### CONNECTOR **MIDVALLEY CONNECTOR DRAFT ENVIRONMENTAL STUDY REPORT**

**NOVEMBER 2018** 



Prepared for:

MIDVALLEY











CTH

This page intentionally left blank.

#### DRAFT ENVIRONMENTAL STUDY REPORT MIDVALLEY CONNECTOR BUS RAPID TRANSIT PROJECT

#### Salt Lake County, Utah

This Draft Environmental Study Report (Draft ESR) describes the environmental impacts and identifies potential mitigation measures associated with the proposed Midvalley Connector Bus Rapid Transit (BRT) Project that extends along Murray, Taylorsville, and West Valley City located in Salt Lake County, Utah. The Draft ESR was written is accordance with Utah Transit Authority (UTA) environmental procedures for environmental studies and in accordance with applicable local, state, and federal laws. The Draft ESR will be available for a 30-day public comment period. After the public comment period is over, UTA will respond to all comments received and will prepare the Final Environmental Study Report.

The Proposed Action includes a bus rapid transit line that travels from Murray Central station, through Taylorsville with connection at Salt Lake Community College on Redwood Road, to West Valley Central station. The proposed project is approximately 7 miles in length with 15 proposed stations. The project includes approximately 1.4 miles of center-running exclusive bus lane along 4700 South.

The primary purpose of the project is to provide a frequent, efficient connection between Murray Central station, SLCC, and West Valley Central station; improve transit service; increase mobility; and enhance the local economy.

NOVEMBER 20, 2018

Date of Approval

Steve Meyer, Interim Executive Director Utah Transit Authority

# TABLE OF CONTENTS

### ACRONYMS AND ABBREVIATIONS......x

EXECUTIVE SUMMARY......ES-1

#### **PURPOSE AND NEED**



| 1.1 Introduction           | 1-1 |
|----------------------------|-----|
| 1.2 Study Area             | 1-2 |
| 1.3 Purpose of the Project | 1-5 |
| 14 Need for the Project    | 1-5 |

### ALTERNATIVES

| 2.1 Introduction                    | . 2-1 |
|-------------------------------------|-------|
| 2.2 Refinements to the 2013 Preferr | ed    |
| Alternative                         | 2-3   |
| 2.3 No-Action Alternative           | .2-7  |
| 2.4 The Preferred Alternative       | 2-8   |
| 2.5 Phased Options                  | 2-17  |
| 2.6 Preferred Alternative Meets     |       |
| Purpose and Need                    | 2-19  |

### AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

|   | 3.1 Introduction                    |
|---|-------------------------------------|
| 5 | 3.2 Land Use 3-5                    |
|   | 3.3 Socio-Economic Conditions3-12   |
|   | 3.4 Transportation 3-22             |
|   | 3.5 Utilities                       |
|   | 3.6 Right-of-Way Acquisition &      |
|   | Relocations                         |
|   | 3.7 Air Quality 3-39                |
|   | 3.8 Noise & Vibration               |
|   | 3.9 Water Resources & Water Quality |
|   |                                     |
|   | 3.10 Natural Resources3-51          |
|   | 3.11 Hazardous Waste                |
|   | 3.12 Cultural Resources 3-59        |
|   | 3.13 Cumulative Effects             |
|   |                                     |

APPENDIX A.....A-1

**Right-of-Way Impacts** 

### APPENDIX B.....B-1

Coordination

### APPENDIX C.....C-1

References

### COMMENTS AND COORDINATION

| 4.1 Introduction                                  | 4-1   |
|---|-------|
| 4.2 Project Team                                  | 4-1   |
| 4.3 Agency, Tribal, & Section 106<br>Consultation | . 4-2 |
| 4.4 Public Outreach                               | . 4-2 |
| 4.5 Adoption of the Preferred Alternative         | . 4-3 |
| 4.6 Next Steps                                    | . 4-3 |

## LIST OF TABLES

| Table ES.1 Preferred AlternativeStationsES-3   |
|--|
| Table ES.2 Summary of EnvironmentalImpacts and Mitigation for the PreferredAlternativeES-5 |
| Table 1.1 Regional Area PopulationProjections1-10  |
| Table 2.1 Station Locations andDescriptions2-14  |
| Table 3.1 Summary of EnvironmentalImpacts and Mitigation of the PreferredAlternative3-2    |
| Table 3.2 Existing Murray Land Use 3-5   |
| Table 3.3 Existing Taylorsville Land Use   |
|  |
| Table 3.4 Existing West Valley City LandUse3-8   |
| Table 3.5 Regional PopulationProjections3-13   |
| Table 3.6 Study Area PopulationProjections3-13   |
| Table 3.7 Ethnicity Data by Block<br>Group <sup>*</sup>                                    |
| Table 3.8 Low-Income Populationswithin the Study Area*3-17                                 |

| Table 3.9 Public Facilities and Services within or Serving the Study Area3-19     |
|---|
| Table 3.10 Existing Bus Ridership withinStudy Area3-22                            |
| Table 3.11 Utilities within the Study Area  |
|   |
| Table 3.12 Potential Right-of-WayImpacts  |
| Table 3.13 Summary of Noise AnalysisResults3-44                                   |
| Table 3.14 UDWQ Beneficial Use  |
| Assessment Results 3-49   |
| Table 3.15 Permit Requirements3-51  |
| Table 3.16 Hazardous Waste Sites within<br>Quarter-Mile of Preferred Alternative* |
|   |
| Table 3.17 Hazardous Waste Sites withPotential for Impact                         |
| Table 3.18 Eligible Historic Propertieswithin the APE                             |
| Table 3.19 Past, Present and ReasonablyForeseeable Actions3-68                    |

# **LIST OF FIGURES**

| Figure ES.1 Dedicated BRT Lanes -                                      |
|--|
| Westbound 4500/4700 South ES-3   |
| Figure ES.2 Preferred Alternative ES-4                                 |
| Figure 1.1 Study Area1-3   |
| Figure 1.2 Regional Area1-4  |
| Figure 1.3 Existing Transit 1-7  |
| Figure 1.4 Future (2040) Intersection Level of Service1-8              |
| Figure 1.5 Study Area Household,<br>Population, and Employment         |
| Projections1-10  |
| Figure 2.1 2013 Preferred Alternative                                  |
|  |
| Figure 2.2 Vine Street Station Location                                |
|  |
| Figure 2.3 2013 East Atherton StationConcept                           |
| Figure 2.4 Midvalley Connector East<br>Atherton Station Refinement 2-5 |
| Figure 2.5 2013 Redwood Road<br>Intersection Configuration 2-6         |
| Figure 2.6 Midvalley Connector<br>Redwood Road Intersection            |
| Refinements 2-6  |
| Figure 2.7 Preferred Alternative 2-9                                   |

| Figure 2.8 Northbound Murray<br>Boulevard2-10  |
|--|
| Figure 2.9 Northbound East Atherton  |
| Figure 210 Northbound Supstone Road  |
| 2.10   |
| Eigure 2.11 Westbound 4E00/4700  |
| South  |
| Figure 2.12 New Road at 1780 West to Salt Lake Community College 2-11                            |
| Figure 2.13 Westbound 4700 South   |
|  |
| Figure 2.14 Northbound 2700 West   |
|  |
| Figure 2.15 Northbound 2700 West toWest Valley Central   |
| Figure 2.16 Rendering of Center-running<br>Station Serving both Directions of                    |
| Iravel   |
| Figure 2.17 Two-sided Center-runningStation2-15  |
| Figure 2.18 One-sided Center-running Station2-15   |
| Figure 2.19 Side-running Station2-15   |
| Figure 2.20 Murray Central Station:<br>Proposed BRT Flow   |
| Figure 2.21 SLCC Station: Proposed<br>Eastbound BRT Flow   |
| Figure 2.22 SLCC Station: Proposed<br>Westbound BRT Flow2-16                                     |
| Figure 2.23 West Valley Central Station:<br>Proposed BRT Flow2-16                                |
| Figure 2.24 Phasing Option: Future<br>1175 West and 1300 West Intersection<br>Configurations2-18 |
| Figure 2.25 Phasing Option: 4700<br>South Auxiliary Lane (I-215 to 2700<br>West)                 |
| Figure 31 Existing Land Lise 3-7   |
| Figure 3.2 Proposed Land Liso 2.0  |
| rigule 3.2 Froposed Lalla OSe 3-9  |

| Figure 3.3 Public Facilities and Services   |
|---|
|   |
| Figure 3.4 Existing Intersection  |
| Level of Service  |
| Figure 3.5 Existing and Planned Bicycle<br>Facilities 3-26                          |
| Figure 3.6 Parcels 426-002 & 426-021<br>(1 of 17) 3-34                              |
| Figure 3.7 Parcels 254-004 & 253-024<br>(2 of 17) 3-34                              |
| Figure 3.8 Parcels 160-001 & 178-003 (3 of 17)                                      |
| Figure 3.9 Parcel 342-015 (4 of 17)   |
|   |
| Figure 3.10 Parcels 400-025 & 426-003 (5 of 17) 3-35                                |
| Figure 3.11 Parcels 453-005, 454-008, 457-001 & 457-002 (6 of 17) 3-35              |
| Figure 3.12 Parcel 328-009 (7 of 17)  |
|   |
| Figure 3.13 Parcels 377-010, 378-001, 377-013, 378-003, 380-036 & 380-049 (8 of 17) |
| Figure 3.14 Parcels 380-048, 380-044 & Casa Linda Apts (9 of 17) 3-36               |
| Figure 3.15 Parcel 380-030 (10 of 17)   |
| Figure 3.16 Parcels 352-017 & 101-053<br>(11 of 17) 3-37                            |
| Figure 3.17 Parcels 329-014, 376-024 & 451-024 (12 of 17)                           |
| Figure 3.18 Parcels 329-015, 182-021 & 251-007 (13 of 17)                           |
| Figure 3.19 Parcel 131-017 (14 of 17)   |
|   |
| Figure 3.20 Parcel 131-001 (15 of 17)   |
|   |
|   |

| Figure 3.21 Parcel 456-003 (16 of 17)                             |
|---|
|   |
| Figure 3.22 Parcels 182-016, 182-017 & 251-003 (17 of 17) 3-38    |
| Figure 3.23 EPA National Ambient Air<br>Quality Standards         |
| Figure 3.24 Noise Measurement & Sensitive Receptor Locations 3-43 |
| Figure 3.25 Noise Levels Defining                                 |
|   |
| Figure 3.26 Floodplains 3-4/                                      |
| Figure 3.27 Groundwater 3-48                                      |
| Figure 3.28 North Jordan Canal Culvert Extension                  |
| Figure 3.29 Wetlands 3-53   |
| Figure 3.30 Hazardous Waste 3-57                                  |
| Figure 3.31 Cultural Resources 3-61                               |

This page intentionally left blank.

## ACRONYMS AND ABBREVIATIONS

AGRC Automated Graphic Reference Center

AMEX American Express

APE Area of Potential Effects

BMP Best Management Practices

**BRT** Bus Rapid Transit

**CERCLA** Comprehensive Environmental Response, Compensation, and Liability Act

**CFR** Code of Federal Regulations

**CO** Carbon Monoxide

**dBA** A-weighted Decibel

**DERR** Division of Environmental Response and Remediation

**D&RGW** Denver & Rio Grande Western Railroad **DWSP** Drinking Water Source Protection

**EPA** U.S. Environmental Protection Agency

ESR Environmental Study Report

**FEMA** Federal Emergency Management Agency

**FTA** Federal Transit Administration

**Ldn** Day-night average sound level

**Leq** Equivalent continuous sound level

LOS Level of Service

LUST Leaking Underground Storage Tank

NAAQS National Ambient Air Quality Standards

**NHPA** National Historic Preservation Act

NO<sub>2</sub> Nitrogen Dioxide

NPL National Priorities List

**NRHP** National Register of Historic Places

**O**₃ Ozone

**Pb** Lead

**PM** Particulate Matter **PM**<sub>2.5</sub> Particulate Matter with a diameter less than or equal to 2.5 micrometers

**PM<sub>10</sub>** Particulate Matter with a diameter less than or equal to 10 micrometers

**RCRA** Resource Conservation and Recovery Act

**RTP** Regional Transportation Plan

**SHPO** State Historic Preservation Office

**SIP** State Implementation Plan

**SLCC** Salt Lake Community College

**Sulfur Dioxide** 

**SSOD** Smelter Site Overlay District

**TAZ** Transportation Analysis Zone

**TDS** Total Dissolved Solids

**TIP** Transportation Improvement Program

**TMDL** Total Maximum Daily Load

**TOD** Transit-oriented Development

**TRI** Toxic Release Inventory

**UDEQ** Utah Department of Environmental Quality

**UDOT** Utah Department of Transportation **UDWQ** Utah Division of Water Quality

**UPDES** Utah Pollutant Discharge Elimination System

**USACE** U.S. Army Corps of Engineers

**USDOT** U.S. Department of Transportation

**UST** Underground Storage Tank

**UTA** Utah Transit Authority

WFRC Wasatch Front Regional Council

# EXECUTIVE SUMMARY

1

(m-1-1)

+



Rendering of Center-running Station along 4700 South Serving both Directions of Travel

### WHAT IS THE PROPOSED PROJECT?

Taylorsville, Murray, West Valley City, the Utah Transit Authority (UTA), the Utah Department of Transportation (UDOT), Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council (WFRC) are working together to prepare an Environmental Study Report (ESR) for the proposed Midvalley Connector Bus Rapid Transit (BRT) project. The proposed project is a new BRT facility connecting the Murray Central TRAX and FrontRunner station to the SLCC Redwood campus in Taylorsville to the West Valley Central TRAX station.

The portion of the BRT route from Murray Central station to the SLCC Redwood campus was analyzed as the Preferred Alternative in the 2013 Taylorsville-Murray Transit ESR completed by UTA in coordination with Taylorsville, Murray, UDOT, SLCC, WFRC, and Salt Lake County. Since the completion of the 2013 ESR, Murray, Taylorsville, West Valley City, and UTA have agreed to extend the proposed route from the SLCC Redwood campus to West Valley Central station. The Midvalley Connector ESR is being prepared to document the extension of the BRT route, as well as any refinements or changes to the 2013 Preferred Alternative.

Refinements to the 2013 Preferred Alternative focused primarily on the following:

- Extension of the BRT route from SLCC to the West Valley Central station
- Removal of the portion of the route through the Murray City Center District
- Addition of a station at Vine Street in Murray
- Refinements to the East Atherton station type
   and location
- Refinements to the BRT route at the 4700 South/ Redwood Road intersection

### WHAT IS THE PURPOSE AND NEED OF THE PROJECT?

The purpose of the Midvalley Connector project is to:

Provide a **LOCAL** 

The need for the Midvalley Connector project includes the following:



AND REGIONAL CONNECTION for destinations from the Murray Central TRAX and FrontRunner station to the West Valley Central station.



The existing transit network lacks an **EFFICIENT AND DIRECT** transit connection from FrontRunner commuter rail and TRAX to local and regional destinations in the study area.



**IMPROVE TRANSIT SERVICE** frequency and visibility to attract riders.



#### ACCESSIBILITY AND VISIBILITY are

limited due to a lack of direct transit service connections between the redevelopment areas in the region.



### **INCREASE MOBILITY**

and provide an alternative mode of transportation for future population and travel demand growth.



#### **TRANSIT SERVICE**

**DEMAND** and the need for alternative mobility options will increase as the population and SLCC student enrollment continue to grow.



ENHANCE THE LOCAL ECONOMY by encouraging redevelopment and

improving accessibility to existing and planned developments.

### WHAT IS THE PREFERRED ALTERNATIVE?

The Preferred Alternative would begin at the Murray Central station, travel along Vine Street to Murray Boulevard, and traverse Taylorsville via Sunstone Road, Atherton Drive, along 4700 South to SLCC. From SLCC, the BRT route would follow 4700 South west to 2700 West and then north along 2700 West to the West Valley Central station. See Figures ES.1 and ES.2.

For most of the route, the bus would travel in mixed-flow lanes, meaning the bus would travel in the existing travel lanes with other vehicles. The Preferred Alternative includes one section of the route with dedicated bus lanes—along 4500/4700 South from East Atherton Drive to Redwood Road (Figures ES.1 and ES.2).

The Preferred Alternative includes:

- 7 miles of BRT service to large employment, activity, and civic centers.
- **15 stations** with shelters, benches, and off-board fare collection/ticketing machines (Table ES.1)
- **1.4 miles of dedicated transit lanes** on 4500/4700 South with three substantial stations featuring amenities such as shelters, benches, real-time bus information, and unique branding and infrastructure
- **Frequent service** throughout the day (10- to 15-minute headways), with transit signal priority for BRT buses at most intersections
- A new transit hub at SLCC
- A new road at 1780 West connecting the SLCC transit hub with 4700 South

Table ES.1 Preferred Alternative Stations<sup>1</sup>

| STATION NAME             | TYPE OF STATION<br>(SIDE VS CENTER) |
|--------------------------|-------------------------------------|
| Murray Central           | Transit Hub                         |
| Vine Street <sup>2</sup> | Side                                |
| Murray Boulevard         | Side                                |
| Sunstone Road            | Side                                |
| South Atherton           | Side                                |
| East Atherton            | Center/Side <sup>3</sup>            |
| West Atherton            | Center                              |
| Fore Lakes               | Center                              |
| SLCC                     | Transit Hub                         |
| Golden Living            | Side                                |
| 4700 South 2700 West     | Side                                |
| American Express         | Side                                |
| 2700 West 4100 South     | Side                                |
| 2700 West 3800 South     | Side                                |
| West Valley Central      | Transit Hub                         |

Shaded rows indicate stations that have been added since the 2013 ESR.
 Vine Street station to be phased into the project based on Murray City and UTA determining funding and timing of station construction.

3. The westbound station would be a center platform; whereas, the eastbound station would be a side platform on the south side of 4700 South.



Figure ES.1 Dedicated BRT Lanes - Westbound 4500/4700 South (Example shown at 935 West 4700 South)

EXECUTIVE SUMMARY | ES-3



The Preferred Alternative is a new 7-mile BRT route that includes:

- Center-running, exclusive BRT lanes with center stations along 4500/4700 South
- Urban design elements and a "complete street" corridor along 4500/4700 South
- An enhanced transit
   plaza at SLCC
- 15 new BRT stations
- Connections to regional TRAX and FrontRunner service at the Murray Central and West Valley Central stations



ES-4 | MIDVALLEY CONNECTOR DRAFT ENVIRONMENTAL STUDY REPORT

# WHAT ARE THE ENVIRONMENTAL IMPACTS OF THE PREFERRED ALTERNATIVE?

The environmental impacts of the Preferred Alternative and applicable mitigation are described in Chapter 3 of this report. Table ES.2 summarizes the impacts to resources in the study area.

Table ES.2 Summary of Environmental Impacts and Mitigation for the Preferred Alternative

| RESOURCE                 | IMPACTS  | MITIGATION  |
|--------------------------|--|---|
| Land Use                 | • The Preferred Alternative would<br>support existing and future land use and<br>redevelopment in Taylorsville, Murray, and<br>West Valley City.   | <ul> <li>No mitigation is needed.</li> </ul>  |
| Socio-<br>Economic       | <ul> <li>The Preferred Alternative would improve<br/>access to and from the study area with<br/>improved transit service.</li> <li>Implementation of the Preferred Alternative<br/>would result in negative impacts to the Casa<br/>Linda Apartments, affecting the character<br/>and cohesiveness of the apartment complex.</li> </ul>  | • Adequate, decent, safe, and sanitary replacement<br>housing is available within the area at affordable costs.<br>Relocation resources will be made available to affected<br>residents. In addition, the City of Taylorsville plans to<br>redevelop the current Casa Linda parcel to provide new<br>services for the surrounding neighborhoods and SLCC<br>community.  |
| Environmental<br>Justice | • The Casa Linda Apartments, a low-income<br>and minority apartment complex, would be<br>affected.   | <ul> <li>See Section 3.6, Right-of-Way Acquisition and<br/>Relocations, for Casa Linda Apartment impact mitigation.</li> </ul>  |
| Public<br>Facilities     | • Local bus routes may be modified.  | • Modifications to local bus routes will be determined<br>during final design. UTA will complete a new service<br>plan for any revised routes. This plan will include<br>outreach to current riders, a public comment period for<br>the draft plan, and public hearings in the affected area.   |
| Transportation           | <ul> <li>The Preferred Alternative would improve<br/>transit connectivity and travel time between<br/>the Murray Central station, SLCC, and West<br/>Valley Central station.</li> <li>Local bus routes may be modified as a<br/>result of the Preferred Alternative.</li> <li>Construction impacts may include<br/>increased travel times and changes to<br/>travel patterns during construction. Impacts<br/>would not occur at all construction locations<br/>simultaneously, but would correspond with<br/>the phasing of construction activities.</li> </ul> | <ul> <li>A public involvement plan will be developed to provide construction activity information to the public and businesses.</li> <li>A traffic management plan coordinated with Murray, Taylorsville, and West Valley cities may be necessary to assure access to local roads and businesses during construction activities.</li> </ul>   |
| Utilities                | <ul> <li>The Preferred Alternative would result<br/>in impacts to utilities; specific locations<br/>and levels of impact would be updated<br/>throughout the final design process as more<br/>detailed utility information is gathered.</li> <li>Utility service could be disrupted during<br/>construction.</li> </ul>  | <ul> <li>Appropriate coordination will occur with all utility providers within the study area to ensure that necessary permits and agreements are in place prior to construction.</li> <li>Utilities directly in conflict with proposed construction will be relocated outside of the new roadway, within public right-of-way.</li> <li>Utilities impacted by construction that do not require relocation will be protected in place (e.g., through the use of a utility casing, adjusting the height of the utility, or adjusting the grading around the utility). Utilities that are minimally impacted by construction.</li> </ul> |

| RESOURCE  | IMPACTS  | MITIGATION  |  |  |
|---|--|---|--|--|
| Right-of-Way<br>Acquisition<br>and<br>Relocations | <ul> <li>30 partial land acquisitions would be required.</li> <li>Since 2013, Taylorsville City has purchased<br/>the Casa Linda Apartments. The buildings<br/>no longer need to be purchased, but the 30<br/>units will need to be relocated.</li> </ul>  | • Property acquisitions and relocations will be made<br>according to the State of Utah Relocation Program, as<br>specified in the Utah Relocation Assistance Act (Utah<br>Code 57-12). Relocation resources are available to all<br>relocated persons without discrimination.   |  |  |
| Air Quality                                       | <ul> <li>Construction may result in a temporary increase in emissions and fugitive dust.</li> <li>BRT can provide air quality benefits by helping to reduce overall vehicle emissions and pollutants by replacing separate private vehicle trips with fewer BRT buses that generally emit less pollution on a per-person basis.</li> </ul>   | <ul> <li>Best management practices (BMPs) such as watering will be used to minimize short-term construction air quality impacts.</li> <li>A fugitive dust control plan will be prepared and followed for the construction phase.</li> </ul>   |  |  |
| Noise and<br>Vibration                            | <ul> <li>No noise impacts.</li> <li>Noise generated from construction<br/>activities would be temporary and would<br/>occur during daytime hours.</li> </ul>   | <ul> <li>BMPs such as time restrictions will be used to minimize noise impacts during construction. Construction activities will be limited to daytime hours (between 7AM and 10PM), and adequate public notification of construction operations and schedules will be performed.</li> <li>All construction work will be subject to Salt Lake County and city noise ordinances unless exempt by a temporary noise permit obtained from the Salt Lake County Health Department.</li> </ul>   |  |  |
| Water<br>Resources and<br>Water Quality           | <ul> <li>Extension of the culvert at the North Jordan<br/>Canal.</li> <li>The Preferred Alternative would result<br/>in an increase in impervious area and a<br/>corresponding increase in storm water runoff<br/>peak flow.</li> <li>During construction, runoff from disturbed<br/>areas could temporarily increase pollutants.</li> <li>The Salt Lake County trunk line may be<br/>replaced or rehabilitated where there would<br/>be road widening on 4700 South.</li> </ul> | <ul> <li>A permit from the U.S. Army Corps of Engineers<br/>(USACE) and a Salt Lake County Flood Control Permit<br/>will be required for the North Jordan Canal culvert<br/>extension.</li> <li>A Utah Pollutant Discharge Elimination System<br/>(UPDES) storm water permit will be needed for impacts<br/>greater than 1 acre.</li> <li>BMPs such as silt fences will be used during<br/>construction, and an erosion control plan will be<br/>developed and incorporated into construction<br/>documents.</li> </ul>   |  |  |
| Natural<br>Resources                              | <ul> <li>Up to 0.06 acres of non-jurisdictional wetlands may be impacted through temporary construction easements.</li> <li>During construction, ground-disturbing activities have the potential to spread invasive species and noxious weeds.</li> <li>There is potential for impact to migratory birds and raptors due to the suitable habitat found within the study area.</li> </ul>   | <ul> <li>A Section 404 permit will be required for impacts to wetlands; wetland mitigation will be determined during the Section 404 permit process.</li> <li>BMPs will be used to minimize the spread of invasive weeds.</li> <li>Vegetation should not be removed during the bird breeding season (March to August). If construction is to occur during this time, bird nest clearance surveys should be done by a qualified biologist to verify the absence of nests prior to vegetation removal. If nests are found, further coordination with the U.S. Fish and Wildlife is required.</li> </ul>   |  |  |
| Hazardous<br>Waste                                | <ul> <li>There is moderate risk that the Murray<br/>Central station construction could affect<br/>the Smelter Site Overlay District (SSOD)<br/>repository cap, exposing contaminated soils.</li> <li>Hazardous materials could be encountered<br/>during construction.</li> </ul>  | <ul> <li>Final design and construction work in the SSOD will<br/>be coordinated with the U.S. Environmental Protection<br/>Agency (EPA), the Utah Department of Environmental<br/>Quality (UDEQ), Murray City, and the property owner.<br/>Excavation or breaks in the cap over the category II<br/>material is prohibited. Specifications for protecting the<br/>cap will be included in construction documents.</li> <li>A development permit will be required for any work<br/>within the SSOD.</li> <li>Coordination with local, state, and federal agencies will<br/>be conducted if hazardous materials are encountered<br/>during construction.</li> </ul> |  |  |

Table ES.2 Summary of Environmental Impacts and Mitigation for the Preferred Alternative (continued)

| RESOURCE              | IMPACTS  | MITIGATION  |  |
|-----------------------|--|---|--|
| Cultural<br>Resources | <ul> <li>A finding of No Historic Properties Affected<br/>for 68 eligible historic structures and two<br/>railroads.</li> <li>A finding of No Adverse Effect for the<br/>culvert extension at the historic North Jordan<br/>Canal, and 33 eligible historic structures.</li> <li>A finding of Adverse Effect for two eligible<br/>buildings (the Casa Linda Apartments).</li> <li>During construction, cultural resources<br/>could be discovered during ground-<br/>disturbing activities.</li> </ul> | <ul> <li>If previously unidentified resources are discovered<br/>during construction, activities in the area of the<br/>discovery will immediately stop. The process outlined in<br/>Section 36 of the Code of Federal Regulations (CFR) Part<br/>800.13 will be followed.</li> <li>Coordination with local, state, and federal agencies will<br/>be conducted if cultural resources are encountered.</li> <li>A Memorandum of Agreement will be prepared with<br/>the Utah State Historic Preservation Office (SHPO)<br/>identifying mitigation measures to address the Adverse<br/>Effect.</li> </ul> |  |
| Cumulative            | <ul> <li>Redevelopment is likely to occur at a faster rate with the Preferred Alternative.</li> <li>The Preferred Alternative would result in wetland impacts and contribute to the cumulative loss of wetlands in the study area.</li> </ul>  | <ul> <li>Wetland impacts will be mitigated during the Section<br/>404 permit process.</li> </ul>  |  |

### WHAT ARE THE NEXT STEPS?

The next steps for the Midvalley Connector project include:



### A PUBLIC OPEN HOUSE

will be held for the Draft ESR in late 2018.



The **FINAL ESR** is anticipated to be approved by winter 2018/19.



After the Final ESR is approved, the Preferred Alternative will **ADVANCE TO FINAL DESIGN,** anticipated to begin in early spring 2018/19.



As the design advances, **CAPITAL AND OPERATING COSTS** will be estimated, and sources for construction funding identified.



**RIGHT-OF-WAY PURCHASE AND CONSTRUCTION** would begin no sooner than 2019, depending on funding.

# **Chapter 1**

# **PURPOSE AND NEED**





Fore Lakes Golf Course (Source: Google Earth via Shawn Baugh)

### **1.1 INTRODUCTION**

Taylorsville, Murray, West Valley City, UTA, UDOT, SLCC, Salt Lake County, and WFRC are working together to prepare an ESR for the proposed Midvalley Connector BRT project. The proposed project is a new BRT facility connecting the Murray Central TRAX and FrontRunner station to the SLCC Redwood campus in Taylorsville to the West Valley Central TRAX station.

The portion of the BRT route from Murray Central station to the SLCC Redwood campus was analyzed as the Preferred Alternative in the 2013 Taylorsville-Murray Transit ESR (referenced throughout this document as the 2013 ESR) completed by UTA in coordination with Taylorsville, Murray, UDOT, SLCC, WFRC, and Salt Lake County. Since the completion of the 2013 ESR, Murray, Taylorsville, West Valley City, and UTA have agreed to extend the proposed route from the SLCC Redwood campus to the West Valley Central station. The Midvalley Connector ESR is being prepared to document the extension of the BRT route, as well as any refinements or changes to the 2013 Preferred Alternative, including design, land use and/or any regulatory or procedural changes, and any changes to the environmental setting or impacts identified in the 2013 ESR.

**STUDY PARTNERS** 



### 1.2 STUDY AREA

The project study area extends approximately 7 miles along the BRT route, and includes a quartermile buffer from the BRT centerline (Figure 1.1). The study area spans three cities in Salt Lake County— Murray, Taylorsville, and West Valley City (Figure 1.2), which together make up approximately 23% of the county's total population (U.S. Census Bureau 2015).

The eastern terminus of the project is at the Murray Central station, which serves bus, TRAX, and

FrontRunner, and is adjacent to the Intermountain Medical Center. The western terminus is at the West Valley Central station, which serves bus and TRAX, and is adjacent to West Valley City Hall and Valley Fair Mall. The study area encompasses residential areas (including high-density and senior housing facilities), office parks, educational facilities, and various recreational and shopping opportunities.

### MAJOR DESTINATIONS WITHIN STUDY AREA

### **01** Intermountain Medical Center

This 100-acre Intermountain Healthcare facility opened in 2007 and is one of the 19 largest hospitals in the Intermountain West. The center houses five hospitals that provide varying specialties, including women/newborn, heart/lung, emergency/trauma, outpatient, and cancer care (Intermountain Healthcare, no date).

# 02 Murray Central Station

Located directly west of the Intermountain Medical Center, this intermodal hub is served by FrontRunner commuter rail, TRAX light rail, and bus routes 45, 47, 54, 200, and 201, connecting users with destinations throughout the valley.

# **03** Sorenson Research Park

East of I-215 and west of I-15, this high-tech business park sits on more than 100 acres and houses tenants such as Convergys, the Muscular Dystrophy Association, Psomas, the Utah State University Taylorsville Campus, and Kleinfelder. The total size of the office space at the business park is approximately 775,000 square feet, plus manufacturing space.

# **04** Fore Lakes Golf Course

Approximately 50 acres, this golf course includes a par-3 course, a 9-hole course, and a driving range. The *Taylorsville Expressway BRT Master Plan* proposes future mixed-use development for this site. The course's proximity to the center of Taylorsville makes it attractive for resident activity or potential redevelopment.

### $\mathbf{05}$ SLCC Taylorsville Redwood Campus

The Taylorsville Redwood campus functions as the SLCC administrative headquarters and serves more than 13,000 students annually (SLCC 2018a). The campus is situated across two city blocks and holds 12 academic buildings, a library, athletic facilities, an amphitheater, and a student union building. The campus is planning an expansion of 225,000 square feet of new building space in the next five to 10 years (SLCC 2018b).

# 06 Calvin Rampton Complex

This state facility serves as an administrative building housing UDOT, the Utah Department of Public Safety Driver License Division, and the Department of Technology Services.

# 07 American Express

This building holds more than 700 employees, with capacity for up to 2,900 (American Express 2018). The property has a pond area that serves as an outdoor area for the building's employees.

# 08 Valley Fair Mall

This 20-acre shopping center is located southwest of the I-215 belt route and 3500 South. It was constructed in 1970 and has since been through two phases of renovation. The shopping center holds about 130 in-line shops, a 13-bay and 450-seat food court, and a 15-screen Megaplex movie theater.

# **09** West Valley Central Station

Located near West Valley City Hall and Valley Fair Mall, this intermodal hub is served by the TRAX Green line and 11 bus routes.



#### FIGURE 1.2 REGIONAL AREA

The study area spans three cities in Salt Lake County—Murray, Taylorsville, and West Valley City, which together make up approximately 23% of the county's total population.



### 1.3 PURPOSE OF THE PROJECT

The purpose of the Midvalley Connector BRT project is to:

### 1.4 NEED FOR THE PROJECT

The need for the Midvalley Connector BRT project includes the following:



#### Provide a **LOCAL AND REGIONAL CONNECTION** for destinations from the Murray Central TRAX and FrontRunner station to the West Valley Central TRAX station.



The existing transit network lacks an **EFFICIENT AND DIRECT** transit connection from FrontRunner commuter rail and TRAX to local and regional destinations in the study area.



### **IMPROVE TRANSIT SERVICE** frequency and visibility to attract riders.



### ACCESSIBILITY AND VISIBILITY are

limited due to a lack of direct transit service connections between the redevelopment areas in the region.



### **INCREASE MOBILITY** and provide an alternative

mode of transportation for future population and travel demand growth.

### TRANSIT SERVICE

**DEMAND** and the need for alternative mobility options will increase as the population and SLCC student enrollment continue to grow.



#### **ENHANCE THE LOCAL ECONOMY** by encouraging redevelopment and improving accessibility

to existing and planned developments.

#### 1.4.1 IMPROVED TRANSIT CONNECTIONS AND VISIBILITY

The study area is in the center of the Salt Lake Valley and is home to a number of the region's largest employers. The study area is also at the center of UTA's service area, with connections to regional service through the TRAX Green, Red, and Blue lines, and FrontRunner commuter rail (see Figure 1.3).

The cities of West Valley, Taylorsville, and Murray are actively working to redevelop large areas throughout the study area. Improved connectivity would increase the use of alternative modes of transportation while also strengthening the potential for future development and redevelopment

Current UTA bus service within a quarter-mile of the proposed route includes bus routes 33, 35, 35M, 39, 41, 45, 47, 54, 200, 201, 227, 232, 240, 248, 509, and 513 (Figure 1.3). In general, these routes provide service to key trip generators in and around the study area and exhibit strong ridership. However, there is a clear need for direct, frequent connections to regional transit options including the Murray Central TRAX and FrontRunner station and West Valley Central station, and key employment, educational, and redevelopment locations in between.

To improve connectivity and increase the use of alternative modes of transportation, the transit system should provide the following features:

- Frequent and timely bus service
- Travel times competitive with the automobile
- **Increased visibility,** which helps create public perception of system permanence that can be difficult to gain with standard bus service
- **Passenger comfort and convenience** (attractive, spacious, and comfortable stations, frequent service, and high-quality passenger information)
- **High-quality pedestrian and bicycle access** (an inviting pedestrian and biking environment with effective connections to adjacent homes, schools, and businesses)

### 1.4.2 INCREASED MOBILITY

Roadways in the study area, including Redwood Road, 2700 West, and 4700 South, are already experiencing increasing traffic congestion. Level of service (LOS) is a term used to describe how well an intersection or road operates. On a scale from A to F, LOS A represents free-flow conditions and LOS F represents severe congestion and delay. LOS E or F is typically considered failing.

Two intersections along the proposed BRT route are currently failing, and 12 are projected to experience severe congestion by the year 2040 (Avenue Consultants 2018); see Figure 1.4. Traffic volumes at many of the intersections along the route are expected to more than double by 2040. The intersection at 2700 West and 4700 South is of particular interest, as it is one of the most congested intersections in the state.

Worsening LOS will mean reduced traffic operations, increased congestion, and longer travel times. Due to right-of-way constraints, capacity increases through additional lanes are not feasible. Enhancing bus service in the area would allow for improved mobility options and increase the number of persons able to travel through these congested areas.



Level of Service (LOS)



Although current local bus routes serve key trip generators in and around the study area, there is still a need for a direct connection between the Murray Central TRAX and FrontRunner station and the West Valley Central TRAX station, both of which provide connections to regional TRAX and FrontRunner service. The map exhibits August 2017 existing service.



CHAPTER 1: PURPOSE & NEED | 1-7



# 1.4.3 REDEVELOPMENT AND ACCESSIBILITY

The cities of Murray, Taylorsville, and West Valley are engaged in redefining land use. Murray City intends to implement transit-oriented development (TOD) characteristics, encourage pedestrian-oriented design, and increase residential and commercial densities over 97 acres through the Murray City Center District initiative. The purpose of this initiative is to promote compact, mixed-use TOD with neighborhood-oriented commercial, restaurant, and civic and cultural spaces. The city also adopted design guidelines to encourage pedestrian activity and promote multi-modality, create employment centers, and link city districts (Murray City 2017). Additionally, there is planned redevelopment of vacant and underutilized land along Cottonwood Street and Vine Street near the eastern terminus of the Midvalley Connector project.

The City of Taylorsville has targeted the intersection of 4700 South/Redwood Road and the area surrounding the SLCC campus as an area for revitalization. This includes integrating the SLCC campus into the community by reviving all corners of 4700 South and Redwood Road with a mix of uses including student housing, retail, office, student and staff support services, and office opportunities.

West Valley City has been implementing *Vision West* 2035, an update to West Valley City's general plan, including a plan reevaluating land use and making efforts to revitalize residential and commercial spaces in designated "opportunity areas." These areas include Fairbourne Station, 3500 South, 4100 South, and Redwood Road (West Valley City 2015). These projects will redefine the land use in West Valley City to provide more economic opportunity while meeting the needs of residents in the area.

#### 1.4.4 DEMOGRAPHICS AND ALTERNATIVE MODES OF TRANSPORTATION

Rapid population and employment growth along the Wasatch Front over the past two decades have led to increased development and congestion throughout the region. In 2000, the Salt Lake County population was approximately 900,000. By 2015, the population had increased approximately 16% to 1 million (U.S. Census Bureau 2015). As shown in Table 1.1, these trends are estimated to continue, with population projections for Murray, Taylorsville, West Valley City, and Salt Lake County increasing 10 to 40% by 2040 (Governor's Office of Planning and Budget 2012).

The study area's population, household, and employment projections are consistent with the regional growth described above (see Figure 1.5). As population increases and development and redevelopment occur, demand for transit and nonmotorized travel will increase.

According to the 2011–2015 American Community Survey, 18% of the population in the study area falls below the poverty threshold; this percentage is higher than the statewide average of 10.2% (U.S. Census Bureau 2015). Alternatives to travel are needed to increase mobility options for transitdependent populations.

The SLCC Redwood campus serves approximately 13,000 students annually (SLCC 2018a), and there are plans to add approximately 225,000 square feet of new facilities on the Redwood campus in the next five to 10 years (SLCC 2018b). Although there has been a slight decline in overall student enrollment over the past several years, likely attributed to the increase in online courses, student enrollment will increase over time at the SLCC Redwood campus.

#### Table 1.1 Regional Area Population Projections

| GEOGRAPHY         | 2015      | 2020      | 2040      | INCREASE |
|-------------------|-----------|-----------|-----------|----------|
| Salt Lake County  | 1,078,958 | 1,180,859 | 1,507,997 | 40%      |
| Murray City       | 48,460    | 53,748    | 67,668    | 40%      |
| Taylorsville City | 60,383    | 65,637    | 66,546    | 10%      |
| West Valley City  | 133,660   | 145,400   | 150,990   | 13%      |

Source: Governor's Office of Planning and Budget, 2012 Baseline City Population Projections



Figure 1.5 Study Area Household, Population, and Employment Projections (Source: WFRC, 2017 TAZ Data)

Regional population growth, projected student enrollment, and evolving campus strategies throughout the SLCC system may cause issues regarding parking space. The SLCC Redwood campus may require additional parking capacity in the future to mitigate these problems. Highly visible and convenient service to and from SLCC would improve access and reduce demand for parking on campus, as well as provide additional building capacity to meet the needs of a growing student population. SLCC identified transit as a critical component of the college-wide master plan, stating that transit is "critical to enhance student access, reduce overall cost to students, and reduce dependence on single occupant vehicles" (SLCC 2018b).

As a result of improved local and regional access, student trips would increase for the following reasons:

- **SLCC is a commuter-based college** with no student housing.
- College students are well suited for transit use because they typically have limited resources and transit trips are on a regular schedule.

This page intentionally left blank.



# ALTERNATIVES

 $(\mathfrak{X})$ 



SLCC Taylorsville Redwood Campus

### 2.1 INTRODUCTION

This chapter describes the development and details of the Preferred Alternative for the Midvalley Connector BRT project, which includes a new BRT facility from the Murray Central TRAX and FrontRunner station in Murray through Taylorsville to the West Valley Central station in West Valley City. The Preferred Alternative has been identified based on the findings of several previous planning studies, as well as the engineering and operational analysis, environmental resource evaluation, and stakeholder input developed as part of this ESR.

The portion of the BRT route from Murray Central station to the SLCC Redwood campus in Taylorsville was analyzed as the Preferred Alternative in the 2013 Taylorsville-Murray Transit ESR (referenced

throughout this document as the 2013 ESR). Since the completion of the 2013 ESR, Murray, Taylorsville, West Valley City, and UTA have agreed to extend the proposed route from the SLCC Redwood campus to the West Valley Central station.

This chapter describes the Preferred Alternative in its entirety, and focuses specifically on the extension of the BRT route, as well as any refinements to the 2013 Preferred Alternative. For additional details on the development and screening of the 2013 Preferred Alternative (the BRT route from Murray Central station to the SLCC Redwood campus), see the 2013 ESR.

### 2.1.1 BACKGROUND

Over the past decade, several planning studies have supported the identification and development of the Preferred Alternative for the project:

- Taylorsville-Murray Transit Corridor Alternatives Analysis (2009): The 2009 study's alternative evaluation identified a preferred mode and general alignment between the Murray Central TRAX and FrontRunner station to the SLCC Taylorsville Redwood campus based on community input, the ability to serve key activity centers, and the ability to encourage redevelopment and improve accessibility to planned developments.
- Taylorsville-Murray Transit ESR (2013): The 2013 ESR identified the Preferred Alternative BRT route, station locations, sections of the route where new dedicated bus lanes would be constructed, and sections of the route where the bus would travel in mixed-flow lanes with general traffic (see Figure 2.1). In February and

March of 2013, Murray City, Taylorsville City, and UTA passed resolutions in support of the Locally Preferred Alternative. UTA approved the ESR and the Preferred Alternative in a final decision document dated September 2013. The decision document also identified anticipated environmental impacts and the mitigation commitments necessary for implementation of the Preferred Alternative.

Taylorsville Expressway BRT Master Plan

 (2015): In 2015, Taylorsville City prepared a BRT
 master plan that provided recommendations for
 complete street refinements along 4500/4700
 South to be included with the Preferred
 Alternative. Recommendations included high comfort pedestrian and bicycle facilities, station
 accessibility design, location enhancements, and
 neighborhood connectivity. Additionally, urban
 design guidelines recommended building design,
 placement, use, and orientation to the street for
 future development along the corridor.



Figure 2.1 2013 Preferred Alternative (Source: Taylorsville-Murray Transit ESR, UTA, 2013)

### 2.2 REFINEMENTS TO THE 2013 PREFERRED ALTERNATIVE

Refinements to the 2013 Preferred Alternative focused primarily on the following:

- Extension of the BRT route from SLCC to the West Valley Central station
- Removal of the portion of the route through the Murray City Center District
- Addition of a station at Vine Street in Murray
- Refinements to the East Atherton station type and location
- Refinements to the BRT route at the 4700 South/ Redwood Road intersection

#### 2.2.1 EXTENSION FROM SLCC TO WEST VALLEY CENTRAL STATION

Subsequent to completion of the 2013 ESR, Murray, Taylorsville, West Valley City, and UTA coordinated to extend the western project terminus from the SLCC Redwood campus to the West Valley Central station, connecting the Murray Central and West Valley Central stations with BRT service. The proposed route would continue west along 4700 South from the SLCC campus, and then north along 2700 West, where it would terminate at West Valley Central station. The extension would add seven stations along this portion of the route.

The project team considered 2200 West as an alternative to 2700 West. The 2200 West corridor was eliminated due to higher potential ridership capture from employment and activity centers along 2700 West, including the American Express complex, state administrative offices, and planned residential and commercial developments just south of 4100 South. Additionally, 2700 West is identified on the WFRC 2040 Regional Transportation Plan (RTP) for enhanced bus service. The bus would operate in mixed-flow along this portion of the route, using the existing general travel lanes along both 4700 South and 2700 West.

Dedicated BRT lanes were considered but eliminated along the western portion of 4700 South and 2700 West due to impacts to private properties, which would be needed to accommodate two additional dedicated transit lanes.

### 2.2.2 REMOVAL OF ROUTE THROUGH MURRAY CITY CENTER

The Murray City Center portion of the route and associated stations proposed in the 2013 ESR were intended to support Murray's City Center District. Due to a lag in development of the district, that portion of the route (including its proposed stations) has been removed from the Preferred Alternative.

### **2.2.3 STATION REFINEMENTS**

The 2013 Preferred Alternative proposed eight stations and two additional phased stations. Both the Murray City Center District stations proposed in 2013 have been eliminated. Seven additional stations are being proposed from SLCC to West Valley Central station. Two notable station refinements have been made to the 2013 Preferred Alternative: addition of a station at Vine Street in Murray, and revisions to the layout and station type for the East Atherton station.

#### Vine Street Station

A new station is proposed at the Vine Street and Commerce Drive intersection (Figure 2.2). The proposed station is included in the Preferred Alternative for environmental clearance, but would be phased in by Murray City in coordination UTA, as need and funding dictate. Phasing details are included in Section 2.4.2.

It should be noted that the Vine Street station proposed in the 2013 ESR was optional based on development of the Murray City Center District. Since the Murray City Center District has lagged in development, the originally proposed Vine Street station has been replaced with a proposed station at Vine Street and Commerce Drive. There have been several new and planned commercial developments along Vine Street since the 2013 ESR, increasing the potential for ridership capture and further redevelopment in this area.



Figure 2.2 Vine Street Station Location

#### **East Atherton Station**

The 2013 Preferred Alternative proposed the East Atherton station as a center station located on Atherton Drive near the 4700 South intersection (Figure 2.3). Placing the station in this location would not serve the potential ridership capture at the major employment center of Sorenson Research Park, which is located northeast of the intersection shown in Figure 2.3. Due to the station's close proximity to the 4700 South intersection, this station placement would require additional right-of-way acquisition from adjacent commercial and residential properties to allow the intersection to operate for both buses and auto traffic without major operational disruptions. A center station on 4700 South serving buses in both directions would be optimal for ridership capture. However, traffic operations and right-of-way constraints limit the feasibility of this option. Signal preemption, giving buses immediate priority in the intersection, would be required to maintain the speed and operations of the bus.

The East Atherton station has been modified to eliminate the center station on Atherton Drive and build a new eastbound side station on 4700 South and a westbound center station on 4700 South (see Figure 2.4). The new East Atherton station design would increase the proximity and visibility to the Sorenson Research Park for highest ridership capture while minimizing impacts to adjacent properties.
Atherton Drive Center Station (2013 Design)

Figure 2.3 2013 East Atherton Station Concept



Figure 2.4 Midvalley Connector East Atherton Station Refinement

### 2.2.4 REDWOOD ROAD INTERSECTION REFINEMENTS

The 2013 Redwood Road intersection configuration extended the westbound dedicated bus lane to the Redwood Road intersection, and started the eastbound dedicated bus lane approximately 200 feet east of the intersection (Figure 2.5). The configuration would affect adjacent properties, including major utility and canal infrastructure. Design refinements for the Redwood Road intersection include terminating the westbound dedicated bus lane immediately west of the Fore Lakes station, and adding a bus-only and right-turn lane extension on the right side of 4700 South to Redwood Road. Eastbound buses would enter the dedicated lanes between the Fore Lakes and Simmental Drive intersections (Figure 2.6).



Figure 2.5 2013 Redwood Road Intersection Configuration



Figure 2.6 Midvalley Connector Redwood Road Intersection Refinements

# 2.3 NO-ACTION ALTERNATIVE

The No-Action Alternative provides a baseline for comparing the travel benefits of the Preferred Alternative. The No-Action Alternative includes the following planned projects from the WFRC 2015–2040 RTP and city projects that would be constructed between now and 2040.

#### REGIONAL TRANSPORTATION PLAN PHASES TIMELINE



#### PLANNED PROJECTS: WFRC 2040 REGIONAL TRANSPORTATION PLAN AND CITY PROJECTS





4700 South and Redwood Road

# 2.4 THE PREFERRED ALTERNATIVE

The Preferred Alternative is a 7-mile BRT route that begins at the Murray Central TRAX and FrontRunner station, travels through Murray along Vine Street to Murray Boulevard, and traverses Taylorsville via Sunstone Road, Atherton Drive, along 4700 South to SLCC. From SLCC, the BRT route follows 4700 South west to 2700 West and then north along 2700 West to the West Valley Central station in West Valley City. See Figure 2.7.

For most of the route, the bus travels in mixed-flow lanes, meaning the bus will travel in the existing travel lanes with other vehicles. The Preferred Alternative includes one section of the route with dedicated bus lanes—along 4500/4700 South from East Atherton Drive to Redwood Road.

The proposed BRT service would offer higher speed and frequent bus operations, including the following:

- Off-board fare collection (using ticket vending machines) for faster boarding
- Enhanced, real-time transit information (next bus information) at stations

- Frequent service throughout the day (10- to 15-minute headways)
- Transit signal priority for BRT buses at most intersections
- Comfortable, sheltered seating at stations

### 2.4.1 TYPICAL ROADWAY SECTIONS

The proposed BRT roadway typical sections are presented in Figures 2.8 to 2.15 on the following pages and have been divided into three geographic sections for ease of display:

- Murray Central Westbound: Murray Central station to 4500/4700 South
- Dedicated Transit Lanes: 4500/4700 South to SLCC
- Redwood Road to West Valley Central Station:
   SLCC to West Valley Central station

These typical sections are conceptual renderings that show a specific location within each segment; actual dimensions and treatments may vary within each segment from the provided example.



The Preferred Alternative is a new 7-mile BRT route that includes:

- Center-running, exclusive BRT lanes with center stations along 4500/4700 South
- Urban design elements and a "complete street" corridor along 4500/4700 South
- An enhanced transit
   plaza at SLCC
- 15 new BRT stations
- Connections to regional TRAX and FrontRunner service at the Murray Central and West Valley Central stations



### MURRAY CENTRAL WESTBOUND

This section of the Preferred Alternative starts at the eastern terminus of the route at Murray Central station and ends at the intersection of East Atherton Drive and 4500/4700 South. The bus would operate in mixed-flow traffic for the entire 2 miles of the section. See Figures 2.8 to 2.10. Options to mitigate potential conflicts between bus ingress/egress at stations and bicycle lanes on Northbound Murray Boulevard would be considered during final design.





Figure 2.8 Northbound Murray Boulevard (Example shown at 5050 South Murray Boulevard)



Figure 2.9 Northbound East Atherton Drive (Example shown at 4500 South Atherton Drive)

2-10 | MIDVALLEY CONNECTOR DRAFT ENVIRONMENTAL STUDY REPORT

Figure 2.10 Northbound Sunstone Road (Example shown at 4870 South Sunstone Road)



Typical Section Locations

## DEDICATED TRANSIT LANES

The dedicated transit section begins at the intersection of East Atherton Drive and 4500/4700 South, and terminates at the intersection of 4700 South and Redwood Road (see Figure 2.11). Transit infrastructure would be used at multiple locations on the dedicated transit section. The dedicated lanes would run for approximately 1.4 miles. Varying bicycle and pedestrian infrastructure would exist along the dedicated transit lanes. In addition to dedicated transit lanes on 4500/4700 South, a new road at approximately 1780 West would connect 4700 South directly with SLCC (Figure 2.12).



Figure 2.11 Westbound 4500/4700 South (Example shown at 935 West 4700 South)



\*Bus only between Bowling Ave and Bruin Blvd

Figure 2.12 New Road at 1780 West to Salt Lake Community College



Typical Section Locations

## REDWOOD ROAD TO WEST VALLEY CENTRAL STATION

West of Redwood Road, the Preferred Alternative would return to mixed-flow traffic operation for the remaining 3 miles to SLCC and West Valley Central station. The SLCC station design would feature connections to local bus routes. Ongoing redevelopment initiatives could route the bus through a "town-and-gown" TOD with exclusive bus use by connecting 4700 South to SLCC by way of 1780 West. Once leaving SLCC, the bus would travel in mixed-flow lanes. The typical sections are shown in Figures 2.13 to 2.15.

Options to mitigate potential conflicts between bus ingress/egress at stations and bicycle lanes on 2700 West would be considered during final design. Additionally, the West Valley Central station layout would need to be altered slightly to accommodate the additional rolling stock of buses needed for the Preferred Alternative.



Figure 2.13 Westbound 4700 South (Example shown at 1960 West 4700 South)



Typical Section Locations

## REDWOOD ROAD TO WEST VALLEY CENTRAL STATION (CONT'D)



Figure 2.14 Northbound 2700 West (Example shown at 4270 South 2700 West)



Figure 2.15 Northbound 2700 West to West Valley Central (Example shown at 3930 South 2700 West)



Typical Section Locations

### 2.4.2 STATIONS

A total of 15 stations are planned for the Preferred Alternative (Table 2.1). Most of the stations identified in 2013 are being retained except for those associated with the Murray City Center District, which were eliminated due to a lag in development that was intended to provide the ridership for the stations. The Fore Lakes station, a phased option in 2013, is being carried forward in this ESR. An additional station intended to serve growth around the intersection of

Table 2.1 Station Locations and Descriptions

Vine Street and Commerce Boulevard in Murray has been added as a phased option.

Each station identified in this ESR has been chosen based on various criteria within a half-mile of each station: presence of a population center; presence of an activity center; presence of an employment center; bike and pedestrian access; ridership; distance between stations; complementary transit infrastructure; compatibility with local, regional and state plans; development opportunities; stakeholder support; and multimodal connectivity.

| STATION NAME/<br>LOCATION | TYPE OF STATION<br>(SIDE VS CENTER) | DESCRIPTION  |
|---------------------------|-------------------------------------|--|
| Murray Central            | Transit Hub                         | Transit hub with connections to TRAX light rail and FrontRunner commuter rail and five bus routes; potential surrounding infill development.               |
| Vine Street <sup>2</sup>  | Side                                | Surrounding new and planned development will increase ridership capture.   |
| Murray Boulevard          | Side                                | Charter school and surrounding high-density housing provide high ridership.  |
| Sunstone Road             | Side                                | High-density apartment complexes provide high ridership.   |
| South Atherton            | Side                                | Ridership capture from surrounding residential and commercial space on the south side of 4500/4700 South.  |
| East Atherton             | Center/Side <sup>3</sup>            | High ridership capture from Sorenson Research Park and apartments on the south side of 4500/4700 South.  |
| West Atherton             | Center                              | High ridership capture from Sorenson Research Park and adjacent apartments.  |
| Fore Lakes                | Center                              | Ridership facilitated by adjacent neighborhood and potential transit-oriented redevelopment of Fore Lakes Golf Course.                                     |
| SLCC                      | Transit Hub                         | Connections to multiple bus routes and campus shuttle. Proposed redevelopment around SLCC as a mixed-use TOD, improved transit connectivity for residents. |
| Golden Living             | Side                                | High- and mid-density senior housing and adjacent apartments provide high ridership capture, addresses an existing transit gap.                            |
| 4700 South 2700 West      | Side                                | Surrounding commercial uses and services for transit users include grocery stores, banks, restaurants, pharmacies, and others.                             |
| American Express          | Side                                | High ridership capture from American Express and potential redevelopment for office and residential to the north and west.                                 |
| 2700 West 4100 South      | Side                                | Mixed mid- and low-density housing surround the intersection.  |
| 2700 West 3800 South      | Side                                | Mixed mid- and low-density housing and commercial use node.  |
| West Valley Central       | Transit Hub                         | West Valley City Center TOD with connections to 11 bus routes and TRAX.  |

1. Shaded rows indicate stations that have been added since the 2013 ESR.

2. Vine Street station to be phased into the project based on Murray City and UTA determining funding and timing of station construction. 3. The westbound station would be a center platform; whereas, the eastbound station would be a side platform on the south side of 4700 South.

#### **Architecture, Features and Layout**

The Taylorsville Expressway BRT Master Plan provided conceptual architecture and layouts for premium stations along the route that served as the basis of the station design for the Preferred Alternative. The station design would incorporate recommended elements such as locally sourced building materials and architecture that acknowledges the importance of the Jordan River and Canal systems (City of Taylorsville 2015). Additional amenities to be incorporated into the station design may include benches, off-board fare collection, shelter, lighting, and real-time bus status displays.

The Preferred Alternative would feature three different station designs to accommodate the center-running and mixed-flow roadway alignments:



Figure 2.16 Rendering of Center-running Station Serving both Directions of Travel

- The center-running dedicated lanes on 4500/4700 South would feature a single platform in the center of 4500/4700 South designed to serve both directions of travel (Figures 2.16 and 2.17).
- The East Atherton westbound station would be a unique, one-sided center station serving only westbound buses (Figure 2.18).
- Stations along the mixed-flow portions of the route are proposed as side stations (Figure 2.19).

## **CENTER-RUNNING STATIONS**

Because the proposed buses only have doors on the right side, they would have to approach the center-running station in the lane opposite their direction of travel (contraflow to auto traffic). Buses would perform weave movements before and after each station through intersections and dedicated weave sections within the center-running lanes. A full operational analysis will be prepared as part of the final design to ensure adequate center-running station design(s) for 10-minute headways.





Figure 2.17 Two-sided Center-running Station: Side (upper left), Front (upper right) and Plan Views (bottom) (Station type for the following stations: East Atherton Eastbound, West Atherton, Fore Lakes)



Figure 2.18 One-sided Center-running Station: Side (upper left), Front (upper right) and Plan Views (bottom); East Atherton Westbound Station

## SIDE-RUNNING STATIONS





Figure 2.19 Side-running Station: Side (upper left), Front (upper right) and Plan Views (bottom) (Station type for the following stations: Vine Street, Murray Boulevard, Sunstone Road, South Atherton, Golden Living, 4700 South 2700 West, American Express, 2700 West 4100 South, 2700 West 3800 South)

#### **Murray Central Station**

Murray Central station currently provides connections to five UTA bus routes: the 45, 47, 54, and 200 (all of which are 15-minute frequencies), and the 201 (30-minute frequency). Additionally, the TRAX Blue and Red lines depart every 15 minutes and the FrontRunner commuter rail departs every 30 minutes during peak periods and every hour during off-peak periods. The station would be redesigned slightly with the addition of three bus bays and an alteration to the ingress and egress of the bus loading zones and park-and-ride lots (Figure 2.20).

### Salt Lake Community College (SLCC)

The SLCC station provides connections to three existing UTA bus routes: 41, 47, and 217 (all 15-minute frequencies). Additionally, SLCC operates the B-Line inter-campus shuttle, which currently runs every 30 minutes. The SLCC bus station would be redesigned to accommodate the additional rolling stock of buses for the Preferred Alternative and to create a uniquely branded station to increase ridership and transit visibility within the community. The Taylorsville Expressway BRT Master Plan envisions a "town-and-gown" district where students, residents, teachers, and staff will congregate around a central plaza surrounded by mixed-use TOD (City of Taylorsville 2015). The station would be moved from its current location on the northern edge of campus to the southern edge of campus, ultimately connecting 1780 West to 4700 South with a new road. The new road would accommodate transit only between Bowling Avenue and Bruin Boulevard (see Figures 2.21 and 2.22). The new station would be the center of a transit-oriented community that would foster integration between SLCC and the surrounding land uses through high-quality transit connections, mixed uses, and walkable development.



Figure 2.20 Murray Central Station: Proposed BRT Flow



Figure 2.21 SLCC Station: Proposed Eastbound BRT Flow



Figure 2.22 SLCC Station: Proposed Westbound BRT Flow

### West Valley Central Station

The West Valley Central station provides connections to 11 bus routes: the 33, 35M, and 41 (operating on 15-minute frequencies); the 35, 39, 227, 232, 240, 248, and 509 (operating on 30-minute frequencies); and the 513, which is a shuttle bus that departs twice in the morning and twice in the evening. The West Valley Central station is also the southern terminus of the TRAX Green line. As part of this project, the station would be redesigned slightly to accommodate the addition of the BRT in a way that minimally affects the operations of existing routes. The location of an additional bay has been preliminarily identified at the northern end of the existing station loop (Figure 2.23).



Figure 2.23 West Valley Central Station: Proposed BRT Flow

### 2.4.3 BUSES AND OPERATIONS

Opening day (2021) ridership is estimated at 2,200 to 2,700 (Avenue Consultants 2018). The Preferred Alternative would use 40-foot buses with doors on the right side, with a 50-person capacity seated and standing. The bus type (likely hybrid-electric) and potential unique vehicle branding would be determined by UTA and project partners during final design.

The proposed BRT route would provide frequent service throughout the day (10- to 15-minute frequency between 6AM and 7PM), and 30-minute frequency outside those hours. Nine buses would be required for 10-minute service; six buses would be required for 15-minute service; and three buses would be required for 30-minute service. Two additional buses would be required for each trip during periods of special service. Additional buses could be pulled from the existing UTA fleet in the event of breakdowns, route modifications, or special service. The final schedule would be determined by UTA during final design and implementation.

#### 2.4.4 COMPLETE STREETS

As an overarching goal, the Preferred Alternative would implement enhanced pedestrian and bicycle amenities throughout the entire corridor to provide essential "first-mile/last-mile" connections to stations and surrounding land uses. First-mile/last-mile refers to passenger travel getting to and from bus and rail stops.

Using the recommendations set forth in the Taylorsville Expressway BRT Master Plan, the Preferred Alternative would include complete street elements along 4700 South from East Atherton Drive to Redwood Road. Complete streets are those that incorporate high comfort facilities for bikers and pedestrians, creating a "complete" facility that supports all modes of transportation. Complete street facilities include wide sidewalks, adequately separated bike lanes, greenery, accessible transit stops, and obvious demarcation of crossing infrastructure for non-automotive modes. The Preferred Alternative would incorporate a new shared-use path on the north side of 4500/4700 South connecting to the Jordan River Parkway Trail at the east end of the corridor and to the North Jordan Canal near Redwood Road. The North Jordan Canal Trail would provide connectivity to SLCC by way of 4610 South/Bruin Boulevard. The existing sidewalk on the south side of 4500/4700 South may be widened at the discretion of Taylorsville City.

While not in the scope of this project, small parklets are envisioned by Taylorsville City for the spaces where 1300 West and 1505 West dead-end on the north side of 4500/4700 South. Currently, these streets and connecting neighborhood are fenced off from 4500/4700 South. The parklets would provide pedestrian and bicycle connectivity to 4500/4700 South while creating a human-scaled urban amenity area for the residents of the surrounding neighborhood. The parklet option at 1300 West may be limited by the future phasing option to open 1300 West at 4700 South and signalize the intersection; see Section 2.5.2.

## 2.5 PHASED OPTIONS

Multiple design options are recommended for potential future implementation, separate from the Preferred Alternative. The timing and implementation would be based on funding, local development potential, and local preferences.

#### **2.5.1 VINE STREET STATION**

As discussed in Section 2.2.3, a new station has been proposed at the intersection of Vine Street and Commerce Drive. The station may be phased concurrent with the planning and construction of multiple commercial and residential developments. The station is included in the Preferred Alternative for environmental clearance, but may be constructed at a later time at the discretion of Murray City and UTA and as funding is identified.

## 2.5.21175 WEST AND 1300 WEST

Alterations to the 1175 West and 1300 West intersections are contingent upon potential redevelopment of the Fore Lakes Golf Course. Concurrent with redevelopment would be the closure of 1175 West and opening of 1300 West to provide cross street access, limit intersection conflicts for the BRT, and provide residential access to the Fore Lakes station. See Figure 2.24.

Currently, 1175 West is an unsignalized intersection with north-south access across 4700 South. 1300 West is a residential street terminating on the north side of 4700 South; an unsignalized intersection provides access to Fore Lakes Golf Course from 4700 South. If the Fore Lakes Golf Course is redeveloped, the 1175 West intersection would be closed to north-south through traffic, and access to 1300 West on the north side of 4700 South would be opened, creating a full signalized intersection at 1300 West and 4700 South. This option would also provide an opportunity to connect bike/ pedestrian amenities along 4700 South with the regional 1300 West bike facility proposed in UDOT's *Salt Lake County West Side Bicycle Connectivity Study.* 

No redevelopment plans are currently in place for Fore Lakes. Any alteration of the intersections would require a separate intersection study to determine the impacts to surrounding resources and would be carried out by UTA, Taylorsville City, and relevant project partners.

# 2.5.3 WEST VALLEY CENTRAL STATION EXPANSION

West Valley City has a long-range program for redeveloping the West Valley Central station and surrounding area including the America First Credit Union immediately east of the station. Though not assumed for this project, full buildout of the station would include permanent bus bays for the Preferred Alternative. The location of the bus bays is dependent on final design and operational efficiency decisions. Final implementation would be coordinated between West Valley City and UTA as needs, funds, and goals of the West Valley City Redevelopment Association dictate.



West Valley Central Station

## 2.5.44700 SOUTH AUXILIARY LANE

The addition of an auxiliary lane on the north side of 4700 South between the southbound I-215 exit and 2700 West is proposed to help relieve congestion at the 4700 South/2700 West intersection—one of the most congested in the state. The westbound auxiliary lane would create turn storage and three lanes of through traffic where two through lanes and a shared right-turn lane currently exist (Figure 2.25). UDOT and Taylorsville City are coordinating to identify funding and prioritize these improvements, as they would benefit both bus and auto traffic at one of the most congested intersections in Salt Lake County.

## **FUTURE PHASING OPTIONS**



Figure 2.24 Phasing Option: Future 1175 West and 1300 West Intersection Configurations



Figure 2.25 Phasing Option: 4700 South Auxiliary Lane (I-215 to 2700 West)

**EXISTING ROW** 

Dedicated Bus Lanes & Center Curb through 1175 W Intersection

## 2.6 PREFERRED ALTERNATIVE MEETS PURPOSE AND NEED

The Preferred Alternative meets the purpose and need of the project. Specifically, the Preferred Alternative would address the problems discussed in Chapter 1 as a part of the need for the project:

- The existing transit network lacks an efficient and direct transit connection from FrontRunner commuter rail and TRAX to local and regional destinations in the study area. The Preferred Alternative expedites service to activity centers including Sorenson Research Park, SLCC, American Express, UDOT, and West Valley City's central city.
- Accessibility and visibility are limited due to

   a lack of direct transit service connections
   between the redevelopment areas in the region.
   The Preferred Alternative improves transit
   accessibility to Murray, West Valley City, and
   the Fore Lakes area with a highly visible system
   using substantial transit infrastructure.
- Transit service demand and the need for alternative mobility options will increase as the population and SLCC student enrollment continue to grow. The Preferred Alternative improves multimodal mobility and accessibility for a growing population by incorporating bicycle facilities and dedicated transit lanes without compromising the existing LOS for auto traffic.



Jordan River Parkway Trail

# **Chapter 3**

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES



2700 West near the Utah Public Health Laboratory, part of the proposed BRT route

# 3.1 INTRODUCTION

This chapter discusses the environmental resources within the study area, potential impacts to these resources as a result of the Preferred Alternative, and any required mitigation for such impacts.

Three types of impacts were considered:

- **Direct Effects:** Impacts directly caused by the project, occurring at the same time and place as the project implementation.
- Indirect Effects: Impacts that would not occur at the same time and place as the project; they may be further removed by either time or distance, but are still reasonably foreseeable.
- **Cumulative Effects:** Environmental impacts resulting from the incremental impact of actions when added to other past, present, and reasonably foreseeable future actions.

Direct and indirect impacts are described for each resource throughout the chapter, while cumulative impacts are discussed in Section 3.13.

## 3.1.1 UPDATES TO 2013 ESR

As described in Chapters 1 and 2, the portion of the BRT route from Murray Central station to the SLCC Redwood campus in Taylorsville was analyzed as the Preferred Alternative in the 2013 Taylorsville-Murray Transit ESR (referenced throughout this document as the 2013 ESR). Since completion of that document, the route has been extended from SLCC to West Valley Central station (see Figure 2.7).

In general, this chapter addresses the BRT route as follows:

- Murray Central to SLCC: If there is no change in existing conditions (or affected environment) for a specific resource since 2013, this is noted. The conditions are not further discussed, and the 2013 ESR is referenced for more information. Any changes or updates to a specific resource since 2013 are described in their respective sections of this chapter. Impacts (or environmental consequences) identified in the 2013 ESR are summarized in this chapter, as well as any changes or updates to those impacts.
- SLCC to West Valley Central: Since this portion of the Preferred Alternative was not analyzed in the 2013 ESR, the existing conditions and potential impacts for each environmental resource are described in detail.

## **3.1.2 STUDY AREA**

The project study area is defined in Chapter 1 (see Figure 1.1), and generally includes a quarter-mile buffer around the Preferred Alternative from Murray Central station to West Valley Central station. The study area applies to all environmental resources in this chapter, unless otherwise noted.

### **3.1.3 SUMMARY OF IMPACTS**

Table 3.1 summarizes the environmental impacts and mitigation measures associated with the Preferred Alternative. The following environmental resources were reviewed and found not to have any impacts, and therefore are not further discussed in this chapter: geology and soil, and energy.

Table 3.1 Summary of Environmental Impacts and Mitigation of the Preferred Alternative

| RESOURCE                 | IMPACTS  | MITIGATION   |
|--------------------------|--|--|
| Land Use                 | <ul> <li>The Preferred Alternative would<br/>support existing and future land use and<br/>redevelopment in Taylorsville, Murray, and<br/>West Valley City.</li> </ul>  | <ul> <li>No mitigation is needed.</li> </ul>   |
| Socio-<br>Economic       | <ul> <li>The Preferred Alternative would improve<br/>access to and from the study area with<br/>improved transit service.</li> <li>Implementation of the Preferred Alternative<br/>would result in negative impacts to the Casa<br/>Linda Apartments, affecting the character and<br/>cohesiveness of the apartment complex.</li> </ul>  | • Adequate, decent, safe, and sanitary replacement<br>housing is available within the area at affordable costs.<br>Relocation resources will be made available to affected<br>residents. In addition, the City of Taylorsville plans to<br>redevelop the current Casa Linda parcel to provide new<br>services for the surrounding neighborhoods and SLCC<br>community.   |
| Environmental<br>Justice | <ul> <li>The Casa Linda Apartments, a low-income<br/>and minority apartment complex, would be<br/>affected.</li> </ul>   | <ul> <li>See Section 3.6, Right-of-Way Acquisition and<br/>Relocations, for Casa Linda Apartment impact mitigation.</li> </ul>   |
| Public<br>Facilities     | • Local bus routes may be modified.  | • Modifications to local bus routes will be determined<br>during final design. UTA will complete a new service<br>plan for any revised routes. This plan will include<br>outreach to current riders, a public comment period for<br>the draft plan, and public hearings in the affected area.  |
| Transportation           | <ul> <li>The Preferred Alternative would improve<br/>transit connectivity and travel time between<br/>the Murray Central station, SLCC, and West<br/>Valley Central station.</li> <li>Local bus routes may be modified as a<br/>result of the Preferred Alternative.</li> <li>Construction impacts may include<br/>increased travel times and changes to<br/>travel patterns during construction. Impacts<br/>would not occur at all construction locations<br/>simultaneously, but would correspond with<br/>the phasing of construction activities.</li> </ul> | <ul> <li>A public involvement plan will be developed to provide construction activity information to the public and businesses.</li> <li>A traffic management plan coordinated with Murray, Taylorsville, and West Valley cities may be necessary to assure access to local roads and businesses during construction activities.</li> </ul>  |
| Utilities                | <ul> <li>The Preferred Alternative would result<br/>in impacts to utilities; specific locations<br/>and levels of impact would be updated<br/>throughout the final design process as more<br/>detailed utility information is gathered.</li> <li>Utility service could be disrupted during<br/>construction.</li> </ul>  | <ul> <li>Appropriate coordination will occur with all utility providers within the study area to ensure that necessary permits and agreements are in place prior to construction.</li> <li>Utilities directly in conflict with proposed construction will be relocated outside of the new roadway, within public right-of-way.</li> <li>Utilities impacted by construction that do not require relocation will be protected in place (e.g., through the use of a utility casing, adjusting the height of the utility, or adjusting the grading around the utility). Utilities that are minimally impacted by construction will require protection only during construction.</li> </ul> |

Table 3.1 Summary of Environmental Impacts and Mitigation of the Preferred Alternative (continued)

| RESOURCE  | IMPACTS  | MITIGATION  |
|---|--|---|
| Right-of-Way<br>Acquisition<br>and<br>Relocations | <ul> <li>30 partial land acquisitions would be required.</li> <li>Since 2013, Taylorsville City has purchased the Casa Linda Apartments. The buildings no longer need to be purchased, but the 30 units will need to be relocated.</li> </ul>  | • Property acquisitions and relocations will be made<br>according to the State of Utah Relocation Program, as<br>specified in the Utah Relocation Assistance Act (Utah<br>Code 57-12). Relocation resources are available to all<br>relocated persons without discrimination.   |
| Air Quality                                       | <ul> <li>Construction may result in a temporary increase in emissions and fugitive dust.</li> <li>BRT can provide air quality benefits by helping to reduce overall vehicle emissions and pollutants by replacing separate private vehicle trips with fewer BRT buses that generally emit less pollution on a per-person basis.</li> </ul>   | <ul> <li>BMPs such as watering will be used to minimize short-term construction air quality impacts.</li> <li>A fugitive dust control plan will be prepared and followed for the construction phase.</li> </ul>   |
| Noise and<br>Vibration                            | <ul> <li>No noise impacts.</li> <li>Noise generated from construction<br/>activities would be temporary and would<br/>occur during daytime hours.</li> </ul>   | <ul> <li>BMPs such as time restrictions will be used to minimize noise impacts during construction. Construction activities will be limited to daytime hours (between 7AM and 10PM), and adequate public notification of construction operations and schedules will be performed.</li> <li>All construction work will be subject to Salt Lake County and city noise ordinances unless exempt by a temporary noise permit obtained from the Salt Lake County Health Department.</li> </ul>   |
| Water<br>Resources and<br>Water Quality           | <ul> <li>Extension of the culvert at the North Jordan<br/>Canal.</li> <li>The Preferred Alternative would result<br/>in an increase in impervious area and a<br/>corresponding increase in storm water runoff<br/>peak flow.</li> <li>During construction, runoff from disturbed<br/>areas could temporarily increase pollutants.</li> <li>The Salt Lake County trunk line may be<br/>replaced or rehabilitated where there would<br/>be road widening on 4700 South.</li> </ul> | <ul> <li>A permit from the USACE and a Salt Lake County Flood<br/>Control Permit will be required for the North Jordan<br/>Canal culvert extension.</li> <li>A UPDES storm water permit will be needed for<br/>impacts greater than 1 acre.</li> <li>BMPs such as silt fences will be used during<br/>construction, and an erosion control plan will be<br/>developed and incorporated into construction<br/>documents.</li> </ul>  |
| Natural<br>Resources                              | <ul> <li>Up to 0.06 acres of non-jurisdictional wetlands may be impacted through temporary construction easements.</li> <li>During construction, ground-disturbing activities have the potential to spread invasive species and noxious weeds.</li> <li>There is potential for impact to migratory birds and raptors due to the suitable habitat found within the study area.</li> </ul>   | <ul> <li>A Section 404 permit will be required for impacts to wetlands; wetland mitigation will be determined during the Section 404 permit process.</li> <li>BMPs will be used to minimize the spread of invasive weeds.</li> <li>Vegetation should not be removed during the bird breeding season (March to August). If construction is to occur during this time, bird nest clearance surveys should be done by a qualified biologist to verify the absence of nests prior to vegetation removal. If nests are found, further coordination with the U.S. Fish and Wildlife is required.</li> </ul> |

Table 3.1 Summary of Environmental Impacts and Mitigation of the Preferred Alternative (continued)

| RESOURCE              | IMPACTS  | MITIGATION  |
|-----------------------|--|---|
| Hazardous<br>Waste    | <ul> <li>There is moderate risk that the Murray<br/>Central station construction could affect the<br/>SSOD repository cap, exposing contaminated<br/>soils.</li> <li>Hazardous materials could be encountered<br/>during construction.</li> </ul>  | <ul> <li>Final design and construction work in the SSOD will<br/>be coordinated with the EPA, UDEQ, Murray City, and<br/>the property owner. Excavation or breaks in the cap<br/>over the category II material is prohibited. Specifications<br/>for protecting the cap will be included in construction<br/>documents.</li> <li>A development permit will be required for any work<br/>within the SSOD.</li> <li>Coordination with local, state, and federal agencies will<br/>be conducted if hazardous materials are encountered<br/>during construction.</li> </ul> |
| Cultural<br>Resources | <ul> <li>A finding of No Historic Properties Affected<br/>for 68 eligible historic structures and two<br/>railroads.</li> <li>A finding of No Adverse Effect for the<br/>culvert extension at the historic North Jordan<br/>Canal, and 33 eligible historic structures.</li> <li>A finding of Adverse Effect for two eligible<br/>buildings (the Casa Linda Apartments).</li> <li>During construction, cultural resources<br/>could be discovered during ground-<br/>disturbing activities.</li> </ul> | <ul> <li>If previously unidentified resources are discovered<br/>during construction, activities in the area of the<br/>discovery will immediately stop. The process outlined in<br/>36 CFR 800.13 will be followed.</li> <li>Coordination with local, state, and federal agencies will<br/>be conducted if cultural resources are encountered.</li> <li>A Memorandum of Agreement will be prepared with<br/>the Utah SHPO identifying mitigation measures to<br/>address the Adverse Effect.</li> </ul>  |
| Cumulative            | <ul> <li>Redevelopment is likely to occur at a faster rate with the Preferred Alternative.</li> <li>The Preferred Alternative would result in wetland impacts and contribute to the cumulative loss of wetlands in the study area.</li> </ul>  | <ul> <li>Wetland impacts will be mitigated during the Section<br/>404 permit process.</li> </ul>  |

# 3.2 LAND USE

This section identifies current and future land use patterns, policies, and plans within Murray, Taylorsville, and West Valley City, including major activity centers and planned areas of redevelopment. The Murray, Taylorsville, and West Valley general plans have been used as the basis for this section and describe the long-range goals and related land use policies that will guide the future growth and development of the cities. Although land use patterns and development trends were considered at the regional and city levels, the land use evaluation area used to assess direct impacts from the Preferred Alternative consists of the quarter-mile study area along the Preferred Alternative.

## **3.2.1 AFFECTED ENVIRONMENT**

#### **Existing Land Use**

#### Murray

The prominent land use in Murray is land dedicated to healthcare (19%). Commercial (13%), industrial (13%), and education (10%) are the next most prominent uses (Table 3.2 and Figure 3.1).

This area in Murray is dominated by healthcare uses due to the presence of the Intermountain Medical Center (63 acres). Most land adjacent to I-15 is commercial due to the ease of transporting goods and materials. However, the location of the Murray Central station provides an opportunity to inject housing into the land-use mix. The land around Murray Central station is in the Central Business District and Murray Smelter Redevelopment Areas, and is being actively redeveloped for TOD.

| Land Use Type              | Acres | % of Murray |
|----------------------------|-------|-------------|
| Low-Density Residential    | 37.5  | 9.45%       |
| Medium-Density Residential | 27.49 | 6.93%       |
| High-Density Residential   | 8.57  | 2.16%       |
| Church                     | 2.1   | 1%          |
| Government                 | 24    | 6%          |
| Healthcare                 | 75    | 19%         |
| Education                  | 38.1  | 10%         |
| Transportation             | 8.00  | 2%          |
| Vacant/Undeveloped Land    | 18.88 | 4.76%       |
| Office                     | 32.25 | 8.13%       |
| Commercial                 | 52.91 | 13.34%      |
| Parks                      | 20.04 | 5.05%       |
| Industrial                 | 51.91 | 13.08%      |

Table 3.2 Existing Murray Land Use

Existing land use data represents land use as of October 2018. Land use was updated utilizing datasets provided by West Valley, Taylorsville and Murray cities, WFRC existing land use interactive map, the Salt Lake County Assessors website as well as up-to-date aerials and business/offices/industry/institution locations via Zoom Earth and Google Maps. Since 2013, commercial and housing developments have been creating infill around the intersection of Vine Street and Commerce Street. Most recent is an 80,000-square-foot commercial building housing Educators Mutual.

One property in Murray has developed along a different path than first described in the 2013 ESR. The property that now contains the American International School of Utah and K2 The Church located along Murray Boulevard and Galleria Drive was vacant and identified for a future mixed-use development in the 2013 ESR. In 2014, the site was redeveloped and remodeled and is now the location of K2 The Church and The American International School of Utah, a 1,300-student, K-12 charter school.

#### Taylorsville

As shown in Table 3.3 and Figure 3.1, land use within the Taylorsville boundaries along this portion

of the route is dominated primarily by low-density residential housing (26%), high-density residential (19%), and parks (11%).

Sunstone Road, East Atherton, and 4500/4700 South from East Atherton to Redwood Road are surrounded by multiple apartments, condominiums, and townhome complexes. From Redwood Road west along 4700 South, land use is dominated by low-density housing on the north and a mix of commercial, low-, medium-, and high-density housing on the south. Medium- to high-density housing and a seniororiented housing node exist along the south side of 4700 South and near 4100 South just west of I-215.

This area includes the senior-oriented Golden Living Taylorsville (105 units) and Silvercrest Senior Community (314 units), Cinnamon Springs Apartments (114 units), and The Village 2 Apartments (105 units) which are located at the intersection of 2700 West and 4100 South.

| Land Use Type              | Acres  | % of Taylorsville |
|----------------------------|--------|-------------------|
| Low-Density Residential    | 248.05 | 26.09%            |
| Medium-Density Residential | 78.44  | 8.25%             |
| High-Density Residential   | 180.70 | 19.00%            |
| Church                     | 14.84  | 1.56%             |
| Government                 | 67.80  | 7.13%             |
| Education                  | 74.85  | 7.87%             |
| Vacant/Undeveloped Land    | 18.11  | 1.90%             |
| Office                     | 79.21  | 8.33%             |
| Commercial                 | 53.18  | 5.59%             |
| Parks                      | 103.67 | 10.90%            |
| Industrial                 | 19.81  | 2.08%             |
| Agriculture                | 0.05   | 0.005%            |
| Canal                      | 1.34   | 0.14%             |
| Utility                    | 10.81  | 1.14%             |

Existing land use data represents land use as of October 2018. Land use was updated utilizing datasets provided by West Valley, Taylorsville and Murray cities, WFRC existing land use interactive map, the Salt Lake County Assessors website as well as up-to-date aerials and business/offices/industry/institution locations via Zoom Earth and Google Maps.

#### Table 3.3 Existing Taylorsville Land Use

# FIGURE 3.1 EXISTING LAND USE

Existing land use data represents land use as of October 2018. Land use was updated utilizing datasets provided by West Valley, Taylorsville and Murray cities, WFRC existing land use interactive map, the Salt Lake County Assessors website as well as up-todate aerials and business/ offices/industry/institution locations via Zoom Earth and Google Maps.



A commercial and public activity center is located along 2700 West between 4700 South and 4300 South. State offices at the Calvin Rampton Complex and an American Express administrative building make up the majority of these large parcels. The large parcel to the north of American Express is planned for two 150,000-square-foot office buildings; site plans for this parcel have been submitted to the city for review.

#### West Valley City

Low-density residential neighborhoods make up the majority of land use in West Valley City in the study area, at 51% (see Table 3.4 and Figure 3.1). Commercial is the next largest use at 21%, followed by high-density residential and vacant/undeveloped land (6%). Most commercial land use is located in the City Center district, a mixed-use designation for the redevelopment area surrounding Fairbourne Station, which is located at the western terminus of the project near the West Valley Central station. The strongest concentration of low-density housing exists on the west side of 2700 West from 4700 South north to 3650 South.

The western terminus of the project is at the planned Fairbourne Station District. The *Fairbourne Station Vision* is the guiding document for development focused on urban design and TOD around 3500 South and 2700 West, called the City Center in the general plan. TOD is characterized by high-density mixed-use buildings in close proximity to transit, employment, entertainment, and services. In addition, West Valley City's land use section of the general plan and the *Fairbourne Station Vision* identify the 3500 South corridor and Fairbourne Station (West Valley Central) as opportunity areas for redevelopment.

The concentration of high-density housing around Fairbourne Station—in close proximity to city services, entertainment, dining, and retail—provides the critical mass of uses and people that support rapid transit and light rail modes. High-density housing exists near

Table 3.4 Existing West Valley City Land Use

| Land Use Type              | Acres  | % of West Valley |
|----------------------------|--------|------------------|
| Low-Density Residential    | 207.03 | 51.22%           |
| Medium-Density Residential | 5.43   | 1.34%            |
| High-Density Residential   | 24.96  | 6.17%            |
| Commercial                 | 87.21  | 21.58%           |
| Church                     | 9.30   | 2.30%            |
| Government                 | 11.56  | 2.86%            |
| Transportation             | 21.26  | 5.26%            |
| Schools                    | 6.33   | 1.57%            |
| Utilities                  | 0.36   | 0.09%            |
| Vacant/Undeveloped         | 25.19  | 6.23%            |
| Parks                      | 1.79   | 0.94%            |
| Agriculture                | 3.78   | 0.44%            |

Existing land use data represents land use as of October 2018. Land use was updated utilizing datasets provided by West Valley, Taylorsville and Murray cities, WFRC existing land use interactive map, the Salt Lake County Assessors website as well as up-to-date aerials and business/offices/industry/institution locations via Zoom Earth and Google Maps. the intersection of 4700 South and 2700 West at Overlook Point (304 units), and at Fairbourne Station, which supports ICO Fairbourne Station Apartments (225 units), Edgewood Condominiums (12 units), Valley Fair Senior Housing Center (100 units), and the Aspen Village Apartments (90 units).

Commercial/retail development in West Valley in this portion of the study area is focused on a half-mile section on 2700 West from 3800 South to 3500 South. Commercial centers include Valley Fair Mall, a small commercial pad (65,000 square feet), Costco, and various smaller retail buildings with multiple spaces. Valley Fair Mall has a ground cover of 45 acres and features 130 spaces, approximately 108 of which are filled by vendors.

#### **Consistency with Regional and Local Plans**

The changes in land use plans and policies that could result from implementation of the Preferred Alternative support the goals and objectives of the following regional and local plans.

WFRC has developed a shared regional vision based on building community values called the *Wasatch Choice 2040*. The recently updated *Draft Wasatch Choice 2050* plan identifies the following:



The area around West Valley Central as a center of activity, economic, and social development, and Fairbourne Station as a Regional Urban Center to be served by a variety of major roads and freeways as well as high-capacity and high-frequency transit.



**Need for district-to-district transit improvements**, such as improving and expediting service from SLCC to West Valley Central station. The existing bus route on 2700 West (route 227) is a candidate for enhanced bus service.



Three scenarios for regional development based on keeping the existing transportation system as is, adding transit in key locations, and shifting to a transit-oriented system. The most recent *Murray General Plan* was adopted in 2017 and recommends the following land use policies for the area around the city center and Murray Central Station:

- Create community nodes around transit by converting vacant and underutilized land for TOD.
- Designate land for mixed use around the city center and transit station areas to improve access to high-capacity transit. Density is recommended between 10 and 30 units per acre.

The area around Murray Central station is recommended almost exclusively for mixed use on the Future Land Use Map of the general plan.

The *City of Taylorsville General Plan* was adopted in 2006 and recommends the following policies and opportunities within the SLCC to West Valley Central portion of the BRT route:

- Expansion of a BRT or light rail system along 2700 West. The plan highlights an abundance of rightof-way for improving transit and vacant land for park-and-ride lots or TOD.
- Figure 3.2 shows the planned land use indicated in the general plan; it recommends professional office space for the undeveloped parcel north of American Express (labeled AMEX on the map).
- Other small parcels in the study area are currently a use that differs from that proposed in the general plan (Figure 3.2).



FIGURE 3.2 PROPOSED LAND USE

Land uses depicted in this map represent uses established by each city's general plan.

*The* Taylorsville Expressway BRT Master Plan was adopted in September 2015. The Preferred Alternative is consistent with the plan, which guides the connection between transportation and land use along 4500/4700 South through the following recommendations:

- Design principles for a BRT route, such as dedicated lanes on 4700 South, urban design with improved pedestrian and bicycle infrastructure, and surrounding BRT with TOD and mixed-use development.
- Redevelopment of the area immediately south of SLCC for TOD; the area would feature urban design elements that establish a unique "townand-gown" district.
- Future mixed-use redevelopment of Fore Lakes Golf Course is proposed in the Taylorsville Expressway BRT Master Plan. The course's proximity to the center of Taylorsville makes it attractive for resident activity or potential redevelopment.

In 2015, West Valley City updated their general plan, *Vision West 2035*. Rather than dividing the city into planning districts, *Vision West 2035* focuses on "opportunity areas" for the purposes of suggesting future land use policies. Two roads in the study area, 3500 South and 4100 South, are identified as opportunity areas. Policy decisions directing land use in opportunity areas are guided by the following principles:

- **Preserve and enhance** existing single-family neighborhoods.
- Encourage industrial and office development to promote revenue and job growth.
- Encourage new retail development on existing vacant ground zoned commercial and on aging and/or underdeveloped retail areas instead of rezoning more ground for retail.
- Encourage TOD in strategic locations.
- **Promote a greater balance of housing** by encouraging higher value housing on larger lots.

*Vision West 2035* also identifies the following land use recommendations, issues, goals, and actions for 4100 South:

- 4000 West to I-215: Primarily low-density residential with some neighborhood commercial and residential office at minor intersections.
   When the road is reconstructed, the city should install consistent walls and lighting.
- I-215 to Jordan River: Low-density residential with a small area of neighborhood commercial at 2200 West and general commercial at the Redwood Road intersection.

The recommendation for 3500 South in the study area is determined by the *Fairbourne Station Vision*. The *Fairbourne Station Vision*, adopted in 2015, is a small area plan that identifies the area around West Valley Central as a recognizable town center with mixed-use and TOD. The plan supports a revitalization of high-density housing stock in close proximity to civic services, transit, commerce, and entertainment.



Vision West 2035: West Valley City General Plan Update



Fairbourne Station Apartments (Source: fairbournestation.com)

The *Fairbourne Station Vision* articulates the following development and TOD objectives:

- Create a new mixed-use urban center that supports area retail using a varied and unique built environment reflecting excellence in architecture, landscaping, and design.
- Build new streets to improve circulation and provide access to new compact, walkable, and human-scale development oriented toward streets and sidewalks.
- Create an interconnected street grid with smaller blocks, a minimized need for automobile use, and traffic-calming that supports increased mobility using all modes of transportation.
- Incorporate complementary mixed land uses, including residential, office, retail, restaurant, entertainment, hospitality.

The proposed land use indicated in the general plan guides development and exists as a reference to measure the success of ongoing development. Some parcels within the study area are being used in slightly different ways than recommended in the general plan (Figure 3.2). For example, there are multiple small apartment buildings and duplexes in the areas recommended for low-density housing.

# 3.2.2 ENVIRONMENTAL CONSEQUENCES

#### **No-Action Alternative**

Development is likely to occur within the study area regardless of implementation of the Preferred Alternative. Taylorsville City and West Valley City have expressed a desire for TOD and mixed-use development within the study area. Two vacant properties on 2700 West and roughly 4400 South are being developed—one featuring condo housing and the other mixed-use commercial. In Murray, TOD is already occurring around the intersection of Vine Street and Commerce Drive due to its proximity to Murray Central station. Additionally, Taylorsville City has long-term goals to redevelop Fore Lakes as an internally walkable TOD.

#### **Preferred Alternative**

The Preferred Alternative is consistent with the land use plans and policies for Murray. The Murray Boulevard station would serve the new charter school and church in addition to the existing medium- to high-density residential use with direct access to the BRT route. The additional Vine Street station would serve the development growth on Vine Street and Commerce Street. Overall, the environmental impacts in Murray are similar to those identified in the 2013 ESR.

High-density housing in the area of the dedicated transit lanes and senior-oriented residential housing along the south side of 4700 South could benefit from BRT. A stop adjacent to the facilities would close the transit gap and provide connectivity for the under-served senior population.

Development along 2700 West is occurring across from American Express and on the parcel between 2700 West and I-215 just south of 4100 South. The sites would benefit from BRT service whether they are developed for commercial or residential use.

The Preferred Alternative conforms to the Taylorsville Expressway BRT Master Plan by planning for a BRT system that would be supported by TOD, improve connectivity, and incorporate unique urban design elements. Moreover, regional land use plans recognize SLCC as a center for activity. The Preferred Alternative would aid in the efforts of creating a walkable student district around SLCC.

West Valley City's *Vision West 2035* has multiple accommodations for transit improvements in addition to small area plans recommending development around the West Valley Central station. Implementation of the Preferred Alternative would amplify the existing development in the corridor and would be compatible with future land uses identified in West Valley City's plans.

Commercial uses in the study area are likely to benefit from the Preferred Alternative. Most commercial uses are located on or near 2700 West, within close proximity to a proposed stop. Studies have suggested that BRT lines can stimulate growth in real estate, sales, and service-oriented development in their surrounding environments due to increased accessibility for customers and (Institute for Transportation Development and Policy 2013). The Preferred Alternative would provide additional connectivity to existing commercial centers for consumers and employees by providing a faster alternative to conventional bus and an additional mode of transportation beyond single-occupancy vehicles.

Implementation of the Preferred Alternative would support regional transit planning goals, visions, and growth principles. *Wasatch Choice 2050* plans for intensified development around West Valley Central station. Additionally, the 2040 RTP includes plans for enhanced bus service along the route of the Preferred Alternative.

#### **Construction Impacts**

Impacts from construction activities would not affect the short- or long-term land use patterns within Murray, Taylorsville, or West Valley City.

## **3.2.3 MITIGATION**

No mitigation is required.

# 3.3 SOCIO-ECONOMIC CONDITIONS

This section analyzes neighborhood cohesion, economic conditions, public facilities and services, and potential impacts to the existing social and demographic characteristics within the study area.

## **3.3.1 NEIGHBORHOOD COHESION**

#### **Affected Environment**

Overall, the existing neighborhood characteristics along the portion of the route from Murray Central station to SLCC remain the same as identified in the 2013 ESR (see the 2013 ESR for detailed discussion of neighborhood cohesion in this area). In the 2013 ESR, vacant land located along Murray Boulevard and Galleria Drive was identified for a future mixeduse development. In 2014, the site was redeveloped and remodeled, and is now the location of K2 The Church and the American International School, a 1,300 student, K-12 charter school.

As described in Section 3.2, Land Use, the land use in Taylorsville and West Valley from SLCC to West Valley Central station is dominated by low-density, single-family housing (300 acres). Low-density housing is the most prevalent housing type in the neighborhoods along 4700 South east of I-215 and along 2700 West from 4700 South to 3800 South. Few homes actually front these roadways; most are turned away from the street with fences or block walls separating the roadway from suburban development. The neighborhood design is a typical suburban non-grid layout with lot sizes around 8,000 square feet (0.18 acres). The primary function of the neighborhood design is for easy accessibility to public schools and churches.

In this area, the 4700 South and 2700 West corridors disrupt the cohesion between the streets and blocks of the adjoining neighborhoods. The neighborhoods on either side of 4700 South and 2700 West are not defined by a single characteristic or level of cohesion. Medium- to high-density housing is found along 4700 South and primarily at the West Valley City Center.

Two dedicated senior living centers, Golden Living Taylorsville (105 units) and Silvercrest Senior Community (314 units), are adjacent to each other on 4700 South at about 2000 West. Just west of the senior communities on 4700 South and 2200 West is the Cinnamon Spring Apartments (144 units). These three higher density parcels create age and income diversity in the surrounding suburban neighborhoods.

High-density housing in the SLCC to West Valley Central area includes the following developments:

- Overlook Point (304 units) at 4612 South 2930 West
- Village 2 Apartments (105 units) at 4153 South 2700 West
- ICO Fairbourne Station Apartments (225 units)
   at 2900 West Lehman Avenue
- Valley Fair Village Senior Housing Center (100 units) at 3102 West 3650 South
- Aspen Village Apartments (90 units) on 3500 South in the City Center
- Edgewood Condominiums (12 units) at 2970 West 3650 South

#### **Environmental Consequences**

No impacts to neighborhood cohesion are anticipated with the No-Action Alternative.

As described in the 2013 ESR, implementation of the Preferred Alternative would result in negative impacts to the Casa Linda Apartments, affecting the character and cohesiveness of the apartment complex.

#### Construction Impacts

Construction impacts including noise, detours, changes to bicycle and pedestrian travel patterns, delays, and dust could temporarily alter the connectivity, accessibility, and walkability of the neighborhoods adjacent the corridor. To mitigate the construction impacts, a public involvement plan will be developed to work with the public and provide them with up-to-date construction information. Safe alternatives for automobiles, pedestrians, and cyclists will be provided and clearly marked to maintain access and flow of traffic in and out of affected neighborhoods.

#### **Mitigation**

Adequate, decent, safe, and sanitary replacement housing is available within the area at affordable costs. Relocation resources will be made available to affected residents. In addition, the City of Taylorsville plans to redevelop the current Casa Linda parcel to provide new services for the surrounding neighborhoods and SLCC community.

# 3.3.2 POPULATION AND ECONOMIC CONDITIONS

#### **Affected Environment**

Economic and population trends are important indicators of the market for high-capacity transit because they influence the density of land development and redevelopment. Utah is experiencing incredible growth, primarily in urban areas along the Wasatch Front. Utah's employment grew 4.3% in 2017 compared to the national average of 1.5% (U.S. Census Bureau 2015). Similarly, the unemployment rate for the population over 16 years old is 7.9% in West Valley City, 6.4% in Taylorsville, and 5.5% in Murray; lower than the 8.3% national unemployment rate (U.S. Census Bureau 2015).

Tables 3.5 and 3.6 show population growth within Murray, Taylorsville, and West Valley City. Taylorsville and West Valley are the slowest growing cities in Utah at 10% and 13%, respectively. The study area's overall population is expected to grow by 17%. The employment growth rate is higher than the population growth rate; it is projected that there will be 6,000 more jobs than people in the study area by 2040.

All three cities have plans to redevelop parcels adjacent to the BRT route, including the Vine Street and Cottonwood Street commercial area in Murray; Fore Lakes Golf Course and a large parcel located just north of American Express in Taylorsville; and a 150-unit apartment complex west of American Express on 2700 West in West Valley City.

| JURISDICTION     | 2015      | 2040      | INCREASE |
|------------------|-----------|-----------|----------|
| Murray           | 48,460    | 67,668    | 40%      |
| Taylorsville     | 60,383    | 66,546    | 10%      |
| West Valley City | 133,660   | 150,990   | 13%      |
| Salt Lake County | 1,078,958 | 1,507,997 | 40%      |

Source: Utah Governor's Office of Planning and Budget, 2015 ACS 5-Year Estimates

#### Table 3.6 Study Area Population Projections

| DEMOGRAPHIC | 2011   | 2040   | INCREASE |
|-------------|--------|--------|----------|
| Households  | 15,669 | 20,440 | 30%      |
| Population  | 43,249 | 50,739 | 17%      |
| Employment  | 40.697 | 58,814 | 45%      |

Source: WFRC Transportation Analysis Zone (TAZ) Data, 2017

CHAPTER 3: AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES | 3-13

#### Table 3.5 Regional Population Projections

The *Fairbourne Station Vision* plans for development adjacent to the western terminus of the Preferred Alternative in West Valley.

#### **Environmental Consequences**

#### No-Action Alternative

Population and economic growth is expected to occur regardless of any improvements to transportation infrastructure. Increased employment and population will increase demand on stressed transportation networks within the study area, independent of the Preferred Alternative. In addition, planned development along the corridor will generate additional effects, but the degree of impact is largely contingent on the development type and density. Failure to implement alternative transportation solutions in places where employment and population is expected to grow can constrain the economic potential of the area.

#### Preferred Alternative

Implementation of the Preferred Alternative would provide numerous social and economic benefits to the study area. Expedited bus transit can alleviate a portion of roadway demand that is generated by development. West Valley City and Taylorsville City have planned for TOD within the corridor, expressing a desire for business growth in close proximity to residential housing and alternative transportation. The presence of a transportation alternative with comparable trip times to automobiles can increase the capture of the existing and planned activity centers. Construction of the Preferred Alternative would provide temporary and permanent jobs utilizing the existing services and business within the study area.

The Preferred Alternative would provide ancillary benefits to regional transportation stemming from increased opportunity accessibility. The Preferred Alternative would provide a vein of transportation to regional hubs of activity by way of the West Valley Central Green TRAX line and Murray Central



Businesses along 4700 South in Taylorsville

Blue and Red TRAX lines. Increasing the service to entertainment, employment, and retail destinations expands the potential for individual benefits by way of additional job opportunities, healthcare options, quality of goods, and social interactions.

#### Construction Impacts

Construction would likely result in a temporary change in access to commercial properties, which could result in driver inconvenience and possible temporary reduction of sales. A public involvement plan will be developed to work with business owners and the public to provide them with up-todate construction information and measures for alternative access and use.

#### Mitigation

No mitigation is required.

## **3.3.3 ENVIRONMENTAL JUSTICE**

Environmental justice impacts were assessed according to Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) and the U.S. Department of Transportation Order on Environmental Justice (USDOT Order 5610.2).

Since 2013, population has grown in the area and new census data has become available; thus, minority and population data has changed from that reported in the 2013 ESR.

#### **Affected Environment**

#### Minority Populations

The USDOT Order on Environmental Justice defines a minority as a person who is one of the following:

- **Black:** a person having origins in any of the black racial groups of Africa;
- Hispanic or Latino: a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race;
- Asian American: a person having origins in any of the original people of the Far East, Southeast Asia, or the Indian subcontinent;
- American Indian and Alaskan Native: a person having origins in any of the original people of North America, South America (including Central America), and who maintains cultural identification through tribal affiliation or community recognition; or
- Native Hawaiian and Other Pacific Islander: a person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.

The Order also defines minority populations as any readily identifiable groups of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed DOT program, policy, or activity.

Table 3.7 presents the race and ethnicity data within the study area. This data was obtained from the U.S. Census Bureau's 2011–2015 American Community Survey 5-Year Estimates at the block group level, for any block groups within or crossing the quartermile study area. According to this survey, individuals classified as "non-white" have identified themselves as part of one of the previously mentioned minority races. Because Hispanic and Latino people may self-identify as members of several different races, data from Hispanic/Latino individuals is recorded separately by the U.S. Census Bureau and is shown separately in Table 3.7 as part of this analysis.

The following conclusions have been drawn based on the census race and ethnicity data presented in Table 3.7:

- All three block groups in the study area within Murray have an equal or higher percentage of Hispanic and non-white populations than that of the city as a whole.
- Six of the 16 block groups in the study area within Taylorsville have an equal or higher percentage of Hispanic populations, and nine of the 16 block groups have an equal or higher percentage of non-white populations than that of Taylorsville as a whole.
- **One of the six block groups** within West Valley has an equal or higher percentage of Hispanic and non-white populations than the city average.

Based on the above information, it has been determined that there are minority populations within the study area.

#### Table 3.7 Ethnicity Data by Block Group\*

| LOCATION                            | TOTAL POPULATION | % HISPANIC / LATINO | % NON-WHITE |
|-------------------------------------|------------------|---------------------|-------------|
| Murray                              | 48,460           | <b>12</b> %         | 18%         |
| Census Tract 1121, Block Group 2    | 1,973            | 21%                 | 36%         |
| Census Tract 1121, Block Group 3    | 1,169            | 14%                 | 26%         |
| Census Tract 1121, Block Group 4    | 948              | <b>12</b> %         | <b>21</b> % |
|                                     |                  |                     |             |
| Taylorsville                        | 60,383           | <b>21</b> %         | 32%         |
| Census Tract 1135.10, Block Group 1 | 1,613            | 19%                 | 36%         |
| Census Tract 1135.10, Block Group 3 | 686              | 33%                 | <b>44</b> % |
| Census Tract 1135.11, Block Group 1 | 2,183            | 16%                 | 32%         |
| Census Tract 1135.11, Block Group 2 | 1,492            | 11%                 | 22%         |
| Census Tract 1135.12, Block Group 1 | 1,906            | 19%                 | 31%         |
| Census Tract 1135.12, Block Group 2 | 1,604            | 27%                 | <b>47</b> % |
| Census Tract 1135.13, Block Group 1 | 1,172            | 17%                 | 23%         |
| Census Tract 1135.13, Block Group 2 | 883              | 15%                 | 22%         |
| Census Tract 1135.13, Block Group 3 | 1,262            | 20%                 | 35%         |
| Census Tract 1135.14, Block Group 1 | 1,156            | 26%                 | <b>41</b> % |
| Census Tract 1135.14, Block Group 2 | 1,452            | <b>21</b> %         | 31%         |
| Census Tract 1135.14, Block Group 3 | 1,280            | 34%                 | <b>43</b> % |
| Census Tract 1135.14, Block Group 4 | 1,853            | 29%                 | <b>43</b> % |
| Census Tract 1135.15, Block Group 1 | 2,371            | 8%                  | 17%         |
| Census Tract 1135.22, Block Group 1 | 1,533            | 13%                 | 27%         |
| Census Tract 1135.22, Block Group 2 | 1,760            | 12%                 | 21%         |
|                                     |                  |                     |             |
| West Valley City                    | 133,660          | 38%                 | <b>52</b> % |
| Census Tract 1133.09, Block Group 3 | 1,378            | 23%                 | 31%         |
| Census Tract 1133.10, Block Group 1 | 1,190            | 31%                 | 42%         |
| Census Tract 1133.10, Block Group 2 | 1,075            | 41%                 | 54%         |
| Census Tract 1133.10, Block Group 3 | 750              | 18%                 | 27%         |
| Census Tract 1135.20, Block Group 1 | 2,133            | 22%                 | 35%         |
| Census Tract TI35.20, Block Group 2 | 1,850            | ∠۱%                 | 32%         |
| Study Area Total/ Average           | 36.672           | 21%                 | 32%         |
| ,                                   |                  |                     |             |

Source: U.S. Census Bureau, 2011–2015 American Community Survey 5-Year Estimates **\*Bold items** indicate block groups that are equal to or greater than the city average.

#### Low-Income Populations

A low-income household is defined as one living at or below the U.S. Department of Health and Human Services poverty guidelines. The 2017 Health and Human Services poverty guidelines are based on the poverty thresholds updated each year by the Census Bureau. The 2017 poverty guidelines are adjusted for household size, and range from \$12,060 for a oneperson household to \$41,320 for an eight-person household (U.S. Department of Health and Human Services 2017).

Table 3.8 shows the percentage of the population within the study area that falls below the poverty threshold, based on median household income data. This data was obtained for census tracts either within or crossing the quarter-mile study area. The following conclusions have been drawn based on the low-income data presented in Table 3.8:

- One census tract was identified in the study area within Murray; it has a higher percentage of people below the poverty level than the city as a whole.
- Five of the seven census tracts in the study area within Taylorsville have an equal or higher percentage of people living below the poverty level than the city average.
- **Two of the three census tracts** in the study area within West Valley have an equal or greater percentage of people living below the poverty level than the city as a whole.

Based on the above information, it has been determined that there are low-income populations within the study area.

| LOCATION                  | TOTAL POPULATION ASSESSED | % BELOW POVERTY LEVEL |
|---------------------------|---------------------------|-----------------------|
| Murray                    | 48,460                    | 13%                   |
| Census Tract 1121         | 8,105                     | 17%                   |
| Taylorsville              | 60,383                    | 11%                   |
| Census Tract 1135.10      | 3,255                     | 11%                   |
| Census Tract 1135.11      | 4,310                     | 19%                   |
| Census Tract 1135.12      | 3,555                     | 24%                   |
| Census Tract 1135.13      | 6,236                     | 14%                   |
| Census Tract 1135.14      | 6,561                     | 23%                   |
| Census Tract 1135.15      | 5,430                     | 8%                    |
| Census Tract 1135.22      | 3,415                     | 2%                    |
| West Valley City          | 133,660                   | 19%                   |
| Census Tract 1133.09      | 5,618                     | 30%                   |
| Census Tract 1133.10      | 2,600                     | 31%                   |
| Census Tract 1135.20      | 4,131                     | 8%                    |
| Study Area Total/ Average | 53,216                    | 18%                   |

Table 3.8 Low-Income Populations within the Study Area\*

Source: U.S. Census Bureau, 2011–2015 American Community Survey 5-Year Estimates

\*Bold items indicate census tracts that are equal to or greater than the city average.



Intersection of 4700 South and Redwood Road (looking east)

#### **Environmental Consequences**

#### No-Action Alternative

No disproportionate impacts to minority and lowincome populations are anticipated from the No-Action Alternative.

#### Preferred Alternative

Although minority and low-income populations have been identified throughout the study area, it has been determined that they would not be disproportionately affected in relation to non-minority or non-low-income populations.

Direct impacts to private property would generally include temporary easements at station locations along the entire corridor and minor right-of-way purchases at several properties adjacent to the major intersections along 4700 South from Redwood Road to Atherton Drive (see Section 3.6, Right-of-Way Acquisition and Relocations).

The Casa Linda Apartments have been identified as a low-income, minority residence. Due to the necessary acquisition of the Casa Linda Apartments for the Preferred Alternative, the apartment residents would experience a disproportionately high and adverse effect due to being displaced.

Right-of-way, noise, and temporary construction impacts are expected for minority and low-income populations along the corridor. However, these impacts are not predominately born by minority or low-income populations, nor are they of greater severity when compared with impacts to nonminority and non-low-income populations.

#### Construction Impacts

Temporary construction and noise impacts are expected for minority and low-income populations along the corridor; however, these impacts are not predominately born by the minority or low-income populations, nor are they of greater severity when compared with impacts to non-minority and non-lowincome populations.

#### **Mitigation**

Property acquisition activities will be conducted in accordance with the State of Utah Relocation Program, as specified in the Utah Relocation Assistance Act (Utah Code 57-12).

# 3.3.4 PUBLIC FACILITIES AND SERVICES

Public facilities evaluated for this project include emergency services, hospitals, parks and schools, churches, and public transportation services within and serving the study area.

#### **Affected Environment**

Table 3.9 lists the facilities and services within and serving the study area, from Murray Central station to West Valley Central station.

Overall, the public facilities within and serving the portion of the route from Murray Central to SLCC remain the same as described in the 2013 ESR (see the 2013 ESR for detailed discussion of public facilities and services in this area). Two schools identified in the 2013 ESR have since permanently closed: Murray Adult Transition and ITT Technical Institute.

There are two major parks within the study area: Taylorsville City Park at 4700 South Redwood Road and Arrowhead Park at 593 East 4800 South. The Jordan River Corridor could be considered a linear park and often connects established parks. The Jordan River Parkway Trail is the principal trail in the regional system. The trail traverses the entirety of Salt Lake County, connecting to regional trails in Davis and Utah counties. Other trails include a public recreation loop trail north of the Utah State Laboratories at 4431 South 2700 West in West Valley City. See also Figure 3.3 for public facilities and services along the proposed BRT route. Note that the existing public transit facilities are shown in Figure 1.3 in Chapter 1.

#### **Environmental Consequences**

#### No-Action Alternative

No impacts to public facilities and services are anticipated from the No-Action Alternative.

#### Preferred Alternative

None of the public facilities or services would be directly affected by the Preferred Alternative. Access to and from public facilities would be maintained during construction of the project.

Modifications to some local bus routes may occur as a result of the Preferred Alternative, including operational changes such as timing or minor routing changes. Any change to existing bus routing would be determined by UTA during the final design and implementation stages of the Preferred Alternative.

#### **Mitigation**

If route changes are deemed necessary, UTA will complete a new service plan for the revised routes. This plan will include outreach to current riders, a public comment period for the draft plan, and public hearings in the affected area. The final plan, which will be revised based on public comments, must be completed 60 days prior to change day. Title VI impacts will also be addressed during this process.

| FACILITY /<br>SERVICE TYPE | NAME                                    | ADDRESS             |
|----------------------------|---|---------------------|
|                            | Murray Police Department                | 5025 S. State St.   |
|                            | Murray City Fire Department, Station 81 | 40 E. 4800 S.       |
| Emergency                  | Unified Fire Authority, Station 117     | 4545 S. 1700 W.     |
| Services                   | Utah Highway Patrol                     | 4600 S. Redwood Rd. |
|                            | West Valley City Police Department      | 3575 S. Market St.  |
|                            | Utah Highway Patrol Headquarters        | 4501 S. 2700 W.     |

 Table 3.9 Public Facilities and Services within or Serving the Study Area (continued on next page)

| FACILITY /<br>SERVICE TYPE | NAME                                   | ADDRESS  |
|----------------------------|--|--|
| Healthcare                 | Intermountain Medical Center           | 5121 S. Cottonwood St.   |
|                            | Oquirrh Artificial Kidney Center South | 2496 W. 4700 S.  |
|                            | Golden Living Center                   | 2011 W. 4700 S.  |
|                            | Aspire Hospice Care, Inc.              | 1018 W. Atherton Dr.   |
|                            | ResCare HomeCare                       | 4548 S. Atherton Dr., Ste. 260                                   |
|                            | Coram Specialty Infusion Services      | 120 W. Vine St., Ste. 140  |
| Schools                    | Citizenship Class                      | 2880 W. 3650 S.  |
|                            | Salt Lake Community College            | 4600 S. Redwood Rd.  |
|                            | Stevens Henager College                | 383 W. Vine St.  |
|                            | Prince of Peace Lutheran School        | 1441 S. 4630 S.  |
|                            | University of Phoenix                  | 5373 S. Green St.  |
|                            | Mount Vernon Academy                   | 5130 S. State St.  |
|                            | Columbia College                       | 5250 S. Commerce Dr.   |
|                            | Iqra Academy of Utah                   | 3990 S. 2700 W.  |
|                            | Utah College of Applied Technology     | 4501 S. Constitution Blvd., Ste. 3                               |
|                            | Sego Lily School                       | 447 W. 4800 S.   |
|                            | Realms of Inquiry                      | 4998 S. Galleria Dr.   |
|                            | American International School of Utah  | 4998 S. Galleria Dr.   |
| Places of<br>Worship       | Prince of Peace Lutheran Church        | 1441 W. 4630 S.  |
|                            | LDS Church                             | 2850 W. 3835 S.  |
|                            | First Baptist Church                   | 3831 S. 2700 W.  |
|                            | K2 The Church                          | 5049 S. Murray Blvd.   |
| Parks                      | Arrowhead Park                         | 563 W. 4800 S.   |
|                            | Jordan River Parkway                   | Bisects study area   |
|                            | Freedom Shrine                         | 612 W. Taylorsville Parkway                                      |
|                            | Murray City Park                       | 5130 S. State St.  |
|                            | Taylorsville Park                      | 4721 S. Redwood Rd.  |
| Public<br>Transportation   | Route 227                              | West Valley Central Station to 2700 W. Sugar Factory Rd. Station |
|                            | Route 39/41                            | 3900 S. TRAX Station to 4100 S. 5600 W.                          |
|                            | Route 35M                              | 3500 S. 8400 W. to Millcreek Station                             |
|                            | Route 35                               | West Valley Central Station to 3500 S. 8400 W.                   |
|                            | Route 240                              | West Valley Central Station to SLCC West Jordan Campus           |
|                            | Route 232                              | West Valley Central Station to Jordan Valley Station             |
|                            | Route 513 (Ind. Business Park Shuttle) | West Valley Central Station to Salt Lake Central Station         |
|                            | Route 217                              | Central Point Station to West Jordan City Center Station         |
|                            | FrontRunner                            | Murray Central, going north and south                            |
|                            | TRAX                                   | Murray Central, lines going north and south                      |
|                            | TRAX                                   | West Valley Central Station, lines going north and south         |

Source: Utah Automated Geographic Reference Center (AGRC) 2017


### 3.4 TRANSPORTATION

This section identifies the existing auto, transit, pedestrian, and bicycle transportation systems throughout the study area, and their roles in providing regional and local mobility. Transportation infrastructure improvements for plan year 2040 were used as a baseline to compare the effects of the Preferred Alternative on the existing systems.

#### **3.4.1 AFFECTED ENVIRONMENT**

#### Local and Regional Mobility

The study area is well connected to the regional roadway system, with I-15 to the east and I-215 to the west. Both interstates provide connections to the other high-capacity grade-separated highways in Salt Lake County, SR-201 and I-80. Three main arterial roads run through the project corridor: Redwood Road (a main arterial running north-south through Salt Lake County), 4500/4700 South (a high-capacity east-west arterial), and 2700 West which is a minor arterial.

UTA is the transit service authority in Salt Lake, Weber, Davis, Utah, Tooele, and Box Elder counties. UTA provides regional service from Ogden to Provo with the FrontRunner commuter rail, and subregional service across the Salt Lake Valley with the TRAX light rail. Murray Central station at 5300 South and Cottonwood Street and West Valley Central station at 3500 South and 2700 West are intermodal transit hubs within the study area featuring park-and-ride lots with rail and bus mode options.

The Murray Central TRAX and FrontRunner station is an important intermodal center and the eastern terminus of the proposed BRT route. Murray Central provides connections with north-south service and serves as a transfer point between the TRAX Blue line (Salt Lake Central to Sandy Civic Center), the TRAX Red line (University of Utah to Daybreak Parkway), and FrontRunner (Ogden to Provo Central). The station provides connections to five bus routes. West Valley Central station, the western terminus of the proposed BRT route, serves as an important intermodal center in West Valley City. West Valley Central connections include north-south service on the TRAX Green line (to downtown Salt Lake City and Salt Lake International Airport), the 35 MAX BRT, and connections to 10 other bus routes (UTA 2017a).

#### Transit

Murray Central and West Valley Central stations serve 15 UTA bus routes; four of which provide service within the study area: routes 39, 41, 47, 217, and 227. Both stations are important for north-south and east-west bus connectivity on regional and local scales. SLCC acts as an additional local bus hub, providing connections to routes 41, 47, and 217.

Currently, route 47 operates on a similar route to the Preferred Alternative between Murray Central and 2700 West. From that point, the bus continues west to 5600 West where it turns and eventually terminates at 4100 South. Route 227 operates on 2700 West, providing the ultimate connection to West Valley Central station. Figure 1.3 in Chapter 1 shows the existing bus routes within the study area. Existing route-wide ridership for the four routes serving the study area is shown in Table 3.10.

#### Table 3.10 Existing Bus Ridership within Study Area

| ROUTE | AVERAGE DAILY RIDERSHIP (2017) |
|-------|--------------------------------|
| 39/41 | 2,071                          |
| 47    | 1,744                          |
| 217   | 4,020                          |
| 227   | 196                            |

Source: UTA, Midvalley Connector Ridership (Average Daily Boardings), August 2017.



West Valley Central Station

#### Parking

Existing parking facilities are available for transit riders at the Murray Central and West Valley Central stations. Murray Central provides approximately 719 parking stalls, 14 of which are dedicated handicap stalls. West Valley Central provides approximately 166 off-street parking stalls, five of which are dedicated handicap stalls. An additional 55 on-street parking stalls are provided adjacent to the station on Lehman Avenue and Market Street.

The SLCC campus is permit-only parking, limited to students attending classes on site or at another SLCC satellite campus. There are approximately 4,586 parking stalls—3,609 student stalls, 686 faculty and staff stalls, 82 metered visitor stalls, 68 motorcycle stalls, and 88 handicapped stalls (SLCC 2017).

#### **Traffic Operations**

Traffic operations were evaluated through a LOS analysis conducted for the intersections in the study area. LOS is a qualitative measure of intersection or mainline operations and takes into account various factors such as: speed, travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. Specifically, LOS A to F are defined in terms of vehicle delay for intersections as seen to the right. Overall, an acceptable LOS for the project corridor is LOS D.

Two intersections within the study area currently exhibit failing operations (LOS E): 4700 South/2700 West and 4800 South/Sunstone Road. Figure 3.4 shows the existing LOS of intersections within the study area.

East-west traffic along 4700 South operates at an acceptable LOS overall within the study area, but experiences congestion at times during AM and PM peak travel periods (Avenue Consultants 2017).

#### **Pedestrian and Bicycle Facilities**

None of the cities within the study area have an extensive bicycle network, but major facilities are planned along the route. Generally, sidewalks exist throughout the corridor with the exception of a small segment on the north side of 4700 South and multiple small segments on the west side of 2700 West. Crosswalks are present at most intersections within the corridor, most of which are standard continental crosswalks placed in high foot traffic zones.

Bicycle facilities on major roads within the study area are infrequent. Striped bike lanes and those marked with sharrows are present only in West Valley City along 2700 West. The only shared-use path in the study area is the Jordan River Parkway Trail, which runs the length of Salt Lake County. The following major facilities are either existing or planned within the study area (see Figure 3.5):

- Jordan River Parkway Trail: Existing
- Murray Boulevard Bike Lane: Planned
- 4700 South Shared-Use Path: Planned
- **2700 West Bike Lane**: Existing with a planned extension
- 1300 West Bike Lane: Planned regional facility
- Cottonwood Street Buffered Bike Lane: Planned



Level of Service (LOS)

Bicycle lane widths vary depending on roadway and sidewalk design in West Valley City. Namely, the bicycle lane on 2700 West varies between 3 and 6 feet and is only present as a dedicated bicycle lane with painted bike markings on the east side of the street. The west side of the street features an intermittent 8-foot parking/bicycle combination lane. The gutter is used as the bike lane in sections of the street. The most consistent on-street bicycle facility in the study area is along 3800 South, complete with bicycle markings and sharrows.

The Jordan River Parkway Trail runs north-south along the east edge of the study area. The trail provides access separate from automobile and transit via shared-use path. A connection to the Jordan River Parkway Trail is located within the study area near Sunstone Road and Murray Taylorsville Boulevard.

Murray City has identified and designed a roadway alignment for striped bicycle lanes on Murray Boulevard from 4800 South to Glyndon Way within the study area. This facility will feature 5-foot bicycle lanes in each direction, curbside parking, 11-foot through lanes and a 12-foot center-turn lane. These features have been assumed in the design of the Preferred Alternative along this portion of the route. Construction of the Murray Boulevard bike lane is anticipated for 2019.

#### **Planned Transportation System Improvements**

WFRC's 2015-2040 RTP identifies the following planned improvements in the study area from Murray Central to West Valley Central station:

- Highway:
  - 4700 South: Widening from 4000 West to I-215 (Phase 1)
  - Redwood Road: Operational improvements from 1000 North to 6200 South (Phase 1)
  - **4500/4700 South:** Widening from Redwood Road to I-15 (Phase 2)
- Transit:
  - Midvalley Connector BRT (Murray -Taylorsville): BRT from Murray Central station to SLCC (Phase 1)
  - 4500/4700 South (Taylorsville 5600 West):
    Enhanced bus from Taylorsville 5600 West
  - 2700 West: Enhanced bus from 900 South to 4700 South (Phase 2)
  - **4100 South:** Enhanced bus from I-215 (east side) to 5600 West (Phase 2)
  - Redwood Road: Core route from North Temple TRAX Station to 10400 South (Phase 2)







CHAPTER 3: AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES | 3-25



# 3.4.2 ENVIRONMENTAL CONSEQUENCES

#### **No-Action Alternative**

Other planned transit projects would improve mobility within and accessibility to the study area. Even with the planned transportation projects in the RTP, multiple intersections would still be at or approaching failing LOS. The conversion of parking lots at the three central stations would not be required and may continue to be used for parking or redevelopment. Pedestrian and bicycle improvements are planned for the study area as identified by the RTP, local plans, and the recent completion of UDOT's *Salt Lake County West Side Bicycle Connectivity Study*.

#### **Preferred Alternative**

#### Transit

Although there is a high level of transit availability, most trips to major activity centers within the study area are made with single-occupancy personal vehicles. The 2013 ESR described a perceived lack of transit service as the potential cause. High use of single-occupancy vehicles within the study area has led to congestion, especially in the PM peak travel period. As a result, transit service within the study area suffers from unpredictable and unreliable service and delay of buses in mixed-flow traffic.

Route 47 could experience reduced ridership as a result of implementation of the Preferred Alternative. Ridership is estimated to decrease from nearly 1,800 average daily boardings to between 800 and 900 daily boardings by opening day of the Preferred Alternative (2021), compared to 2,000 to 2,400 daily boardings (2021) without the Preferred Alternative (Avenue Consultants 2018).

Additionally, route 41 is projected to experience decreased ridership as a result of the Preferred Alternative—estimated at 1,900 to 2,100 for opening day (2021) instead of an estimated 2,200 to 2,400 without the Preferred Alternative (Avenue Consultants 2018). Route 47 may cease to serve the study area in the long term if modifications to the local bus routes occur in the future as a result of the Preferred Alternative. If so, UTA will complete a new service plan for the revised route. This plan will include outreach to current riders, a public comment period for the draft plan, and public hearings in the affected area. The final plan, which will be revised based on public comments, must be completed 60 days prior to change day.

The Preferred Alternative would better serve residents, employees, and students accessing destinations in Murray, Taylorsville, and West Valley City. The Preferred Alternative would complement short local bus trips with expedited, 10- to 15-minute service to major activity centers using exclusive bus lanes, signal priority, and prepaid ticketing. To improve the perception of transit service in the area, the Preferred Alternative would include: comfortable stations, increased community visibility, convenient user information, and modal integration.

Opening year ridership (2021) for the Preferred Alternative is estimated at 2,200 to 2,700 daily (Avenue Consultants 2018).

The Murray Central TRAX and FrontRunner station offers the only connection to FrontRunner between downtown Salt Lake City and South Jordan. The addition of the Preferred Alternative and east-west service would greatly improve regional connectivity.

#### Traffic Operations

The overall impact of the Preferred Alternative on traffic operations would be minor. Most of the intersections within the study area would be congested under both 2040 No-Action and Preferred Alternative conditions. The addition of BRT would not change LOS at intersections, but overall mobility would improve. Two intersections are currently failing in the PM peak period within the study area. By 2040, 12 intersections within the study area are projected to be failing in the PM peak period under No-Action conditions; the Preferred Alternative would not noticeably change these conditions.

#### Parking

The Preferred Alternative would have minimal effects to on-street parking throughout the corridor. Station redesigns at Murray Central and SLCC would remove approximately 65 parking stalls and 328 stalls, respectively. However, replacing some auto trips to SLCC with transit trips would decrease the need for parking and could offset the loss of parking stalls where the proposed SLCC bus hub would be constructed.

#### Pedestrian and Bicycle Facilities

Implementation of the Preferred Alternative would improve pedestrian and bicycle connectivity throughout the study area using complete street design elements such as shared pedestrian and bicycle space, landscaping, upgraded crosswalks, increased station accessibility, and connections between regional trails. Under the Preferred Alternative, signalized intersections in the study area would feature painted crosswalks, push button activation, countdown timers, median refuges, signage, and textured curb ramps.

In addition, the Preferred Alternative would improve the existing pedestrian and bicycle facility on 4500/4700 South through a multi-use path along 4700 South that would connect the Jordan River Parkway Trail to SLCC and the proposed 1300 West regional bicycle facility recommended in UDOT's Salt Lake County West Side Bicycle Connectivity Study.

#### **Construction Impacts**

Construction impacts would affect vehicle traffic, pedestrians, and bicycle facilities due to delays, rerouting, and temporary closures. Residents would be disrupted by construction at proposed station areas, along 1780 West, and along 4700 South for construction of the BRT exclusive lane.



Bike lane on 2700 West

#### **3.4.3 MITIGATION**

Impacts would not occur at all construction locations simultaneously, but would correspond with the phasing of construction activities. A traffic management plan coordinated with Murray, Taylorsville, and West Valley cities may be necessary to assure access to local roads and businesses during construction activities.

### 3.5 UTILITIES

This section discusses utilities identified to date along the Preferred Alternative in its entirety, from Murray Central station to West Valley Central station.

#### **3.5.1 AFFECTED ENVIRONMENT**

Utilities within the study area were identified from available records and coordination with utility companies. Table 3.11 lists the utility lines identified to date within, crossing, or running parallel to the study area. For this section, the study area is defined as the existing right-of-way, with a 25-foot buffer. The utilities identified in the 2013 ESR are assumed to remain unchanged, and are listed along with the newly identified utilities along the SLCC to West Valley Central portion of the route.

## 3.5.2 ENVIRONMENTAL CONSEQUENCES

#### **No-Action Alternative**

No impacts to utilities are anticipated from the No-Action Alternative, though roadway widenings are planned for various roads in the study area. Project-specific determinations for those projects would be done during their respective individual environmental and design processes.

#### **Preferred Alternative**

Potential impacts to utilities are categorized by level of impact to best determine what type of mitigation would be required. The levels of impact are defined as follows:

- **High:** The utility is directly in conflict with the proposed construction and would need to be removed and relocated outside of the conflict area.
- **Medium:** The utility is affected by construction limits and requires treatment such as a casing extension, new casing installation, lowering, or other adjustments. The utility would remain in the same location.

• Low: The utility is minimally or not affected by construction. In many cases, the utility would need to be protected during construction, but no additional measures would be needed.

Table 3.11 lists the level of impact anticipated for the utilities identified within the study area. All stations would require power for ticket operations, lighting, etc. Coordination through appropriate power companies would be initiated as the design is finalized. Specific locations of utilities, as well as potential levels of impact, would also be updated throughout the final design process as more detailed utility information is gathered.

#### **Construction Impacts**

Although utility service would be maintained throughout most construction activities, utility service could be temporarily disrupted during construction. All utility providers affected by construction will be consulted, and the construction contractor will coordinate with all utility providers to minimize interruptions to utility service.

#### **3.5.3 MITIGATION**

Appropriate coordination will occur with all utility providers within the study area to ensure that necessary permits and agreements are in place prior to construction.

Utilities directly in conflict with proposed construction will be relocated outside of the new roadway, within public right-of-way.

Utilities impacted by construction that do not require relocation will be protected in place (e.g., through the use of a utility casing, adjusting the height of the utility, or adjusting the grading around the utility). Utilities that are minimally impacted by construction will require protection only during construction.

#### Table 3.11 Utilities within the Study Area

| OWNER                                     | UTILITY TYPE                  | IMPACT LEVEL |
|---|-------------------------------|--------------|
| Municipality                              |                               |              |
| Cottonwood Improvement District           | Sewer                         | None         |
| Murray City                               | Water, Sewer, Storm, Power    | High         |
| Salt Lake County                          | Traffic Signals, Fiber, Storm | Medium       |
| Taylorsville City                         | Storm, Power, Sewer, Water    | Medium       |
| West Valley City                          | Storm                         | High         |
|   |                               |              |
| Agency                                    |                               |              |
| Granger-Hunter Improvement District       | Water                         | Low          |
| Granger-Hunter Improvement District       | Sewer                         | Medium       |
| Jordan Valley Water Conservancy District  | Water                         | Low          |
| North Jordan Canal Company                | Water                         | Medium       |
| Taylorsville-Bennion Improvement District | Water, Sewer                  | Low          |
| LIDOT                                     | Fiber                         | Medium       |
| ODOT                                      | Storm                         | Low          |
|   |                               |              |
| Private Company                           |                               |              |
| AT&T                                      | Fiber                         | None         |
| CentraCom                                 | Fiber                         | Low          |
| Century Link                              | Telephone                     | High         |
| Comcast                                   | Cable/Fiber                   | High         |
| Dominion Energy                           | Gas                           | Low          |
| First Digital                             | Telephone                     | Low          |
| Integra Telecom                           | Fiber                         | None         |
| L3  | Fiber                         | Low          |
| Monte Vista Homes                         | Water                         | None         |
| Rocky Mountain Power                      | Power                         | High         |
| Syringa                                   | Fiber/Telephone               | High         |
| Utopia                                    | Fiber                         | High         |
| Verizon                                   | Fiber                         | Low          |
| XO Communications                         | Fiber                         | None         |
| Zayo                                      | Fiber                         | Medium       |

# 3.6 RIGHT-OF-WAYACQUISITION & RELOCATIONS

This section describes the property acquisition, relocation, lease, and easement required to build and operate the Preferred Alternative. The Utah Relocation Assistance Act (Utah Code 57-12) provides a uniform policy for the fair and equitable treatment of persons displaced from their homes or businesses without discrimination on any basis. The requirements of this act will be implemented for this project.

#### **3.6.1 AFFECTED ENVIRONMENT**

With the exception of 4700 South from South Atherton Drive to Redwood Road, the Preferred Alternative would travel with mixed traffic along city-, state-, and SLCC-owned streets and would not require roadway widening. Homes along 4700 South are positioned away from the road, typically with a fence between the residence and street.

A dedicated transit lane is proposed near the SLCC campus, connecting 1780 West to 4700 South. The Casa Linda Apartments are currently located on the land identified for the proposed transit-only roadway at 1780 West. This apartment complex consists of two buildings and approximately 30 residential units.

# 3.6.2 ENVIRONMENTAL CONSEQUENCES

#### **No-Action Alternative**

No impacts to property are anticipated from the No-Action Alternative, though roadway widenings are planned for various roads in the study area. Project-specific determinations for those projects would be done during their respective individual environmental and design processes.

#### **Preferred Alternative**

Land acquisition would be necessary to expand and add stations, widen strips of 4700 South, and construct 1780 West as part of the Preferred Alternative. For this analysis, it was assumed that structures within 15 feet of the project right-of-way line would be relocated. Properties within the right-of-way line that do not have a structure within 15 feet of the right-or-way line are assumed to be partial acquisitions.

Construction of the Preferred Alternative would result in partial acquisitions to 30 parcels, totaling approximately 0.5 acres (see Table 3.12 and Figures 3.6 to 3.22). These figures focus primarily on parcels requiring partial acquisitions. Easements along strips of 4700 South would also be necessary to accommodate the BRT center-running lane, station facilities, and the construction of a multi-use trail. See Appendix A for a full list of temporary construction easements and right-of-way impacts.

The Casa Linda Apartments were identified as a full acquisition and relocation in the 2013 ESR to accommodate the proposed dedicated transit lane along 1780 West. Since completion of the 2013 study, the City of Taylorsville has purchased the property. The buildings would need to be demolished to accommodate construction of the Preferred Alternative in this area; therefore, tenants residing in the 30 units would need to be relocated.

The right-of-way required for the Preferred Alternative, and the resulting acquisitions, were estimated using preliminary design. Therefore, the impacts listed in Table 3.12 should be considered a preliminary estimate. Refinement of the alignment during final design may result in different impacts for specific properties than those described. Impacts are expected to remain within a similar range overall.

#### **Construction Impacts**

Temporary construction easements would be needed for 120 parcels, totaling over 7.5 acres (see Appendix A for a full list of temporary easements and right-of-way impacts).

#### **3.6.3 MITIGATION**

Property acquisitions will include fair compensation measures for property owners. All acquisitions and relocations will be conducted in accordance with the State of Utah Relocation Program, as specified in the Utah Relocation Assistance Act (Utah Code 57-12). Relocation resources will be available to all relocated persons without discrimination. Table 3.12 Potential Right-of-Way Impacts

| PARCEL LOCATION/DESCRIPTION  | PARCEL ID* | TOTAL PARCEL AREA<br>(SQ FT) | FULL<br>ACQUISITION<br>(SQ FT) | PARTIAL<br>ACQUISITION<br>(SQ FT) |
|--|------------|------------------------------|--------------------------------|-----------------------------------|
| Murray   |            |                              |                                |                                   |
| Murray Central Station**   | 426-021    | 4,266                        | 4,266                          |                                   |
| 5098 S. & 5142 S. Cottonwood St.   | 426-022    | 110,725                      |                                | 8,055                             |
| Murray City School District<br>Administration Office<br>5102 S. Commerce Dr. | 254-004    | 21,244                       |                                | 791                               |
| 5066 S. Commerce Dr.   | 253-024    | 21,547                       |                                | 385                               |
| 5054 S. Murray Blvd.   | 178-003    | 10,303                       |                                | 74                                |
| Hunters Woods Apartments<br>4924 S. Murray Blvd.                             | 160-001    | 245,831                      |                                | 1,660                             |
|  |            |                              |                                |                                   |
| Taylorsville   |            |                              |                                |                                   |
| Mark Twain Apartments<br>4639 S. Sunstone Rd.                                | 342-015    | 33,844                       |                                | 357                               |
| Atherton Park Apartments<br>4545 S. Atherton Dr.                             | 400-025    | 271,370                      |                                | 301                               |
| Monte Vista Manufactured Home<br>Community<br>4595 S. Monte Vista Dr.        | 426-003    | 1,086,250                    |                                | 233                               |
| 1615 W. Hemlock Dr.  | 457-002    | 8,887                        |                                | 302                               |
| 1625 W. Hemlock Dr.  | 457-001    | 10,505                       |                                | 2,135                             |
| 4676 S. Hemlock Dr.  | 454-008    | 9,997                        |                                | 299                               |
| <b>Village Inn</b><br>4681 S. Redwood Rd.                                    | 453-005    | 59,739                       |                                | 2,960                             |
| <b>Del Taco Parking</b><br>1731 W. Bowling Ave.                              | 380-049    | 38,911                       |                                | 234                               |
| SLCC**<br>1760 W. Bowling Ave.   | 378-003    | 10,236                       |                                | 76                                |
| <b>SLCC**</b><br>4615 S. 1780 W.   | 378-001    | 14,611                       |                                | 67                                |
| SLCC**<br>4475 S. Community Blvd.  | 328-009    | 4,593,360                    |                                | 202,428                           |
| 4616 S. 1780 W.  | 377-010    | 12,948                       |                                | 303                               |
| 1796 W. Bowling Ave.   | 377-013    | 14,503                       |                                | 56                                |
| Taylorsville-Bennion<br>Improvement District<br>1795 W. Bowling Ave.         | 380-036    | 13,369                       |                                | 27                                |

Table 3.12 Potential Right-of-Way Impacts (continued)

| PARCEL LOCATION/DESCRIPTION   | PARCEL ID* | TOTAL PARCEL AREA<br>(SQ FT) | FULL<br>ACQUISITION<br>(SQ FT) | PARTIAL<br>ACQUISITION<br>(SQ FT) |
|---|------------|------------------------------|--------------------------------|-----------------------------------|
| Taylorsville  |            |                              |                                |                                   |
| <b>Taylorsville-Bennion</b><br><b>Improvement District</b><br>1800 W. 4700 S. | 380-030    | 6,635                        |                                | 1,542                             |
| <b>Silvercrest Senior Community</b><br>2099 W. 4700 S.                        | 101-053    | 338,987                      |                                | 359                               |
| High Gear Games & Hobbies<br>2160 W. 4700 S.                                  | 352-017    | 21,341                       |                                | 372                               |
| <b>Arby's</b><br>4663 S. 2700 W.  | 451-024    | 21,569                       |                                | 259                               |
| American Express<br>4315 S. 2700 W.   | 251-007    | 1,388,820                    |                                | 224                               |
| West Valley City  |            |                              |                                |                                   |
| <b>Self-Serve Car Wash</b><br>4646 S. Constitution Blvd.                      | 376-024    | 20,871                       |                                | 9                                 |
| <b>West Valley Driver License Division</b> 2780 W. 4700 S.                    | 329-014    | 822,417                      |                                | 580                               |
| 4500 S. Constitution Blvd.  | 329-015    | 679,915                      |                                | 8,318                             |
| 2717 W. Bedford Rd.   | 182-021    | 8,787                        |                                | 108                               |
| 2718 W. Winchester Dr.  | 131-017    | 8,961                        |                                | 22                                |
| 4119 S. 2735 W.   | 131-001    | 10,103                       |                                | 103                               |
| 4058 S. 2665 W.   | 456-003    | 9,124                        |                                | 57                                |
| <b>Davis Grocery &amp; Pharmacy</b><br>3765 S. Constitution Blvd.             | 251-003    | 91,996                       |                                | 276                               |
| 2730 W. 3800 S.   | 182-017    | 9,878                        |                                | 14                                |
| 3781 S. Lee Maur St.  | 182-016    | 10,011                       |                                | 262                               |
| Polocations   |            |                              |                                |                                   |
| Casa Linda Anastmanta   | 280.049    |                              | NI/A                           | NI/A                              |
| 1753 W. Bowling Ave.  | 380-048    | 30 Units                     | IN/A                           | IN/A                              |
| 1774 W. 4700 S.   | 380-044    |                              | N/A                            | N/A                               |

\*Parcel ID numbers have been simplified for ease of reference in this report; see Appendix A for full parcel ID numbers, as well as a full list of temporary construction easements.

\*\*No property will be purchased at these parcels. An agreement and/or easement with UTA will be established for BRT use.

#### FIGURES 3.6 - 3.7: POTENTIAL RIGHT-OF-WAY IMPACTS





Figure 3.6 Parcels 426-002 & 426-021 (1 of 17)



Figure 3.7 Parcels 254-004 & 253-024 (2 of 17)

#### FIGURES 3.8 - 3.11: POTENTIAL RIGHT-OF-WAY IMPACTS



Figure 3.8 Parcels 160-001 & 178-003 (3 of 17)



Figure 3.10 Parcels 400-025 & 426-003 (5 of 17)



Figure 3.9 Parcel 342-015 (4 of 17)



Figure 3.11 Parcels 453-005, 454-008, 457-001 & 457-002 (6 of 17)

#### FIGURES 3.12 - 3.15: POTENTIAL RIGHT-OF-WAY IMPACTS



Figure 3.12 Parcel 328-009 (7 of 17)



Figure 3.14 Parcels 380-048, 380-044 & Casa Linda Apts (9 of 17)



Figure 3.13 Parcels 377-010, 378-001, 377-013, 378-003, 380-036 & 380-049 (8 of 17)



Figure 3.15 Parcel 380-030 (10 of 17)

#### FIGURES 3.16 - 3.19: POTENTIAL RIGHT-OF-WAY IMPACTS



Contraction of the second second

Figure 3.16 Parcels 352-017 & 101-053 (11 of 17)



<u>20 00 Pret</u>
 BRT Route Existing Easements

Figure 3.18 Parcels 329-015, 182-021 & 251-007 (13 of 17)



Figure 3.17 Parcels 329-014, 376-024 & 451-024 (12 of 17)



Figure 3.19 Parcel 131-017 (14 of 17)

#### FIGURES 3.20 - 3.22: POTENTIAL RIGHT-OF-WAY IMPACTS



Figure 3.20 Parcel 131-001 (15 of 17)



Figure 3.22 Parcels 182-016, 182-017 & 251-003 (17 of 17)



Figure 3.21 Parcel 456-003 (16 of 17)

### 3.7 AIR QUALITY

The EPA has established National Ambient Air Quality Standards (NAAQS) for seven criteria pollutants, including carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), lead (Pb), particulate matter with a diameter less than or equal to 10 micrometers ( $PM_{10}$ ), particulate matter with a diameter less than or equal to 2.5 micrometers ( $PM_{2.5}$ ), and sulfur dioxide ( $SO_{2}$ ).

A geographic area that is below the NAAQS for one or more pollutants is called an attainment area. However, if the concentration of any one pollutant exceeds the limit of the NAAQS in an area, that area is designated as being in non-attainment. An area can also be designated as a maintenance area if that area has previously been designated as nonattainment, but has since demonstrated attainment of the standard.

Under the conformity provisions of the Clean Air Act Amendments, regionally significant and federally funded projects located in designated non-attainment or attainment/maintenance areas must demonstrate transportation conformity to State Implementation and Maintenance Plans. To determine if a project demonstrates conformity to the State Implementation and Maintenance Plans, a project must be included in an RTP and Transportation Improvement Program (TIP), and not contribute to any new violation of NAAQS, increase the frequency or severity of NAAQS violations, or delay timely attainment of the NAAQS. Conformity with the Clean Air Act Amendments takes place on two levels-first, at the regional level and second, at the project level. The proposed project must conform at both levels to be approved.

#### **3.7.1 AFFECTED ENVIRONMENT**

The study area is located in the cities of Murray, Taylorsville, and West Valley in Salt Lake County, Utah. Figure 3.23 details Salt Lake County's attainment status for each NAAQS criteria pollutant in 2017. Although Salt Lake County is designated as a non-attainment area for  $SO_2$ ,  $PM_{10}$ , and  $PM_{2.5}$ , transportation projects are not expected to cause or contribute to violations of the  $SO_2$  standard. For this reason,  $SO_2$  is not a pollutant of concern for the Midvalley Connector BRT project (EPA 2018).

Salt Lake County is located along the western slope of the Wasatch Mountains. Episodes of high PM concentrations typically occur during the winter months, when temperature inversion conditions exist. The proximity of the Wasatch Mountains to the Great Salt Lake, along with cold winters, creates conditions for wintertime inversions.

The Utah Department of Environmental Quality (UDEQ) operates a network of ambient air monitoring stations throughout Salt Lake County, though none are located within the study area. The closest air monitoring stations are located in Magna, Salt Lake City, Midvale, and Herriman (UDEQ 2018).



Figure 3.23 EPA National Ambient Air Quality Standards

# 3.7.2 ENVIRONMENTAL CONSEQUENCES

#### **No-Action Alternative**

No impacts to air quality are anticipated from the No-Action Alternative. All projects comprising the No-Action Alternative are a part of the RTP, a conforming TIP.

#### **Preferred Alternative**

The Midvalley Connector BRT project is included in a conforming TIP, specifically WFRC's 2040 RTP and the 2018-2023 TIP. The 2040 RTP demonstrated conformity with the State Implementation Plan (SIP) for  $PM_{10}$  and conformity with interim conformity guidelines for  $PM_{2.5}$  for the Salt Lake County nonattainment area. Therefore, all of the transportation projects in the WFRC region found in the 2018-2023 TIP were found to conform to the SIP.

The Preferred Alternative (in combination with other transit and road projects in WFRC's long-range plan) is expected to reduce vehicle miles traveled, and therefore would reduce regional PM<sub>10</sub> and CO emissions. Since the Midvalley Connector BRT project is included in a conforming RTP, the Preferred Alternative can be assumed not to cause new air quality violations, worsen existing violations, or delay timely attainment of the NAAQS.

BRT can provide air quality benefits by helping to reduce overall vehicle emissions and the pollutants that create smog by replacing many separate private vehicle trips with fewer BRT buses that generally emit less pollution on a per person basis. Buses can also use alternative fuels such as compressed natural gas, liquefied natural gas, fuel cells, or hybrid- or bio-diesel, which have lesser impact on air quality. In addition, by moving more people with fewer vehicles, BRT can potentially aid in reducing greenhouse gas emissions.

#### Localized Impacts (PM<sub>10</sub> and PM<sub>2.5</sub>)

PM<sub>10</sub> and PM<sub>25</sub> are pollutants of concern for Utah. Under the transportation conformity requirements, a PM<sub>10</sub> and PM<sub>25</sub> hot-spot analysis is required for "projects of air quality concern." The EPA specified in 40 CFR 93.123(b)(1) of the Final Rule that projects of air quality concern include transit projects that involve significant levels of diesel vehicle traffic, or any other project that is identified in the SIP as a localized air quality concern. The Utah SIP does not identify any projects as being of localized air quality concern. The Final Rule goes into further detail to define projects of air quality concern as those involving "new bus and rail terminals and transfer points that have significant number of vehicles congregating at a single location" (40 CFR 93.123(b) (1)(iii)).

Using this definition of "projects of air quality concern," the major design feature that would most notably affect the hot-spot analysis is the proposed new bus terminal near SLCC and the potential for adding additional capacity to the study area. The proposed bus hub location, in a parking lot just east of the Construction Trades building at SLCC, would provide for up to five BRT and six standard bus stops. However, this would have minimal effect on localized air emissions and is not expected to cause an exceedance of the NAAQS. The only road addition planned in the project would be a dedicated bus lane. It is assumed that this would not generate additional capacity within the project area; thus, a PM<sub>10</sub> and PM<sub>2.5</sub> hot-spot analysis is not required for this project.

#### Summary of Impacts

At a regional level, the project has been determined to conform to the SIP for Salt Lake County. The qualitative project-level analysis demonstrates that  $PM_{10}$  and  $PM_{2.5}$  emissions from the Midvalley Connector BRT project, including the SLCC proposed transit hub, would not result in or contribute to any violations of the NAAQS. Local and regional concentrations of all other criteria pollutants are not expected to be affected by implementation of the Preferred Alternative.



Intermountain Medical Center in Murray

#### **Construction Impacts**

Construction impacts would temporarily increase PM<sub>10</sub> through emissions and fugitive dust. PM<sub>10</sub> emissions from construction activities are usually local and short-term, lasting only for the duration of the construction period. Construction emissions will be minimized through good construction practices, such as limiting exposed and disturbed surfaces, minimizing construction equipment and vehicle speeds, watering exposed surfaces, and properly maintaining vehicle engines as well as any additional measures required per the dust-control plan.

#### **3.7.3 MITIGATION**

Implementation of the Preferred Alternative would neither create nor contribute to any new or existing PM<sub>10</sub> or PM<sub>2.5</sub> violations of the NAAQS and would conform to the purpose of the regional SIP. The Utah Air Quality Rules require a dust-control plan from all sources whose activities or equipment could produce fugitive dust or airborne dust. A dust-control plan will be prepared for the construction phase of the project. Dust-control measures could include planting vegetative cover, providing synthetic covers, and watering.

### 3.8 NOISE & VIBRATION

A noise analysis was conducted to evaluate noise impacts of the Preferred Alternative, from Murray Central station to West Valley Central station. The noise analysis was conducted per the UTA Standard Operating Procedures No. 002, Noise Assessment and Mitigation Procedures (April 13, 2018), which is based on the procedures outlined in the Federal Transit Administration's (FTA) May 2006 Transit Noise and Vibration Impact Assessment.

Full details of the noise methodology and assessment are included in the *Midvalley Connector Bus Rapid Transit Noise Analysis Technical Report* dated November 2018 (Jacobs 2018a).

A vibration assessment was not conducted for this project since there are no improvements to existing rail or new rail alignment included.

#### **3.8.1 AFFECTED ENVIRONMENT**

The majority of development within the study area along the existing BRT route from the Murray Central station to the SLCC campus consists mostly of residential development with commercial development east of Murray Boulevard. There are no noise sensitive receptors within the screening distance for the Murray Central station.

The majority of development within the study area along the new BRT route extension from SLCC campus to West Valley Central station consists mostly of residential and commercial development mostly adjacent to Redwood Road and 4700 South. The only noise sensitive receptor within the screening distance of the SLCC campus is the SLCC campus, which does not provide student housing. Noise sensitive receptors within the screening distance of the West Valley Central station are a library and residential development (see Figure 3.24). There are a total of 34 noise sensitive receptors within the study area: 22 representative noise sensitive receptors identified in the 2013 ESR are included in the model and analysis, and an additional 12 are included due to the extension of the route to West Valley City. See Figure 3.24.

The existing noise sources within the study area include mostly vehicle traffic as well as buses that use the existing route proposed for BRT. The existing noise exposure was based on field noise measurements collected during the 2013 noise analysis and during 2017 (Jacobs 2018a).

### 3.8.2 ENVIRONMENTAL CONSEQUENCES

#### **No Action-Alternative**

No impacts to noise and vibration are anticipated from the No-Action Alternative, though road widenings and other transit projects are planned for the study area.

#### **Preferred Alternative**

Noise criteria are used by the FTA to identify noise impacts. FTA guidelines define noise impacts for various land use categories using different noise metrics (Leq or Ldn), which are summarized below. Leq refers to the average noise level within a measurement period; whereas Ldn is the average noise level of a 24-hour period.

- Category 1 (Leq): Tracts of land where quiet is an essential element of their purpose. Includes lands set aside for serenity and quiet, and such land uses as outdoor amphitheaters, concert pavilions, recording studios, and concert halls, as well as National Historic Landmarks with significant outdoor use.
- **Category 2** (Ldn): Residences and buildings where people normally sleep, including homes, hospitals, and hotels where nighttime sensitivity is assumed to be of utmost importance.



CHAPTER 3: AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES | 3-43

 Category 3 (Leq): Institutional land uses with primarily daytime and evening use, such as schools, libraries, theaters, churches, cemeteries, monuments, museums, campgrounds, recreational facilities, certain historic sites, and parks.

A general noise assessment, as defined in the FTA manual, was conducted. FTA noise impact criteria are based on a comparison of the existing outdoor noise levels (Leq or Ldn depending on land use category) and the future outdoor noise levels from the proposed project. Project impacts are categorized as "No Impact," "Moderate Impact," or "Severe Impact," as determined from the allowable limit in projectgenerated noise exposure over the existing noise exposure (see Figure 3.25).



Figure 3.25 Noise Levels Defining Impact for Transit Projects

A screening procedure was conducted to identify all noise sensitive receivers that may be impacted as a result of the project. Due to the numerous noise sensitive receptors within the project area, representative receptors were selected to represent the different land use categories within the project area. The closest receptor in each area was selected to determine if noise impacts were anticipated as a result of the proposed project. Table 3.13 summarizes the results of the noise analysis. As shown in the table, the increase in noise levels at all representative noise sensitive receptors is less than 3 dBA (A-weighted decibels).

The human ear cannot detect a change in noise levels below 3 dBA (Federal Highway Administration 2017). In addition, none of the representative receptors are located within the moderate or severe noise impact contours (FTA 2007, 2018). Therefore, the Preferred Alternative would not result in any noise impacts, and no further analysis is required.

#### **Construction Impacts**

During construction of the Preferred Alternative, short-term noise impacts may occur as a result of both stationary and mobile construction equipment. These impacts would be temporary at any one location. Noise levels from construction activities along the Preferred Alternative could be a temporary nuisance at nearby sensitive receptors such as residences, hospitals, daycare centers, and the Fore Lakes Golf Course.

Table 3.13 Summary of Noise Analysis Results

#### **3.8.3 MITIGATION**

No mitigation is required.

Temporary construction noise mitigation measures could include limiting construction activities to daytime hours (between 7AM and 10PM) in accordance with the Taylorsville, Murray, and West Valley City noise ordinances, as well as adequately notifying the public of construction operations and schedules. Mitigation measures are typically determined on an individual project basis, and all mitigation measures will be reevaluated when the project construction scenarios are finalized. Construction noise can be controlled through time restrictions on working hours, well-maintained equipment, and standard specifications on construction machinery, such as mufflers.

| RECEPTOR # - LAND    | DISTANCE                                |                   | STING<br>DISE<br>DOURE<br>DOURE<br>DBA)<br>TOTAL PROJECT<br>NOISE (PROJECT<br>ALONE) (DBA) | TOTAL NOISE INCREASE |                    | NOISE CONTOURS    |                         |                       | NOISE   |
|----------------------|---|-------------------|--|----------------------|--------------------|-------------------|-------------------------|-----------------------|---------|
| USE CATEGORY         | FROM SOURCE<br>TO RECEPTOR <sup>1</sup> | EXPOSURE<br>(DBA) |  | EXPOSURE<br>(DBA)    | IN NOISE<br>LEVELS | NO IMPACT<br>(FT) | MODERATE<br>IMPACT (FT) | SEVERE<br>IMPACT (FT) | IMPACT? |
| R1 & R2 - Category 2 | 30 ft                                   | 58                | 56   | 60                   | +2                 | 27                | 26                      | 11                    | No      |
| R3 - Category 2      | 55 ft (43 ft with<br>future)            | 65²               | 56   | 66                   | +1                 | 23                | 22                      | 10                    | No      |
| R4 - Category 3      | 160 ft                                  | 61                | 48   | 61                   | 0                  | 17                | 16                      | 7                     | No      |
| R5 - Category 3      | 35 ft                                   | 67 <sup>3</sup>   | 58   | 68                   | +1                 | 10                | 9                       | 4                     | No      |
| R6 - Category 3      | 100 ft                                  | 55 <sup>2</sup>   | 56   | 58                   | +3                 | 66                | 65                      | 38                    | No      |
| R7 - Category 2      | 30 ft                                   | 70 <sup>2</sup>   | 59   | 70                   | 0                  | 14                | 13                      | 6                     | No      |
| R8 - Category 3      | 40 ft                                   | 65 <sup>3</sup>   | 57   | 66                   | +1                 | 12                | 11                      | 5                     | No      |
| R9 - Category 2      | 40 ft                                   | 64                | 57   | 65                   | +1                 | 25                | 24                      | 11                    | No      |
| R10 - Category 3     | 100 ft                                  | 59                | 51   | 60                   | +1                 | 19                | 18                      | 8                     | No      |
| R11 - Category 2     | 175 ft                                  | 55 <sup>2</sup>   | 49   | 56                   | +1                 | 102               | 101                     | 59                    | No      |
| R12 - Category 3     | 130 ft                                  | 55 <sup>2</sup>   | 53   | 58                   | +2                 | 66                | 65                      | 38                    | No      |

1. Distance from the centerline of the nearest travel lane or center from activity at transit center

2. Estimated using FTA look-up tables (FTA 2018)

3. Based on nearby comparable meter location

Source: Jacobs 2018a

# 3.9 WATER RESOURCES & WATER QUALITY

Water resources and water quality are regulated under the Clean Water Act and the Safe Drinking Water Act.

#### **3.9.1 AFFECTED ENVIRONMENT**

#### **Surface Water Resources**

The 2013 ESR identified the intersections of two natural water courses and one canal: the Jordan River, Little Cottonwood Creek, and North Jordan Canal. The extension of the project corridor has introduced another intersection of the North Jordan Canal at 4100 South 2700 West and the Brighton Canal at 4530 South (see Figure 3.26). These are the only changes in surface water resources since the 2013 ESR.

The Jordan River is a perennial river flowing north from Utah Lake to the Great Salt Lake. Little Cottonwood Creek is a perennial stream flowing west from the Wasatch Mountains to its confluence with the Jordan River. The North Jordan Canal flows north from the Jordan River to the Kennecott/ Riter Canal. Most of the water in the canal is used in connection with ore processing operations of Kennecott Copper facilities. The Jordan River, Little Cottonwood Creek, Brighton Canal, and North Jordan Canal are all waters of the U.S., regulated by the U.S. Army Corps of Engineers (USACE), and total approximately 25.2 acres in the study area. Each of these water resources, with the exception of the Brighton Canal, are county-wide flood control facilities regulated by Salt Lake County. In addition, the Jordan River and Little Cottonwood Creek are regulated by the Utah Division of Water Rights.

#### Floodplains

Floodplain data remains the same as stated in the 2013 ESR. The Preferred Alternative crosses Federal Emergency Management Agency (FEMA) designated 100-year and 500-year floodplains at the intersection of 4800 South and Sunstone Road (see Figure 3.26).

#### **Existing Drainage Systems**

Storm water runoff from the roads associated with the Preferred Alternative currently discharges to the North Jordan Canal, Jordan River, Brighton Canal, or Little Cottonwood Creek via overland flow, roadside ditches and swales, or storm drain systems. The 2013 ESR also identified retention ponds to the west of Murray Boulevard, north of Vine Street, which have not changed.

#### **Surface Water Quality**

The Utah Division of Water Quality (UDWQ) has designated uses to rivers and streams as listed in Table 3.14 (on page 3-49). Water quality standards are defined for each use. The UDWQ completed a beneficial use assessment of the surface waters in the study area, but due to resource limitations, the UDWQ must prioritize which waters are assessed. Although the North Jordan and Brighton Canals cross the study area, they are not included in the UDWQ Integrated Report and were not assessed. The objective of the assessment is to determine if the water quality is adequate to support the designated use.

Temperature is influenced by streamside canopy and groundwater inflow. This project has low potential to affect either canopy or inflow, and temperature is not discussed further. Relative to this project, the main pollutant of concern is Total Dissolved Solids (TDS), which measures the concentration of mineral salts in water.

A Total Maximum Daily Load (TMDL) study of the Jordan River Watershed for the UDEQ, approved June 2013, describes processes to restore water guality in the Jordan River. The three major components of this study include assigning beneficial use classifications to the river, assessing the available monitoring data to determine which segments might be impaired for which beneficial uses, and determining the allowable pollutant loads or loading capacity to protect those uses. The study determined that TDS loading sources are mostly due to natural causes, including shallow water, hot summer air temperatures, and ground water high in natural thermal discharges and TDS. TMDL studies for Little Cottonwood Creek are a low priority and have not been started.

#### **Groundwater Resources**

The project area overlies a shallow unconfined aquifer and a deeper confined aquifer referred to as the principal aquifer. Low yields and poorer quality limit the use of water from the shallow unconfined aquifer. The principal aquifer is higher quality and is used for drinking water. The principal recharge area is in the eastern part of the valley, along the base of the Wasatch Range.

East of approximately 1300 West, the project corridor is in a groundwater discharge area (groundwater movement is upward toward the shallow unconfined aquifer), which means it is unlikely surface contaminants could migrate to the aquifer. West of approximately 1300 West, the project corridor is in a secondary recharge area (groundwater movement is from the shallow aquifer to the principal aquifer), which means it is possible contaminants could migrate from the surface to the aquifer.

Five public drinking wells that are Drinking Water Source Protection (DWSP) zone 1 and/or zone 2 were identified in or overlapping the impact area (see Figure 3.27). Zone 1 indicates the area within a 100foot radius of the wellhead; whereas, zone 2 is the area within a 250-day groundwater time of travel to the wellhead. These wells include:

- Taylorsville East Well (WS002) Active
- Atherton West Well (WS024) Active
- Atherton East Well (WS023) Active
- Rawson Well (WS026) Active
- Sunstone Weel (WS018) Inactive

Each of the wells identified in the study area are within the Taylorsville-Bennion Improvement District. The 2016 Annual Water Quality Report for the district highlights soil runoff as a likely source of contamination for groundwater.



#### FIGURE 3.27 GROUNDWATER

The project area overlies a shallow unconfined aquifer and a deeper confined aquifer referred to as the principal aquifer. The principal recharge area is in the eastern part of the valley, along the base of the Wasatch Range.



Table 3.14 UDWQ Beneficial Use Assessment Results

| WATER BODY   | BENEFICIAL USE DESIGNATION            | ASSESSMENT   |  |
|--|---------------------------------------|--|--|
|  | Secondary Recreation (2B)             | Not Supporting due to E. coli (listed 2014; high priority TMDL)                |  |
| Jordan River-4<br>(from 2100 South to the confluence<br>with Little Cottonwood Creek)                | Warm Water Aquatic Life (3B)          | Not Supporting due to OE<br>Bioassessment (listed 2010; low<br>priority TMDL)  |  |
|  | Agriculture (4)                       | Not Supporting due to TDS (listed 2008; low priority TMDL)                     |  |
| Jacoban Diver E  | Secondary Recreation (2B)             | Not Supporting due to E. coli (listed 2006; high priority TMDL)                |  |
| (from the confluence with<br>Little Cottonwood Creek to 7800 South)                                  | Cold Water Aquatic Life (3A)          | Not Supporting due to temperature (listed 2006; low priority TMDL)             |  |
|  | Agriculture (4)                       | Not Supporting due to TDS (listed 2006; low priority TMDL)                     |  |
|  | Cold Water Aquatic Life<br>(3A; HH3A) | Not Supporting due to Dissolved<br>Cadmium (listed 2014; low priority<br>TMDL) |  |
|  | Secondary Recreation (2B)             | Not Supporting due to E. coli (listed 2014; high priority TMDL)                |  |
| Little Cottonwood Creek-1<br>(from Jordan River confluence to<br>Metropolitan Water Treatment Plant) | Cold Water Aquatic Life (3A)          | Not Supporting due to OE<br>Bioassessment (listed 2008; low<br>priority TMDL)  |  |
|  | Cold Water Aquatic Life (3A)          | Not Supporting due to temperature (listed 2006; low priority TMDL)             |  |
|  | Agriculture (4)                       | Not Supporting due to TDS (listed 2006; high priority TMDL)                    |  |
| Brighton Canal   | Not Assessed                          |  |  |
| North Jordan Canal   | Not As                                | ssessed  |  |

Source: 2016 Utah Integrated Report, Water Quality Assessment 305(b) and 303(d)

# 3.9.2 ENVIRONMENTAL CONSEQUENCES

#### **No-Action Alternative**

No impacts to water resources and water quality are anticipated from the No-Action Alternative.

#### **Preferred Alternative**

#### Surface Water Resources

The Preferred Alternative would include road widening where the project crosses the North Jordan Canal around Redwood Road and 4700 South. The existing culvert over the canal would need to be extended 60 feet as a result of the Preferred Alternative (see Figure 3.28). A Salt Lake County Flood Control Permit and Section 404 permit from USACE would be required. There would be no direct impacts to the North Jordan Canal, Jordan River, or Little Cottonwood Creek.

#### Floodplains

There would be no impacts to floodplains; no construction activities would take place at the crossings with the Jordan River or Little Cottonwood Creek.

#### Drainage Systems

The study area is already highly urbanized; however, the Preferred Alternative would result in an increase in impervious area and a corresponding increase in storm water runoff. The main increase in impervious area would result from widening for exclusive lanes on 4700 South. Roadway runoff is currently treated by grassy swales and natural water treatment facilities near the rivers and canals. A landscaped trail is planned along the North Jordan Canal, along with several grassy swales where appropriate to mitigate any increase in storm water runoff. Under the Preferred Alternative, proposed drainage west of the canal would either continue to discharge to the canal or it would be collected by a new storm drain system bypassing the canal and discharge to the Jordan River. Existing drainage patterns would be reconnected for all side stations. Coordination with the North Jordan Canal Company would take place during final design.



Figure 3.28 North Jordan Canal Culvert Extension

The Preferred Alternative would result in impacts to the Salt Lake County storm drain. County representatives understand that the Preferred Alternative could discharge roadway runoff into the existing Salt Lake County storm drain system along 4700 South. No enhancement to the outfall or additional detention is necessary. There would be no impact to peak flow from additional pavement because runoff from the project area would exit into the Jordan River quickly due to its proximity.

While it would not affect peak flow in the system, the Preferred Alternative would affect Salt Lake County's trunk line, a large underground pipe carrying large volumes of water at high pressure, due to roadway widening on the north side of 4700 South over the existing pipe. The current pipe is made of various materials, the majority of which is 60-inch, asphaltcoated metal pipe. It is assumed that this pipe would be replaced or rehabilitated in areas of roadway widening due to the existing condition of the system. Any potential impacts would be addressed in coordination with Salt Lake County during final design.

Roadway runoff east of the canal currently discharges to the Jordan River. Proposed drainage east of the canal would continue to discharge to the Jordan River. Coordination with Salt Lake County would take place to ensure if detention to reduce peak flow prior to discharging to the Jordan River would be required. The retention ponds to the west of Murray Boulevard would experience minor impacts and may aid in mitigating increased runoff created by the project.

#### Surface Water Quality

Compliance with the county's Municipal Separate Storm Sewer System permit would be upheld by planned low-impact development along the Preferred Alternative. Grassy swales would be added along the route where space allows, and there would be no change to the natural flood control facility north of 4430 South at the crossing of the Jordan River Parkway.

#### Construction Impacts

There is potential for temporary impacts to surface water quality during construction. Construction activities may disturb vegetation and cause erosion. Runoff from disturbed areas could temporarily increase pollutant loading into receiving waters. BMPs, such as silt fences, erosion control fabric, mulching, and revegetation, will be used to minimize pollutant loading.

#### **3.9.3 MITIGATION**

Mitigation for impacts will be addressed through UPDES permit requirements (see Table 3.15) and through the use of BMPs.

An erosion control plan will be developed and incorporated into construction documents. Impacts to wells are not anticipated, but if necessary, UTA will either, 1) ensure that wells are replaced and that the replaced wells are properly abandoned, or 2) compensate the owners for their water rights.

#### Table 3.15 Permit Requirements

| PERMIT                                      | IMPACT                                   |
|---|--|
| Salt Lake<br>County Flood<br>Control Permit | Extending North Jordan Canal box culvert |
| Nationwide<br>Section 404<br>Permit         | Extending North Jordan Canal box culvert |
| UPDES Permit                                | Disturbance greater than 1 acre          |

### 3.10 NATURAL RESOURCES

This section discusses wetlands, federally listed threatened and endangered or candidate species, state-listed special status species, migratory birds, and invasive species. This section describes any changes in these conditions from those identified in the 2013 ESR, and the conditions for the portion of the Preferred Alternative from SLCC to West Valley Central station.

Further information regarding natural resources can be found in the *Midvalley Connector Natural Resources Technical Report* (Jacobs 2018b).

#### 3.10.1 AFFECTED ENVIRONMENT

On November 28, 2017, and February 1, 2018, field surveys were conducted to identify potential wetlands, potentially suitable habitat for special status species, and to document invasive species within the study area. This survey confirmed the conditions and findings identified in the 2013 ESR, and analyzed the portion of the Preferred Alternative from SLCC to West Valley Central station for the aforementioned natural resources. Details of the surveys and its results are included in the *Midvalley Connector Natural Resources Technical Report* (Jacobs 2018b).

#### Wetlands and Waters of the U.S.

Under USACE protocol, wetlands must exhibit three criteria: hydrophytic vegetation, hydric soils, and hydrology. No National Wetland Inventory wetlands are present within the project study area. According to the National Hydrologic Dataset and confirmed during the field surveys, waters of the U.S. in the study area include the North Jordan Canal, which crosses the project in two locations, 4700 South Redwood and 2700 West 4100 South, and the Brighton Canal which crosses at 4700 South, west of Atherton. Other waters of the U.S. include Little Cottonwood Creek and the Jordan River (see Section 3.9, Water Resources and Water Quality). Six wetlands have been identified in the study area (one confirmed from the 2013 ESR, and five newly identified); see Figure 3.29 for the location of each wetland:

- Wetland 1: 0.074 acres; located on the south side of 4700 South, east of East Atherton Drive, within a drainage swale that flows into the Brighton Canal; likely jurisdictional
- Wetland 2: 0.013 acres; located on the south side of 4700 South, just west of East Atherton Drive; likely non-jurisdictional
- Wetland 3: 0.027 acres; located on the south side of 4700 South, west of East Atherton Drive; likely non-jurisdictional
- Wetland 4: 0.02 acres; located on the south side of 4700 South, west of East Atherton Drive; originally identified in the 2013 ESR, and confirmed with the 2017 survey
- Wetland 5: 0.42 acres; located along the east side of 2700 West, between the Calvin Rampton Complex and American Express buildings; likely non-jurisdictional
- Wetland 6: 0.003 acres; located along the east side of 2700 West, between the Calvin Rampton Complex and American Express buildings; likely non-jurisdictional

#### **IDENTIFIED WETLANDS**

Wetland 1



Wetland 4



Wetland 5



Wetland 6





CHAPTER 3: AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES | 3-53

### Threatened & Endangered and State-Listed Special Status Species

Federal and state listed threatened and endangered species potentially occurring within the project study area were determined by using the U.S. Fish and Wildlife Service's online Information Planning and Conservation tool. State of Utah sensitive species information was reviewed through the Utah Division of Wildlife Resources' Utah Conservation Data Center and the Utah Sensitive Species List. A request was also made through the Utah Natural Heritage Program to obtain information on historical sensitive species occurrences within a half-mile and 2 miles of the project study area.

No federally listed or state sensitive plant species were identified within the project study area (Jacobs 2018b). These findings are consistent with findings reported in the 2013 ESR.

No federally listed animal species, nor their designated critical habitats, were identified in the project study area due to the lack of suitable habitat. The Canada lynx, yellow-billed cuckoo, and June sucker were the only wildlife species included on the U.S. Fish and Wildlife Service official species list developed for the project.

The project area and surrounding landscape contain little to no natural wildlife habitat due to the widespread commercial and residential development that has occurred. This is consistent with findings outlined in the 2013 ESR.

#### **Migratory Birds**

No bird nests or raptors were observed in the full study area during field investigations. There is potential for birds to nest in domestic landscaping vegetation, power poles, and other human-made structures, and the riparian habitat of the Jordan River.

#### **Invasive Species**

Based on the current State of Utah Noxious Weed List (Utah Department of Agriculture and Food 2017), the following noxious weeds were identified during the field surveys in addition to those previously identified in 2013, both of which are Class 3 Containment:

- Common reed (*Phragmites australis*) (considered invasive in Salt Lake County and not noxious)
- Tamarisk (Tamarix sp.)

# 3.10.2 ENVIRONMENTAL CONSEQUENCES

#### **No-Action Alternative**

No impacts to natural resources are anticipated from the No-Action Alternative.

#### **Preferred Alternative**

#### Wetlands and Waters of the U.S.

The North Jordan Canal would experience impacts as the culvert is widened on the north side of its intersection at 4700 South. Non-jurisdictional wetlands 2, 3, and 4 may experience temporary construction impacts totaling 0.06 acres.

#### Special Status Species

There would be no impacts to federally listed plant or animal species or designated critical habitat, as none were identified in the study area.

#### Migratory Birds and Raptors

Although no migratory birds or raptors were observed in the study area, there is potential for impact to migratory birds and raptors due to the suitable habitat found within the study area.

#### Invasive Species

During construction of the Preferred Alternative, there is a potential to spread invasive species during clearing of vegetation.

#### 3.10.3 MITIGATION

#### Wetlands and Waters of the U.S.

For unavoidable impacts, UTA will consult with the appropriate federal and state regulatory agencies, including the USACE, to obtain Section 404 and all other necessary permits prior to commencement of any impacts to wetlands and waters of the U.S.

#### **Special Status Species**

There would be no impacts to special status species or designated critical habitat. Therefore, no mitigation is necessary.

#### **Migratory Birds and Raptors**

To comply with the Migratory Bird Treaty Act, vegetation (i.e., trees, shrubs, and herbaceous plants) should not be removed during the bird breeding season (March to August). If construction is to occur during this time, bird nest clearance surveys should be done by a qualified biologist to verify the absence of nests prior to vegetation removal. If nests are found, further coordination with the U.S. Fish and Wildlife is required.

#### **Invasive Species**

The project will comply with Rule R68-9-4 of the Utah Noxious Weed Act to prevent dissemination of noxious weed seeds or parts of noxious weed plants that could cause new growth by contaminated articles.



Common reed or Phragmites australis (Source: Invasive.org)

### 3.11 HAZARDOUS WASTE

Hazardous waste is a substance (liquid, solid, gas, or sludge) that could be hazardous to health and the environment if misused, mishandled, or improperly released. Hazardous waste sites are regulated by the Resource Conservation and Recovery Act (RCRA); the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); and Utah Administrative Code Title R315 Environmental Quality, Solid and Hazardous Waste.

RCRA regulates how waste should be managed to avoid potential threats to human health and the environment. CERCLA, commonly known as Superfund, applies to abandoned or uncontrolled hazardous waste sites. CERCLA authorizes the EPA to act if there is an imminent threat from hazardous waste and to carry out long-term remedial actions at contaminated sites on the National Priorities List (NPL). The NPL is the list of national priorities among the Superfund sites, and it helps EPA prioritize sites for cleanup.

The Utah Division of Environmental Response and Remediation (DERR), a division of the UDEQ, regulates underground storage tanks (USTs) and leaking underground storage tanks (LUSTs).

#### 3.11.1 AFFECTED ENVIRONMENT

Potential hazardous waste sites were identified within the study area by reviewing EPA and UDEQ databases for the following sites:

- **Brownfields:** Abandoned industrial and commercial facilities available for re-use
- **CERCLA:** Superfund sites contaminated with hazardous substances
- NPL: Superfund sites on the NPL
- Formerly used defense
- **Military Munitions Response:** Sites with potential unexploded ordnance, discarded military munitions, and munitions constituents
- **RCRA Large Quantity Generator:** Facilities that handle hazardous waste (not necessarily contaminated)
- Toxic Release Inventory (TRI): Facilities that produce or handle large amounts of toxic chemicals, including chemical, mining, oil, and gas (not necessarily contaminated)
- LUSTs: Sites with leaking USTs

The following list includes sites that have been recorded within a quarter-mile of the Preferred Alternative (see Table 3.16 and Figure 3.30):

- 7 CERCLA sites
- 3 Open LUST sites
- 1 TRI site

The following sites have closed since they were identified in the 2013 ESR:

- Jensen Oil Company: LUST
- Quick Sack: LUST
- Jakes Quick Lube & Service: LUST
- Franklin or Horn Silver Smelter: CERCLA
- 4800 S 150 W Plume: CERCLA
- Wasatch Silver Lead Works: CERCLA
- Lemco Corp.: RCRA Large Quantity Generator

#### **Murray Smelter Site**

The Murray Smelter site is the former location of a large lead smelter that operated from 1872 to 1949. Its boundaries are 5300 South to the south, State Street to the east, Little Cottonwood Creek to the north, and the west set of Union Pacific railroad tracks to the west. It is described in further detail in the 2013 ESR.

Remediation of the site included excavation and off-site disposal of soils containing the highest levels of arsenic; excavation and on-site consolidation in a repository of soils containing lower levels of arsenic; demolition of two smoke stacks; and removal and replacement of lead-contaminated soils.

The Smelter Site Overlay District (SSOD) was created by Murray City to protect human health and the environment from the remaining contamination at the site. As shown on Figure 3.30, a portion of Cottonwood Street, Woodrow Street, and the Murray Central Station parking lot are constructed on top of an encapsulated repository that contains contaminated soil. The contaminated soil has been identified by EPA as posing a potential direct contact health risk and as being a source of arsenic to groundwater.

However, with remediation measures (including the repository) in place, the SSOD is expected to be protective of human health and the environment. Monitoring wells are located throughout the SSOD. Two monitoring wells are located in the Murray Central TRAX parking lot—one located north of the bus loop (MW-3D) and one at the south end of the parking lot (MW-2D).

Construction on the cleanup project is complete and consistent with the EPA's land revitalization goals, and groundwater and surface water monitoring are ongoing. Institutional controls are enforced by Murray City. Development of the former smelter site is regulated by the SSOD (Murray Code Chapter 17.25). A development permit must be obtained from Murray City prior to demolition, excavation, or construction within any area of the SSOD.

Table 3.16 Hazardous Waste Sites within Quarter-Mile of Preferred Alternative\*

| FIG.<br>ID # | CITY/LOCATION                      | ADDRESS             | FACILITY ID     | SITE TYPE |
|--------------|------------------------------------|---------------------|-----------------|-----------|
|              | Taylorsville                       |                     |                 |           |
| 1            | M and M Service                    | 4804 S. Redwood Rd. | 4000451         | Open LUST |
| 2            | Redwood Road/4800 S. PCE Plume     | 4800 S. Redwood Rd. | UT0012950418    | CERCLA    |
|              |                                    |                     |                 |           |
|              | Murray                             |                     |                 |           |
| 3            | Elite Marble and Maintenance, Inc. | 203 W. 4800 S.      | 84107LTMRB23W48 | TRI       |
| 4            | Redevelopment Agency of Murray     | 5040 S. State St.   | 4001660         | Open LUST |
| 5            | American Smelting and Refining Co. | Garfield            | UTD988075743    | CERCLA    |
| 6            | Forest Products Sales, Inc.        | 249 W. Vine St.     | 4000307         | Open LUST |
| 7            | 4500 S. 500 W. Plume               | 4500 S. 500 W.      | UT0012950282    | CERCLA    |
| 8            | 4500 S. 300 W. Plume               | 4500 S. 300 W.      | UTN000802749    | CERCLA    |
| 9            | Murray Smelter                     | 5300 S. Main St.    | UTD980951420    | CERCLA    |
| 10           | Germania Smelting and Refining Co. | 4900 S. West Temple | UTD988071601    | CERCLA    |
| 11           | Murray Smelter Drum Site           | 5000 S. State St.   | UTSFN9048112    | CERCLA    |

Source: Utah DEQ, AGRC, EPA Superfund Site Information, homefacts.com.

\* Bold entries indicate sites that were identified in the 2013 Taylorsville-Murray Transit ESR.


CHAPTER 3: AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES | 3-57

# 3.11.2 ENVIRONMENTAL CONSEQUENCES

### **No-Action Alternative**

No impacts to hazardous waste sites are anticipated from the No-Action Alternative.

## **Preferred Alternative**

There would be no impact from hazardous waste sites identified in locations where the Preferred Alternative is in mixed-flow traffic (traveling on existing lanes). No right-of-way acquisition and/or excavation would be required; therefore, there would be no threat for exposure from hazardous materials to the public or construction workers in these areas.

Right-of-way acquisition and/or excavation would be required where the Preferred Alternative is on exclusive lanes and at proposed stations. Hazardous waste sites identified within a quarter-mile of exclusive lanes and/or proposed stations, and their potential risk, are described in Table 3.17. A portion of the redesigned Murray Central station could overlap the encapsulated repository containing contaminated soil.

## **Construction Impacts**

If the Murray Central station is constructed on top of the encapsulated repository, there is potential for damaging the repository cap and exposing soils contaminated with arsenic. Short-term exposure to arsenic-contaminated soil can cause a wide spectrum of adverse health effects. The primary route of exposure is ingestion of contaminated soil, by direct hand to mouth activity or by swallowing airborne soil and dust particles that enter the mouth and nose. It is further possible that unforeseen hazardous materials may be encountered during construction.

### Table 3.17 Hazardous Waste Sites with Potential for Impact

| FIG. ID # | FACILITY/<br>PROPERTY<br>NAME  | SITE<br>TYPE | FACILITY ID  | DISTANCE AND DIRECTION<br>FROM PREFERRED<br>ALTERNATIVE  | POTENTIAL RISK   |
|-----------|--------------------------------|--------------|--------------|--|--|
| 9         | Murray Smelter<br>(SSOD)       | CERCLA       | UTD980951420 | Overlapping Preferred<br>Alternative – Murray<br>Central station is located on<br>remediated site                            | Moderate – improvements<br>near intermodal center<br>are proposed on SSOD<br>encapsulated repository that<br>contains contaminated soil. |
| 11        | Murray Smelter<br>Drum Site    | CERCLA       | UTSFN9048112 | South of Preferred<br>Alternative (intermodal<br>center parking lot); within<br>the boundaries of the Murray<br>Smelter site | Low due to distance from site.   |
| 6         | Forest Products<br>Sales, Inc. | Open<br>LUST | 4000307      | Approximately 125 feet south<br>of the Preferred Alternative<br>at Vine Street/5100 South                                    | Low due to no need for<br>right-of-way acquisition or<br>excavation in this portion of<br>the project.                                   |

## **3.11.3 MITIGATION**

Final design and construction work in the SSOD will be coordinated with the EPA, UDEQ, Murray City, and the property owner. Excavation or breaks in the cap over the category II material is prohibited. Specifications for protecting the cap will be included in construction documents.

If any unforeseen hazardous materials are encountered during construction, necessary procedures will be implemented in conformance with local, state, and federal regulations, and the appropriate authorities will be notified. In addition, appropriate handling and disposal procedures will be implemented during construction to reduce or eliminate impacts from hazardous materials.

# 3.12 CULTURAL RESOURCES

The National Historic Preservation Act (NHPA) outlines the national policy and procedures regarding historic properties (i.e., districts, sites, buildings, structures, and objects included in or eligible for the National Register of Historic Places [NRHP]). Section 106 of the NHPA requires federal agencies to consider the effects of their undertakings on such properties by following regulation 36 CFR 800, which is issued by the Advisory Council on Historic Preservation. Although this project is not using federal funds, Section 106 applies because the Section 404 permit required from USACE is a federal nexus.

For the purpose of this analysis, cultural resources include historic properties and paleontological resources. The study area for cultural resources is defined as the area of potential effects (APE) for direct and indirect effects. The APE for identifying cultural resources was defined as all properties one parcel deep along the proposed project route.

Detailed information regarding cultural resources can be found in the reports titled A Selective Reconnaissance-Level Survey of Architectural Resources for the Murray-Taylorsville BRT Project, Salt Lake County, Utah (SWCA 2012a); A Cultural Resource Inventory of the Murray-Taylorsville BRT Project, Salt Lake County, Utah (SWCA 2012b); A Cultural Resource Assessment for the Midvalley Connector Transit Project (Certus Environmental Solutions 2017); and An Addendum Cultural Resources Assessment for the Midvalley Connector Transit Project – Segment 1, Salt Lake County, Utah (Certus Environmental Solutions 2018).

## **3.12.1 AFFECTED ENVIRONMENT**

Historic properties are defined as any prehistoric or historic district, site, building, structure, or object included on, or eligible for inclusion on, the NRHP. Per 36 CFR 60, all cultural resource sites, including buildings, must be evaluated for their eligibility for the NRHP under four specific criteria and with consideration for seven elements of integrity. A cultural resource site or building may be considered eligible for the NRHP if it:

- Is associated with events that have made a significant contribution to the broad patterns of our history; or
- 2. Is associated with the lives of persons significant in our past; or
- Embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or
- **4.** Yields, or may be likely to yield, information important in prehistory or history.

Sites and buildings considered potentially eligible under one of the four aforementioned criteria must also be evaluated for integrity of location, design, setting, materials, workmanship, feeling, and association. To be eligible for the NRHP, a site/ building must possess integrity of those elements directly related to the criterion or criteria under which it would be determined eligible.

Each primary historic building was also assessed based on the rating system established by the Utah State Historic Preservation Office (SHPO). Each historic building was assessed for architectural type and style, historical integrity, and other basic architectural details. All of the historic buildings in this report recommended as eligible for the NRHP are recommended rated as "EC" or Eligible/ Contributing under SHPO's ratings, meaning they are built within the historic period and retain integrity, and are good examples of a style or type.

## **Historic Structures**

The area surveyed for historic structures was defined as all properties one parcel deep along the proposed BRT route and is synonymous with the APE. The portion of the Preferred Alternative from Murray Central station to SLCC was surveyed and reported in A Selective Reconnaissance-Level Survey of Architectural Resources for the Murray-Taylorsville BRT Project, Salt Lake County, Utah (SWCA 2012a), and the Determination of Eligibility and Finding of Effect for the 2013 ESR. Because of the time gap since the 2012 surveys for the portion of the route from Murray Central station to SLCC, a supplemental/ addendum survey and inventory of that segment of the route was conducted to identify any structures that may now meet the historical age criterion. The results of that supplemental assessment are presented in the report titled An Addendum Cultural Resources Assessment for the Midvalley Connector Transit Project – Segment 1, Salt Lake County, Utah (Certus Environmental Solutions 2018).

The portion of the Preferred Alternative from SLCC to West Valley Central station was surveyed in 2017; details are included in the report titled *A Cultural Resource Assessment for the Midvalley Connector Transit Project* (Certus Environmental Solutions 2017).

In the 2013 ESR, 30 eligible historic buildings were identified in the APE. Since the 2013 study, 16 of those eligible properties are no longer in the APE due to the removal of the Murray City Center portion of the Preferred Alternative, where these properties were all located. These properties included:

- 4836 S. Poplar St.
- 7 E. 4800 S.
- 48 E. 4800 S.
- 35 E. Fifth Ave.
- 4872 S. Poplar St.
- 4843 S. Poplar St.
- 65 E Fifth Ave. Bldg. 1
- 65 E Fifth Ave. Bldg. 2
- 10 W. Fourth Ave.
- 22 E. Fifth Ave.
- 32 E. Fourth Ave.

- 4918 S. Poplar St.
- 16 W. 4800 S.
- 4874 S. Box Elder St.
- 4869 S. Box Elder St.
- 32 W. Fifth Ave.

In addition, the following four eligible properties identified in 2013 have since been demolished and are no longer present in the APE:

- 4615 S. 1780 W.
- 404 W. Vine St.
- 5100 Commerce Dr.
- 4600 S. Redwood Rd.

Of the 30 eligible properties identified in 2013, 10 eligible properties are still in the APE.

The 2018 supplemental survey identified an additional 14 eligible historic structures in the Murray Central station to SLCC portion of the APE. These structures now meet the historical age criterion or were not documented in the 2012 survey.

The 2017 survey reported an additional 112 historic buildings within the study area, 79 of which are recommended as eligible for listing on the NRHP.

In total for the full BRT route, there are 103 eligible historic structures within the APE. Figure 3.31 depicts the locations of the eligible historic structures within the APE.

## Archaeological Resources

The 2012 archaeological and historic linear resources inventory involved an intensive-level pedestrian survey and a reconnaissance-level visual inspection of the project area. Three archaeological and/or historic linear resources eligible for the NRHP were identified in the APE (see Figure 3.31):

- Denver & Rio Grande Western Railroad (D&RGW), Site 42SL000293
- Utah Southern/Union Pacific Railroad, Site w42SL000344
- North Jordan Canal, Site 42SL000342

### FIGURE 3.31 CULTURAL RESOURCES

103 eligible historic structures have been identified in the APE, as well as three archaeological sites: Denver & Rio Grande Western Railroad, Utah Southern/Union Pacific Railroad, and the North Jordan Canal.



The 2017 survey identified an additional segment of the North Jordan Canal, Site 42SL000342, crossing 2700 West at approximately 4100 South in West Valley (see Figure 3.31). No additional archaeological sites or segments were identified during the supplemental survey.

No paleontological resources were identified in the APE.

# 3.12.2 ENVIRONMENTAL CONSEQUENCES

### **No-Action Alternative**

No impacts to cultural resources are anticipated from the No-Action Alternative.

### **Preferred Alternative**

Effects to the historic properties under the Preferred Alternative were assessed based on the standards of the NHPA and its implementing regulations, 36 CFR 800. Under these regulations, there are three categories for classifying effects to historic and archaeological resources. They are as follows:

- No Historic Properties Affected: The project will have no effect on the property
- No Adverse Effect: The project will have no effect on the property that would alter the characteristics qualifying it for inclusion on or eligibility for the NRHP.
- Adverse Effect: The project may alter any of the characteristics qualifying the property for inclusion on the NRHP.

### Historic Buildings

The Preferred Alternative would result in a finding of No Historic Properties Affected for 68 eligible historic structures, and a finding of No Adverse Effect for 33 properties. These recommended findings are described in Table 3.18.

The Preferred Alternative would result in an Adverse Effect to two eligible buildings located at 1774 W. 4700 S. and 1759 W. 4700 S. (both of which are part of the Casa Linda Apartments). The historic structures would need to be demolished to allow for construction of the proposed dedicated-transit road along 1780 West. UTA is consulting with SHPO regarding this project due to its presence on 4500/4700 South, part of SR-266, a UDOT-maintained road. SHPO concurred with the findings of effect identified in 2013 for the Preferred Alternative on April 18, 2013. An updated Determination of Eligibility and Finding of Effect was submitted to SHPO in November 2018. The updated Determination of Eligibility and Finding of Effect identifies the additional historic properties along the full BRT route, and provides updated effect determinations for those properties identified in 2013.

### Archaeological Resources

The Preferred Alternative would result in a finding of No Historic Properties Affected for the two historic railroads identified in the APE because the project would use the existing roadway in the location of the identified segments. No excavation would occur for the Preferred Alternative in the area of the historic railroads.

The Preferred Alternative would have No Adverse Effect on the North Jordan Canal. The Preferred Alternative includes exclusive lanes where the canal crosses 4700 South and the existing box culvert would most likely need to be extended to accommodate widening. The extent of the culvert extension would be determined in final design. The canal would experience construction impacts where it crosses 4700 South to expand the culvert.

### **Construction Impacts**

Ground-disturbing activities during construction could potentially result in the discovery of previously unidentified, subsurface cultural or paleontological resources.

## **3.12.3 MITIGATION**

If previously unidentified resources are discovered during construction, activities in the area of the discovery will immediately stop. The process outlined in 36 CFR 800.13 will be followed.

A Memorandum of Agreement would be prepared with SHPO identifying mitigation measures to address the Adverse Effect. Table 3.18 Eligible Historic Properties within the APE

| ADDRESS               | SHPO RATING/<br>NRHP<br>ELIGIBILITY | SECTIO   |
|-----------------------|-------------------------------------|--|
| Murray                |                                     |  |
| 321 W. Vine St.       | EC/Eligible                         | No Histor  |
| 370 W. Vine St.       | EC / Eligible                       | No Histor  |
| Taylorsville          |                                     |  |
| 1100 W. Carmellia Dr. | EC/Eligible                         | No Adver<br>required (<br>way would<br>home sha<br>constructi  |
| 1108 W. Carmellia Dr. | EC/Eligible                         | No Adver<br>required (<br>way would<br>home sha<br>constructi  |
| 1126 W. Carmellia Dr. | EC/Eligible                         | No Adver<br>required (<br>way would<br>home sha<br>constructi  |
| 1130 W. Carmellia Dr. | EC/Eligible                         | No Adver-<br>required (<br>way would<br>home sha<br>constructi |
| 1201 W. Tamarack Dr.  | EC/Eligible                         | No Adver<br>required (<br>would be                             |
| 1229 W. Tamarack Dr.  | EC/Eligible                         | No Adver<br>required (<br>would be                             |
| 1237 W. Tamarack Dr.  | EC/Eligible                         | No Adver<br>required (<br>would be                             |
| 1253 W. Tamarack Dr.  | EC/Eligible                         | No Adver<br>required (<br>would be                             |
| 1285 W. Tamarack Dr.  | EC/Eligible                         | No Adver<br>required (<br>would be                             |
|                       |                                     |  |

### N 106 EFFECT DETERMINATION / DESCRIPTION OF EFFECT

ric Properties Affected | The property would not be impacted.

ric Properties Affected | The property would not be impacted.

**rse Effect** | A temporary construction easement would be (5,329 sq. ft. of the property's total 2,120,757 sq. ft.). No right-of-Id be acquired. The historic building would not be impacted. This ares a common parcel within a mobile home park; temporary tion easements are quantified for the parcel as a whole.

**rse Effect** | A temporary construction easement would be (5,329 sq. ft. of the property's total 2,120,757 sq. ft.). No right-ofld be acquired. The historic building would not be impacted. This ares a common parcel within a mobile home park; temporary tion easements are quantified for the parcel as a whole.

**rse Effect** | A temporary construction easement would be (5,329 sq. ft. of the property's total 2,120,757 sq. ft.). No right-of-Id be acquired. The historic building would not be impacted. This ares a common parcel within a mobile home park; temporary tion easements are quantified for the parcel as a whole.

**rse Effect** | A temporary construction easement would be (5,329 sq. ft. of the property's total 2,120,757 sq. ft.). No right-ofld be acquired. The historic building would not be impacted. This ares a common parcel within a mobile home park; temporary tion easements are quantified for the parcel as a whole.

**rse Effect** | A temporary construction easement would be (96 sq. ft. of the property's total 9,205 sq. ft.). No right-of-way acquired. The historic building would not be impacted.

**rse Effect** | A temporary construction easement would be (800 sq. ft. of the property's total 9,200 sq. ft.). No right-of-way acquired. The historic building would not be impacted.

**rse Effect** | A temporary construction easement would be (687 sq. ft. of the property's total 7,894 sq. ft.). No right-of-way acquired. The historic building would not be impacted.

**rse Effect** | A temporary construction easement would be (687 sq. ft. of the property's total 7,889 sq. ft.). No right-of-way acquired. The historic building would not be impacted.

**rse Effect** | A temporary construction easement would be (687 sq. ft. of the property's total 7,881 sq. ft.). No right-of-way acquired. The historic building would not be impacted.

### Table 3.18 Eligible Historic Properties within the APE (continued)

| ADDRESS   | SHPO RATING/<br>NRHP<br>ELIGIBILITY | SECTION 106 EFFECT DETERMINATION / DESCRIPTION OF EFFECT   |
|---|-------------------------------------|--|
| 1317 W. Tamarack Dr.  | EC/Eligible                         | <b>No Adverse Effect</b>   A temporary construction easement would be required (804 sq. ft. of the property's total 9,207 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.                  |
| 4675 S. Beechwood Rd.   | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (914 sq. ft. of the property's total 10,186 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.                 |
| 1555 W. Hemlock Dr.   | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (818 sq. ft. of the property's total 9,334 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.                  |
| 1567 W. Hemlock Dr.   | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (800 sq. ft. of the property's total 9,375 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.                  |
| 1579 W. Hemlock Dr.   | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (752 sq. ft. of the property's total 8,768 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.                  |
| 1591 W. Hemlock Dr.   | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (802 sq. ft. of the property's total 9,152 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.                  |
| 1601 W. Hemlock Dr.   | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (795 sq. ft. of the property's total 8,766 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.                  |
| 1615 W. Hemlock Dr.   | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement of 977 sq. ft.<br>and partial land acquisition of 302 sq. ft. would be required from the<br>property's total 8,887 sq. ft. The historic building would not be impacted. |
| 1625 W. Hemlock Dr.   | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement of 1,074 sq. ft. and partial land acquisition of 2,135 sq. ft. would be required from the property's total 10,505 sq. ft. The historic building would not be impacted.  |
| 1774 W. 4700 S. &<br>1759 W. 4700 S.<br>(Casa Linda Apartments) | EC / Eligible                       | <b>Adverse Effect</b>   The existing buildings would be demolished for construction of the 1780 West connection to 4700 South.   |
| 1555 S. Redwood Road<br>(Daughters of Utah Pioneers<br>Marker)  | EC/Eligible                         | <b>No Historic Properties Affected</b>   The historic structure would not be impacted.   |
| 1796 W. Bowling Ave.  | EC / Eligible                       | <b>No Adverse Effect</b>   A partial land acquisition of 56 sq. ft. would be required from the property's total 14,503 sq. ft. The historic building would not be impacted.  |
| 1844 W. 4700 S.   | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.  |

### Table 3.18 Eligible Historic Properties within the APE (continued)

| ADDRESS                | SHPO RATING/<br>NRHP<br>ELIGIBILITY | SECTION 106 EFFECT DETERMINATION / DESCRIPTION OF EFFECT  |
|------------------------|-------------------------------------|---|
| 1860 W. 4700 S.        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 1904 W. 4700 S.        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 1922 W. 4700 S.        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 1996 W. 4700 S.        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2025 W. 4680 S.        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2035 W. 4680 S.        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2051 W. 4700 S.        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2067 W. 4700 S.        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 4688 S. 2080 W.        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2115 W. 4700 S.        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2309 S. Edgeware Ln.   | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2335 S. Edgeware Ln.   | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2345 S. Edgeware Ln.   | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 4216 S. Solitude Ridge | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2679 W. Village Ln.    | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 4165 S. 2670 W.        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 4159 S. 2670 W.        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 4147 S. 2670 W.        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| West Valley            |                                     |   |
| 2719 W. 4270 S.        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2718. W 4270 S.        | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement of 612 sq. ft. and partial land acquisition of 22 sq. ft. would be required from the property's total 8,961 sq. ft. The historic building would not be impacted. |

### Table 3.18 Eligible Historic Properties within the APE (continued.)

| ADDRESS              | SHPO RATING/<br>NRHP<br>ELIGIBILITY | SECTION 106 EFFECT DETERMINATION / DESCRIPTION OF EFFECT  |
|----------------------|-------------------------------------|---|
| 4241 S. 2735 W.      | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (641 sq. ft. of the property's total 8,814 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.             |
| 4205 S. 2735 W.      | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (667 sq. ft. of the property's total 8,833 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.             |
| 4197 S. 2735 W.      | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (674 sq. ft. of the property's total 8,841 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.             |
| 4189 S. 2735 W.      | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (681 sq. ft. of the property's total 8,844 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.             |
| 4179 S. 2735 W.      | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (687 sq. ft. of the property's total 8,849 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.             |
| 4171 S. 2735 W.      | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (693 sq. ft. of the property's total 8,855 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.             |
| 4143 S. 2735 W.      | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (780 sq. ft. of the property's total 9,779 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.             |
| 4131 S. 2735 W.      | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (698 sq. ft. of the property's total 8,669 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.             |
| 4119 S. 2735 W.      | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement of 867 sq. ft. and partial land acquisition of 103 sq. ft. would be required from the property's total 10,103 sq. ft. The historic building would not be impacted. |
| 4107 S. 2735 W.      | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 4078-4080 S. 2665 W. | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 4068-4072 S. 2665 W. | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 4058 S. 2665 W.      | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement of 910 sq. ft. and partial land acquisition of 57 sq. ft. would be required from the property's total 9,124 sq. ft. The historic building would not be impacted.   |
| 4050 S. 2665 W.      | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement would be required (64 sq. ft. of the property's total 9,120 sq. ft.). No right-of-way would be acquired. The historic building would not be impacted.              |

### Table 3.18 Eligible Historic Properties within the APE (continued)

| ADDRESS                                 | SHPO RATING/<br>NRHP<br>ELIGIBILITY | SECTION 106 EFFECT DETERMINATION / DESCRIPTION OF EFFECT              |
|---|-------------------------------------|---|
| 2579 W. Westshire Dr.                   | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 4024 S. 2665 W.                         | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 4014 S. 2665 W.                         | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 4006 S. 2665 W.                         | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3996 S. 2665 W.                         | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3980 S. 2700 W.                         | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3970 S. 2700 W.                         | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3970 S. 2665 W.                         | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 2717 W. Marcus Rd. &<br>3968 S. 2700 W. | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 2671 W. 3935 S.                         | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3980 S. 2665 W.                         | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3939 S. Lee Maur St.                    | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3931 S. Lee Maur St.                    | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 2668 W. 3935 S.                         | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3921 S. Lee Maur St.                    | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3918 S. Hallmark Dr.                    | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3911 S. Lee Maur St.                    | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3910 S. Hallmark Dr.                    | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3904 S. Hallmark Dr.                    | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3901 S. Lee Maur St.                    | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3898 S. Hallmark Dr.                    | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3891 S. Lee Maur St.                    | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3881 S. Lee Maur St.                    | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |
| 3877 S. Lee Maur St.                    | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted. |

## Table 3.18 Eligible Historic Properties within the APE (continued)

| ADDRESS                                   | SHPO RATING/<br>NRHP<br>ELIGIBILITY | SECTION 106 EFFECT DETERMINATION / DESCRIPTION OF EFFECT  |
|---|-------------------------------------|---|
| 3867 S. Lee Maur St.                      | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 3857 S. Lee Maur St.                      | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2721 W. 3835 S. &<br>3847 S. Lee Maur St. | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2722-2724 W. 3835 S.                      | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2718-2720 W. 3835 S.                      | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 3819 S. Lee Maur St.                      | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2720-2730 W. 3800 S.                      | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement of 45 sq. ft. and partial land acquisition of 14 sq. ft. would be required from the property's total 9,878 sq. ft. The historic building would not be impacted.          |
| 3781 S. Lee Maur St.                      | EC / Eligible                       | <b>No Adverse Effect</b>   A temporary construction easement of 849 sq. ft.<br>and partial land acquisition of 262 sq. ft. would be required from the<br>property's total 10,011 sq. ft. The historic building would not be impacted. |
| 3771 S. Lee Maur St.                      | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 3763 S. Lee Maur St.                      | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 3755 S. Lee Maur St.                      | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 3747 S. Lee Maur St.                      | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 3727 S. Lee Maur St.                      | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 3687 S. Lee Maur St.                      | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 3671 S. Lee Maur St.                      | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 3660 S. Lee Maur St.                      | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2765 W. Lancer Way                        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2791 W. Lancer Way                        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 3660 S. Market St.                        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |
| 2835 W. Lancer Way                        | EC / Eligible                       | No Historic Properties Affected   The property would not be impacted.   |

# 3.13 CUMULATIVE EFFECTS

Cumulative impacts are defined as the impact on the environment that results from the incremental effect of multiple actions regardless of what agency or person undertakes such actions. Cumulative impacts include the direct and indirect impacts of a project, together with the reasonably foreseeable future actions of other projects.

Cumulative impacts were assessed based on past, present, and foreseeable future actions,

which include both the No-Action and Preferred Alternatives. This section discusses cumulative effects that would occur as a result of the Preferred Alternative. The analysis for cumulative effects is generally defined as the study area, but depending on the character of the resource, it may include areas outside of the study area. Where applicable, actions outside the study area that may contribute to impacts within the study area are considered. Past, present, and reasonably foreseeable actions are listed in Table 3.19.

|            | -            |              |              |                 |
|------------|--------------|--------------|--------------|-----------------|
| Table 3.19 | Past, Presei | nt and Reaso | onably Fore. | seeable Actions |

| PROJECT OR ACTIVITY                   | DESCRIPTION  | PROJECT STATUS |  |  |
|---------------------------------------|--|----------------|--|--|
| Past Projects                         |  |                |  |  |
| American International School of Utah | Redevelopment of land along Murray Boulevard<br>and Galleria Drive in Murray; completion of the<br>American International School of Utah in 2014 | Complete       |  |  |
| State Crime Lab                       | New state crime lab completed in 2017  | Complete       |  |  |
| West Valley Station Apartments        | New apartment complex adjacent to West Valley<br>Central station   | Complete       |  |  |
| Present Projects                      |  |                |  |  |
| I-215, Southbound Frontage Road       | Southbound frontage road on the west side of<br>I-215 from SR-201 to 4700 South  | Ongoing        |  |  |
| 2700 West Apartment Complex           | 150-unit apartment building at approximately<br>4600 South and 2700 West in the planning and<br>entitlement process                              | Ongoing        |  |  |
|                                       |  |                |  |  |
| Reasonably Foreseeable Projects       |  |                |  |  |
| 2700 West Corridor Improvements       | Bus enhancements from West Valley Central station to Salt Lake Central along 2700 West   | Planned        |  |  |
| Redwood Road Core Route               | Improved bus service from 600 North to South<br>Jordan Parkway   | Planned        |  |  |
| 4100 South Enhanced Bus               | Bus enhancements from the east-side park-and-<br>ride to 5600 West   | Planned        |  |  |
| 4700 South Widening                   | Widening 4700 South from two to four lanes in both directions I-215 to 4000 West   | Planned        |  |  |
| Senior-Oriented District              | Internally connective senior-oriented district at 4700 South and Redwood Road  | Planned        |  |  |
| Development of Taylorsville Parcels   | Construction of two 150,000-square-foot office<br>buildings on the parcel to the north of American<br>Express                                    | Planned        |  |  |

## 3.13.1 LAND USE

Undeveloped land in Taylorsville is consolidated to a state-owned parcel on 2700 West. There are development plans for two 150,000-square-foot buildings, with a third possible. The buildings and their occupants would add to the strain on the 4700 South and 2700 West intersection, further delaying existing bus operations.

Additional redevelopment on the southwest corner of 4700 South and Redwood Road is being considered as a senior-oriented district with high internal walkability and connectivity to the existing Golden Living senior center and Silvercrest Senior Apartments. Additionally, redevelopment is likely at Fore Lakes Golf Course and land just south of Fore Lakes Golf Course that is undeveloped or currently designated as agricultural use. Redevelopment of the Fore Lakes Golf Course property may be accelerated by the implementation of the Preferred Alternative, but is planned for future redevelopment regardless of the project. Development in and around the study area would continue to occur independent of the Preferred Alternative, consistent with the city's general plan.

Land in West Valley City has potential for development within and outside the study. West Valley City has already begun concentrating housing and retail land uses around West Valley Central station in an effort to promote TOD. The *Fairbourne Station Vision* and *Vision West 2035* guide building, site, and street design in an effort to create a recognizable town center combining civic services, public open space, high-density housing, retail, hospitality, and office space. Redevelopment of the Fairbourne Station district will occur regardless of implementation of the Preferred Alternative.

With the development anticipated within the cities of Taylorsville and West Valley, the Preferred Alternative would provide a reliable transit option for these new developments.

## **3.13.2 TRANSPORTATION**

Planned transit projects by WFRC will improve transit connectivity at West Valley Central station and SLCC and improve regional transit across the valley. The 2700 West corridor is planned for enhanced bus improvements to expedite transit service into downtown. The 35M MAX BRT is planned to extend to the east-side belt route of I-215 and to 6000 West, and as an enhanced bus to 8400 West. An enhanced bus is planned for 4100 South, though it remains to be seen if the enhanced route will run directly down 4100 South or mimic the routing of the existing 41 route. These projects can potentially tap into latent demand for transit that currently exists as singleoccupancy auto trips.

The addition of a Core Route, a route slated for more frequent service based on high ridership, on Redwood Road further identifies an effort to improve the multi-modal system in the study area. New transit infrastructure may require additional right-of-way acquisition and redesign of existing facilities leading to temporary construction delays.

Widening along 4700 South from 2700 West to 4000 West is planned as a part of WFRC's RTP. The roadway widening is an effort to ease congestion at the 4700 South 2700 West intersection, which is one of the most congested in the state. As a result, the Preferred Alternative would experience ancillary benefits. The route is designed for mixedflow traffic lanes through this section; improved traffic operations can improve bus reliability and speed. In addition, a frontage road along the west side of southbound I-215 is planned from SR-201 to 4700 South. One section of the I-215 Frontage Roads project from 4100 South to 4700 South was amended to a Phase 1 RTP project, with an environmental document and conceptual design currently underway.

## 3.13.3 NOISE

Future transportation projects are expected to continue to have the greatest impacts on noise levels. The Preferred Alternative would contribute to the cumulative noise increase associated with other planned transportation projects in Murray, Taylorsville, and West Valley. However, as engine and fuel technologies continue to accelerate, making combustion engines on all types of vehicles quieter, current noise levels may be reduced. Trends in land use may also reduce the need for single-occupancy vehicles, thereby reducing noise levels as well.

## 3.13.4 WETLANDS

No data is available on the exact amount of wetlands to be converted to urban uses because each project is considered independently by USACE. Although other planned transportation projects could result in impacts to wetlands, urban growth will likely cause the greatest impact to wetlands in the study area. It is expected that all direct impacts will have to be mitigated (through creation, restoration, or enhancement of wetlands) within the general vicinity of the project to satisfy the federal policy of no net loss of wetland acres and/or function. As required by USACE, jurisdictional wetlands would be mitigated by replacing the major wetland functions, vegetation communities, and areas lost as a result of development.

This page intentionally left blank.



000

**COMMENTS AND** COORDINATION

# Murray Central 5144 S. Cottonwood







000000000

60,00000



0

(.

(





West Valley Central Station

# 4.1 INTRODUCTION

This chapter describes the public involvement activities and stakeholder and agency coordination undertaken for the Midvalley Connector ESR. Outreach activities have built upon those conducted for the Taylorsville-Murray Transit ESR (2013 ESR), and have included distribution of outreach materials, city and community council updates, project information at Taylorsville Dayzz, and a public open house meeting. The public involvement, stakeholder, and coordination efforts for the project were designed to be inclusive, comprehensive, transparent, and continuous throughout the course of the project.

# 4.2 PROJECT TEAM

The Midvalley Connector project team consists of the cities of Taylorsville, Murray, and West Valley, UTA, WFRC, SLCC, UDOT, and Salt Lake County. Team coordination took place on a monthly basis to discuss the Preferred Alternative, station locations and design, environmental impacts, public comments and concerns, and phasing and funding opportunities.

# 4.3 AGENCY, TRIBAL, & SECTION 106 CONSULTATION

## **4.3.1 AGENCY COORDINATION**

The agencies listed below received scoping letters inviting comment and providing project information for the 2013 ESR. On November 16, 2017, letters with updated project information, opportunity for comment, and contact information were also sent to the same agencies:

- USACE
- Utah SHPO
- Jordan River Commission
- North Jordan Irrigation Company

No responses were received. Copies of these letters are included in Appendix B.

## 4.3.2 TRIBAL AND SECTION 106 CONSULTATION

The project area does not include tribal lands; however, Native American tribes could have an interest in the project due to the potential to discover historic resources. UTA sent letters to the following Native American tribes and agencies on November 16, 2017:

- Confederated Tribes of the Goshute Reservation
- Skull Valley Band of Goshute Indians
- Northwestern Band of Shoshone Nation
- Shoshone-Bannock Tribes of the Fort Hall Reservation
- Eastern Shoshone Tribe of the Wind River Reservation
- Ute Indian Tribe of the Uintah and Ouray Reservation
- Cedar Band of Paiute Indians
- Indian Peaks Band of Paiute Indians
- Shivwits Band of Paiute Indians
- Utah SHPO

No responses were received. Copies of these letters are included in Appendix B.



Taylorsville Dayzz (Source: Taylorsvilletidbits.com)

UTA is consulting with SHPO regarding impacts to cultural resources. In September 2013, SHPO concurred with the findings of effect identified in 2013 for the Preferred Alternative on April 18, 2013. An updated Determination of Eligibility and Finding of Effect was submitted to SHPO in November 2018.

# 4.4 PUBLIC OUTREACH

Over the course of the project, the project team updated the public through project and city websites, social media, newsletters, poster distribution at public locations throughout the study area, city council updates, and meetings with community councils.

The project team also participated in Taylorsville Dayzz in June 2017 and 2018. There, residents were able to sign up for email updates and receive information regarding the proposed route and potential service. City council updates, community council meetings, and one-on-one meetings with key stakeholders and business owners also took place to allow for input on the proposed route, station locations, and potential impacts or community opinions.

# 4.5 ADOPTION OF THE PREFERRED ALTERNATIVE

Representatives from UTA, UDOT, Taylorsville, Murray, and West Valley have been actively involved in planning the Midvalley Connector project. Their input has been incorporated into the development and selection of the Preferred Alternative.

In 2013, the Taylorsville City Council, Murray City Council, and UTA Board adopted resolutions in support of the Preferred Alternative presented in the 2013 ESR. It is anticipated these entities will pass resolutions in support of the revised Preferred Alternative, as presented in this Midvalley Connector ESR, in winter 2018/2019.

# 4.6 NEXT STEPS

The Draft Midvalley Connector ESR will be circulated for public review and a 30-day comment period in November 2018. A public open house will be held during the comment period. The public will be able to formally comment through the use of a comment form, email, or the project website for the duration of the comment period. The Draft ESR will be available on the project website (www.midvalleyconnector. com), linked through each city's website, and at various public locations during the comment period. **Appendix A** 

# RIGHT-OF-WAY IMPACTS



# RIGHT-OF-WAY IMPACTS

| Street Address                | City              | Parcel Type | Parcel Short ID | Parcel Assessor ID | Parcel Area<br>(SQFT) | Full Acquisition<br>(SQFT) | Partial Acquisition<br>(SQFT) | Temporary<br>Construction<br>Easement (SQFT) | Thumbnail<br>Number* |                                  |
|-------------------------------|-------------------|-------------|-----------------|--------------------|-----------------------|----------------------------|-------------------------------|--|----------------------|----------------------------------|
| 4924 S MURRAY BLVD            | Murray            | Residential | 160-001a        | 21121600010000     | 245,831               |                            | 1,660                         | 522  | 3                    | Same parcel number as parce      |
| 4924 S MURRAY BLVD            | Murray            | Residential | 160-001b        | 21121600010000     | 236,037               |                            |                               | 2,726  |                      |                                  |
| 5054 S MURRAY BLVD            | Murray            | Residential | 178-003         | 21121780030000     | 10,303                |                            | 74                            |  | 3                    |                                  |
| 328 W VINE ST                 | Murray            | Commercial  | 253-009         | 21122530090000     | 16,604                |                            |                               | 2,169  |                      |                                  |
| 316 W VINE ST                 | Murray            | Commercial  | 253-022         | 21122530220000     | 69,110                |                            |                               | 4,181  |                      |                                  |
| 5066 S COMMERCE DR            | Murray            | Commercial  | 253-024         | 21122530240000     | 21,547                |                            | 385                           | 2,028  | 2                    |                                  |
| 5102 S COMMERCE DR            | Murray            | Commercial  | 254-004         | 21122540040000     | 21,244                |                            | 791                           | 754  | 2                    | Eligible building demolished a   |
| 5098 S COTTONWOOD ST          | Murray            | Commercial  | 426-021         | 21124260210000     | 4,266                 | 4,266                      |                               |  | 1                    | Murray Cental Hub; No prope      |
| 5142 S COTTONWOOD ST          | Murray            | Commercial  | 426-022         | 21124260220000     | 110,725               |                            | 8,055                         |  | 1                    | UTA will be established for BR   |
| 2099 W 4700 S APT B320        | Taylorsville      | Commercial  | 101-053         | 21101010530000     | 338,987               |                            | 359                           | 1,137  | 11                   |                                  |
| 4710 S REDWOOD RD             | Taylorsville      | Commercial  | 127-044         | 21101270410000     | 46,110                |                            |                               | 387  |                      |                                  |
| 618 W TAYLORSVILLE EXPY       | Taylorsville      | Commercial  | 152-004         | 21011520040000     | 67,849                |                            |                               | 4,926  |                      | Jordan River Trail, Salt Lake Co |
| 4731 S REDWOOD RD             | Taylorsville      | Recreation  | 201-035         | 21102010350000     | 279,127               |                            |                               | 4,163  |                      | Taylorsville Park                |
| 4705 S REDWOOD RD             | Taylorsville      | Recreation  | 201-036         | 21102010360000     | 4,668                 |                            |                               | 34   |                      | Taylorsville Park                |
| 4755 S SETTLERS WAY APT 21    | Taylorsville      | Residential | 202-004         | 21102020040000     | 673,216               |                            |                               | 5,497  |                      |                                  |
| 1495 W BROOKBURY WAY APT 202  | Taylorsville      | Residential | 226-023         | 21102260230000     | 239,309               |                            |                               | 7,993  |                      |                                  |
| 1285 W TAYLORSVILLE EXPY      | Taylorsville      | Commercial  | 226-052         | 21102260520000     | 2,741,780             |                            |                               | 61,182                                       |                      |                                  |
| 4315 S 2700 W                 | Taylorsville      | Commercial  | 251-007         | 21042510070000     | 1,388,820             |                            | 224                           | 1,258  | 13                   |                                  |
| 4393 S RIVERBOAT RD           | ,<br>Taylorsville | Commercial  | 276-012         | 21022760120000     | 250,800               |                            |                               | 6,124  |                      |                                  |
| 4351 S SUNNY RIVER RD APT 329 | ,<br>Tavlorsville | Residential | 276-015         | 21022760150000     | 1.239.124             |                            |                               | 4.344  |                      |                                  |
| 4490 S ATHERTON DR            | ,<br>Tavlorsville | Commercial  | 327-001         | 21023270010000     | 226.838               |                            |                               | 7.782  |                      | Several Parcels within           |
|                               | Taylorsville      |             | 328 000         | 21033280080000     | 4,593,360             |                            | 202,428                       | 1,086  | 7                    | No property will be purchased    |
|                               | Taylorsville      | Commercial  | 320.002         | 21033200000000     | 131 810               |                            |                               | 9 102  | ,                    |                                  |
|                               | Taylorsville      | Commercial  | 329-002         | 21023290020000     | 125 141               |                            |                               | 5,102  |                      |                                  |
|                               | Taylorsville      | Residential | 342.015         | 21023230040000     | 22 044                |                            | 257                           | 0,708  | 1                    | Several Parcels within           |
|                               | Taylorsville      | Residential | 251 001         | 21013340130000     | 0 1 9 2               |                            | 557                           | 995  | 4                    |                                  |
|                               | Taylorsville      | Residential | 251.002         | 21023310010000     | 9,103                 |                            |                               | 600  |                      |                                  |
|                               | Taylorsville      | Residential | 351-002         | 21023510020000     | 7,881                 |                            |                               | 687  |                      |                                  |
|                               | Taylorsville      | Residential | 351-003         | 21025510050000     | 7,003                 |                            |                               | 672  |                      |                                  |
|                               | Taylorsville      | Residential | 251-004         | 21023510040000     | 7,005                 |                            |                               | 697  |                      |                                  |
|                               | Taylorsville      | Residential | 351-005         | 21025510050000     | 7,007                 |                            |                               | 697  |                      |                                  |
|                               | Taylorsville      | Residential | 251-000         | 21023510060000     | 7,009                 |                            |                               | 697  |                      |                                  |
|                               | Taylorsville      | Residential | 251-007         | 21025510070000     | 7,092                 |                            |                               | 697  |                      |                                  |
|                               | Taylorsville      | Residential | 351-008         | 21025510080000     | 7,694                 |                            |                               | 800  |                      |                                  |
|                               | Taylorsville      | Residential | 251.010         | 21025510090000     | 9,200                 |                            |                               | 709  |                      |                                  |
|                               | Taylorsville      | Residential | 251 011         | 21023510100000     | 9,201                 |                            |                               | 798  |                      |                                  |
|                               | Taylorsville      | Residential | 251 012         | 21023510110000     | 9,200                 |                            |                               | 794  |                      |                                  |
|                               | Taylorsville      | Residential | 251 012         | 21023510120000     | 9,205                 |                            |                               | 790  |                      |                                  |
|                               | Taylorsville      | Residential | 251 014         | 21023510130000     | 9,212                 |                            |                               | 709  |                      |                                  |
|                               | Taylorsville      | Residential | 251 015         | 21023510140000     | 9,207                 |                            |                               | 1 607  |                      |                                  |
| 2160 W 4700 S                 | Taylorsville      | Commorcial  | 252 017         | 21023510150000     | 21 2/1                |                            | 272                           | 1,007  | 11                   |                                  |
| 2100 W 4700 3                 | Taylorsville      | Residential | 352.001         | 21033520170000     | 02 050                |                            | 572                           | 722  | 11                   |                                  |
|                               | Taylorsville      | Residential | 353-001         | 21013330010000     | 133,005               |                            |                               | 0.101  |                      |                                  |
|                               | Taylorsville      | Commercial  | 376.001         | 21023330430000     | 56 787                |                            |                               | 3,434  |                      |                                  |
|                               | Taylorsville      | Commercial  | 376-003         | 21023760030000     | 58 588                |                            |                               | 3,064  |                      |                                  |
| 4616 S 1780 W                 | Taylorsville      | Residential | 377-010         | 21023700030000     | 12 948                |                            | 303                           | 5,004  | 8                    | Eligible building demolished 1   |
|                               | Taylorsville      | Desidential | 277.010         | 21022770100000     | 2,120,757             |                            | 303                           | 5,329  | 0                    | Total parcel impact encompas     |
| 4000 S ASPEIN LIN             | Taylorsville      | Commercial  | 377-018         | 21023770180000     |                       |                            |                               | 2.201  |                      | DI., 1126 W Carmellia Dr., and   |
| 45/9 5 11/5 W                 | Taylorsville      | Commercial  | 377-022         | 21023770220000     | 46,051                |                            |                               | 2,381  |                      | Fligible building demolished a   |
| 4615 S 1780 W                 | Taylorsville      | SLCC Campus | 378-001         | 21033780010000     | 14,611                |                            | 67                            | 664  | 8                    | agreement and/or easement        |
| 1760 W BOWLING AVE            | Taylorsville      | SLCC Campus | 378-003         | 21033780030000     | 10,236                |                            | 76                            |  | 8                    | for BRT use.                     |
| 1800 W 4700 S                 | Taylorsville      | Commercial  | 380-017         | 21033800170000     | 59,545                |                            |                               | 1,061  |                      | 1780 W Road Impacts              |
| 1800 W 4700 S                 | Taylorsville      | Commercial  | 380-018         | 21033800180000     | 2,401                 |                            |                               | 154  |                      | 1780 W Road Impacts              |

| Notes  |
|--|
| across the street - Murray Blvd, Several Parcels within  |
|  |
|  |
|  |
|  |
| nd replaced by newer one   |
| ty will be purchased at these parcels. An agreement and/or easement with                                       |
|  |
|  |
| unty Owned   |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
| at this parcel. An agreement and/or easement with UTA will be established                                      |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
| 780 W Road Impacts; empty lot  |
| ses TCEs from multiple addresses: 1100 W Carmellia Dr., 1108 W Carmellia                                       |
|  |
| 780 W Road Impacts; No property will be purchased at this parcel. An vith UTA will be established for BRT use. |
| at this parcel. An agreement and/or easement with UTA will be established                                      |
|  |

# RIGHT-OF-WAY IMPACTS (CONT'D)

| Street Address      | City              | Parcel Type | Parcel Short ID | Parcel Assessor ID | Parcel Area<br>(SQFT) | Full Acquisition<br>(SQFT) | Partial Acquisition<br>(SQFT) | Temporary<br>Construction<br>Easement (SQFT) | Thumbnail<br>Number* |                             |
|---------------------|-------------------|-------------|-----------------|--------------------|-----------------------|----------------------------|-------------------------------|--|----------------------|-----------------------------|
| 4668 S REDWOOD RD   | Taylorsville      | Commercial  | 380-022         | 21033800220000     | 38,344                |                            |                               | 432  |                      | 1780 W Road Impacts         |
| 1800 W 4700 S       | Taylorsville      | Commercial  | 380-030         | 21033800300000     | 6,635                 |                            | 1,542                         | 1,189  | 10                   | 1780 W Road Impacts         |
| 1752 W 4700 S       | Taylorsville      | Commercial  | 380-033         | 21033800330000     | 23,304                |                            |                               | 441  |                      | 1780 W Road Impacts         |
| 1795 W BOWLING AVE  | Tavlorsville      | Commercial  | 380-036         | 21033800360000     | 13.369                |                            | 27                            | 1.413  | 8                    | 1780 W Road Impacts         |
| 4668 S REDWOOD RD   | Taylorsville      | Commercial  | 380-045         | 21033800450000     | 27.271                |                            |                               | 320  |                      | 1780 W Road Impacts         |
| 1731 W BOWLING AVE  | Taylorsville      | Commercial  | 380-049         | 21033800490000     | 38,911                |                            | 234                           | 1.852  | 8                    | 1780 W Road Impacts         |
| 925 W ATHERTON DR   | Taylorsville      | Residential | 400-007         | 21024000070000     | 114.361               |                            | 201                           | 1,449  |                      |                             |
| 4576 S MERIDIAN CIR | Taylorsville      | Residential | 400-019         | 21024000192000     | 402 811               |                            |                               | 3 048  |                      |                             |
| 4545 S ATHERTON DR  | Taylorsville      | Residential | 400-025         | 21024000250000     | 271 370               |                            | 301                           | 810  | 5                    |                             |
| 925 W ATHERTON DR   | Taylorsville      | Utilities   | 400-027         | 21024000270000     | 134 323               |                            | 501                           | 65.682                                       |                      | Parcel extends into the roa |
| 986 W ATHERTON DR   | Taylorsville      | Commercial  | 400-034         | 21024000340000     | 16.8/6                |                            |                               | 750  |                      |                             |
| 972 W ATHERTON DR   | Taylorsville      | Commercial  | 400-036         | 21024000360000     | 139 257               |                            |                               | 2 1/15                                       |                      |                             |
|                     | Taylorsville      | Commercial  | 400-030         | 21024000300000     | 153,237               |                            |                               | 2,143  |                      |                             |
|                     | Taylorsville      | Commercial  | 400-033         | 21024000330000     | 24.205                |                            |                               | 3,007  |                      |                             |
|                     | Taylorsville      | Commercial  | 402-002         | 21024020020000     | 121 522               |                            |                               | 2,300  |                      |                             |
|                     | Taylorsville      | Commercial  | 402-003         | 21024020030000     | 121,532               |                            |                               | 0,720  |                      |                             |
|                     | Taylorsville      | Residential | 426-003         | 21024260030000     | 1,086,250             |                            | 233                           | 1,143  | 5                    | 4                           |
| 4548 SATHERTON DR   | Taylorsville      | Commercial  | 427-003         | 21024270030000     | 91,538                |                            |                               | 2,575  |                      |                             |
| 4546 S ATHERTON DR  | Taylorsville      | Commercial  | 427-004         | 21024270040000     | 40,205                |                            |                               | 2,324  |                      | 4                           |
| 4663 S 2700 W       | laylorsville      | Commercial  | 451-024         | 21044510240000     | 21,569                |                            | 259                           | /3/  | 12                   |                             |
| 4631 S REDWOOD RD   | Taylorsville      | Commercial  | 453-003         | 21034530030000     | 27,735                |                            |                               | 3,192  |                      | North Jordan Canal Trail Im |
| 4661 S REDWOOD RD   | Taylorsville      | Commercial  | 453-004         | 21034530040000     | 21,554                |                            |                               | 1,369  |                      | North Jordan Canal Trail Im |
| 4681 S REDWOOD RD   | Taylorsville      | Commercial  | 453-005         | 21034530050000     | 59,739                |                            | 2,960                         | 5,243  | 6                    | North Jordan Canal Trail Im |
| 4618 S HEMLOCK DR   | Taylorsville      | Residential | 454-001         | 21034540010000     | 10,179                |                            |                               | 1,228  |                      | North Jordan Canal Trail Im |
| 4628 S HEMLOCK DR   | Taylorsville      | Residential | 454-002         | 21034540020000     | 10,436                |                            |                               | 977  |                      | North Jordan Canal Trail Im |
| 4640 S HEMLOCK DR   | Taylorsville      | Residential | 454-003         | 21034540030000     | 9,333                 |                            |                               | 718  |                      | North Jordan Canal Trail Im |
| 4644 S HEMLOCK DR   | Taylorsville      | Residential | 454-004         | 21034540040000     | 9,619                 |                            |                               | 712  |                      | North Jordan Canal Trail Im |
| 4650 S HEMLOCK DR   | Taylorsville      | Residential | 454-005         | 21034540050000     | 9,853                 |                            |                               | 723  |                      | North Jordan Canal Trail Im |
| 4660 S HEMLOCK DR   | Taylorsville      | Residential | 454-006         | 21034540060000     | 8,837                 |                            |                               | 680  |                      | North Jordan Canal Trail Im |
| 4672 S HEMLOCK DR   | Taylorsville      | Residential | 454-007         | 21034540070000     | 7,927                 |                            |                               | 668  |                      | North Jordan Canal Trail Im |
| 4676 S HEMLOCK DR   | Taylorsville      | Residential | 454-008         | 21034540080000     | 9,997                 |                            | 299                           | 1,086  | 6                    | North Jordan Canal Trail Im |
| 1625 W HEMLOCK DR   | Taylorsville      | Residential | 457-001         | 21034570010000     | 10,505                |                            | 2,135                         | 1,074  | 6                    | North Jordan Canal Trail Im |
| 1615 W HEMLOCK DR   | Taylorsville      | Residential | 457-002         | 21034570020000     | 8,887                 |                            | 302                           | 977  | 6                    | North Jordan Canal Trail Im |
| 1601 W HEMLOCK DR   | Taylorsville      | Residential | 457-003         | 21034570030000     | 8,766                 |                            |                               | 795  |                      |                             |
| 1591 W HEMLOCK DR   | Taylorsville      | Residential | 457-004         | 21034570040000     | 9,152                 |                            |                               | 802  |                      |                             |
| 1579 W HEMLOCK DR   | Taylorsville      | Residential | 457-005         | 21034570050000     | 8,768                 |                            |                               | 752  |                      |                             |
| 1567 W HEMLOCK DR   | Taylorsville      | Residential | 457-006         | 21034570060000     | 9,375                 |                            |                               | 800  |                      |                             |
| 1555 W HEMLOCK DR   | Taylorsville      | Residential | 457-007         | 21034570070000     | 9,334                 |                            |                               | 818  |                      |                             |
| 4675 S BEECHWOOD RD | Taylorsville      | Residential | 480-004         | 21034800040000     | 10,186                |                            |                               | 914  |                      |                             |
| 1495 W TAMARACK RD  | Taylorsville      | Commercial  | 480-005         | 21034800050000     | 134,226               |                            |                               | 3,812  |                      |                             |
| 1441 W TAMARACK RD  | Taylorsville      | Commercial  | 480-006         | 21034800060000     | 146,474               |                            |                               | 6,975  |                      |                             |
| 1369 W TAMARACK RD  | Tavlorsville      | Residential | 480-007         | 21034800070000     | 17.880                |                            |                               | 1.771  |                      |                             |
| 1355 W TAMARACK RD  | ,<br>Tavlorsville | Residential | 480-008         | 21034800080000     | 9.829                 |                            |                               | 865  |                      |                             |
| 1341 W TAMARACK RD  | Taylorsville      | Residential | 480-009         | 21034800090000     | 9,736                 |                            |                               | 850  |                      |                             |
| 1335 W TAMARACK RD  | Taylorsville      | Residential | 480-010         | 21034800100000     | 9,739                 |                            |                               | 850  |                      |                             |
| 1321 W TAMARACK RD  | Taylorsville      | Residential | 480-011         | 21034800110000     | 8 018                 |                            |                               | 683  |                      |                             |
|                     | Taylorsville      | Residential | 480-012         | 21034800120000     | 9 207                 |                            |                               | 804  |                      |                             |
|                     | Taylorsville      | Residential | 480-012         | 21034800120000     | 9.1/6                 |                            |                               | 795  |                      |                             |
|                     | Taylorsville      | Residential | 377-013         | 21034800130000     | 14 503                |                            | 56                            | 155  | 8                    |                             |
|                     | Taylorsville      | Residential | 380.048         | 21033770130000     | 14,505                |                            | Relocation 30 Units           |  | 0                    | Casa Linda Ants: already ad |
| 1774 W/ 4700 S      | Taylorsville      | Residential | 380-048         | 21033800480000     | 20,102                |                            | Relocation 20 Units           |  | 9                    | Casa Linda Apts, already ac |
| 1/74 W 4700 S       |                   | Residential | 121 001         | 21033800440000     | 30,192                |                            |                               | 0.67   | 15                   | Casa Linua Apis, aireauy ac |
| 4113 5 2/35 VV      | West Valley City  | Residential | 131-001         | 21041310010000     | 10,103                |                            | 103                           | 867  | 15                   |                             |
| 4131 S 2/35 W       | west valley City  | Residential | 131-002         | 21041310020000     | 8,669                 |                            |                               | 698  |                      |                             |
| 4143 S 2/35 W       | West Valley City  | Residential | 131-003         | 21041310030000     | 9,79                  |                            |                               | /83  |                      |                             |
| 4155 S 2735 W       | West Valley City  | Residential | 131-004         | 21041310040000     | 8,862                 |                            |                               | 704  |                      |                             |
| 4163 S 2735 W       | West Valley City  | Residential | 131-005         | 21041310050000     | 8,833                 |                            |                               | 675  |                      |                             |
| 41/1 S 2735 W       | West Valley City  | Residential | 131-006         | 21041310060000     | 8,855                 |                            |                               | 693  |                      |                             |
| 4179 S 2735 W       | West Valley City  | Residential | 131-007         | 21041310070000     | 8,849                 |                            |                               | 687  |                      |                             |

| Notes  |
|--|
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
| I, owned by the power company                    |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
| nacts  |
| pacts  |
| Dacts  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
|  |
| uired by Taylorsville, 30 units to be relocated  |
| quired by Taylorsville, 30 units to be relocated |
|  |
|  |
|  |
|  |
|  |
|  |
|  |

# RIGHT-OF-WAY IMPACTS (CONT'D)

| City             | Parcel Type  | Parcel Short ID  | Parcel Assessor ID   | Parcel Area<br>(SQFT)  | Full Acquisition<br>(SQFT)  | Partial Acquisition<br>(SQFT)   | Temporary<br>Construction<br>Easement (SQFT)   | Thumbnail<br>Number*   |  |
|------------------|--|--|--|--|---|---|--|--|--|
| West Valley City | Residential  | 131-008  | 21041310080000   | 8,844  |   |   | 681  |  |  |
| West Valley City | Residential  | 131-009  | 21041310090000   | 8,841  |   |   | 674  |  |  |
| West Valley City | Residential  | 131-010  | 21041310100000   | 8,833  |   |   | 667  |  |  |
| West Valley City | Residential  | 131-011  | 21041310110000   | 8,827  |   |   | 660  |  |  |
| West Valley City | Residential  | 131-012  | 21041310120000   | 8,824  |   |   | 653  |  |  |
| West Valley City | Residential  | 131-013  | 21041310130000   | 8,817  |   |   | 646  |  |  |
| West Valley City | Residential  | 131-014  | 21041310140000   | 8,814  |   |   | 641  |  |  |
| West Valley City | Residential  | 131-015  | 21041310150000   | 8,931  |   |   | 644  |  |  |
| West Valley City | Residential  | 131-016  | 21041310160000   | 8,922  |   |   | 638  |  |  |
| West Valley City | Residential  | 131-017  | 21041310170000   | 8,961  |   | 22  | 612  | 14   |  |
| West Valley City | Residential  | 182-016  | 15331820160000   | 10,011   |   | 262   | 849  | 17   |  |
| West Valley City | Residential  | 182-017  | 15331820170000   | 9,878  |   | 14  | 45   | 17   |  |
| West Valley City | Residential  | 182-021  | 21041820210000   | 8,787  |   | 108   | 591  | 13   |  |
| West Valley City | Commercial   | 251-003  | 15332510030000   | 91,996   |   | 276   | 1,331  | 17   |  |
| West Valley City | Commercial   | 329-014  | 21043290140000   | 822,417  |   | 580   | 1,927  | 12   | WV Driver's License Divisi   |
| West Valley City | Residential  | 329-015  | 21043290150000   | 679,915  |   | 8,318   | 1,764  | 13   | Empty lot  |
| West Valley City | Commercial   | 376-024  | 21043760240000   | 20,871   |   | 9   | 103  | 12   |  |
| West Valley City | Residential  | 456-002  | 15334560020000   | 9,120  |   |   | 64   |  |  |
| West Valley City | Residential  | 456-003  | 15334560030000   | 9,124  |   | 57  | 910  | 16   |  |
|                  | City<br>West Valley City | CityParcel TypeWest Valley CityResidentialWest Valley CityResidential | CityParcel TypeParcel Short IDWest Valley CityResidential131-008West Valley CityResidential131-009West Valley CityResidential131-010West Valley CityResidential131-011West Valley CityResidential131-012West Valley CityResidential131-013West Valley CityResidential131-013West Valley CityResidential131-014West Valley CityResidential131-015West Valley CityResidential131-016West Valley CityResidential131-017West Valley CityResidential182-016West Valley CityResidential182-017West Valley CityResidential182-017West Valley CityResidential132-014West Valley CityResidential329-014West Valley CityResidential329-015West Valley CityResidential376-024West Valley CityResidential456-002West Valley CityResidential456-003 | CityParcel TypeParcel Short IDParcel Assessor IDWest Valley CityResidential131-00821041310080000West Valley CityResidential131-00921041310090000West Valley CityResidential131-01021041310100000West Valley CityResidential131-01121041310100000West Valley CityResidential131-01221041310110000West Valley CityResidential131-01221041310120000West Valley CityResidential131-01321041310130000West Valley CityResidential131-01321041310130000West Valley CityResidential131-01521041310150000West Valley CityResidential131-01521041310160000West Valley CityResidential131-01721041310170000West Valley CityResidential131-01721041310170000West Valley CityResidential182-01615331820160000West Valley CityResidential182-01715331820170000West Valley CityResidential182-02121041820210000West Valley CityResidential329-01421043290140000West Valley CityResidential329-01521043290150000West Valley CityResidential329-01521043290150000West Valley CityResidential329-01521043290150000West Valley CityResidential329-01521043290150000West Valley CityResidential329-01521043290150000 </td <td>CityParcel TypeParcel Short IDParcel Assessor IDParcel Area<br/>(SQFT)West Valley CityResidential131-008210413100800008,844West Valley CityResidential131-009210413100900008,841West Valley CityResidential131-010210413101000008,833West Valley CityResidential131-010210413101000008,833West Valley CityResidential131-01121041310100008,827West Valley CityResidential131-012210413101200008,824West Valley CityResidential131-013210413101300008,817West Valley CityResidential131-014210413101400008,814West Valley CityResidential131-015210413101500008,931West Valley CityResidential131-016210413101600008,922West Valley CityResidential131-017210413101700008,961West Valley CityResidential182-0161533182016000010,011West Valley CityResidential182-017153318201700009,878West Valley CityResidential182-02121041320100008,787West Valley CityResidential182-01521043290140000822,417West Valley CityCommercial251-0031533251003000091,996West Valley CityResidential329-01421043290150000679,915West Valley CityResidential329-01521043290150000</td> <td>CityParcel TypeParcel Short IDParcel Assessor IDParcel Area<br/>(SQFT)Full Acquisition<br/>(SQFT)West Valley CityResidential131-008210413100800008,844West Valley CityResidential131-010210413101000008,843West Valley CityResidential131-011210413101000008,833West Valley CityResidential131-01221041310100008,827West Valley CityResidential131-01221041310120008,824West Valley CityResidential131-01321041310130008,817West Valley CityResidential131-014210413101400008,814West Valley CityResidential131-015210413101500008,931West Valley CityResidential131-017210413101700008,961West Valley CityResidential131-017210413101700008,961West Valley CityResidential182-0161533182016000010,011West Valley CityResidential182-017153318201700009,878West Valley CityResidential182-0131533251003000091,996West Valley CityResidential329-01421043290140000822,417West Valley CityResidential329-01521043290150000679,915West Valley CityResidential329-01521043290150000679,915West Vall</td> <td>CityParcel TypeParcel Short IDParcel Assessor IDParcel Area<br/>(SQFT)Full Acquisition<br/>(SQFT)Partial Acquisition<br/>(SQFT)West Valley CityResidential131-00821041310080008,844West Valley CityResidential131-01021041310100008,833West Valley CityResidential131-01021041310100008,833West Valley CityResidential131-01121041310100008,827West Valley CityResidential131-01221041310120008,824West Valley CityResidential131-01321041310130008,814West Valley CityResidential131-01521041310150008,931West Valley CityResidential131-01621041310160008,931West Valley CityResidential131-01721041310170008,961222West Valley CityResidential131-01721041310170008,961222West Valley CityResidential182-01715331820170009,878144West Valley CityResidential182-01715331820170009,878144West Valley CityResidential182-01221041320140008,787108West Valley CityResidential182-0152104329014000822,417580West Valley CityResidential329-0142104329014000822,417580West Valley CityCommercial329-0152104329015000<td< td=""><td>CityParcel TypeParcel Short IDParcel Assessor IDParcel Area<br/>(SQFT)Full Acquisition<br/>(SQFT)Partial Acquisition<br/>(SQFT)Temporary<br/>Construction<br/>Easement (SQFT)West Valley CityResidential131-008210413100800008,844681West Valley CityResidential131-00921041310090008,841667West Valley CityResidential131-010210413101000008,8276660West Valley CityResidential131-012210413101100008,8276660West Valley CityResidential131-012210413101300008,8246670West Valley CityResidential131-013210413101300008,8276660West Valley CityResidential131-014210413101300008,8176660West Valley CityResidential131-015210413101500008,9316673West Valley CityResidential131-016210413101500008,9316644West Valley CityResidential131-017210413101500008,932638West Valley CityResidential131-017210413101500008,922638West Valley CityResidential132-017153182016000010,0112262644West Valley CityResidential182-01715331820150000<!--</td--><td>CityParcel TypeParcel Short IDParcel Assessor IDParcel Areas<br/>(SAFT)Full AcquisitionPartial AcquisitionTemporary<br/>Construction<br/>Easement (SAFT)ThumbailWest Valley CityResidential131-008210413100800008,844681West Valley CityResidential131-009210413100900008,844667West Valley CityResidential131-010210413101000008,8336667West Valley CityResidential131-012210413101200008,8276667West Valley CityResidential131-012210413101200008,8276667West Valley CityResidential131-012210413101200008,8246667West Valley CityResidential131-013210413101300008,8276667West Valley CityResidential131-014210413101400008,828<!--</td--></td></td></td<></td> | CityParcel TypeParcel Short IDParcel Assessor IDParcel Area<br>(SQFT)West Valley CityResidential131-008210413100800008,844West Valley CityResidential131-009210413100900008,841West Valley CityResidential131-010210413101000008,833West Valley CityResidential131-010210413101000008,833West Valley CityResidential131-01121041310100008,827West Valley CityResidential131-012210413101200008,824West Valley CityResidential131-013210413101300008,817West Valley CityResidential131-014210413101400008,814West Valley CityResidential131-015210413101500008,931West Valley CityResidential131-016210413101600008,922West Valley CityResidential131-017210413101700008,961West Valley CityResidential182-0161533182016000010,011West Valley CityResidential182-017153318201700009,878West Valley CityResidential182-02121041320100008,787West Valley CityResidential182-01521043290140000822,417West Valley CityCommercial251-0031533251003000091,996West Valley CityResidential329-01421043290150000679,915West Valley CityResidential329-01521043290150000 | CityParcel TypeParcel Short IDParcel Assessor IDParcel Area<br>(SQFT)Full Acquisition<br>(SQFT)West Valley CityResidential131-008210413100800008,844West Valley CityResidential131-010210413101000008,843West Valley CityResidential131-011210413101000008,833West Valley CityResidential131-01221041310100008,827West Valley CityResidential131-01221041310120008,824West Valley CityResidential131-01321041310130008,817West Valley CityResidential131-014210413101400008,814West Valley CityResidential131-015210413101500008,931West Valley CityResidential131-017210413101700008,961West Valley CityResidential131-017210413101700008,961West Valley CityResidential182-0161533182016000010,011West Valley CityResidential182-017153318201700009,878West Valley CityResidential182-0131533251003000091,996West Valley CityResidential329-01421043290140000822,417West Valley CityResidential329-01521043290150000679,915West Valley CityResidential329-01521043290150000679,915West Vall | CityParcel TypeParcel Short IDParcel Assessor IDParcel Area<br>(SQFT)Full Acquisition<br>(SQFT)Partial Acquisition<br>(SQFT)West Valley CityResidential131-00821041310080008,844West Valley CityResidential131-01021041310100008,833West Valley CityResidential131-01021041310100008,833West Valley CityResidential131-01121041310100008,827West Valley CityResidential131-01221041310120008,824West Valley CityResidential131-01321041310130008,814West Valley CityResidential131-01521041310150008,931West Valley CityResidential131-01621041310160008,931West Valley CityResidential131-01721041310170008,961222West Valley CityResidential131-01721041310170008,961222West Valley CityResidential182-01715331820170009,878144West Valley CityResidential182-01715331820170009,878144West Valley CityResidential182-01221041320140008,787108West Valley CityResidential182-0152104329014000822,417580West Valley CityResidential329-0142104329014000822,417580West Valley CityCommercial329-0152104329015000 <td< td=""><td>CityParcel TypeParcel Short IDParcel Assessor IDParcel Area<br/>(SQFT)Full Acquisition<br/>(SQFT)Partial Acquisition<br/>(SQFT)Temporary<br/>Construction<br/>Easement (SQFT)West Valley CityResidential131-008210413100800008,844681West Valley CityResidential131-00921041310090008,841667West Valley CityResidential131-010210413101000008,8276660West Valley CityResidential131-012210413101100008,8276660West Valley CityResidential131-012210413101300008,8246670West Valley CityResidential131-013210413101300008,8276660West Valley CityResidential131-014210413101300008,8176660West Valley CityResidential131-015210413101500008,9316673West Valley CityResidential131-016210413101500008,9316644West Valley CityResidential131-017210413101500008,932638West Valley CityResidential131-017210413101500008,922638West Valley CityResidential132-017153182016000010,0112262644West Valley CityResidential182-01715331820150000<!--</td--><td>CityParcel TypeParcel Short IDParcel Assessor IDParcel Areas<br/>(SAFT)Full AcquisitionPartial AcquisitionTemporary<br/>Construction<br/>Easement (SAFT)ThumbailWest Valley CityResidential131-008210413100800008,844681West Valley CityResidential131-009210413100900008,844667West Valley CityResidential131-010210413101000008,8336667West Valley CityResidential131-012210413101200008,8276667West Valley CityResidential131-012210413101200008,8276667West Valley CityResidential131-012210413101200008,8246667West Valley CityResidential131-013210413101300008,8276667West Valley CityResidential131-014210413101400008,828<!--</td--></td></td></td<> | CityParcel TypeParcel Short IDParcel Assessor IDParcel Area<br>(SQFT)Full Acquisition<br>(SQFT)Partial Acquisition<br>(SQFT)Temporary<br>Construction<br>Easement (SQFT)West Valley CityResidential131-008210413100800008,844681West Valley CityResidential131-00921041310090008,841667West Valley CityResidential131-010210413101000008,8276660West Valley CityResidential131-012210413101100008,8276660West Valley CityResidential131-012210413101300008,8246670West Valley CityResidential131-013210413101300008,8276660West Valley CityResidential131-014210413101300008,8176660West Valley CityResidential131-015210413101500008,9316673West Valley CityResidential131-016210413101500008,9316644West Valley CityResidential131-017210413101500008,932638West Valley CityResidential131-017210413101500008,922638West Valley CityResidential132-017153182016000010,0112262644West Valley CityResidential182-01715331820150000 </td <td>CityParcel TypeParcel Short IDParcel Assessor IDParcel Areas<br/>(SAFT)Full AcquisitionPartial AcquisitionTemporary<br/>Construction<br/>Easement (SAFT)ThumbailWest Valley CityResidential131-008210413100800008,844681West Valley CityResidential131-009210413100900008,844667West Valley CityResidential131-010210413101000008,8336667West Valley CityResidential131-012210413101200008,8276667West Valley CityResidential131-012210413101200008,8276667West Valley CityResidential131-012210413101200008,8246667West Valley CityResidential131-013210413101300008,8276667West Valley CityResidential131-014210413101400008,828<!--</td--></td> | CityParcel TypeParcel Short IDParcel Assessor IDParcel Areas<br>(SAFT)Full AcquisitionPartial AcquisitionTemporary<br>Construction<br>Easement (SAFT)ThumbailWest Valley CityResidential131-008210413100800008,844681West Valley CityResidential131-009210413100900008,844667West Valley CityResidential131-010210413101000008,8336667West Valley CityResidential131-012210413101200008,8276667West Valley CityResidential131-012210413101200008,8276667West Valley CityResidential131-012210413101200008,8246667West Valley CityResidential131-013210413101300008,8276667West Valley CityResidential131-014210413101400008,828 </td |

Lease Agreement / Easement

Relocation

Total Parcel Impacted030120Total Acres Impacted0.000.527.67

|    | Notes |  |
|----|-------|--|
|    |       |  |
|    |       |  |
|    |       |  |
|    |       |  |
|    |       |  |
|    |       |  |
|    |       |  |
|    |       |  |
|    |       |  |
|    |       |  |
|    |       |  |
|    |       |  |
|    |       |  |
|    |       |  |
| on |       |  |
|    |       |  |
|    |       |  |
|    |       |  |
|    |       |  |

This page intentionally left blank.

This page intentionally left blank.



# COORDINATION

# CONTENTS:

- Agency and Section 106 Coordination Letters
- Determination of Eligibility and Finding of Effect (2013)





Mr. Cory Jensen Utah State Historic Preservation Office 300 S. Rio Grande Street Salt Lake City, UT 84101

### Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Mr. Jensen,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely Autumn Hu

NEPA Project Administrator

Attachments: Project Location Map

Licesont\_nos l'accilion funt citters trans con-







Mr. Virgil W. Johnson, Chairman Confederated Tribes of the Goshute Reservation P.O. Box 6104/195 Tribal Center Rd. Ibapah, UT 84034

### Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Mr. Johnson,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely,

Autumn Hu

NEPA Project Administrator

Attachments: Project Location Map

cc: Ms. Mary Pete-Freeman, Tribal Transportation Planner





Ms. Mary Pete-Freeman, Tribal Transportation Planner Confederated Tribes of the Goshute Reservation P.O. Box 6104/195 Tribal Center Rd. Ibapah, UT 84034

### Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Ms. Pete-Freeman,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely,

Autumn Hu NEPA Project Administrator

Attachments: Project Location Map

cc: Mr. Virgil W. Johnson, Chairman

1000001-2008 12001-001-001-011535-18001-2005





UTA 669 West 200 South Salt Lake City, UT 84101

Ms. Candace Bear, Chairwoman Skull Valley Band of Goshute Indians 407 Skull Valley Rd. Skull Valley, UT 84029

### Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Ms. Bear,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely,

Autumn Hu NEPA Project Administrator

Attachments: Project Location Map



Mr. Darren Parry, Chairman Northwestern Band of Shoshone Nation 707 North Main Street Brigham City, UT 84302

### Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Mr. Parry,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely.

Autumn Hu

NEPA Project Administrator

Attachments: Project Location Map

cc: Ms. Patty Timbimboo-Madsen, Cultural and Natural Resource Manager

[367-8031/2008] [SG-14001-5004] (MD-SS-18001-5007.

1-888-RIDE-UTA www.rideuta.com

UTA

669 West 200 South

Salt Lake City, UT 84101



Ms. Patty Timbimboo-Madsen, Cultural and Natural Resource Manager Northwestern Band of Shoshone Nation 707 North Main Street Brigham City, UT 84302

### Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Ms. Timbimboo-Madsen,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely.

Autumn Hu NEPA Project Administrator

Attachments: Project Location Map

cc: Mr. Darren Parry, Chairman



Mr. Blaine Edmo, Chairman Shoshone-Bannock Tribes of the Fort Hall Reservation P.O. Box 306 Pima Dr. Fort Hall, ID 83203

### Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Mr. Edmo,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely,

Autumn Hu

NEPA Project Administrator

Attachments: Project Location Map

cc: Ms. Carolyn Smith, Cultural Resources/Tribal Heritage Office

Forestall Page.

Past11001.2001 (011535-15001-2002

1-888-RIDE-UTA www.rideuta.com



UTA

Salt Lake City, UT 84101



Ms. Carolyn Smith, Cultural Resources/Tribal Heritage Office Shoshone-Bannock Tribes of the Fort Hall Reservation P.O. Box 306 Pima Dr. Fort Hall, ID 83203

#### Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Ms. Smith,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely.

Autumn Hu NEPA Project Administrator

Attachments: Project Location Map

cc: Mr. Blaine Edmo, Chairman







Mr. Darwin St. Clair, Jr., Chairman Eastern Shoshone Tribe of the Wind River Reservation P.O. Box 538/15 North Fork Rd. Fort Washakie, WY 82514

#### Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report **Request for Agency Comments**

Dear Mr. St. Clair,

Taylorsville City-in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council-is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see http://midvalleyconnector.com/) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely,

Autumn Hu NEPA Project Administrator

Attachments: Project Location Map cc: Ms. Glenda Trosper, Director, Cultural Center Mr. Joshua Mann, Tribal Historic Preservation Officer

Pay-onal long. Exc [shoul this collect. Employee


UTA 669 West 200 South Salt Lake City, UT 84101

Ms. Glenda Trosper, Director, Cultural Center Eastern Shoshone Tribe of the Wind River Reservation P.O. Box 538/15 North Fork Rd. Fort Washakie, WY 82514

# Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Ms. Trosper,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely,

Autumn Hu NEPA Project Administrator

Attachments: Project Location Map cc: Mr. Darwin St. Clair, Jr., Chairman Mr. Joshua Mann, Tribal Historic Preservation Officer

DVEVENT TO A DOLE THE STRUCT THE STRUCT THEY





Mr. Joshua Mann, Tribal Historic Preservation Officer Eastern Shoshone Tribe of the Wind River Reservation P.O. Box 538/15 North Fork Rd. Fort Washakie, WY 82514

# Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Mr. Mann,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely,

Autumn Hu

NEPA Project Administrator

Attachments: Project Location Map cc: Mr. Darwin St. Clair, Jr., Chairman Ms. Glenda Trosper, Director, Cultural Center

Personations - Iso ruorocor difess hauroon







Mr. Luke Dunkin, Chairperson Ute Indian Tribe of the Uintah & Ouray Reservation P.O. Box 190 Fort Duchesne, UT 84026

## Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Mr. Dunkin,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely,

Autumn Hu NEPA Project Administrator

Attachments: Project Location Map

cc: Ms. Betsy Chapoose, Director, Cultural Rights & Protection



UTA Salt Lake City, UT 84101

Ms. Betsy Chapoose, Director, Cultural Rights & Protection Ute Indian Tribe of the Uintah & Ouray Reservation P.O. Box 190 Fort Duchesne, UT 84026

# Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Ms. Chapoose,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely Autumn Hu

NEPA Project Administrator

Attachments: Project Location Map

cc: Mr. Luke Dunkin, Chairperson

15(1900) 2008 - 15(11)001 2004 E015AS DODE 2015







Mr. Mertin Bow. Band Chairman Cedar Band of Paiute Indians 600 North 100 East Cedar City, UT 84721

#### Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report **Request for Agency Comments**

Dear Mr. Bow.

Taylorsville City-in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council-is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see http://midvalleyconnector.com/) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely.

Autumn Hu NEPA Project Administrator

Attachments: Project Location Map

cc: Ms. Vala Parashonts, Cultural Resources Representative

180111001 0001 001D1A \$ 18001 1002





Ms. Vala Parashonts, Cultural Resources Representative Cedar Band of Paiute Indians 600 North 100 East Cedar City, UT 84721

#### Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Ms. Parashonts,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely, Autumn Hu

NEPA Project Administrator

Attachments: Project Location Map

cc: Mr. Mertin Bow, Band Chairman

1511.90011.206.8

P311100012001-10.P5A5-130012005





Ms. Jeanine Borchardt, Band Chairwoman Indian Peaks Band of Paiute Indians 940 West 526 South Cedar City, UT 84721

#### Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Ms. Borchardt,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely Autumn Hu

NEPA Project Administrator

Attachments: Project Location Map





Mr. Patrick Charles, Band Chairman Shivwits Band of Paiute Indians 6060 West 3650 North Ivins, UT 84738

# Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Mr. Charles,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely,

Autumn Hu

NEPA Project Administrator

Attachments: Project Location Map

cc: Ms. Sabrina Redfoot, Cultural Resource Director

1101/2001 2008

1SOC14061 2004 OTEAS 18001 2001







Ms. Sabrina Redfoot, Cultural Resource Director Shivwits Band of Paiute Indians 6060 West 3650 North Ivins, UT 84738

## Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Ms. Redfoot,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached.

A cultural resource inventory is being conducted as part of this project. The Area of Potential Effects (APE) includes the existing right-of-way and all areas where permanent and temporary construction activities, acquisition of right-of-way, and long-term maintenance will occur. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South. Additionally, the APE includes buildings one property deep along the corridor to account for the potential effects of above-grade structures. A cultural resources inventory report is being prepared. Evaluation of eligibility and effect to cultural resources will be considered at that point.

We request the assistance of your agency in regards to any issues you may have relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or any other agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely

Autumn Hu NEPA Project Administrator

Attachments: Project Location Map

cc: Mr. Patrick Charles, Band Chairman







Mr. Jason Gipson Chief, Utah-Nevada Regulatory Branch US Army Corps of Engineers 533 W. 2600 S., Ste. 150 Bountiful, UT 84010

#### Midvalley Connector Bus Rapid Transit Environmental Study Report Subject: **Request for Agency Comments**

Dear Mr. Gipson,

Taylorsville City-in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council-is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see http://midvalleyconnector.com/) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South.

Environmental resources previously identified in the project area include the Jordan River, specifically as the river crosses Murray Taylorsville Road. Additionally, the project route crosses the North Jordan Canal. The existing culvert over the North Jordan Canal will likely be extended near the 4700 South and Redwood Road intersection. Although we do not anticipate impacts to jurisdictional wetlands and/or Waters of the U.S. requiring an individual Section 404 permit, efforts to identify environmental resources and potential impacts are being conducted.

We request the assistance of your agency in regards to any known resources or issues relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or another agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely Autumn Hu

NEPA Project Administrator

Attachments: Project Location Map

1511.00017.3002

1213 F-R001 2004 - 111 P-555 F-800 P-2013

Mr. Robert L. Wirthlin North Jordan Irrigation Company 4701 South 1065 West Taylorsville, UT 84123

#### Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Agency Comments

Dear Mr. Wirthlin,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South.

The project route crosses the North Jordan Canal near the 4700 South and Redwood Road intersection. Extension of the existing culvert over the North Jordan Canal is anticipated with the implementation of this project.

We request the assistance of your agency in regards to any issues with the North Jordan Canal or other resources under your jurisdiction relating to the project. We will not conduct a formal agency scoping meeting unless requested by you or another agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018,

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely Autumn Hu

NEPA Project Administrator

Attachments: Project Location Map

1-888-RIDE-UTA www.rideutg.com

UTA

669 West 200 South

Salt Lake City, UT 84101





Mr. Soren Simonsen, Executive Director Jordan River Commission P.O. Box 91095 Salt Lake City, UT 84109

#### Subject: Midvalley Connector Bus Rapid Transit Environmental Study Report Request for Comments

Dear Mr. Simonsen,

Taylorsville City—in coordination with Murray City, West Valley City, Utah Transit Authority, Utah Department of Transportation, Salt Lake Community College (SLCC), Salt Lake County, and Wasatch Front Regional Council—is preparing an Environmental Study Report (ESR) and design for a new bus rapid transit (BRT) facility. The project will extend and refine the Locally Preferred Alternative (LPA) previously identified in the 2013 Taylorsville-Murray Transit ESR. The new BRT route (referred to as the Midvalley Connector; see <a href="http://midvalleyconnector.com/">http://midvalleyconnector.com/</a>) will run from Murray Central TRAX Station to the SLCC Redwood Campus in Taylorsville, then to the West Valley Central Station. The previously identified LPA included BRT connecting the Murray Central TRAX Station with the SLCC Redwood Campus. The undertaken project now will refine the LPA and extend the route from the SLCC Redwood Campus to the West Valley Central Station. A project location map of the LPA is attached. The majority of the proposed BRT project stays within the existing roadway right-of-way, with minor exceptions at intersections and proposed station locations primarily along 4700 South.

The Jordan River Trail is a valuable resource near the project area. We request the assistance of your agency in regards to any issues or planned projects associated with the Jordan River Trail near the project vicinity. We will not conduct a formal agency scoping meeting unless requested by you or another agency. We are also available to meet with you individually upon request. A public meeting on the ESR is expected to be held in spring 2018.

Please forward your input to Angie Fellows via email (angie.fellows@jacobs.com) or mail:

Angie Fellows, Jacobs 155 North 400 West, Ste. 550 Salt Lake City, UT 84103

Sincerely,

Autumn Hu

NEPA Project Administrator

Attachments: Project Location Map

0.110001 008 13011000 000 10055 18001 9001



and in

DISHUSANSIT & UNOPUT

April 18, 2013

UTA 669 West 200 South Salt Lake City, UT 84101

Mr. Chris Hansen Preservation Planner Utah State Historic Preservation Office 300 S. Rio Grande Street Salt Lake City, UT 84101

RE: Taylorsville-Murray Transit Project, Salt Lake County, Utah – Area of Potential Effect, Determination of Eligibility and Finding of Effect

Cheis Dear Mr. Hansen,

The Utah Transit Authority (UTA) has been working with Taylorsville City, Murray City, Salt Lake County, Salt Lake Community College, the Utah Department of Transportation (UDOT), and the Wasatch Front Regional Council to complete an Environmental Study Report for the Taylorsville-Murray transit project. The proposed action includes a bus rapid transit (BRT) line that travels from the Murray City Center just north of the Intermountain Medical Center in Murray to the Murray Central TRAX station and then west to Salt Lake Community College on Redwood Road located in Taylorsville City. The Locally Preferred Alternative (LPA) for the project is shown in Figure 1. The LPA has been approved by the Taylorsville City Council, the Murray City Council, the UTA Board of Trustees, and the Wasatch Front Regional Council.

The LPA is 4.4 miles long and includes 1.5 miles of exclusive bus lane; the majority of the exclusive lane is located on 4500/4700 South. Bus only lanes will also be located at 1780 West between 4700 south and Bowling Avenue. The remaining 2.9 miles of the project will operate as mixed flow on existing roadways. The project will also include 8 new stations for the BRT line. The main purpose of the project is to provide a reliable, efficient transit connection between the Murray Central TRAX and FrontRunner stations and the Murray City Center District and the Salt Lake Community College.

As part of this undertaking, UTA has made an effort to identify historic properties that could be affected by the proposed action and to assess those effects. Although this will be a non-federally funded project, UTA would like to consult with the State Historic Preservation Office regarding this project because the bulk of the project is located on 4500/4700 South, part of State Route 266, a UDOT maintained road. As such, in accordance with Utah Code Annotated 9-8-404, we wish to consult with you in our Determination of Eligibility and Finding of Effect for the proposed project.

Two reports pertaining to historic and archaeological resources were completed for the project: one for historic buildings and one for archaeological and historic linear resources. The reports are attached (Kisman, 2012; and Lechert and Kisman, 2012). Three archaeological sites (two historic railroads and one historic canal) and 45 properties containing historic buildings were identified during the field studies. Of the 45 historic properties identified, 30 are considered eligible for the National Register of Historic Places (NHRP). The resources identified are listed in Tables 1 & 2, along with their recommended eligibility determination.

1-888-RIDE-UTA www.rideuta.com

711D



| a de la seconde la seconde la seconde seconde la second | Table 1. Docume | nted Historic Building | s by Address, Ci | ity. NRHP R | ecommendation |
|--|-----------------|------------------------|------------------|-------------|---------------|
|--|-----------------|------------------------|------------------|-------------|---------------|

| Address   | City         | Recommended<br>UDSH Rating | Recommended NRHP Eligibility   |
|---|--------------|----------------------------|--|
| 16 West 4800 South*                                 | Murray       | EC                         | Eligible   |
| 3 West 4800 South*                                  | Murray       | NC                         | Ineligible   |
| 6 East 4800 South*                                  | Murray       | NC                         | Ineligible   |
| 7 East 4800 South*                                  | Murray       | EC                         | Eligible   |
| 17 East 4800 South*                                 | Murray       | NC                         | Ineligible   |
| 20 East 4800 South*                                 | Murray       | NC                         | Ineligible   |
| 23 East 4800 South*                                 | Murray       | NC                         | Ineligible   |
| 48 East 4800 South*                                 | Murray       | EC                         | Eligible<br>Listed on the Murray City Historic Sites Register  |
| 32 West 5th Avenue*                                 | Murray       | EC                         | Eligible   |
| 22 East 5th Avenue*                                 | Murray       | EC                         | Eligible   |
| 35 East 5th Avenue*                                 | Murray       | EC                         | Eligible   |
| 65 East 5th Avenue – Building 1*                    | Murray       | EC                         | Eligible<br>Contributing to Murray Downtown Historic District  |
| 65 East 5th Avenue – Building 2*                    | Murray       | EC                         | Eligible<br>Contributing to Murray Downtown Historic District  |
| 10 West 4th Avenue*                                 | Murray       | EC                         | Eligible   |
| 28 East 4th Avenue*                                 | Murrav       | NC                         | Ineligible   |
| 32 East 4th Avenue*                                 | Murray       | EC                         | Eligible   |
| 36 Fast 4th Avenue*                                 | Murray       | NC                         | Ineligible   |
| 4869 South Box Elder Street*                        | Morray       | FC                         | Flighte  |
| 4874 South Box Elder Street*                        | Murray       | FC                         | Eligible   |
| 4907 South Box Elder Street*                        | Murray       | NC                         | Inaligible   |
| 4903 South Box Elder Street*                        | Murray       | NC                         | Ineligible   |
| 1836 South Bonlar Street*                           | Murray       | FC                         | Eligible   |
| 4843 South Poplar Street*                           | Murray       | ES                         | Eligible<br>Contributing to Murray Downtown Historic District<br>Listed on the Murray City Historic Sites Register |
| 4872 South Poplar Street*                           | Murray       | ES                         | Eligible<br>Individually listed on NRHP Listed on the Murray<br>City Historic Sites Register                       |
| 4918 South Poplar Street*                           | Murray       | EC                         | Eligible<br>Listed on the Murray City Historic Sites Register  |
| 45 East Vine Street (4924<br>South Poplar Street )* | Murray       | NC                         | Ineligible   |
| 412 West Vine Street                                | Murray       | NC                         | Ineligible   |
| 404 West Vine Street*                               | Murray       | EC                         | Eligible   |
| 370 West Vine Street                                | Murray       | EC                         | Eligible   |
| 368 West Vine Street*                               | Murray       | NC                         | Ineligible   |
| 341 West Vine Street                                | Murray       | NC                         | Ineligible   |
| 328 West Vine Street*                               | Murray       | NC                         | Ineligible   |
| 5100 Commerce Drive                                 | Murray       | EC                         | Eligible   |
| 4675 Beechwood                                      | Taylorsville | EC                         | Eligible   |
| 1625 West Hemlock Drive                             | Taylorsville | ES                         | Eligible   |
| 1615 West Hemlock Drive                             | Taylorsville | EC                         | Eligible   |
| 1601 West Hemlock Drive                             | Taylorsville | EC                         | Eligible   |
| 1591 West Hemlock Drive                             | Taylorsville | EC                         | Eligible   |
| 1579 West Hemlock Drive                             | Taylorsville | EC.                        | Eligible   |
| 1567 West Hemlock Drive                             | Taylorsville | FC                         | Flight   |
| 1555 West Hemlock Drive                             | Taylorsville | EC                         | Flight   |
| 1796 Fast Bowling Avenue                            | Taylorsville | EC                         | Fligible   |
| 4615 South 1780 West                                | Taylorsville | EC                         | Flight   |
| 4616 South 1780 West                                | Taylorsville | NC                         | Inaligible   |
| 4600 South Redwood Road                             | Taylorsville | EC                         | Fligible   |

Notes: ES = eligible/significant; EC = eligible/contributing; NC = ineligible/non-contributing \*Indicates property was previously documented.

# Table 2: Documented Archaeological and Historic Linear Resources within the APE and Eligibility Recommendation

| Site Name/Number   | Site Type              | Eligibility<br>Recommendation  |
|--|------------------------|--------------------------------|
| Denver & Rio Grande<br>Western Railroad<br>42SL000293      | Historical<br>Railroad | Eligible; Contributing segment |
| Utah Southern/Union<br>Pacific Railroad<br>Site 42SL000344 | Historical<br>Railroad | Eligible; Contributing segment |
| North Jordan Canal<br>42SL000342                           | Historical<br>Canal    | Eligible: Contributing segment |

# Determination of Eligibility

# **Historic Buildings**

For the purpose of the historic buildings survey, the proposed area of potential effect (APE) is defined as an area one parcel deep along the proposed LPA to account for noise or visual impacts to historic buildings that may occur outside the area of direct effects. The area surveyed for historic buildings encompassed all properties abutting the proposed project corridor. In all, 45 properties containing 45 primary historic buildings were previously documented. The historic buildings APE. Most of these buildings are shown in Figure 2.

Of the 45 historic buildings in the APE, 30 are recommended eligible for the NRHP, and 15 are recommended ineligible for the NRHP as a result of substantive structural modifications. One of the eligible properties is currently listed on the NRHP. This same property is also listed on the Murray City Historic Sites Register along with three other buildings. Of the eligible properties, three are contributing to the Murray Downtown Historic District. A listing of the properties, their Utah Division of State History (UDSH) rating, and their corresponding NRHP eligibility recommendations are provided in Table 1.

# Archaeological Resources

The proposed APE for archaeological and historic linear resources is equivalent to the LPA footprint. The archaeological and historic linear resources inventory involved an intensive-level pedestrian survey (2.09 hectares [5.17 acres]) and reconnaissance-level visual inspection of the project area (17.6 hectares [43.5 acres]). The survey identified areas that have been substantially paved, developed, built up, or covered with non-native materials. These areas were subject to a reconnaissance-level survey, and were visually scanned for potential archaeological resources from the closest accessible point. The remaining portion of the project area that was not paved or substantially developed was surveyed using 15-meter (50-foot) transects. All sites were documented on standard Intermountain Antiquities Computer System (IMACS) site forms. All previously recorded sites were evaluated for impacts and conditions that would affect their NRHP eligibility. As a result of the survey for archaeological and historic linear resources, three sites were updated: two historic railroads and a historic canal. The sites, as shown in Figure 2 and listed in Table 2, are the Denver & Rio Grande Western Railroad (D&RGW), the Utah Southern/Union Pacific Railroad, and the North Jordan Canal. No previously undocumented sites were identified.



Figure 2: Historic Buildings' APE





# Finding of Effect

# **No-Action Alternative**

Under the No-Action Alternative, the proposed bus rapid transit system would not be constructed or operate. The No-Action Alternative would not affect any historic or archaeological resources.

# Locally Preferred Alternative

Under this alternative, the 4.4-mile bus rapid transit system would be constructed with 1.4 miles of exclusive lane on 4500/4700 South and approximately 0.1 miles at 1780 West. The remaining portion of the project would operate on existing traffic lanes, except for the eight station locations where platforms will be constructed on the side or center of the traffic lanes. The details of the anticipated effects on individual historic and archaeological resources are provided in Tables 3 & 4. Under this alternative, we have made one finding of No Adverse Effect. Below is a summary of the anticipated effects of the LPA on historic buildings and archaeological resources.

# **Historic Buildings**

UTA finds that the LPA would result in No Historic Properties Affected for all historic buildings. This is primarily due to the limited property effects associated with the LPA. With the exception of 4700 South and 1780 West, the LPA would travel with mixed flow traffic along existing streets and would not require roadway widening. No historic building impacts or historic building acquisitions are required for the LPA, other than those described in the next paragraph for Phase II in the Murray City Center District.

Construction of the LPA would be phased. During Phase I, the LPA would run in mixed flow along Poplar Street between 4800 South and Vine Street. Murray City is planning to extend Hanauer Street from 4800 South to Vine Street as a separate project. This extension would result in the removal of two historic buildings (22 East Fifth Avenue and 32 West Fourth Avenue). Once the extension is constructed, Phase II would move the LPA from Poplar Street to mixed flow on Hanauer Street. Impacts for the extension were accounted for in the Cottonwood Street Environmental Assessment (for which the Federal Highway Administration (FHWA) issued a Finding of No Significant Impact in March 2012). A Memorandum of Agreement for Adverse Effects to historic properties was executed between your office, UDOT, and FHWA, and mitigation measures were completed in February 2012.

#### Archaeological Resources

UTA finds that the LPA would result in No Historic Properties Affected for the historic railroads identified in the APE because the project will use the existing roadway in the location of the identified segments. No excavation will occur for the LPA in the area of the historic railroads.

UTA finds that the LPA would have No Adverse Effect on the North Jordan Canal. The LPA includes exclusive lanes where the canal crosses 4700 South and the existing box culvert would most likely need to be extended 75 feet to accommodate widening. The extent of the culvert extension would be determined in final design.

If previously unidentified resources are discovered during construction of the LPA, activities in the area of discovery will immediately stop and the process outlined in 36 CFR 800.13 will be followed.

| Address                             | Nature of Impact             | Effect                            |
|-------------------------------------|------------------------------|-----------------------------------|
| 16 West 4800 South*                 | No direct or indirect effect | No Historic Properties Affected   |
| 7 East 4800 South*                  | No direct or indirect effect | No Historic Properties Affected   |
| 48 East 4800 South*                 | No direct or indirect effect | No Historic Properties Affected   |
| 32 West 5th Avenue*                 | No direct or indirect effect | No Historic Properties Affected   |
| 22 East 5th Avenue*                 | No direct or indirect effect | No Historic Properties Affected** |
| 35 East 5th Avenue*                 | No direct or indirect effect | No Historic Properties Affected   |
| 65 East 5th Avenue –<br>Building 1* | No direct or indirect effect | No Historic Properties Affected   |
| 65 East 5th Avenue –<br>Building 2* | No direct or indirect effect | No Historic Properties Affected   |
| 10 West 4th Avenue*                 | No direct or indirect effect | No Historic Properties Affected   |
| 32 East 4th Avenue*                 | No direct or indirect effect | No Historic Properties Affected** |
| 4869 South Box Elder Street*        | No direct or indirect effect | No Historic Properties Affected   |
| 4874 South Box Elder Street*        | No direct or indirect effect | No Historic Properties Affected   |
| 4836 South Poplar Street*           | No direct or indirect effect | No Historic Properties Affected   |
| 4843 South Poplar Street*           | No direct or indirect effect | No Historic Properties Affected   |
| 4872 South Poplar Street*           | No direct or indirect effect | No Historic Properties Affected   |
| 4918 South Poplar Street*           | No direct or indirect effect | No Historic Properties Affected   |
| 404 West Vine Street*               | No direct or indirect effect | No Historic Properties Affected   |
| 370 West Vine Street                | No direct or indirect effect | No Historic Properties Affected   |
| 5100 Commerce Drive                 | No direct or indirect effect | No Historic Properties Affected   |
| 4675 Beechwood                      | No direct or indirect effect | No Historic Properties Affected   |
| 1625 West Hemlock Drive             | No direct or indirect effect | No Historic Properties Affected   |
| 1615 West Hemlock Drive             | No direct or indirect effect | No Historic Properties Affected   |
| 1601 West Hemlock Drive             | No direct or indirect effect | No Historic Properties Affected   |
| 1591 West Hemlock Drive             | No direct or indirect effect | No Historic Properties Affected   |
| 1579 West Hemlock Drive             | No direct or indirect effect | No Historic Properties Affected   |
| 1567 West Hemlock Drive             | No direct or indirect effect | No Historic Properties Affected   |
| 1555 West Hemlock Drive             | No direct or indirect effect | No Historic Properties Affected   |
| 1796 East Bowling Avenue            | No direct or indirect effect | No Historic Properties Affected   |
| 4615 South 1780 West                | No direct or indirect effect | No Historic Properties Affected   |
| 4600 South Redwood Road             | No direct or indirect effect | No Historic Properties Affected   |

Table 3: Project Effect on NRHP Eligible Historic Buildings

\*Indicates property was previously documented. \*\*Impacts from Hanauer Street extension were addressed in Memorandum of Agreement for Cottonwood Street Environmental Assessment in February 2012.

Table 4: Project Effect on Documented Archaeological and Historic Linear Resources

| Site Name/Number                                      | Nature of Impact  | Effect                             |
|---|---|------------------------------------|
| Denver & Rio Grande Western<br>Railroad<br>42SL000293 | No direct or indirect effect  | No Historic Properties<br>Affected |
| Utah Southern/Union<br>Pacific Railroad<br>42SL000344 | No direct or indirect effect  | No Historic Properties<br>Affected |
| North Jordan Canal<br>42SL000342                      | Existing culvert may be extended 75 feet to accommodate roadway widening. | No Adverse Effect                  |

#### Concurrence

We request that you review this document and the attached reports, and, providing you agree with the determination of eligibility and the finding of effect for the proposed project, provide your written concurrence. If you have any questions or would like more information, please contact me at 801-741-8858. Thank you for your time and assistance in this effort.

Sincerely,

Patti Garver, P.E. Environmental Specialist

Enclosures

Cultural Resources Inventory of the Murray-Taylorsville BRT Project, Salt Lake County, Utah A Selective Reconnaissance-Level Survey of Architectural Resources for the

Murray-Taylorsville BRT Project, Salt Lake County, Utah

cc: Robert Miles, UDOT Janelle Ericson, UTA Document Control

9



# REFERENCES

- American Express. 2018. Personal communication between Scott Tabish, American Express, and Jessica Tracy, Jacobs Engineering, regarding American Express employment numbers and building capacity. April 18.
- Avenue Consultants. 2017. Midvalley Connector 2017 AM and PM Peak Hour Level of Service (LOS) Results.
- Avenue Consultants. 2018. Midvalley Connector BRT Estimated Opening Year (2021) Ridership. February 18.
- **Certus Environmental Solutions.** 2017. A Cultural Resource Assessment for the Midvalley Connector Transit Project, Salt Lake County, Utah. Prepared by Sheri Murray Ellis, MS, RPA. Certus Environmental Solutions, LLC. September 2017.
- **Certus Environmental Solutions.** 2018. An Addendum Cultural Resources Assessment for the Midvalley Connector Transit Project – Segment 1, Salt Lake County, Utah. Prepared by Sheri Murray Ellis, MS, RPA. Certus Environmental Solutions, LLC. November 2018.
- City of Taylorsville. 2006. Taylorsville General Plan. Adopted November 2006.
- City of Taylorsville. 2015. Taylorsville Expressway BRT Master Plan. Adopted September 2015.
- **Environmental Laboratory.** 1987. Corp of Engineers Wetlands Delineation Manual, Technical Report YL-87-1. U.S. Army Corps of Engineers, Waterways Experiment Station, Vicksburg, MS, 1987.
- [EPA] U.S. Environmental Protection Agency. 2017. Superfund Site Database. Available at: https://cumulis.epa. gov/supercpad/CurSites/srchsites.cfm. Accessed November 2017.
- [EPA] U.S. Environmental Protection Agency. 2018. Utah Nonattainment/Maintenance Status by Year for All Criteria Pollutants. Accessed March 2018.
- **Federal Highway Administration.** 2017. Highway Traffic Noise Analysis and Abatement Policy and Guidance. Noise Fundamentals. Updated August 24, 2017. Accessed November 2018.
- [FTA] Federal Transit Administration. 2006. Transit Noise and Vibration Impact Assessment. May 2006. FTA-VA-90-1003-06.
- [FTA] Federal Transit Administration. 2007. Noise Impact Assessment Spreadsheet. July 3, 2007.
- [FTA] Federal Transit Administration. 2018. Noise Impact Assessment for the Midvalley Connector Project. Jacobs Engineering Group. October 2018.
- **Governor's Office of Planning and Budget.** 2012. Demographic and Economic Projections 2010 2060. https://gomb.utah.gov/budget-policy/demographic-economic-analysis/. Accessed August 2017.
- Home Facts. No Date. Superfund Sites. Available at: https://www.homefacts.com/county/Utah/Salt-Lake-County. html Accessed March 2018.
- Institute for Transportation Development and Policy. 2013. More Development for Your Transit Dollar—An Analysis of 21 North American Transit Corridors. November.
- Intermountain Healthcare. No Date. Intermountain Medical Center History. Available at: https:// intermountainhealthcare.org/locations/intermountain-medical-center/hospital-information/history/. Accessed December 2017.
- Jacobs. 2018a. Midvalley Connector Noise Analysis Technical Report. November.
- Jacobs. 2018b. Midvalley Connector Natural Resources Technical Report. March.

# Murray City. 2017. 2017 Murray General Plan.

- [SLCC] Salt Lake Community College. 2017. Personal communication between Rick Medley, SLCC, and Riley Shewak, Jacobs Engineering, regarding SLCC parking services.
- [SLCC] Salt Lake Community College. 2018a. Personal communication between Matt Toone, SLCC, and Jessica Tracy, Jacobs Engineering, regarding SLCC Redwood campus student enrollment. March.
- [SLCC] Salt Lake Community College. 2018b. Comprehensive Facilities Master Plan.
- [SWCA] SWCA Environmental Consultants. 2012a. A Selective Reconnaissance-Level Survey of Architectural Resources for the Murray-Taylorsville BRT Project, Salt Lake County, Utah. Prepared by SWCA Environmental Consultants. November 2012.
- [SWCA] SWCA Environmental Consultants. 2012b. Cultural Resource Inventory of the Murray-Taylorsville BRT Project, Salt Lake County, Utah. November 2012.
- [SWCA] SWCA Environmental Consultants. 2012c. Natural Resources Technical Memorandum for the Taylorsville Murray Transit Environmental Study. Prepared for: Utah Transit Authority. November 2012.
- [SWCA] SWCA Environmental Consultants. 2013. Delineation of Wetlands and Other Waters of the U.S. for Taylorsville Murray Transit, Salt Lake County, Utah. Prepared for: Utah Transit Authority. April 2013.
- Transportation Research Board. 2010. Highway Capacity Manual.
- [UDEQ] Utah Department of Environmental Quality. 2018. Utah Environmental Interactive Map, Air Monitoring by Station Data. Accessed May 2018.
- [UDEQ] Utah Department of Environmental Quality. 2013. Jordan River Total Maximum Daily Load Water Quality Study – Phase 1. Prepared by Cirrus Ecological Solutions, LC. Accessed March 2018.
- [UDEQ] Utah Department of Environmental Quality. 2017. Public Water System Inventory Report, Taylorsville-Bennion Improvement District. Administrative contact - Kevin Warren Fenn. Accessed March 2018.
- [UDOT] Utah Department of Transportation. 2017a. Salt Lake County West Side Bicycle Connectivity Study.
- [UDOT] Utah Department of Transportation. 2017b. UDOT's Noise Abatement Policy. Revised June 15, 2017.
- [UDWQ] Utah Division of Water Quality. 2016. Final Integrated Report.
- [USACE] U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/ EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Census Bureau. 2015. 2011–2015 American Community Survey 5-Year Estimate. Accessed September 2017.
- **U.S. Department of Health and Human Services.** 2017. 2017 Poverty Guidelines. Available at: https://aspe.hhs. gov/2017-poverty-guidelines#guidelines. Accessed January 2018.
- **U.S. Fish and Wildlife Service.** 2013. Endangered and Threatened Wildlife and Plants; Proposed Threatened Status for the Western Distinct Population Segment of the Yellow-billed Cuckoo (Coccyzus americanus). Federal Register Vol. 78, No. 192. Dated October 3, 2013.
- **U.S. Fish and Wildlife Service.** 2017. Information for Planning and Conservation (IPaC) online search. Available at: https://ecos.fws.gov/ipac/.Report dated: November 8, 2017.

- [UTA] Utah Transit Authority. 2010. Standard Operating Procedures No. 002, Noise Assessment and Mitigation Procedures. Revised April 13, 2018.
- [UTA] Utah Transit Authority. 2013. Taylorsville-Murray Transit Environmental Study Report. Signed May 1, 2013.
- [UTA] Utah Transit Authority. 2017a. Salt Lake County System Map. Available at: https://www.rideuta.com/Rider-Tools/Schedules-and-Maps. December.
- [UTA] Utah Transit Authority. 2017b. Midvalley Connector Ridership (Average Daily Boardings), August 2017.
- Utah Air Quality Board. 2014. Utah State Implementation Plan (SIP). Accessed January 2018.
- **Utah Department of Agriculture and Food.** 2017. Utah Noxious Weed Act. Rule R68-9. Effective November 1, 2017. Available at: https://rules.utah.gov/publicat/code/r068/r068-009.htm
- **Utah Division of Wildlife Resources.** 2017. State of Utah Department of Natural Resources Utah Sensitive Species List. Updated November 1, 2017. Available at: https://dwrcdc.nr.utah.gov/ucdc/
- **Utah Natural Heritage Program.** 2018. Letter received from the UNHP dated February 1, 2018, Sarah Lindsay, UNHP, to Dan Soucy, Jacobs Engineering.
- **Utah State Board of Education.** 2018. School Details: American Institute of Utah 2017-2018 School Year. Available: https://datagateway.schools.utah.gov/Schools/1J800. Accessed May 2018.
- West Valley City. 2012. Fairbourne Station Vision. Adopted September 11, 2012.
- West Valley City. 2015. Vision West 2035: West Valley City General Plan Update.
- [WFRC] Wasatch Front Regional Council. 2015. Adopted 2015-2040 Regional Transportation Plan. Available at: http://wfrc.org/vision-plans/regional-transportation-plan/. Accessed August 2017.
- [WFRC] Wasatch Front Regional Council. 2017. Draft Wasatch Choice 2050 Vision. Available at: https:// wasatchchoice.com/. Accessed August 2017.
- [WFRC] Wasatch Front Regional Council. 2018. 2018-2023 Transportation Improvement Program Projects. Accessed January 2018.