REDWOOD ROAD

Multimodal Transportation Study

Final Report & Implementation Plan

May 2018

PREPARED FOR:

Salt Lake City
Salt Lake County
Sandy City
South Jordan City
Taylorsville City
Utah Department of Transportation
Utah Transit Authority
Wasatch Front Regional Council
West Jordan City
West Valley City

PREPARED BY:

JACOBS

In coordination with:
Avenue Consultants
Jacques & Associates
Leland Consulting Group

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Introduction

The Redwood Road Multimodal Transportation Study has identified and analyzed options for transportation improvements along Redwood Road, from Salt Lake City to South Jordan. The vision of the study is an open, inclusive collaboration that:

- Identifies a unified vision that preserves and enhances Redwood Road.
- Creates a Preferred Multimodal Alternative that addresses transit, roadway, bicycles, pedestrians and land use.
- Lays a framework for implementation.

The study area extends along Redwood Road from 1700 North in Salt Lake City to 11400 South in South Jordan. The study area is focused specifically on the Redwood Road corridor—recommendations for any cross streets, connecting facilities, etc., have only been considered and discussed as they relate to and directly affect Redwood Road.

The study has been led by a collaborative decision-making body of representatives from the following project partners:

- Salt Lake City
- West Valley
- Taylorsville
- West Jordan
- South Jordan
- Sandy
- Salt Lake County
- Utah Transit Authority (UTA)
- Utah Department of Transportation (UDOT)
- Wasatch Front Regional Council (WFRC)

Each project partner is at varying stages of planning efforts. The intent of the study was not to duplicate existing data or recommendations, but rather to build upon such efforts to identify a comprehensive transportation recommendation from a perspective that would benefit the entire Redwood Road corridor and balance the needs of all modes. Representatives from each project partner met regularly to provide input on the project needs, existing conditions and completed studies within their jurisdictions, conceptual solutions, and the Preferred Multimodal Alternative. As listed in Table 1, on the following page, the steering and policy committees met regularly to achieve concurrence over the course of the project.

It should be noted that while Sandy is not adjacent to Redwood Road, Sandy City was a project partner involved throughout the study due to the connection of transit facilities and service on Redwood Road with the planned Sandy-South Jordan Circulator.

The Redwood Road Multimodal Transportation Study consisted of the following five-step process:

1. Gather, analyze existing and future conditions.
2. Determine project need.
3. Develop and screen conceptual solutions.
4. Identify Preferred Multimodal Alternative.
5. Create implementation plan for Preferred Multimodal Alternative.

This final report and implementation plan summarizes the process taken to identify a Preferred Multimodal Alternative, describes the Preferred Multimodal Alternative, and identifies the next steps for implementation. Although the Preferred Multimodal Alternative has been identified for the full corridor, it is not a one-size-fits-all solution for each jurisdiction. Portions of the Preferred Multimodal Alternative have been tailored to the context, needs and future plans of each municipality and particular segments of the corridor. As such, each project partner is responsible

for moving forward with the next steps toward implementation for their specific jurisdiction. This report is intended to outline the next steps for each project partner to take in implementing the short-, medium- and long-term aspects of the Preferred Multimodal Alternative in their respective jurisdictions, or corridor-wide, if applicable.

Table 1. Committee Meeting Summary

DATE	COMMITTEE(S)	MEETING TOPIC
11/1/2016	Steering, Policy	Study kickoff; problems, opportunities, study vision
12/21/2016	Steering	Existing conditions, concurrent studies/projects
1/25/2017	Steering, Policy	Site tour; bus tour of Redwood Road from Salt Lake City to South Jordan; representatives from each city presented a summary of their area and key points for consideration
3/1/2017	Steering	Site tour follow-up, public outreach plan
4/12/2017	Steering, Policy	Draft public survey results; existing conditions
6/28/2017	Steering	Purpose and need, summary of UDOT's *Salt Lake County West Side Bicycle Connectivity Study*
7/26/2017	Steering, Policy	Charrette regarding conceptual alternatives; existing conditions/planned improvements
8/30/2017	Steering	Comments from charrette, alternative screening process
10/4/2017	Steering, Policy	Land use, ridership; revised concepts/draft Preferred Multimodal Alternative
12/6/2017	Steering	Preferred Multimodal Alternative dissemination to cities
3/14/2018	Steering, Policy	Implementation plan

Existing Conditions

The study team gathered and analyzed various data sets to determine the existing and future conditions of the corridor in terms of transit, roadway, bicycles, pedestrians and land use. The following sections summarize the study area characteristics, existing and future conditions, and key takeaways for each of these categories. Data collection efforts included coordination with project partners, review of more than 30 completed and concurrent studies (Table 2), site tours, a land use market analysis and interviews, and a public survey.

This data established the foundation from which the study team and project partners identified the needs along the corridor, which then served as the basis for developing potential solutions. Additional details about the existing conditions are included in the study's online Story Map at https://arcg.is/1914LD, the *Redwood Road Multimodal Transportation Study Existing Conditions Summary* (Jacobs 2017), *Redwood Road Corridor Study Land Use Analysis* (Leland Consulting 2018), and the *Redwood Road Multimodal Study Traffic and Ridership Analysis Memo* (Avenue Consultants 2018).

It should be noted that the studies listed in Table 2 are not an exhaustive list of all sources, but rather the most recent, relevant studies. Additional data sets, GIS data, and general information were gathered from each project partner and used in the analysis for the study.

Table 2. Relevant Studies Reviewed

OWNER	TITLE	DATE
Salt Lake City	Salt Lake City Transit Master Plan	2016
	Salt Lake City Pedestrian and Bicycle Master Plan	December 2015
	Plan Salt Lake	December 2015
	9Line Corridor Master Plan	March 2015
	The Westside Master Plan	December 2014
Salt Lake County	Salt Lake County Active Transportation Implementation Plan	2017
	Salt Lake County Bicycle Best Practice	February 2014
South Jordan	South Jordan Parks, Recreation, Community Arts, Trails, and Open Space Master Plan	November 2016
	South Jordan Redwood Road Corridor Plan Discovery and Analysis Report	February 2016
	Redwood Road Corridor Market Analysis	February 2016
	City of South Jordan General Plan	June 2010

Table 2. Relevant Studies Reviewed (continued)

OWNER	TITLE	DATE
Taylorsville	Center Point Master Plan – Vision Document and Small Area Plan	2014/2015
	City of Taylorsville Economic Development Plan	2012
	6200 South Redwood Road Urban Renewal Project Area Plan	September 2010
	City of Taylorsville General Plan	November 2006
UDOT	Salt Lake County West Side Bicycle Connectivity Study	November 2017 (Draft)
	10600 South Environmental Assessment; Jordan Gateway to Redwood	June 2016
	2015-2040 Long-Range Transportation Plan	2015
UTA	UTA First/Last Mile Strategies Study	April 2015
	UTA Network Study – Next Tier Program Final Report	June 2013
Various	Sandy-South Jordan Circulator Study (Sandy, South Jordan, UTA, UDOT)	April 2015
	Utah Collaborative Active Transportation Study (UDOT, UTA, Mountainland Association of Governments (MAG), WFRC, Salt Lake County)	October 2013
	Utah's Unified Transportation Plan 2011 – 2040 (WFRC, Cache Metropolitan Planning Organization, Dixie Metropolitan Planning Organization, UTA, MAG, UDOT)	2011
West Jordan	Redwood Road Corridor Master Plan Report	October 2015
	City of West Jordan Benchmarking Study	September 2013
	West Jordan City Retail Market Study and Analysis	August 2013
	City of West Jordan Economic Development Strategic Plan	August 2012
	West Jordan Comprehensive General Plan	March 2012
	West Jordan Trail Gap Action Plan	2012
West Valley City	West Valley City General Plan Update	2015
WFRC	Regional Transportation Plan 2015 – 2040	2015
	Wasatch Choice for 2040	2011

TRANSIT

Transit information was analyzed for existing (2016) and future (2040) conditions, including existing and future ridership, quality and quantity of service, and planned transit improvements identified in WFRC's 2040 Regional Transportation Plan (RTP). Full details of the analysis and its findings are provided in the *Redwood Road Multimodal Study Traffic and Ridership Analysis Memo* (Avenue Consultants 2018); excerpts from that report are included or summarized below.

The analyses performed for this study used the jointly owned and maintained WFRC/MAG travel demand model and the Vissim traffic operations evaluation software (version 8.2). The WFRC/MAG travel demand model is a tool used to predict future travel, traffic volumes and transit ridership for the Wasatch Front area. The Vissim software was selected for this study because it allows for the evaluation of transit, closely spaced intersections, and the interaction between the two facilities.

Transit data was collected from UTA for all routes that serve the study area—focusing on Routes 217 and 218, all routes that cross Redwood Road, and routes that have transfer stops to either Route 217 or 218. The data collected consisted of stop-level boardings and alightings, stop locations, service time, and frequency of service.

Routes 217 and 218 provide the primary transit service in the study area. Route 217 runs on Redwood Road from 1700 North in Salt Lake City to the West Jordan City Center TRAX Station at 8020 South, and operates seven days a week with 15-minute weekday headways. Route 217 has connections with the TRAX Green Line at North Temple and Research Way, as well as TRAX Red Line at the southern end of route. Route 217 connects with eight major and minor UTA bus routes and two flex routes at cross streets.

Route 218 runs from the West Jordan City Center TRAX Station to the Sandy Civic Center TRAX Station, and operates on weekdays and Saturday with 30-minute weekday headways. Route 218 has connections with the TRAX Red Line at the north end of the route, FrontRunner at the South Jordan Station, and the TRAX Blue Line at the Sandy Civic Center Station.

Route 217 has 122 weekday trips (61 per direction / 4th most in the UTA bus system) with a bus every 15 minutes. By comparison, Route 218 has 46 weekday trips operating with 30-minute headways in the peaks and 60-minute headways in the off peak.

With its frequent service and long route, Route 217 is a top performer in multiple ridership performance metrics. Most notably, it is the top bus route in average weekday ridership (3,800), number 10 in riders per route mile (224), and number 14 in riders per revenue hour (27). Route 218 has an average of 620 weekday riders, ranking 33rd for total ridership (Avenue Consultants 2018).

Route 217 gets consistent boardings throughout the day, whereas 218 functions more as a commuter route with boardings primarily in the peak periods. Boardings and alightings are distributed along the length of Route 217, though there are several stops where they are concentrated. The highest activity is associated with the three TRAX stations, the Salt Lake Community College (SLCC) campus, and major bus transfer intersections.

Key Takeaways: Ridership (average weekday boardings) for Routes 217 and 218 is highest at stops with connections to other transit lines (Table 3). There is no transit service south of 10400 South on Redwood Road within the study area.

Table 3. Transit Stops with Highest Ridership

STOP	CONNECTIONS
① **North Temple**	Green Line, Airport to Downtown SLC
② **1700 South**	900 West Shuttle (30 min.)
③ **Redwood Junction**	Green Line, West Valley City to Downtown SLC
④ **3500 South**	MAX 3500 South BRT (15 min.)
⑤ **4500 South**	4700 South (30 min.)
⑥ **5400 South**	5400 South (15 min.)
⑦ **City Center**	Red Line, West Jordan to University of Utah

Source: Avenue Consultants 2018

ROADWAY

As mentioned above, the WFRC/MAG travel demand model and Vissim software were used to analyze existing (2016) and future (2040) traffic conditions, including delay, queue lengths, and level of service (LOS) for intersections and mainline Redwood Road. The key findings of the analysis are summarized below; full details are provided in the *Redwood Road Multimodal Study Traffic and Ridership Analysis Memo* (Avenue Consultants 2018).

Existing traffic signal timing data were obtained from the UDOT Traffic Operations Center; turning movement volumes were gathered from various sources including UDOT Automated Traffic Signal Performance Measures (ATSPM) data, previous studies along Redwood Road, automated traffic counts for freeways and ramps, and manual spot counts along the corridor. The corridor was modeled in three sections based on arterial characteristics and general changes in driver behavior: a northern section from North Temple to 3500 South, a central section from 3500 South to 7000 South, and a southern section from 7000 South to 11400 South.

In 2016, most intersections along Redwood Road perform at LOS D or better. As listed in Table 4, nine intersections are currently failing in the PM peak hour. The southern section of the corridor (from 7000 South to 11400 South) performs the worst overall.

The future 2040 model included the assumption that the WFRC RTP projects will be built by 2040. In 2040, most intersections along Redwood Road perform at LOS E or worse, which is considered failing for this type of corridor. The exceptions are some of the intersections within the central section. The southern section performs poorly, as it does under existing conditions. The northern section experiences the greatest impacts of the increased volumes.

In addition to the traffic operations analysis, the project team evaluated UDOT-provided data sets to identify existing roadway infrastructure such as medians, driveways, curbs, signalized intersections, etc. Redwood Road is a major north-south corridor; it is a state road with 18 major intersections and three freeway interchanges within the study area.

Table 4. Redwood Road Failing Intersections – Existing LOS (2016)

INTERSECTION	LEVEL OF SERVICE (PM PEAK HOUR)
North Temple	E
3500 South	F
4100 South	E
I-215 Westbound Off-ramp	E
7000 South	E
7800 South	F
9000 South	E
10400 South	E
11400 South	E

Source: Avenue Consultants 2018

Safety data provided by UDOT was used to identify safety issues along the corridor. UDOT's Safety Index is based on a 0–10 rating scale, and is a combination of four equally weighted safety analysis sub-scores (based on data from 2013–2015):

- Crash Rate Score
- Severe Crash Rate Score
- Crashes per Mile Score
- Severe Crashes per Mile Score

The Safety Index for Redwood Road has been reported based on a statewide safety comparison of other comparable roadways, taking into account the different traffic patterns and volumes. The Safety Index for Redwood Road is reported with a rating of good-to-moderate to poor conditions. Redwood Road has poor safety conditions from 9800 South in South Jordan to 700 North in Salt Lake City, where 12 of 18 analyzed segments have a Safety Index rating higher than 6. Meaning, these segments are above the 76th percentile for the majority of factors that comprise the Safety Index as stated above.

Key Takeaways:

- Currently, 9 of the 42 major intersections, and 2 miles of southbound mainline Redwood Road, are operating at a failing LOS.

- By 2040, the majority of the intersections will be operating at a failing LOS.
- Redwood Road has poor safety conditions from 9800 South in South Jordan to 700 North in Salt Lake City.

BICYCLES

The project team used GIS data provided by WFRC to identify the existing and proposed bicycle facilities on Redwood Road and intersecting roads. Additionally, individual city plans, previous studies, and regional plans were analyzed to supplement the WFRC data.

There are two segments of designated bike lanes along Redwood Road—from approximately 1100 North to 2100 South in Salt Lake City (nearly 9 miles) and 1.25 miles in South Jordan, ending at 10400 South.

Various regional and local trails either intersect Redwood Road or connect nearby. Regional trails include the Jordan River Parkway and Utah and Salt Lake Canal Trail; local trails include the 9 Line and South Jordan Canal trails. Along the 19-mile corridor, there are only 10 connections to the Jordan River Parkway with Redwood Road on designated bike facilities, nine of which are in Salt Lake City.

UDOT's *Salt Lake County West Side Bicycle Connectivity Study* ran concurrently with this project. To streamline efforts and facilitate consistency among recommendations, the project teams for both studies coordinated regularly. The outcomes of the bicycle study were incorporated into the screening process and bicycle recommendations for the Redwood Road Multimodal Transportation Study.

The purpose of UDOT's bicycle study was to identify a feasible, prioritized north-south alignment and bikeway recommendations to provide regional connectivity through Salt Lake County between 1300 West and 2700 West. Although Redwood Road was analyzed as an alignment in the study, 1300 West was identified as the preferred corridor based on its high levels of comfort and safety, directness, access to surrounding uses and transit, existing use levels, implementation costs and impacts.

Key Takeaways:

- Lack of bicycle facilities on or near Redwood Road—along the 19-mile study area, there are 10 miles of on-road bicycle facilities in Salt Lake and 1.25 miles of on-road facilities in South Jordan, with only pockets of east-west facilities.
- Only 10 connections to Jordan River Trail with Redwood Road on designated bike facility (9 of which in Salt Lake City).

WALKABILITY

The walkability analysis for the study was conducted using data from AGRC, local municipalities, UTA and UDOT. The process analyzed locations along the corridor based on their proximity to light rail stations, parks, schools, shared-use paths, and significant intersections. Each location received a score from 1–11 representing the potential walkability of the location (11 indicating the highest potential for walkability, and 1 the lowest). "Significant intersections" were identified as those with a potential high demand for pedestrian access, based primarily on surrounding land uses. Details of the methodology used for the walkability analysis are included in the *Redwood Road Multimodal Transportation Study Walkability Analysis* (Jacobs 2017). Based on this analysis, Salt Lake City has the highest walkability potential of the cities within the study area, and South Jordan has the lowest.

Data from UDOT was analyzed for existing sidewalks, pedestrian amenities and crosswalks. Sidewalks exist along both sides of Redwood Road for the majority of the corridor. An approximately 1.25-mile segment in Salt Lake City is missing sidewalk, from 1100 North to the Jordan River Parkway Trail. The corridor also includes three pedestrian bridges at approximately 2600 South (across from Rosewood Elementary School), 4400 South (across from Eisenhower Junior High School), and approximately 7525 South.

This 19-mile stretch of Redwood Road has 42 signalized intersections, including various intersections with free-right turn movements for automobiles—which can create a challenging pedestrian crossing environment. Within the study area, 14 intersections are 130' or wider (Table 5). These wide intersections increase the exposure time experienced by a

pedestrian in the intersection, and can add to pedestrians feeling exposed or unsafe while crossing.

Table 5. Widest Intersections within the Study Area

INTERSECTION	CITY	WIDTH
① **North Temple**	Salt Lake	148’
② **9000 South**	West Jordan	148’
③ **5600 South**	Taylorsville	143’
④ **2100 South**	Salt Lake	140’
⑤ **7000 South**	West Jordan	138’
⑥ **7800 South**	West Jordan	138’
⑦ **4700 South**	Taylorsville	138’
⑧ **11400 South**	South Jordan	135’
⑨ **5400 South**	Taylorsville	134’
⑩ **South Jordan Pkwy (10400 South)**	South Jordan	134’

Key Takeaways: In general, walkability potential is highest near some of the largest intersections. Within the study area, 14 intersections are 130’ or wider.

Walkability Ranking by City:

1. Salt Lake City
2. West Valley
3. West Jordan
4. Taylorsville
5. South Jordan

LAND USE

A land use market analysis was conducted to ensure transportation improvements were informed by an understanding of existing and future market conditions, and would adequately meet market demand. Findings are summarized in this report, and full details are included in the *Redwood Road Corridor Study Land Use Analysis* (Leland Consulting 2018). The analysis served as a guide to assist community development patterns supportive of successful multimodal transportation projects, and identify potential for economic development in the study area. It included key recommendations based on land use mix and an assessment of future development potential to assist stakeholders when considering types of development. The market analysis incorporated the following information:

- Key findings from existing municipal land use, market analysis and other pertinent studies or plans, and interviews with economic development staff from each city.
- Existing land use, redevelopment areas, zoning and other municipal data.
- Existing and projected demographic, employment and economic data in the study area.
- Projections of land use demand for the project study area. Where possible, the analysis defined ranges of potential development by land use, and identified key land use types that are particularly well suited for the corridor.

The market analysis identified 19 nodes along the corridor that have some potential to serve as transit-oriented development (TOD) opportunity sites based on market conditions, designation in existing plans and studies, or recommendations from economic development staff at each city. TOD is characterized by close proximity to transit, services, commerce, employment, and entertainment.

Of the 19 nodes, key nodes were identified at: 9 Line, North Temple, Central West Valley, SLCC, Center Pointe, West Jordan City Center, and South Jordan Towne Center (Table 6). To determine whether TOD is feasible at each node, the team prepared a financial feasibility analysis of the recommended land use program (mix of uses), prevailing land values, lease rates, and construction costs.

Key Takeaways: Focus should be placed on nodes with the highest potential for TOD with multimodal transportation investment.

Table 6. Key Nodes with Highest Potential for TOD

NODE	RATIONALE
9 Line	Recreation access, redevelopment area with public, private interest, underutilized land
North Temple	Transit hub, higher density population and employment, redevelopment potential
Central West Valley	Strong commercial, redevelopment areas in place, higher population densities, sizable vacant land, WFRC Urban Center/Station Community (transit-based)
SLCC	Major activity center and employer, nearby amenities can be leveraged, potential future redevelopment and programming opportunities
Center Pointe	Commercial center, significant employment, existing redevelopment area; recent redevelopment activity, designated WFRC Town Center
West Jordan City Center	Commercial center, multiple redevelopment area incentives, near existing TRAX line, recent development activity, nearby amenities to be leveraged
South Jordan Towne Center	Recent development activity, multiple redevelopment areas, major underutilized sites, WFRC Center, major employment (Merit Medical), future transit connection over I-15 to downtown Sandy

Source: Leland Consulting 2018

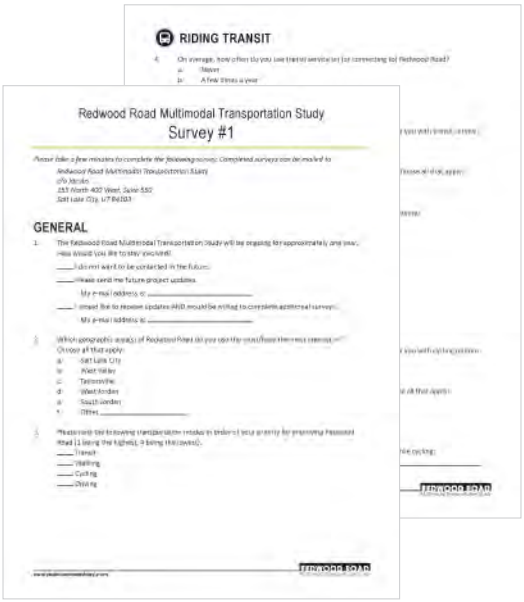
PUBLIC INPUT

A public survey was administered to gauge the usage, improvement priority, and satisfaction of current conditions for each mode. The survey was available in both Spanish and English on the project website (www.redwoodroadstudy.com) from late spring through summer 2017. Notices about the survey were posted on each city's website and the online Open UTA Forum, and flyers directing the public to the online survey were distributed at city office and other public locations along the project corridor. In addition, project team members attended the West Valley Saturday swap meet to distribute flyers and administer the survey to attendees.

Respondents were asked how often they use each mode on Redwood Road, their current satisfaction with each mode, and preferences for improvements for each mode. Of the 500+ responses received, the following key outcomes were identified:

- Autos and transit are by far the most used modes.
- Prioritized improvements lean toward roadway operations.
- Least satisfaction with existing bicycle conditions, of all modes.
- Top improvements desired for each mode:
  - Transit: Better bus connections to other transit service; more frequent service
  - Roadway: Reduced traffic congestion; improved traffic signal timing
  - Pedestrians: Better sidewalks, more visible/ frequent crosswalks
  - Bicycles: More/improved areas designated for bikes; improved access to trails

The project website, www.redwoodroadstudy.com, has also been maintained throughout the study with project information, updates, and opportunities to provide comments.



A public survey garnered 500+ responses.

Project Need

The purpose of the project is to: provide improved automobile, transit, bike, and pedestrian transportation options to accommodate future population growth, projected roadway congestion and a lack of high-quality transit, bike and pedestrian facilities along the Redwood Road corridor; and to support the redevelopment of land uses and transit-oriented development (TOD).

The data described in the Existing Conditions section established the foundation from which the study team and project partners identified the project need, defined as:

- By 2040, the population along Redwood Road will increase by 24%. This will stress the existing transportation facilities, and exacerbate the identified problems for each mode.
- There is a lack of high-quality, frequent and reliable public transit.
- By 2040, the majority of major intersections along Redwood Road and the southbound mainline of Redwood Road will be operationally failing and severely congested.
- The majority of Redwood Road lacks bicycle facilities; approximately 10 miles of the 19 total miles along Redwood Road include designated bike facilities.
- Walkability potential for pedestrians along Redwood Road is highest near several of the largest intersections along Redwood Road, with crossing distances up to 148 feet and limited pedestrian safety design features.

Conceptual Alternatives

To address the project needs, various types of improvements were identified on a conceptual level for each mode—roadway, transit, walkability, and bicycles. The following summarizes the conceptual solutions identified for each mode; the criteria through which the options were compared; and the improvements that were carried forward for each mode to collectively make up the Preferred Multimodal Alternative. Further details about the conceptual alternatives and the screening process are documented in the *Redwood Road Multimodal Transportation Study Alternatives Development and Screening Report* (Jacobs 2017).

ALTERNATIVE DEVELOPMENT

As listed in Table 7, multiple conceptual solutions were identified for each mode—roadway, transit, walkability, and bicycles. These solutions were then screened and refined based on coordination with the project partners, how well the conceptual options would solve the identified problems/needs of the corridor, mode-specific screening criteria, and the context and constraints of specific locations along the corridor.

Various conceptual alternatives were meant to be high-level categories of options that include multiple types of improvements. The conceptual alternatives would then be further identified and refined based on the needs and constraints of specific locations along the corridor. It should also be noted that minimizing right-of-way impacts to adjacent parcels was an agreed-upon focus in both developing and carrying forward alternatives.

Table 7. Summary of Conceptual Alternatives by Mode

MODE	CONCEPTUAL OPTION	DESCRIPTION
ROADWAY	**Access Management**	Implement access management solutions to control vehicle cross-traffic; techniques may include driveway consolidation and raised medians.
	Turning Movement Improvements	Add right-turn pockets to provide motorists with a dedicated lane for deceleration and right-turn queuing. They can be used at intersections or mid-block for adjoining roads and driveways.
	Intersection Improvements	Adjust existing infrastructure and layout of travel lanes. May include new intersection configurations, number of intersection approaches, intersection angles, corner radius and curb ramp designs, detectable warnings, access control, sight distance, and vehicle/pedestrian interface.
	Rededication of Two General Purpose Lanes	One in each direction for HOT or transit only: rededication of two general purpose lanes for a managed lane (which could be transit only, transit and right-turn lane (BAT lane), or transit and HOT (such as that proposed in the 2017 Foothill Study)).

Table 7. Summary of Conceptual Alternatives by Mode (continued)

MODE	CONCEPTUAL OPTION	DESCRIPTION
TRANSIT	**Existing Station Improvements**	Improve existing stations for Routes 217 and 218; recommended amenities may include pedestrian shelters, benches, level pads, improved lighting, and wayfinding/route information. All stations should be made ADA compliant.
	Core Route	Implement corridor-wide Core Route bus service defined by fewer, more substantial stations, rapid transit branding, 40-foot to 60-foot buses, real-time messaging, off-board fare collection, 15-minute or less headways, and queue-jump and/or transit signal priority at intersections. This Core Route would be in addition to existing transit services on Redwood Road.
	Two Additional Lanes (One in Each Direction for Transit)	Add two additional lanes; one in each direction for transit.
BICYCLE	**Connection to Planned Bike Route**	Connect existing and planned bike paths, lanes, and routes to recommended Redwood Road bike infrastructure. May include wayfinding and/or dedicated bike turn lanes.
	Add/Enhance Bike Crossing & Intersection Infrastructure	Provide safe, visible crossings for bikes at intersections. This may include bike boxes and/or green paint.
	Add Bike Lane	Add bike lane per UDOT's *Salt Lake County West Side Bicycle Connectivity Study*; located on Redwood Road from 1700 North to 2595 South and on alternate north-south routes throughout the remainder of the corridor.
WALKABILITY	**Enhance Existing Pedestrian Crossing**	Improve existing crossings to increase pedestrian safety and convenience. Possible improvement techniques include signal optimization for pedestrians, improved crosswalk markings (e.g., paint, thermoplastic, brick), improved access, lighting, and amenities such as timers.
	Add New Pedestrian Crossing	New signalized pedestrian crossings in areas with high potential for walkability that are currently lacking east-west connectivity. It is recommended that all north-south pedestrian movements be supported.
	Add Pedestrian Infrastructure	Add more substantial pedestrian infrastructure to improve pedestrian safety through traffic-calming effects. This includes the addition of pedestrian refuge islands and curb wedge/bulb-outs.
	10' Shared-Use Path	Add a 10-foot multi-use path along both sides of Redwood Road.

CONCEPTUAL ALTERNATIVES CHARRETTE

The conceptual alternatives were presented to the project partners at an interactive charrette on July 26, 2017. Attendees included representatives from West Valley City, Sandy City, Taylorsville, WFRC, UTA, Salt Lake County, South Jordan, UDOT, West Jordan, Salt Lake City, and study team members.

Materials at the charrette included a large-scale map presenting the existing and future conditions along the corridor for each mode; maps of conceptual alternatives by city; and take-away versions of these maps for the project partners to review and provide comments. Attendees were able to comment on the materials presented by writing on the maps themselves, leaving comments on sticky notes, discussions with project team members, and providing comments via email after the charrette.

Most of the comments received focused on spot-specific recommendations. Input received during and after the charrette was used to refine the conceptual alternatives and finalize the locations at which the options were recommended.

Project partners and study team members review and comment on the conceptual alternatives.

SCREENING & COMPARISON OF ALTERNATIVES

The criteria described in Table 8, on the following page, were used to compare and analyze the conceptual alternatives. A rating of positive, neutral, or negative was assigned to the conceptual alternatives for each comparison criterion. In general, preference was given to those options that minimized or avoided right-of-way impacts. Details about the screening and comparison of the conceptual alternatives are documented in the *Redwood Road Multimodal Transportation Study Alternatives Development and Screening Report* (Jacobs 2017).

All conceptual alternative options were carried forward into the Preferred Multimodal Alternative in some capacity, except the Rededication of Two General Purpose Lanes (Roadway) and Two Additional Lanes (One in Each Direction for Transit) options.

The only conceptual options eliminated completely included the Rededication of Two General Purpose Lanes (Roadway) and Two Additional Lanes (One in Each Direction for Transit) concepts (see Tables 7 and 8). The rededication of two general purpose lanes as a managed HOV/transit lane was not carried forward due to negative impacts to traffic operations. As the planning horizon for this study is 2040, the decision to rededicate general purpose lanes can be reassessed as land use and mobility change in the corridor over time. Similarly, the option to add two additional lanes was not carried forward due to its substantial right-of-way impacts. The addition of two lanes along Redwood Road could affect up to 1,000 properties.

All other conceptual alternatives were carried forward; they were further refined based on needs and physical constraints of each location, input from project partners, public survey responses, transit and traffic modeling results, walkability analysis results, and an overarching goal to minimize right-of-way impacts to adjacent parcels.

Table 8. Conceptual Alternatives Comparison Criteria

COMPARISON CRITERION	DESCRIPTION
Parcels Affected	Level of impact to adjacent properties, i.e., parcels requiring partial or full land acquisitions and/or relocations.
Stakeholder Support	Desirability of option by the project partners; compatibility with local and regional planning documents for each entity.
Transit Ridership	Does the option increase attractiveness to new riders and/or enhance connections?
Traffic Operations	Does the option improve traffic operations and/or safety for automobiles?
Walkability Potential	Does the option increase the potential for walkability (i.e., provide safe and accessible facilities, support first/last mile access, etc.)?
TOD	Does the option support the opportunity of land use change toward TOD?
Bike Accommodations	Does the option provide improved bike facilities or opportunities for bike use through design features, enhanced facilities, and/or better conditions?

Preferred Alternative

The Preferred Multimodal Alternative is a holistic multimodal transportation solution that addresses and balances the needs of each mode, based on the unique context, needs, constraints, and opportunities within each city along the corridor. The Preferred Multimodal Alternative recommends improved roadway, transit, bike, and pedestrian transportation options to accommodate future population growth, projected roadway congestion and a lack of high-quality transit, bike, and pedestrian facilities along Redwood Road. In addition, it recommends areas to support transit-oriented development (or TOD).

The Preferred Multimodal Alternative is a combination of the various improvements identified as conceptual alternatives for each transportation mode. Some improvements are proposed for the full corridor (such as the new Core Route bus service and 10-foot shared-use path along both sides of the road), while other improvements are proposed for specific locations based on the context and needs of each city along the corridor.

In summary, the Preferred Multimodal Alternative includes the following improvements for each mode. These improvements are recommended in various combinations along the corridor. **The location-specific recommendations are shown on the Preferred Alternative map for each city beginning on page 26.**

ROADWAY

Roadway recommendations focus on improving congestion, safety and level of service (LOS) at intersections and along mainline Redwood Road through:

- Intersection improvements
- New turn pockets
- Access management (driveway consolidation and/or raised medians)

TRANSIT

Transit recommendations focus primarily on providing high-quality, frequent service along Redwood Road from Salt Lake to South Jordan through:

- New Core Route bus service from Salt Lake to South Jordan, with fast, frequent, reliable service and substantial stations
- Connection to new Sandy-South Jordan Circulator
- Improved amenities at existing bus stops

WALKABILITY

Pedestrian improvements focus on supporting potentially walkable areas, supporting first/last mile accessibility to transit and providing an improved, safer, pedestrian-friendly environment along the whole corridor through:

- Corridor-wide connectivity through 10' shared-use path
- New crosswalks
- Pedestrian refuge islands
- Improved lighting, signal timing, and crosswalk markings

BICYCLES

Bicycle recommendations focus on the overall lack of bicycle facilities along Redwood Road, and supporting the recommendations from UDOT's *Salt Lake County West Side Bicycle Connectivity Study*, which recommended 1300 West as the prioritized corridor for north-south bicycle facilities in Salt Lake County:

- Corridor-wide connectivity through 10' shared-use path
- On-road bike lane from 2100 South to 1700 North
- Improved crossings, turn lanes, signage, and connections to other bike lanes, routes and trails

LAND USE

Land use recommendations focus on supporting potential TOD nodes with the presence of local economic development and redevelopment areas. Four "Focus Nodes" were selected as key catalyst sites, or areas where there was significant and sometimes unique potential for development. For the purposes of demonstrating a range of land use alternatives, sites that showed a distinct range of features, opportunities, challenges, and land uses were deliberately selected. These four nodes can broadly apply to various locations along the corridor with a diversity of contexts:

- 9 Line (900 South)
- Research Way (2270 South)
- Taylorsville (4800 South)
- West Jordan City Center (8000 South)

*Detailed maps showing the **Preferred Multimodal Alternative** are included with the corridor-wide implementation recommendations and for each city beginning on page 21.*

Implementation

This section describes the implementation recommendations associated with the Preferred Multimodal Alternative. These recommendations build on planning analysis already completed by local and regional bodies in an effort to group projects with similar objectives to create a "critical mass" that is more competitive and collaborative locally, regionally, and at the state level. The outcome is a snapshot of various elements of implementation to aid stakeholders in determining the critical next steps toward implementation and construction.

SUMMARY OF IMPLEMENTATION CONSIDERATIONS

The implementation recommendations are described in three categories, based on how the improvement would logically be funded and constructed:

- **Corridor-wide:** Core Route service is the only improvement with implementation recommendations provided solely on a corridor-wide level. The Core Route recommendations are described in more detail, including needs for stations and supplemental infrastructure.

- **City-wide:** City-wide recommendations specifically include improvements to existing bus stops and the addition of a shared-use path along both sides of Redwood Road. The shared-use path would be implemented city by city depending on the existing sidewalk design, available right-of-way, and local transportation needs and priorities. Close coordination with UDOT will be required to create a uniform continuous path. Though recommendations for managing vehicle access are listed as location-specific, they would be determined at the city level or multi-block level due to the impacts on adjacent intersection and mainline operations.

- **Location-specific:** All other improvements are recommended for implementation in a spot-specific manner as facility needs are determined, or as spot-improvements can be incorporated into broader transportation projects.

In general, four considerations affecting implementation were analyzed for each improvement. Where relevant, recommendations for each consideration are listed in the corresponding recommendation table for each city.

- **Timeline:** Based on current STIP, RTP and city and regional agency priorities:
  - Near-Term: 0 – 5 years
  - Mid-Term: 5 – 15 years
  - Long-Term: 15+ years

- **Combined Project Opportunities:** The projects from the STIP and RTP with which the recommendations could be combined for maximum utilization, to streamline planning efforts, and to make them more competitive for funding in the mid- to long-term outlook.

- **Land Use Connections:** The active land use and transportation connections being made by local and regional planning agencies; includes land use recommendations identified as part of the land use market analysis conducted for this study.

- **Funding:** Potential federal and state funding sources available for project implementation. Project partners should review the requirements and eligible activities to determine the most competitive funding program, and to identify opportunities to coordinate with WFRC, UDOT, UTA and/or Salt Lake County.

See Table 9 for a summary of potential funding sources by mode, and Table 10 for additional details for each funding source. This list serves as a starting point for each project partner to review as they prioritize improvements and identify appropriate next steps specific to different funding sources. This funding information is on a broad scale. Because potential funding sources play a key role in dictating next steps, level of effort, and environmental requirements, it is recommended that potential funding sources be identified as early as possible for each improvement.

Table 9. Potential Funding Sources by Mode (Summary)

POTENTIAL FUNDING SOURCES BY MODE	
Pedestrian	Surface Transportation Block Grant (STBG), Transportation Alternatives Program (TAP), Highway Safety Improvement Program (HSIP), Federal Transit Administration (FTA) Associated Grants (5309), Better Utilizing Investments to Leverage Development (BUILD) (formerly TIGER), National Highway Performance Program (NHPP), Transportation Infrastructure Finance and Innovation Act (TIFIA), Congestion Mitigation and Air Quality (CMAQ), County Active Transportation Network Improvement Program (CATNIP), Recreation Trails Program (RTP), Safe Sidewalks Fund
Bike	
Highway	Surface Transportation Block Grant (STBG), Highway Safety Improvement Program (HSIP), Better Utilizing Investments to Leverage Development (BUILD) (formerly TIGER), National Highway Performance Program (NHPP), Transportation Infrastructure Finance and Innovation Act (TIFIA)
Transit	Surface Transportation Block Grant (STBG), Congestion Mitigation and Air Quality (CMAQ), Highway Safety Improvement Program (HSIP), Better Utilizing Investments to Leverage Development (BUILD) (formerly TIGER), FTA Associated Grants (5309, 5310), National Highway Performance Program (NHPP), Transportation Infrastructure Finance and Innovation Act (TIFIA)

Table 10. Funding Source Details

FUNDING SOURCE	ELIGIBLE MODES	ELIGIBILITY REQUIREMENTS	LEAD AGENCY
Surface Transportation Block Grant (STBG) (formerly STP)	Highway, Transit, Pedestrian, Bike	STP funds may be used for constructing new streets or widening, improving, or reconstructing existing streets classified as Federal Aid Eligible (FAE) freeways, highways, arterials, or collectors. In addition, STBG funds can be used for intersection improvement projects that reduce traffic demand such as capital improvements and active transportation.	WFRC
Congestion Mitigation and Air Quality Improvement (CMAQ) Program	Transit, Pedestrian, Bike	Funds must be used for projects that improve air quality. Eligible projects include transportation activities in the State Air Quality Implementation Plan (SIP); construction/ purchase of public transportation facilities and equipment; construction of bicycle or pedestrian facilities serving transportation needs; promotion of alternative modes, including ridesharing; Intelligent Transportation Systems (ITS); and certain traffic control measures, such as traffic signal coordination, intersection improvements, and incident management. The funds may not be used for major road widening.	WFRC
Transportation Alternatives Program (TAP)	Pedestrian, Bike	Construction, planning, and design of on-road and off-road trail facilities for: • Pedestrians, bicyclists, and other non-motorized forms of transportation, including sidewalks, bicycle infrastructure, pedestrian and bicycle signals, traffic-calming techniques, lighting and other safety-related infrastructure, and transportation projects to achieve compliance with the Americans with Disabilities Act of 1990. • Construction, planning, and design of infrastructure-related projects and systems that will provide safe routes for non-drivers, including children, older adults, and individuals with disabilities to access daily needs. • Conversion and use of abandoned railroad corridors for trails for pedestrians, bicyclists, or other non-motorized transportation users.	WFRC or UDOT
Highway Safety Improvement Program (HSIP)	Highway, Transit, Pedestrian, Bike	Projects consistent with the state's strategic highway safety plan, infrastructure related. Can also include: installation of vehicle-to-infrastructure communication equipment, pedestrian hybrid beacons, roadway improvements that provide separation between pedestrians and motor vehicles, including medians and pedestrian crossing islands, and other physical infrastructure projects not enumerated in the list of eligible projects.	UDOT
FTA Section 5310 Enhanced Mobility for Seniors and Individuals with Disabilities	Transit, Pedestrian, Bike	Transit-related information technology systems, including scheduling/routing/one-call systems, mobility management programs, acquisition of transportation services under contract, lease, or other arrangement. Non-traditional activities include: travel training, volunteer driver programs, paths to bus stops, sidewalks, pedestrian signals, signage and wayfinding, cost of providing same-day service, purchasing vehicles to support accessibility, and mobility management programs.	UTA
FTA Section 5309 Capital Investment Grants – Small Starts and New Starts	Transit	The discretionary Capital Investment Grant (CIG) program provides funding for fixed-guideway investments such as new and expanded rapid rail, commuter rail, light rail, streetcars, BRT, and ferries, as well as corridor-based BRT investments that emulate the features of rail. There are four categories of eligible projects under the CIG program: New Starts, Small Starts, Core Capacity, and Programs of Interrelated Projects: • New Starts projects are new fixed-guideway projects or extensions to existing fixed-guideway systems with a total estimated capital cost of $300 million or more, or that are seeking $100 million or more in Section 5309 CIG program funds. • Small Starts projects are new fixed-guideway projects, extensions to existing fixed-guideway systems, or corridor-based BRT projects with a total estimated capital cost of less than $300 million and that are seeking less than $100 million in Section 5309 CIG program funds. • Core Capacity projects are substantial corridor-based capital investments in existing fixed-guideway systems that increase capacity by not less than 10 percent in corridors that are at capacity today or will be in five years. Core Capacity projects may not include elements designed to maintain a state of good repair. • Programs of Interrelated Projects are comprised of any combination of two or more New Starts, Small Starts, or Core Capacity projects. The projects in the program must have logical connectivity to one another and all must begin construction within a reasonable timeframe.	UTA
Better Utilizing Investments to Leverage Development (BUILD) (formerly TIGER)	Transit, Highway, Pedestrian, Bike	Includes, but not limited to, highway or bridge projects, public transportation projects, passenger and freight rail projects, port infrastructure projects, and intermodal projects.	UTA
National Highway Performance Program (NHPP)	Highway, Transit, Pedestrian, Bike	Only projects included in the STIP, TIP, LRP, and RTP are eligible. Eligible projects include vehicle-to-vehicle infrastructure, construction and rehabilitation of a national highway system segment, construction and rehabilitation of transit on a national highway system segment, and bicycle and pedestrian facilities on or associated with a national highway system segment.	UDOT
Transportation Infrastructure Finance and Innovation Act (TIFIA)	Highway, Transit, Pedestrian, Bike	Any type of project that is eligible for federal assistance through existing surface transportation programs (highway projects and transit capital projects) is eligible for the TIFIA credit program, including ITS. In addition, the following types of projects are eligible: private facilities providing public benefit for highway users and projects that provide access to such facilities; service improvements on or adjacent to the national highway system. An eligible project must be included in the applicable STIP. Major requirements include a capital cost of at least $50 million (or 33.3 percent of a state's annual apportionment of federal-aid funds, whichever is less) or $15 million in the case of ITS.	UDOT
County Active Transportation Network Improvement Program (CATNIP)	Pedestrian, Bike	Grants assist communities with implementing pedestrian and bicycle improvements within non-state-owned right-of-way that are not in their own rights-of-way (e.g., Jordan River Trail). Funding will be given to projects identified on the County's Active Transportation Implementation Plan (ATIP). Trails or pathways within their own rights-of-way are not eligible for funding. Intersection improvements, however, where trails cross street rights-of-way ARE eligible. Funds may be used for construction or for design activities that are expected to result in eventual construction. Grants cannot be used for solely planning purposes such as city bicycle master plans. Project sponsors must be municipal entities with jurisdictional authority over the proposed project location.	Salt Lake County
Recreation Trails Program (RTP)	Pedestrian, Bike	Eligible uses for RTP funds include trail maintenance and restoration, trailside and trailhead facilities, equipment for construction and maintenance, construction of new recreational trails, acquisition of trail corridors, assessment of trail corridors, education for safety and environmental protection, and administration.	Department of Natural Resources
Safe Sidewalks Fund	Pedestrian, Bike	For a proposed sidewalk location to be considered for the Safe Sidewalks Program, it must first meet the following criteria: located adjacent to a state highway; located within an urban area or an area where the immediate environment of the project is of an urban nature; significant pedestrian traffic; and 25 percent local government match.	UDOT

CORE ROUTE IMPLEMENTATION

The recommended Core Route concept is a new, high-quality transit service (similar to bus rapid transit (BRT) or enhanced bus). The new Core Route service is recommended for approximately 17 miles along the Redwood Road corridor, with a southern terminus at South Jordan Parkway (connecting to the Sandy Civic Center TRAX Station via the planned Sandy-South Jordan Circulator), and a northern terminus in downtown Salt Lake City, traveling east-west along 600 North, then down and through downtown Salt Lake City. Core Route includes high-frequency service with fewer stops; substantial infrastructure like stations with shelters, seating, real-time messaging, off-board payment, and advanced transit technologies like transit signal priority and queue jumps at select intersections; and unique Core Route branding.

Figures 1 and 2, on the following pages, show the Core Route and recommended station locations. It is assumed that the Core Route will include continuation of underlying local bus service by Routes 217 and 218; upon implementation of the Core Route, UTA will make a final decision on the need to keep underlying service.

Table 11 summarizes the aforementioned implementation considerations specific to the Core Route. This information is derived from existing funding programs, long-term plans, and analysis done for this study. This is not a comprehensive list; rather, implementing agencies are advised to seek additional resources as the recommended projects move forward.

Core Route station and advanced transit infrastructure locations were determined by an in-depth analysis of existing conditions throughout the corridor, as described below and listed in Table 12 (on page 23). Figures 3 and 4 show the Core Route recommendation with the data used to recommend the different components of the Core Route; the data includes existing transit conditions, projected ridership, and walkability. Not shown on this map, but included in Table 12, is intersection level of service (LOS).

Existing ridership on Routes 217 and 218, connectivity to other transit lines, intersection and mainline LOS, surrounding land use, walkability, and projected ridership for a BRT system on Redwood Road were all considered. Due to the projected ridership of the route along Redwood Road, Core Route service is being recommended, even though the RTP describes the Phase 1 and Phase 2 projects along Redwood Road as either BRT or enhanced bus. All recommendations address a local transit need and are supported by at least one part of the whole equation for a feasible high-quality bus line.

Existing Ridership for Routes 217 & 218: Total weekday boardings and alightings at individual stops for Routes 217 and 218 were used for the ridership analysis (see Table 12). Capture areas, rather than one individual station, were used to determine high and low ridership. For example, stations one-tenth of a mile in either direction could have factored in to the determination of a high or low ridership area. The distance used to include adjacent stations in the ridership analysis varied due to the difference between accessibility to stations, land uses, and other existing infrastructure at each station.

Table 11. Core Route Implementation Considerations

CORE ROUTE IMPLEMENTATION			
Potential Funding	**Timeline**	**Opportunities to Combine Projects**	**Land Use Connections**
• Small Starts/New Starts • State and Local Funding	Mid-Term	N/A	• North Temple TOD Node • 9 Line Recreational Node • Research Way TOD Node • 4800 South Student/Senior TOD Node • West Jordan City Center TOD Node

Projected Ridership: The conceptual route used for the projected ridership analysis connects to Salt Lake Central Station via 600 North. Socioeconomic growth, and traffic operations including LOS, intersection queue length, and density of vehicles per mile all factored into the projections.

Land Use Connections: What active land use and transportation connections are being made by local and regional planning agencies? This includes land use recommendations identified as part of the land use market analysis conducted for this study.

Connectivity to Other Transit: Where do existing bus or TRAX lines intersect Redwood Road, and where are the major connections? A premium is placed on connections to high-quality transit like enhanced bus, BRT, and TRAX. The analysis for the study indicates these stations within the study area tend to have the highest ridership as well.

Intersection & Mainline LOS: Poorly performing highway mainline and intersection operations impair transit reliability. Failing intersections (LOS E or F) adjacent to failing mainline segments were recommended for transit-expediting infrastructure like signal priority or queue jumps to maintain Core Route reliability.

Walkability: Walkability scores were determined by a location's proximity to light rail stations, parks, schools, shared-use paths, and significant intersections. Generally, walkability within the study area is highest near large intersections. Similarly, the highest transit ridership is near large intersections. Stations were recommended at locations with low walkability, necessitating additional infrastructure to overcome station accessibility barriers. The top half of walkability scores were used in the analysis. The bottom half were on the fringe of the half-mile study area and did not come into consideration when analyzing walkability on Redwood Road.

17 Miles Core Route Service

18 New Core Route Stations

9 Signal Priority Locations

8 Queue Jump Locations

Figure 1. Preferred Alternative - Core Route (Salt Lake to Taylorsville)

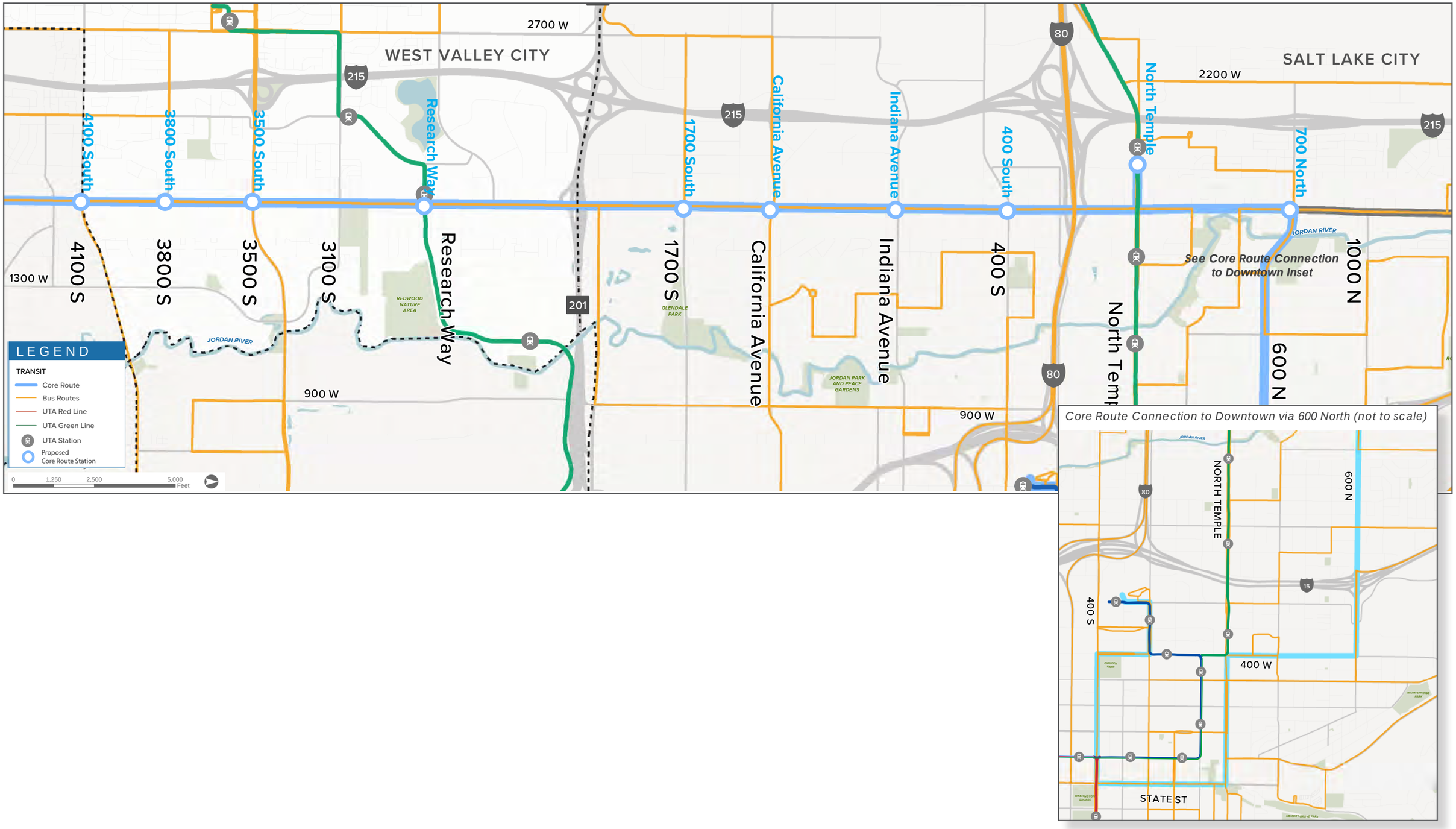


Figure 2. Preferred Alternative - Core Route (Taylorsville to South Jordan)

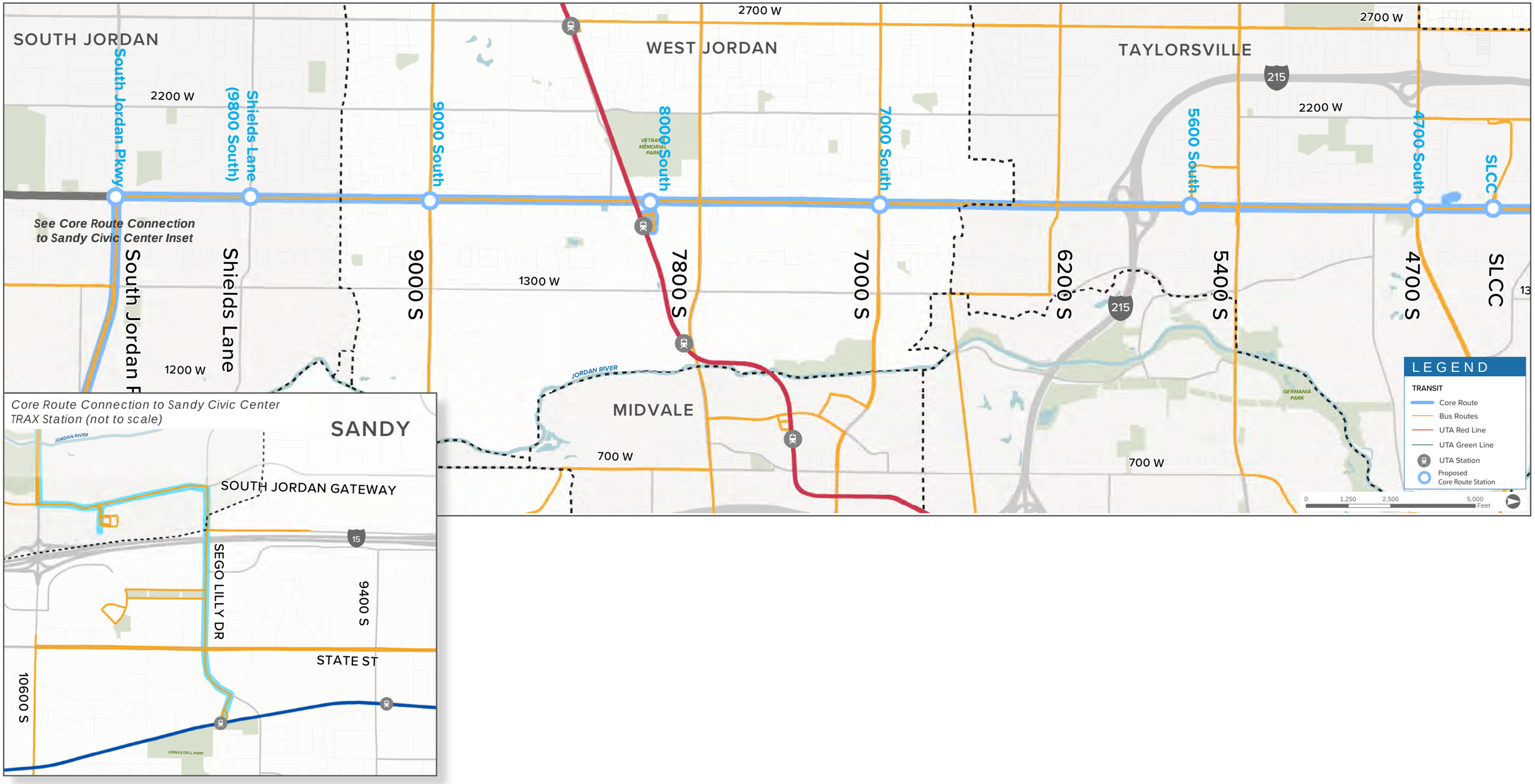


Table 12. Summary of Core Route Implementation Considerations

CORE ROUTE							
LOCATION	**RECOMMENDED INFRASTRUCTURE**	**EXISTING RIDERSHIP – TOTAL WEEKDAY** (STOPS INCLUDED FOR ROUTES 217 & 218)	**SURROUNDING LAND USE**	**CONNECTIVITY TO OTHER TRANSIT**	**INTERSECTION LEVEL OF SERVICE (PM)**		**WALKABILITY**
					EXISTING (2016)	FUTURE (2040)	
SALT LAKE CITY							
700 North	Bus Station	High in both directions – 147 (2 stops)	High-density residential and schools within close proximity	519 and 919	Not measured	Not measured	High
North Temple	Bus Station (1950 West)	High in both directions – 436 (2 stops)	Commercial, service, North Temple RDA and TOD node	TRAX Green Line, 453, 454, 456 Regional-Connectors, 5600 West Core Route	E	F	Medium
South Temple	Transit Signal Priority	Moderate southbound Low northbound – 74 (2 stops)	Commercial, industrial	None	B	D	Low
400 South	Bus Station	High in both directions when combined with 500 South – 204 (4 stops)	High-density residential, commercial, civic—schools and social centers	None	B	F	Medium
Indiana Avenue	Bus Station Transit Signal Priority Queue Jump	Moderate in both directions – 44 (2 stops)	Mid-density residential with small blocks, near 9 Line RDA recreational node	None	B	F	Low
California Avenue	Bus Station Queue Jump	High in both directions – 150 (2 stops)	Commercial	513	C	F	Low
1700 South	Bus Station	High in both directions – 343 (2 stops)	Commercial	509, RTP 2700 West Enhanced Bus	C	F	Low
WEST VALLEY CITY							
Research Way	Bus Station Transit Signal Priority Queue Jump	High in both directions – 470 (2 stops)	Low and mid-density employment, Research Way node, start of Redwood Boulevard Community	TRAX Green Line	B	F	High
3100 South	Transit Signal Priority	Low in both directions – 90 (2 stops)	Residential, commercial	None	D	F	High
3500 South	Bus Station Transit Signal Priority Queue Jump	High in both directions – 453 (2 stops)	Commercial, industrial, Granger Crossing RDA	33, 35M	F	F	Low
3800 South	Bus Station	Low in both directions – 131 (4 stops)	High-density apartments and commercial	None	A	A	High on west side of Redwood
4100 South	Bus Station	High in both directions at stations on both sides of the street – 393 (4 stops)	Commercial, high-density residential one block to the east	41, planned 4100 South Enhanced Bus	E	F	Low

Source: Redwood Road Multimodal Study Traffic and Ridership Analysis Memo (Avenue Consultants 2018); Redwood Road Multimodal Transportation Study Walkability Analysis (Jacobs 2017); see also project Story Map at https://arcg.is/1914LD

Table 12. Summary of Core Route Implementation Considerations (continued)

CORE ROUTE							
LOCATION	**RECOMMENDED INFRASTRUCTURE**	**RIDERSHIP – TOTAL WEEKDAY** (STOPS INCLUDED FOR ROUTES 217 & 218)	**SURROUNDING LAND USE**	**CONNECTIVITY TO OTHER TRANSIT**	**INTERSECTION LEVEL OF SERVICE (PM)**		**WALKABILITY**
					EXISTING (2016)	FUTURE (2040)	
TAYLORSVILLE							
4200 South	Transit Signal Priority	High at stations closer to 4100 South	Commercial, high-density residential on southeast corner	None	B	C	Medium
SLCC	Bus Station	High in both directions – 483 (4 stops)	Unique student and senior-oriented services and housing	41, 47, SLCC Shuttle Bus	A	A	High in and around SLCC
4700 South	Bus Station Transit Signal Priority	Moderate in both directions – 125 (3 stops)	Major Activity Center, commercial, unique student and senior population	47, planned Midvalley Connector BRT	C	E	High
5400 South	Transit Signal Priority Queue Jump	High in both directions between 5400 South and 5600 South – 581 (4 stops)	Commercial Center	54	D	D	High to the southwest
5600 South	Bus Station	High in both directions between 5400 South and 5600 South – 581 (4 stops)	Commercial Center	54	C	D	High to the west
WEST JORDAN							
7000 South	Bus Station	High in both directions – 241 (5 stops)	Commercial Center, high-density apartments to the northeast	F570 Flex	E	F	High
7800 South	Transit Signal Priority Queue Jump	Low in both directions – 64 (3 stops) attributed to TRAX	Adjacent government center, high commercial usage	F578 Flex	F	F	High
8000 South	Bus Station	High in both directions – 853 (5 stops, 218 included)	Center of government and commerce, opportunities for TOD, significant public properties and under-utilized land	TRAX Red Line	A	F	High
8200 South	Queue Jump	Low in both directions – 10 (2 stops)	Residential, vacant parcels	None	A	F	High
9000 South	Bus Station Queue Jump	Low in both directions – 52 (3 stops)	Commercial with medium-density residential to the southwest and southeast	F590 Flex	E	F	High to the south
SOUTH JORDAN							
Shields Lane (9800 South)	Bus Station	Low in both directions – 12 (4 stops)	Large employment center	None	C	F	Low
South Jordan Parkway (10400 South)	Bus Station	Moderate in both directions – 64 (2 stops)	Commercial, high-density residential to the northwest	Planned Sandy-South Jordan Circulator, Sandy Daybreak Enhanced Bus	E	F	High to the east

Source: Redwood Road Multimodal Study Traffic and Ridership Analysis Memo (Avenue Consultants 2018); Redwood Road Multimodal Transportation Study Walkability Analysis (Jacobs 2017); see also project Story Map at https://arcg.is/1914LD

Figure 3. Core Route Recommendations & Implementation Considerations (Salt Lake to Taylorsville)

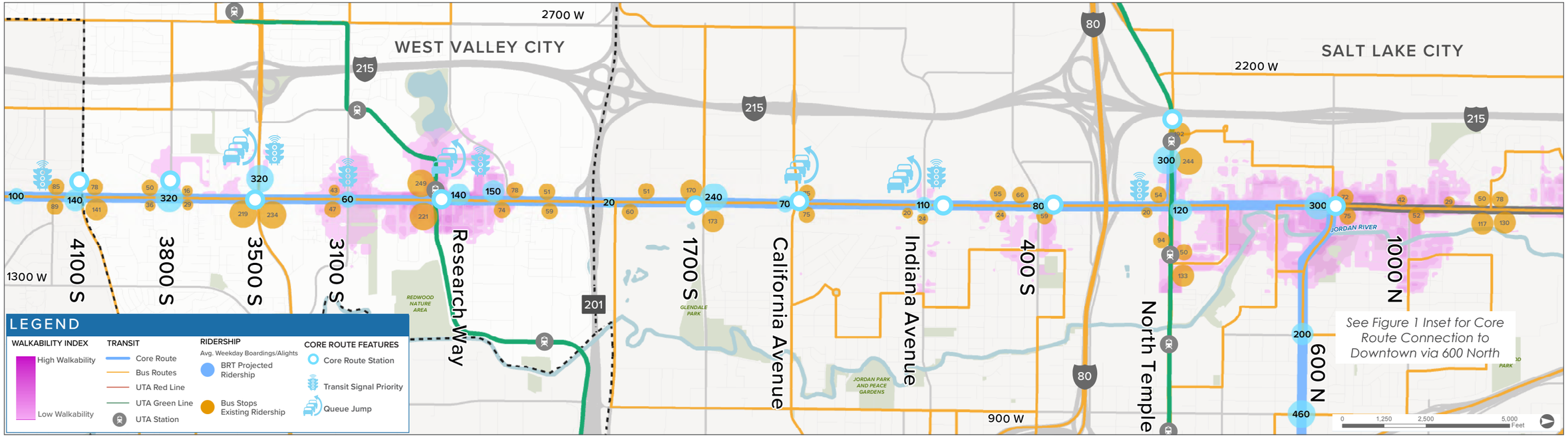
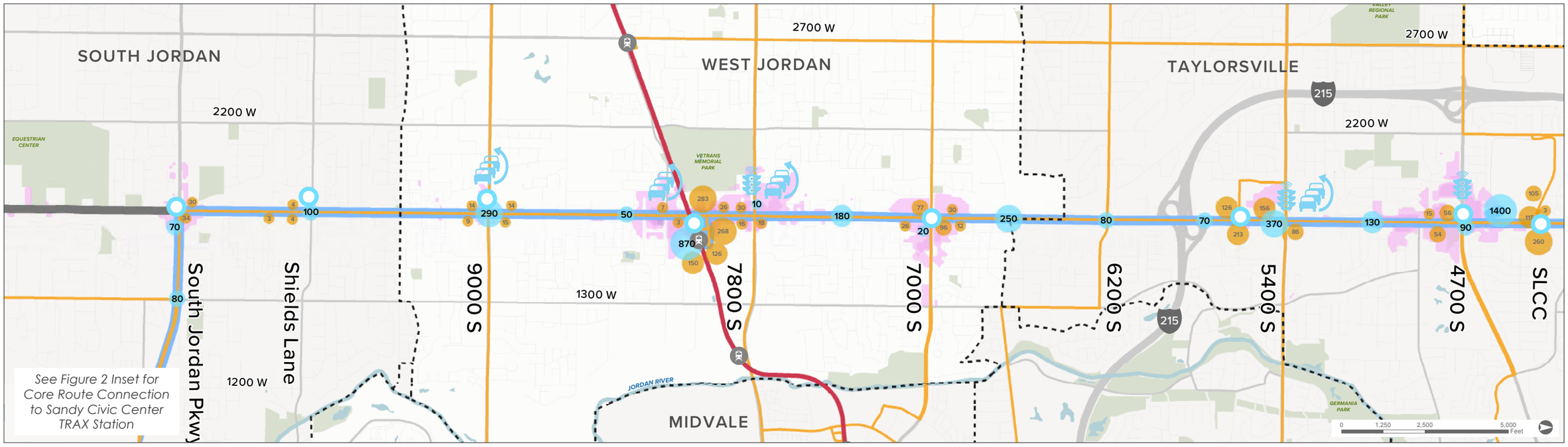
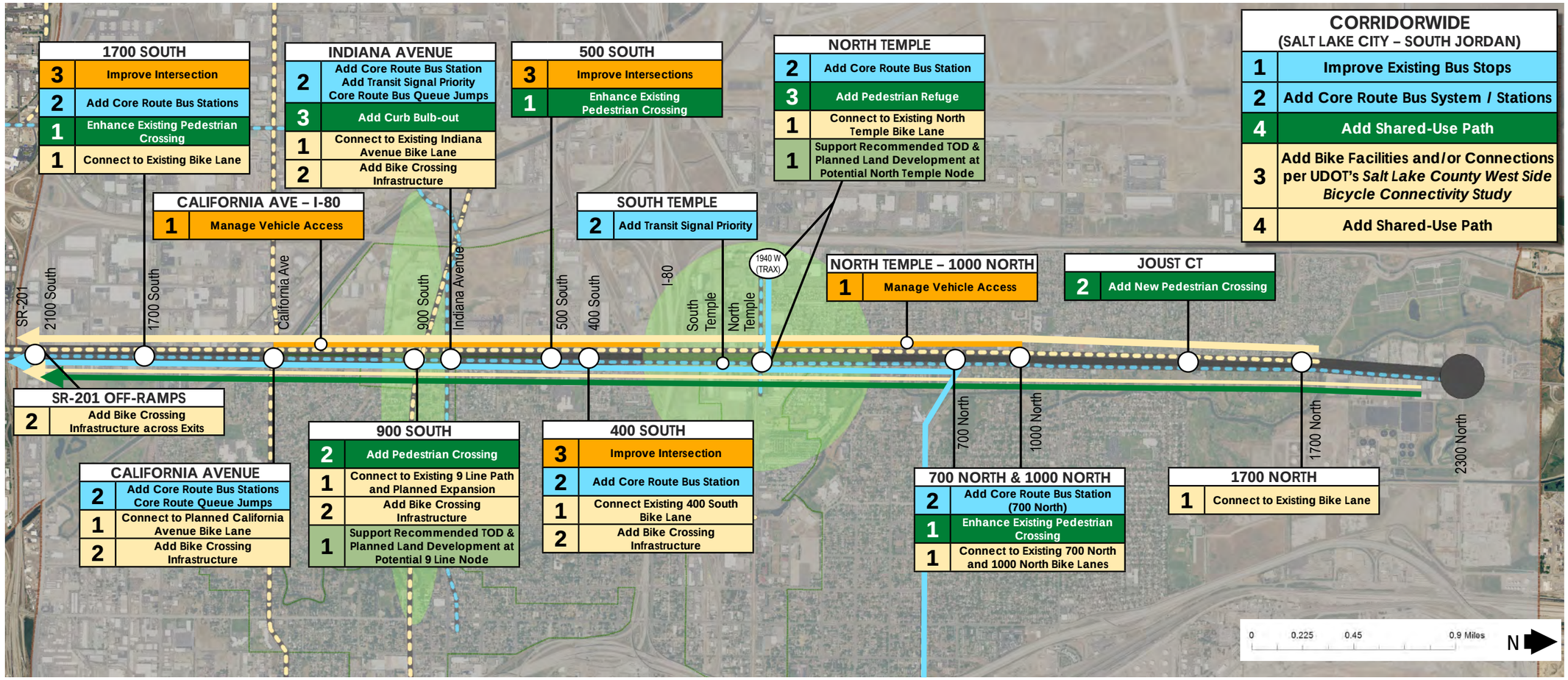


Figure 4. Core Route Recommendations & Implementation Considerations (Taylorsville to South Jordan)



SALT LAKE CITY IMPLEMENTATION

Figure 5. Salt Lake City Preferred Multimodal Alternative



Roadway Recommendations

Recommended Access Management Area

1 Access Management
Implement access management solutions to control vehicle cross-traffic, thereby improving level of service (LOS) and safety. Techniques may include driveway consolidation, strategic use of medians, and modifications to setback distance.

2 Turn Movement Improvements
Add turn pockets to provide motorists with a dedicated lane for deceleration and right-turn queuing, which improves LOS and safety. Could be used at intersections or mid-block for adjoining roads and driveways.

3 Intersection Improvements
Adjust existing infrastructure and layout of travel lanes to better serve current and future needs. Improvements may include modifications to channelization principles, number of intersection approaches, intersection angles, corner radius and curb ramp designs, detectable warnings, access control, sight distance, and vehicle/pedestrian interface.

Transit Recommendations

Planned Bus Rapid Transit / Core Route

Recommended Core Route

1 Existing Bus Stop Improvements
Improve existing stops to provide bus route 217 and 218 riders with a more enjoyable transit experience and increase the visibility and allure of transit in the community. Recommended amenities may include pedestrian shelters, level pads, improved lighting, and wayfinding/route information. Benches and shelters should be installed at all stops, and all improvements must be ADA compliant.

2 Core Route Bus System / Stations
Implement corridor-wide core route bus system defined by fewer, more substantial stations in strategic locations, frequent service, faster travel times, queue-jump infrastructure, and transit signal priority. It is recommended that this core route initially be in addition to existing local bus service on Redwood Road. The final decision of keeping or replacing the existing underlying bus service will be analyzed and determined upon final design and implementation of the core route service.

Walkability Recommendations

Recommended Shared-Use Path

1 Enhance Existing Pedestrian Crossing
Improve existing crossings to increase pedestrian safety and convenience. Possible improvements include signal optimization for pedestrians, improved crosswalk markings (e.g., paint, thermoplastic, brick), improved access, lighting, and amenities such as timers.

2 Add New Pedestrian Crossing
Add new signalized pedestrian crossings in areas with high potential for walkability that are currently lacking east-west connectivity. It is recommended that all north-south pedestrian movements be supported.

3 Add Pedestrian Infrastructure
Add more substantial pedestrian infrastructure to improve pedestrian safety through traffic-calming effects. This includes the addition of pedestrian refuge islands or curb bulb-outs.

4 Add Shared-Use Path
Add a shared-use path with a minimum width of 10' along both sides of the entire Redwood Road corridor. The path will serve both pedestrians and bicyclists.

Bicycle Recommendations

Planned Bike Lane

Recommended Shared-Use Path

Recommended Bike Lane

1 Connect Bike Paths/Lanes/Routes
Connect existing and planned bike paths, lanes and routes to recommended Redwood Road bike infrastructure. May include wayfinding signage and/or dedicated bike turn lanes.

2 Add/Enhance Bike Crossing & Intersection Infrastructure
Provide safe, visible crossings for bike lanes at intersections. This may include bike boxes and/or green paint.

3 Add Bike Lane
Maintain existing bike lane on Redwood Road from 2100 S to 1000 N and extend to 1700 N. Determine the best practice of implementing buffered or protected bike facilities based on posted speed, traffic volumes, and number of lanes. UDOT's *Salt Lake County West Side Bicycle Connectivity Study* recommends the typical section to the right for the Redwood Road route through Salt Lake City.

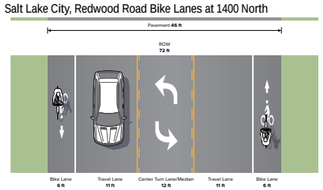
4 Add Shared-Use Path
Add a shared-use path with a minimum width of 10' along both sides of the entire Redwood Road corridor. The path will serve both pedestrians and bicyclists.

Land Use Recommendations

Planned Redevelopment / Economic Development Areas

1 Transit-Oriented Development (TOD)
Potential TOD nodes with the presence of local economic development and redevelopment areas. TOD is characterized by close proximity to transit, services, commerce, employment, and entertainment.

Salt Lake City, Redwood Road Bike Lanes at 1400 North



Source: UDOT Salt Lake County West Side Bicycle Connectivity Study

Table 13. Salt Lake City Implementation Recommendations

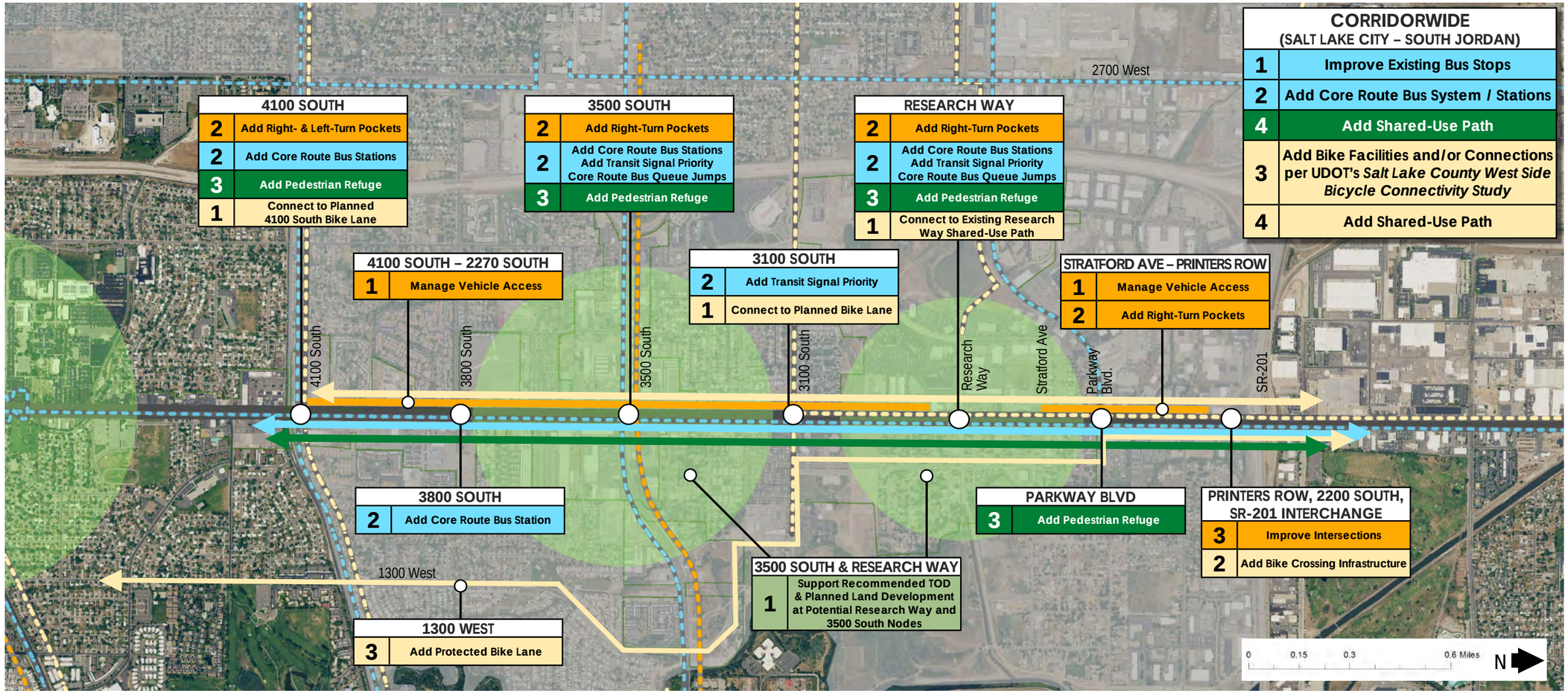
CORRIDOR-WIDE	
Core Route	**Timeline:** Mid-Term | **Combined Project Opportunities:** N/A | **Land Use Connections:** North Temple TOD Node, 9 Line Recreational Node, Research Way TOD Node, 4800 South Student/Senior TOD Node, West Jordan City Center TOD Node Potential funding sources include FTA Small Starts/New Starts, with state and local funding. See discussion regarding Core Route Implementation on pages 20–25.
CITY-WIDE	
Improve Existing Bus Stops	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** Any projects altering the existing sidewalk and/or existing bus stop location | **Land Use Connections:** 9 Line, North Temple Existing bus stops along Redwood Road are recommended for improvement along the length of the corridor. These stops could be improved to meet Core Route design elements as ancillary projects are implemented or as funding options are available. Any projects that alter the sidewalk should include considerations for improving the existing bus stop. Cities should pursue station improvements outside of Core Route implementation, as Core Route will retain underlying service. Federal funds are available for a variety of transit projects. The City should review the requirements and eligible activities for each program and determine the most competitive option.
Shared-Use Path	**Timeline:** Mid- to Long-Term | **Combined Project Opportunities:** Any projects altering the existing sidewalk and/or including roadway widening | **Land Use Connections:** 9 Line, North Temple Similar to existing station improvements, any projects that alter the sidewalk should include considerations for the shared-use path. Availability of right-of-way may constrain improvements in certain locations.
1700 NORTH	
Connect to Existing Bike Lane	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** Phase 2 Redwood Widening 2-4 Lanes 1000 North to Davis County Line, Phase 2 North Redwood Enhanced Bus | **Land Use Connections:** N/A Planned widening on Redwood Road from 1000 North to the Davis County Line provides an opportunity for implementation of recommendation. The planned transit improvements on this segment of Redwood Road would qualify recommendations that improve transit accessibility for FTA funding.
JOUST COURT (1375 SOUTH)	
Add New Pedestrian Crossing	**Timeline:** Mid-Term | **Combined Project Opportunities:** Phase 2 Redwood Widening 2-4 Lanes 1000 North to Davis County Line, Phase 2 North Redwood Enhanced Bus | **Land Use Connections:** N/A Planned widening on Redwood Road from 1000 North to the Davis County Line provides an opportunity for implementation of recommendation. The planned transit improvement on this segment of Redwood Road would qualify recommendations that improve transit accessibility for FTA funding.
1000 NORTH	
Enhance Existing Pedestrian Crossing	**Timeline:** Mid-Term (funding dependent) | **Combined Project Opportunities:** Phase 2 Redwood Widening 2-4 Lanes 1000 North to Davis County Line, Phase 2 North Redwood Enhanced Bus **Land Use Connections:** N/A Planned widening on Redwood Road from 1000 North to the Davis County Line provides an opportunity for implementation of recommendation. The planned transit improvements on this segment of Redwood Road would qualify recommendations that improve transit accessibility for FTA funding.
Connect to Existing Bike Lane	
700 NORTH	
Connect to Existing Bike Lane	**Timeline:** Near- to Mid-Term (funding dependent) | **Combined Project Opportunities:** Phase 2 North Redwood Enhanced Bus, ATIP Recommended Buffered Bike Lane | **Land Use Connections:** N/A The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide an opportunity for stand-alone bike and pedestrian recommendations. Planned transit improvements to this segment of Redwood Road qualify recommendations that improve transit accessibility for FTA funding. Other general funds are available through different Federal Highway Administration (FHWA) programs that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.
Enhance Pedestrian Crossing	
NORTH TEMPLE	
Add Turn Pockets	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** Phase 1 5600 West Core Route, Phase 2 North Redwood Enhanced Bus 1950 West Stop **Land Use Connections:** Wasatch Choice 2050 Village Center and Station Community, Transit Node and North Temple RDA Multiple planned transit projects provide opportunities for implementation of recommendations. Recommendations that improve accessibility to transit could be highly competitive as they are concentrated near a transit node with impacts to multiple lines and projects. Other general funds are available through different FHWA programs that require interagency coordination. Active connections between land use and transportation in the area are evident with the creation of the North Temple RDA and planned TOD development.
Add Pedestrian Refuge	
Connect to Existing Bike Lane	

Table 13. Salt Lake City Implementation Recommendations (continued)

400 SOUTH	
Improve Intersection **Add Crossing Infrastructure, Connect to Bike Lane**	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** ATIP Recommended Buffered Bike Lane, Local Bicycle Connections and Multi-Use Path from 300-400 South | **Land Use Connections:** N/A The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for standalone bike and pedestrian recommendations. Additionally, funds for auto-specific recommendations are highly competitive. The city should review the requirements and eligible activities for each program and determine the most competitive option.
500 SOUTH	
Improve Intersection **Enhance Pedestrian Crossing**	**Timeline:** Long-Term | **Combined Project Opportunities:** None | **Land Use Connections:** N/A Funds for auto-specific recommendations are highly competitive. Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other general funds are available through FHWA. The city should review the requirements and eligible activities for each program and determine the most competitive option.
INDIANA AVENUE	
Add Crossing Infrastructure and Connect to Bike Lane **Add Curb Bulb-Out**	**Timeline:** Mid-Term | **Combined Project Opportunities:** Phase 2 2700 West Corridor Enhanced Bus | **Land Use Connections:** N/A East-west transit projects provide opportunities for implementation of recommendations on Redwood Road. Additionally, recommendations that improve transit accessibility could be implemented as stand-alone projects using FTA funds. Pursuit of FTA funds could move the recommendation into a near-term outlook. Other general funding sources are available through FHWA.
900 SOUTH	
Connect to 9 Line, Add Crossing Infrastructure **Add Pedestrian Refuge**	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** ATIP Recommended Shared-Use Path Extension, Locally Identified Bike Improvement Location | **Land Use Connections:** Unique Recreational Node, 9 Line RDA The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations. Active connections between land use and transportation in the area are evident with the creation of the 9 Line RDA and planned development along the 9 Line shard-use path.
CALIFORNIA AVENUE	
Connect to Planned Bike Lane, Add Crossing Infrastructure	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** ATIP Recommended Buffered Bike Lane | **Land Use Connections:** N/A The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations. Other general funds are available through different FHWA programs that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.
SR-201 OFF-RAMPS	
Add Bike Crossing Infrastructure	**Timeline:** Long-Term | **Combined Project Opportunities:** N/A | **Land Use Connections:** N/A Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other funds are available through FHWA that require interagency coordination. The city should review the requirements for each program and determine the most competitive option.
NORTH TEMPLE – 1000 NORTH & CALIFORNIA AVENUE – I-80	
Manage Vehicle Access	**Timeline:** Long-Term | **Combined Project Opportunities:** N/A | **Land Use Connections:** N/A Funds for auto-specific recommendations are highly competitive. Managing vehicle access provides safety improvement opportunities for pedestrians and bikers, as conflict points between modes are reduced. The city should review the requirements and eligible activities for each program and determine the most competitive option and work to develop a purpose for the project that demonstrates a multimodal need.

WEST VALLEY IMPLEMENTATION

Figure 6. West Valley Preferred Multimodal Alternative



Roadway Recommendations

Recommended Access Management Area

1 Access Management
Implement access management solutions to control vehicle cross-traffic, thereby improving level of service (LOS) and safety. Techniques may include driveway consolidation, strategic use of medians, and modifications to setback distance.

2 Turn Movement Improvements
Add turn pockets to provide motorists with a dedicated lane for deceleration and right-turn queuing, which improves LOS and safety. Could be used at intersections or mid-block for adjoining roads and driveways.

3 Intersection Improvements
Adjust existing infrastructure and layout of travel lanes to better serve current and future needs. Improvements may include modifications to channelization principles, number of intersection approaches, intersection angles, corner radius and curb ramp designs, detectable warnings, access control, sight distance, and vehicle/pedestrian interface.

Transit Recommendations

Planned Bus Rapid Transit / Core Route

Recommended Core Route

1 Existing Bus Stop Improvements
Improve existing stops to provide bus route 217 and 218 riders with a more enjoyable transit experience and increase the visibility and allure of transit in the community. Recommended amenities may include pedestrian shelters, level pads, improved lighting, and wayfinding/route information. Benches and shelters should be installed at all stops, and all improvements must be ADA compliant.

2 Core Route Bus System / Stations
Implement corridor-wide core route bus system defined by fewer, more substantial stations in strategic locations, frequent service, faster travel times, queue-jump infrastructure, and transit signal priority. It is recommended that this core route initially be in addition to existing local bus service on Redwood Road. The final decision of keeping or replacing the existing underlying bus service will be analyzed and determined upon final design and implementation of the core route service.

Walkability Recommendations

Recommended Shared-Use Path

1 Enhance Existing Pedestrian Crossing
Improve existing crossings to increase pedestrian safety and convenience. Possible improvements include signal optimization for pedestrians, improved crosswalk markings (e.g., paint, thermoplastic, brick), improved access, lighting, and amenities such as timers.

2 Add New Pedestrian Crossing
Add new signalized pedestrian crossings in areas with high potential for walkability that are currently lacking east-west connectivity. It is recommended that all north-south pedestrian movements be supported.

3 Add Pedestrian Infrastructure
Add more substantial pedestrian infrastructure to improve pedestrian safety through traffic-calming effects. This includes the addition of pedestrian refuge islands or curb bulb-outs.

4 Add Shared-Use Path
Add a shared-use path with a minimum width of 10' along both sides of the entire Redwood Road corridor. The path will serve both pedestrians and bicyclists.

Bicycle Recommendations

Planned Bike Lane

Recommended Shared-Use Path

Recommended Bike Lane

1 Connect Bike Paths/Lanes/Routes
Connect existing and planned bike paths, lanes and routes to recommended Redwood Road bike infrastructure. May include wayfinding signage and/or dedicated bike turn lanes.

2 Add/Enhance Bike Crossing & Intersection Infrastructure
Provide safe, visible crossings for bike lanes at intersections. This may include bike boxes and/or green paint.

3 Add Bike Lane
Add bike lane on 1300 W Corridor Route per UDOT's *Salt Lake County West Side Bicycle Connectivity Study*. Add bike lane on Redwood Road from approximately Parkway Boulevard to existing bike lane at 2100 S. Determine the best practice of implementing buffered or protected bike facilities based on posted speed, traffic volumes, and number of lanes. UDOT's study recommends the typical sections to the right for the route.

4 Add Shared-Use Path
Add a shared-use path with a minimum width of 10' along both sides of the entire Redwood Road corridor. The path will serve both pedestrians and bicyclists.

Land Use Recommendations

Planned Redevelopment / Economic Development Areas

1 Transit-Oriented Development (TOD)
Potential TOD nodes with the presence of local economic development and redevelopment areas. TOD is characterized by close proximity to transit, services, commerce, employment, and entertainment.

Salt Lake City, Redwood Road. Bike Lanes at 1400 North

West Valley, 1300 West. Buffered Bike Lanes at Chickadee Street

Source: UDOT Salt Lake County West Side Bicycle Connectivity Study

Table 14. West Valley Implementation Recommendations

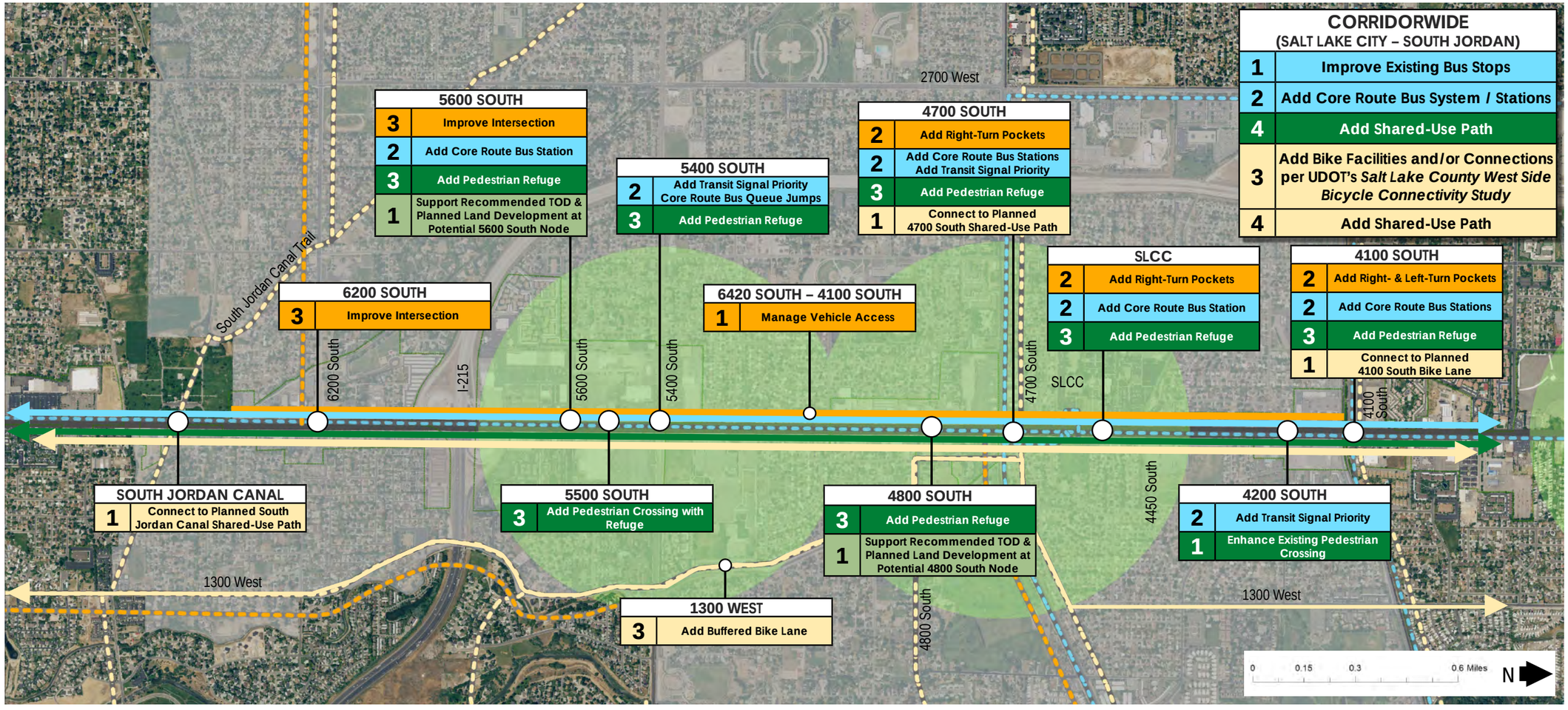
CORRIDOR-WIDE	
Core Route	**Timeline:** Mid-Term | **Combined Project Opportunities:** N/A | **Land Use Connections:** North Temple TOD Node, 9 Line Recreational Node, Research Way TOD Node, 4800 South Student/Senior TOD Node, West Jordan City Center TOD Node Potential funding sources include FTA Small Starts/New Starts, with state and local funding. See discussion regarding Core Route Implementation on pages 20–25.
CITY-WIDE	
Improve Existing Bus Stops	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** Any projects altering the existing sidewalk and/or existing bus stop location | **Land Use Connections:** Research Way TOD Node Existing bus stops along Redwood Road are recommended for improvement along the length of the corridor. These stops could be improved to meet Core Route design elements as ancillary projects are implemented or as funding options are available. Any projects that alter the sidewalk should include considerations for improving the existing bus stop. Cities should pursue station improvements outside of Core Route implementation, as Core Route will retain underlying service. Federal funds are available for a variety of transit projects. The city should review the requirements and eligible activities for each program and determine the most competitive option.
Shared-Use Path	**Timeline:** Mid- to Long-Term | **Combined Project Opportunities:** Any projects altering the existing sidewalk and/or including roadway widening | **Land Use Connections:** Research TOD Node Similar to existing station improvements, any projects that alter the sidewalk should include considerations for the shared-use path. Availability of right-of-way may constrain improvements in certain locations.
SR-201, PRINTERS ROW, 2200 SOUTH	
Improve Intersection **Add Bike Crossing Infrastructure**	**Timeline:** Mid-Term | **Combined Project Opportunities:** Phase 2 SR-201 Widening | **Land Use Connections:** N/A Widening at the SR-201 off-ramps provides an opportunity to fill a bicycle transportation gap. Other funds are available through different FHWA programs that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.
STRATFORD AVENUE-PRINTERS ROW	
Manage Vehicle Access **Add Right-Turn Pockets**	**Timeline:** Long-Term | **Combined Project Opportunities:** N/A | **Land Use Connections:** N/A Funds for auto-specific recommendations are limited and are highly competitive. Managing vehicle access provides safety improvement opportunities for pedestrians and bikers, as conflict points between modes are reduced. The city should review the requirements and eligible activities for each program and determine the most competitive option and work to develop a purpose for the project that demonstrates a multimodal need.
PARKWAY BOULEVARD	
Add Pedestrian Refuge	**Timeline:** Long-Term | **Combined Project Opportunities:** N/A | **Land Use Connections:** Wasatch Choice Redwood Road Boulevard Community, Local RDA, Near Transit Node Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.
RESEARCH WAY	
Add Pedestrian Refuge	**Timeline:** Near- to Mid-Term (funding dependent) | **Combined Project Opportunities:** ATIP Recommended Shared Use Path | **Land Use Connections:** Local RDA, Wasatch Choice 2050 Boulevard Community, STIP Transportation Land Use Connection, TOD Potential The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations. Additionally, recommendations that improve transit accessibility could be implemented as stand-alone projects using FTA funds. Pursuit of FTA funds could move the recommendation into a near-term outlook. Other bicycle and pedestrian funds are available through FHWA. Active connections between land use and transportation in the area are evident with close proximity to TRAX and an established local RDA.
Connect to Shared-Use Path	
3100 SOUTH	
Connect to Planned Bike Lane	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** ATIP Recommended Buffered Bike Lane | **Land Use Connections:** Wasatch Choice 2050 Boulevard Community The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations. Other bicycle funds are available through different FHWA programs that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.

Table 14. West Valley Implementation Recommendations (continued)

3500 SOUTH	
Add Right-Turn Pockets **Add Pedestrian Refuge**	**Timeline:** Mid-Term | **Combined Project Opportunities:** Phase 2 3500 South I-215 to Highland Drive Operational Improvements, Phase 2 R 35MAX Expansion/Optimization **Land Use Connections:** Wasatch Choice 2050 Boulevard Community, STIP Transportation Land Use Connection, Local RDA East-west transit projects provide opportunities for implementation of recommendations on Redwood Road. Additionally, recommendations that improve transit accessibility could be implemented as stand-alone projects using FTA funds. Pursuit of FTA funds could move the recommendation into a near-term outlook. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.
4100 SOUTH	
Add Right- and Left-Turn Pockets **Add Pedestrian Refuge** **Connect to Planned Bike Lane**	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** Phase 2 4100 South Enhanced Bus, STIP 4100 South – 4700 South Intersection Improvements, ATIP Recommended Buffered Bike Lane **Land Use Connections:** Wasatch Choice 2050 Boulevard Community East-west transit projects provide opportunities for implementation of recommendations on Redwood Road. The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations. In addition, near-term intersection improvement projects provide opportunities for improvements for all modes. This location is a high-opportunity location for recommendation implementation and should be pursued with strong interagency collaboration.
4100 SOUTH – 2270 WEST	
Manage Vehicle Access	**Timeline:** Long-Term | **Combined Project Opportunities:** N/A | **Land Use Connections:** Wasatch Choice 2050 Boulevard Community Funds for auto-specific recommendations are highly competitive. Managing vehicle access provides safety improvement opportunities for pedestrians and bikers, as conflict points between modes are reduced. The city should review the requirements and eligible activities for each program and determine the most competitive option and work to develop a purpose for the project that demonstrates a multimodal need.
1300 WEST	
Add Buffered Bike Lane	**Timeline:** Near- to Mid-Term (funding dependent) | **Combined Project Opportunities:** ATIP Recommended Buffered Bike Lane | **Land Use Connections:** N/A The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations. Other funds are available through FHWA that require interagency coordination. Recommendations that improve transit accessibility could qualify for competitive FTA funding. The city should review the requirements and eligible activities for each program and determine the most competitive option.

TAYLORSVILLE IMPLEMENTATION

Figure 7. Taylorsville Preferred Multimodal Alternative



Roadway Recommendations

Recommended Access Management Area

1 Access Management
Implement access management solutions to control vehicle cross-traffic, thereby improving level of service (LOS) and safety. Techniques may include driveway consolidation, strategic use of medians, and modifications to setback distance.

2 Turn Movement Improvements
Add turn pockets to provide motorists with a dedicated lane for deceleration and right-turn queuing, which improves LOS and safety. Could be used at intersections or mid-block for adjoining roads and driveways.

3 Intersection Improvements
Adjust existing infrastructure and layout of travel lanes to better serve current and future needs. Improvements may include modifications to channelization principles, number of intersection approaches, intersection angles, corner radius and curb ramp designs, detectable warnings, access control, sight distance, and vehicle/pedestrian interface.

Transit Recommendations

Planned Bus Rapid Transit / Core Route

Recommended Core Route

1 Existing Bus Stop Improvements
Improve existing stops to provide bus route 217 and 218 riders with a more enjoyable transit experience and increase the visibility and allure of transit in the community. Recommended amenities may include pedestrian shelters, level pads, improved lighting, and wayfinding/route information. Benches and shelters should be installed at all stops, and all improvements must be ADA compliant.

2 Core Route Bus System / Stations
Implement corridor-wide core route bus system defined by fewer, more substantial stations in strategic locations, frequent service, faster travel times, queue-jump infrastructure, and transit signal priority. It is recommended that this core route initially be in addition to existing local bus service on Redwood Road. The final decision of keeping or replacing the existing underlying bus service will be analyzed and determined upon final design and implementation of the core route service.

Walkability Recommendations

Recommended Shared-Use Path

1 Enhance Existing Pedestrian Crossing
Improve existing crossings to increase pedestrian safety and convenience. Possible improvements include signal optimization for pedestrians, improved crosswalk markings (e.g., paint, thermoplastic, brick), improved access, lighting, and amenities such as timers.

2 Add New Pedestrian Crossing
Add new signalized pedestrian crossings in areas with high potential for walkability that are currently lacking east-west connectivity. It is recommended that all north-south pedestrian movements be supported.

3 Add Pedestrian Infrastructure
Add more substantial pedestrian infrastructure to improve pedestrian safety through traffic-calming effects. This includes the addition of pedestrian refuge islands or curb bulb-outs.

4 Add Shared-Use Path
Add a shared-use path with a minimum width of 10' along both sides of the entire Redwood Road corridor. The path will serve both pedestrians and bicyclists.

Bicycle Recommendations

Planned Bike Lane

Recommended Shared-Use Path

Recommended Bike Lane

1 Connect Bike Paths/Lanes/Routes
Connect existing and planned bike paths, lanes and routes to recommended Redwood Road bike infrastructure. May include wayfinding signage and/or dedicated bike turn lanes.

2 Add/Enhance Bike Crossing & Intersection Infrastructure
Provide safe, visible crossings for bike lanes at intersections. May include bike boxes and/or green paint.

3 Add Bike Lane
Add bike lane on 1300 W Corridor Route per UDOT's *Salt Lake County West Side Bicycle Connectivity Study*. Determine the best practice of implementing buffered or protected bike facilities based on posted speed, traffic volumes, and number of lanes. UDOT's study recommends the typical section to the right for the route.

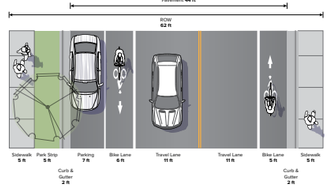
4 Add Shared-Use Path
Add a shared-use path with a minimum width of 10' along both sides of the entire Redwood Road corridor. The path will serve both pedestrians and bicyclists.

Land Use Recommendations

Planned Redevelopment / Economic Development Areas

1 Transit-Oriented Development (TOD)
Potential TOD nodes with the presence of local economic development and redevelopment areas. TOD is characterized by close proximity to transit, services, commerce, employment, and entertainment.

Taylorsville, 1300 West. Buffered Bike Lanes at 5115 South



Source: UDOT Salt Lake County West Side Bicycle Connectivity Study

Table 15. Taylorsville Implementation Recommendations

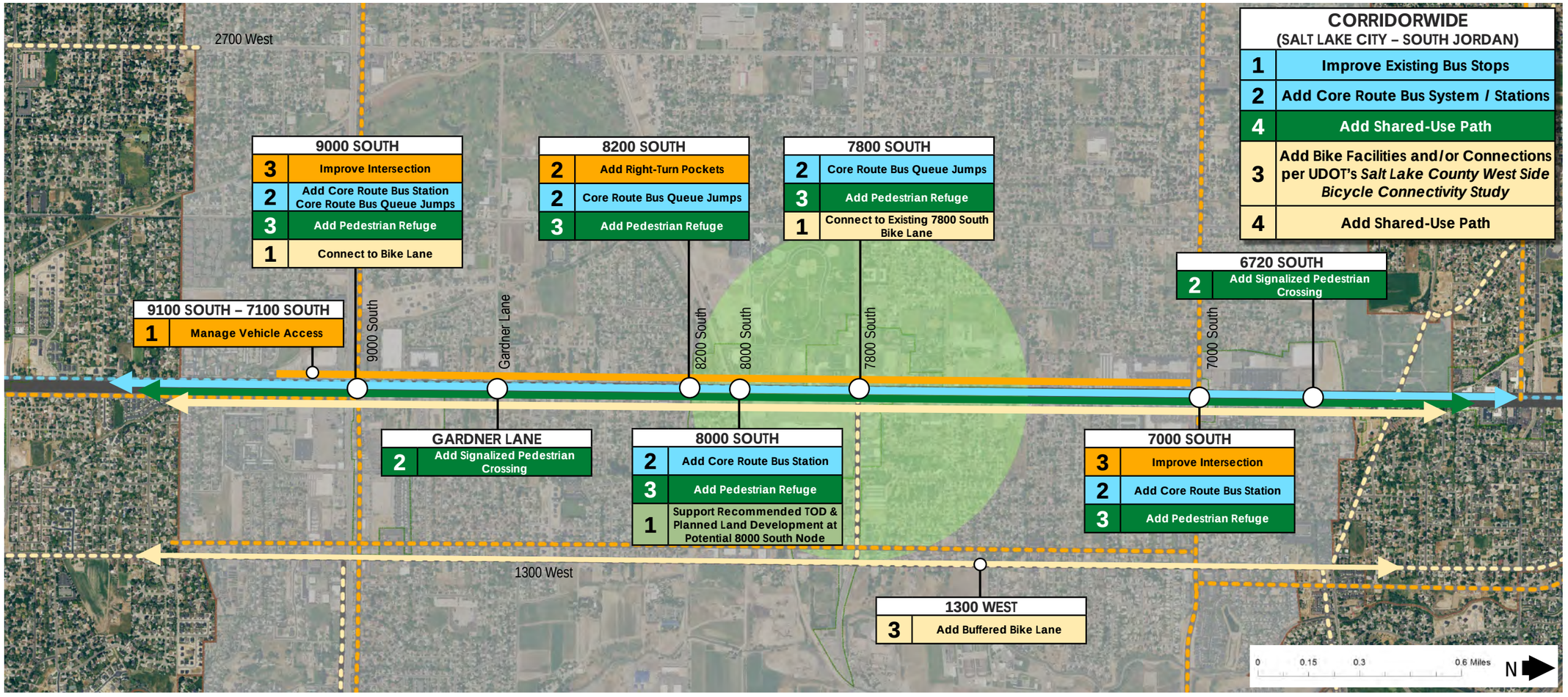
CORRIDOR-WIDE	
Core Route	**Timeline:** Mid-Term | **Combined Project Opportunities:** N/A | **Land Use Connections:** North Temple TOD Node, 9 Line Recreational Node, Research Way TOD Node, 4800 South Student/Senior TOD Node, West Jordan City Center TOD Node Potential funding sources include FTA Small Starts/New Starts, with state and local funding. See discussion regarding Core Route Implementation on pages 20–25.
CITY-WIDE	
Improve Existing Bus Stops	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** Any projects altering the existing sidewalk and/or existing bus stop location | **Land Use Connections:** SLCC, Center Point Existing bus stops along Redwood Road are recommended for improvement along the length of the corridor. These stops could be improved to meet Core Route design elements as ancillary projects are implemented or as funding options are available. Any projects that alter the sidewalk should include considerations for improving the existing bus stop. Cities should pursue station improvements outside of Core Route implementation, as Core Route will retain underlying service. Federal funds are available for a variety of transit projects. The city should review the requirements and eligible activities for each program and determine the most competitive option.
Shared-Use Path	**Timeline:** Mid- to Long-Term | **Combined Project Opportunities:** Any projects altering the existing sidewalk and/or including roadway widening | **Land Use Connections:** SLCC, Center Point Similar to existing station improvements, any projects that alter the sidewalk should include considerations for the shared-use path. Availability of right-of-way may constrain improvements in certain locations.
4100 SOUTH	
Add Right- and Left-Turn Pockets **Add Pedestrian Refuge** **Connect to Planned 4100 South Bike Lane**	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** Phase 2 4100 South Enhanced Bus, STIP 4100 South – 4700 South Intersection Improvements, ATIP Recommended Buffered Bike Lane **Land Use Connection:** Wasatch Choice 2050 Boulevard Community East-west transit projects provide opportunities for implementation of recommendations on Redwood Road. The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations. In addition, near-term STIP intersection improvement projects provide opportunities for improvements for all modes. This location is a high-opportunity location for recommendation implementation and should be pursued with strong interagency collaboration.
6420 SOUTH – 4100 SOUTH	
Manage Vehicle Access	**Timeline:** Near-Term | **Combined Project Opportunities:** STIP 4100 South – 4700 South Intersection Improvements, STIP 4700 South to 5400 South Mobility and Access Management **Land Use Connections:** Wasatch Choice 2050 Boulevard Community Funds for auto-specific recommendations are highly competitive. Managing vehicle access provides safety improvement opportunities for pedestrians and bikers, as conflict points between modes are reduced. The city should review the requirements and eligible activities for each program and determine the most competitive option and work to develop a purpose for the project that is supported by a multimodal need.
4200 SOUTH	
Enhance Existing Pedestrian Crossing	**Timeline:** Near-Term | **Combined Project Opportunities:** STIP 4100 South – 4700 South Intersection Improvements | **Land Use Connections:** Wasatch Choice 2050 Boulevard Community Near-term STIP intersection improvement projects provide opportunities for improvements for all modes.
SLCC	
Add Right-Turn Pockets **Add Pedestrian Refuge**	**Timeline:** Near-Term | **Combined Project Opportunities:** STIP 4100 South – 4700 South Intersection Improvements | **Land Use Connections:** Wasatch Choice 2050 Boulevard Community, STIP Land Use and Transportation Connection Near-term STIP intersection improvement projects provide opportunities for improvements for all modes. Additionally, recommendations that improve transit accessibility could be implemented as stand-alone projects using FTA funds. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.
4700 SOUTH	
Add Right-Turn Pockets **Add Pedestrian Refuge** **Connect to Planned 4700 South Shared-Use Path**	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** Phase 2 4700 South Enhanced Bus, Phase 2 Widening 4-6 Lanes, STIP 4100 South to 4700 South Intersection Improvements, ATIP Recommended Shared-Use Path | **Land Use Connections:** Wasatch Choice 2050 Boulevard Community East-west transit projects provide opportunities for recommendation implementation on Redwood Road. The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations. In addition, near-term STIP intersection improvement projects provide opportunities for all modes. This location is a high-opportunity location for recommendation implementation and should be pursued with strong interagency collaboration.

Table 15. Taylorsville Implementation Recommendations (continued)

4800 SOUTH	
Add Pedestrian Refuge	**Timeline:** Near-Term | **Combined Project Opportunities:** STIP 4700 South – 5400 South Mobility and Access Management | **Land Use Connections:** Wasatch Choice 2050 Boulevard Community, Land Use Market Analysis Major Activity Center Near-term STIP mobility improvement projects provide opportunities for pedestrian and bicycle recommendations. Active connections between land use and transportation in the area are evident with the creation of a Local RDA and feasible TOD development. SLCC and surrounding Senior-Oriented housing create a unique opportunity for transit and walkable development.
5400 SOUTH	
Add Pedestrian Refuge **Connect to Planned Bike Lane**	**Timeline:** Near-Term | **Combined Project Opportunities:** STIP 4700 South – 5400 South Mobility and Access Management, ATIP Recommended Buffered Bike Lane | **Land Use Connections:** Wasatch Choice 2050 Boulevard Community Near-term STIP mobility improvement projects provide opportunities for pedestrian and bicycle recommendations. The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations.
5500 SOUTH	
Add Pedestrian Refuge	**Timeline:** Long-Term | **Combined Project Opportunities:** N/A | **Land Use Connections:** Local RDA at Major Activity Center, STIP Transportation and Land Use Connection Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.
5600 SOUTH	
Improve Intersection **Add Pedestrian Refuge**	**Timeline:** Near- to Mid-Term (funding dependent) | **Combined Project Opportunities:** N/A | **Land Use Connections:** Local RDA at Major Activity Center Funds for auto-specific recommendations are highly competitive. Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.
6200 SOUTH	
Improve Intersection	**Timeline:** Mid-Term | **Combined Project Opportunities:** Phase 2 I-215 Interchange Upgrade | **Land Use Connections:** N/A Funds for auto-specific recommendations are highly competitive. The city should review the requirements and eligible activities for each program and determine the most competitive option.
SOUTH JORDAN CANAL/1300 WEST	
Connect to Planned South Jordan Canal Shared-Use Path **Add Buffered Bike Lane on 1300 West**	**Timeline:** Near- to Mid-Term (funding dependent) | **Combined Project Opportunities:** ATIP Recommended Shared-Use Path, Phase 3 1300 West Widening | **Land Use Connections:** N/A The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.

WEST JORDAN IMPLEMENTATION

Figure 8. West Jordan Preferred Multimodal Alternative



Roadway Recommendations

Recommended Access Management Area

1 Access Management
Implement access management solutions to control vehicle cross-traffic, thereby improving level of service (LOS) and safety. Techniques may include driveway consolidation, strategic use of medians, and modifications to setback distance.

2 Turn Movement Improvements
Add turn pockets to provide motorists with a dedicated lane for deceleration and right-turn queuing, which improves LOS and safety. Could be used at intersections or mid-block for adjoining roads and driveways.

3 Intersection Improvements
Adjust existing infrastructure and layout of travel lanes to better serve current and future needs. Improvements may include modifications to channelization principles, number of intersection approaches, intersection angles, corner radius and curb ramp designs, detectable warnings, access control, sight distance, and vehicle/pedestrian interface.

Transit Recommendations

Planned Bus Rapid Transit / Core Route

Recommended Core Route

1 Existing Bus Stop Improvements
Improve existing stops to provide bus route 217 and 218 riders with a more enjoyable transit experience and increase the visibility and allure of transit in the community. Recommended amenities may include pedestrian shelters, level pads, improved lighting, and wayfinding/route information. Benches and shelters should be installed at all stops, and all improvements must be ADA compliant.

2 Core Route Bus System / Stations
Implement corridor-wide core route bus system defined by fewer, more substantial stations in strategic locations, frequent service, faster travel times, queue-jump infrastructure, and transit signal priority. It is recommended that this core route initially be in addition to existing local bus service on Redwood Road. The final decision of keeping or replacing the existing underlying bus service will be analyzed and determined upon final design and implementation of the core route service.

Walkability Recommendations

Recommended Shared-Use Path

1 Enhance Existing Pedestrian Crossing
Improve existing crossings to increase pedestrian safety and convenience. Possible improvements include signal optimization for pedestrians, improved crosswalk markings (e.g., paint, thermoplastic, brick), improved access, lighting, and amenities such as timers.

2 Add New Pedestrian Crossing
Add new signalized pedestrian crossings in areas with high potential for walkability that are currently lacking east-west connectivity. It is recommended that all north-south pedestrian movements be supported.

3 Add Pedestrian Infrastructure
Add more substantial pedestrian infrastructure to improve pedestrian safety through traffic-calming effects. This includes the addition of pedestrian refuge islands or curb bulb-outs.

4 Add Shared-Use Path
Add a shared-use path with a minimum width of 10' along both sides of the entire Redwood Road corridor. The path will serve both pedestrians and bicyclists.

Bicycle Recommendations

Planned Bike Lane

Recommended Shared-Use Path

Recommended Bike Lane

1 Connect Bike Paths/Lanes/Routes
Connect existing and planned bike paths, lanes and routes to recommended Redwood Road bike infrastructure. May include wayfinding signage and/or dedicated bike turn lanes.

2 Add/Enhance Bike Crossing & Intersection Infrastructure
Provide safe, visible crossings for bike lanes at intersections. This may include bike boxes and/or green paint.

3 Add Bike Lane
Add bike lane on 1300 W Corridor Route per UDOT's *Salt Lake County West Side Bicycle Connectivity Study*. Determine the best practice of implementing buffered or protected bike facilities based on posted speed, traffic volumes, and number of lanes. UDOT's study recommends the typical section to the right for the route.

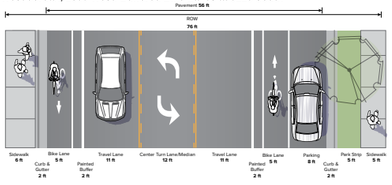
4 Add Shared-Use Path
Add a shared-use path with a minimum width of 10' along both sides of the entire Redwood Road corridor. The path will serve both pedestrians and bicyclists.

Land Use Recommendations

Planned Redevelopment / Economic Development Areas

1 Transit-Oriented Development (TOD)
Potential TOD nodes with the presence of local economic development and redevelopment areas. TOD is characterized by close proximity to transit, services, commerce, employment, and entertainment.

West Jordan, 1300 West. Buffered Bike Lanes at 9220 South



Source: UDOT Salt Lake County West Side Bicycle Connectivity Study

Table 16. West Jordan Implementation Recommendations

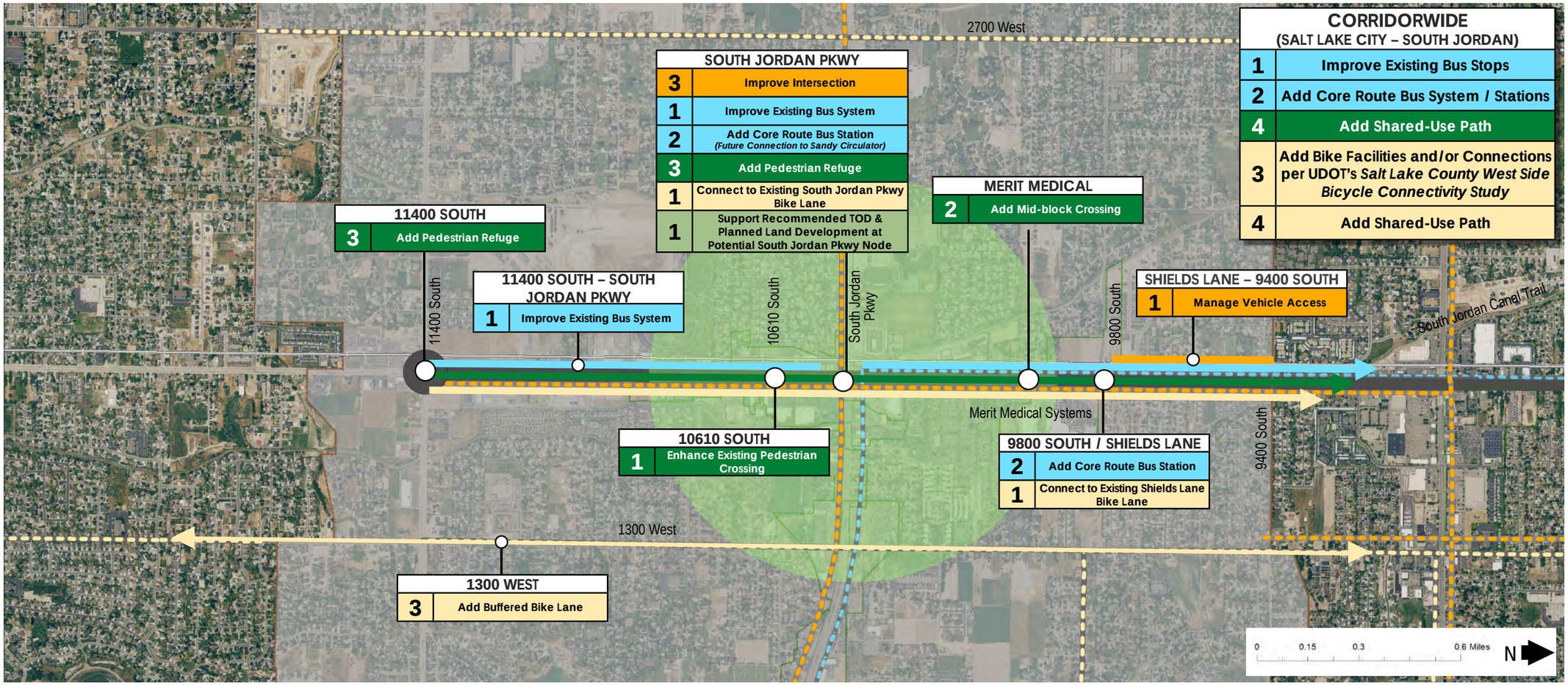
CORRIDOR-WIDE	
Core Route	**Timeline:** Mid-Term | **Combined Project Opportunities:** N/A | **Land Use Connections:** North Temple TOD Node, 9 Line Recreational Node, Research Way TOD Node, 4800 South Student/Senior TOD Node, West Jordan City Center TOD Node Potential funding sources include FTA Small Starts/New Starts, with state and local funding. See discussion regarding Core Route Implementation on pages 20–25.
CITY-WIDE	
Improve Existing Bus Stops	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** Any projects altering the existing sidewalk and/or existing bus stop location | **Land Use Connections:** City Center (8000 South) Existing bus stops along Redwood Road are recommended for improvement along the length of the corridor. These stops could be improved to meet Core Route design elements as ancillary projects are implemented or as funding options are available. Any projects that alter the sidewalk should include considerations for improving the existing bus stop. Cities should pursue station improvements outside of Core Route implementation, as Core Route will retain underlying service. Federal funds are available for a variety of transit projects. The city should review the requirements and eligible activities for each program and determine the most competitive option.
Shared-Use Path	**Timeline:** Mid- to Long-Term | **Combined Project Opportunities:** Any projects altering the existing sidewalk and/or including roadway widening | **Land Use Connections:** City Center (8000 South) Similar to existing stop improvements, any projects that alter the sidewalk should include considerations for the shared-use path. Availability of right-of-way may constrain improvements in certain locations.
6800 SOUTH	
Add Pedestrian Refuge	**Timeline:** Long-Term | **Combined Project Opportunities:** N/A | **Land Use Connections:** Local RDA Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.
7000 SOUTH	
Improve Intersection **Add Pedestrian Refuge**	**Timeline:** Near- to Long-Term | **Combined Project Opportunities:** Unfunded Cottonwood – Kearns Corridor BRT, STIP Redwood Corridor Preservation | **Land Use Connections:** N/A Federal funds are available for altering the hard infrastructure within the right-of-way such as installation of a pedestrian refuge. Funds for auto-specific recommendations are highly competitive. The city should review the requirements and eligible activities for each program and determine the most competitive option. Combining multimodal needs into one project could make it more competitive for federal funds.
7800 SOUTH	
Add Pedestrian Refuge **Connect to Existing Bike Lane**	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** ATIP Recommended Buffered Bike Lane | **Land Use Connections:** Wasatch Choice 2050 Town Center, Adjacent Civic and Transit Node The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations. Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.
8000 SOUTH	
Add Pedestrian Refuge **Support Recommended TOD & Planned Land Development**	**Timeline:** Long-Term | **Combined Project Opportunities:** Significant publicly owned land near high-quality transit connection; STIP TOD Infrastructure | **Land Use Connections:** Wasatch Choice 2050 Town Center A land use market analysis has identified this location as having high feasibility for TOD. State funds allocated for planning support should be pursued to create the best possible development that supports transit use. Additional pedestrian improvement recommendations should be sought to create internal and external connectivity between TOD development and the transit infrastructure.
8200 SOUTH	
Add Right-Turn Pocket **Add Pedestrian Refuge**	**Timeline:** Long-Term | **Combined Project Opportunities:** N/A | **Land Use Connections:** N/A Federal funds are available for projects that demonstrate improved accessibility and connectivity to transit. Additionally, funds for auto-specific projects are highly competitive and should be sought with interagency coordination and multimodal need. The city should review the requirements and eligible activities for each program and determine the most competitive option.
GARDNER LANE	
Add Pedestrian Refuge or Curb Bulb-Out	**Timeline:** Near-Term | **Combined Project Opportunities:** STIP Redwood Corridor Preservation Signal Construction | **Land Use Connections:** N/A Two new signals are being constructed near the recommended pedestrian refuge. Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.

Table 16. West Jordan Implementation Recommendations (continued)

9000 SOUTH	
Improve Intersection **Add Pedestrian Refuge** **Connect to Existing Bike Lane**	**Timeline:** Near-Term | **Combined Project Opportunities:** Phase 1 Widening I-15 to Redwood, Redwood Widening 9000 South-11400 South; STIP Redwood Corridor Preservation; ATIP Recommended Buffered Bike Lane | **Land Use Connections:** N/A East-west highway improvement projects provide opportunities for implementation of recommendations on Redwood Road. When coupled with active operational improvements, hard infrastructure to improve pedestrian and bicycle travel becomes more competitive for federal funding. The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations.
9100 SOUTH – 7100 SOUTH	
Manage Vehicle Access	**Timeline:** Near- to Long-Term | **Combined Project Opportunities:** Phase 1 Widening I-15 to Redwood, Redwood Widening 9000 South-11400 South, STIP Redwood Corridor Preservation **Land Use Connections:** N/A Widening on Redwood Road is a prime opportunity for managing vehicle access. Managing vehicle access provides safety improvement opportunities for pedestrians and bikers as conflict points between modes are reduced. The city should review the requirements and eligible activities for each program and determine the most competitive option and work to develop a purpose for the project that has a multimodal need.
SOUTH JORDAN CANAL/1300 WEST	
Add Buffered Bike Lane on 1300 West	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** Phase 3 1300 West Widening, ATIP Recommended Buffered Bike Lane | **Land Use Connections:** N/A The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations. Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.

SOUTH JORDAN IMPLEMENTATION

Figure 9. South Jordan Preferred Multimodal Alternative



Roadway Recommendations

Recommended Access Management Area

1 Access Management
Implement access management solutions to control vehicle cross-traffic, thereby improving level of service (LOS) and safety. Techniques may include driveway consolidation, strategic use of medians, and modifications to setback distance.

2 Turn Movement Improvements
Add turn pockets to provide motorists with a dedicated lane for deceleration and right-turn queuing, which improves LOS and safety. Could be used at intersections or mid-block for adjoining roads and driveways.

3 Intersection Improvements
Adjust existing infrastructure and layout of travel lanes to better serve current and future needs. Improvements may include modifications to channelization principles, number of intersection approaches, intersection angles, corner radius and curb ramp designs, detectable warnings, access control, sight distance, and vehicle/pedestrian interface.

Transit Recommendations

Planned Bus Rapid Transit / Core Route

Recommended Core Route

1 Existing Bus Stop Improvements
Improve existing stops to provide bus route 217 and 218 riders with a more enjoyable transit experience and increase the visibility and allure of transit in the community. Recommended amenities may include pedestrian shelters, level pads, improved lighting, and wayfinding/route information. Benches and shelters should be installed at all stops, and all improvements must be ADA compliant.

2 Core Route Bus System / Stations
Implement corridor-wide core route bus system defined by fewer, more substantial stations in strategic locations, frequent service, faster travel times, queue-jump infrastructure, and transit signal priority. At the South Jordan Parkway station, there are future plans to connect the Redwood Road core route to South Jordan FrontRunner, which will then connect to the Sandy downtown area via the Sandy Circulator.

It is recommended that this core route initially be in addition to existing local bus service on Redwood Road. The final decision of keeping or replacing the existing underlying bus service will be analyzed and determined upon final design and implementation of the core route service.

Walkability Recommendations

Recommended Shared-Use Path

1 Enhance Existing Pedestrian Crossing
Improve existing crossings to increase pedestrian safety and convenience. Possible improvements include signal optimization for pedestrians, improved crosswalk markings (e.g., paint, thermoplastic, brick), improved access, lighting, and amenities such as timers.

2 Add New Pedestrian Crossing
Add new signalized pedestrian crossings in areas with high potential for walkability that are currently lacking east-west connectivity. It is recommended that all north-south pedestrian movements be supported.

3 Add Pedestrian Infrastructure
Add more substantial pedestrian infrastructure to improve pedestrian safety through traffic-calming effects. This includes the addition of pedestrian refuge islands or curb bulb-outs.

4 Add Shared-Use Path
Add a shared-use path with a minimum width of 10' along both sides of the entire Redwood Road corridor. The path will serve both pedestrians and bicyclists.

Bicycle Recommendations

Planned Bike Lane

Recommended Shared-Use Path

Recommended Bike Lane

1 Connect Bike Paths/Lanes/Routes
Connect existing and planned bike paths, lanes and routes to recommended Redwood Road bike infrastructure. May include wayfinding signage and/or dedicated bike turn lanes.

2 Add/Enhance Bike Crossing & Intersection Infrastructure
Provide safe, visible crossings for bike lanes at intersections. May include bike boxes and/or green paint.

3 Add Bike Lane
Add bike lane on 1300 W Corridor Route per UDOT's *Salt Lake County West Side Bicycle Connectivity Study*. Determine the best practice of implementing buffered or protected bike facilities based on posted speed, traffic volumes, and number of lanes. UDOT's study recommends the typical section to the right for the route.

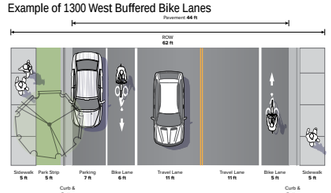
4 Add Shared-Use Path
Add a shared-use path with a minimum width of 10' along both sides of the entire Redwood Road corridor. The path will serve both pedestrians and bicyclists.

Land Use Recommendations

Planned Redevelopment / Economic Development Areas

1 Transit-Oriented Development (TOD)
Potential TOD nodes with the presence of local economic development and redevelopment areas. TOD is characterized by close proximity to transit, services, commerce, employment, and entertainment.

Example of 1300 West Buffered Bike Lanes



Source: UDOT Salt Lake County West Side Bicycle Connectivity Study

Table 17. South Jordan Implementation Recommendations

CORRIDOR-WIDE	
Core Route	**Timeline:** Mid-Term | **Combined Project Opportunities:** N/A | **Land Use Connections:** North Temple TOD Node, 9 Line Recreational Node, Research Way TOD Node, 4800 South Student/Senior TOD Node, West Jordan City Center TOD Node Potential funding sources include FTA Small Starts/New Starts, with state and local funding. See discussion regarding Core Route Implementation on pages 20–25.
CITY-WIDE	
Improve Existing Bus Stops	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** Any projects altering the existing sidewalk and/or existing bus stop location | **Land Use Connections:** South Jordan Town Center (10400 South) Existing bus stops along Redwood Road are recommended for improvement along the length of the corridor. These stops could be improved to meet Core Route design elements as ancillary projects are implemented or as funding options are available. Any projects that alter the sidewalk should include considerations for improving the existing bus stop. Cities should pursue station improvements outside of Core Route implementation, as Core Route will retain underlying service. Federal funds are available for a variety of transit projects. The city should review the requirements and eligible activities for each program and determine the most competitive option.
Shared-Use Path	**Timeline:** Mid- to Long-Term | **Combined Project Opportunities:** Any projects altering the existing sidewalk and/or including roadway widening | **Land Use Connections:** South Jordan Town Center (10400 South) Similar to existing stop improvements, any projects that alter the sidewalk should include considerations for the shared-use path. Availability of right-of-way may constrain improvements in certain locations.
SHIELDS LANE (9800 SOUTH)	
Connect to Existing Bike Lane	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** ATIP Recommended Buffered Bike Lane | **Land Use Connections:** N/A The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations. Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.
MERIT MEDICAL	
Improve Intersection **Add Mid-Block Crosswalk**	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** Phase 1 Redwood Widening 4-6 Lanes, Phase 2 Redwood Road BRT | **Land Use Connections:** N/A Widening on Redwood Road is a prime near-term opportunity for improving intersection operations and pedestrian facilities. Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.
SOUTH JORDAN PARKWAY	
Improve Intersection **Add Pedestrian Refuge** **Improve Existing Bus System**	**Timeline:** Near- to Long-Term | **Combined Project Opportunities:** Phase 1 South Jordan Parkway Widening I-15 to Redwood, Phase 1 Redwood Widening 4-6 Lanes, Phase 2 Sandy Circulator Enhanced Bus, Unfunded Sandy Daybreak Corridor Enhanced Bus | **Land Use Connections:** Wasatch Choice 2050 Town Center, Local RDA, Civic Retail Node Multiple projects including transit, east-west highway, and Redwood Road improvement projects provide prime opportunities for implementation of the recommendations on Redwood Road. The number of projects planned for this location creates a highly competitive opportunity to improve the highway functionality and the possibility for pedestrian connectivity to transit and local land uses. Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option. The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations.
10610 SOUTH	
Enhance Existing Pedestrian Refuge	**Timeline:** Near-Term | **Combined Project Opportunities:** Phase 1 Redwood Widening | **Land Use Connections:** Wasatch Choice 2050 Town Center, Local RDA Civic and Retail Node Widening on Redwood Road is a prime near-term opportunity for improving pedestrian facilities. Pedestrian recommendations should be considered when altering and expanding the hard infrastructure within the public right-of-way. Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.
11400 SOUTH	
Add Pedestrian Refuge	**Timeline:** Mid-Term | **Combined Project Opportunities:** STIP Bus Rote Service Expansion Subsidy, STIP Locally Funded Transit Enhancements | **Land Use Connections:** N/A Widening on Redwood Road is a prime near-term opportunity for improving pedestrian facilities. Pedestrian recommendations should be considered when altering and expanding the hard infrastructure within the public right-of-way. Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.

Table 17. South Jordan Implementation Recommendations (continued)

11400 SOUTH – SOUTH JORDAN PARKWAY	
Improve Existing Bus Service	**Timeline:** Mid-Term | **Combined Project Opportunities:** STIP Bus Rote Service Expansion Subsidy, STIP Locally Funded Transit Enhancements | **Land Use Connections:** N/A FTA and state funding should be pursued to extend service south of South Jordan Parkway. Other recommendations between South Jordan Parkway and 11400 South that improve transit accessibility could make the extension more competitive for funding.
1300 WEST	
Add Buffered Bike Lane on 1300 West	**Timeline:** Near- to Mid-Term | **Combined Project Opportunities:** Phase 3 1300 West Widening, ATIP Recommended Buffered Bike Lane | **Land Use Connections:** N/A The Salt Lake County Active Transportation Network Improvement Program (CATNIP) would provide a near-term opportunity for stand-alone bike and pedestrian recommendations. Recommendations that improve transit accessibility could qualify for competitive FTA funding. Other funds are available through FHWA that require interagency coordination. The city should review the requirements and eligible activities for each program and determine the most competitive option.

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