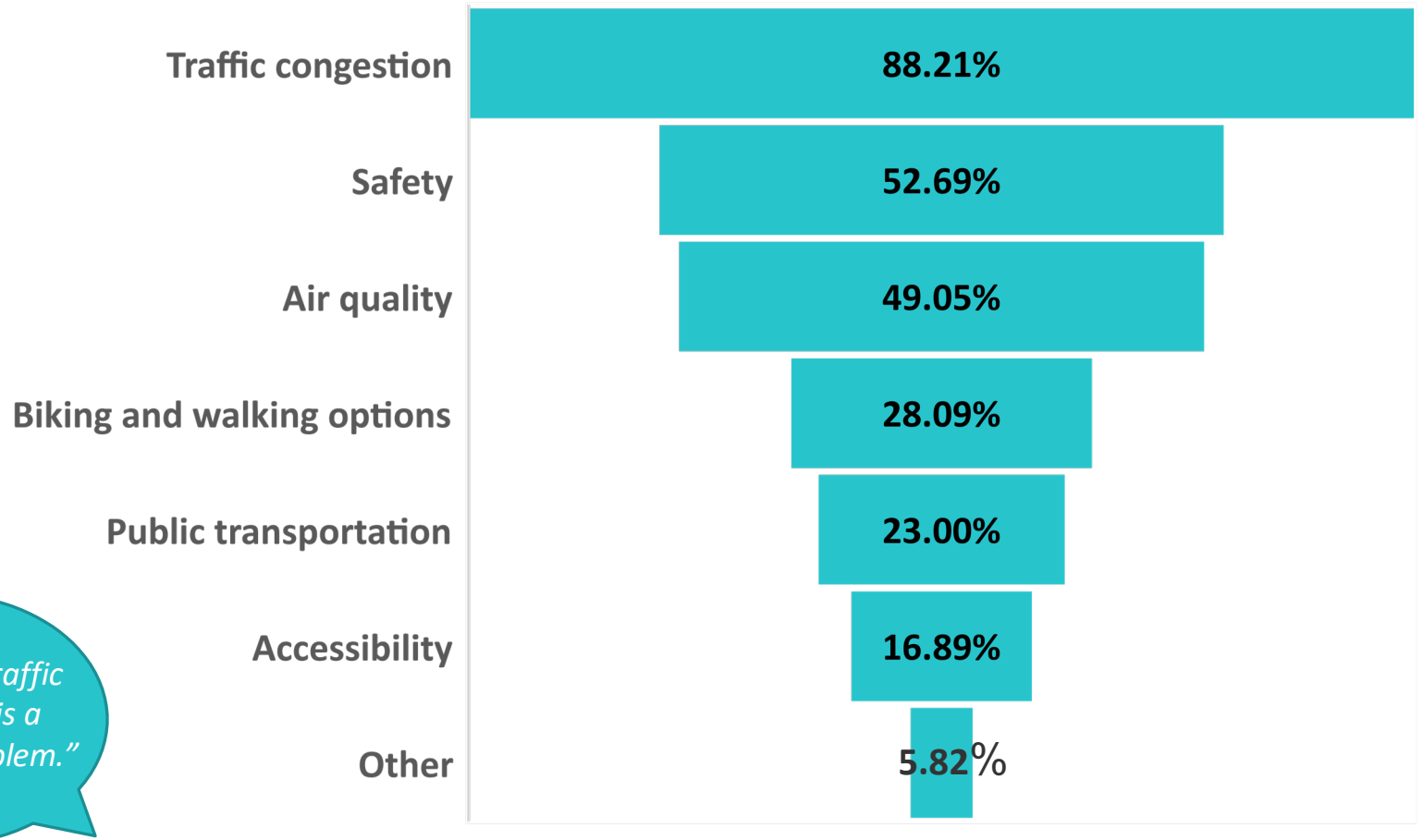


Destination Hotspots

- *54.83% of respondents most frequently travel to their job destination*
- *31.82% of respondents do not often travel to transit connections as their destination*



Transportation Concerns



"Often they just fill in holes in our roads. The next year those repairs often come out. We end up driving on what feels like a dirt or gravel road."

"East-West traffic congestion is a particular problem."

Budget Spending

Better maintain the existing transportation system

Neutral

Enhance the transportation system with new or improved facilities and services

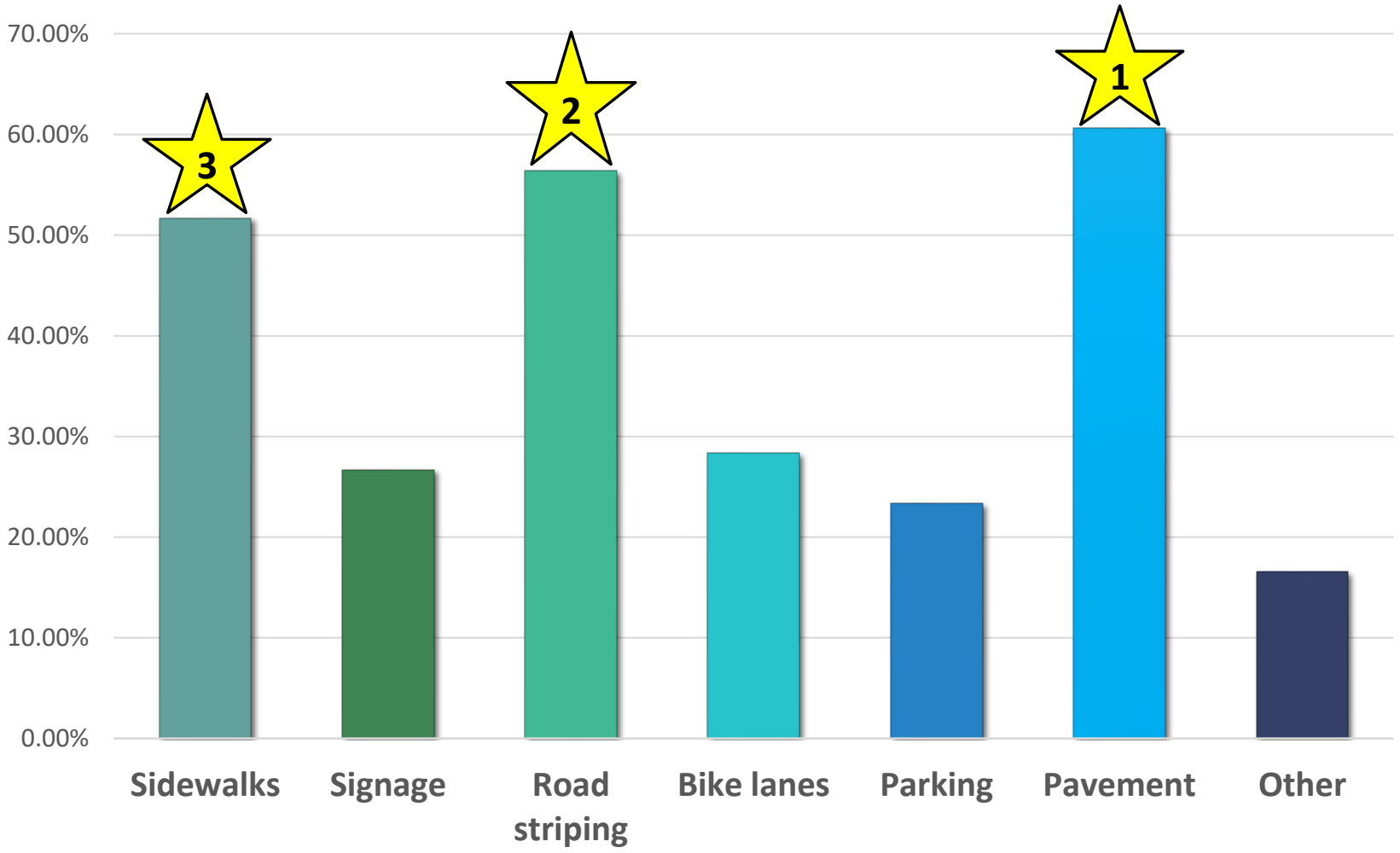
Focus on a fewer number of big projects

Neutral

Focus on a higher number of smaller projects

Most Common Concerns

Improvement & Goals



Safety Concerns

Traffic Congestion

"Jordan landing. High traffic around Walmart. Hard to see around corners and vehicles when turning."

"The exits from Bangerter for 6200 s, 7000 a, and 7800 South need to flow far better than they currently do."

"East bound on 7800 south by Jordan landing, the left turn lane into JL is too short and causes back up in the east bound lanes."

"Cars merging just west of Mountain View Next to the entrance to that park and neighborhood."

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APPENDIX D

Public Meeting Summary

Public Meeting Summary

Meeting Information:

Project Name:	West Jordan Transportation Master Plan
Location:	West Jordan Public Works Building and Zoom Webinar
Date:	Thursday, April 25, 2024
Time:	6:00 PM
Number of Attendees:	10 in person and 24 on Zoom Webinar (note, a recording of the presentation was made available on the city social channels)

Notification Efforts:

- Social Media Posts
- Stakeholder database notification
- City Website Announcement

Presentation Topics (see attached presentation):

- TMP purpose
- Public Survey Results
- Proposed Projects via Story Map Website
- Next Steps and Q&A

Area Representation:

- Individual Residents
- West Jordan City
- WFRC
- UDOT

Project Team Attendees:

Team:

Dirk Burton, West Jordan Mayor
Nate Nelson, City Engineer
Marie Magers, City Communications Manager
Brian Clegg, City Public Works Director
Nestor Gallo, City Traffic Engineer
Jeremy Searle, WCG Project Manager
Scott Johnson, WCG Traffic Engineer
Jordan King, KH Engagement Manager

Summary of Comments:

Questions pertained mostly to east-west connections, congestion, coordination with UTA and a need/want for more transit options.

Attachments:

- Social Media Posts
- City Event Page
- Question and Answer Report
- Meeting Presentation
- Pictures

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SEARCH MENU

/ Events / Transportation Master Plan – Public Meeting

This event has passed.

Transportation Master Plan – Public Meeting

April 25 @ 6:00 pm – 7:30 pm

Join us to learn more about the future of transportation in West Jordan! View the storymap: https://storymaps.arcgis.com/stories/5f7de71d02f844a8ba34512f35c45e14

Join us in person at the West Jordan Public Works building (7960 South 4000 West) or online (see link below)!

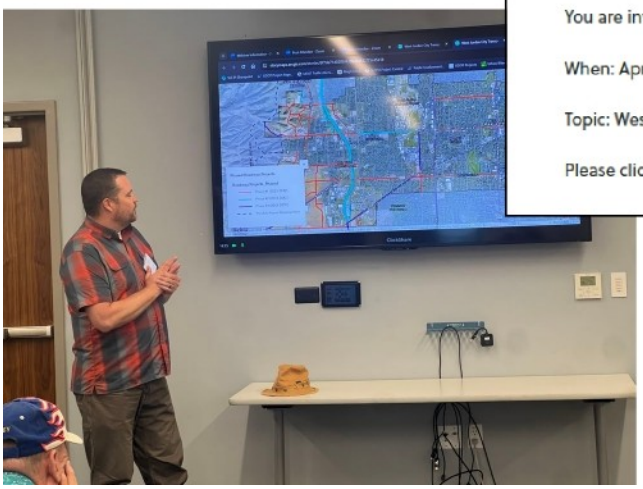
This is an opportunity to view the results from the recent city-wide survey, ask questions about the plan, and learn more about transportation in West Jordan! We'll see you there!

You are invited to a Zoom webinar.

When: Apr 25, 2024 06:00 PM Mountain Time (US and Canada)

Topic: West Jordan Transportation Master Plan Public Meeting

Please click the link below to join the webinar:



WEST JORDAN
UTAH

Transportation Master Plan

PUBLIC MEETING | APRIL 25, 2024

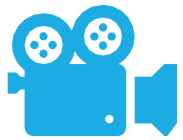
WCG
WALL CONSULTANT GROUP

Kimley»Horn

Welcome

MAYOR DIRK BURTON

Introductory Notes



Presentation Recording
A recording and a PDF of the presentation will be made available on the city website.

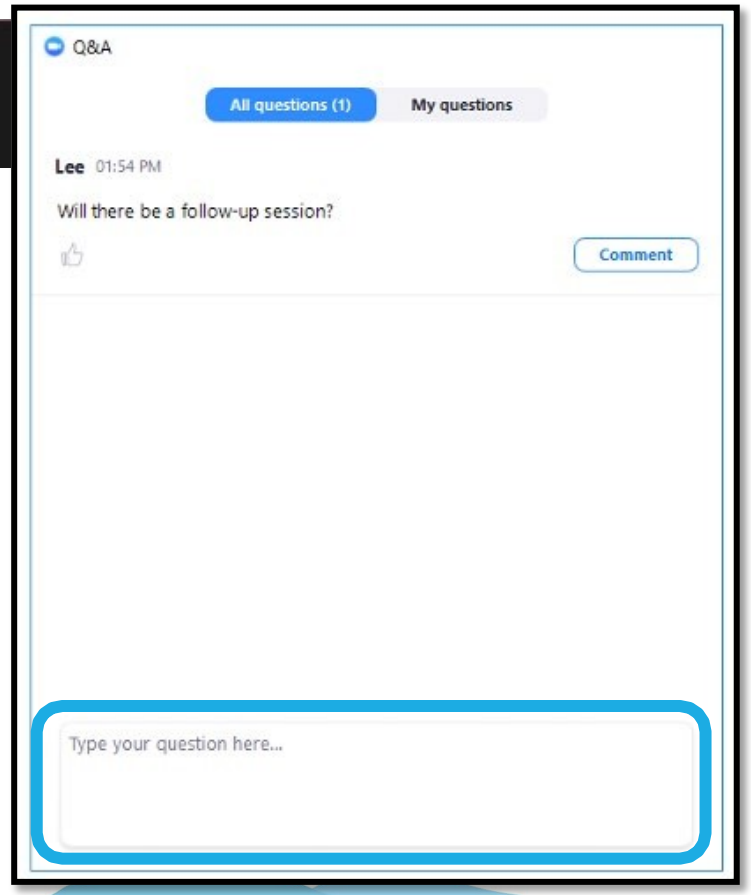
Live Q&A
You can provide written questions or comments using the Q&A button at the bottom of your screen for our panel to answer today.

Zoom Functions

- Use the Q&A for any comments or questions
- The Chat function is turned off and will not be used
- All questions may not be answered live due to time constraints but will be included in the Q&A on the project website

Step 1:
Click the Q&A icon

Step 2:
Enter your question in the new window



Public Engagement

SURVEY RESULTS

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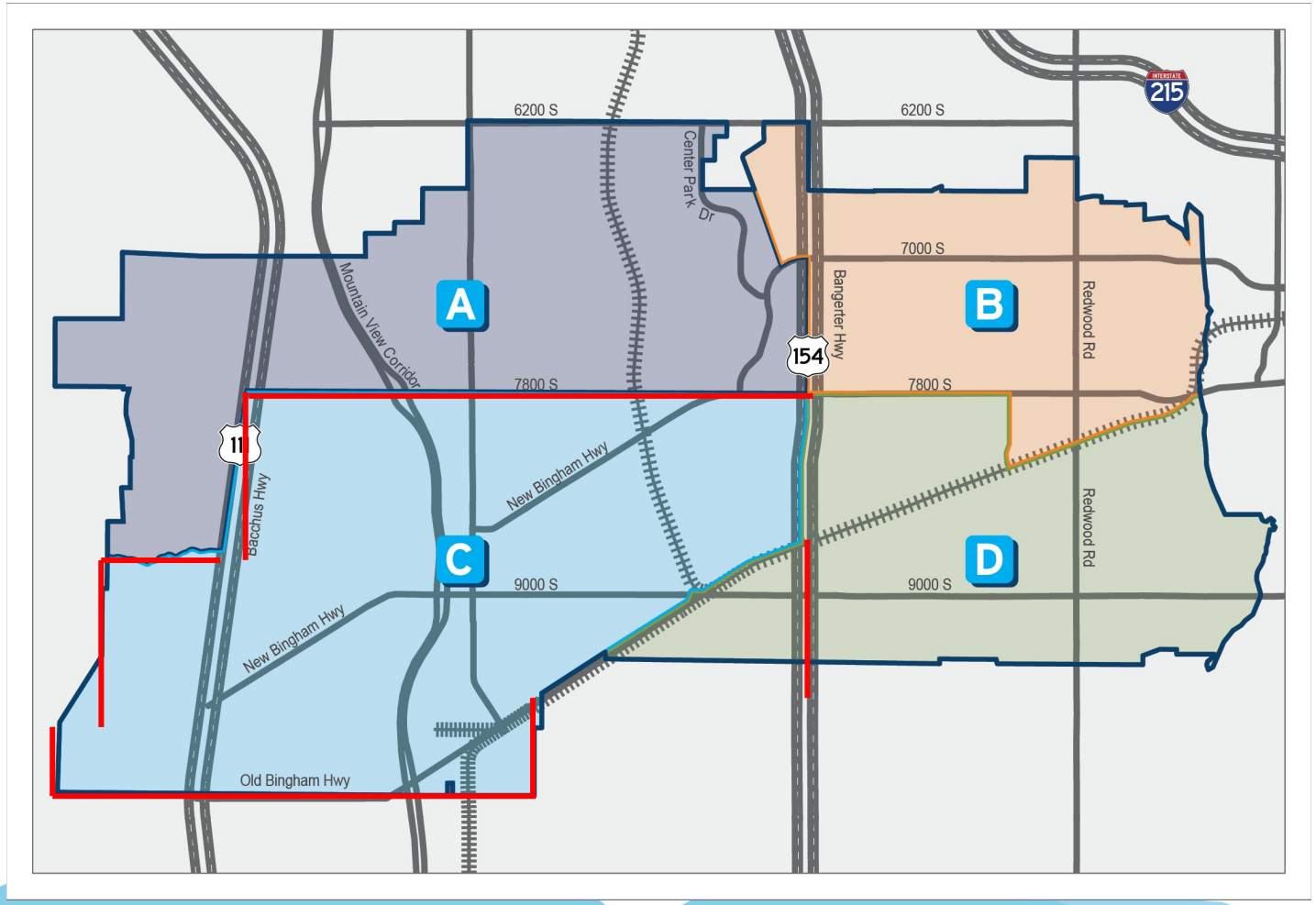

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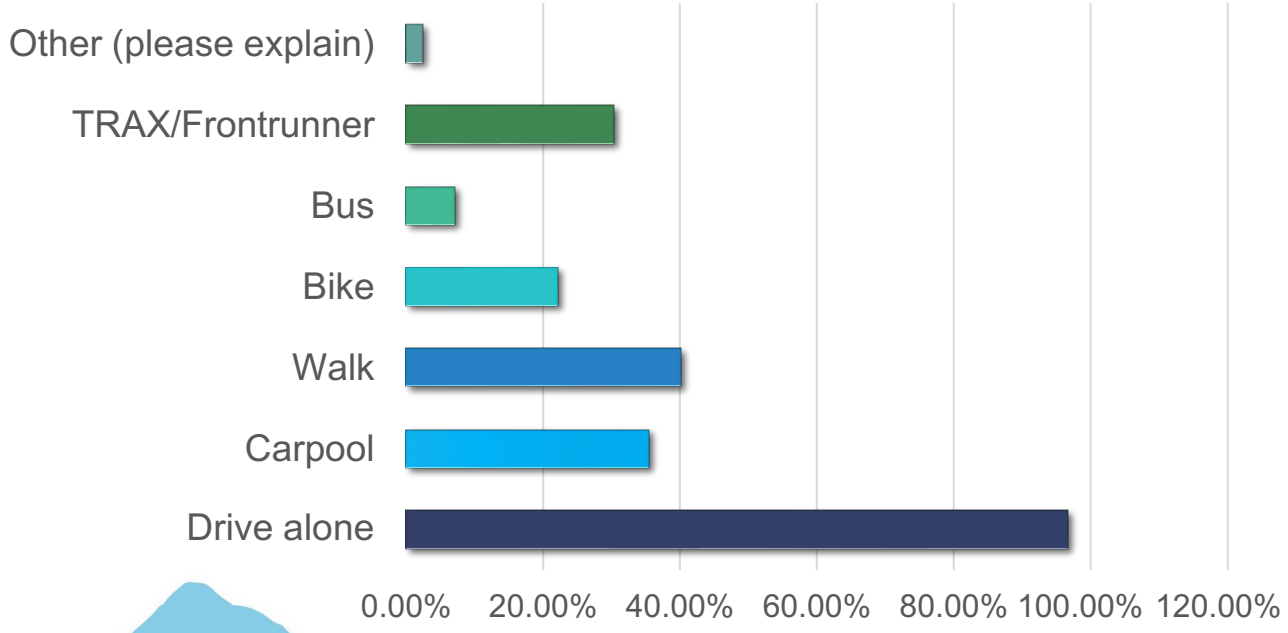

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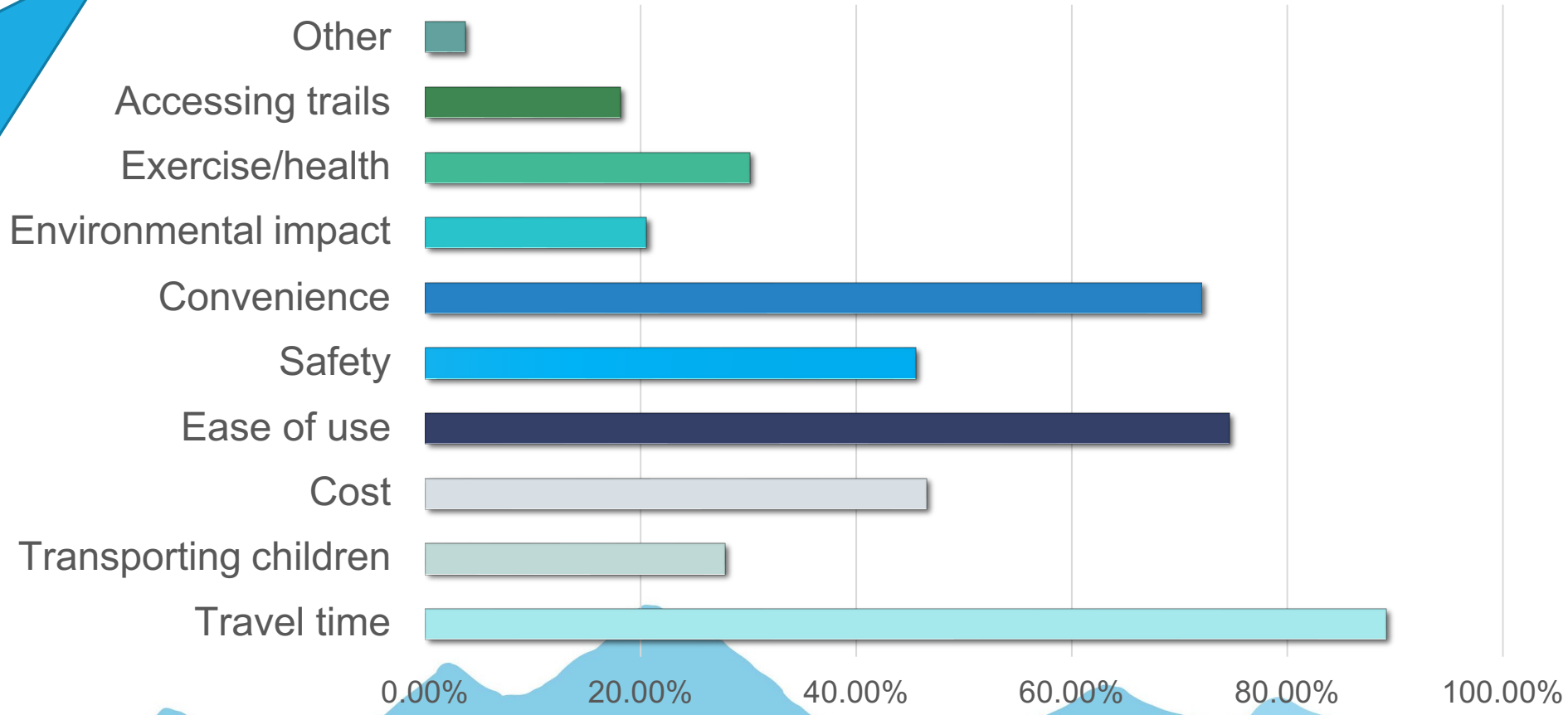

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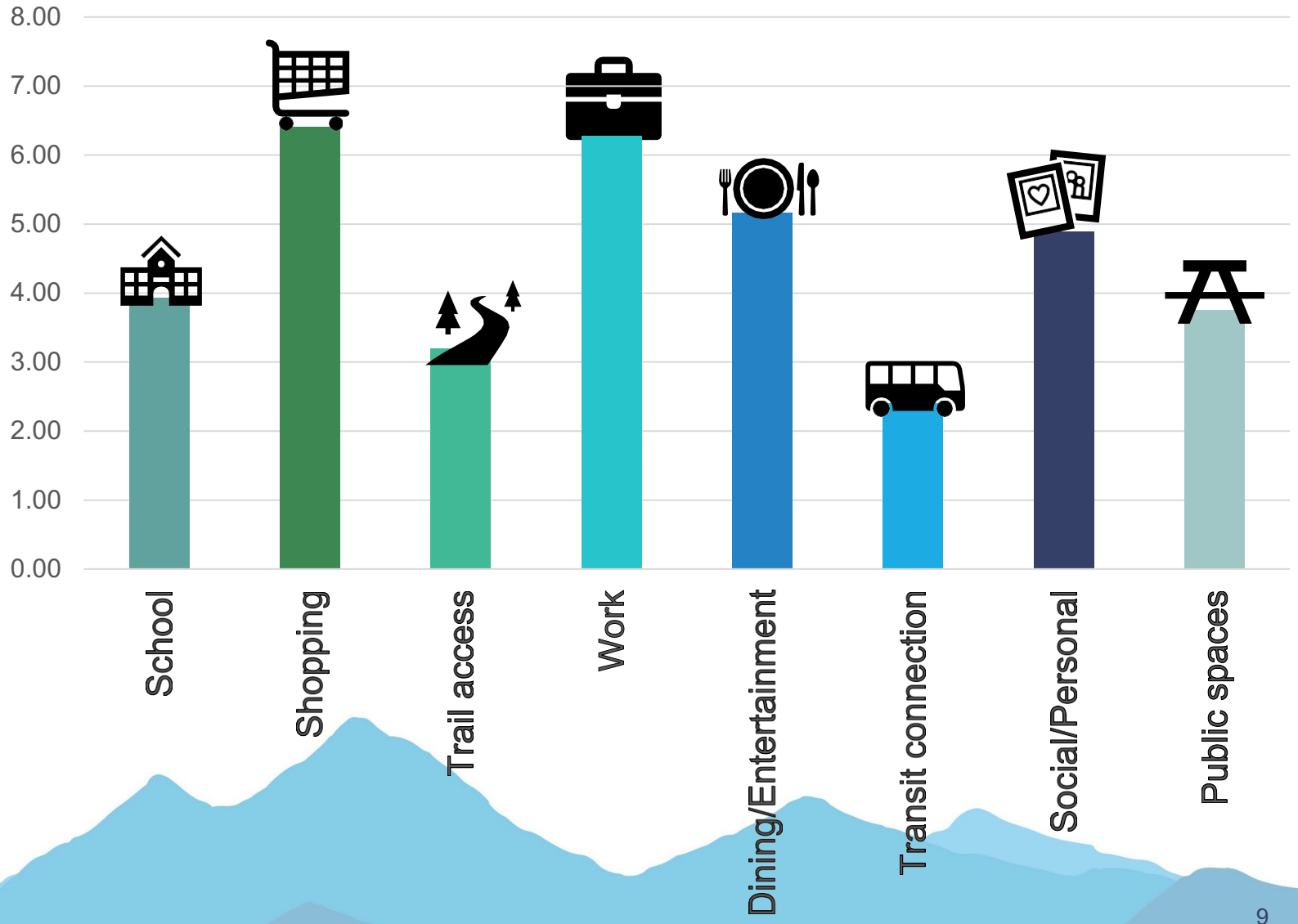
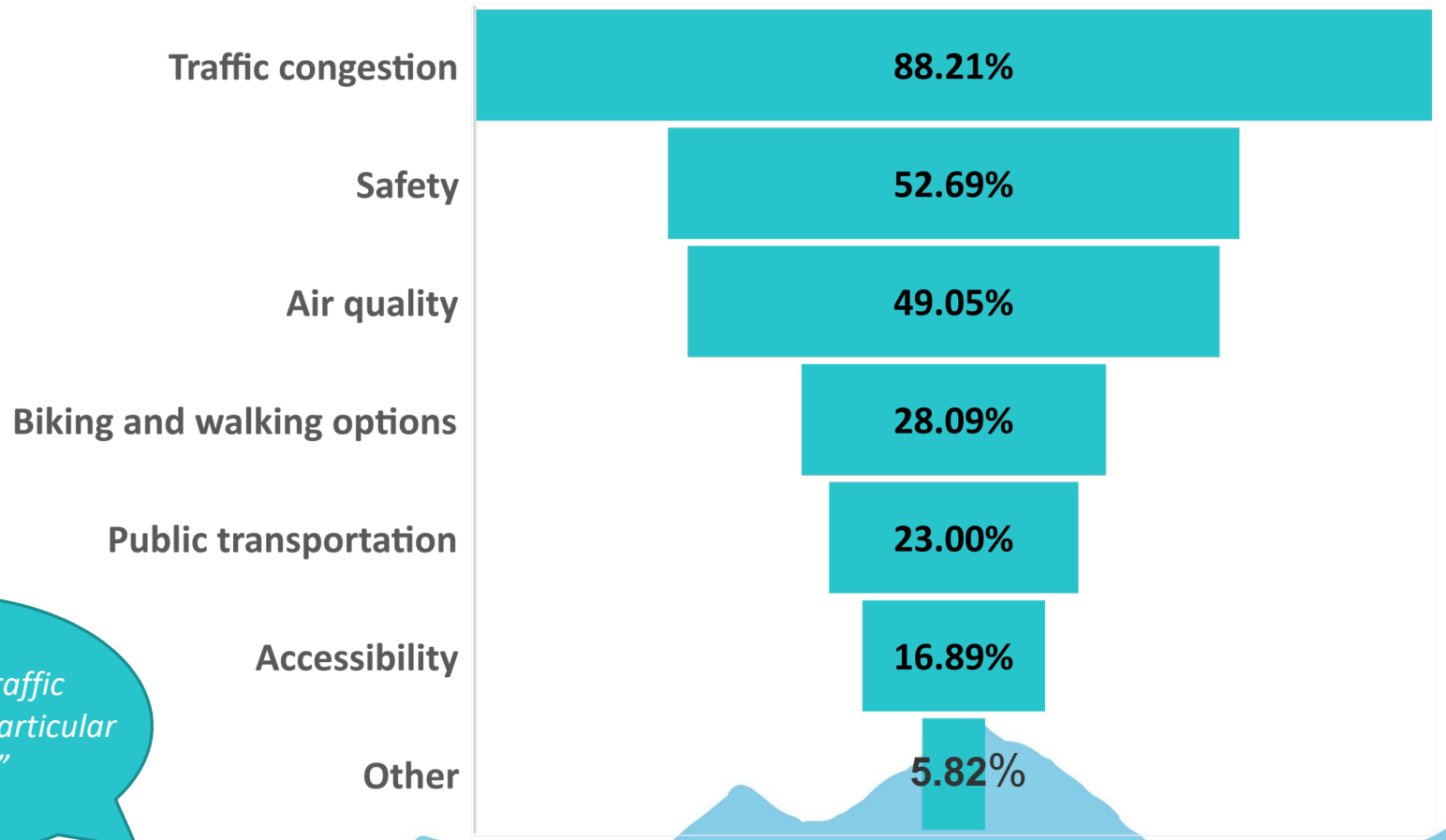


Transportation Concerns

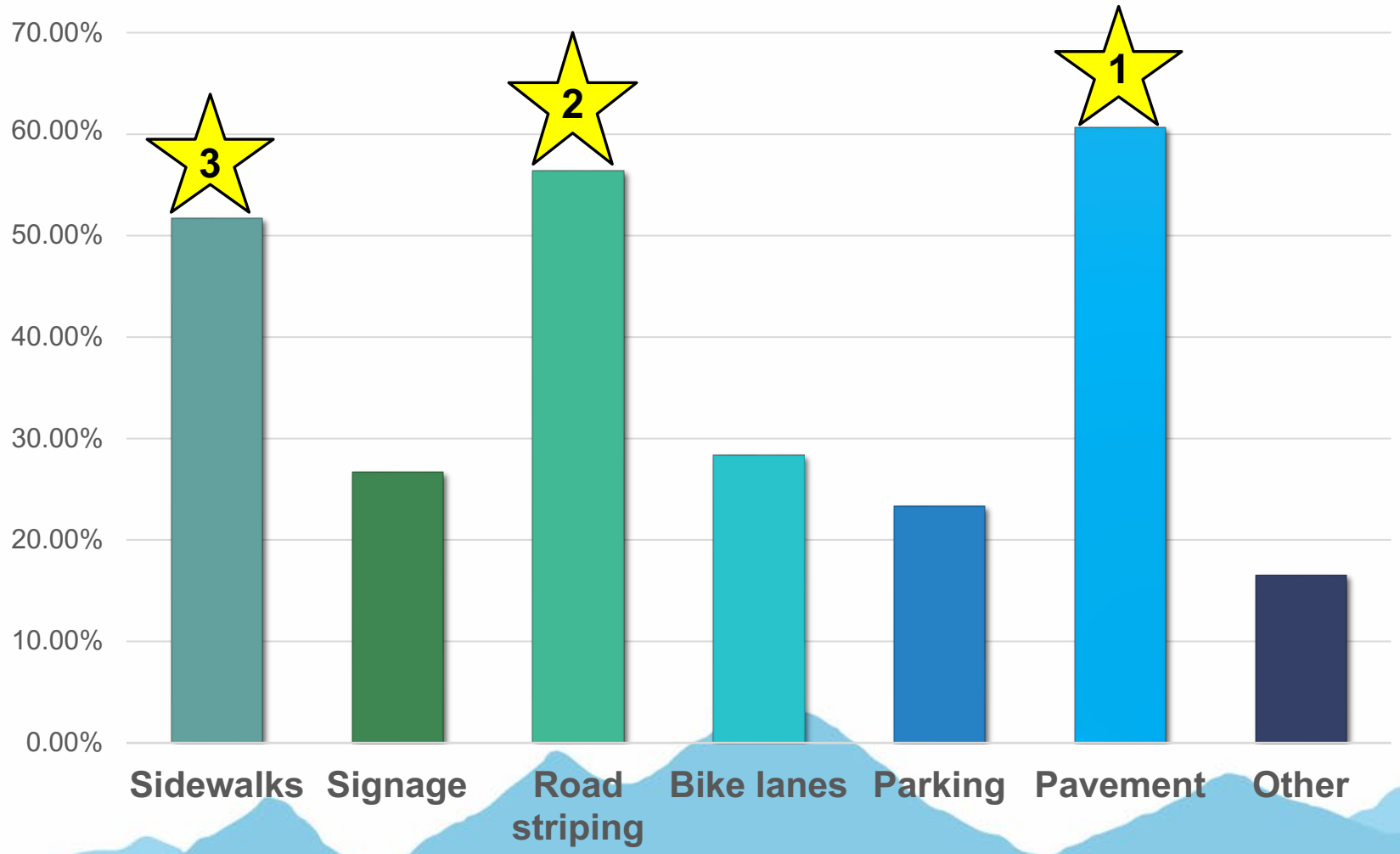


"Often they just fill in holes in our roads. The next year those repairs often come out. We end up driving on what feels like a dirt or gravel road."

"East-West traffic congestion is a particular problem."

Most Common Concerns

Improvement & Goals



Safety Concerns

Traffic Congestion

"Jordan landing. High traffic around Walmart. Hard to see around corners and vehicles when turning."

"The exits from Bangerter for 6200 s, 7000 a, and 7800 South need to flow far better than they currently do."

"East bound on 7800 south by Jordan landing, the left turn lane into JL is too short and causes back up in the east bound lanes."

"Cars merging just west of Mountain View Next to the entrance to that park and neighborhood."

What are we doing with the results?

We used the survey results in combination with other data to help develop the overall transportation master plan.

D ft Plan

REVIEW OUR STORY MAP

Jeremy Searle
Project Manager

Shawn Seager
Regional Planner

Scott Johnson
Traffic Engineer

Jordan King
Public Engagement Manager

Nate Nelson
City Engineer

Brian Clegg
Public Works Director

Nestor Gallo
Traffic Engineer

Marie Magers
Public Information Manager

Question Report

Report Generated:		5/24/2024 9:37
Topic	Webinar ID	# Question
West Jordan Transportation Master Plan Public Meeting	956 0498 5153	18

Question Details

#	Question	Answer
1	I know you're not UTA, but if you have any insight, I'd be eager to hear! UTA's five-year plan calls for a new rapid bus route from the 5600 W. Old Bingham Highway TRAX station to downtown Salt Lake. Two questions: 1. The five-year plan calls for it to be ready in August 2027. Have you heard anything differently? I'm hoping it could be pushed up a bit. 2. Where would the stops be? Would any of them be near existing TRAX stations? Even if it dropped passengers off near the Airport TRAX station, that has the potential to shorten my commute quite a bit.	live answered
2	Is the city looking into hiring private transportation for the west side now that it is allowed?	live answered
3	Do the models consider the effects of induced demand? Building more lanes doesn’t fix congestion. See: Houston, Los Angeles, etc.	live answered
4	it is really hard to hear	live answered
5	For decades, there has been discussion about significanly improved westside east-west highways similar to Van Winkle Expressway or Bangerter Highway (pre-limited access). Even a higher-speed road like 114th South. But nothing has every happened. It would take an expensive amount of taking but really seems necessary. 90th South appears to be the best place for this. I know it's painful; UDOT took my parents' home of 58 years, which killed them. But it seems there's been nothing concrete planned. Has all regional discussion on this stopped?	live answered
6	7 lanes don't help without creating a 55 mph road on 90th South.	live answered
7	You mentioned multimodal, are there any initiatives to a complete streets program similar to SLC, where each project must meet a multimodal design book? I see projects being built with no multimodal designs now.	live answered
8	why was the speed limit on New Bingham Hwy/Grizzly Way reduced?	live answered
9	Thank you!!!	live answered
10	The Roadway Projects map shows Mountain View south of Old Bingham Highway being a Phase #3 project while north of there is a Phase #2 project. That's the opposite of what you have told us. Could you clarify?	live answered
11	Will 7000 south be widened from airport westbound once 7000 south crosses mountain view and U-111?	live answered
12	thank you	live answered
13	Can you post the letter for the reduced speed on "Copper Hills Pkwy". was there any pushback on the reduced speed? That crossing is rarely used, in fact in the 12 years since I have lived out here I have never seen a train use that crossing. I actually thought it was not in use.	live answered
14	Are we also integrating with zoning to reduce congestion? Bringing some gentle commercial closer to residential areas to reduce trips, see the new integrated development on the west side. By gentle commercial, such as coffee shops, barber shop, etc. if we are not already doing so, I would support some added commercial, there are large spots in our community without commercial nearby.	live answered
15	Thank you for all your excellent work and for the city's commitment to this.	live answered
16	What is your plan for 7800 S. and is it to be widened between Midvale and Bangerter? Also why are buildings being allowed to be built so close to the roadway considering we have the issue with east/west congestion.	live answered
17	7800 S. from Redwood over towards Midvale area	live answered
18	That is the area I was talking about	live answered

WEST JORDAN
UTAH

APPENDIX E

Cost Estimates

ENGINEER'S ESTIMATE (2024 COSTS)				
7000 South & High Bluff Drive				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$67,000.00
Public Information Services	1	lump	2.00%	$14,100.00
Traffic Control	1	lump	10.00%	$70,500.00
Survey	1	lump	5.00%	$35,300.00
				$186,900.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	1,233	cu yd	-$ 24.00	$29,603.56
Granular Borrow (Plan Quantity)	1,233	cu yd	-$ 35.00	$43,171.85
Untreated Base Course	1, 891	Ton	-$ 40.00	$75,658.49
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	998	Ton	-$ 150.00	$149,686.40
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$504,260.70
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	200	ft	-$ 125.00	$25,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$81,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$40,000.00	$40,000.00
Lighting at roundabout (assume 8 lights)	8	Each	$8,000.00	$64,000.00
				$104,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$15,000.00	$15,000.00
				$15,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$891,160.70**
			Contingency (30%) $	**$267,348.21**
			BID ITEMS TOTAL $	**$1,158,508.91**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	6,000	sq ft	$15.00	$90,000.00
Assuming 5' wide construction easement	5,000	sq ft	$3.00	$15,000.00
				$105,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$139,021.07	$139,021.07
				$139,021.07
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$139,021.07	$139,021.07
				$139,021.07
			BID ITEMS TOTAL $	**$1,158,508.91**
			NON-BID ITEMS TOTAL $	**$383,042.14**
			GRAND TOTAL $	**$1,541,551.04**

ENGINEER'S ESTIMATE (2024 COSTS)				
7200 West & 8200 South				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$67,000.00
Public Information Services	1	lump	2.00%	$14,100.00
Traffic Control	1	lump	10.00%	$70,500.00
Survey	1	lump	5.00%	$35,300.00
				$186,900.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	1,233	cu yd	-$ 24.00	$29,603.56
Granular Borrow (Plan Quantity)	1,233	cu yd	-$ 35.00	$43,171.85
Untreated Base Course	1, 891	Ton	-$ 40.00	$75,658.49
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	998	Ton	-$ 150.00	$149,686.40
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$504,260.70
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	200	ft	-$ 125.00	$25,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$81,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$40,000.00	$40,000.00
Lighting at roundabout (assume 8 lights)	8	Each	$8,000.00	$64,000.00
				$104,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$15,000.00	$15,000.00
				$15,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$891,160.70**
			Contingency (30%) $	**$267,348.21**
			BID ITEMS TOTAL $	**$1,158,508.91**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	4,000	sq ft	$15.00	$60,000.00
Assuming 5' wide construction easement	1,000	sq ft	$3.00	$3,000.00
				$63,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$139,021.07	$139,021.07
				$139,021.07
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$139,021.07	$139,021.07
				$139,021.07
			BID ITEMS TOTAL $	**$1,158,508.91**
			NON-BID ITEMS TOTAL $	**$341,042.14**
			GRAND TOTAL $	**$1,499,551.04**

ENGINEER'S ESTIMATE (2024 COSTS)				
7200 West & 8600 South				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$55,500.00
Public Information Services	1	lump	2.00%	$11,700.00
Traffic Control	1	lump	10.00%	$58,400.00
Survey	1	lump	5.00%	$29,200.00
				$154,800.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	952	cu yd	-$ 24.00	$22,848.00
Granular Borrow (Plan Quantity)	952	cu yd	-$ 35.00	$33,320.00
Untreated Base Course	1, 186	Ton	-$ 40.00	$47,426.99
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	626	Ton	-$ 150.00	$93,831.84
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$403,567.23
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	200	ft	-$ 125.00	$25,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$81,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$20,000.00	$20,000.00
Lighting at roundabout (assume 8 lights)	8	Each	$8,000.00	$64,000.00
				$84,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$15,000.00	$15,000.00
				$15,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$738,367.23**
			Contingency (30%) $	**$221,510.17**
			BID ITEMS TOTAL $	**$959,877.39**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	4,000	sq ft	$15.00	$60,000.00
Assuming 5' wide construction easement	1,000	sq ft	$3.00	$3,000.00
				$63,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$115,185.29	$115,185.29
				$115,185.29
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$115,185.29	$115,185.29
				$115,185.29
			BID ITEMS TOTAL $	**$959,877.39**
			NON-BID ITEMS TOTAL $	**$293,370.57**
			GRAND TOTAL $	**$1,253,247.97**

ENGINEER'S ESTIMATE (2024 COSTS)				
6700 West & 8600 South				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$65,100.00
Public Information Services	1	lump	2.00%	$13,700.00
Traffic Control	1	lump	10.00%	$68,500.00
Survey	1	lump	5.00%	$34,300.00
				$181,600.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	1,233	cu yd	-$ 24.00	$29,603.56
Granular Borrow (Plan Quantity)	1,233	cu yd	-$ 35.00	$43,171.85
Untreated Base Course	1, 891	Ton	-$ 40.00	$75,658.49
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	998	Ton	-$ 150.00	$149,686.40
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$504,260.70
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	200	ft	-$ 125.00	$25,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$81,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$20,000.00	$20,000.00
Lighting at roundabout (assume 8 lights)	8	Each	$8,000.00	$64,000.00
				$84,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$15,000.00	$15,000.00
				$15,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$865,860.70**
			Contingency (30%) $	**$259,758.21**
			BID ITEMS TOTAL $	**$1,125,618.91**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	4,000	sq ft	$15.00	$60,000.00
Assuming 5' wide construction easement	1,000	sq ft	$3.00	$3,000.00
				$63,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$135,074.27	$135,074.27
				$135,074.27
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$135,074.27	$135,074.27
				$135,074.27
			BID ITEMS TOTAL $	**$1,125,618.91**
			NON-BID ITEMS TOTAL $	**$333,148.54**
			GRAND TOTAL $	**$1,458,767.44**

ENGINEER'S ESTIMATE (2024 COSTS)				
6400 West & 7400 South				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$57,400.00
Public Information Services	1	lump	2.00%	$12,100.00
Traffic Control	1	lump	10.00%	$60,400.00
Survey	1	lump	5.00%	$30,200.00
				$160,100.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	952	cu yd	-$ 24.00	$22,848.00
Granular Borrow (Plan Quantity)	952	cu yd	-$ 35.00	$33,320.00
Untreated Base Course	1, 186	Ton	-$ 40.00	$47,426.99
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	626	Ton	-$ 150.00	$93,831.84
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$403,567.23
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	200	ft	-$ 125.00	$25,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$81,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$40,000.00	$40,000.00
Lighting at roundabout (assume 8 lights)	8	Each	$8,000.00	$64,000.00
				$104,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$15,000.00	$15,000.00
				$15,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$763,667.23**
			Contingency (30%) $	**$229,100.17**
			BID ITEMS TOTAL $	**$992,767.39**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout		sq ft	$15.00	$0.00
Assuming 5' wide construction easement	5,000	sq ft	$3.00	$15,000.00
				$15,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$119,132.09	$119,132.09
				$119,132.09
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$119,132.09	$119,132.09
				$119,132.09
			BID ITEMS TOTAL $	**$992,767.39**
			NON-BID ITEMS TOTAL $	**$253,264.17**
			GRAND TOTAL $	**$1,246,031.57**

ENGINEER'S ESTIMATE (2024 COSTS)				
6200 West & 7800 South				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$67,000.00
Public Information Services	1	lump	2.00%	$14,100.00
Traffic Control	1	lump	10.00%	$70,500.00
Survey	1	lump	5.00%	$35,300.00
				$186,900.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	1,233	cu yd	-$ 24.00	$29,603.56
Granular Borrow (Plan Quantity)	1,233	cu yd	-$ 35.00	$43,171.85
Untreated Base Course	1, 891	Ton	-$ 40.00	$75,658.49
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	998	Ton	-$ 150.00	$149,686.40
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$504,260.70
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	200	ft	-$ 125.00	$25,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$81,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$40,000.00	$40,000.00
Lighting at roundabout (assume 8 lights)	8	Each	$8,000.00	$64,000.00
				$104,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$15,000.00	$15,000.00
				$15,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$891,160.70**
			Contingency (30%) $	**$267,348.21**
			BID ITEMS TOTAL $	**$1,158,508.91**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	7,000	sq ft	$15.00	$105,000.00
Assuming 5' wide construction easement	5,000	sq ft	$3.00	$15,000.00
				$120,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$139,021.07	$139,021.07
				$139,021.07
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$139,021.07	$139,021.07
				$139,021.07
			BID ITEMS TOTAL $	**$1,158,508.91**
			NON-BID ITEMS TOTAL $	**$398,042.14**
			GRAND TOTAL $	**$1,556,551.04**

ENGINEER'S ESTIMATE (2024 COSTS)				
6400 West & 7600 South				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$62,100.00
Public Information Services	1	lump	2.00%	$13,100.00
Traffic Control	1	lump	10.00%	$65,400.00
Survey	1	lump	5.00%	$32,700.00
				$173,300.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	952	cu yd	-$ 24.00	$22,848.00
Granular Borrow (Plan Quantity)	952	cu yd	-$ 35.00	$33,320.00
Untreated Base Course	1, 186	Ton	-$ 40.00	$47,426.99
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	626	Ton	-$ 150.00	$93,831.84
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$403,567.23
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	600	ft	-$ 125.00	$75,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$131,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$40,000.00	$40,000.00
Lighting at roundabout (assume 8 lights)	8	Each	$8,000.00	$64,000.00
				$104,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$15,000.00	$15,000.00
				$15,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$826,867.23**
			Contingency (30%) $	**$248,060.17**
			BID ITEMS TOTAL $	**$1,074,927.39**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	6,000	sq ft	$15.00	$90,000.00
Assuming 5' wide construction easement	5,000	sq ft	$3.00	$15,000.00
				$105,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$128,991.29	$128,991.29
				$128,991.29
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$128,991.29	$128,991.29
				$128,991.29
			BID ITEMS TOTAL $	**$1,074,927.39**
			NON-BID ITEMS TOTAL $	**$362,982.57**
			GRAND TOTAL $	**$1,437,909.97**

ENGINEER'S ESTIMATE (2024 COSTS)				
7300 West and 9000 South				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$55,500.00
Public Information Services	1	lump	2.00%	$11,700.00
Traffic Control	1	lump	10.00%	$58,400.00
Survey	1	lump	5.00%	$29,200.00
				$154,800.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	952	cu yd	-$ 24.00	$22,848.00
Granular Borrow (Plan Quantity)	952	cu yd	-$ 35.00	$33,320.00
Untreated Base Course	1, 186	Ton	-$ 40.00	$47,426.99
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	626	Ton	-$ 150.00	$93,831.84
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$403,567.23
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	200	ft	-$ 125.00	$25,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$81,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$20,000.00	$20,000.00
Lighting at roundabout (assume 8 lights)	8	Each	$8,000.00	$64,000.00
				$84,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$15,000.00	$15,000.00
				$15,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$738,367.23**
			Contingency (30%) $	**$221,510.17**
			BID ITEMS TOTAL $	**$959,877.39**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	4,000	sq ft	$15.00	$60,000.00
Assuming 5' wide construction easement	1,000	sq ft	$3.00	$3,000.00
				$63,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$115,185.29	$115,185.29
				$115,185.29
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$115,185.29	$115,185.29
				$115,185.29
			BID ITEMS TOTAL $	**$959,877.39**
			NON-BID ITEMS TOTAL $	**$293,370.57**
			GRAND TOTAL $	**$1,253,247.97**

ENGINEER'S ESTIMATE (2024 COSTS)				
6400 West and 7800 South				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$69,300.00
Public Information Services	1	lump	2.00%	$14,600.00
Traffic Control	1	lump	10.00%	$73,000.00
Survey	1	lump	5.00%	$36,500.00
				$193,400.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	1,233	cu yd	-$ 24.00	$29,603.56
Granular Borrow (Plan Quantity)	1,233	cu yd	-$ 35.00	$43,171.85
Untreated Base Course	1, 891	Ton	-$ 40.00	$75,658.49
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	998	Ton	-$ 150.00	$149,686.40
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$504,260.70
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	400	ft	-$ 125.00	$50,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$106,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$40,000.00	$40,000.00
Lighting at roundabout (assume 8 lights)	8	Each	$8,000.00	$64,000.00
				$104,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$15,000.00	$15,000.00
				$15,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$922,660.70**
			Contingency (30%) $	**$276,798.21**
			BID ITEMS TOTAL $	**$1,199,458.91**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	5,000	sq ft	$15.00	$75,000.00
Assuming 5' wide construction easement	1,000	sq ft	$3.00	$3,000.00
				$78,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$143,935.07	$143,935.07
				$143,935.07
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$143,935.07	$143,935.07
				$143,935.07
			BID ITEMS TOTAL $	**$1,199,458.91**
			NON-BID ITEMS TOTAL $	**$365,870.14**
			GRAND TOTAL $	**$1,565,329.04**

ENGINEER'S ESTIMATE (2024 COSTS)				
9000 South & New Bingham Hwy				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$103,900.00
Public Information Services	1	lump	1.00%	$11,000.00
Traffic Control	1	lump	2.00%	$21,900.00
Survey	1	lump	2.00%	$21,900.00
				$158,700.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	1,300	ft	-$ 12.00	$15,600.00
Remove Concrete Sidewalk	433	sq yd	-$ 28.00	$12,133.33
Roadway Excavation (Plan Quantity)	4,444	cu yd	-$ 24.00	$106,666.67
Granular Borrow (Plan Quantity)	2,222	cu yd	-$ 35.00	$77,777.78
Untreated Base Course	900	Ton	-$ 40.00	$36,000.00
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	600	Ton	-$ 150.00	$90,000.00
Pavement Marking Paint	30	gal	-$ 80.00	$2,400.00
Pavement Message (Preformed Thermoplastic)	16	Each	-$ 250.00	$4,000.00
Concrete Curb and Gutter Type B1	1,300	ft	-$ 45.00	$58,500.00
Perpendicular/Parallel Pedestrian Access Ramp	4	Each	-$ 4,000.00	$16,000.00
Concrete Sidewalk	3,600	sq ft	-$ 15.00	$54,000.00
Chip Seal Coat, Type II	2,666.67	sq yd	-$ 40.00	$106,666.67
			-$ 12.00	
				$579,744.44
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	300	ft	-$ 125.00	$37,500.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	2	Each	-$ 5,000.00	$10,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	2	Each	-$ 2,000.00	$4,000.00
				$51,500.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
New Signal System	1	Lump	$350,000.00	$350,000.00
				$350,000.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Utility contingency	1	lump	$40,000.00	$40,000.00
Street Lighting (spaced every 200')	6.5	Each	$8,000.00	$52,000.00
Ovehead power line relocate		Each	$25,000.00	$0.00
				$92,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	1	Lump	$20,000.00	$20,000.00
				$20,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$1,251,944.44**
			Contingency (50%) $	**$625,972.22**
			BID ITEMS TOTAL $	**$1,877,916.67**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way (assuming full roadway area to 1' behind walk)	160,950	sq ft	$15.00	$2,414,250.00
Assuming 5' wide construction easement required for length of project		sq ft	$2.00	$0.00
				$2,414,250.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$225,350.00	$225,350.00
				$225,350.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (10% of Bid Items)	1	lump	$187,791.67	$187,791.67
				$187,791.67
			BID ITEMS TOTAL	**$1,877,916.67**
			NON-BID ITEMS TOTAL	**$2,827,391.67**
			Grand Total	**$4,705,308.33**

ENGINEER'S ESTIMATE (2024 COSTS)				
6700 West & 8200 South				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$77,400.00
Public Information Services	1	lump	2.00%	$16,300.00
Traffic Control	1	lump	10.00%	$81,500.00
Survey	1	lump	5.00%	$40,800.00
				$216,000.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	1,233	cu yd	-$ 24.00	$29,603.56
Granular Borrow (Plan Quantity)	1,233	cu yd	-$ 35.00	$43,171.85
Untreated Base Course	1, 891	Ton	-$ 40.00	$75,658.49
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	998	Ton	-$ 150.00	$149,686.40
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$504,260.70
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	600	ft	-$ 125.00	$75,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$131,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$100,000.00	$100,000.00
Lighting at roundabout (assume 8 lights)	8	Each	$8,000.00	$64,000.00
				$164,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$15,000.00	$15,000.00
				$15,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$1,030,260.70**
			Contingency (30%) $	**$309,078.21**
			BID ITEMS TOTAL $	**$1,339,338.91**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	8,000	sq ft	$15.00	$120,000.00
Assuming 5' wide construction easement	1,000	sq ft	$3.00	$3,000.00
				$123,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$160,720.67	$160,720.67
				$160,720.67
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$160,720.67	$160,720.67
				$160,720.67
			BID ITEMS TOTAL $	**$1,339,338.91**
			NON-BID ITEMS TOTAL $	**$444,441.34**
			GRAND TOTAL $	**$1,783,780.24**

ENGINEER'S ESTIMATE (2024 COSTS)				
5600 West & 7400 South				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$79,000.00
Public Information Services	1	lump	2.00%	$16,700.00
Traffic Control	1	lump	10.00%	$83,200.00
Survey	1	lump	5.00%	$41,600.00
				$220,500.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	1,233	cu yd	-$ 24.00	$29,603.56
Granular Borrow (Plan Quantity)	1,233	cu yd	-$ 35.00	$43,171.85
Untreated Base Course	1, 891	Ton	-$ 40.00	$75,658.49
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	998	Ton	-$ 150.00	$149,686.40
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$504,260.70
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	600	ft	-$ 125.00	$75,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$131,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$75,000.00	$75,000.00
Lighting at roundabout (assume 12 lights)	12	Each	$8,000.00	$96,000.00
				$171,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$25,000.00	$25,000.00
				$25,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$1,051,760.70**
			Contingency (30%) $	**$315,528.21**
			BID ITEMS TOTAL $	**$1,367,288.91**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	8,000	sq ft	$15.00	$120,000.00
Assuming 5' wide construction easement	1,000	sq ft	$3.00	$3,000.00
				$123,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (15% of Bid Items)	1	lump	$205,093.34	$205,093.34
				$205,093.34
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$164,074.67	$164,074.67
				$164,074.67
			BID ITEMS TOTAL $	**$1,367,288.91**
			NON-BID ITEMS TOTAL $	**$492,168.00**
			GRAND TOTAL $	**$1,859,456.91**

ENGINEER'S ESTIMATE (2024 COSTS)				
5600 West & 8000 South				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$83,800.00
Public Information Services	1	lump	2.00%	$17,700.00
Traffic Control	1	lump	10.00%	$88,200.00
Survey	1	lump	5.00%	$44,100.00
				$233,800.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	1,233	cu yd	-$ 24.00	$29,603.56
Granular Borrow (Plan Quantity)	1,233	cu yd	-$ 35.00	$43,171.85
Untreated Base Course	1, 891	Ton	-$ 40.00	$75,658.49
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	998	Ton	-$ 150.00	$149,686.40
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$504,260.70
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	600	ft	-$ 125.00	$75,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$131,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$125,000.00	$125,000.00
Lighting at roundabout (assume 12 lights)	12	Each	$8,000.00	$96,000.00
				$221,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$25,000.00	$25,000.00
				$25,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$1,115,060.70**
			Contingency (30%) $	**$334,518.21**
			BID ITEMS TOTAL $	**$1,449,578.91**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	8,000	sq ft	$15.00	$120,000.00
Assuming 5' wide construction easement	1,000	sq ft	$3.00	$3,000.00
				$123,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (15% of Bid Items)	1	lump	$217,436.84	$217,436.84
				$217,436.84
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$173,949.47	$173,949.47
				$173,949.47
			BID ITEMS TOTAL $	**$1,449,578.91**
			NON-BID ITEMS TOTAL $	**$514,386.30**
			GRAND TOTAL $	**$1,963,965.21**

ENGINEER'S ESTIMATE (2024 COSTS)				
Grizzly Way & 7000 South				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$73,900.00
Public Information Services	1	lump	2.00%	$15,600.00
Traffic Control	1	lump	10.00%	$77,800.00
Survey	1	lump	5.00%	$38,900.00
				$206,200.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	1,085	cu yd	-$ 24.00	$26,048.00
Granular Borrow (Plan Quantity)	1,085	cu yd	-$ 35.00	$37,986.67
Untreated Base Course	1,403	Ton	-$ 40.00	$56,126.99
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	740	Ton	-$ 150.00	$111,044.34
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$437,346.39
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	600	ft	-$ 125.00	$75,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$131,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$125,000.00	$125,000.00
Lighting at roundabout (assume 8 lights)	8	Each	$8,000.00	$64,000.00
				$189,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$20,000.00	$20,000.00
				$20,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$983,546.39**
			Contingency (30%) $	**$295,063.92**
			BID ITEMS TOTAL $	**$1,278,610.31**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	5,000	sq ft	$15.00	$75,000.00
Assuming 5' wide construction easement	1,000	sq ft	$3.00	$3,000.00
				$78,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (15% of Bid Items)	1	lump	$191,791.55	$191,791.55
				$191,791.55
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$153,433.24	$153,433.24
				$153,433.24
			BID ITEMS TOTAL $	**$1,278,610.31**
			NON-BID ITEMS TOTAL $	**$423,224.78**
			GRAND TOTAL $	**$1,701,835.10**

ENGINEER'S ESTIMATE (2024 COSTS)				
9400 South & 7500 West				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$55,500.00
Public Information Services	1	lump	2.00%	$11,700.00
Traffic Control	1	lump	10.00%	$58,400.00
Survey	1	lump	5.00%	$29,200.00
				$154,800.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	952	cu yd	-$ 24.00	$22,848.00
Granular Borrow (Plan Quantity)	952	cu yd	-$ 35.00	$33,320.00
Untreated Base Course	1, 186	Ton	-$ 40.00	$47,426.99
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	626	Ton	-$ 150.00	$93,831.84
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$403,567.23
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	200	ft	-$ 125.00	$25,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$81,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$20,000.00	$20,000.00
Lighting at roundabout (assume 8 lights)	8	Each	$8,000.00	$64,000.00
				$84,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$15,000.00	$15,000.00
				$15,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$738,367.23**
			Contingency (30%) $	**$221,510.17**
			BID ITEMS TOTAL $	**$959,877.39**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	4,000	sq ft	$15.00	$60,000.00
Assuming 5' wide construction easement	1,000	sq ft	$3.00	$3,000.00
				$63,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$115,185.29	$115,185.29
				$115,185.29
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$115,185.29	$115,185.29
				$115,185.29
			BID ITEMS TOTAL $	**$959,877.39**
			NON-BID ITEMS TOTAL $	**$293,370.57**
			GRAND TOTAL $	**$1,253,247.97**

ENGINEER'S ESTIMATE (2024 COSTS)				
7500 West & 10000 South				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$55,500.00
Public Information Services	1	lump	2.00%	$11,700.00
Traffic Control	1	lump	10.00%	$58,400.00
Survey	1	lump	5.00%	$29,200.00
				$154,800.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	200	ft	-$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	-$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	952	cu yd	-$ 24.00	$22,848.00
Granular Borrow (Plan Quantity)	952	cu yd	-$ 35.00	$33,320.00
Untreated Base Course	1, 186	Ton	-$ 40.00	$47,426.99
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	626	Ton	-$ 150.00	$93,831.84
Pavement Marking Paint	100	gal	-$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	-$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	-$ 45.00	$36,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	-$ 15.00	$60,000.00
Concrete Curb and Gutter Type M1	437	ft	-$ 40.00	$17,480.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	-$ 12.00	$40,910.40
				$403,567.23
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	200	ft	-$ 125.00	$25,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$81,000.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
utility relocates	1	lump	$20,000.00	$20,000.00
Lighting at roundabout (assume 8 lights)	8	Each	$8,000.00	$64,000.00
				$84,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$15,000.00	$15,000.00
				$15,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00
			BID ITEMS $	**$738,367.23**
			Contingency (30%) $	**$221,510.17**
			BID ITEMS TOTAL $	**$959,877.39**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	4,000	sq ft	$15.00	$60,000.00
Assuming 5' wide construction easement	1,000	sq ft	$3.00	$3,000.00
				$63,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$115,185.29	$115,185.29
				$115,185.29
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$115,185.29	$115,185.29
				$115,185.29
			BID ITEMS TOTAL $	**$959,877.39**
			NON-BID ITEMS TOTAL $	**$293,370.57**
			GRAND TOTAL $	**$1,253,247.97**

ENGINEER'S ESTIMATE (2024 COSTS)				
7800 South Widening from SR-111 to 5600 West				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$866,700.00
Public Information Services	1	lump	1.00%	$91,300.00
Traffic Control	1	lump	10.00%	$912,300.00
Survey	1	lump	2.00%	$182,500.00
				$2,052,800.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	8,600	ft	-$ 12.00	$103,200.00
Remove Concrete Sidewalk	4,778	sq yd	-$ 28.00	$133,777.78
Roadway Excavation (Plan Quantity)	38,222	cu yd	-$ 24.00	$917,333.33
Granular Borrow (Plan Quantity)	19,111	cu yd	-$ 35.00	$668,888.89
Untreated Base Course	7,740	Ton	-$ 40.00	$309,600.00
Remove Concrete Driveway	1,320	sq yd	-$ 28.00	$36,960.00
HMA - 1/2 inch	5,160	Ton	-$ 150.00	$774,000.00
Pavement Marking Paint	200	gal	-$ 80.00	$16,000.00
Pavement Message (Preformed Thermoplastic)	100	Each	-$ 250.00	$25,000.00
Concrete Curb and Gutter Type B1	8,600	ft	-$ 45.00	$387,000.00
Perpendicular/Parallel Pedestrian Access Ramp	30	Each	-$ 4,000.00	$120,000.00
Concrete Sidewalk	43,000	sq ft	-$ 15.00	$645,000.00
Chip Seal Coat, Type II	80,267	sq yd	-$ 5.00	$401,333.33
				$4,538,093.33
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	9102	ft	-$ 125.00	$1,137,750.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	29	Each	-$ 5,000.00	$145,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	29	Each	-$ 2,000.00	$58,000.00
				$1,340,750.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Modify 3 signals	3	lump	$300,000.00	$900,000.00
				$900,000.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Utility Contingency (assume minimal utiities since it is a green field road)	1	lump	$2,000,000.00	$2,000,000.00
Street Lighting (spaced every 200')	43	Each	$8,000.00	$344,000.00
				$2,344,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
	1	Lump		$0.00
				$0.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Widen Railroad Structure		Lump		$0.00
				$0.00
			BID ITEMS $	**$11,175,643.33**
			Contingency (40%) $	**$4,470,257.33**
			BID ITEMS TOTAL $	**$15,645,900.67**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way (assuming full roadway area to 1' behind walk)		sq ft	$17.00	$0.00
Assuming 5' wide construction easement required for length of project	43,000	sq ft	$3.00	$129,000.00
Potential full right of way takes		each	$600,000.00	$0.00
				$129,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (10% of Bid Items)	1	lump	$1,564,590.07	$1,564,590.07
				$1,564,590.07
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (10% of Bid Items)	1	lump	$1,564,590.07	$1,564,590.07
				$1,564,590.07
			BID ITEMS TOTAL	**$15,645,900.67**
			NON-BID ITEMS TOTAL	**$3,258,180.13**
			TOTAL	**$18,904,080.80**

ENGINEER'S ESTIMATE (2024 COSTS)				
Old Bingham Highway: 5600 West to Mountain View Corridor				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$284,900.00
Public Information Services	1	lump	1.00%	$30,000.00
Traffic Control	1	lump	10.00%	$299,900.00
Survey	1	lump	2.00%	$60,000.00
				$674,800.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	4,030	ft	-$ 12.00	$48,360.00
Remove Concrete Sidewalk	2,239	sq yd	-$ 28.00	$62,688.89
Roadway Excavation (Plan Quantity)	8,956	cu yd	-$ 24.00	$214,933.33
Granular Borrow (Plan Quantity)	4,478	cu yd	-$ 35.00	$156,722.22
Untreated Base Course	1,814	Ton	-$ 40.00	$72,540.00
Remove Concrete Driveway	1,320	sq yd	-$ 28.00	$36,960.00
HMA - 1/2 inch	1,209	Ton	-$ 150.00	$181,350.00
Pavement Marking Paint	200	gal	-$ 80.00	$16,000.00
Pavement Message (Preformed Thermoplastic)	100	Each	-$ 250.00	$25,000.00
Concrete Curb and Gutter Type B1	4,030	ft	-$ 45.00	$181,350.00
Perpendicular/Parallel Pedestrian Access Ramp	30	Each	-$ 4,000.00	$120,000.00
Concrete Sidewalk	20,150	sq ft	-$ 15.00	$302,250.00
Chip Seal Coat, Type II	32,240	sq yd	-$ 5.00	$161,200.00
				$1,579,354.44
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	4266	ft	-$ 125.00	$533,250.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	14	Each	-$ 5,000.00	$70,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	14	Each	-$ 2,000.00	$28,000.00
				$631,250.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Modify 1 signal	1	lump	$200,000.00	$200,000.00
				$200,000.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Utility Contingency (assume minimal utiities since it is a green field road)	1	lump	$50,000.00	$50,000.00
Street Lighting (spaced every 200')	21	Each	$8,000.00	$168,000.00
Relocate powerline (20 poles)	1	lump	$350,000.00	$350,000.00
				$568,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	1	Lump	$20,000.00	$20,000.00
				$20,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
		Lump	$200,000.00	$0.00
				$0.00
			BID ITEMS $	**$3,673,404.44**
			Contingency (40%) $	**$1,469,361.78**
			BID ITEMS TOTAL $	**$5,142,766.22**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way (assuming full roadway area to 1' behind walk)	48,360	sq ft	$17.00	$822,120.00
Assuming 5' wide construction easement required for length of project	20,150	sq ft	$3.00	$60,450.00
Potential full right of way takes		each	$600,000.00	$0.00
				$882,570.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (10% of Bid Items)	1	lump	$514,276.62	$514,276.62
				$514,276.62
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (10% of Bid Items)	1	lump	$514,276.62	$514,276.62
				$514,276.62
			BID ITEMS TOTAL	**$5,142,766.22**
			NON-BID ITEMS TOTAL	**$1,911,123.24**
			TOTAL	**$7,053,889.47**

ENGINEER'S ESTIMATE (2024 COSTS)				
4000 West; Old Bingham Hwy to South Jordan Border				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$616,700.00
Public Information Services	1	lump	1.00%	$65,000.00
Traffic Control	1	lump	10.00%	$649,200.00
Survey	1	lump	2.00%	$129,900.00
				$1,460,800.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	3,800	ft	-$ 12.00	$45,600.00
Remove Concrete Sidewalk	2,111	sq yd	-$ 28.00	$59,111.11
Roadway Excavation (Plan Quantity)	16,889	cu yd	-$ 24.00	$405,333.33
Granular Borrow (Plan Quantity)	8,444	cu yd	-$ 35.00	$295,555.56
Untreated Base Course	3,420	Ton	-$ 40.00	$136,800.00
Remove Concrete Driveway	1,320	sq yd	-$ 28.00	$36,960.00
HMA - 1/2 inch	2,280	Ton	-$ 150.00	$342,000.00
Pavement Marking Paint	200	gal	-$ 80.00	$16,000.00
Pavement Message (Preformed Thermoplastic)	100	Each	-$ 250.00	$25,000.00
Concrete Curb and Gutter Type B1	3,800	ft	-$ 45.00	$171,000.00
Perpendicular/Parallel Pedestrian Access Ramp	30	Each	-$ 4,000.00	$120,000.00
Concrete Sidewalk	19,000	sq ft	-$ 15.00	$285,000.00
Chip Seal Coat, Type II	35,467	sq yd	-$ 5.00	$177,333.33
				$2,115,693.33
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	4022	ft	-$ 125.00	$502,750.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	13	Each	-$ 5,000.00	$65,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	13	Each	-$ 2,000.00	$26,000.00
				$593,750.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Modify 2 signals	2	lump	$300,000.00	$600,000.00
				$600,000.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Utility Contingency (assume minimal utiities since it is a green field road)	1	lump	$1,000,000.00	$1,000,000.00
Street Lighting (spaced every 200')	19	Each	$8,000.00	$152,000.00
Rail crossing	1	lump	$2,000,000.00	$2,000,000.00
				$3,152,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
	1	Lump	$30,000.00	$30,000.00
				$30,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Widen Railroad Structure		Lump		$0.00
				$0.00
			BID ITEMS $	**$7,952,243.33**
			Contingency (40%) $	**$3,180,897.33**
			BID ITEMS TOTAL $	**$11,133,140.67**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way (assuming full roadway area to 1' behind walk)	91,200	sq ft	$17.00	$1,550,400.00
Assuming 5' wide construction easement required for length of project	19,000	sq ft	$3.00	$57,000.00
Potential full right of way takes	4	each	$600,000.00	$2,400,000.00
				$4,007,400.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (10% of Bid Items)	1	lump	$1,113,314.07	$1,113,314.07
				$1,113,314.07
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (10% of Bid Items)	1	lump	$1,113,314.07	$1,113,314.07
				$1,113,314.07
			BID ITEMS TOTAL	**$11,133,140.67**
			NON-BID ITEMS TOTAL	**$6,234,028.13**
			TOTAL	**$17,367,168.80**

ENGINEER'S ESTIMATE (2024 COSTS)				
New Bingham Highway				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$144,200.00
Public Information Services	1	lump	1.00%	$15,200.00
Traffic Control	1	lump	10.00%	$151,800.00
Survey	1	lump	2.00%	$30,400.00
				$341,600.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	2,200	ft	-$ 12.00	$26,400.00
Remove Concrete Sidewalk	1,222	sq yd	-$ 28.00	$34,222.22
Roadway Excavation (Plan Quantity)	4,889	cu yd	-$ 24.00	$117,333.33
Granular Borrow (Plan Quantity)	2,444	cu yd	-$ 35.00	$85,555.56
Untreated Base Course	990	Ton	-$ 40.00	$39,600.00
Remove Concrete Driveway	1,320	sq yd	-$ 28.00	$36,960.00
HMA - 1/2 inch	660	Ton	-$ 150.00	$99,000.00
Pavement Marking Paint	200	gal	-$ 80.00	$16,000.00
Pavement Message (Preformed Thermoplastic)	100	Each	-$ 250.00	$25,000.00
Concrete Curb and Gutter Type B1	2,200	ft	-$ 45.00	$99,000.00
Perpendicular/Parallel Pedestrian Access Ramp	30	Each	-$ 4,000.00	$120,000.00
Concrete Sidewalk	11,000	sq ft	-$ 15.00	$165,000.00
Chip Seal Coat, Type II	17,600	sq yd	-$ 5.00	$88,000.00
				$952,071.11
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	2329	ft	-$ 125.00	$291,125.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	-$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	-$ 2,000.00	$16,000.00
				$347,125.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Modify 2 signals		lump	$300,000.00	$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Utility Contingency (assume minimal utiities since it is a green field road)	1	lump	$100,000.00	$100,000.00
Street Lighting (spaced every 200')	11	Each	$8,000.00	$88,000.00
Rail crossing		lump	$2,000,000.00	$0.00
				$188,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
	1	Lump	$30,000.00	$30,000.00
				$30,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Widen Railroad Structure		Lump		$0.00
				$0.00
			BID ITEMS $	**$1,858,796.11**
			Contingency (40%) $	**$743,518.44**
			BID ITEMS TOTAL $	**$2,602,314.56**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way (assuming full roadway area to 1' behind walk)	26,400	sq ft	$17.00	$448,800.00
Assuming 5' wide construction easement required for length of project	11,000	sq ft	$3.00	$33,000.00
Potential full right of way takes		each	$600,000.00	$0.00
				$481,800.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (10% of Bid Items)	1	lump	$260,231.46	$260,231.46
				$260,231.46
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (10% of Bid Items)	1	lump	$260,231.46	$260,231.46
				$260,231.46
			BID ITEMS TOTAL	**$2,602,314.56**
			NON-BID ITEMS TOTAL	**$1,002,262.91**
			TOTAL	**$3,604,577.47**

ENGINEER'S ESTIMATE (2024 COSTS)				
2 Lane New Roadway				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$73,600.00
Public Information Services	1	lump	1.00%	$7,800.00
Traffic Control	1	lump	2.00%	$15,500.00
Survey	1	lump	2.00%	$15,500.00
				$112,400.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	0	ft	-$ 12.00	$0.00
Remove Concrete Sidewalk	0	sq yd	-$ 28.00	$0.00
Roadway Excavation (Plan Quantity)	1,534	cu yd	-$ 24.00	$36,814.81
Granular Borrow (Plan Quantity)	1,595	cu yd	-$ 35.00	$55,825.00
Untreated Base Course	1,595	Ton	-$ 40.00	$63,800.00
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	1,403	Ton	-$ 130.00	$182,325.00
Pavement Marking Paint	50	gal	-$ 80.00	$4,000.00
Pavement Message (Preformed Thermoplastic)	6	Each	-$ 250.00	$1,500.00
Concrete Curb and Gutter Type B1	2,000	ft	-$ 35.00	$70,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	12,000	sq ft	-$ 9.00	$108,000.00
				$554,264.81
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	1059	ft	-$ 125.00	$132,375.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	4	Each	-$ 5,000.00	$20,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	4	Each	-$ 2,000.00	$8,000.00
				$160,375.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Utility Contingency (assume minimal utiities since it is a green field road)	1	lump	$20,000.00	$10,000.00
Street Lighting (spaced every 200')	5	Each	$8,000.00	$40,000.00
				$50,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	1	Lump	$10,000.00	$10,000.00
				$10,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
		Lump	$200,000.00	$0.00
				$0.00
			BID ITEMS $	**$887,039.81**
			Contingency (30%) $	**$266,111.94**
			BID ITEMS TOTAL $	**$1,153,151.76**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way (assuming full roadway area to 1' behind walk)	71,000	sq ft	$15.00	$1,065,000.00
Assuming 5' wide construction easement required for length of project	10,000	sq ft	$3.00	$30,000.00
				$1,095,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (10% of Bid Items)	1	lump	$115,315.18	$115,315.18
				$115,315.18
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (10% of Bid Items)	1	lump	$115,315.18	$115,315.18
				$115,315.18
		Per mile with Right of Way		$13,087,969.55
		Per mile without Right of Way		$6,918,910.56

ENGINEER'S ESTIMATE (2024 COSTS)				
3 Lane New Roadway				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$76,800.00
Public Information Services	1	lump	1.00%	$8,100.00
Traffic Control	1	lump	2.00%	$16,200.00
Survey	1	lump	2.00%	$16,200.00
				$117,300.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	0	ft	-$ 12.00	$0.00
Remove Concrete Sidewalk	0	sq yd	-$ 28.00	$0.00
Roadway Excavation (Plan Quantity)	1,858	cu yd	-$ 24.00	$44,592.59
Granular Borrow (Plan Quantity)	1,885	cu yd	-$ 35.00	$65,975.00
Untreated Base Course	1,885	Ton	-$ 40.00	$75,400.00
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	1,658	Ton	-$ 130.00	$215,475.00
Pavement Marking Paint	75	gal	-$ 80.00	$6,000.00
Pavement Message (Preformed Thermoplastic)	8	Each	-$ 250.00	$2,000.00
Concrete Curb and Gutter Type B1	2,000	ft	-$ 35.00	$70,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	10,000	sq ft	-$ 9.00	$90,000.00
Asphalt Path		Ton	-$ 130.00	$0.00
Ashpalt Path (UTBC)		Ton	-$ 40.00	$0.00
				$601,442.59
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	1059	ft	-$ 125.00	$132,375.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	2	Each	-$ 5,000.00	$10,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	2	Each	-$ 2,000.00	$4,000.00
				$146,375.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Utility Contingency (assume minimal utiities since it is a green field road)	1	lump	$20,000.00	$10,000.00
Street Lighting (spaced every 200')	5	Each	$8,000.00	$40,000.00
				$50,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	1	Lump	$10,000.00	$10,000.00
				$10,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
		Lump	$200,000.00	$0.00
				$0.00
			BID ITEMS $	**$925,117.59**
			Contingency (30%) $	**$277,535.28**
			BID ITEMS TOTAL $	**$1,202,652.87**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way (assuming full roadway area to 1' behind walk)	66,000	sq ft	$15.00	$990,000.00
Assuming 5' wide construction easement required for length of project	10,000	sq ft	$3.00	$30,000.00
				$1,020,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (10% of Bid Items)	1	lump	$120,265.29	$120,265.29
				$120,265.29
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (10% of Bid Items)	1	lump	$120,265.29	$120,265.29
				$120,265.29
		Per mile with Right of Way		$13,005,608.59
		Per mile without Right of Way		$7,215,917.22

ENGINEER'S ESTIMATE (2024 COSTS)				
Old Bingham Highway: 5600 West to Mountain View Corridor				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$407,000.00
Public Information Services	1	lump	1.00%	$42,900.00
Traffic Control	1	lump	10.00%	$428,400.00
Survey	1	lump	2.00%	$85,700.00
				$964,000.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter		ft	-$ 12.00	$0.00
Remove Concrete Sidewalk		sq yd	-$ 28.00	$0.00
Roadway Excavation (Plan Quantity)	18,889	cu yd	-$ 24.00	$453,333.33
Granular Borrow (Plan Quantity)	9,444	cu yd	-$ 35.00	$330,555.56
Untreated Base Course	3,825	Ton	-$ 40.00	$153,000.00
Remove Concrete Driveway	1,320	sq yd	-$ 28.00	$36,960.00
HMA - 1/2 inch	2,550	Ton	-$ 150.00	$382,500.00
Pavement Marking Paint	200	gal	-$ 80.00	$16,000.00
Pavement Message (Preformed Thermoplastic)	100	Each	-$ 250.00	$25,000.00
Concrete Curb and Gutter Type B1	8,500	ft	-$ 45.00	$382,500.00
Perpendicular/Parallel Pedestrian Access Ramp	30	Each	-$ 4,000.00	$120,000.00
Concrete Sidewalk	42,500	sq ft	-$ 15.00	$637,500.00
Chip Seal Coat, Type II	39,667	sq yd	-$ 5.00	$198,333.33
				$2,735,682.22
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	4498	ft	-$ 125.00	$562,250.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	15	Each	-$ 5,000.00	$75,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	15	Each	-$ 2,000.00	$30,000.00
				$667,250.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Modify 1 signals	1	lump	$200,000.00	$200,000.00
				$200,000.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Utility Contingency (assume minimal utiities since it is a green field road)	1	lump	$100,000.00	$100,000.00
Street Lighting (spaced every 200')	22	Each	$8,000.00	$176,000.00
Rail crossing		lump	$2,000,000.00	$0.00
Relocate utility poles	15	Each	$25,000.00	$375,000.00
				$0.00
				$651,000.00
LANDSCAPING				

Description	Quantity	Unit	Unit Price	Amount
	1	Lump	$30,000.00	$30,000.00
				$30,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Widen Railroad Structure		Lump		$0.00
				$0.00
			BID ITEMS $	**$5,247,932.22**
			Contingency (40%) $	**$2,099,172.89**
			BID ITEMS TOTAL $	**$7,347,105.11**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way (assuming full roadway area to 1' behind walk)	102,000	sq ft	$17.00	$1,734,000.00
Assuming 5' wide construction easement required for length of project	21,250	sq ft	$3.00	$63,750.00
Potential full right of way takes		each	$600,000.00	$0.00
				$1,797,750.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (10% of Bid Items)	1	lump	$734,710.51	$734,710.51
				$734,710.51
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (10% of Bid Items)	1	lump	$734,710.51	$734,710.51
				$734,710.51
			BID ITEMS TOTAL	**$7,347,105.11**
			NON-BID ITEMS TOTAL	**$3,267,171.02**
			TOTAL	**$10,614,276.13**

ENGINEER'S ESTIMATE (2024 COSTS)				
5 Lane New Roadway				
BID ITEMS				
GENERAL				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Mobilization	1	lump	9.50%	$130,600.00
Public Information Services	1	lump	1.00%	$13,800.00
Traffic Control	1	lump	2.00%	$27,500.00
Survey	1	lump	2.00%	$27,500.00
				$199,400.00
ROADWAY				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Remove Concrete Curb and Gutter	0	ft	-$ 12.00	$0.00
Remove Concrete Sidewalk	0	sq yd	-$ 28.00	$0.00
Roadway Excavation (Plan Quantity)	2,160	cu yd	-$ 24.00	$51,851.85
Granular Borrow (Plan Quantity)	2,755	cu yd	-$ 35.00	$96,425.00
Untreated Base Course	2,755	Ton	-$ 40.00	$110,200.00
Remove Concrete Driveway	0	sq yd	-$ 28.00	$0.00
HMA - 1/2 inch	2,423	Ton	-$ 150.00	$363,375.00
Pavement Marking Paint	20	gal	-$ 80.00	$1,600.00
Pavement Message (Preformed Thermoplastic)	8	Each	-$ 250.00	$2,000.00
Concrete Curb and Gutter Type B1	4,000	ft	-$ 45.00	$180,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	-$ 4,000.00	$32,000.00
Concrete Sidewalk	16,000	sq ft	-$ 15.00	$240,000.00
Chip Seal Coat, Type II	8,000	sq yd	-$ 5.00	$40,000.00
				$1,117,451.85
DRAINAGE & IRRIGATION				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
24 Inch Irrigation HDPE Pipe	1059	ft	-$ 125.00	$132,375.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	2	Each	-$ 5,000.00	$10,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	2	Each	-$ 2,000.00	$4,000.00
				$146,375.00
SIGNAL SYSTEM				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
None		lump		$0.00
				$0.00
UTILITIES				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Utility Contingency (assume minimal utiities since it is a green field road)	1	lump	$20,000.00	$10,000.00
Street Lighting (spaced every 200')	10	Each	$8,000.00	$80,000.00
				$90,000.00
LANDSCAPING				

Description	Quantity	Unit	Unit Price	Amount
Landscaping	1	Lump	$20,000.00	$20,000.00
				$20,000.00
Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
		Lump	$200,000.00	$0.00
				$0.00
			BID ITEMS $	**$1,573,226.85**
			Contingency (30%) $	**$471,968.06**
			BID ITEMS TOTAL $	**$2,045,194.91**
NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way (assuming full roadway area to 1' behind walk)	84,000	sq ft	$15.00	$1,260,000.00
Assuming 5' wide construction easement required for length of project	10,000	sq ft	$3.00	$30,000.00
				$1,290,000.00
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$245,423.39	$245,423.39
				$245,423.39
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$245,423.39	$245,423.39
				$245,423.39
		Per mile with Right of Way		$20,201,500.10
		Per mile without Right of Way		$12,680,208.43