

# FINAL ENVIRONMENTAL IMPACT STATEMENT

## Executive Summary



### ES-1 INTRODUCTION

This chapter provides a summary of the Final Environmental Impact Statement (Final EIS).

The Federal Highway Administration (FHWA), in cooperation with the Nevada Department of Transportation (NDOT) and the Regional Transportation Commission of Washoe County (RTC), prepared this EIS to identify and evaluate transportation improvements along the Pyramid Highway (State Highway 445) corridor in the Northeast Truckee Meadows area.

RTC is the project sponsor and overseeing the environmental study and the preliminary engineering performed as part of the study. The party responsible for development of final design plans, securing bids, selecting a contractor, and construction oversight will be determined at a later date in consultation between RTC and NDOT. Because improvements would occur within NDOT right-of-way, and the proposed United States (US) 395 Connector would be an NDOT highway and Pyramid Highway is an NDOT highway, NDOT has a major role in this project, including oversight of the National Environmental Policy Act (NEPA) process, under which this Final EIS has been prepared. The final design will adhere to NDOT standards

and the project will comply with NDOT policy. NDOT also will lead and/or oversee the right-of-way acquisition process to ensure compliance with the Uniform Relocation Act. FHWA has oversight responsibility on the entire process because federal funds are involved.

The improvements considered in this Final EIS address the regional movement of people and goods; relieve traffic congestion on Pyramid Highway; and provide improved east-west community connectivity between US Highway 395 (US 395), Pyramid Highway, and Vista Boulevard.

The Study Area is located in Washoe County, Nevada (Figure ES-1). It covers portions of unincorporated Washoe County and portions of the cities of Sparks and Reno. The Study Area surrounds the existing Pyramid Highway from Calle de la Plata at the northern end to Queen Way at the southern end. The Study Area also includes the area where portions of the proposed roadway connecting existing Pyramid Highway and US 395 (called the US 395 Connector) may be located, extending from near Dandini Boulevard on the west end to Vista Boulevard on the east end (Figure ES-2).



## ES-2 STUDY BACKGROUND

The RTC's 2015 Regional Transportation Plan adopted in 1997 indicated that forecasted traffic volumes identify a need to widen Pyramid Highway from the existing four lanes to six to eight lanes. In the spring of 1998, the RTC began discussing the Pyramid Highway widening project with the City of Sparks and neighboring communities. In the Northeast Truckee Meadows area, which includes the

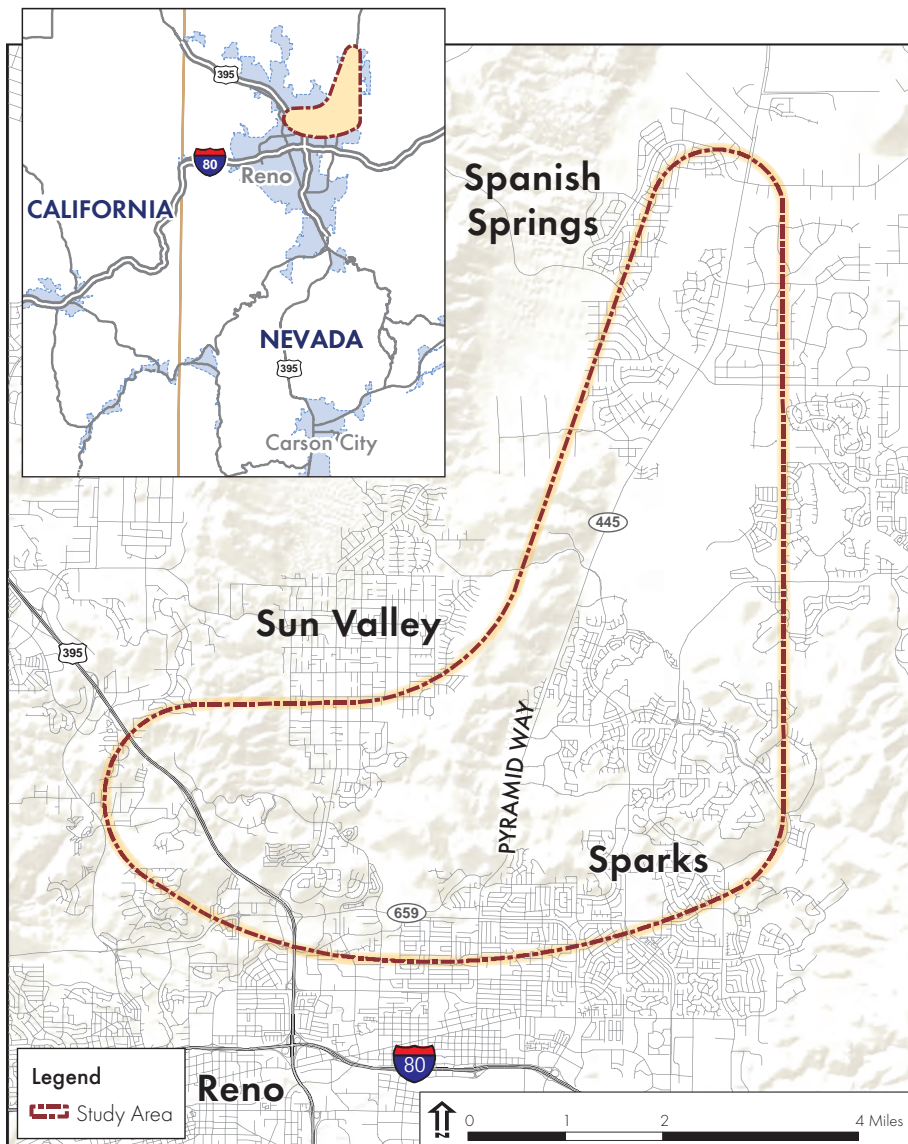
communities of Sparks, Spanish Springs, Sun Valley and lands immediately surrounding them, populations were expected to greatly increase. Further, population growth in larger Washoe County and employment growth in the southern portions of Washoe County were increasing demand for north-south travel. While recognizing that rapid growth in this area of Washoe County called for a solution to traffic congestion, the City of Sparks and the surrounding communities expressed great concern about community impacts from the planned widening. In response to the RTC's plan to widen Pyramid Highway, and in view of the growth patterns, the City of Sparks requested that the RTC evaluate long-range transportation solutions for the broader region through 2030.

In the summer of 1998, the Pyramid Highway corridor Citizens' Steering Committee was formed to study and make recommendations for improvements in the Northeast Truckee Meadows area, with specific lane recommendations for the Pyramid Highway through the City of Sparks urban core. The Citizens' Steering Committee included representatives from citizen and neighborhood advisory boards, private development, and local governments. They developed the vision and objectives for the Pyramid Highway Corridor Management Plan (CMP), approved by the RTC in 2002. This CMP formed the basis for inclusion of the improvement project in RTC's current regional transportation plan at the time, which was the 2030 Regional Transportation Plan (2030 RTP).

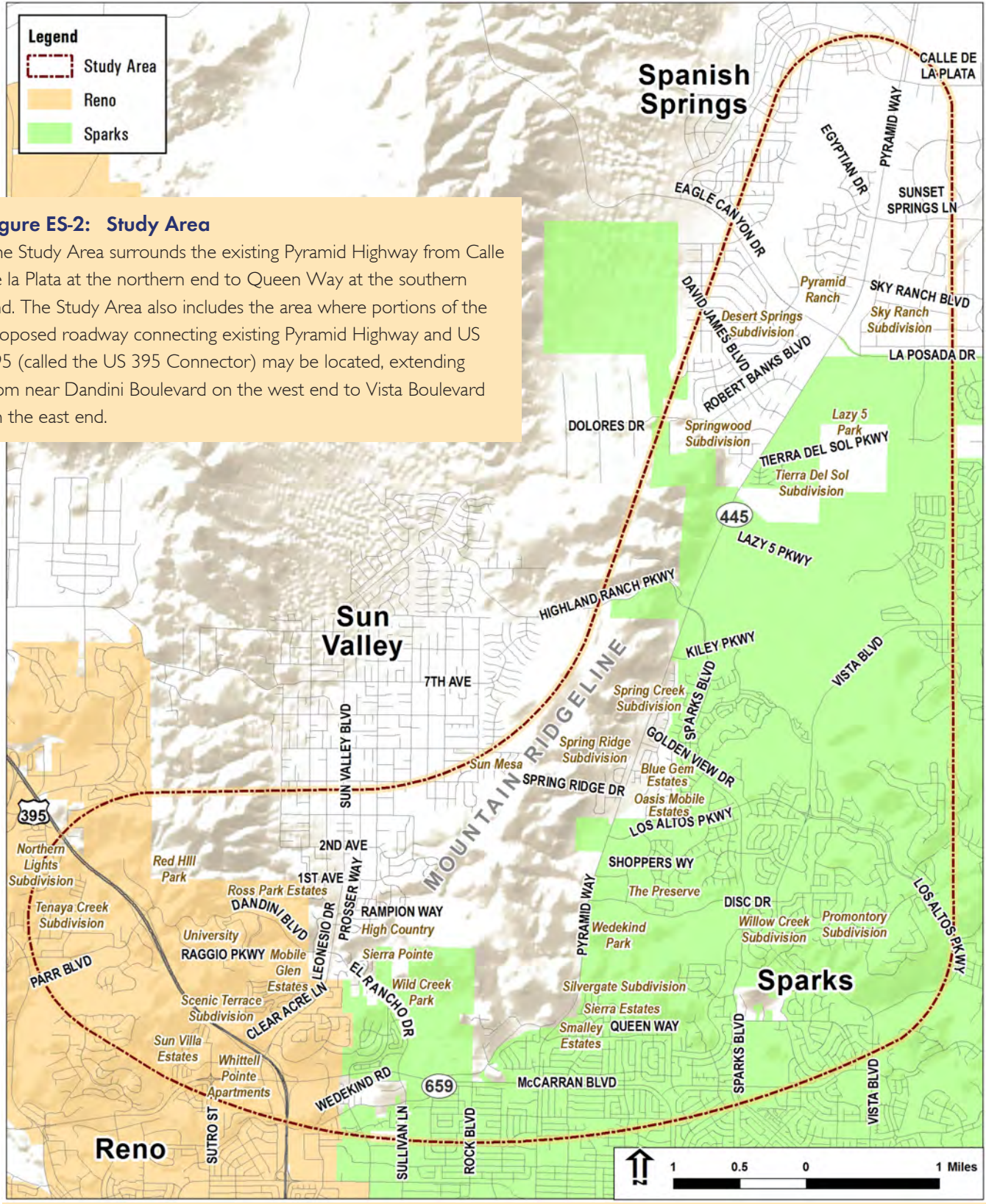
Following the adoption of the CMP, the RTC worked with FHWA and NDOT to identify funding sources and lay the groundwork for initiation of this EIS.

**Figure ES-1: Vicinity Map**

The Study Area is located in Washoe County, Nevada. It covers portions of unincorporated Washoe County and portions of the cities of Sparks and Reno.







**Figure ES-2: Study Area**

The Study Area surrounds the existing Pyramid Highway from Calle de la Plata at the northern end to Queen Way at the southern end. The Study Area also includes the area where portions of the proposed roadway connecting existing Pyramid Highway and US 395 (called the US 395 Connector) may be located, extending from near Dandini Boulevard on the west end to Vista Boulevard on the east end.



### ES-3 PURPOSE AND NEED

The purpose and needs for this Study are based partly on information developed for the CMP. The project objective is to implement a plan that will maintain and improve the Pyramid Highway corridor as a viable transportation route for the Sparks urban core and the growing Northeast Truckee Meadows community. FHWA, NDOT, and the RTC identified multiple statements of purpose in coordination with project stakeholders in support of this objective. The statements of purpose are tied to a recognized need within the Pyramid Highway Corridor, and are described below.

### ES-4 BLM PURPOSE AND NEED

The Bureau of Land Management (BLM) is serving as a cooperating agency on this project because the BLM has jurisdiction over land within the Study Area and will need to authorize any required land appropriations under their jurisdiction. This requires the BLM to conduct an environmental study under NEPA. To streamline the environmental study process, cooperating agency responsibilities under NEPA are addressed under this EIS. BLM's purpose for this project is to determine if certain public lands should be appropriated for federal highway uses.

#### Purpose and Need

**Purpose:** Provide improvements to serve existing and future growth.

**Need:** Serve forecasted population and employment growth in the Cities of Reno and Sparks and unincorporated Washoe County, which have experienced considerable growth in population and employment. The projected increase in population and employment in the region will result in a commensurate increase in vehicle miles traveled, and continue to strain the region's transportation network. Improvements are needed to respond to this recent and forecasted growth.

**Purpose:** Alleviate existing congestion problems on Pyramid Highway.

**Need:** The level of service (LOS) at some Study Area intersections is currently standard during peak hours, and numerous intersections are anticipated to operate at LOS F during peak hours in year 2035. Analysis indicates that by 2035 the roadway network will not be able to handle the predicted travel demand. The inadequate transportation network serving the Study Area results in congestion at intersections and on roadways. These conditions will continue to worsen without capacity improvements.

**Purpose:** Provide direct and efficient travel routes to address existing travel inefficiencies

**Need:** The existing roadway network lacks east-west connectivity in the Study Area, and north-south connectivity is inefficient. This lack of adequate travel corridors has created inefficient and indirect travel routes, resulting in out-of-direction travel and traffic overloading on roadways with insufficient capacity.

**Purpose:** Respond to regional and local plans.

**Need:** Numerous local plans cite a need for transportation improvements to help meet land use and transportation goals, and include plans to improve Pyramid Highway and east-west connectivity, and provide multimodal options.





## ES-5 ALTERNATIVES CONSIDERED

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The Study team carried out an extensive process to identify a reasonable range of alternatives to meet the Purpose and Need of the project. Alternatives were developed through a comprehensive public and agency coordination process combined with thorough environmental and engineering analyses. The range of alternatives considered in the first three levels of screening fell into nine general categories, with several options considered under each, as described below:

- Two arterial expansion alternatives
- Nine north-south alignments
- Seven east-west alignments
- Six different cross-sections
- Over 20 interchange types and locations
- Bicycle and pedestrian alternatives consistent with area plans
- Three transit alternatives
- Seven lane types
- Eight congestion management strategies

Alternatives that advanced through the alternatives screening process were combined into the four build alternatives that were fully analyzed in the Draft and Final EISs. For the Draft EIS, these build alternatives were designed to freeway standards. After the Draft EIS was distributed, updated traffic data became available that indicated reductions in forecasted traffic. This led to the four build alternatives being redesigned to arterial standards, which reduced impacts and project costs. A No-Action Alternative also was fully evaluated and used as a baseline comparison for environmental analysis purposes.

## ES-6 ALTERNATIVES FULLY EVALUATED IN THE DRAFT EIS

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The No-Action Alternative evaluated in the Draft EIS assumed completion of the reasonably foreseeable transportation, development, and infrastructure projects that were already in progress; were programmed by NDOT, Washoe County, the cities of Reno and Sparks; or were included in the fiscally constrained 2035 RTP. The No-Action Alternative was used as a baseline comparison for environmental analysis purposes.

Each of the four Freeway Alternatives evaluated in the Draft EIS would provide similar improvements along Pyramid Highway from Queen Way north to Calle de la Plata Drive. However, the Freeway Alternatives differed regarding alignments for the US 395 Connector, interchange locations, and cross-sections through much of the Study Area.

Each Freeway Alternative included a new freeway facility from Pyramid Highway to US 395, through the Sun Valley area. Both the US 395 Connector and Pyramid Highway north to Eagle Canyon Drive/La Posada Drive would be constructed as limited-access freeway facilities, with interchanges at major intersecting roadways. Pyramid Highway was proposed as



*View from Sun Valley Boulevard south of Rampion Way, looking north*

a primary arterial highway from Eagle Canyon Drive/La Posada Drive to Calle de la Plata Drive. The US 395 service interchange at Parr Boulevard would be reconfigured to accommodate a new system interchange for the US 395 Connector. Raggio Parkway and Dandini Boulevard would be realigned in this area. All Freeway Alternatives included construction of auxiliary lanes on US 395 between the new US 395 Connector and McCarran Boulevard (State Highway 659).

Each Freeway Alternative included the construction of an off-street shared-use path along Pyramid Highway between Calle de la Plata and Disc Drive. This path would continue west from Disc Drive to Sun Valley Boulevard along the US 395 Connector alignment for each Freeway Alternative. The Freeway Alternative also included regional bus service along Pyramid Highway consistent with the service standards of RTC, and Intelligent Transportation Systems.

The three design elements that differed amongst the Freeway Alternatives included the US 395 Connector alignment, the Sun Valley crossing location, and the Sun Valley interchange location. Table ES-1 summarizes these major design elements. For the US 395 Connector, the on alignment would connect west of Sun Valley to existing Disc Drive. The off

alignment would connect to Pyramid Highway farther north near Highland Ranch Parkway and run just below the ridgeline separating Sun Valley and Spanish Springs. The ridge alignment generally would follow this ridgeline before dropping to connect to Pyramid Highway.

## ES-7 PROJECT CHANGES AFTER THE DRAFT EIS

After the August 2013 Draft EIS was issued, FHWA, NDOT, and RTC reviewed and considered all public and agency comments received on the Draft EIS. Working with the Technical Advisory Committee (TAC), the Lead Agencies identified Freeway Alternative 3 as the Preferred Alternative in early 2014.

The traffic analysis presented in the Draft EIS was conducted in 2011 and based on the RTC Regional Travel Demand Model at that time. This model provided traffic and transit forecasts based on the adopted RTC Interim Consensus Forecast (ICF). After the Draft EIS was finalized, the Truckee Meadows Regional Planning Agency completed a new Consensus Forecast, with updated population and employment projections, that replaced the ICF. Also, the RTC had started preparing a new regional travel demand model. As a result, the traffic analysis conducted for the Draft EIS was

**Table ES-1: Major Design Elements of the Freeway Alternatives**

Freeway Alternative	US 395 Connector	Sun Valley Crossing	Sun Valley Interchange
<b>Alternative 1</b>	Off Alignment	North Crossing	At Sun Valley Blvd.
<b>Alternative 2</b>	On Alignment	South Crossing	At Sun Valley Blvd.
<b>Alternative 3</b>	Ridge Alignment	South Crossing	West of Sun Valley
<b>Alternative 4</b>	On Alignment	North Crossing	West of Sun Valley



reevaluated. The reanalysis showed a reduction in forecasted traffic volumes for the Study area. The reduction in traffic forecasts was significant enough for the Study team to undergo a process to validate the project's purpose and need and previous alternatives screening.

Next, the Study team completed a detailed reevaluation of the four Freeway Alternatives evaluated in the Draft EIS. The reduced traffic demand changed the type of highway facility needed; the Study team concluded that an arterial facility in lieu of a freeway facility could provide adequate capacity for the projected traffic volumes. Therefore, the Study team redesigned the Freeway Alternatives to arterial facilities. This effort resulted in an overall reduction in the design footprint of the build ("freeway") alternatives that were fully evaluated in the Draft EIS. The reduced footprints led to corresponding reductions in environmental impacts and project costs.

## ES-8 ALTERNATIVES FULLY EVALUATED IN THIS FINAL EIS

### No-Action Alternative

The No-Action Alternative evaluated in the Final EIS is similar to the No-Action Alternative studied in the Draft EIS, described above. These improvements would be made whether or not any other improvements are made in conjunction with this Study and were included as the base case for all analyses, including traffic analyses. Under the No-Action Alternative, improvements within the Study Area would consist of planned roadway modifications and additions. The improvements would be locally or regionally funded, and are reasonably foreseeable.

### Arterial Alternatives

The alignments of the Arterial Alternatives evaluated in this Final EIS are the same as the four Freeway Alternatives studied in the Draft EIS. Design modifications made after the Draft EIS resulted in project changes such as overall narrowing of the alternative footprints and elimination of certain previously-proposed grade-separated interchanges and all frontage roads along Pyramid Highway.

The Arterial Alternatives are summarized in the following sections. The major elements of the Arterial Alternatives are the same as those described for the Freeway Alternatives (see Table ES-1). Please refer to Chapter 2.0 *Alternatives* for more details.

### Elements Common to all Four Arterial Alternatives

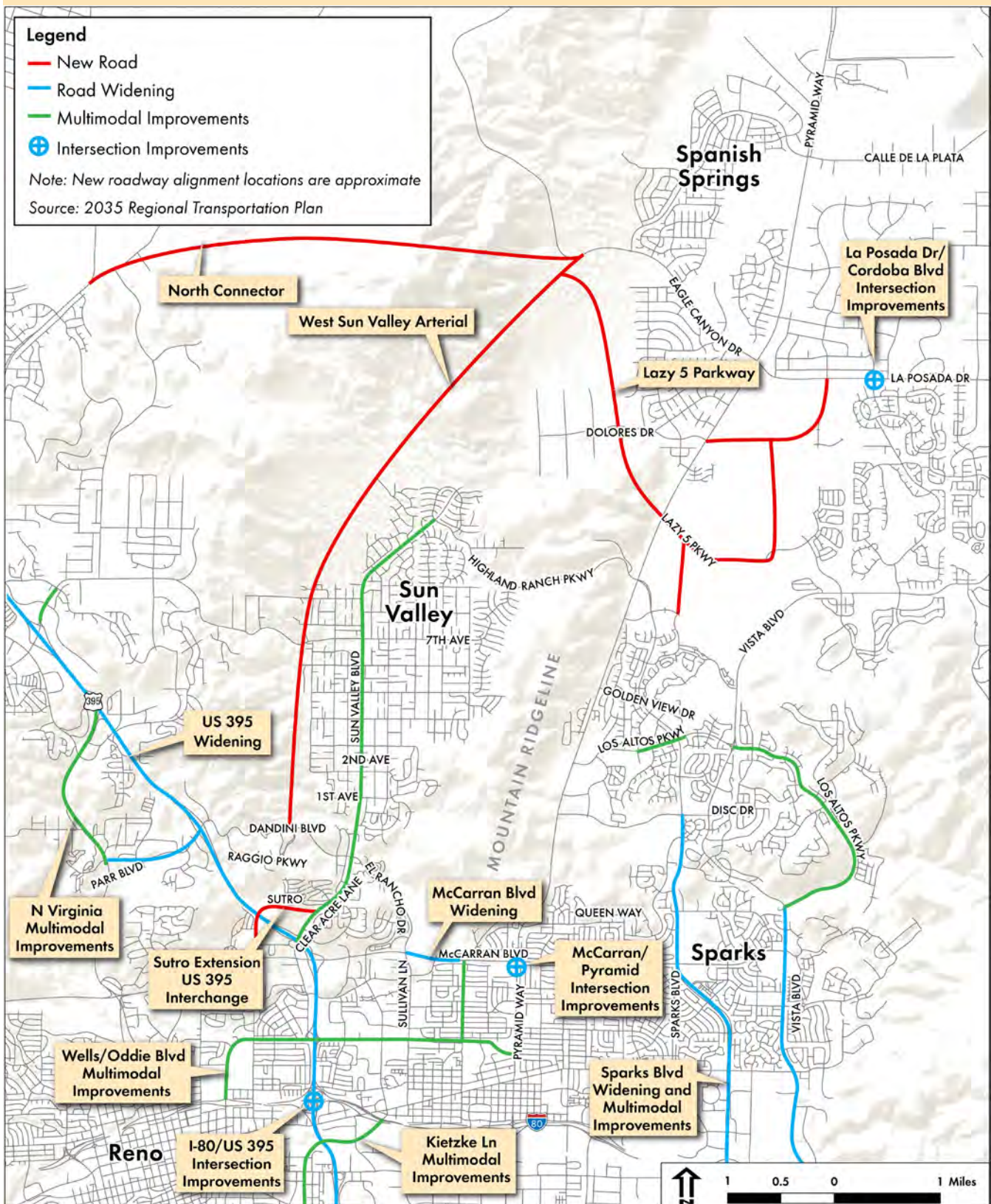
Each of the Arterial Alternatives would have similar improvements along the 7.7-mile segment of Pyramid Highway in the Study Area, from Queen Way north to Calle de la Plata Drive. The Arterial Alternatives differ regarding alignments for the new US 395 Connector, interchange locations, and cross-sections through much of the Study Area. North of



View from Sun Valley Boulevard south of Rampion Way, looking north



**Figure ES-3: No-Action Alternative**







Sparks Boulevard, the Arterial Alternatives follow the same alignment along the existing Pyramid Highway.

Each Arterial Alternative would include a new arterial facility (US 395 Connector) and ancillary improvements from Pyramid Highway to US 395, through the Sun Valley area. Arterial improvements are designed to carry traffic directly to US 395 via the US 395 Connector rather than along the existing Pyramid Highway to McCarran Boulevard or I-80. Both the US 395 Connector and Pyramid Highway segments north to Calle de la Plata Drive would be constructed as access-controlled primary arterial highways with a combination of interchanges and at-grade intersections at certain intersecting roadways.

Arterial design elements along Pyramid Highway include installing a raised median to separate directions of travel and limit left-turn access. Along the US 395 Connector, the design includes an unpaved median and barrier rail only at select locations where required to meet clear zone distances. Approaching US 395, all the Arterial Alternatives would be constructed as limited-access facilities with increased use of barrier rail on both the outside shoulders and in the median, mostly due to topographic constraints.

The US 395 interchange at Parr Boulevard would be reconstructed and reconfigured to accommodate the new directional system interchange for the US 395 Connector. Raggio Parkway, Dandini Boulevard, and Spectrum Drive would be realigned in this area to accommodate the interchange improvements and provide improved access to the Desert Research Institute (DRI) and Truckee Meadows Community College (TMCC) campuses.

Each Arterial Alternative would have the following cross-sections:

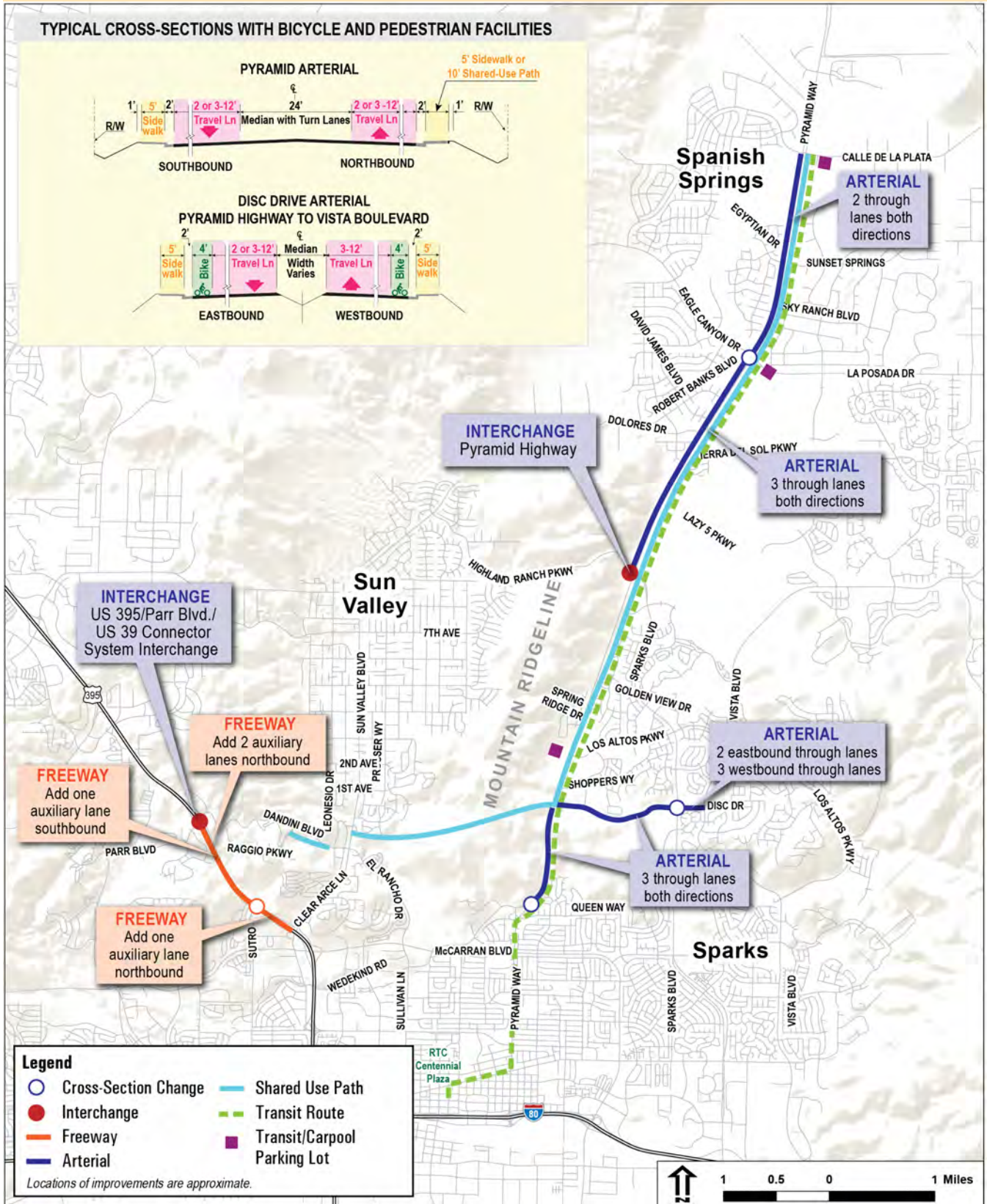
- Four-lane Arterial along Pyramid Highway between Calle de la Plata and Eagle Canyon Drive/La Posada Drive.
- Six-lane Arterial along Pyramid Highway between Eagle Canyon Drive/La Posada Drive and Sparks Boulevard/Highland Ranch Parkway.
- Six-lane Arterial along Pyramid Highway between Disc Drive and Queen Way. The proposed lanes would match the improvements currently being constructed for the Pyramid Highway/McCarran intersection under a separate project.
- Six-lane Arterial along Disc Drive between Pyramid Highway and Sparks Boulevard.
- Five-lane Arterial along Disc Drive between Sparks Boulevard and Vista Boulevard.

Each Arterial Alternative would provide bicycle and pedestrian facilities along all improved roadways, including Pyramid Highway, Disc Drive, the new US 395 Connector, and Sun Valley Boulevard. Regional bus service would be added to serve corridor demand consistent with RTC's service standards, and transit/carpool parking lots would also be provided.



*View of southern portion of Study Area looking south along Pyramid Highway*

**Figure ES-4: Elements Common to All Arterial Alternatives**







Intelligent Transportation Systems would be included to improve traffic operations and increase roadway effectiveness. Retaining walls would be constructed at several locations to avoid or minimize impacts. Traffic noise barriers are recommended at certain impacted locations to mitigate traffic noise impacts per regulation and policy. To mitigate visual impacts in Environmental Justice Areas, screening walls would also be built, which could also provide some traffic noise reduction. All Arterial Alternatives would provide water quality and drainage improvements, including culverts, ditches, and water quality basins.

### Arterial Alternative 1

Arterial Alternative 1 would consist of an alignment just west of the existing Pyramid Highway between the US 395 Connector and Highland Ranch Parkway. This alignment would be located just below the mountain ridgeline west of Pyramid Highway. Of the two alternative alignments through Sun Valley, Arterial Alternative 1 would follow the northern crossing and would include an interchange at Sun Valley Boulevard.

### Arterial Alternative 2

Arterial Alternative 2 would consist of an alignment along the existing Pyramid Highway between the US 395 Connector and Sparks Boulevard/Highland Ranch Parkway. The US 395 alignment would follow the southern crossing of Sun Valley and would include an interchange at Sun Valley Boulevard.

### Arterial Alternative 3

Arterial Alternative 3 would consist of an alignment along the mountain ridgeline between the US 395 Connector and Sparks Boulevard/Highland Ranch Parkway. This alignment would not include any interchanges between Disc Drive and Highland Ranch Parkway. The US 395 alignment would follow the southern crossing of Sun Valley and would include an interchange immediately west of Sun Valley Boulevard.

### Arterial Alternative 4

Arterial Alternative 4 would consist of an alignment along the existing Pyramid Highway between the US 395 Connector and Sparks Boulevard/Highland Ranch Parkway, with a northern crossing of Sun Valley and an interchange immediately west of Sun Valley Boulevard.

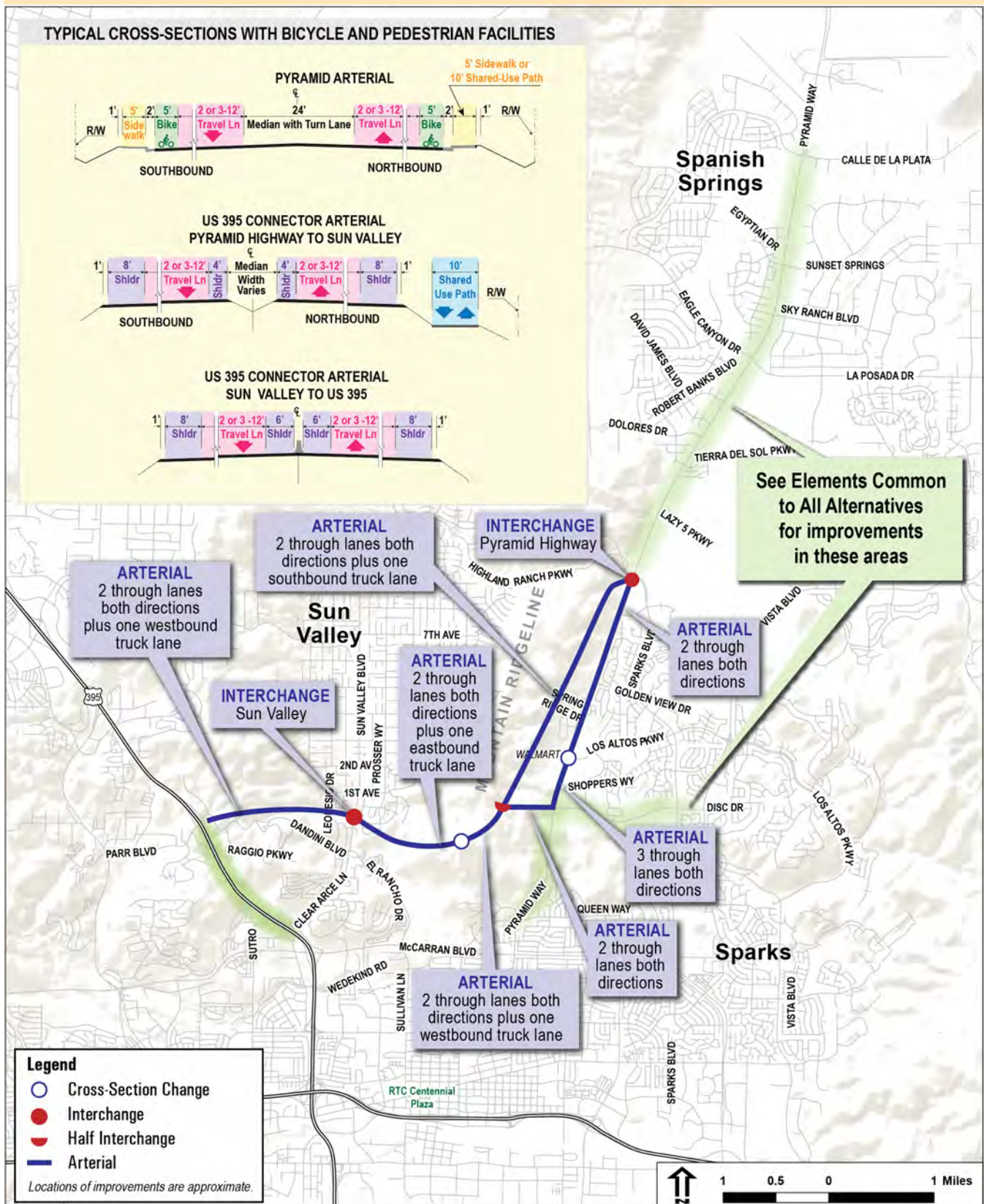
## ES-9 ENVIRONMENTAL RESOURCE IMPACTS

This section summarizes potential impacts from all alternatives evaluated in this Final EIS (the No-Action Alternative and four Arterial Alternatives). Chapter 3.0 *Environmental*



View of Study Area south of La Posada Drive looking south along Pyramid Highway

**Figure ES-5: Arterial Alternative 1**







**Figure ES-6: Arterial Alternative 2**

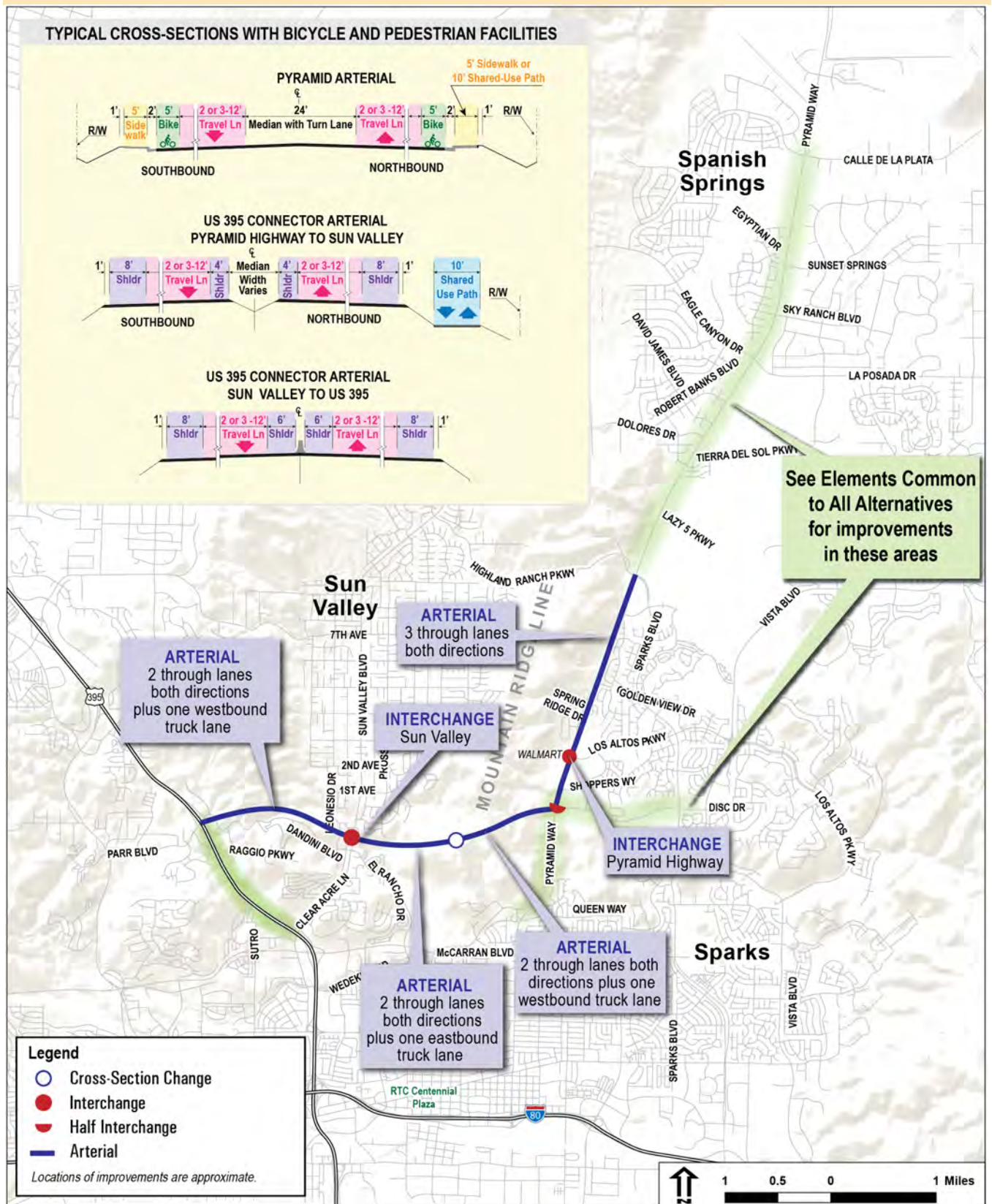




Figure ES-7: Arterial Alternative 3

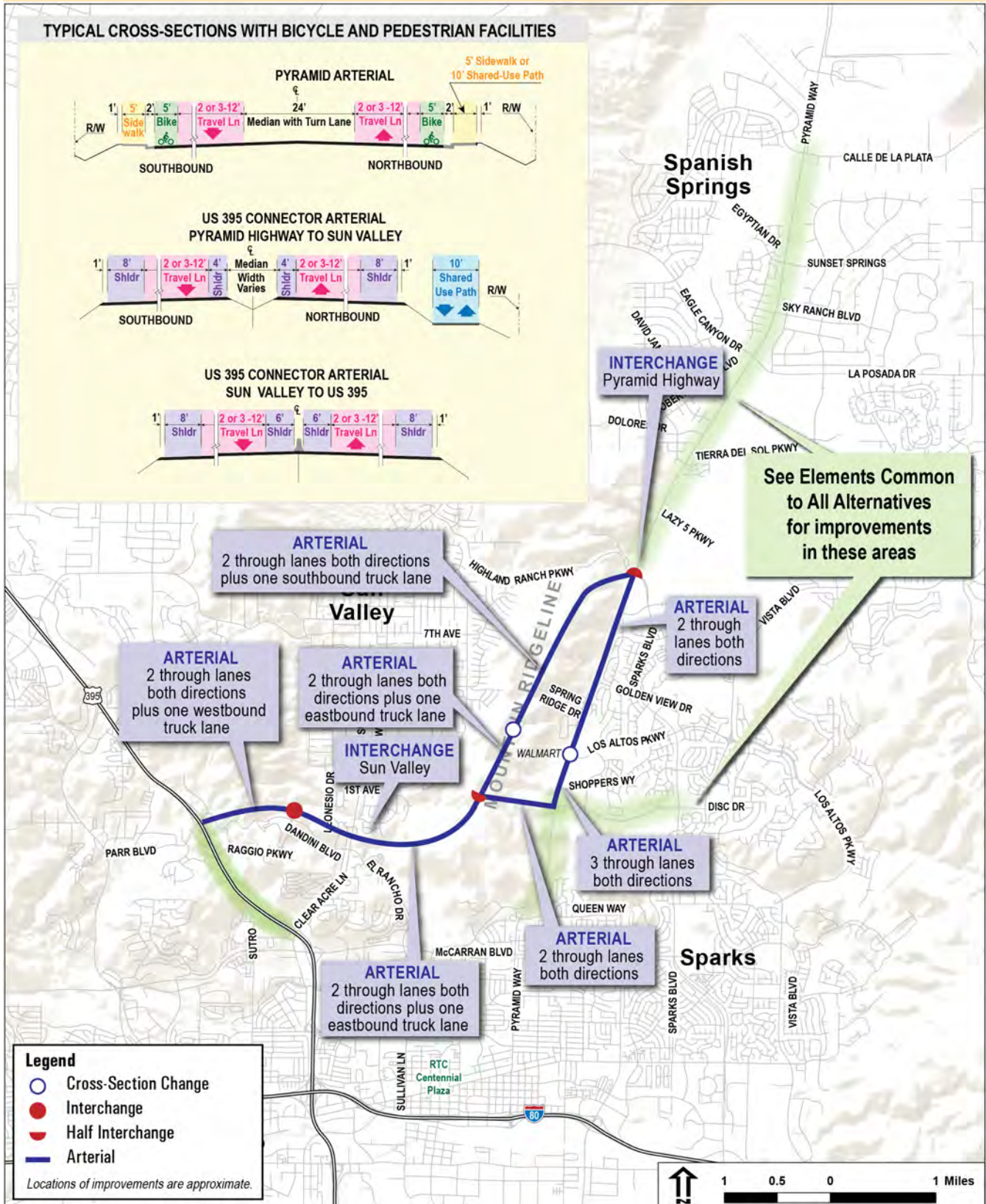
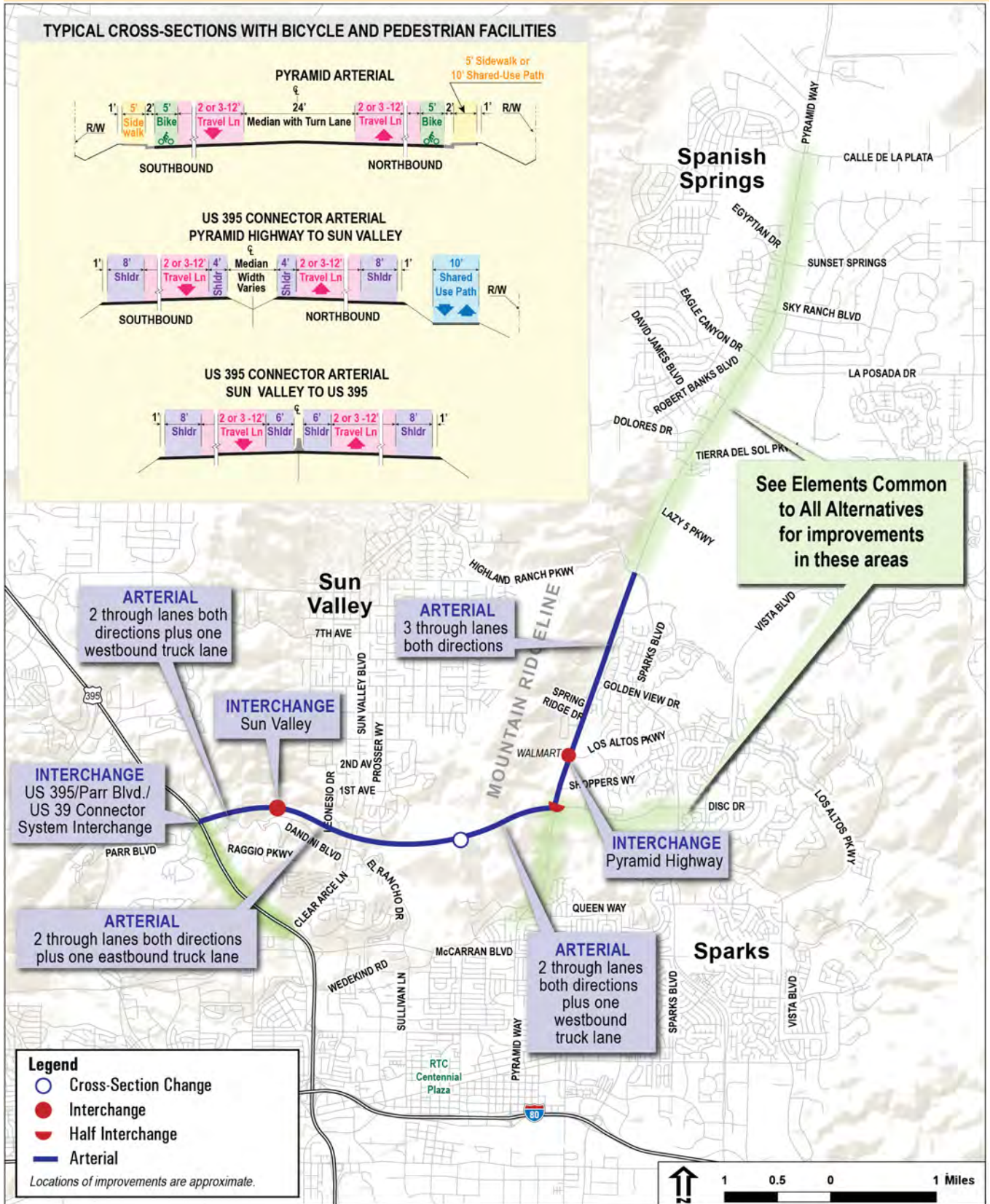






Figure ES-8: Arterial Alternative 4



*Resources, Impacts, and Mitigation* presents the existing social, economic, environmental, and transportation conditions within the Study Area. It presents a thorough discussion of potential consequences, both adverse and beneficial, expected to result from each Arterial Alternative considered.

**Impacts**

**No-Action Alternative Impacts**

The No-Action Alternative would result in few physical impacts to existing social and environmental resources, compared to the Arterial Alternatives. The No-Action Alternative would not support regional plans to improve Pyramid Highway and east-west connectivity in the Study Area. Traffic congestion and safety hazards would worsen.

**Arterial Alternative Impacts**

The Arterial Alternatives would have varying effects to environmental, social, and economic resources. Table ES-2 summarizes environmental impacts anticipated from the No-Action Alternative and the Arterial Alternatives, followed by a discussion of notable differences in environmental impacts.

**Land Use.** Comprehensive and regional planning documents for Washoe County, Truckee Meadows Regional Planning Agency (TMRPA), RTC, and the City of Sparks call for improvements to Pyramid Highway and improved east-west connectivity, such as an outer ring highway. Because the No-Action Alternative does not include these improvements, it would not be consistent with these plans. All Arterial Alternatives generally are consistent with these plans.



*View of Study Area near US 395, facing northwest*



*View of Study Area south of Los Altos Parkway, looking north*

The Arterial Alternatives would convert similar amounts of land to transportation use, ranging from 117 to 125 acres. None of the Arterial Alternatives would require an amendment to BLM's Resource Management Plan or impact active grazing or mining.





**Table ES-2: Impact Summary**

Resource	No-Action Alternative	Arterial Alternative 1	Arterial Alternative 2	Arterial Alternative 3 (Preferred Alternative)	Arterial Alternative 4
<b>Land Use</b>					
Consistent with local and regional planning	No. Does not support regional planning since regional efforts include improvements to Pyramid Highway and increase east-west connectivity in the Study Area.			Yes	
BLM (Bureau of Land Management) Resource Management Plan (RMP), amendment required.	No			No	
Acres of land use converted to a transportation use (right-of-way needed)	Indeterminate**	125	119	121	117
<b>Social Resources, Environmental Justice, and Economics</b>					
Local and regional access	Traffic congestion and safety hazards would worsen, hindering access to housing, businesses, and community facilities and services. No changes to local access.	All Arterial Alternatives would reduce congestion and add lanes to improve the efficiency and safety of Pyramid Highway. The US 395 Connector would allow better east/west mobility. Improved transit would be provided to serve corridor demand consistent with the service standards of RTC, and local transit routes would be reassessed in coordination with RTC Transit Planning to best serve Sun Valley and the northern Reno/Sparks area. Bicyclists and pedestrian opportunities would also be available. Changes to local access points and circulation.			
Short-term economic impacts	Would result in direct or indirect employment due to temporary construction jobs.	All Arterial Alternatives would result in direct employment related to temporary highway construction jobs. Public investment in infrastructure would result in indirect employment in related industries. Induced employment would be expected as a result of the consumer spending that would result from the wages paid to workers directly or indirectly employed through the infrastructure investment.			
Temp construction jobs created (average number of employees per year throughout construction period)	Indeterminate**	390	426	377	473
Long-term economic impacts	No loss of tax base due to property acquisitions. Worsening congestion would impair business access	All Arterial Alternatives would result in the loss of tax base due to property acquisitions. These losses would likely be offset by the benefits of improved transportation facilities. Improved access expands business potential and residential and commercial property values would rise with proximity to improved transportation infrastructure, including public transit (to serve corridor demand consistent with the service standards of RTC) and other multimodal improvements.			
Relocations in Environmental Justice communities	Potential for relocations	96	167 (includes 35 apartments displaced from impacts to 5 buildings)	89 (includes 35 apartments displaced from impacts to 5 buildings)	167

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Resource	No-Action Alternative	Arterial Alternative 1	Arterial Alternative 2	Arterial Alternative 3 (Preferred Alternative)	Arterial Alternative 4
Disproportionate high and adverse impact	Indeterminate**	No. All Arterial Alternatives would provide benefits and mitigation that would offset disproportionate high and adverse impacts.			
<b>Right-of-way</b>					
<b>Potential Residential Relocations</b>					
Single family	Potential for relocations; impacts not available	67	87	27	120
Mobile home	Indeterminate**	31	46	27	49
Multifamily	Indeterminate**	0	35 apartment units in 5 buildings	35 apartment units in 5 buildings	0
<b>Total Potential Residential Relocations</b>	<b>Indeterminate**</b>	<b>98</b>	<b>168</b> (includes 35 potential relocations resulting from acquisition of 5 buildings)	<b>89</b> (includes 35 potential relocations resulting from acquisition of 5 buildings)	<b>169</b>
Potential business relocations	Indeterminate**	15	35	10	36
Grazing allotments / permits on BLM land	No new impacts	No BLM land that would be affected is actively grazed, based on multiple and ongoing field observations. Effects to any grazing allotment and/or permits would be further investigated during later stages of project development, including final design and the right-of-way process.			
<b>Transportation</b>					
Meets identified local and regional transportation needs	No	Yes			
Vehicle hours traveled (daily)	312,900	313,100	309,400	309,700	308,800
Vehicle miles traveled (daily)	10,310,000	10,989,700	10,898,400	10,931,600	10,890,800
Transit improvements	None	All Arterial Alternatives include new regional bus service along Pyramid Highway to serve corridor demands consistent with the service standards of RTC, and three new transit/carpool parking lots at major cross streets.			
<b>Traffic Noise</b>					
Number of impacted receptors	214	281	285	261	260
<b>Air Quality</b>					
NAAQS criteria exceeded	NAAQS exceedance indeterminate. Increased peak hour volumes and continued severe congestion would contribute to increased vehicle emissions.	No Arterial Alternative would cause an exceedance of NAAQS criteria. Improved transportation operations would result in improved air quality compared to the No-Action Alternative.			





Resource	No-Action Alternative	Arterial Alternative 1	Arterial Alternative 2	Arterial Alternative 3 (Preferred Alternative)	Arterial Alternative 4
<b>Pedestrians and Bicyclists</b>					
Bicycle and pedestrian facilities	Some improvements are planned along Pyramid Highway, pending funding.	All Arterial Alternatives include providing more bicycle and pedestrian improvements than planned under the No-Action Alternative. Improvements would occur along Pyramid Highway and between Pyramid Highway and US 395 along the US 395 Connector and Dandini Boulevard.			
<b>Water Quality</b>					
Acres of impervious surface added	Indeterminate**	267	263	258	253
Construction considerations	Indeterminate**	Arterial Alternatives 2 and 4 would have the least amount of ground-disturbing activity and potential for short-term impacts during construction. Arterial Alternative 1 would have the most ground disturbance.			
<b>Wetlands and other Waters of the U.S.</b>					
Wetlands - permanent acres of fill	Indeterminate**	0.0	0.04	0.04	0.03
Waters of the U.S. – permanent acres of fill	Indeterminate**	0.39	0.50	0.22	0.61
<b>Floodplains</b>					
Acres of impact in the 100-year floodplain	None	7.49	4.34	3.17	6.34
<b>Vegetation, Wildlife, and Special Status Species</b>					
Habitat impacts – acres, temporary/permanent	Increasing development would continue to put pressure on wildlife and wildlife habitat. Impact estimates are not available.	413/313	333/332	410/305	338/323
BLM land converted to transportation use	No	Arterial Alternatives 1 and 3 would have the greatest impact to vegetation, and wildlife resulting from conversion of existing BLM land to a transportation use.			
<b>Visual</b>					
Changes to visual landscape	Visual changes associated with continued area development, and would be consistent with local and regional visual preservation policies.	Similar visual impacts to area residents, businesses, and motorists by introducing new visual elements in the Study Area in the form of street lighting and associated nighttime glare and light pollution, bridges, ramps, new roadway alignment, cut and fill areas, retaining walls, screening walls, and traffic noise barriers. All Arterial Alternatives would be consistent with local and regional visual preservation policies, including the City of Sparks “hillside” ordinance.			
Sensitive visual resources	Indeterminate**	Arterial Alternative 1 and 4 would have the least visual impacts to Wildcreek Park users.	Arterial Alternative 2 and 4 would have the highest visual impacts to Wedekind Park users.	Arterial Alternative 3 would have the lowest visual impacts to Wedekind Park users.	Arterial Alternative 1 and 4 would have the least visual impacts to Wildcreek Park users. Arterial Alternative 2 and 4 would have the highest visual impacts to Wedekind Park users.

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<b>Historic</b>					
Prosser Valley Ditch	No known impacts.	No Adverse Effect			
Sierra Vista Ranch, Trosi Family/Kiley Ranch, and Iratcabal Farm Historic Districts	No known impacts.	No Historic Properties Affected			
Three NRHP-eligible archaeological sites	No known impacts.	*	*	1 site: Adverse Effect 1 site: No Adverse Effect 1 site: No Historic Properties Affected	*
<b>Hazardous Materials</b>					
Number of potential contaminated sites within the construction limits	Indeterminate**	16	14	14	19
Number of potential contaminated sites within 1/4 mile of improvements	Indeterminate**	57	58	55	59
<b>Parks and Recreation</b>					
Acres of impact to Wedekind Park	None	2.57			
Access changes at Lazy 5 Regional Park	No	Existing access maintained but reconfigured to tie into road improvements.			
<b>Farmland</b>					
Acres of prime farmland impacted	Indeterminate**	0			
<b>Use of Section 4(f) properties</b>					
Wedekind Park	No	All Arterial Alternatives would impact Wedekind Park, converting park land to transportation uses, resulting in a <i>de minimis</i> impact.			
Prosser Valley Ditch	No	30 linear feet of impact resulting in a <i>de minimis</i> impact.			

\*NRHP - eligible sites were identified for each Arterial Alternative, but a determination of effect was conducted only for archaeological sites identified for Arterial Alternative 3 (Preferred Alternative)

\*\*Impact estimates for projects included in the No-Action Alternative cannot be determined based upon available information

**Economic.** The No-Action Alternative would potentially require business relocations from construction of new roads; the exact relocations are not available at this time. The No-Action Alternative would not provide the capacity and access improvements associated with the Arterial Alternatives. This would adversely affect the long-term growth of the tax

base and revenues that would result from economic activity, such as planned development. Worsening congestion and safety concerns would make it increasingly difficult to access businesses throughout the Study Area.

All Arterial Alternatives would result in the potential relocation of businesses and convert





land to transportation use, which would result in loss in the tax base and tax revenues. These losses would be offset by improved access, which expands business potential and raises property values near improved transportation infrastructure. All Arterial Alternatives would result in direct employment related to temporary construction jobs. Public investment in infrastructure would result in indirect employment in related industries. Induced employment would be expected as a result of the consumer spending that would result from the wages paid to workers directly or indirectly employed through the infrastructure investment.

**Social and Environmental Justice.** Some projects included under the No-Action Alternative, such as the widening of Sun Valley Boulevard or the West Sun Valley Arterial, might displace minority or low-income residents, businesses, or employees. These Environmental Justice (EJ) communities would be indirectly impacted by increased traffic and congestion.

All Arterial Alternatives would result in potential residential displacements in EJ neighborhoods. Arterial Alternatives 2 and 4 would have considerably higher residential relocations than Arterial Alternatives 1 and 3. Adverse social impacts, including community isolation, would occur in several Sun Valley neighborhoods.

All Arterial Alternatives would reduce congestion, increase mobility, improve safety, transit options, and air quality in the Study Area, and provide direct and indirect employment. Along with the general population, EJ populations would benefit from the improved access provided by these improvements. All Arterial Alternatives would provide benefits and mitigation that would offset disproportionate high and adverse impacts.

**Relocations.** Arterial Alternatives 2 and 4 would result in about twice the number of residential relocations as Arterial Alternatives 1 and 3. Arterial Alternatives 2 and 4 also would result in over approximately 35 potential business relocations, mostly along Pyramid Highway. Arterial Alternatives 1 and 3 would result in considerably fewer potential business relocations.

**Transportation.** The No-Action Alternative would not improve traffic operations, safety, connectivity, or transit operations. While some improvements are planned within the Study Area under the No-Action Alternative, these would not alleviate the major congestion issues.

All Arterial Alternatives would improve traffic operations, safety, connectivity, and transit operations. Access changes would alter localized travel patterns, but these changes would be offset by increased efficiency of traffic operations, particularly for east-west travelers using the US 395 Connector. The US 395 Connector would decrease travel times while relieving congestion on McCarran Boulevard. Arterial Alternatives 1 and 3 would increase north-south connectivity by providing a new roadway to existing Pyramid Highway.

The Arterial Alternatives would meet traffic operations conditions as follows:

- Result in LOS D or better along all major arterials.
- Result in 55 mph major arterial design speeds.
- Result in ramp operations that do not generate queues or spillback that degrade operations on the major arterials or cross streets.
- Result in LOS E or better at Study Area intersections

**Air Quality.** None of the Arterial Alternatives would result in an exceedance of the National Ambient Air Quality Standards (NAAQS) criteria. Based on results of the revised traffic analysis conducted under the Final EIS, carbon monoxide emission conformity requirements have been met and no further analysis is required. Improved transportation operations would result in improved air quality compared to the No-Action Alternative.

**Traffic Noise.** Under the No-Action Alternative, traffic increases would result in traffic noise impacts to an estimated 214 receptors. Noise impacts under the Arterial Alternatives range from 260 to 285 impacted noise receptors. Arterial Alternatives 3 and 4 would have fewer traffic noise impacts compared to Arterial Alternatives 1 and 2. In Sun Valley, the southern alignment over Sun Valley Boulevard included with Arterial Alternatives 2 and 3 would result in higher traffic noise impacts than Arterial Alternatives 1 and 4.

**Water Quality.** The Arterial Alternatives would increase the amount of new impervious surface by approximately 253 to 267 acres, with little difference between the alternatives. Topography and ground disturbance are the next best indicators of potential water quality impacts. Arterial Alternatives 2 and 4 would have the least amount of ground-disturbing activity and potential for short-term impacts during construction. Arterial Alternative 1 would have the most ground disturbance. Arterial Alternative 3's location along a ridgeline facilitates slope stabilization and stormwater management.

**Wetlands and Other Waters of the U.S.** The Arterial Alternatives would impact 0.0 to 0.04 acre of wetlands. Impacts to other waters of the U.S. range from 0.22 to 0.61 acre. All Arterial Alternatives would likely require a Section 404 permit from the U.S. Army Corps of Engineers (USACE) due to impacts to wetlands and other waters of the U.S.

**Vegetation, Wildlife, and Special-Status Species.** The Arterial Alternatives would impact wildlife foraging and nesting habitat. However, with the exception of BLM lands located between Sparks and Sun Valley, most habitat that would be converted for a transportation use has been degraded because of its roadside location and surrounding development.

All Arterial Alternatives would convert existing BLM land to a transportation use resulting from construction of the US 395 Connector. Arterial Alternatives 1 and 3, south of the Pyramid Highway/Sparks Boulevard intersection, would impact additional BLM land as they veer west from the existing Pyramid Highway corridor and traverse the slopes and ridge.

**Historic Resources.** The No-Action Alternative would not result in new impacts to historic resources within the Area of Potential Effects. All Arterial Alternatives would result in No Historic Properties Affected to the three historic districts located within the Area of Potential Effect. All Arterial Alternatives would have No Adverse Effect on the Prosser Valley Ditch, a resource eligible for the National Register of Historic Places (NRHP).

For archaeological resources, the Preferred Alternative would result in an Adverse Effect to one site, No Adverse Effect to a second site, and No Historic Properties Affected to a third site.

**Section 4(f).** All Arterial Alternatives would impact Wedekind Park, converting park land to a transportation use. Acreages vary, but all Arterial Alternatives result in a *de minimis* impact. All Arterial Alternatives would impact approximately 30 linear feet of the historic Prosser Valley Ditch, resulting in a *de minimis* impact to this resource.





**Table ES-3: Purpose and Need Summary by Alternative**

Purpose and Need Element	No-Action Alternative	Arterial Alternative 1 Off Alignment	Arterial Alternative 2 On Alignment	Arterial Alternative 3 Ridge Alignment	Arterial Alternative 4 On Alignment
Provide improvements to serve existing and future growth.	<ul style="list-style-type: none"> <li>Would not accommodate growth or be consistent with area goals to provide east-west connectivity or Pyramid Hwy improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Would accommodate growth, be consistent with area plans to improve east-west connectivity, improve Pyramid Highway, and provide multimodal transportation options.</li> </ul>			
Alleviate existing congestion problems on Pyramid Highway.	<ul style="list-style-type: none"> <li>Increased congestion along entire Pyramid corridor, placing additional pressure on transportation system as a whole.</li> </ul>	<ul style="list-style-type: none"> <li>Would meet traffic operations conditions. Performs better on Pyramid Hwy. between Sparks Blvd. and Disc Dr. than other Arterial Alternatives.</li> </ul>	<ul style="list-style-type: none"> <li>Would meet traffic operations conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Would meet traffic operations conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Would meet traffic operational needs. Worst performance on Pyramid Highway between Sparks Blvd. and Disc Dr.</li> </ul>
Provide direct and efficient travel routes to address existing travel inefficiencies.	<ul style="list-style-type: none"> <li>Would not improve Study Area connectivity. Would not impact access along Pyramid Highway.</li> </ul>	<ul style="list-style-type: none"> <li>Would improve east-west connectivity. New road parallel to highway would improve N/S connectivity and provide more direct route than Arterial Alts. 2 and 4.</li> </ul>	<ul style="list-style-type: none"> <li>Would improve east-west connectivity. On alignment would provide greater connectivity and direct access to Pyramid Hwy. activity areas.</li> </ul>	<ul style="list-style-type: none"> <li>Same as described under Arterial Alt. 1.</li> </ul>	<ul style="list-style-type: none"> <li>Same as described under Arterial Alt. 2.</li> </ul>
Respond to regional and local plans.	<ul style="list-style-type: none"> <li>Inconsistent with area plans to improve Pyramid Hwy. and east-west connectivity, and provide additional multimodal options. Consistent with area plans to improve bike/ped facilities as funding allows.</li> </ul>	<ul style="list-style-type: none"> <li>Consistent with area plans to improve Pyramid Hwy. and east-west connectivity, provide additional multimodal options, and improve bike/ped facilities.</li> </ul>			

## ES-10 SUMMARY AND COMPARISON OF ALTERNATIVES

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Table ES-3 summarizes and compares how the alternatives would meet the Purpose and Need of the project.

## ES-11 IDENTIFICATION OF THE PREFERRED ALTERNATIVE

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Consistent with FHWA Guidance, the Arterial Alternatives were designed and evaluated comparatively at a sufficient level of detail to support a reasoned choice (FHWA, 2010). This evaluation focused on each Arterial Alternative's performance related to four main differentiators identified when evaluating the original Freeway Alternatives, as listed below.

- Community/EJ Impacts
- Highway Geometry
- Traffic Performance
- Earthwork Balancing

A quantitative and qualitative assessment of the differentiators listed above was conducted, and is summarized below. For more information, please refer to the *Alternatives Development and Screening Update: Identification of a Preferred Alternative for Pyramid Highway and US 395 Connector* (RTC, 2017), which is incorporated by reference and available under separate cover.

- **US 395 Connector Alignment:** The On Alignment design included in Arterial Alternatives 2 and 4 would result in about twice the number of relocations relative to other Connector alignments but not provide notable performance benefits. There-

fore, Arterial Alternatives 1 and 3 were preferred to Alternatives 2 and 4.

The off alignment (Arterial Alternative 1) required the most earthwork of all the Arterial Alternatives and also resulted in more visual impacts. The ridge alignment component of the Arterial Alternative 3 was preferred.

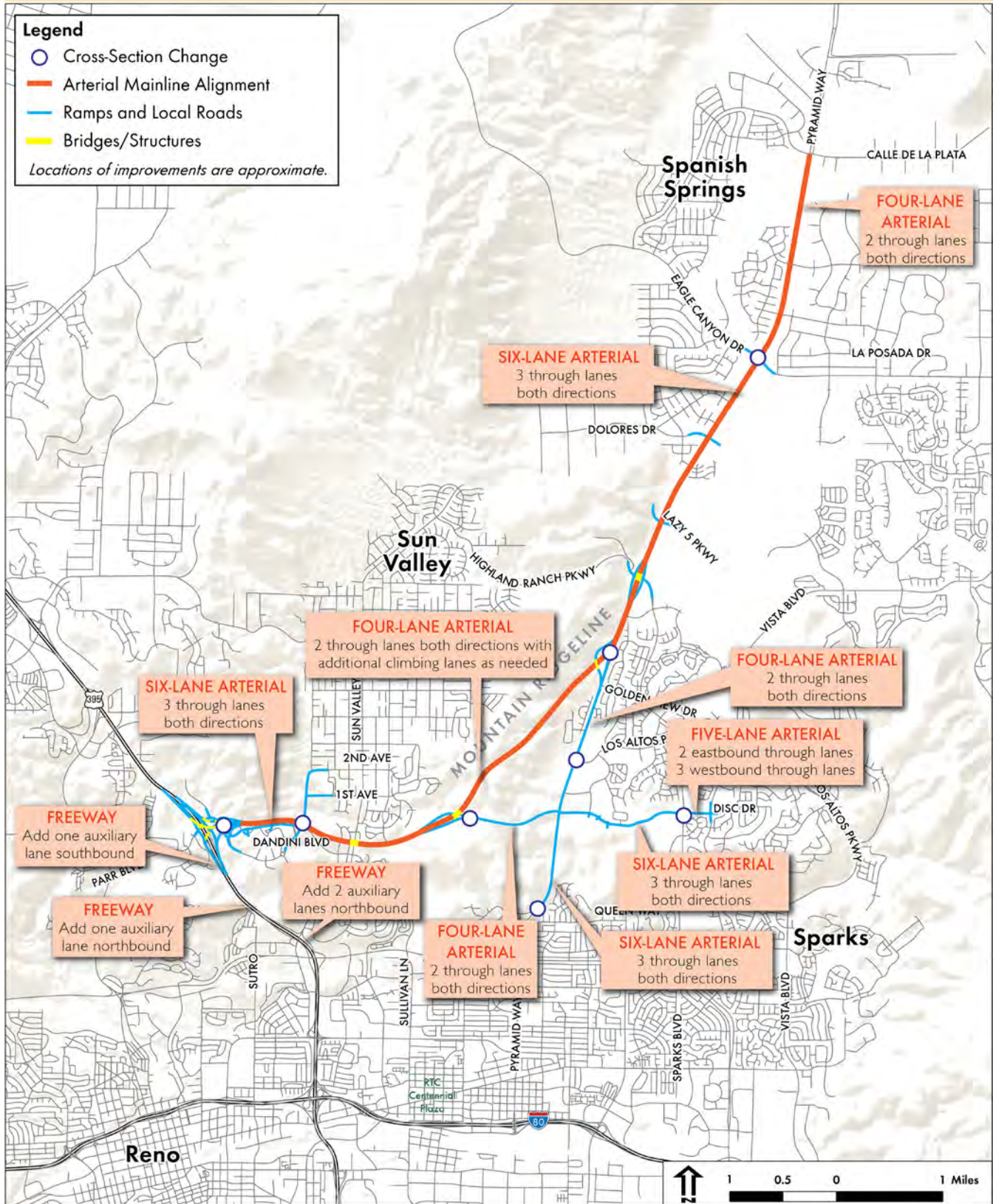
- **Sun Valley Crossing Location:** The northern Sun Valley alignment is an element of the Arterial Alternatives 1 and 4. Compared to the southern crossing included in Arterial Alternatives 2 and 3, the northern crossing would have more relocations, impact more established neighborhoods, and require more internal street reconfigurations. Therefore, the southern crossing was preferred.
- **Sun Valley Boulevard Interchange Location:** Arterial Alternatives 1 and 2 include interchanges directly at Sun Valley Boulevard with different ramp configurations. These ramps would impact more houses and have some adverse operational effects on Sun Valley Boulevard compared to the interchanges immediately west included in Arterial Alternatives 3 and 4. Therefore, the West Sun Valley Boulevard Interchange location was found to perform better.

Based on the evaluation of the Arterial Alternatives presented in Chapter 3.0 *Environmental Resources, Impacts, and Mitigation* of this Final EIS, and consideration of comments received during the public and agency comment period, FHWA, in coordination with NDOT and RTC, has identified Arterial Alternative 3 as the Preferred Alternative. The Preferred Alternative incorporates all applicable mitigation commitments described in Chapter 3.0 *Environmental Resources, Impacts, and Mitigation* of this Final EIS and Chapter 6.0 *Evaluation of Alternatives* of this Final EIS.





**Figure ES-9: Preferred Alternative (Arterial Alternative 3)**



## ES-12 DESCRIPTION OF THE PREFERRED ALTERNATIVE

The Preferred Alternative (Arterial Alternative 3) would include the following improvements (see Figure ES-9 ).

### US 395 Connector

Arterial Alternative 3 would provide a new east-west connection between Pyramid Highway and US 395, referred to as the US 395 Connector. The US 395 Connector would veer southwest from Pyramid Highway south of Sparks Boulevard and continue southwest along the mountain ridgeline west of Pyramid Highway. Disc Drive would be extended approximately one mile west of Pyramid Highway to intersect the new US 395 Connector. The US 395 Connector would veer west to cross over Sun Valley Boulevard south of Rampion Way. A new interchange would be built immediately west of Sun Valley Boulevard connect to Sun Valley and Raggio Parkway with ramps. Raggio Parkway would be extended north and connect to the new West Sun Valley Boulevard. 1st and 2nd Avenues would be extended west to intersect the new West Sun Valley Boulevard and provide access to Sun Valley Boulevard.

The US 395 Connector would continue west and connect to US 395 via a reconfigured US 395/Parr Boulevard interchange. Raggio Parkway, Parr Boulevard, and Dandini Boulevard would be realigned in this area to accommodate this new interchange.

Design elements of the US 395 Connector are summarized below, listed in order from Pyramid Highway west to US 395:

- High speed, limited access primary arterial.
- Interchange at Pyramid Highway and US 395 Connector, with southbound Pyramid Highway ramp crossing under the US 395 Connector.
- Interchange at Disc Drive/US 395 Connector, with US 395 Connector crossing over the Disc Drive westbound on ramp.
- Bridge across Sun Valley Boulevard.
- Interchange and ramps immediately west of Sun Valley Boulevard.
- Interchange and ramps at US 395/Parr Boulevard/US 395 Connector.
- Four-lane arterial from Pyramid Highway to west of Sun Valley Boulevard, with climbing/truck lanes and an unpaved median.
- Six-lane arterial between the west of Sun Valley Boulevard interchange and the US 395 interchange, with a median barrier.

### Pyramid Highway

Pyramid Highway would be improved to a four-lane, limited-access arterial between Calle de la Plata and Eagle Canyon/La Posada Drive, and a six-lane arterial between Eagle Canyon Drive/La Posada Drive to just north of Sparks Boulevard. South of Sparks Boulevard, Pyramid Highway would become a four-lane arterial between Golden View and Los Altos Parkway and a six-lane arterial between Los Altos Parkway and Queen Way. The proposed lanes would match the improvements for the Pyramid Highway/McCarran intersection project.



View toward Pyramid Highway from Disc Drive looking west





Arterial Alternative 3 would modify the following major roadways that intersect Pyramid Highway: Calle de la Plata, Egyptian Drive/Sunset Springs Lane, West Sky Ranch Boulevard, Eagle Canyon Drive/La Posada Drive, Robert Banks Boulevard, David James Boulevard, Dolores Drive, Lazy 5 Parkway, Highland Ranch Parkway/Sparks Boulevard, Kiley Parkway, Golden View, Los Altos Parkway and Shoppers Way. Modifications would include providing traffic signals at some intersections; providing individual left-turn, through, and right-turn lanes; eliminating left-turn access; or changing access to right-in/right-out only.

East of Pyramid Highway, Disc Drive would be widened from four to six lanes to Sparks Boulevard, and from four to five lanes between Sparks Boulevard and Vista Boulevard.

## US 395

Arterial Alternative 3 would widen US 395 and provide two auxiliary lanes (one southbound and one northbound) on US 395 between the US 395 Connector and Sutro Street to accommodate weaving movements at the reconfigured US 395/Parr Boulevard/US 395 Connector interchange. This design would tie into the planned US 395 widening between I-80 and Parr Boulevard, and other improvements resulting from a current study of the US 395/I-580/I-80 interchange.

## Multimodal Improvements

Along Pyramid Highway, Arterial Alternative 3 would provide bike lanes, a shared-use path, a sidewalk, and widened shoulders. Locations of these facilities vary by location (see Section 6.6 for details).

South of the US 395 Connector, a separated shared-use paved path would be constructed from Pyramid Highway to El Rancho Drive just east of Sun Valley Boulevard. Just west of Leonesio Drive, a proposed shared-use paved path would run west to the Raggio

Parkway/Dandini Boulevard intersection. Bicycle and pedestrian facilities also would be provided on Disc Drive, Raggio Parkway, Parr Boulevard, West Sun Valley Arterial, West 1st and 2nd Avenues, Dandini Boulevard, and Spectrum Drive.

Arterial Alternative 3 would include the addition of regional bus service along Pyramid Highway to serve corridor demand consistent with the service standards of RTC. Transit/carpool parking lots would be constructed at three Pyramid Highway intersections for use by transit patrons and carpoolers.

## ES-13 SUMMARY OF MITIGATION MEASURES FOR PREFERRED ALTERNATIVE (ARTERIAL ALTERNATIVE 3)

FHWA, NDOT, and RTC will avoid and minimize impacts to the extent practicable. Unavoidable impacts will be mitigated to the extent practicable and allowable under state and federal law.

Measures that will be undertaken to mitigate potential impacts of the Preferred Alternative (Arterial Alternative 3) are summarized below. Please refer to Chapter 6.0 *Evaluation of Alternatives* for a complete list of mitigation measures. The roles and responsibilities between RTC and NDOT in carrying out these measures will be determined during later phases of project implementation. For construction-related mitigation measures, RTC and/or NDOT will oversee the construction contractor to ensure compliance. All mitigation commitments will be included in the Record of Decision prepared by FHWA at the conclusion of the EIS process.

## Land Use

RTC and/or NDOT will seek to avoid and minimize impacts to existing development during final design and will work with local planners to incorporate the Preferred Alternative into future land use plans and modify future land use and zoning as needed. BLM will reflect the highway project in their future plan revisions. Any potential effects to any grazing allotments on BLM land and/or permits and necessary mitigation measures will be investigated during final design and the right-of-way process. If valid mineral claims have occurred within the Preferred Alternative alignment on the date of BLM's Letter of Consent appropriating the right-of-way, NDOT will obtain permission as may be necessary from claim holders to account for such claims within the right-of-way.

## Social Resources, Environmental Justice, and Economics

Any right-of-way acquisition will comply with the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970, as amended (URA) Section 205(a), and with NDOT's *Right-of-Way Manual* (2011) (see Right-of-Way below for details). As part of a comprehensive package to mitigate impacts to minority and low-income neighborhoods (Environmental Justice [EJ] communities), RTC and/or NDOT will install barriers to mitigate traffic noise impacts (see details under Traffic Noise), and provide screening walls to mitigate visual impacts if desired by these communities. RTC and/or NDOT also will provide landscaping and aesthetic treatments; a gateway design feature on the bridge over Sun Valley Boulevard to signify entrance into Sun Valley; bicycle/pedestrian improvements around EJ areas; bus turnouts and bus stop amenities; new regional bus service along Pyramid Highway, consistent with the service standards of RTC; and new transit/carpool parking lots.

To mitigate economic impacts, new access will be provided for businesses where existing accesses are removed. To avoid disruption of business during construction, the new access will be provided before the existing access is removed. Business access will be maintained throughout construction. RTC and/or NDOT will prepare a comprehensive relocation/acquisition plan to ensure availability of relocation properties. A traffic control plan will be developed to minimize traffic impacts from construction equipment movement and activities. RTC and/or NDOT will provide advance notice to emergency service providers, local businesses, and residents regarding road delays, access, and special construction activities. To minimize disruption to traffic and local businesses, construction activities will be staged and work hours varied. Where feasible, retaining walls will be constructed along Pyramid Highway to minimize impacts to commercial development.

## Right-of-Way

Any right-of-way acquisition will comply with the URA Section 205(a) and with NDOT's *Right-of-Way Manual* (2011). RTC and/or NDOT will prepare a comprehensive relocation/acquisition plan before or during final design to ensure availability of suitable replacement properties to accommodate residential and business relocations. Relocations, acquisitions, and parking impacts will be avoided or minimized during final design to the extent practicable. In addition to the URA requirements, RTC and/or NDOT may offer benefits and assistance to affected businesses and residents and help make sure that relocations occur in a timely manner. Also, at the beginning of the right-of-way acquisition process, the special needs of all impacted parties will be investigated and accommodated, as required.

FHWA has instituted a temporary Programmatic Waiver of 49 CFR 24.401(b)(1)— Tem-



porary Waiver of Methodology for Calculating Replacement Housing Payment for Negative Equity (FHWA December 27, 2016 waiver expiration extended through December 31, 2018) that allows NDOT to acquire homes with negative equity without reducing other provided benefits. As part of a larger compensation package, the FHWA waiver would help relieve the debt of relocated homeowners caused by property value declines.

Retaining walls will be installed to eliminate or minimize right-of-way impacts. Utility impacts will be avoided or minimized during final design.

## Transportation

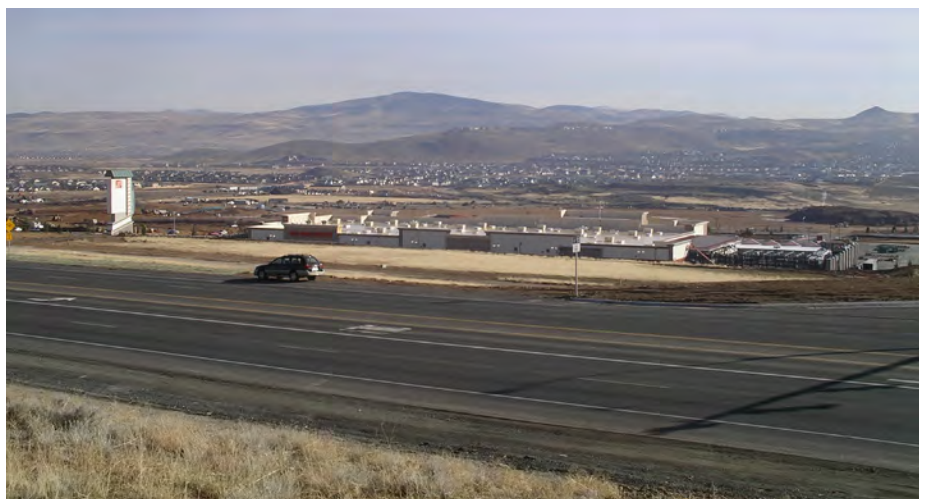
Measures to mitigate temporary transportation and traffic impacts during construction will include: develop traffic management plans; implement detours during road closures; coordinate with emergency service providers to minimize delays and ensure access to properties; provide advance notice to the public, community facilities, local schools, and local businesses of upcoming construction activities likely to result in traffic disruption, rerouting, and changes in access; use signage to announce/advertise timing of road closures and detours; and limit duration of road closures and detours to the extent practicable.

## Pedestrians and Bicyclists

To mitigate temporary impacts during construction, RTC and/or NDOT will provide detours during construction to maintain continued use of bicycle and pedestrian facilities, conduct a public information program to notify bicyclists and pedestrians of planned closures and/or detours, use signage to direct bicyclists and pedestrians to temporary detours, and provide construction fencing or other barrier to protect bicyclists and pedestrians from construction areas.

## Air Quality

This project meets the Clean Air Act (CAA) and its amendment conformity requirements and is not expected to exceed the National Ambient Air Quality Standards. Therefore, mitigation measures are not required. Regional and local agency strategies that could be used to reduce criteria pollutants and mobile source air toxics (MSAT) emissions include strategies such as tailpipe retrofits, clean fuels, engine rebuild and replacement requirements, and anti-idling ordinances and legislation. Implementation of a vehicle purchase/recycle program would also help to reduce air pollution in the Study Area by reducing highly polluting vehicles off the road. The State of Nevada has implemented several programs to reduce air emissions from mobile sources and control strategies and contingency measures for non-attainment and maintenance areas. These programs include Federal Motor Vehicle Control Program, Nevada's Motor Vehicle Inspection and Maintenance Program, Washoe County Oxygenated Fuel Program, Street Sanding and Sweeping Program, and Dust Control. To mitigate temporary impacts during construction, RTC and/or NDOT will prepare an air quality mitigation plan, and require the construction contractor to adhere to its requirements.



View of Study Area north of Disc Drive, looking northeast



## Traffic Noise

Traffic noise barriers are recommended to mitigate traffic noise impacts at the Sun Villa Estates subdivision, Whittell Pointe Apartments, Willow Creek subdivision, Spring Ridge subdivision, Tierra Del Sol Subdivision, and Springwood Subdivision. RTC and/or NDOT will prepare a noise control plan that specifies noise mitigation measures to be implemented during construction. The plan will include measures such as establishing hours of construction and noise level limits, properly maintaining construction equipment, and placing stationary construction equipment as far from residences as feasible.

## Water Resources and Water Quality

RTC and/or NDOT will develop a Stormwater Pollution Prevention Plan (SWPPP) that outlines temporary and permanent erosion and sediment controls, locates stormwater discharge points, and describes Best Management Practices (BMPs) to be implemented to prevent or reduce stormwater pollutant discharge associated with construction activities to the maximum extent practical. A Notice of Intent will be filed with Nevada Division of Environmental Protection's (NDEP's) Bureau of Water Pollution Control to obtain coverage under the General Permit for Stormwater Discharges Associated with Construction Activity (NVR100000). Temporary erosion control and stormwater control measures will be conducted during construction, and post-construction BMPs will be designed per the NDOT Storm Water Quality Manuals. A Section 401 Water Quality Certification issued by NDEP's, Bureau of Water Quality Planning will be obtained as required for water quality assurances if a Section 404 Department of Army permit is issued by the USACE. If construction equipment is required to enter in or near Waters of the State and/or ephemeral stream channels, the construction contractor will obtain a Temporary Working in Waterways Permit issued by

NDEP's Bureau of Water Pollution Control. RTC and/or NDOT will continue to coordinate with local agencies and municipalities to finalize permanent water quantity/quality basins and other structural BMPs and locations, to maintain compliance with applicable water quality regulations. RTC and/or NDOT will continue to coordinate with the Nevada Division of Water Resources, Truckee Meadows Water Authority, NDEP, and Washoe County Department of Water Resources to avoid and minimize impacts to public groundwater wells and well head protection areas.

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

All wetlands and other water feature impacts will be mitigated in accordance with current USACE mitigation policies and the conditions of the USACE Section 404 Permit and 23 CFR Part 777. Appropriate BMPs to prevent and minimize temporary or indirect impacts to wetlands will be followed during construction, including measures such as protect non-impacted wetland areas with fencing; install sediment control measures to prevent sediment filling wetlands; prohibit fertilizing or hydro-mulching within 50 feet of a wetland; reclaim and revegetate disturbed areas with native grass and forb species; apply seed, mulch, and mulch tackifier in phases throughout construction; develop a stormwater management plan with appropriate BMPs to minimize adverse effects to water quality and quantity; and use erosion logs, silt fence, or other sediment control devices as sediment barriers and filters adjacent to wetlands, surface waterways, and at inlets where appropriate.

## Floodplains

RTC and/or NDOT will conduct additional hydraulic analysis as part of the final design phase to identify specific impact avoidance, minimization, and mitigation measures, including preservation of beneficial floodplain values. During



final design, RTC and/or NDOT will minimize floodplain impacts through minimizing fill in the floodplain; using retaining walls and other design features where practical; avoiding floodplain encroachment to the maximum extent practicable; and reconfiguring the floodway, if possible, in instances where the flood elevation would be increased. RTC and/or NDOT will seek to avoid any net increase to the 100-year flood water surface elevation. In instances where the flood elevations will increase, a Letter of Map Revision will be completed and mitigation measures included in the design to protect affected properties.

## Vegetation and Noxious Weeds

RTC and/or NDOT and the construction contractor will implement a series of measures to avoid, minimize, and mitigate impacts to vegetation from the Preferred Alternative in addition to those identified under Water Resources and Water Quality. RTC and/or NDOT and its construction contractor will minimize the amount of disturbance and limit the amount of time that disturbed areas are allowed to remain non-vegetated; employ NDOT BMPs and revegetation guidelines to minimize habitat impacts associated with vegetation removal; implement an Integrated Weed Management Plan; avoid disturbance to existing trees, shrubs and vegetation; revegetate all disturbed areas with native grass and forb species; use erosion control blankets, where feasible, on steep, newly seeded slopes to control erosion and to promote the establishment of vegetation; limit work areas as much as possible to minimize construction impacts to vegetation; and include non-structural BMPs when possible, such as litter and debris control, and landscaping and vegetative practices.

## Wildlife

RTC and/or NDOT and the construction contractor will follow appropriate BMPs to prevent and minimize temporary impacts to

vegetation and wildlife during construction, including but not limited to, employ NDOT BMPs and revegetation guidelines to minimize habitat impacts associated with vegetation removal; avoid impacts to nesting birds in accordance with the Migratory Bird Treaty Act (MBTA), including conduct of nest surveys and coordinating with Nevada Department of Wildlife and U.S. Fish and Wildlife Service as required; and evaluate opportunities to incorporate specific measures to enhance wildlife connectivity as needed during final design.

## Special Status Species

RTC and/or NDOT and construction contractor will follow appropriate BMPs to prevent and minimize effects to special-status species during construction. In addition to measures listed above for wetlands, vegetation, and wildlife, these measures include employing NDOT BMPs and revegetation guidelines to minimize habitat impacts associated with vegetation removal; for construction phases in areas with viable habitat, conducting pre-construction botanical surveys within the project limits during the appropriate bloom time for special-status plant species; removing garbage or trash produced from construction activities promptly and properly to help avoid attracting wildlife; and implementing Required Design Features as outlined in Appendix E. Prior to construction on BLM lands, BLM will be coordinated with to determine if surveys for sensitive species are warranted and obtain survey protocols.

## Visual

RTC and/or NDOT will design traffic noise barriers, screening walls, and retaining walls such that they blend into the surrounding environment; employ new street lighting with counter measures to minimize light trespass and glare impacts; coordinate with city staff during the final design process to identify opportunities to mitigate visual impacts at the Spanish Springs Library; coordinate with parks

staff at the City of Sparks and Washoe County on design of the water quantity/quality basin proposed at Wedekind Park to make consistent with the park’s planned uses; minimize cut/fill areas where feasible and design them to blend in with the surrounding environment; minimize the amount of construction disturbance; limit the amount of time that disturbed areas are allowed to remain non-vegetated; avoid disturbance to existing trees, shrubs and vegetation to the maximum extent possible; and revegetate all disturbed areas with native grass and forb species. If nighttime construction is required, procedures will be taken to direct the light inward toward the construction site to minimize glare for residents and motorists in the immediate vicinity. RTC and/or NDOT will implement measures to reduce visual impacts on BLM land, including but not limited to land form mitigation (prohibit dumping of excess material on downhill slopes, design alignment to follow existing grades, shape cut and fill areas to appear as natural forms); retain existing vegetation where reasonable and feasible; and minimize contrast of new structures to natural landforms (use earth-tone paints, use natural stone surfaces, select paint finishes with low reflectivity, take advantage of natural screening). RTC and/or NDOT will prepare a project-specific plan for the aesthetic/urban design theme for the project corridor that will consider the mitigation measures described in this Final EIS.

### Historic

In consultation with FHWA, RTC, the State Historic Preservation Officer (SHPO), BLM, and tribal governments, NDOT will develop a Memorandum of Agreement to resolve the adverse effect to one archaeological site as a result of the Preferred Alternative. To mitigate temporary impacts during construction, RTC and/or NDOT will undertake measures such as minimize area of disturbance to the extent practicable; control construction access and

limit work within construction area; and revegetate disturbed areas as soon as practicable, consistent with adjacent landscape features and with desirable native plant species. NDOT and/or its construction contractor will address unexpected discoveries made during construction as stipulated in the 2014 Transportation Programmatic Agreement between FHWA, NDOT, SHPO, and the Advisory Council on Historic Preservation.

### Hazardous Materials

Contaminated soil and hazardous materials will be analyzed and properly disposed of at an approved facility. The material will be managed and disposed of in accordance with applicable local, state, and federal hazardous waste regulations. Owners of subsurface utilities will be contacted for areas where excavation will be conducted to assess whether the utilities are contained in Transite™ asbestos pipe. Abandoned utilities also may be encountered during excavation. In these instances, special handling and possibly asbestos abatement will be performed as required. Prior to commencement of activities that may disturb suspect material, inspections will be conducted by appropriately trained and licensed personnel. RTC and/or NDOT will conduct further evaluations later in the project development process based on more detailed design information. Potential impacts will be further evaluated based on the nature of the potential impact relative to the proposed improvements. Additional evaluations should initially include facility-specific Phase I Environmental Site Assessments (ESAs) for all properties within the Preferred Alternative footprint, with follow-on Phase II investigations conducted, if justified by the Phase I ESA findings. Mitigation measures, if determined to be necessary, will be based on the results of the Phase I and Phase II investigations.





## Parks and Recreation

Access to park and recreation facilities will be maintained during construction. The existing trailhead parking access at the northern portion of the park will be preserved and slightly improved. To mitigate visual impacts to Wedekind Park, cut/fill areas of the US 395 Connector will be minimized to blend in with the surrounding environment. Fill slopes at the Disc Drive/Pyramid Highway intersection will be designed to mimic the natural landscape and all disturbed areas will be revegetated with native grasses and shrubs as appropriate. Similarly, design of the proposed permanent water quantity/quality basin in Wedekind Park will mimic the natural landscape to the extent possible and will be revegetated. RTC and/or NDOT will continue to coordinate with the City of Sparks Parks and Recreation Department on the design of the permanent water quantity/quality basin proposed in the southwest portion of Wedekind Park so that it is consistent with the park's planned uses and amenities. Property acquisition will be completed under the URA. The Preferred Alternative will acquire the Sun Valley open space in its entirety. RTC will coordinate with Washoe County to meet the commitments set forth in Washoe County's August 2011 Resolution of Support regarding the Sun Valley open space parcel.

## ES-14 COMMENTS AND COORDINATION

The EIS process involved an extensive public and agency involvement program, with the goal to provide numerous opportunities for interested parties to participate in and contribute to the EIS process. Comments and input received from agencies, members of the public, and tribal representatives throughout the EIS process helped guide decision making on major project elements, such as development of the Purpose and Need and development and evaluation of alternatives.

## Agency Coordination

Agency coordination was conducted to ensure a timely flow of project information between the local, state, and federal agencies involved in the EIS and to ensure necessary interaction with and awareness of public issues and concerns identified during public involvement activities. Coordination activities included project scoping, regular meetings and briefings with agency staff, and creation of a TAC.

TAC members included representatives from cooperating and participating agencies (BLM, Reno-Sparks Indian Colony [RSIC], City of Reno, City of Sparks, Washoe County, and U.S. Environmental Protection Agency [EPA]). The TAC helped guide the EIS process, disseminate information to their respective agencies, provide input on major study elements, and provide input on technical issues. The TAC was one of the primary mechanisms used to obtain input at project milestones, per Section 6002 of SAFETEA-LU.

The Study team also met with individual agencies throughout the EIS process to discuss various topics of concern to their particular agency, including several meetings with the EPA, RSIC, Bureau of Indian Affairs, BLM, Washoe County, City of Sparks, and the SHPO. Local, state, and federal agencies were contacted at various points in the process to collect technical information and discuss concerns regarding such issues as wetlands, wildlife, community resources, and city and county long-range plans.

## Section 106

Under Section 106 of the National Historic Preservation Act, FHWA consulted with the SHPO, tribal governments, and historic consulting parties throughout the EIS process to identify cultural resources within the Study Area and evaluate potential effects.

## Public Involvement

Several public meetings were held at key milestones in the EIS process to allow the public to interact with planners, engineers, RTC, NDOT, FHWA, and other Study team members to obtain project information. Public meetings allowed individuals interested in the project to express their concerns and have questions answered. Several small group meetings were also held to obtain input and provide more focused project information to smaller groups and organizations.

The Study team established a Stakeholder Working Group (SWG) comprised of various community groups and local agency representatives to provide input to the Study, assist the Study team to better understand the community's needs and interests, and serve as a community liaison to the Study team. The SWG served as an additional mechanism to obtain input at project milestones, as required under Section 6002 of SAFETEA-LU.

Additionally, the Study team began outreach to Environmental Justice (EJ) populations early in the process to ensure that the concerns of minority and low-income communities were considered, and that these groups had a voice in the EIS process. This allowed the Study team to begin working early on to avoid disproportionate adverse impacts to EJ populations. Because Sun Valley contains likely EJ populations and will likely experience project impacts, the Study team held specialized outreach meetings to more involve this community in the EIS process.

The Draft EIS was finalized in August 2013 and distributed for a 60-day public and agency comment period from September 13 through November 12, 2013. Two public hearings were held in October 2013 to present the alternatives, environmental impacts, and mitigation measures described in the Draft EIS and to obtain public input. Availability of the Draft EIS and public hearings were announced through the NDOT and RTC websites, bulk mailings, and local news ad. The Draft EIS was made available for review at five locations in the study area, on NDOT and RTC websites, and by emailed document links. Copies were also available from NDOT by request. Both public hearings were well attended, with over 100 people signing in at each hearing. Several comments and questions were received and responded to at the public hearings (see public hearing transcripts in Appendix B *Public Involvement*). Comment letters, emails, or phone calls received during the 60-day comment period, and responses to those comments, are provided in Appendix D *Draft EIS Comments and Responses*. Refer to Chapter 4.0 *Comments and Coordination* for more information.

This Final EIS will be made available for review at several locations in the study area, on NDOT and RTC websites, and by emailed document links.

After the EIS process for this project is completed, public and agency involvement will continue as appropriate as the project moves into the final design and construction phases.