

SOUTH DAVIS SMALL AREA TRANSIT STUDY

In cooperation with the cities of Farmington, Centerville, Bountiful, West Bountiful, Woods Cross, and North Salt Lake City, Utah

> UTA Planning Division August 2022

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All photographs in this document are sourced from UTA, unless otherwise noted.

EXECUTIVE SUMMARY

What's Working Well

Transit service in the south part of Davis County generally meets the communities' needs. South Davis County has a blend of express and local bus routes and shuttles, as well as commuter rail stations in Woods Cross and Farmington, and the Davis-SLC Community Connector will add arterial BRT service to the area when it is implemented.

	CATEGORY	ASSESSMENT
	ROUTE 470 (Hwy 89/Main St) AND ROUTE 455 (Orchard Drive, 400 E)	 Near greatest densities of people, households, jobs, and transit dependent populations in study area. Connects Davis County with downtown SLC and the UofU, the most common destinations outside the study area
BUS STOP	ROUTE 667 (Farmington Circulator)	• High ridership when Lagoon is open
	SERVING TRANSIT-DEPENDENT POPULATIONS	 Neighborhoods with higher concentrations of transit dependent people are generally adequately served by the current transit system

Community Feedback

During UTA's listening tours with the communities in 2021, we heard that some parts of the study area (like the 500 West corridor) were likely to remain auto-oriented zones, and that many area residents will continue to prioritize driving access rather than transit trips. The planned Davis-SLC Community Connector is likely to meet many of the region's commuting needs. Getting to and from station areas and bus stops was a higher priority to solve.



EXECUTIVE SUMMARY

Opportunities for Improvement

While the transit routes proposed in the Five Year Service Plan meet many of the mobility needs identified for the south part of Davis County, there are still some other improvements that can help people meet their travel needs on a daily basis. These improvements can be implemented by UTA, local cities, UDOT, or sometimes a combination of these agencies.



Next Steps

UTA will incorporate these recommendations into the Five Year Service Plan and other agency plans as applicable. UTA will also coordinate with regional partners to include recommendations for first/last mile infrastructure into funding applications and other implementation strategies. Cities can take the lead on implementing local infrastructure improvements, coordinating with UDOT on better interchanges and mid-block crossings, and installing wayfinding signage leading to station areas. UTA launched the microtransit service in 2022.



CHAPTER 1



EXISTING AND FUTURE CONDITIONS

This section explains observed and anticipated travel needs in the southern part of Davis County. It provides information on the following topics:

- Travel demand observed from data sources such as Streetlight origin/destination data, the Census Bureau, and observed UTA transit patterns;
- Projected travel demand based on job and population growth as provided by the Wasatch Front Regional Council, including planned near-term and long-term transit projects; and
- Additional supporting information, including demographic profiles, relevant planning documents, and transportation conditions for people walking, biking, and driving.

Travel Demand: Where Are People Going?

Different types of data and analyses can help us understand how people travel: where they start and end their trips, and what modes of transportation they use in their daily lives. This study included an analysis of Streetlight origin/destination data, Census data, observed transit ridership, projected socioeconomic conditions, and other relevant data sources. These analyses are described in the following section.

Streetlight Data Visualizations Using Flowmap

Streetlight data (<u>www.streetlightdata.com</u>) provided current and detailed insights into travel patterns throughout the study area. Streetlight's data is collected from anonymized cellphone and vehicle GPS data and includes travel for all reasons, not just commuting to work. UDOT (Utah Department of Transportation) has access to a Streetlight dataset providing origin and destination pairs for average weekdays between 6 am and 6 pm, in September and November of 2019, before the COVID pandemic began. The origin and destinations were aggregated into Transportation Analysis Zones (TAZ) developed for the Wasatch Range Front Council (WFRC) Travel Demand Model. Trips had to have an origin or destination or both in the study area to be included. In addition, only origins or destinations near the fixed route system in Salt Lake County and Weber County were included. All trip origins and destinations within Davis County were included.

Within the study area, the 500 West and 200 West corridors just east of I-15, between roughly 2600 South and Parrish Lane, had the greatest number of trips. The area includes big box stores like Costco, Walmart, Super Target, and Smiths, as well as higher density housing. Looking at sample trips with an origin within the area of Centerville to North Salt Lake, 40% had a destination in these zones. Midday and evening had the greatest draw, but there was still significant demand for travel during the AM peak, suggesting trips by both shoppers and employees commuting to the businesses.

Public schools also generate trips from both the east and west sides of I-15. Viewmont High and Woods Cross High, which are located along the 500 West/200 West corridor, have a large demand for trips, as shown in **Figure 1**. Regardless of what types of public transit service improvements might be implemented in the future, this area could likely benefit from active transportation infrastructure improvements that allow students to safely walk and bike to and from school.





Within the area of Centerville to North Salt Lake, I-15 acts as a barrier to east/west travel largely for residents living on the west side of the study area. Because major trip attractors are located on the east side of the freeway (500 West corridor and public schools), residents on the east side of the study appear to be less likely to cross over to the west side of the study area.

Many people consider south Davis County to be a bedroom community, with residents commuting to Salt Lake County to work. However, there was a roughly even split between trips with both an origin and destination in the study area and trips with one end outside the study area. Looking at only trips originating in Centerville to North Salt Lake (as shown in **Figure 2**), the percentage of trips captured within the study area increases to 68%. Even during the AM peak period (6 am-9 am), 57% of originating trips have a destination in these cities. The number of internal trips may indicate a greater number of residents commuting to work within south Davis County than expected, trip chaining errands/shopping before commuting to work outside of south Davis, and/or the prevalence of trips to public schools within the community.





Figure 2: Trips Starting and Ending Within the Study Area

The primary destinations outside the study area, to the south, are downtown Salt Lake City, including the LDS Church Office Building and the University of Utah and Research Park. The number of trips decrease the further south the destination is in Salt Lake County. To the north, locations near Main Street and I-15 in Layton stood out, connecting to Station Park.

US Census Data

People Traveling to Work

The U.S. Census Bureau collects data about commutes through the Longitudinal Employer-Household Dynamics (LEHD) program. This data shows where residents living in the study area travel to for work. The data (as shown in **Figure 3**) indicates that many residents commute to work destinations within the study area, northern Davis County, and northern Salt Lake County.





Figure 3: Locations Where Study Area Residents Travel to Work

Transit Dependence

To better understand the transit-dependent populations in the study area, a Transit Dependent Index (TDI) was developed using the 2019 5-Year American Community Survey (ACS) Census data. This combined index compares population and household statistics in the study area to the average for Davis County and ranks them on a 1 to 5 scale. The scores are combined to develop a final TDI value for each census tract: the higher the score, the higher the concentration of people likely to be transit-dependent in that census tract.

This is a common methodology used for assessing transit dependency needs. While the approach has been modified somewhat, the concept is based on findings from a National Cooperative Highway Research Program (NCHRP) report focused on methods for assessing populations related to environmental justice⁷.

The following categories from the 2019 5-Year ACS were used to identify transit-dependent populations:

- Zero Vehicle Households
- Population Over 65
- Disability
- Low Income (population below poverty status)
- Youth (population between 10-19)
- Population per square mile

Each census tract received a ranking for each category of transit-dependent population, reflecting that tract's concentration of the populations compared to the Davis County average. These rankings were then weighted by the population density for each census tract, to emphasize areas with greater concentrations of people overall. Maps showing the concentrations of each transit-dependent category by census tract are provided in the Supporting Information section of this document. The resulting TDI rankings are shown in **Figure 4**. The TDI scale ranges from a low of zero to a high of 100. The highest TDI score recorded for any tract in Davis County was 68, which suggests that none of the tracts demonstrate an overly high level of transit dependence. The two tracts scoring 68 are in northern Davis County in Kaysville and Layton. Within the study area, the highest scoring tract received a score of 56 and is located in Centerville, east of I-15 and roughly around the Main Street and Parrish Lane corridors. There are also identifiable concentrations of transit dependent populations in Bountiful, west of I-15. These locations should be priority areas for providing transit service from both an equity and productivity standpoint.

¹ National Academies of Sciences, Engineering, and Medicine 2004. Effective Methods for Environmental Justice Assessment. Washington, DC: The National Academies Press. <u>https://doi.org/10.17226/1369</u>





Figure 4: Transit Dependency Index

ACS Means of Transportation to Work

ACS data was also analyzed to understand current commuting behavior in the study area. The vast majority of workers in the study area (approximately 81%) drive alone to work. Approximately 2% use transit to get to work. The census tract with the highest percentage of transit commuters in the county (6%) is located in northeast Centerville and southeast Farmington (see **Figure 5**). However, much of the study area has much lower percentages than other areas in the County, especially the Layton and Kaysville areas.





Figure 5: Transit Commuters

Observed Transit Patterns

Existing Transit Routes and Service Levels

South Davis County is served by commuter rail (FrontRunner) and local buses. FrontRunner connects the area north to Ogden and south to Salt Lake City and Provo. The train operates on weekdays and Saturdays every 30 minutes during the peaks and every hour during the off-peaks, and has stations in Woods Cross and Farmington within the study area.

Five bus routes serve south Davis County:

- Route 455 serves the University of Utah, downtown Salt Lake City, Lakeview Hospital, Farmington FrontRunner station, Weber State University, and Ogden FrontRunner station. The bus operates on weekdays from 4:00am to 10:00pm with 30-minute peak frequencies and hourly off-peak frequencies.
- **Route 470** operates between Ogden and Salt Lake City. The bus runs every half hour from 4:00am to midnight on weekdays and from 7:00am to midnight on Saturdays. On Sundays, the bus runs every 30-45 minutes from 5:30am to 11:00pm.
- Route 473 (peak-only) serves the University of Utah, downtown Salt Lake City, Farmington FrontRunner station, Weber State University,

and Ogden FrontRunner station. This peakonly route operates on weekdays from 4:00am to 8:00am in the southbound direction and from 3:00pm to 7:00pm in the northbound direction. There is no weekend service.

- Route F605 (Flex Route) operates between Bountiful and Centerville serving the Woods Cross FrontRunner station, Lakeview Hospital, and the Centerville junior high school. The bus operates on weekdays from 6:30am to 7:30pm on hourly frequencies. This flex route offers deviations for an extra \$1.25 up to 0.75 miles from the planned route.
- **The 667 (Lagoon Shuttle)** operates as a shuttle between Lagoon and FrontRunner trains, bus routes 455 and 470, and the Farmington Health Center. The shuttle operates on weekdays and Saturdays from 7:45am to 9:00pm with 15-minute peak frequencies and half hour off-peak frequencies. There is no Sunday service.

Five routes (460, 461, 462, 463, and 471) previously operated in the area but were temporarily suspended during the COVID-19 pandemic due to low ridership and will likely be permanently discontinued. **Figure 6** shows the current operating network.





Figure 6: Study Area Transit Routes

Ridership Trends

Ridership in the study area slightly declined between 2015 and 2019 as shown in the table below. This mirrors national trends of decreasing transit ridership that were occurring even before the start of the pandemic. Looking at each city, Woods Cross City and Centerville City experienced slight increases in 2019 bus boardings compared to 2015. This was likely due to the new flex route, the F605. The F605 also offset some ridership declines on the route 470 in Bountiful City.

Average Weekday Bus Boardings by City and Year					
City	2015	2016	2017	2018	2019
North Salt Lake	249	326	237	219	233
Bountiful	623	603	568	575	571
Woods Cross	19	24	20	15	32
West Bountiful	8	8	7	7	8
Centerville	202	199	205	209	232
Farmington	887*	785	722	613	718
TOTAL**	1,988*	1,955	1,769	1,649	1,805
Source: UTA ridership data from the August Change Day service period for each year (approx. August - November)					

* 2015 Route 667 alighting data used instead of boardings

** Total includes unincorporated area between Bountiful and North Salt Lake

Table 1: Average Weekday Bus Boardings by City and Year

In south Davis County, ridership declined significantly on Route 460 and remained stable on Routes 461, 462, 463, 471, and 473. The 455 and 667 remained stable, while Route 470 had declining ridership.

Average Weekday Boardings per Route

Route	2015	2016	2017	2018	2019
455	1,582	1,618	1,556	1,570	1,569
460	64	59	49	43	44
461	73	72	67	67	67
462	70	79	76	77	82
463	46	52	44	43	42
470	3,636	3,764	3,390	3,296	3,177
471	61	62	52	56	61
473	594	607	576	547	466
F605	N/A	N/A	N/A	N/A	63
667	233*	309	286	167	298
Total	6,126	6,622	6,096	5,866	5,869
Source: LITA ridership data from the August Change Day service period (approx					

Source: UTA ridership data from the August Change Day service period (approx. August - November) * 2015 Route 667 alighting data used instead of boardings

 Table 2: Average Weekday Boardings per Route

Most bus boardings in the study area are on either Route 455 or Route 470, as shown in **Figure 7**. In North Salt Lake, Bountiful, and Centerville, people boarding Routes 455 or 470 represent between 84% to 93% of all bus boardings in those cities. In Farmington, Route 667 has greater ridership than both the 455 and 470 when Lagoon is open. Many bus riders can use Routes 455 or 470 instead of the recently suspended commuter routes (Routes 460, 461, 462, 463, and 471). The table below summarizes the boardings within a quarter mile of Routes 455 or 470.

Bus Stop Average Boardings within Quarter-Mile Buffer Route quarter-2015 2016 2017 2018 2019 mile buffer 455 1,569 1,132 1,019 937 1.020 470 1,228 1,293 1,185 1,144 1,160 455 and 470 2,176 1.828 1.658 1.543 1.646

Ridership data from the August Change Day service period (approx. August -November)

Table 3: Bus Stop Average Boardings near Routes 455 and 470





Figure 7: Ridership Patterns

On the 470, stops with higher ridership (20+ average daily boardings) include Highway 89/Center Street in North Salt Lake; Highway 89's intersections with 2600 South, Main Street and 500 South in Bountiful; and Main Street/Parrish Lane in Centerville. For route 455, stops with higher ridership (10+ average daily boardings) include Highway 89/Center Street in North Salt Lake; and the Bountiful intersections of 2600 South and Orchard Drive, 2200 South/Orchard Drive, 1800 South/Orchard Drive, and Lakeview Hospital.

Farmington City has the highest single stop ridership in the study area, with over 100 boardings each at Lagoon and the Farmington FrontRunner Station. However, when Lagoon is not open, ridership significantly declines at these stops. The stops near the Vista Education Center, served by the 455 and the 470, also have high ridership numbers of about 50 average daily boardings.

Alightings at rail stations can indicate transfer activity between buses and trains. At Woods Cross Station, there were generally less than ten bus alightings per weekday between 2015 and 2019, indicating a low amount of bus transfer activity at this rail station. At Farmington Station, there were more bus alightings; however, due to the proximity of nearby retail and housing, it's not certain if the alightings represent bus transfers or merely riders walking to nearby attractions.

Average Weekday Bus Alightings at Rail Stations					
Station	2015	2016	2017	2018	2019
Woods Cross	6	6	7	5	16
Farmington	366	253	292	186	257
Source: UTA ridership data from the August Change Day service period (approx.					

Source: UTA ridership data from the August Change Day service period (approx August - November)

Table 4: Average Weekday Bus Alightings at Rail Stations

Route Performance: Propensity vs Productivity

In the 2019-2023 version of UTA's Five-Year Service Plan, each route was evaluated based upon two metrics: the Transit Propensity Index, and ridership productivity. The Transit Propensity Index predicts how transit will perform based upon the land use near the route alignment. Ridership productivity compares the number of observed riders to the number of hours or miles UTA invests in a route.

Different metrics are used for local and commuter routes because the service characteristics are different. For local routes, a people-based Transit Propensity Index was used, and the ridership productivity metric was Passengers per Hour (PPH). For commuter routes, a jobs-based Transit Propensity Index was used, and the ridership productivity metric used was Passenger Miles per Mile (PM/M). Commuter routes have long segments without any stops and would perform poorly if PPH was the metric. Therefore, PM/M is a more accurate indicator for commuter routes. Full buses are a measure of success for commuter routes because peak hour service is less efficient than local all-day service at a per mile/per hour cost. Productivity thresholds were based upon a literature review and comparisons of route productivity within tiers of service (higher or lower frequency routes). Using the American Bus Benchmarking Group data, UTA productivity thresholds are lenient compared to other transit agencies' service design guidelines.

As shown in **Table 5**, Routes 460, 461, 462, 463, and 471 did not meet the ridership productivity threshold of 7 pm/M. The other bus routes in the study area (shown in both **Table 5** and **Table 6**) met the productivity thresholds for their respective level of service. At the beginning of the pandemic, these routes were suspended along with other commuter routes in Salt Lake County, due to low ridership.

Commuter Route Transit Propensity and Productivity				
Route	Transit Propensity Index	Passenger Miles per Mile		
460	367	2.9		
461	283	3.04		
462	371	4.13		
463	377	3.42		
471	338	3.3		
473	143	11.18		

Source: UTA 2019 Five-Year Service Plan

Table 5: Commuter Route Transit Propensity and Productivity

Local Route Transit Propensity and Productivity					
Route	Transit Propensity Index	Weekday Passengers per Hour	Saturday Passengers per Hour	Sunday Passengers per Hour	
455	168	10.45			
470	165	14.79	12.69	10.34	
667	34	19.73	31.82		
Source: UTA 2019 Five-Year Service Plan					

Table 6: Local Route Transit Propensity and Productivity

When a route fails to meet the productivity standard, UTA Service Planning evaluates service alternatives and ways to improve the route. Not meeting the Transit Propensity Index or productivity guidelines does not automatically result in a service reduction or elimination. At the same time, meeting the thresholds does not protect a route from service reductions when UTA is facing budget cuts, staffing shortages, or emergencies like the Covid19 pandemic.

Travel Demand in the Future

Future increases in jobs and population in the study area may generate more demand for transit service. This section describes data provided by WFRC on projected growth in the study area.

Future Job Growth

The WFRC Travel Demand Model provides data on current and future densities of jobs, shown as jobs per acre. Jobs per acre helps demonstrate potential demand for transit because people need to commute to work, so areas with high concentrations of jobs may also represent high demand for transit.² The density of jobs also correlates to trips like shopping, going to school, or accessing healthcare.

In 2019 (the most recent base year available from WFRC), there were about 71,000 jobs in the study area, generally at low densities as shown in **Figure 8**. The places with the highest density of jobs included Redwood Road in North Salt Lake, 500 West in West Bountiful and Woods Cross, Lakeview Hospital and Main Street in Bountiful, Parrish Lane in Centerville, and Lagoon and Station Park in Farmington.

² This should remain true even in a post COVID-19, remote work environment.





Figure 8: 2019 Employment Density

Between 2019 and 2030, the WFRC model predicts job growth mostly on the west side of south Davis County, as shown in **Figure 9**. West of the freeway, between Park Lane and Shepard Lane, the North Farmington Station planned development has 52 acres for office space and commercial, resulting in a large potential increase in jobs in the area. There is also more moderate job growth near Redwood Road and 500 South in North Salt Lake, Woods Cross, and West Bountiful, and on the west side of I-15 in Centerville and Farmington. About 12,500 jobs may be added to the study area, bringing the projected total near 83,500 jobs.





Figure 9: Change in Employment Density 2019-2030

Future Population Growth

In 2019, there were about 126,700 residents in the study area. The population density as shown in **Figure 10** was greater on the east side of I-15 than the west side in the study area, concentrating around Highway 89/Main St.



Figure 10: 2019 Population Density



By 2030, the WFRC predicts an increase in population by about 9,000, concentrated near Highway 89/Main Street, Parrish Lane near the freeway, and between Park Lane and Shepard Lane, west of the freeway in Farmington (shown in **Figure 11**). The North Farmington Station plan would devote 52 acres to mixed use and residential, including 32 acres of high-density development. WFRC predicts about 6,000 additional households within the study area.



Figure 11: Change in Population Density 2019-2030

Planned Transit Projects

Several transit improvements are already planned in south Davis County to address needs identified in the previous pages. These include projects associated with the Davis-SLC Community Connector, service changes outlined in UTA's Five-Year-Service Plan, and long-term projects identified in WFRC's Regional Transportation Plan. These are discussed in the following section.

Davis-SLC Community Connector

The following studies identified the need for an additional transit service between Davis County and Salt Lake City:

- South Davis Transit Needs Assessment (2005, WFRC, MAG, Mayors, Envision Utah)
- South Davis Alternatives Analysis (2008, UDOT and UTA)
- Davis-SLC Community Connector Alternatives
 Analysis (2014)

As a result of this work, UTA moved forward with a preferred alignment for the Davis-SLC Community Connector. Building off these previous studies and community input, the Davis-SLC Community Connector's goals are as follows:

- Meet projected growth needs
- Address service gaps
- Resolve access and mobility barriers
- Enhance bicycle and pedestrian facilities
- Revitalize neighborhoods and corridors
- Improve air quality
- Reach markets not currently served

The final proposed Davis-SLC Community Connector includes a high-frequency community connector route, a new local bus route, and a microtransit zone to improve connections in the area. These new services would consolidate and replace the five existing low-ridership peak-only bus routes (460, 461, 462, 463, and 471) connecting south Davis County to Salt Lake City. The complete proposed network is shown in **Figure 12**.

Bus Rapid Transit (BRT)

The proposed BRT alignment will connect the Farmington FrontRunner station to the University of Utah and will feature enhanced bus operational improvements including transit signal priority and queue jumps. The "base portion" of the project (500 South in Bountiful to 200 South in Salt Lake City) will include high-end stations while the remainder of the corridor will feature basic bus stop improvements.

New Local Bus Route

To improve travel speeds and decrease running times, the recommended Davis-SLC Community Connector does not include a stop at the Woods Cross FrontRunner station. To maintain connections to the Woods Cross FrontRunner station, the plan recommends a new local bus route between Woods Cross station and the Central Pointe TRAX station. This bus would run on 30-minute frequencies and connect to the Bountiful BRT station, Lakeview Hospital, and destinations throughout downtown Salt Lake City.





Figure 12. Davis-SLC Community Connector. Source: UTA.

UTA's Five-Year Service Plan

UTA's Five-Year Service Plan (adopted in February 2021) outlines future service changes to accommodate expected growth. This plan will serve as a baseline for public input that UTA will use to update the final service plan. The plan includes the following service objectives:

- Maximize regional connectivity between modes and geographic areas
- Increase midday service
- Develop a connected network of highfrequency core routes
- Extend hours for earlier and later trips
- Increase mobility and connections in areas less amenable to traditional public transit
- Provide service choices

The following potential projects are planned for south Davis County:

- Consider innovative transit solutions such as microtransit in south Davis County, which provide better all-day coverage and replace low-ridership routes such as the F605
- Add 15-minute service on State Street and Main Street between Farmington and Ogden
- Improve connections from FrontRunner to the University of Utah and Research Park
- Improve all-day service on several routes

Microtransit Service

UTA's Microtransit Planning Project, completed in 2020, identified nineteen zones from Brigham City to Santaquin that would be good opportunities for microtransit. These zones were further modelled and analyzed to understand use cases (types of trips passengers would take), service area boundaries, trip restrictions (pre-existing fixed route service), and estimated ridership. Ridership was estimated by analyzing existing transit ridership, parking availability

at stations, walkability and street grid patterns, diversity of use cases, relative poverty rate, and zerovehicle households. A low, medium, and high ridership estimate was determined for each of the nineteen zones.

The proposed south Davis County microtransit zone (as discussed above in the Davis-SLC Community Connector section) improves connections for residents not located near the well-performing bus routes along Main Street and Orchard Drive. The service would replace the low-performing 460, 461, 462, 463, 471, and F605 routes. The estimated daily ridership is 330 (low ridership scenario), 530 (medium ridership scenario), and 850 (high ridership scenario). Via, UTA's microtransit service provider, estimates the service would require 7 to 12 vehicles, operate 27,000 to 45,000 vehicle hours per year, and 3.5 to 6.3 passengers per vehicle hour considering the low, medium, and high ridership scenarios. The service would operate weekdays and Saturdays from 6:00am to 9:00pm. There would be no Sunday service.

To prioritize the proposed nineteen zones, UTA classified zones as low, medium, or high for each of the following criteria: expansion of transit coverage, cost-effectiveness of the transit service, replacement of underperforming bus routes, support to existing ADA paratransit service, and increase of equity. South Davis County ranked high in passengers per vehicle hour and replacement of underperforming bus routes, and ranked medium in the remaining categories.

Long-Term Transit Projects in South Davis County

WFRC RTP 2019-2050

WFRC's Regional Transportation Plan (RTP) outlines a number of transit projects throughout south Davis County area, as shown in **Figure 13.**





Figure 13. WFRC RTP Planned Transit Projects 2019-2050. Source: WFRC.

Specifically, these projects include:

- Doubletrack FrontRunner (Phase 1)
- Develop a core bus service with 15-minute headways between the Clearfield FrontRunner station and the Woods Cross FrontRunner station (Phase 2)
- Develop a core bus service with 15-minute headways between the Woods Cross FrontRunner Station and the Salt Lake County line running along Redwood Road west of I-15. (Phase 2)
- Develop a BRT between the Woods Cross FrontRunner Station and the Salt Lake County line running along HWY 89 east of I-15. (Phase 1)

Supporting Information

Demographic Profiles

Demographics often play a major role in determining transit system ridership. Certain populations use transit more frequently than others, and in many cases are largely dependent on public transit services for mobility. This includes households with no vehicles, people over 65 years old, people with disabilities, those with lower incomes, and youth who are not yet able to drive.

American Community Survey (ACS) 5-year estimates (2015-2019) developed by the Census Bureau were assessed at a census tract level for Davis County, including the south Davis County study area, to identify concentrations of these populations. The census tract with the highest share of zero car households in the study area is located in Bountiful, north of 500 South and 400 North and west of 400 East, as shown in **Figure 14**. Areas to the east of this location also have a higher share of zero-car households.







The eastern half of the study area has much higher concentrations of people over 65 compared to the western half of the study area, as shown in **Figure 15**.



Figure 15: Concentrations of People Over 65 Years Old


Most of the east side of the study area has a higher share of populations with a disability, while areas to the west and north have lower shares of this population, shown in **Figure 16**.



Figure 16: Concentration of People with a Disability

Low-income populations appear to be much more concentrated than many of the other measures analyzed, as shown in **Figure 17**. Census tracts in Bountiful, Woods Cross and West Bountiful have the highest percentage of low-income populations. There also appears to be a higher concentration in northeast North Salt Lake and south Bountiful.



Figure 17: Concentration of Low-Income Populations



Much of the study area has a fairly low percentage of youth population, particularly in Centerville and Bountiful. However, there are higher concentrations in Woods Cross, northeast North Salt Lake and Farmington, as shown in **Figure 18**.





Planning Context

Transit-related Goals and Objectives

Several planning documents adopted in the area identify goals or objectives pertaining to transit service in the study area. They are outlined below.

Bountiful Transportation Master Plan (2009)

The Bountiful Transportation Master Plan identifies the South Davis Transit line as a priority for transportation projects in the City. The identified corridor runs along 200 West between 1800 South and 400 North. The Plan recommends continuing conversations with UTA and property owners as the alignment develops; readers should note that this Plan was adopted in 2009, and alignments have shifted since that time.

Centerville TMP (2016)

The Centerville Transportation Master Plan outlines two transit goals:

- Work with UTA to establish/maintain an express bus route from Parrish Lane to Ogden and Salt Lake City
- Work with UDOT to increase the number of Park and Ride lots near Parrish Lane and I-15.

The Plan also recommends incorporating any future UTA transit plan into the City's planning and development process. Centerville should maintain communication with UTA and other agencies to coordinate on new developments and achieve the maximum benefit from future projects.

North Salt Lake Transportation Plan (2013)

The North Salt Lake Transportation Plan envisions robust transit facilities along Highway 89 including transit queue jumps, median stops, active transportation connections, exclusive lanes where feasible, and other amenities similar to those of a BRT or streetcar. The Plan outlines stops along Highway 89 at Eaglewood Village, the Center Street area, and the 3800 South / 350 North area. It is recommended that the City openly communicate its transit goals with UTA and work together to develop the high-capacity transit route.

West Bountiful General Plan (2019)

The West Bountiful General Plan recommends the City to engage in discussions with UTA to advocate for increased transit options (bus rapid transit, light rail, etc.) as well as increased frequency and flexibility of bus routes.

Woods Cross General Plan Update (2019)

Woods Cross General Plan Update's The transportation section was written prior to construction of the FrontRunner corridor, and at a time when the communities of south Davis County were still considering a light rail alignment in the area. Woods Cross may wish to update its transportation goals for the General Plan, or develop a transportation master plan to support future planning decisions within the City.

Woods Cross City completed a station area plan two years ago. Presently, it is not part of general plan but is slated to be updated if necessary to meet new state station area planning requirements. It will than be adopted as part of the general plan.

South Davis Active Transportation Plan (2020)

The South Davis Active Transportation Plan was a collaborative plan completed by Bountiful, Centerville, and North Salt Lake to enhance bicycle and pedestrian connectivity. It recommends a network of new bicycle facilities and multi-use trails, as well as seven 'walkable activity centers' as focus areas for fine-grained pedestrian improvements. It notes that planned bike facilities along Orchard Drive/400 East and US-89 are particularly complimentary to planned transit improvements in this area.

North Salt Lake Town Center Master Plan (2016)

The North Salt Lake Town Center Master Plan lays out a vision for the development and enhancement of a Town Center area around Center Street and US-89. It lists implementing high-capacity transit on US-89 as a key goal and recommends improvements to accommodate BRT or other high-capacity transit service on US-89, including first/last mile bicycle and pedestrian connections and streetscape improvements in this corridor.

Current Land Uses

The study area includes multiple cities in south Davis County. Each city has its own zoning code. But, while the zoning differs in each city, land use patterns are fairly similar. Much of the area consists of lower density single-family households, particularly east of I-15 and Main Street. Higher density housing and commercial uses are generally located around the Main Street corridor in the south end of the study area, with major commercial retail centers concentrated near the I-15 interchanges, especially around the Parrish Lane and Park Lane interchanges. Higher density housing is also located west of I-15 at Parrish Lane.

At the southern end of the study area, manufacturing and industrial land uses are located between I-15 and Redwood Road, interspersed with lower density single-family households which are bounded by Legacy Parkway to the west. Further north in Centerville the Great Salt Lake wetlands largely preclude development west of Legacy Parkway for a short stretch into Farmington. However, Farmington has lower density single-family homes located west of I-15.

The I-15 corridor and parallel rail corridor splits land uses in south Davis County into two sides. Further north in Farmington, the presence of I-15, the rail corridor, US-89, and Legacy Parkway creates large barriers between land uses.

Future Land Uses

Future land use plans for the cities in the study area suggest more densification of housing and commercial retail and office uses along the Main Street corridor at the south end of the study area, but with much of the manufacturing and lower density housing remaining in most of the area. Single family will still be the predominant land use on both the east and west side of the I-15 corridor, with more singlefamily home growth filling out much of the west side of I-15 to the Great Salt Lake in Farmington. Major commercial centers remain in the same location, concentrated around the I-15 interchanges.

Active Transportation Conditions

Current Active Transportation Infrastructure

South Davis County is home to several trails, pathways, and bikeways. The bike infrastructure is classified into four classes: Class I bikeways feature exclusive right-ofway away from the roadway for cyclists and pedestrians; Class II bikeways share right-of-way with the road but provide a dedicated bike lane; Class III bikeways are on-street facilities with shared pavement markings; and Class IV bikeways are dedicated bike lanes or cycle tracks with vertical separation from motor traffic. South Davis County is home to Class I, (Paved Path, PP), II, and III bikeways. The existing active transportation infrastructure is shown in **Figure 19**.





Figure 19. Existing Active Transportation Network. Source: UDOT, AGRC.

Planned Active Transportation Projects

The WFRC RTP outlines several bike/ped infrastructure projects for the 2019-2050 period, as shown in Figure 20.



Figure 20. Planned Bicycle and Pedestrian Improvements, 2019-2050. Source: WFRC.

These planned projects are prioritized into three phases. Phase 1, Phase 2, and Phase 3 projects are detailed in **Table 5**, **Table 6**, and **Table 7**, respectively.



Improvement	City	Location	From	То
Shared Use Path	Farmington	West Davis Corridor Trail	Gentile Street	Legacy Parkway Trail
Buffered Bike Lane	Farmington	Clark Lane	Buffalo Ranch Development	Denver & Rio Grande Western Rail Trail and Station Parkway
Bike Lane	Farmington	Clark Lane	Station Parkway	185 East
Buffered Bike Lane	Farmington	600 North/Main Street	200 West	State Street
Shared Use Path	Farmington	Lagoon Drive	Park Lane	400 West
Bike Lane	Farmington	200 West	State Street	Frontage Road
Shared Use Path	Farmington	Park Lane	Clark Lane	Main Street
Shared Use Path	Farmington	Farmington Creek Trail	Denver & Rio Grande Western Rail Trail	West Davis Corridor Trail
Buffered Bike Lane	Farmington	Glovers Lane	West Davis Corridor Trail	200 East
Buffered Bike Lane	Farmington	185 East/200 East	State Street	Lund Lane
Bike Lane	Centerville	Main Street	Lund Lane	Chase Lane
Bike Lane	Centerville	Pages Lane	Legacy Parkway Trail	400 East
Bike Lane	Bountiful	400 West/200 West	Porter Lane	Main Street
Bike Lane	West Bountiful	400 North	1100 West	Main Street
Bike Lane	Bountiful	400 North	Main Street	1300 East
Bike Lane	Bountiful	500 South	500 West	Davis Boulevard
Buffered Bike Lane	West Bountiful	1100 West	1600 North	1100 North
Bike Lane	West Bountiful	800 West	400 North	500 South
Bike Lane	Woods Cross	700 West/800 West	500 South	1500 South
Bike Lane	Woods Cross	1500 South	Mountain View Blvd	Main Street
Bike Lane	Bountiful	Main Street	200 West	500 West
At-Grade Crossing	North Salt Lake	1100 North & FrontRunner	-	-
Bike Lane	North Salt Lake	1100 North	Legacy Park	Redwood Road
Sidepath	North Salt Lake	Redwood Road	Center Street	Woods Cross
Bike Lane	North Salt Lake	Main Street	1100 North	US-89
At-Grade Crossing	North Salt Lake	Main Street & FrontRunner	-	-
Protected Bike Lane	North Salt Lake	Orchard Drive	Eagleridge Drive	Bountiful
Bike Lane	Bountiful	Orchard Drive	North Salt Lake	2600 South
Shared Use Path	North Salt Lake	Bamberger Trail	350 North	Center Street
Sidepath	North Salt Lake	Center Street	400 West	US-89
Bike Lane	North Salt Lake	Center Street	US-89	Orchard Drive
Shared Use Path	North Salt Lake	I-15 Trail	Center Street	Eagleridge Drive
Buffered Bike Lane	North Salt Lake	Eagleridge Drive	Orchard Drive	Eaglepointe Drive
At-Grade Crossing	North Salt Lake	Center Street & FrontRunner	-	-
Bike Lane	North Salt Lake	Center Street	Jordan River Trail	Foxboro Drive
Shared Use Path	North Salt Lake	Jordan River Center Street Path	Center Street	Jordan River Parkway

 Table 7. WFRC Phase 1 Planned Bicycle and Pedestrian Improvements, 2019-2050

Improvement	City	Location	From	То
Trail	Farmington	Bonneville Shoreline Trail	Farmington Canyon Rd Trail	Steed Creek
Trail	Farmington/Centerville	Bonneville Shoreline Trail	Steed Creek	Oakridge Drive
Bike Lane	Centerville	Chase Lane	Frontage Road	700 East
Shared Use Path	Centerville	1250 West	Legacy Parkway Trail	Porter Lane
Bike Lane	Centerville	400 East	Chase Lane	500 South
Bike Lane	Centerville	Frontage Road	Parrish Lane	Pages Lane
Bike Lane	West Bountiful/ Centerville	Porter Lane	Legacy Parkway Trial	400 West
Overpass	Centerville	Porter Lane & I-15	-	-
Shared Use Path	West Bountiful	Millcreek Canal/400 North	Legacy Parkway Trail	1100 West
Trail	Bountiful	Bonneville Shoreline Trail	Northern Bountiful Limits	North Salt Lake
Bike Lane	Bountiful	Orchard Drive	500 South	150 West
Bike Lane	Bountiful	1500 South	Main Street	Orchard Drive
Bike Lane	Bountiful	1800 South	Main Street	Mueller Park Road
Bike Lane	Bountiful	500 West	Main Street	Orchard Dive
Sidepath	North Slat Lake/ Bountiful	US-89	925 North	2600 South
Bike Lane	Woods Cross/ North Salt Lake	Redwood Road	500 South	Salt Lake County Line
Sidepath	North Salt Lake	US-89	Eagleridge Drive	350 North
Sidepath	North Salt Lake	Overland Road/Pacific Ave	Main Street	1100 North

 Table 8. WFRC Phase 2 Planned Bicycle and Pedestrian Improvements, 2019-2050

Improvement	City	Location	From	То
Overhead Crossing	Farmington	2025 North & I-15	-	-
Bike Lane	Farmington	2025 North	Frontage Road	Main Street
Bike Lane	Farmington	Sunset View Drive	400 West	Main Street
Bike Lane	Bountiful	Bountiful Blvd	1300 East	Viewcrest Drive
Bike Lane	Bountiful	Davis Boulevard	Eaglewood Drive	425 West
Bike Lane	Woods Cross	1250 South to Mountain View Blvd	Legacy Parkway Trail	1500 South
Study	North Salt Lake	2600 South	Main Street	US-89
Sidepath	North Salt Lake	400 West	1100 North	Center Street
Buffered Bike Lane	North Salt Lake	350 North/3800 South	Main Street	US-89
Sidepath	North Salt Lake	Redwood Road	I-215	Salt Lake County

 Table 9.
 WFRC Phase 3 Planned Bicycle and Pedestrian Improvements, 2019-2050



Other Planned Projects

Bountiful (2019)

The Bountiful Trails Master Plan outlines the following proposed improvements and projects:

- Creekside Trail
- Holbrook Canyon Bridges
- Holbrook Canyon Trail connection to Eggett Park including culvert
- Holbrook Canyon Trail connection to Ward Canyon Trail
- Mueller Park Downhill Trail
- North Canyon Single Track Trail
- North Canyon Trailhead
- Twin Hollow (Cheese) Park Pump Track
- Urban Bonneville Shoreline Trail (Bountiful Blvd. connection to Ward Canyon)
- Ward Canyon Trail connection to Tolman (Rocket) Park
- Ward Canyon Trail connection to Temple Ridge Trail

Figure 21 shows the proposed projects:



Figure 21. Trails Master Plan. Source: City of Bountiful. The plan also notes a lack of consistent wayfinding design and recommends design standards for trailhead signage, trail signage, and wayfinding markets to better inform users. The Bountiful Transportation Master Plan also identifies Center Street between 200 West and Main Street as an important pedestrian corridor between the proposed South Davis Transit station and downtown Bountiful. The Plan recommends improving pedestrian access and safety along this route.

Centerville (2016)

The Centerville Transportation and Circulation Plan outlines improvements for active transportation as the City strives to become a bicycle friendly community. The City is currently finalizing a Trails and Bikeways Master Plan which will identify specific active transportation improvements. General improvements include:

- Provide more bike lanes
- Improve wayfinding via signage and pavement markings
- Increase police education and enforcement of traffic laws that protect cyclists
- Create and maintain a downloadable bikeways
 map
- Establish links to active transportation infrastructure of neighboring communities
- Adopt requirements to install bicycle racks and maintenance stands

Farmington (2016)

The Farmington Active Transportation Plan aims to increase economic vitality, safety, and accessibility in the community through active transportation connections. Several off-street, on-street, and spot improvements are recommended for the City, specifically a shared-use path on the potential future West Davis Corridor, sidewalks near schools, buffered bike lanes on Main Street and Clark Lane, and grade separated crossings at I-15. **Figure 22** shows each recommended improvement.

In addition to these specific infrastructure improvements, the Plan also recommends considering a Complete Streets approach, form-based code, pedestrian overlay districts, area design policies, bike parking requirements, and wayfinding to increase the comfortability of system users.





Figure 22. Farmington Recommended Improvements Map. Source: Farmington Active Transportation Plan

North Salt Lake (2013)

The North Salt Lake Parks, Trail, and Recreation section of the North Salt Lake General Plan outlines recommendations for improvements to the active transportation network. The Plan recommends updating and/or expanding several parks and constructing previously planned trails and paths such as the Redwood Road Trail, the 1100 North Trail, and the Springhill Geologic Trail. The Plan also calls for the completion of the Center Street Trail, additional foothill loop trails, and Town Center trails and parks.

West Bountiful (2019)

The West Bountiful General Plan recommends increasing bicycle and pedestrian connectivity on major routes accessing the Woods Cross FrontRunner station as a means to encourage active mode use in conjunction with transit. The Plan also recommends implementing sidewalks and pedestrian crossing treatments based on high volume school, recreation, and transit access routes.

Woods Cross (2019)

The Urban Trails section of the Woods Cross General Plan outlines improvements for street side pedestrian routes, the open space trail system, and bicycle routes. The Plan recommends bike routes on major roadways throughout the City and notes geographical features such as drains suitable for trail access. **Figure 23** shows the recommended master plan.



Figure 23. Woods Cross Trails Master Plan. Source: Woods Cross



Roadway Conditions

Planned Projects in the RTP

The WFRC RTP outlines several roadway infrastructure projects for the 2019-2050 period, as shown in **Figure 24**.



Figure 24. Planned Roadway Projects 2019-2050. Source: WFRC. The projects specifically are:

- Widen I-15 to include 2 HOV lanes in each direction from Farmington to the Salt Lake County Line (Phase 1)
- Construct the West Davis Corridor as a twoto four-lane UDOT freeway from 1800 North in Clinton to I-15/US-89/Legacy Parkway in Farmington (Phase 1)
- Construct Shepard Lane as a five-lane local minor arterial from the new West Davis Corridor to I-15 in Farmington (Phase 1)
- Construct Commerce Drive as a five-lane arterial from the new Shepard Lane to Park Lane in Farmington (Phase 1)
- Widen US-89 to six lanes from Antelope Drive in Layton to I-15 in Farmington (Phase 1)
- Construct 1250 West/650 West as a threelane local collector from Glovers Lane to 1275 North in Farmington.
- Construct an overpass at 500 South over the 800 West Railroad Crossing in West Bountiful (Phase 1)
- Construct an overpass at 2600 South/1100 North over the 1050 West Railroad Crossing in North Salt Lake (Phase 1)
- Construct an overpass at Center Street over the 300 West Railroad Crossing in North Salt Lake (Phase 1)
- Widen Legacy Parkway from I-15/US-89 to I-215 to include 2 HOT lanes (Phase 2)
- Improve the interchange at I-15 and Parrish Lane in Centerville (Phase 2)
- Construct an overpass at Porter Lane over I-15 in Centerville (Phase 2)
- Construct an overpass at 1500 South over the 900 West Railroad Crossing (Phase 2)
- Construct a new Farmington Frontage Road connection from Lagoon Drive to 200 West (SR-2227) (Phase 3)
- Widen Redwood Road to a five-lane arterial from 500 South to 2600 South in Woods Cross

Other Planned Roadway Projects

Bountiful (2009)

Although several projects recommended in the 2009 Bountiful Transportation Master Plan have already been implemented, the following have yet to be realized:

- Make US-89 from 1800 South to Salt Lake City a transit, bicycle, and automobile corridor, including center-running transit-only lanes and shoulder-running bike lanes.
- Work with UDOT, WFRC, and State representatives to install a full-service single point urban interchange at 400 North and I-15 to encourage use of 400 North and relieve traffic from 500 South.
- Build a railway overpass at 500 South west of I-15.
- Install a parkstrip along Orchard Drive where possible.
- Establish bike and jogging trails on major north/south corridors and in flatter areas west of 400 East/Orchard Drive
- Develop an enhanced pedestrian corridor along Center Street between 200 West and Main Street
- Determine whether or not the City should mitigate traffic on Center Street between 200 West and 500 West



North Salt Lake (2013)

The North Salt Lake Transportation section of the General Plan outlines improvements for the following roadways:

- 1100 North: add an oversized park strip and trail on the south side of the roadway and provide grade separation between the roadway and the FrontRunner railway
- Center Street: continue the adjacent trail and widen the south side park strip in locations west of the rail corridors
- Intersection of Redwood Road & Center Street: coordinate with UDOT to evaluate storage capacity improvements and strategies to increase turning movement capacities to accommodate high levels of freight traffic
- Add three more freeway access ramps at Center Street to convert the interchange to full access
- Construct a full trumpet interchange at I-15 and the Town Center
- Connect North Salt Lake to Legacy Highway via Center Street
- Implement flyover ramps to connect Legacy Highway to I-215
- Temporarily restripe the lanes at the Redwood Road interchange with I-215 to increase capacity of the bridge

West Bountiful (2019)

The Transportation section of the West Bountiful General Plan outlines the following transportation improvements:

- 700 West / 800 West Alignment: provide a grade-separated crossing over the UPRR tracks to address safety concerns at the Holly Refinery
- Proposed 1450 West Alignment: follows the three-block spacing between 500 West, 800 West, and 1100 West and connects to the terminus of 400 North
- Proposed 220 North 650 West Alignment: connects to 220 North to 800 West, follows the UPRR tracks, crosses under 400 North, and connects to 650 West
- Proposed Cross-Sections: add bicycle lanes and sidewalks to both sides of major collector streets

Woods Cross (2019)

The Transportation Recommendations section of the Woods Cross General Plan specifically calls for the designation of a truck route between industrial areas and I-15. Possible routes include 2600 South, 500 South, and Redwood Road. The Plan also outlines the need for traffic calming and increased visibility of speed limit signs.



CHAPTER 2



RECOMMENDED IMPROVEMENTS

This section outlines recommendations for the South Davis Small Area Transit Study. Previous analysis of existing and future conditions led to a set of proposed recommendations to improve transit service and connectivity in the south Davis County area. These recommendations fall into five major categories: service improvements, optimize microtransit, east/ west connectivity, first/last mile connections, and implementation of transit-supportive land use. Some of the recommendations can be implemented by UTA, while others require collaboration among the cities, UDOT, or other agencies. The recommendations are described in the following sections.

Service Improvements

Route 470 currently provides local bus service every 30 minutes between Ogden and Salt Lake City, and has maintained expectations in terms of passengers per hour based on UTA's thresholds. This route will continue its service in south Davis County, and this study recommends increasing its frequency to every 15 minutes. The increased frequency will help provide service to those who relied on other routes that have been eliminated in recent years, and will complement UTA's microtransit service. Route 470 will eventually segue into the Davis-SLC Community Connector as that project is implemented, maintaining or increasing the level of service for residents of south Davis County.

Optimize Microtransit

In 2019, UTA began offering microtransit to provide transportation services which expand transit coverage in neighborhoods that cannot effectively support local bus routes. Microtransit, branded by UTA as "UTA On Demand", is a transit service by which a third-party operator (in this case Via) provides transportation on demand to fare-paying passengers within a defined service area. UTA currently operates microtransit services on Salt Lake City's west side, in southern Salt Lake County, and designate new microtransit service zones in Tooele County and south Davis County in August 2022. The new south Davis service area cover North Salt Lake, Woods Cross, Bountiful, West Bountiful, and Centerville, and people using the service will be able to use their smartphone or call in to arrange for a ride between locations within the service area, using their UTA fare cards or passes. The cost of a trip on a UTA On Demand microtransit vehicle is the same as a standard one-way fare, with reduced fares available to seniors and people with disabilities. Trips are typically corner-to-corner at major intersections in the service area while seniors and people with disabilities can receive curb to curb service.

UTA has learned some best practices in its experience implementing microtransit elsewhere in the region, and will be applying that knowledge in south Davis County to optimize the launch of the service. For example, UTA has learned through experience that early fall may be a good time to launch a new service. As students (especially college students) and their families begin adapting to the new school year's travel demands, microtransit can be introduced as new travel patterns are being established, making the use of microtransit habitual to riders. Highly-visible promotion can also help people get on board: UTA hosted a launch event for the southwest Salt Lake County service, where staff handed out fliers and hot cocoa to transit riders, and hung posters advertising the service at train stations within the southern Salt Lake County service area.

UTA also offers a "Travel Trainers" program, in which UTA staff train individual riders on how to use the microtransit system. UTA has several full-time Travel Trainers, who are able to help people learn how to use the system through either virtual or inperson coaching, at locations such as riders' homes or senior centers or other community places. UTA can advertise the Travel Trainers program in advance of the microtransit system launch and afterwards, so that riders are aware of the potential resource as the system becomes available. UTA also has created a video providing instructions on how to book a UTA On Demand ride, available online at <u>https://www.youtube.com/watch?v=WO3-7t7F7-0</u>. In addition, UTA can implement a marketing program in advance of the microtransit launch so riders are aware of the new service.

Making sure the microtransit service is available to all is of critical importance. UTA ensures that the UTA On Demand smartphone app and outreach materials are ADA compliant. UTA can also help users book rides through Via customer service representatives if potential riders don't have a smartphone, or riders can plan a multimodal trip using the Transit app. Prior or soon after rollout of the microtransit system, UTA can coordinate with known providers of services to people with disabilities or other needs, to offer training to caregivers and riders with special needs. Additionally, UTA can offer curb-to-curb service for riders with special needs, rather than to the nearest intersection. Riders using mobility devices can also request a wheelchair-accessible vehicle through the smartphone app, which will also result in curb-to-curb service. UTA also offers multilingual outreach materials and can target non-English speakers with advertisements and educational information in Spanish or other

languages; additionally, UTA will continue to advertise that materials can be translated upon request.

Finally, microtransit will need to be integrated with the Davis-SLC Community Connector when that project is implemented. A clear connection between the two services will help maximize ease of use and safety for riders who utilize both types of transit. One option for integration is providing dedicated microtransit pick-up areas at Davis-SLC Community Connector stops, so people unloading from the Connector know exactly where to find their microtransit ride. These pick-up areas or parking stalls should be clearly marked, and may be first implemented at locations where the Davis-SLC Community Connector unloads a high number of passengers. In fact, these pick-up areas or parking stalls could be implemented now in locations where the Route 470 unloads a high number of passengers, as the Davis-SLC Community Connector will replace the Route 470 when it is constructed. Other microtransit systems offer realtime connections between passengers and drivers (similar to driver/passenger tracking technology for services like Uber and Lyft), so both can see each other's location and be aware of arrival status. Currently, for UTA on Demand only the customer can see the driver's location in real-time.





Figure 25: UTA On-Demand vehicle

East/West Connectivity

As demonstrated in the Existing and Future Conditions section, south Davis County needs better connectivity across major barriers such as I-15 and FrontRunner. A review of origin/destination data from the Big Data vendor Streetlight indicated a strong demand for travel on the west side of I-15 to cross over the freeway to Woods Cross and Bountiful High Schools. There is little transit service on the west side of I-15, but both Woods Cross and Bountiful High Schools' boundaries cover both sides of I-15 and students need to be able to travel safely to and from school.

There are several ways to address this need. First, the planned microtransit service described above can help transit riders get across these major barriers. Microtransit can also be an option for middle- and high-school students traveling from neighborhoods on the west side of I-15 to schools on the east side of I-15. The UTA On Demand program allows minors between the ages of 13 and 18 to have their own member accounts and ride unaccompanied, as long as they have consent from their parent or guardian. In the future UTA can coordinate with Davis School District representatives to understand the district's response to future growth needs. If future high schools or middle schools are to be located west of I-15, UTA and the school district could coordinate on where the new school is built to help ensure effective bus service is a possibility.

Some students and other travelers may wish to walk to destinations on either side of I-15 and FrontRunner, which may necessitate infrastructure at crossing locations. UDOT is currently planning improvements to I-15 in this part of Davis County, and city representatives expressed a need during I-15 outreach workshops in 2021 for better accommodations for people walking and bicycling at interchanges. The I-15 project could mean an opportunity to upgrade crossing facilities, and cities should continue to coordinate with UDOT to ensure safe and comfortable facilities for people walking and bicycling. Cities can also collaborate with UDOT to identify funding via programs such as Safe Routes To School to provide walking infrastructure for students along critical school access routes. The Safe Routes To School program focuses on helping students who live within 1.5 to 2 miles of their school to safely walk or bike to school. Typically, UDOT issues a call for applications for Safe Routes to School funding in September, with applications from cities due to UDOT in October and funding decisions made in December. UDOT's Traffic and Safety Division also offers <u>guidance</u> to potential grantees as they develop funding applications.

First/Last Mile Improvements

First/last mile improvements can cover a broad range of infrastructure and policies. At a broad scale, widespread bicycling and walking infrastructure can make it easier for people to access transit of all types, whether that is a local bus route, microtransit service point, FrontRunner stations, or the future Davis-SLC Connector bus rapid transit project. **Figure 26** shows existing and planned bicycle infrastructure projects in south Davis County, as indicated on local and regional active transportation plans. Two projects identified on these plans in North Salt Lake have been approved for funding from state Transportation Investment Fund (TIF) programs:

- The Town Center I-15 Trail, from the south end of the Town Center at Eaglewood Village to the core of the Town Center at Hatch Park (received approximately \$376,000 in TIF Active Transportation funding in 2022); and
- The Center Street sidewalk from Highway 89 to Orchard Drive (received approximately \$322,000 in TIF First/Last Mile funding in 2022).

Cities in south Davis County may apply for funding from these programs annually to help construct the active transportation network, and can contact staff in UDOT's Planning Division to learn more about the process.





Figure 26: Existing and Planned Bicycle Infrastructure in South Davis County

For the South Davis study area, several other smallscale improvements could help make a difference for area residents trying to access the transit network. First, wayfinding to rail stations needs to be more visible both to drivers as well as to people walking or biking to stations. UTA has a wayfinding master plan that it is implementing, which identifies different types of wayfinding signage and where to install them on UTA transit station property. However, UTA can only install wayfinding signage on its own property, and needs to coordinate with municipalities to implement wayfinding signage recommendations on local streets or UDOT routes. While some past transit projects have designed and installed off-site wayfinding as part of project implementation, this is not uniform across all UTA projects. UTA, the south Davis County cities, and UDOT can coordinate on future implementation steps to identify appropriate distances from transit stations to place wayfinding signage, and the responsibilities for installation and ongoing maintenance.

Second, people walking or bicycling to transit often need to cross busy roads or other barriers, without crossing infrastructure to help them navigate conditions. For example, 500 West has some of the highest concentrations of destinations in the study area. After August Change Day 2022, the closest fixed-route transit will be Route 470 (eventually to be replaced by the Davis-SLC Connector project), which is more than a half-mile walk from 500 West. 500 West has sidewalks along its length (sometimes with a parkstrip buffer separating pedestrians from traffic) but has few crossing opportunities. Bountiful City should evaluate possibilities for new mid-block crossings so transit riders walking from Route 470 to 500 West destinations can cross over 500 West safely. Additionally, at-grade train crossings can also be a barrier to pedestrians. UTA and the cities could evaluate the need to replace the at-grade crossings with grade-separated crossings to facilitate safe passage for pedestrians, cyclists, and vehicles.

Third, the Woods Cross FrontRunner station needs better bicycling access. Currently Woods Cross City has plans for on-street bike lanes on 700 West, 800 South, and 800 West (per the Parks and Trails Master Plan). The City should prioritize implementation of these improvements. In addition, transit riders accessing the station from the north are using a plywood board to cross a grassy area in between the Holly Refinery and the FrontRunner station. This crossing is on private property and will be difficult to formalize without approval from the property owner (Holly Refinery). However, the FrontRunner Forward doubletracking program may require additional rightof-way in this area, which could be designed to include a more direction pedestrian connection to the station from 500 South.

UTA, Wasatch Front Regional Council, UDOT, and the Mountainland Association of Governments are collaborating to develop the next round of regional first/last mile projects for regional and federal funds. UDOT is leading this effort, and will be coordinating with communities throughout the region to establish updated priorities for first/last mile connectivity within each City. All improvements described above for the Woods Cross FrontRunner station are captured in the list of first/last mile projects, as well as several other small-scale improvements that would be helpful at that station. UTA and Woods Cross City can also identify a potential trail connection in this area, which would need to be coordinated with the design of the FrontRunner doubletracking. However, some of the smaller-scale improvements listed at this station may not be appropriate for a regional first/last mile program of improvements, and may be better addressed by UTA's own internal Active Transportation Plan efforts.

Finally, it is worth noting that all of the cities contained within this study area were included in the South Davis Active Transportation Plan, which provides recommendations for active transportation improvements in all of the cities. North Salt Lake City has officially adopted its portion of the South Davis Active Transportation Plan, but the other cities have not gone through the adoption process. UDOT has stated that in order for them to support next steps and implementation of active transportation projects in these cities, each city needs to adopt its respective Active Transportation Plan.



Transit-Supportive Land Use

As noted in the Existing and Future Conditions section, UTA has productivity thresholds in the form of passenger miles per mile and passengers per hour which define whether or not transit routes are sufficiently cost-effective. Commuter or targeted bus routes should have at least seven passenger miles per service mile, and many previous routes in south Davis County (including routes 460, 461, 462, 463, and 471) did not meet these expectations. Land use density and intensity is a large contributor to the passenger mile per mile metrics, adding riders to the system where there are concentrations of multifamily housing or large employment centers. While much of south Davis County is low density residential housing, without large numbers of employees concentrated in any particular location, properties change hands over time and land uses often become denser as redevelopment occurs. UTA and the cities can monitor land use changes, and watch ridership on the microtransit service to see where transit demand might be concentrated – this could indicate future viability of a local bus route or another type of transit service.



CHAPTER 3



COMMUNITY FEEDBACK

Local community feedback is critical to understanding needs, issues, and opportunities, and for gauging potential public and political support for proposed solutions. As part of the South Davis Small Area Transit Study, the project team worked with a Technical Advisory Committee representing the cities in the study area, gathered information from previous UTA outreach activities, and participated in virtual workshops and walking audits associated with larger regional transportation activities. Feedback received during this process is summarized below.

Technical Advisory Committee (TAC)

UTA convened a TAC for this Small Area Transit Study, including representatives from Salt Lake City, North Salt Lake City, Woods Cross, Bountiful, West Bountiful, Centerville, Farmington, UDOT Regions 1 and 2, and WFRC. The kickoff meeting with this group was held in October 2021, to introduce the study, discuss roles and responsibilities, and review initial needs and opportunities. The following points were raised as part of the kickoff meeting:

- The cities have received some feedback on routes that were suspended during the pandemic and subsequently cancelled (including the 460, 461, 462, 463, and 471). While some residents have requested reinstatement of the routes, others are satisfied with the microtransit service that will replace the routes. There is some concern about how to use the app to request microtransit service. UTA may need to engage in more education to help residents feel more comfortable using the app.
- Local elected officials may have questions about the relationship of this study and doubletracking FrontRunner, which UTA should be prepared to answer.
- Centerville is in the process of updating its general plan, and wants UTA to consider shifting the alignment of the Davis-SLC Community Connector to 1250 West in Centerville, in order to connect to proposed job centers in that area. UTA's Trustees have been working with some Centerville elected officials to identify next steps in that planning process.

- Farmington is planning an additional shuttle to connect Lagoon to Station Park, near Cabela's. They hope to have the shuttle operating within the next five years but do not yet have information on whose responsibility the shuttle would be; they are interested in discussing possibilities with UTA.
- The south Davis County communities are interested in making improvements to their bus stops, having dedicated microtransit stops, and adding amenities to those stops such as free WiFi or other ideas.

The TAC met again in January 2022 to review the results of the existing and future conditions analysis, as described in the previous section of this study. The group observed that future land use inputs in the study area, particularly around Centerville and Farmington, may not be reflecting proposed projects and future population and employment in those area. Staff from Wasatch Front Regional Council noted that they were in the process of updating several areas of land use projections; however, these are primarily longer-term time horizons and do not affect the near-term recommendations of this study.

As part of the January 2022 meeting, the TAC also reviewed concentrations of transit-dependent populations. Staff from North Salt Lake noted that there were several places within City boundaries where transit-dependent people lived, and suggested specific outreach to these communities. The project team sent specialized surveys to these neighborhoods, as described in the "Online Survey" section below.

The TAC met a final time in March 2022 to review the proposed recommendations for the South Davis Small Area Transit Study. Participants had some questions about how proposed microtransit service would operate, and how transit riders in the area would be able to reach destinations in Salt Lake City since microtransit does not go into the downtown area (transit riders would be able to take microtransit to FrontRunner or other bus service and transfer to get to downtown Salt Lake City). The group also discussed how microtransit can be accessed by people with disabilities or those without smartphones. Firstand-last-mile connections and active transportation connections to transit were also discussed, with TAC members offering additional information about proposed projects for construction and several projects that had received construction funding. The group also discussed the recent passage of House Bill 462 and how that would affect station area planning in the south Davis County communities.

UTA Listening Tours

In the summer of 2021, UTA Planning staff met with several of the cities in the study area to hear their thoughts on transit needs and issues. These included the points raised below:

 North Salt Lake City would like to prioritize more frequent transit as a mobility solution, and it needs options to move people from east to west, as well as connections to its future Town Center (near Center Street and Highway 89). City staff believe that the Davis-SLC Community Connector will help connect residents with commute destinations north and south, and they see a need to connect students living in the city with the University of Utah as well as Weber State University. They are also interested in initiating a study for a future FrontRunner station in North Salt Lake, within the proposed Town Center area.

- Woods Cross residents prioritize their vehicles for commuting and recreational purposes, and view transit as "inconvenient". They acknowledge that some of their major corridors experience congestion (such as Redwood Road and 500 South), and also note that there is resistance within the community and among Council members for implementing higher-density development.
- Similarly, West Bountiful residents prioritize the use of private vehicles and City staff did not note major demand for transit improvements, although residents have expressed a need for better connections to the Woods Cross FrontRunner station. Some residents perceive that it takes too long to park and wait for the train. City staff noted that active transportation improvements were a high priority for the community, including planned improvements on Pages Lane, and that the Legacy Parkway trail and DNRG pathways were popular facilities.
- Bountiful City staff believed that the Davis-SLC Community Connector will meet future demand for transit service in Bountiful, while acknowledging that private vehicle will still be the dominant choice for Bountiful commuters. Bountiful residents primarily commute elsewhere for work rather than working in the City, frequently to Salt Lake City, and this is expected to continue in the future.

Virtual Workshops and Walking Audits for the I-15 Davis County Environmental Impact Statement (EIS)

At the outset of this planning process, UTA staff and leadership understood that the communities of south Davis County had already been engaged in a number of outreach processes for recent projects, and may be experiencing "planning fatigue". Rather than scheduling community-wide outreach events specific to this Small Area Transit Study, UTA collaborated with UDOT's I-15 Davis County EIS team to hold walking audits and virtual workshops with each of the communities in the EIS study area (which full overlaps with the UTA study area for this project). The walking audits and virtual workshops were held in late October and early November 2021. The conversations were heavily focused on the walking and biking environment in the study area, which generally lacks east-west connectivity and is particularly difficult around I-15 interchanges. In addition, the following points were made about transit service or first/last mile connections in the area:

- Connectivity to the Woods Cross FrontRunner station is difficult, not only for people walking and biking but also for bus connections. The vacant lot north of the FrontRunner station has an informal path covered in plywood, which transit riders are using as a shortcut (see Figure 27). Better and more permanent connections would benefit transit riders accessing that station. The Woods Cross Parks and Trails Master Plan includes a proposed trail in this location, as well as bike lanes around the station on 700 West, 800 West, and 700 South.
- Wayfinding to/from transit stations would be helpful, especially to FrontRunner.
- There is a bus stop on Wildcat Way in Woods Cross, near the Chevron station at 2600 South, that is not connected to the existing sidewalk network. The City would like to fill in that sidewalk network gap.
- Near Farmington, City staff proposed a new bridge connection to the FrontRunner station for consideration.



Figure 27: The informal path covered in plywoodnear the Woods Cross FrontRunner station.

Online Survey

UTA wants all communities to be involved in the planning process and provide their feedback about transit service. Particular attention is being placed better reaching underrepresented groups on and communities who have historically been excluded from engagement processes to ensure representation in public feedback and reflection of diverse perspectives, especially those who benefit from transit the most. To gather input, a survey was developed in English and Spanish and distributed in early 2022. Targeted engagement was planned for the area, to include communities with lower incomes, as well as Hispanic and Spanish-speaking communities. To engage these audiences, UTA consulted external stakeholders from the area to understand community organizations and contacts that could help reach these communities - mobile home managers from the community as well as the Latinos in Action group for Davis School District were identified as key partners in reaching communities. Unfortunately, there was a limited response to the survey with only five participants.

Three out of five respondents said they used transit on a regular basis. One respondent who relies solely on public transit wrote: "I would go a lot more places, like all of them, if i didn't have to walk 20 minutes uphill to get to the bus stop". Outside of south Davis County, two people said the Salt Lake Airport was a place they would like to be able to access on transit.

Some barriers to taking transit were lack of service near respondents' homes and not knowing the transit system, each selected by two respondents. Additional barriers included service not running early or late enough, the wait for buses and trains being too long, and already owning a vehicle, each selected by one survey taker.

To improve transit service, two respondents suggested running service earlier or later, providing more weekend service, and implementing better wayfinding transit stations and stops. Two left open-ended comments: "I generally don't use transportation, but I would like to know where I can



find information, routes, timetables, stops, etc."; "Wish I knew where my stops were." One respondent suggested increasing the frequency of service. One respondent said the transit service was fine as is, and another respondent said they did not want to use transit.

Four out of five survey participants had not heard of UTA on Demand or used UTA on Demand.

To supplement the efforts mentioned above, findings from UTA's 2021 Market Segmentation Study are summarized below. This study investigated the values and beliefs that may influence choosing to take transit with a survey of residents within the UTA service area. There were 76 survey takers living in the south Davis County study area. Respondents were separated into frequent riders (at least once per week), occasional riders (less than once per week), and non-riders. Different questions were asked of those who take transit to work and/or take transit for nonwork purposes.

The survey asked respondents why they did not take transit at all or why they did not take it more often. For both commute and non-commute trips, and among non-riders, occasional riders, and frequent riders, travel time was the greatest barrier to taking transit. For non-commute trips, transit not going to where riders need to go and transit not being near riders' homes were the next most selected reasons for not taking transit. For commute trips, transit not near home and transit not being frequent enough were the more common barriers.

For regular and occasional riders (38 respondents who could select multiple options), the most common reasons to take transit for non-work reasons was to visit family and friends (39%), go shopping (29%), recreation and entertainment (26%). One respondent left a comment asking for transit service focused on local trips: "In general, it feels like most public transit is focused on getting people to downtown SLC for business hours, but I have only worked there for a few years out of my entire work history. Having a more general transit that I could use for travel, say, in south Davis County to get around would make me much less dependent on a car."

For riders taking non-commute trips, not understanding the system was the least cited barrier, and the second least cited among transit commuters. However, among the survey targeting underrepresented communities, two out of five respondents left comments saying they did not know the transit system well enough to use it. While the sample size was low, it may indicate that some communities may need more outreach to help them understand the transit system.

Out of the open-ended comments (13 respondents), they fit into a few categories: requesting service restoration on the south Davis Commuter routes (2), praise for FrontRunner (3), further explanations for why transit service does not work for them (4), expressing support for transit service (2), and suggestions for improvement (2).

Outreach Modifications

In the future, UTA may wish to employ additional engagement strategies for reaching key audiences, including informational interviews or focus groups with community leaders and individuals, as well as attending popular local community events. Having multiple methods for communities to engage is important and may result in a better picture of what is working well and what could potentially be improved.

