PYRAMID HIGHWAY
US 395 CONNECTION
Washoe County, Nevada

Record of Decision (ROD)

FHWA-NV-FEIS-12-02-F

Prepared for:

NEVADA DOT

RTC

U.S. Department of Transportation
Federal Highway Administration

December 2018

Record of Decision

for

Pyramid Highway/US 395 Connection
Washoe County, Nevada

FHWA-NV-FEIS-12-02-F

FHWA Project Number: DE-0191(065)/(067)
NDOT Project Number: 73390/73391

Federal Highway Administration

In cooperation with**:**
Nevada Department of Transportation
Regional Transportation Commission of Washoe County

December 2018

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1.0 DECISION

The Federal Highway Administration (FHWA), in cooperation with the Nevada Department of Transportation (NDOT) and the Regional Transportation Commission of Washoe County (RTC), has identified the Selected Alternative for improving Pyramid Highway between Queen Way and Calle de la Plata and providing a new connection between Pyramid Highway and United States (US) 395 (referred to as the US 395 Connection). The Selected Alternative identified and described in this Record of Decision (ROD) is Arterial Alternative 3, which is the Preferred Alternative identified in the Final Environmental Impact Statement (FEIS) issued in June 2018. The Selected Alternative includes arterial improvements along approximately seven miles of Pyramid Highway from Queen Way to Calle de la Plata, and a new US 395 Connection that would start near Sparks Boulevard, run west along a ridge alignment, cross Sun Valley Boulevard south of Rampion Way, and terminate at the existing US 395/Parr Boulevard interchange, which would be modified to accommodate the new US 395 Connection. A new interchange for the US 395 Connection would be built west of Sun Valley Boulevard. The Selected Alternative also includes improvements on Disc Drive between Pyramid Highway and Vista Boulevard, and would extend Disc Drive from Pyramid Highway west to the new US 395 Connection. Bicycle and pedestrian facility improvements would also be provided along new and improved roadways. The Selected Alternative is described in Chapter 4.0 of this document and in Section 6.6 of the FEIS. The Study Area is shown on Figure 1.

The purpose of the proposed action is to:

- Provide improvements to serve existing and future growth
- Alleviate existing congestion problems on Pyramid Highway
- Provide direct and efficient travel routes to address existing travel inefficiencies
- Respond to regional and local plans

The RTC is the project sponsor for the environmental study and the preliminary engineering performed as part of this Study. For different project phases, RTC and NDOT will determine the party responsible for developing final design plans, securing bids, selecting a contractor, and performing construction oversight. Because improvements would occur within NDOT right-of-way, and the proposed 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 the Final EIS and this ROD have been prepared. The final design will adhere to NDOT standards and the project will comply with current NDOT policies and procedures. NDOT also will lead and/or

oversee the right-of-way acquisition process to ensure compliance with the Uniform Relocation Act.

FHWA is the lead federal agency for this study and, therefore, has the authority and responsibility to define the purpose and need of the project for purposes of NEPA analysis (Council on Environmental Quality [CEQ] 2003 https://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=0a3f626e4d372458f12443f0bc66f42b&mc=true&r=SECTION&n=se40.37.1501_15). However, the Bureau of Land Management (BLM) has jurisdiction over land within the Study Area and as such, FHWA is not the sole federal agency with responsibility for making decisions regarding the proposed action.

FHWA and BLM have an independent responsibility to prepare a NEPA document for the proposed action, including a purpose and need statement. In 2007, to streamline the environmental study process, BLM, FHWA, and NDOT entered into a Memorandum of Understanding concerning operating procedures for processing federal-aid highway rights-of-way from BLM (2007). The agreement states that BLM will participate as a cooperating agency in the NEPA process on public lands.

Consistent with this agreement, BLM is a cooperating agency on this project and its responsibilities under NEPA were addressed under the FEIS and in this ROD prepared by FHWA. BLM will not issue a NEPA Decision Document for this project.

BLM's decision and purpose and need for this project is different than FHWA's. BLM's purpose for this project is to determine if certain public lands should be devoted to federal highway uses. BLM, FHWA, and NDOT will follow the Memorandum of Understanding & Operating Manual, or any approved revisions, for this project (2007). At the conclusion of the NEPA process, FHWA will submit a request to BLM for right-of-way appropriation of public lands determined to be necessary for the project. BLM will then issue a Letter of Consent to FHWA for highway use of the public lands and to identify special stipulations associated with that use.

FHWA identified the Selected Alternative based on the analysis and findings presented in the August 2013 Draft Environmental Impact Statement (DEIS) and the June 2018 FEIS, and in consideration of public and agency comments received. In compliance with CEQ regulations implementing NEPA (40 Code of Federal Regulations [CFR] 1505.2) and FHWA regulations (23 CFR 771.127), this ROD presents the basis for FHWA's decision, provides comments received on the FEIS and responses to those comments, and identifies mitigation measures that will be incorporated in the project.

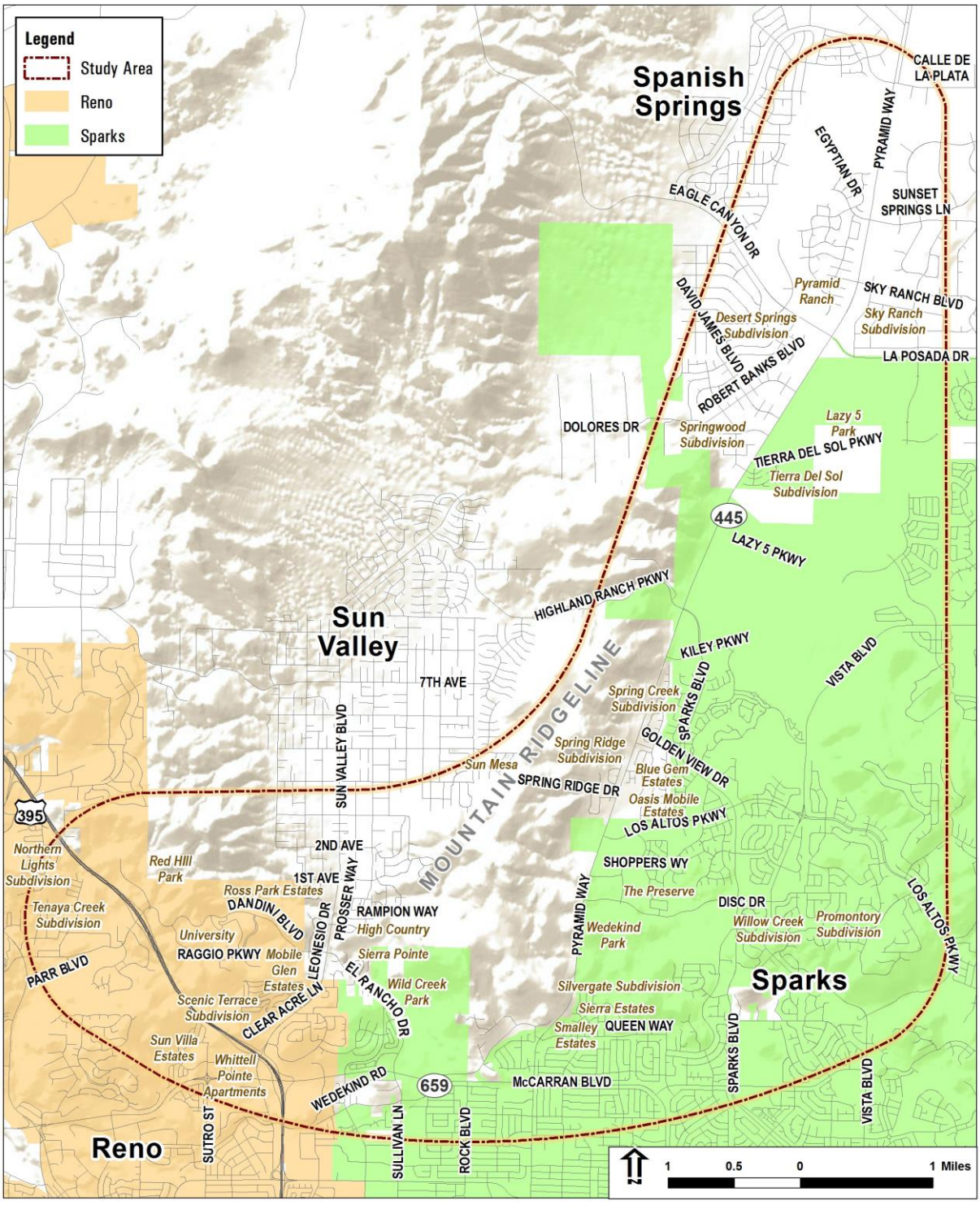

Figure 1. Study Area

2.0 ALTERNATIVES CONSIDERED

A full range of alternatives was developed and screened based on their ability to meet the Purpose and Need of this project while minimizing environmental impacts. Chapter 2.0 of the FEIS details that process and describes alternatives that were considered but dismissed from detailed study.

2.1 ALTERNATIVES ADVANCED FOR DETAILED STUDY IN THE FEIS

This section briefly describes the alternatives studied in detail in the FEIS (see Section 2.7 of the FEIS for details). This section also summarizes and compares key impacts amongst the alternatives.

2.1.1 No-Action Alternative

The No-Action Alternative 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. Under the No-Action Alternative, improvements within the Study Area would consist of planned roadway modifications and additions. The No-Action Alternative was used as a baseline comparison for environmental analysis purposes.

2.1.2 Arterial Alternatives

2.1.2.1 Elements Common to All Arterial Alternatives

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. They differ regarding alignments for the new US 395 Connector, interchange locations, and cross-sections through much of the Study Area. North of 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.

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 include water quality and drainage improvements, including culverts, ditches, and water quality basins.

2.1.2.2 *Elements Specific to Arterial Alternatives*

This section summarizes elements specific to each Arterial Alternative.

- **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**: 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 (Selected Alternative)**: 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**: 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.

2.2 NOTABLE DIFFERENCES IN ALTERNATIVE IMPACTS

This section summarizes impacts of the No-Action Alternative and notable differences in impacts amongst the Arterial Alternatives.

2.2.1 No-Action Alternative

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.

2.2.2 Notable Differences in Arterial Alternative Impacts

The Arterial Alternatives would have varying effects to environmental, social, and economic resources. Table 1 summarizes the notable differences in environmental impacts amongst the Arterial Alternatives. A summary of all environmental impacts of

the No-Action Alternative and Arterial Alternatives is provided in Table 3 in Chapter 6.0.

Table 1. Notable Differences in Arterial Alternative Impacts

Resource	Arterial Alternative Impacts
Land Use	All Arterial Alternative convert similar amounts of land to transportation use, ranging from 117 (Arterial Alt. 4) to 125 acres (Arterial Alt. 1). None of the Arterial Alternatives would require an amendment to BLM's Resource Management Plan or impact active grazing or mining.
Social and EJ	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. Arterial Alternative 3 (the Selected Alternative) would have the fewest. Adverse social impacts, including community isolation, would occur in several Sun Valley neighborhoods. 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. Arterial Alternative 3 (the Selected Alternative) would have the fewest residential and business relocations.
Transportation	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.
Traffic Noise	Noise impacts under the Arterial Alternatives range from 260 to 285 impacted noise receptors. Overall, Arterial Alternatives 3 and 4 would impact fewer traffic noise receivers than Arterial Alternatives 1 and 2. However, 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.
Floodplains	Potential impacts to regulated 100-year floodplains range from 3.17 acres (Arterial Alternative 3) to 7.49 acres (Arterial Alternative 1).
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 indicators of potential short-term 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. The location of Arterial Alternative 3 along a ridgeline would facilitate 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 acre (Arterial Alt. 3) to 0.61 acre (Arterial Alt. 4). 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.

Table 1. Notable Differences in Arterial Alternative Impacts

Resource	Arterial Alternative Impacts
Vegetation, Wildlife, and Special-Status Species	All Arterial Alternatives would impact wildlife foraging and nesting habitat, and would convert existing BLM land to a transportation use. Permanent habitat impacts range from 305 acres (Arterial Alt. 3) to 332 acres (Arterial Alt. 2). 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.

2.3 VALUES CONSIDERED IN DECISION-MAKING PROCESS AND THE SELECTED ALTERNATIVE

Values considered in the decision-making process for the Selected Alternative were based on the project Purpose and Needs, described in Chapter 1.0 of the FEIS, as well as other values described below. 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 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. Table 2 summarizes how the No-Action Alternative and Arterial Alternatives would address the values reflected in the project's Purpose and Need. For details, please refer to Chapter 6.0 of the FEIS.

The decision-making process balanced the alternatives' ability to meet the Purpose and Need with other values. Identifying the Preferred Alternative considered how alternatives differed in their environmental impacts, cost, and geometric and traffic performance. Ultimately, the desires to minimize community/EJ impacts, and control costs by minimizing earthwork during construction, helped in differentiating alternatives and in identifying the Selected Alternative.

Table 2. Purpose and Need Summary by Alternative

Purpose and Need Element	No-Action Alt.	Arterial Alt. 1 Off Alignment	Arterial Alt. 2 On Alignment	Arterial Alt. 3 Ridge Alignment	Arterial Alt. 4 On Alignment
Provide improvements to serve existing and future growth.	• Would not accommodate growth consistent with area goals to provide east-west connectivity or Pyramid Hwy. improvements.	• Would accommodate growth consistent with area plans to improve east-west connectivity and multimodal transportation options.			
Alleviate existing congestion problems on Pyramid Highway	• Increased congestion along entire Pyramid corridor, placing additional pressure on transportation system as a whole.	• Would meet traffic operations conditions. Performs better on Pyramid Hwy. between Sparks Blvd. and Disc Dr. than other Arterial Alternatives.	• Would meet traffic operations conditions.	• Would meet traffic operations conditions.	• Would meet traffic operations conditions. Worst performance on Pyramid Hwy. between Sparks Blvd. and Disc Dr.
Provide direct and efficient travel routes to address existing travel inefficiencies	• Would not improve Study Area connectivity. Would not impact access along Pyramid Hwy.	• Would improve east-west connectivity. New roadway parallel to highway would improve N/S connectivity and more direct route than Arterial Alts. 2 and 4.	• Would improve east-west connectivity. On alignment with frontage roads would provide greater connectivity and direct access to Pyramid Hwy. activity areas.	• Same as described under Arterial Alt. 1.	• Same as described under Arterial Alt. 2.
Respond to regional and local plans.	• 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.	• Consistent with area plans to improve Pyramid Highway and east-west connectivity, provide additional multimodal options, and improve bike/ped facilities.			

3.0 ENVIRONMENTALLY PREFERRED ALTERNATIVE

As required under CEQ regulation 40 CFR 1505.2(b), this ROD specifies "the alternative or alternatives which were considered to be environmentally preferable."

Based on the analyses presented in Chapter 3.0 and 6.0 of the FEIS and summarized in Chapter 2.0 and Table 3 of this ROD, Arterial Alternative 3 was determined to result in lower environmental impacts overall compared to the other build alternatives evaluated (Arterial Alternatives 1 through 4), including Environmental Justice impacts, right-of-way impacts to residences and businesses, floodplain impacts, visual impacts, and hazardous materials impacts. Of all the build alternatives, Arterial Alternative 3 is also amongst the lowest in traffic noise and water quality impacts. Therefore, Arterial Alternative 3 was identified as the Selected Alternative because it would minimize environmental impacts compared to the other build alternatives. Similarly, the Selected Alternative is also identified as the Environmentally Preferred Alternative, in accordance with 40 CFR 1505.2(b). Table 3 summarizes impacts of the No-Action and build alternatives (Arterial Alternatives 1 through 4).

Table 3. Impact Summary

Resource	No-Action Alt.	Arterial Alt. 1	Arterial Alt. 2	Arterial Alt. 3	Arterial Alt. 4
Land Use					
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			
Bureau of Land Management (BLM) Resource Management Plan (RMP), amendment required.	No	No			
Acres of land use converted to a transportation use (right-of-way needed)	Indeterminate[1]	125	119	121	117
Social Resources, Environmental Justice, and Economics					
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.			

[1] Impact estimates for projects included in the No-Action Alternative cannot be determined based upon available information.

Table 3. Impact Summary

Resource	No-Action Alt.	Arterial Alt. 1	Arterial Alt. 2	Arterial Alt. 3	Arterial Alt. 4
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[1]	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
Disproportionate high and adverse impact	Indeterminate[1]	No. All Arterial Alternatives would provide benefits and mitigation that would offset disproportionate high and adverse impacts.			
Right-of-Way					
Potential residential relocations					
Single family	Potential for relocations; impacts not available	67	87	27	120
Mobile home	Indeterminate[1]	31	46	27	49
Multifamily	Indeterminate[1]	0	35 apartment units in 5 buildings	35 apartment units in 5 buildings	0

[1] Impact estimates for projects included in the No-Action Alternative cannot be determined based upon available information.

Table 3. Impact Summary

Resource	No-Action Alt.	Arterial Alt. 1	Arterial Alt. 2	Arterial Alt. 3	Arterial Alt. 4
Total potential residential relocations	**Indeterminate[1]**	**98**	**168** (includes 35 potential relocations resulting from acquisition of 5 buildings)	**89** (includes 35 potential relocations resulting from acquisition of 5 buildings)	**169**
Potential business relocations	Indeterminate[1]	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.			
Transportation					
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.			
Traffic Noise					
Number of impacted receivers	214	281	285	261	260

[1] Impact estimates for projects included in the No-Action Alternative cannot be determined based upon available information.

Table 3. Impact Summary

Resource	No-Action Alt.	Arterial Alt. 1	Arterial Alt. 2	Arterial Alt. 3	Arterial Alt. 4
Air Quality					
NAAQS criteria exceeded	NAAQS exceedance indeterminate. Increased peak hour traffic 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.			
Pedestrians and Bicyclists					
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.			
Water Quality					
Acres of impervious surface added	Indeterminate[1]	267	263	258	253
Construction considerations	Indeterminate[1]	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.			
Wetlands and other Waters of the U.S.					
Wetlands – acres of permanent fill	Indeterminate[1]	0.0	0.04	0.04	0.03
Waters of the U.S. – acres of permanent fill	Indeterminate[1]	0.39	0.50	0.22	0.61
Floodplains					
Acres of impact in the 100-year floodplain	None	7.49	4.34	3.17	6.34

[1] Impact estimates for projects included in the No-Action Alternative cannot be determined based upon available information.

Table 3. Impact Summary

Resource	No-Action Alt.	Arterial Alt. 1	Arterial Alt. 2	Arterial Alt. 3	Arterial Alt. 4
Vegetation, Wildlife, and Special Status Species					
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.			
Visual					
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[1]	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.
Historic					
Prosser Valley Ditch	No known impacts.	No Adverse Effect			

[1] Impact estimates for projects included in the No-Action Alternative cannot be determined based upon available information.

Table 3. Impact Summary

Resource	No-Action Alt.	Arterial Alt. 1	Arterial Alt. 2	Arterial Alt. 3	Arterial Alt. 4
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.	(see footnote[1])	(see footnote[1])	1 site: Adverse Effect 1 site: No Adverse Effect 1 site: No Historic Properties Affected	(see footenote[1])
Hazardous Materials					
Number of potential contaminated sites within the construction limits	Indeterminate[2]	16	14	14	19
Number of potential contaminated sites within ¼ mile of improvements	Indeterminate[2]	57	58	55	59
Parks and Recreation					
Acres of permanent 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.			
Farmland					
Acres, prime farmland impacted	Indeterminate[2]	0			

[1] 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 (Selected Alternative).

[2] Impact estimates for projects included in the No-Action Alternative cannot be determined based upon available information.

Table 3. Impact Summary

Resource	No-Action Alt.	Arterial Alt. 1	Arterial Alt. 2	Arterial Alt. 3	Arterial Alt. 4
Use of Section 4(f) properties					
Wedekind Park	No	All Arterial Alternatives would impact Wedekind Park, converting park land to transportation uses, resulting in a *de minimis* impact.			
Prosser Valley Ditch	No	30 linear feet of impact resulting in a *de minimis* impact.			

4.0 DESCRIPTION OF THE SELECTED ALTERNATIVE

The Selected Alternative is Arterial Alternative 3, which is described in the following sections, shown on Figure 2, and shown on conceptual design plan sheets provided in Appendix A.

4.1 ROADWAY IMPROVEMENTS

4.1.1 US 395 Connector

The Selected Alternative 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 between Kiley Parkway and Golden View Drive and continue southwest along the mountain ridgeline west of Pyramid Highway. The US 395 Connector would veer west to cross over Sun Valley Boulevard south of Rampion Way. A new US 395/Sun Valley Boulevard interchange would be built immediately west of Sun Valley Boulevard. The US 395 Connector would continue west from Sun Valley Boulevard and connect to US 395 via a reconfigured US 395/Parr Boulevard interchange that would accommodate the new US 395 Connector. Raggio Parkway, Parr Boulevard, and Dandini Boulevard would be realigned in this area to accommodate the new US 395 Connector/Sun Valley Boulevard interchange and the reconfigured US 395/Parr Boulevard/US 395 Connector interchange. Disc Drive would be extended approximately one mile west of Pyramid Highway to intersect the new US 395 Connector.

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. (The term "high speed" refers to a design speed over 45 mph per Sections 3.3.4 and 3.3.6 of the 2011 American Association of State Highway and Transportation Officials (AASHTO) *A Policy on Geometric Design of Highways and Streets* [commonly referred to as the "Green Book"]. Essentially, a facility with a design speed up to 45 mph is considered "low speed," and 50 mph and above is considered "high speed.")
- Directional interchange at Pyramid Highway and US 395 Connector, with southbound Pyramid Highway ramp crossing under the US 395 Connector.
- Directional interchange at Disc Drive/US 395 Connector, with US 395 Connector crossing over the Disc Drive westbound on ramp.
- Bridge across Sun Valley Boulevard.

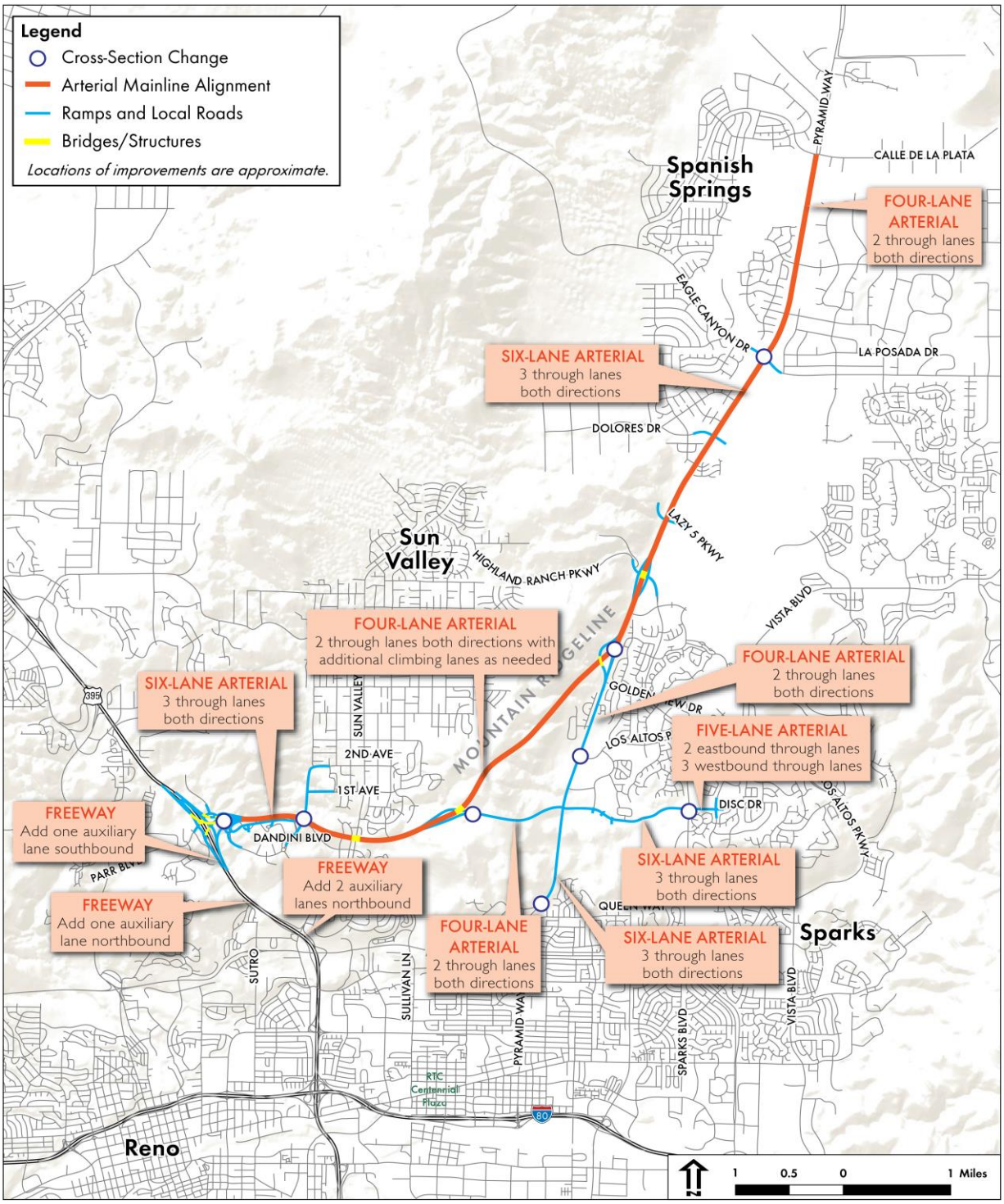

Figure 2. Selected Alternative (Arterial Alternative 3)

- Diamond interchange and associated service ramps immediately west of Sun Valley Boulevard.
- Directional system interchange and associated service ramps at US 395/Parr Boulevard/US 395 Connector.
- Roadway cross-section between Pyramid Highway and the new interchange west of Sun Valley Boulevard: four-lane arterial with climbing/truck lanes where warranted by traffic demand and roadway grade. Includes unpaved median, barrier rail where required to meet clear zone, and paved inside and outside shoulders.
- Roadway cross-section between the new Sun Valley Boulevard interchange and reconfigured US 395/Parr Boulevard/US 395 Connector interchange: six-lane arterial with barrier separation and paved inside/outside shoulders.

4.1.2 Pyramid Highway

Pyramid Highway would be constructed as a limited-access arterial from Calle de la Plata south to the US 395 Connector directional interchange located between Golden View and Kiley Parkway. From that point, Pyramid Highway would be constructed as an arterial south to Queen Way.

Pyramid Highway cross-sections would include a four-lane arterial (two through lanes in both directions) between Calle de la Plata and Eagle Canyon/La Posada Drive, and a six-lane arterial (three through lanes in both directions) between Eagle Canyon Drive/La Posada Drive to just north of Sparks Boulevard. Pyramid Highway would cross over Sparks Boulevard via a new grade-separated interchange. South of Sparks Boulevard, Pyramid Highway cross-sections 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 are intended to match the improvements recently completed for the Pyramid Highway/McCarran intersection project.

Pyramid Highway 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. To allow southbound traffic to continue south on Pyramid Highway past the US 395 Connector, a southbound Pyramid Highway exit ramp would be provided under the US 395 Connector between Golden View and Kiley Parkway. For northbound Pyramid Highway traffic, an entrance ramp to the US 395 Connector would be provided north of Golden View that merges into the US 395 Connector south of Kiley Parkway. The existing Pyramid Highway between Kiley Parkway and Golden View would be demolished to accommodate these proposed improvements.

4.1.3 Roadways Intersecting Pyramid Highway

The Selected Alternative would modify the following major roadways that intersect Pyramid Highway, listed north to south:

- **Calle de la Plata**: Signalize intersection. Reconfigure lanes to provide individual left-turn, through, and right-turn lanes. Portions of the landscaped median will be reconstructed.
- **Egyptian Drive/Sunset Springs Lane**: Signalize intersection. Reconfigure lanes to provide individual left-turn lanes, through lanes, and right-turn lanes. Portions of the landscaped median will be reconstructed.
- **West Sky Ranch Boulevard**: Eliminate left turn access; change to right-in/right-out access only.
- **Eagle Canyon Drive/La Posada Drive**: Enhance right-turn movements, particularly the proposed dual right-turn lanes in the eastbound-to-southbound direction.
- **Robert Banks Boulevard**: Eliminate left turn access; change to right-in/right-out access only.
- **David James Boulevard**: Eliminate Pyramid Highway access and build cul-de-sac because of proximity to Dolores Drive.
- **Dolores Drive**: Signalize intersection. Improve to six lanes. Reconfigure lanes to provide individual left-turn, through, and right-turn lanes in the eastbound and westbound directions. Widening will extend approximately 1,000 feet west along the existing alignment.
- **Lazy 5 Parkway:** Reconfigure lanes to accommodate widening of Pyramid Highway. Design will accommodate a planned future Lazy 5 Parkway extension to the west.
- **Highland Ranch Parkway/Sparks Boulevard**: Build new grade separated diamond interchange, with Pyramid Highway crossing over Sparks Boulevard. The two-lane service ramps will tie into Sparks Boulevard and Highland Ranch Parkway at separate locations.
- **Kiley Parkway**: Eliminate Pyramid Highway access and build cul-de-sac because of proximity of the Sparks Boulevard interchange.
- **Golden View**: Reconfigure lanes to accommodate Pyramid Highway widening.
- **Los Altos Parkway**: Reconfigure lanes to accommodate Pyramid Highway widening.
- **Shoppers Way**: Make minor modifications to tie into improved Pyramid Highway.
- **Disc Drive**: Disc Drive would be extended west from Pyramid Highway approximately one mile to intersect the new US 395 Connector via a directional interchange, with the US 395 Connector crossing over the Disc Drive westbound on ramp. The Disc Drive extension would consist of a four-lane arterial (two through lanes each direction) between the US 395 Connector and Pyramid Highway. The existing Disc Drive/Pyramid Highway intersection would remain at grade, but would be enlarged to accommodate the Disc Drive extension to the west, Pyramid Highway widening, and Disc Drive widening to the east. East of Pyramid Highway,

Disc Drive would be widened from four through lanes with median and turn lanes to a six-lane arterial (three through lanes each direction) with left- and right-turn lanes provided at the intersections between Pyramid Highway and Sparks Boulevard. Between Sparks Boulevard and Vista Boulevard, Disc Drive would be widened from four-lanes with left-turn lanes to a five-lane arterial (two eastbound through lanes and three westbound through lanes). Dual left-turn lanes would be provided at the Sparks Boulevard and Vista Boulevard intersections.

Changes to commercial access along Disc Drive east of Pyramid Highway include eliminating left-turn access to the shopping center located on the north side of Disc Drive between Sparks Boulevard and Vista Boulevard; driveways would become right-in/right-out access only.

In addition, access would be changed to right-in/right-out only at the following locations along Pyramid Highway. The existing right-in/right-out access at Tierra Del Sol Parkway and Spanish Springs Library would be maintained. Minor changes would be made at these locations as necessary to tie into the improved Pyramid Highway.

- Commercial driveways just north of Eagle Canyon Road
- Driveways between Robert Banks Boulevard and Eagle Canyon Drive
- Various driveways between Lazy 5 Parkway and Tierra del Sol
- Driveway to Blue Gem Mobile Estates
- Spring Ridge Drive
- Driveways to the First Baptist Church and Oasis Mobile Estates

4.1.4 West of Sun Valley Boulevard Interchange

Access from Sun Valley Boulevard to the US 395 Connector would be provided via a new diamond interchange built on Raggio Parkway immediately west of Sun Valley Boulevard. Ramps from the US 395 Connector mainline would connect with a four-lane extension of Raggio Parkway, which would cross over the US 395 Connector and extend north to 2nd Avenue. Raggio Parkway would become West Sun Valley Boulevard north of the US 395 Connector. 1st and 2nd Avenues would be extended west to intersect the new West Sun Valley Boulevard and provide access to Sun Valley Boulevard. 1st and 2nd Avenues would be repaved and sidewalks provided as required to comply with the Americans with Disabilities Act (ADA). Dandini Boulevard would be slightly realigned to intersect Raggio Parkway approximately 500 feet south of the existing Raggio Parkway/Dandini Boulevard intersection. Existing Dandini Drive between Raggio Parkway and Sun Valley Boulevard would be removed. The existing full access at all driveways to Truckee Meadows Community College (TMCC) and Desert Research Institute (DRI) along Dandini Drive and Raggio Parkway would be maintained. However, driveway alignments and elevations may be adjusted to tie into proposed improvements.

4.1.5 US 395

The Selected Alternative 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 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.

4.1.6 Interchanges

The Selected Alternative would include interchanges at the following locations:

- Diamond interchange at Pyramid Highway and Highland Ranch Parkway/Sparks Boulevard
- Directional interchange at the new US 395 Connector and Pyramid Highway between Kiley Parkway and Golden View Drive
- Directional interchange at Disc Drive extension and US 395 Connector
- Diamond interchange at US 395 Connector/Sun Valley Boulevard immediately west of Sun Valley Boulevard
- Direction system interchange over a reconstructed service interchange at US 395/Parr Boulevard/US 395 Connector

4.1.7 Bicycle/Pedestrian Facility Improvements

The Selected Alternative would provide the following bicycle and pedestrian facilities:

Pyramid Highway

- Five-foot bike lane on both sides of Pyramid Highway from Egyptian Drive south to Sparks Boulevard and from Golden View Drive south to Queen Way.
- Ten-foot shared-use path on the east side of Pyramid Highway from Calle de la Plata south to Disc Drive.
- Five-foot sidewalk on the west side of Pyramid highway from Calle de la Plata south to Sparks Boulevard, and from Golden View Drive south to Disc Drive.
- Five-foot sidewalk on both sides of Pyramid Highway from Disc Drive south to Queen Way.
- Paved shoulders on Pyramid Highway (ten-foot shoulder on east side and eight-foot shoulder on west side) from Sparks Boulevard south to Golden View.

US 395 Connector

- A separated shared-use paved path along the south side of the Disc Drive extension and US 395 Connector from Pyramid Highway west and tie into existing sidewalk on north side of El Rancho Drive just east of Sun Valley Boulevard. Bicyclists and

pedestrians would use existing facilities on El Rancho Drive across Sun Valley Boulevard and west along Dandini Boulevard. Just west of Leonesio Drive, a separated shared-use paved path would be provided on the south side of the US 395 Connector and run west to the Raggio Parkway/Dandini Boulevard intersection, where the path would terminate. Pedestrians and bicyclists would use bike lanes and sidewalks that would be provided along either Raggio Parkway or Dandini Drive to continue west to Parr Boulevard and US 395.

Other Roadways

- **Disc Drive**: Four-foot bike lanes and five-foot sidewalks on both sides of the roadway.
- **Raggio Parkway and Parr Boulevard**: Five-foot bike lanes and six-foot sidewalks on both sides.
- **West Sun Valley Arterial**: Five-foot bike lanes and six-foot sidewalks on both sides.
- **West 1st and 2nd Avenues**: If right-of-way allows, five-foot bike lanes and six-foot sidewalks on both sides of these roads between Sun Valley Boulevard and West Sun Valley Boulevard. This would be determined during final design.
- **Dandini Boulevard**: Five-foot bike lanes on both sides and six-foot sidewalk on one side.
- **Spectrum Drive**: Five-foot bike lanes on both sides and six-foot sidewalk on one side.

4.2 TRANSIT AND ITS

The Selected Alternative 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 the following Pyramid Highway intersections for use by transit patrons and carpoolers:

- Calle de la Plata and Pyramid Highway intersection: parking lot in the southeast quadrant of the intersection.
- Eagle Canyon/La Posada Drive and Pyramid Highway intersection: parking lot in the southeast quadrant of the intersection.
- Los Altos Parkway and Pyramid Highway intersection: parking lot shared with the Walmart parking lot. This requires coordination with Walmart. If Walmart does not agree to share the parking lot, an alternate site may be identified. If so, the EIS will need to be reevaluated to accommodate the new site.

The Selected Alternative would also include Intelligent Transportation Systems to improve traffic operations and increase roadway effectiveness.

4.3 BRIDGES

The Selected Alternative would include bridges/ramps at the following locations, listed in order from the US 395 interchange east and north to Calle de la Plata.

- Pyramid freeway over Sparks Boulevard
- US 395 Connector Py-2 (crosses over southbound off ramp to Pyramid)
- US 395 Connector freeway over Disc Drive westbound on ramp
- US 395 Connector freeway over Sun Valley Boulevard
- West Sun Valley Interchange: Raggio Parkway over connector freeway
- US 395 Interchange at Parr Boulevard:
  - Parr Boulevard over US 395 (replacement of existing structure)
  - Raggio Parkway over northbound-to-eastbound ramp
  - Westbound-to-southbound ramp over US 395
  - Westbound-to-southbound ramp over Raggio Parkway
  - Westbound-to-southbound ramp over P-2 Ramp (Parr service interchange north off ramp)

4.4 RETAINING WALLS

The Selected Alternative would include construction of several retaining walls along the corridor where necessary to reduce the project footprint to avoid or minimize impacts. Table 4 lists and describes the proposed retaining walls.

Table 4. Selected Alternative Proposed Retaining Wall Locations

Project Element	Location	Approximate Wall Dimensions (feet)	Comments
US 395/Parr Blvd./US 395 Connector System Interchange	Along Parr service southbound on-ramp	Length: 380 Average height: 16 Maximum height: 37	This wall has significant variations in height due to the grading of the surrounding properties. Placed to minimize right-of-way acquisition.
	Along US 395 westbound to southbound system on-ramp	Length: 450 Average height: 5 Maximum height: 10	Placed to avoid right-of-way acquisition.
	Along southbound US 395 just north of Sutro Street	Length: 640 Average height: 10 Maximum height: 15	Placed to minimize right-of-way acquisition.
	Along southbound US 395 at ramp bridge	Length: 260 Average height: 22 Maximum height: 22	Placed along bridge abutment.
	Between two ramps	Length: 850 Average height: 12 Maximum height: 35	Placed to separate grade differential between ramps

Table 4. Selected Alternative Proposed Retaining Wall Locations

Project Element	Location	Approximate Wall Dimensions (feet)	Comments
West of Sun Valley Interchange	Wall along W. 1st Avenue at Lois Allen Elementary School	Length: 320 Average height: 11 Maximum height: 19	Minimizes impacts to the playground area and driveway access to Lois Allen Elementary School.
	Wall along ramp	Length: 660 Average height: 30 Maximum height: 35	Wall to avoid impacts to the Prosser Valley Ditch
	Wall along shared-use path	Length: 315 Average height: 15 Maximum height: 28	Wall to avoid large cut
Pyramid Highway	Disc Drive between Sparks Boulevard and Vista Boulevard, south side	Length: 1,200 Average height: 6 Maximum height: 10	This wall will likely be higher than indicated but any additional height will be used as a traffic noise barrier instead of a retaining wall. Placed to avoid right-of-way acquisition.
	Pyramid Highway just north of Queen Way	Length: 200 Average height: 6 Maximum height: 6	This wall protects against impacts to the Orr Ditch
	Pyramid Highway just south of Wedekind Park	Length: 500 Average height: 15 Maximum height: 28	Placed to avoid right-of-way acquisition
	Pyramid Highway between Disc Drive and Los Altos Parkway	Length: 610 Average height: 4 Maximum height: 6	Placed to avoid right-of-way acquisition
	Pyramid Highway south of Golden View	Length: 800 Average height: 8 Maximum height: 12	Placed to avoid right-of-way acquisition

4.5 WATER QUALITY AND DRAINAGE IMPROVEMENTS

The Selected Alternative would provide water quality and drainage improvements, including construction or replacement of culverts, inlets, and ditches along the impacted roadways, as well as permanent water quality basins. This includes approximately 34 culverts, 28 ditches, 10 water quality basins (totaling approximately 57 acre-feet), and 1 ditch/channel relocation. Water quality basin locations are listed below. Please refer to Section 3.10 *Water Resources and Water Quality* and the *Conceptual Drainage Report* for more information on these improvements.

- Two basins on east side of Pyramid Highway and south of Eagle Canyon/La Posada Drive
- One basin north of Lazy 5 Parkway on east side of Pyramid Highway
- One basin south of Kiley Parkway on west side of Pyramid Highway
- One basin north of Golden View Drive on west side of Pyramid Highway
- One basin in northeast quadrant of Pyramid Highway/Disc Drive intersection
- Two basins (one on each side) of Pyramid Highway just north of Villa Jimenez Way

- One basin on west side of Sun Valley Boulevard, south of US 395 Connector
- One basin in southeast quadrant of the US 395/Parr Boulevard/US 395 Connector Interchange

4.6 PROJECT COSTS AND PHASING

The Study team developed preliminary cost estimates for the Selected Alternative using NDOT software. Developed in year 2017 dollars, and escalated to the anticipated year of expenditure, these estimates account for costs of design, construction, engineering and inspection, traffic control, landscaping and aesthetics, and right-of-way acquisition. Construction costs include earthwork excavation and hauling; clearing and grubbing; roadway embankment; drainage; roadway paving; and costs for constructing sidewalks, curb and gutter, barrier rails, and bridges. A ten percent contingency was added to the total cost for each project phase.

Estimating right-of-way costs involved different data sources, including Washoe County Assessor data and recent projects completed by the RTC. Costs varied depending on whether the parcel was vacant or had existing improvements. For parcels with existing improvements, additional cost variances were considered depending on the parcel's land use -- residential, commercial, or industrial. In general, square foot costs for the property land use type were multiplied by the area impacted, regardless of whether the parcel was a partial or a total acquisition. Additional costs were added to parcels to be totally acquired to account for the purchase of a new property and any associated relocation costs.

RTC will construct the project in phases as funds become available and to ease implementation. A draft phasing plan has been developed that divides the project into six phases, as summarized in Table 5 and shown on Figure 3. All phases would operate independently and allow for the transportation needs described in Chapter 1.0 to be met over time. Table 5 also summarizes cost estimates for the Selected Alternative by construction phase. All project phases are funded and are included in the fiscally constrained RTC's 2040 Regional Transportation Plan https://www.rtcwashoe.com/wp-content/uploads/2017/07/FINAL-RTP-BOOK_17-EC.pdf). Phase 1 also is included in the NDOT Statewide Transportation Improvement Program (ID number WA20117036).

Improvements for phases 1, 4, and 5 would be constructed mostly within existing right-of-way; however, temporary construction easements may be required. Phases 2, 3, and 6 would be constructed within both existing and acquired right-of-way.

Because of its total cost, this project is classified as a Major Project by FHWA. For Federal funding to be authorized for the construction of Major Projects, project sponsors must demonstrate to FHWA that the project has been carefully planned out. To that

end, FHWA conducted a Cost Estimate Review (CER) for the Selected Alternative on August 22 and August 23, 2018. The CER reviewed the project risks and schedule, and applied contingencies and escalation factors based on identified risks to the base cost estimate. The CER results provided verification as well as additional documentation to support the cost estimate of the project. Costs for some project elements increased because of project risk and other variables. Because the CER analyzed the whole project, and not individual phases, the costs presented in Table 5 reflect the original costs described in the FEIS.

Table 5. Selected Alternative Phases and Cost Estimates

Phase	Timeframe (years)	Improvements	Estimated Cost (Escalated to Year of Expenditure $)
1	2019-2023	**Pyramid Highway between Queen Way and Golden View Drive** • Widen Pyramid Highway between Queen Way and Los Altos Parkway. • Build new sidewalk and median improvements between Los Altos Parkway and Golden View Drive. • Build local access changes. • Improvements will be constructed within existing ROW. Temporary construction easements may be needed, therefore, estimated cost for those are included in cost estimate for this phase. • Total cost includes construction, earthwork, ROW, and engineering.	$47M to $58M
2	2023-2026	**Widen Disc Drive from Pyramid Highway to Vista Boulevard** • Improvements will require acquisition of ROW. • Total cost includes construction, earthwork, ROW, and engineering.	$19M to $24M
3	2026-2030	**US 395 Connector and the Disc Drive Extension** • Realign/reconstruct Parr Boulevard, Raggio Parkway, and Dandini Drive. • Build new bridge over US 395 at Parr/Dandini interchange. • Build US 395 interchange service ramps. • Build Raggio Parkway bridge over north-to-east ramp. • Modify Dandini Drive driveways. • Build US 395 Connector bridge over Sun Valley Boulevard. • Build US 395 Connector interchange at Pyramid Highway. • Build shared use path along Pyramid Highway from Golden View Drive to Lazy 5 Parkway. • Limited improvements to Sparks Boulevard intersection at Pyramid Highway.	$379M to $460M[1]*

[1] Includes right-of-way costs for Phase 6.

Table 5. Selected Alternative Phases and Cost Estimates

Phase	Timeframe (years)	Improvements	Estimated Cost (Escalated to Year of Expenditure $)
		• Build local street improvements at Sparks Boulevard. • Extend Disc Drive from Pyramid Highway to the US 395 Connector. • Build Disc Drive interchange. • Build shared Use path along Disc Drive from Pyramid to Sun Valley. • Improvements will be constructed within existing ROW and on new alignment. Temporary construction easements may be needed, so estimated cost for those are included in cost estimate for this phase. • Total cost includes construction, earthwork, ROW, and engineering. Note that costs for Phase 3 include right-of-way costs for Phases 6.	
4	2030-2034	**System ramps at US 395** • Construct system ramps at US 395 for the Connector. • Construct multiple bridges for the west-to-south ramp. • Widen US 395 to four lanes in both directions with auxiliary lanes from McCarran Boulevard to just north of Parr Boulevard. • Improvements will be constructed within existing ROW and on new alignment. Temporary construction easements may be needed, so estimated cost for those are included in cost estimate for this phase. • Total cost includes construction, earthwork, and engineering. ROW costs for this phase are included in Phase 2.	$73M to $94M
5	2035+	**Pyramid Highway improvements from Sparks Boulevard to Calle de la Plata** • Construct grade-separated Sparks Boulevard Interchange. • Widen Pyramid Highway from Sparks Boulevard to Eagle Canyon and north to Calle de la Plata. • Build sidewalk/shared use path and median improvements. • Build local street improvements at Lazy 5 Parkway, Dolores Drive, Eagle Canyon Drive, Sky Ranch and Egyptian. • Build local access changes. • Improvements will be constructed within existing ROW. Temporary construction easements may be needed, so estimated cost for those are included in cost estimate for this phase. • Total cost includes construction, earthwork, ROW, and engineering.	$182M to $224M

Table 5. Selected Alternative Phases and Cost Estimates

Phase	Timeframe (years)	Improvements	Estimated Cost (Escalated to Year of Expenditure $)
6	2035+	**West Sun Valley interchange and local improvements** • Build all four service ramps connecting Raggio Parkway to the West Sun Valley Arterial. • Extend Raggio Parkway to 2nd Avenue. • Build connections to Sun Valley Boulevard via 1st Avenue and 2nd Avenue. • Build Raggio Parkway Bridge over the future US 395 Connector. • Build the shared use pathway from Raggio Parkway to Sun Valley Boulevard. • Improvements will be constructed within existing ROW and on new alignment. Temporary construction easements may be needed, so estimated cost for those are included in cost estimate for this phase. • Total cost includes construction, earthwork, ROW, and engineering.	$51M to $66M[1]
Total Estimated Cost			**$751M to $927M[2]**

[1] Only includes construction costs (right-of-way for this phase is included in Phase 3).

[2] This is a more detailed cost estimate prepared for the Selected Alternative as part of the FHWA Major Project Review process. Therefore, this differs from the comparative arterial alternative cost estimates presented in Chapter 2.0 of the FEIS.

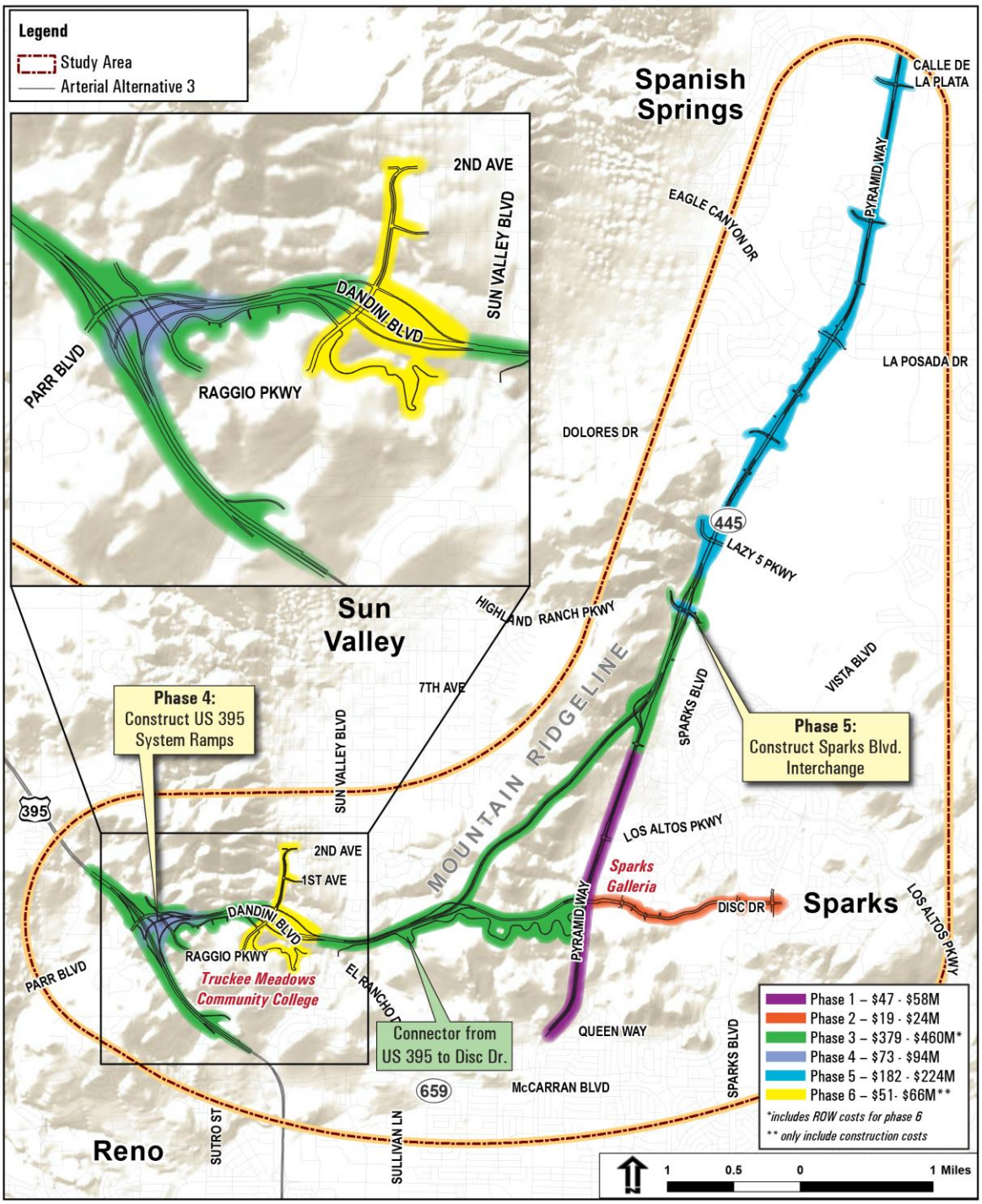

Figure 3. Project Phasing and Estimated Costs

5.0 SECTION 4(f)

This chapter summarizes results of the Section 4(f) evaluation conducted for this undertaking; refer to Chapter 5.0 of the FEIS for details.

Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 United States Code [USC] 303) and its implementing regulations, codified at 23 Code of Federal Regulations (CFR) Part 744, states that the Administration may not approve the use of a Section 4(f) property unless it is determined that there is no feasible and prudent avoidance alternative to the use of land from the property, and that the action includes all possible planning to minimize harm to the property resulting from such use; or that the use of the property, including any measures to minimize harm (such as any avoidance, minimization, mitigation, or enhancement measures) will have a *de minimis* impact on the property, as defined in CFR 774.17.

5.1 SECTION 4(F) RECREATIONAL FACILITIES

Two recreational facilities are located within the limits of disturbance for the Selected Alternative—the Sun Valley Open Space and Wedekind Park. The 15-acre Sun Valley Open Space is owned and managed by Washoe County. Wedekind Regional Park is a 250-acre site located east of Pyramid Highway and south of Disc Drive.

5.1.1 Section 4(f) Use of Recreational Properties

Sun Valley Open Space: The Washoe County Board of Commissioners adopted a Resolution of Support in August 2011 (see Appendix B) that acknowledges that both Washoe County and RTC are committed to working together to accommodate future joint uses for this parcel. Cooperative planning is proposed to minimize the project's potential impacts to the Sun Valley community. The Selected Alternative would result in the full acquisition of this open space. As a result of the Resolution, no Section 4(f) use would occur from the Selected Alternative, and, as such, this would be considered joint planning under 23 CFR 774.11(i).

Wedekind Park: Wedekind Regional Park is a 250-acre site located east of Pyramid Highway and south of Disc Drive. The Selected Alternative would result in approximately 0.97 acre of temporary impacts and 2.57 acres of permanent impacts in two areas of the park for road widening and stormwater management, representing 1.0 percent of the park that would be subject to direct permanent use. Approximately 0.06 acre of permanent use would occur at the northwest corner of the park adjacent to the Pyramid Highway and Disc Drive intersection improvements. This would consist of sliver uses from placement of fill slopes within the park property. Proposed development of the park includes access from Disc Drive in this area, which would be accommodated by the Selected Alternative. Approximately 2.51 acres of permanent use would occur from construction of a water quantity/quality basin in the southwest

portion of the park adjacent to Pyramid Highway and existing residential uses. The basin would be an unfenced, shallow, natural-appearing depression. Both areas of permanent use are located on the periphery of the park adjacent to existing transportation features and do not contain proposed recreation features of the park. Further, the Selected Alternative also would preserve and slightly improve the existing trailhead parking access at the northern part of the park. Use of the park would not adversely affect the features, attributes, or activities that qualify the property for protection under Section 4(f). Therefore, FHWA has recommended that the Selected Alternative would result in a *de minimis* use of Wedekind Park.

Measures to Minimize Harm to Wedekind Park

Modifications to the proposed water quantity/quality basin design were evaluated to minimize harm to Wedekind Park. After considering several options, it was determined that impacts to Wedekind Park could best be minimized by modifying the original design of the water quantity/quality basin, which included a deeper basin with steeper slopes that would be less natural in appearance, and fencing, which would detract from the park setting. The modified basin design included an unfenced, shallow, natural-appearing depression that would not detract from the park setting. Further, the Selected Alternative footprint was minimized to the greatest extent possible through the use of retaining walls. Designers will continue to examine potential ways to further reduce impacts during final design.

Mitigation for Wedekind Park Impacts

Design of fill slopes at the Disc Drive/Pyramid Highway intersection will be constructed to mimic the natural landscape, and all disturbed areas will be revegetated with native shrubs as appropriate and reseeded with native grasses. Similarly, design of the proposed water quantity/quality basin will also mimic the natural landscape to the extent possible, and will be revegetated. The existing access to the trailhead parking at the northern portion of Wedekind Park will be preserved and slightly improved. During construction, best management practices will be used for erosion control. Property acquisition will be completed under the Uniform Relocation Act.

RTC and/or NDOT will continue to coordinate with the City of Sparks Parks and Recreation Department throughout the final design process to design the water quantity/quality basin consistent with the park's planned uses and amenities.

De Minimis Finding for Wedekind Park

FHWA informed the City of Sparks, the Official with Jurisdiction (OWJ) for Wedekind Park, of its intent to make a *de minimis* finding. The City's Parks Director concurred in writing with the *de minimis* finding. Also, the Section 4(f) uses at Wedekind Park and FHWA's intent for a *de minimis* finding were presented for public review and comment, and no public comments on the *de minimis* finding were received. Considering the harm minimization and mitigation measures that have been proposed, and the lack of public

comment regarding the *de minimis* recommendation, FHWA has concluded that the Selected Alternative would have *de minimis* impacts to Wedekind Park and that an analysis of feasible and prudent avoidance alternatives under Section 4(f) is not required.

5.2 HISTORIC AND ARCHAEOLOGICAL RESOURCES

Five NRHP-eligible historic architecture resources were identified within the Area of Potential Effect (APE) that could potentially be affected by the project:

- Sierra Vista Ranch Historic District
- Trosi Family/Kiley Ranch Historic District
- Iratcabal Farm Historic District
- Orr Ditch
- Prosser Valley Ditch (Note: the Prosser Valley Ditch is evaluated both as an historic architecture and archaeological resource)

NRHP-eligible archaeological sites were identified for each Arterial Alternative early in the EIS process for planning purposes, but Section 106 effect determinations were only made for archaeological sites potentially impacted by the Selected Alternative. In addition to the Prosser Valley Ditch, which is evaluated as both an historic architecture and archaeological resource, the Selected Alternative would potentially impact three archaeological sites determined eligible for the NRHP under Criterion D:

- Quarry/Intensive Lithic Reduction; Prospect Complex (26Wa9822).
- Quarry/Intensive Lithic Reduction Site; possible Historic Isolated Feature (26Wa9841).
- Quarry/Intensive Lithic Reduction; Prospect Complex (26Wa9856).

5.2.1 Section 4(f) Use of Historic Resources

Under the Section 106 process, FHWA determined, and the SHPO concurred, that the Selected Alternative would not alter the characteristics of the Sierra Vista Ranch Historic District, Trosi Family/Kiley Ranch Historic District, Iratcabal Farm Historic District, and the Orr Ditch that qualify them for inclusion in the NRHP, and that the project would result in *No Historic Properties Affected* for these properties. Therefore, the Selected Alternative would not result in a Section 4(f) use, including constructive use, for these resources.

The Selected Alternative would directly impact Segment C of the Prosser Valley Ditch at one location by construction of a 10-foot-wide shared-use path across the ditch. Through the Section 106 process, FHWA determined, and the SHPO concurred, that the Selected Alternative would not alter the association characteristics of the entire historic

linear resource that qualify it for inclusion in the NRHP, and that the project would result in *No Adverse Effect* for this resource.

Measures to Minimize Harm to Prosser Valley Ditch

Use of the Prosser Valley Ditch was minimized by modifying the initial design of the shared-use path proposed to cross the ditch. The initial path alignment was shifted approximately 100 feet to cross an area of the ditch that had already been obliterated by recreational vehicle use. Because the ditch had been obliterated in this area, no bridge or culvert would be needed for the path crossing. The modified path crossing would involve gentle earthen slopes spreading out a maximum of 8 feet from each side of the path where it crosses the ditch, and result in approximately 30 feet of permanent impacts and 5 linear feet of temporary impacts to the ditch.

Mitigation for Prosser Valley Ditch Impacts

Although the Selected Alternative would result in *No Adverse Effect* to the Prosser Valley Ditch, RTC and/or NDOT and their construction contractor will work to minimize impacts to the ditch during construction by undertaking measures such as those listed below:

- Minimize area of disturbance to the extent practicable.
- Control construction access.
- Limit work within construction area.
- Revegetate disturbed areas as soon as practicable consistent with adjacent landscape features and with desirable native plant species.

De Minimis Finding for Prosser Valley Ditch

Through the Section 106 process, FHWA and NDOT consulted with, and considered the views of, the SHPO and other historic consulting parties regarding effects to historic resources. These parties also were notified of FHWA's intent to make a *de minimis* finding for the ditch based on the SHPO's concurrence on the *No Adverse Effect* recommendation. The SHPO acknowledged receipt of the Section 4(f) documentation and indicated their agreement that the undertaking would not pose an adverse effect to the Prosser Valley Ditch. No comments from other consulting parties regarding the ditch were received. The ACHP was invited to participate in Section 106 consultation for this undertaking and declined.

Considering the harm minimization and mitigation measures summarized above, the views of consulting parties during the Section 106 process, FHWA's notification to the SHPO of their intent to make a *de minimis* finding for the ditch based on the SHPO's concurrence with the *No Adverse Effect* recommendation, and SHPO's agreement with the *No Adverse Effect* determination, FHWA has concluded that the Selected Alternative

would have *de minimis* impacts to the Prosser Valley Ditch and that an analysis of feasible and prudent avoidance alternatives under Section 4(f) is not required.

5.2.1.1 Section 4(f) Evaluation of Archaeological Resources

Through the Section 106 process, it was determined that the Selected Alternative would result in unavoidable impacts to site 26Wa9841 and result in an Adverse Effect to that resource. FHWA consulted with the SHPO, historic consulting parties, and tribes on their determination of effects and their intent to apply the Section 4(f) exception for historic properties eligible under Criterion D that will have minimal value for preservation in place. Beyond concerns voiced by the Reno-Sparks Indian Colony to avoid archaeological sites potentially affected by the undertaking, no objections from other consulting parties were received. The SHPO did not object to the application of the Section 4(f) exception for historic properties eligible under Criterion D.

6.0 MEASURES TO MINIMIZE HARM

Impacts of the Selected Alternative have been evaluated and minimized to the extent practicable. Mitigation proposed for the impacts are summarized below and fully described in Section 6.7 of the FEIS. Impacts, as presented in the FEIS, are based on best information available and will be minimized to the extent possible during final design through coordination and mitigation commitments.

Table 6 lists measures that will be undertaken to mitigate potential impacts of the Selected Alternative (Arterial Alternative 3). The mitigation measures will be implemented either before or concurrently with each phase of the project's proposed construction activities. The roles and responsibilities between RTC and NDOT in carrying out these mitigation 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.

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
Land Use	RTC and/or NDOT	The Lead Agencies will seek to avoid and minimize impacts to existing development during final design of the Selected Alternative. Also, RTC and/or the Nevada Department of Transportation (NDOT) will work with local planners to incorporate the Selected Alternative into future land use plans and modify future land use and zoning as needed. To mitigate property impacts, RTC and/or NDOT will comply with the Uniform Relocation Assistance and Real Property Acquisitions Policies Act of 1970, as amended (URA) Section 205(a). Conversion of BLM land for the US 395 Connector will not require a revision to BLM's management plan; BLM will reflect the highway project in future plan revisions. Because BLM land that would be affected by the proposed action is not actively grazed, no effects to grazing allotments are anticipated. Any potential effects to any grazing allotment and/or permits and necessary mitigation measures would be further investigated during later stages of project development, including the final design and right-of-way processes. No mining or mineral claims are currently located within the Study Area. If valid mineral claims have occurred within the Selected Alternative alignment on the date of the 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	RTC and/or NDOT and construction contractor	The Lead Agencies will mitigate social impacts from the Selected Alternative in several ways. Property acquisitions will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and with NDOT's *Right-of-Way Manual* (2011). This includes relocations as well as property acquisitions from the Sherriff's Office, the campus of DRI and TMCC, and the Summit Christian School/Church. More specific discussion on relocations and property acquisitions is included in FEIS Section 3.5 *Right-of-Way/Relocation*. Improved mobility from the improvements would offset any out-of-direction travel and access changes, generally improving access to community facilities in the Study Area. Also, measures to mitigate community cohesion impacts in the Sun Valley and other neighborhoods discussed above are included in FEIS Section 3.3.6 *Environmental Justice Mitigation*. Measures to mitigate noise impacts are included in FEIS Section 3.9.7 *Traffic Noise Impacts*. **Environmental Justice:** Throughout the alternatives development and refinement process, the Arterial Alternatives have evolved in an effort to address the needs identified for this project while minimizing community impacts. EJ impacts were considered early in the alternatives screening process. The alignments for the Arterial Alternatives were chosen in part because the US 395 Connector would cross Sun Valley in the narrowest location, thereby minimizing potential EJ impacts. See the *Alternatives Development and Screening Report for Pyramid Highway and US 395 Connector* (RTC, 2012) and *Alternatives*

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		Development and Screening Update: Identification of a Preferred Alternative for Pyramid Highway and US 395 Connector (RTC, 2017) for more information. The final design process will involve design refinements to further avoid and minimize impacts. This section outlines mitigation measures that the Lead Agencies will implement to mitigate effects to the identified EJ populations from the Selected Alternative. RTC and NDOT will continue to work with affected EJ communities during final design and construction phases to seek measures to mitigate impacts from project implementation. As such, ongoing discussions with affected communities and organizations such as the Sun Valley General Improvement District (GID) may warrant modifying some of these measures. As part of a comprehensive mitigation package, RTC and/or NDOT will: • Provide noise barriers, if desired by the communities, to mitigate traffic noise impacts near the following EJ neighborhoods (see FEIS Section 3.9.7 *Traffic Noise Mitigation* for more information on traffic noise barriers): ◆ Whittell Pointe Apartments ◆ Sun Villa Estates ◆ Tierra Del Sol Subdivision ◆ Springwood Subdivision • Provide screening walls in the following minority and low-income neighborhoods, if desired by these communities. Final placement of any such screening walls will be evaluated during final design: ◆ Northern Lights subdivision ◆ Mobile Glen Estates ◆ Ross Park Estates ◆ Sierra Point Apartments ◆ Oasis Mobile Estates and Blue Gem Estates • Provide landscaping and aesthetic treatments, as well as signage improvements along Sun Valley Boulevard as part of development of a gateway concept. NDOT and RTC will work with the Sun Valley GID to follow any adopted aesthetic theme for Sun Valley Boulevard, as outlined in the recommendations and findings of the *Sun Valley Boulevard Corridor Study – Final Draft (January 2015).* • Provide bicycle/pedestrian improvements around all EJ areas. • Provide continuous sidewalks and a dedicated bicycle lane along Sun Valley Boulevard between El Rancho Drive and 1st Avenue, as described in the *Sun Valley Boulevard Corridor Study – Final Draft (2015).* • Provide sidewalks and bicycle lanes on the realigned Dandini Boulevard between Sun Valley Boulevard and Raggio Parkway.

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		• Provide the following intersection improvements to improve pedestrian crossings along Sun Valley Boulevard, as described in the *Sun Valley Boulevard Corridor Study – Final Draft (2015)*: ◆ **Skaggs Circle.** Install rapid flashing beacons, signage, and a pedestrian refuge island. ◆ **1st Avenue.** Realign the east leg of the intersection to provide enhanced visibility for drivers in the intersection. ◆ **6th Avenue.** Install rapid flashing beacons, signage, and a pedestrian refuge island. • Include gateway design features on the bridge over Sun Valley Boulevard to signify entrance into Sun Valley. • In accordance with RTC transit planning, provide bus turnouts and bus stop amenities for existing transit service within project limits. The *Sun Valley Boulevard Corridor Study – Final Draft* identified potential locations for bus stop amenities along Sun Valley Boulevard, including bus stops near Crystal Lane, Dandini Boulevard, Rampion Way, and 1st and 2nd Avenue.) Work with the community on locations of these turnouts and bus stop amenities. • Provide new regional bus service along Pyramid Highway, consistent with the service standards of RTC, with new transit/carpool parking lots at Calle de la Plata, Eagle Canyon Drive, and Los Altos Parkway. NDOT will provide residential property owners and tenants with the benefits in its relocation assistance policies which are outlined in FEIS Section 3.5.4 *Right-of-Way/Relocation Mitigation.* 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). Relocation assistance and payments are designed to compensate displaced property owners for costs that are the result of acquisition of the property. NDOT will make all efforts to relocate affected residents and businesses within or near the community where they currently reside. In addition, the replacement properties for those displaced will be comparable in size, safety, sanitary conditions, and overall decency and functionality as those being acquired. At the beginning of the right-of-way acquisition process, investigation of the special needs of all parties being relocated will be provided. NDOT also provides relocation benefits for renters. The benefits are based on the number and relationship of the people in the displaced units as well as income, rent, and utilities. Similar to the program for property owners, NDOT will provide renters with information about comparable rental properties, and ensure that the property the tenant moves into meets NDOT's standards of decent, safe, and sanitary housing. Due to the downturn in the housing market in 2008, some homeowners have negative equity in their homes. Despite improving home values in recent years, this situation remains for some homeowners. FHWA has instituted a temporary Programmatic Waiver of 49 CFR 24.401(b)(1)— Temporary 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. **Economic**: Acquisition or relocation of property will comply with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and other applicable relocation assistance programs. New access will be provided for business properties where existing accesses are removed. Although some businesses may have changes in

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		access due to the project, RTC and/or NDOT will work to ensure that some form of access is provided to all businesses. To avoid disruption of business activities during construction, the new access will be provided before the existing access is removed. The Study team conducted a preliminary search for commercial properties for lease within the areas where relocations are expected to occur under all the Arterial Alternatives to determine availability of suitable properties for commercial relocation. It was determined through this preliminary search that there are available properties that represent the same range of business types and location criteria represented by the businesses that could be affected by the Selected Alternative. Before or during final design, 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 interference to traffic flow from construction equipment and activities. RTC and/or NDOT will provide advance notice to emergency service providers, local businesses, and residents with regard to road delays, access, and special construction activities. These notifications will be accomplished through radio and public announcements, newspaper notices, on-site signage, RTC's website, and during public meetings when possible. To minimize disruption to traffic and local businesses, construction activities will be staged and work hours varied. Throughout the construction stage, access will be preserved for each affected business. Where feasible, retaining walls will be constructed along Pyramid Highway to minimize impacts to commercial development.
Right-of-Way	RTC and/or NDOT	The Study team sought to avoid and minimize effects to private and public property, particularly those requiring potential relocations, **t**hroughout the alternatives development and screening process. Several retaining walls are proposed to eliminate or minimize right-of-way impacts. Section 4.4 *Retaining Walls* lists these walls and their purpose. The final design process will involve further design refinements to avoid and minimize impacts. Before or during final design, RTC and/or NDOT will prepare a comprehensive relocation/acquisition plan to ensure availability of relocation properties. The plan will be administered by NDOT and adhere to NDOT right-of-way requirements. For more detailed information, please refer to the *Social Considerations, Right-of-Way/Relocation Impacts, and Environmental Justice Technical Report* (RTC, 2017). 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). The purpose of the Uniform Act is to provide uniform and equitable treatment of all persons displaced from their homes, businesses, or farms, and establishes criteria for proper acquisition and relocation benefits. The Uniform Act requires that persons to be displaced be provided with information that they will need to minimize the disruption of moving and maximize the likelihood of a successful relocation. Relocation assistance payments are designed to compensate displaced persons for costs that are the result of acquisition of the property upon which they reside. The criteria contained in Nevada Revised Statutes Section 342 also provide guidance that is applicable to potential relocations within the Study Area by outlining specific services and assistance that must be provided by the governing body.

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		All reasonable opportunities to avoid relocations and minimize the acquisition or impacts to private property will be taken during the final design stage. Also, the Lead Agencies will make all efforts to relocate affected dwelling units and businesses within or near the community in which they currently reside. All efforts will be made so that those displaced will be afforded with properties that are comparable in size, safety, sanitary conditions, and overall decency and functionality to those being acquired. In addition to the requirements under the Uniform Act, the Lead Agencies 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 parties being relocated or selling a portion of their land will be investigated with the goal to accommodate these special needs, as required. As discussed in FEIS Section 3.3.6 *Environmental Justice Mitigation*, due to the 2008 housing situation, some homeowners have negative equity in their homes. The Uniform Act was passed to ensure that displaced persons "shall not suffer disproportionate injuries as a result of programs and projects designed for the benefit of the public as a whole and to minimize the hardship of displacement on such persons" (42 USC 4621[b]). FHWA has instituted a temporary Programmatic Waiver of 49 CFR 24.401(b)(1)—Temporary 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. Because the 2008 economic downturn caused a sharp decline in Study Area property values, many affected homeowners have negative equity. Despite improving home values in recent years, this situation remains for some homeowners. As part of a larger compensation package, the FHWA waiver would help relieve the debt of relocated homeowners caused by property value declines. Because the Selected Alternative may impact available parking for the Summit Christian Church, an analysis of the as-constructed parking facilities will be conducted in coordination with Summit Christian Church representatives during final design to determine if any impacts or alterations can be avoided to maintain the minimum number of required parking spaces for the facility size and type. Alterations to the parking lot could reconfigure the existing parking layout or construct new spaces at other locations on the property. Work may also include earthwork as part of construction. All impacts and subsequent parking alterations will be included as part of the costs associated with the Selected Alternative. This parking evaluation will also be completed for the First Baptist Church of Sparks located south of Spring Ridge Drive. Any overlap of the Selected Alternative on public right-of-way will be coordinated with the utility owners, and the alignment will be modified during final design to minimize adverse effects to utility lines in these locations to the extent practical. Because BLM land that would be affected by the proposed action is not actively grazed, no effects to grazing allotments are anticipated. Effects to any grazing allotment and/or permits and necessary mitigation measures would be further investigated during later stages of project development, including final design and the right-of-way process.

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		If valid mineral claims have occurred within the Selected Alternative alignment on the date of the 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. The results of the analysis conducted regarding suitable replacement property availability indicate that the Study Area and North Valleys contain adequate property to accommodate residential and business relocations. Suitable residential replacement property within the Study Area may be limited for certain housing types, but the housing inventory is expected to increase considerably in coming years. This finding is based on the analysis conducted in 2017 and will be refined during a future final design process.
Transportation	RTC and/or NDOT and construction contractor	Transportation and traffic operations would be improved under the Selected Alternative; therefore, no mitigation would be required. Measures that will be undertaken to mitigate transportation and traffic impacts during construction activities include, but are not limited to, the following measures. These measures will be further developed and refined during the final design process. • Develop traffic management plans. • Maintain traffic flow during peak travel times to the extent practicable. • Implement detours during periods of 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 that are likely to result in traffic disruption, rerouting, and changes in access. • Use signage to announce/advertise timing of road closures and detours. • Limit duration of road closures and detours to the extent practicable.
Pedestrians and Bicyclists	RTC and/or NDOT and construction contractor	The Selected Alternative would improve bicycle and pedestrian connectivity by providing either new or enhanced facilities; therefore, mitigation measures for permanent impacts to bicycle and pedestrian facilities are not required. Please refer to FEIS Section 3.17 for a description of measures to mitigate impacts to the historic Prosser Valley Ditch. RTC and/or NDOT will employ the following measures to mitigate temporary construction impacts to bicycle and pedestrian facilities: • 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. • Provide construction fencing or other barrier to protect bicyclists and pedestrians from construction areas. • Because informal trails are not managed or maintained for recreational use, no mitigation is necessary.
Air Quality	RTC and/or NDOT and construction	This project meets the CAA and its amendment conformity requirements and is not expected to exceed the NAAQS. Therefore, mitigation measures are not required. However, compared to the No-Action Alternative, an increase in pollutant emissions (associated with increases in VMT) is anticipated with the Selected Alternative.

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
	contractor	There are regional and local agency strategies that could be used to reduce criteria pollutants and mobile source air toxics (MSAT) emissions, especially diesel particulate matter from existing diesel engines. These include, but are not limited to: • Tailpipe retrofits • Closed crankcase filtration systems • Clean fuels • Engine rebuild and replacement requirements • Contract requirements • Anti-idling ordinances and legislation • Truck stop electrification programs • Aggressive fleet turnover policies 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. <u>Construction Mitigation</u> Construction activities and unpaved roads are a major contributor to fugitive dust (PM10) emissions. The project is anticipated to disturb one acre or more of land. Therefore, the project area will be subject to a dust control permit from the WCAQMD (regulation 040.030 of the District Board of Health Regulations). A Dust Mitigation Plan will also need to be prepared and submitted. Practical measures to control dust, such as watering of construction areas, will be incorporated into the plans and specifications for the construction phase of the project in accordance with NDOT's Standard Specifications for Road and Bridge Construction. RTC and/or NDOT will require mitigation measures for construction activities, which may include: • Preparing an air quality mitigation plan that describes all feasible measures to reduce air quality impacts resulting from construction activities. • Requiring all construction contractors to: ◆ Obtain a Dust Control Permit from the Washoe County District Health Department, Air Quality Management Division.

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		◆ Comply with the National Pollutant Discharge Elimination System (NPDES) General Permit for erosion control due to stormwater and construction-related runoff from the construction sites. As part of this compliance, the construction contractor will be required to submit and maintain a Storm Water Pollution Prevention Plan (SWPPP) on site that will include best management practices (BMP) to be implemented and maintained during construction. ◆ Ensure that all construction equipment is properly tuned and maintained. ◆ Limit vehicle speeds on work sites, unpaved roads, and in parking areas. ◆ Cover haul trucks when transferring materials. ◆ Install trackout control devices at access points to minimize trackout dirt. ◆ Minimize idling time to 10 minutes to save fuel and reduce emissions. ◆ Have an operational water truck on site at all times. Apply water to control dust as needed to prevent dust impacts off site. ◆ Use existing power sources or clean fuel generators rather than temporary power generators. ◆ Minimize obstructions of through traffic lanes, including accommodating two directional traffic on existing street during construction. Construction will not be allowed in existing signalized intersections during AM and PM peak commuting hours. Flaggers will be provided to guide traffic properly minimizing congestion and to ensure safety at construction sites. • Develop traffic control plans for work on existing road facilities to maintain traffic during construction and to minimize traffic flow interference from construction equipment movement and activities. Plans may include advance public notice of road construction, detours, alternate routes, use of public transportation, and satellite parking areas with a shuttle service. Operations affecting traffic for off-peak hours will be scheduled whenever reasonable.
Traffic Noise	**RTC and construction contractor**	Traffic noise barriers are recommended at the following areas where traffic noise impacts would occur: • Sun Villa Estates subdivision • Whittell Pointe Apartments • Willow Creek subdivision • Spring Ridge subdivision • Tierra Del Sol Subdivision • Springwood Subdivision During construction, RTC may implement the following measures to aid in mitigating temporary noise impacts: • Prepare noise control plan that specifies how noise mitigation measures will be implemented during construction that occurs near residences, establishes hours of operation and noise level limits, requires that proper maintenance be performed on construction equipment, and requires that stationary equipment be placed as far from homes as feasible. • Limit construction activities to workday off-peak hours as best possible.

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		• Use noise blankets or other muffling devices on equipment and quiet-use generators at noise-sensitive receptors. • Use well-maintained equipment and have equipment inspected regularly.
Water Resources and Water Quality	RTC and/or NDOT and construction contractor	RTC and/or NDOT will implement a series of measures to avoid, minimize, and mitigate impacts to water resources and water quality from the Selected Alternative. Specifically, RTC and/or NDOT will: • Implement BMPs during construction. As part of the development of BMPs for the project, NDOT's construction contractor must file a Notice of Intent with NDEP's Bureau of Water Pollution Control to obtain coverage under the General Permit for Stormwater Discharges Associated with Construction Activity (NVR100000). A Stormwater Pollution Prevention Plan (SWPPP) will be developed before the Notice of Intent is submitted. The SWPPP will outline temporary and permanent erosion and sediment controls, locate stormwater discharge points, and describe BMPs to be implemented to prevent or reduce stormwater pollutant discharge associated with construction activities to the maximum extent practical. • Implement temporary erosion control and stormwater control measures during construction per the NDOT Storm Water Quality Manuals. Typical BMPs that may be selected for this project include: ◆ Street sweeping and vacuuming during construction ◆ Storm drain inlet protection ◆ Fiber rolls, silt fences, and gravel bag berms ◆ Stockpile and construction site management ◆ Wind erosion control and application of soil stabilizer ◆ Hydroseeding • Design post-construction BMPs per the requirements of the NDOT Storm Water Quality Manuals. Permanent BMPs that may be selected for this project include: ◆ Preservation of existing vegetation to the extent possible ◆ Installation of hydraulically stable ditches, berms, and swales, as needed ◆ Revegetation, mulching, and slope roughening in disturbed areas to reduce erosion ◆ Infiltration basins that allow pollutants to settle ◆ Installation of rip rap to slow runoff, reduce the potential for erosion, and allow for infiltration ◆ Slope armoring using geotextiles, vegetation, soil cement, or other long-term soil stabilization methods to minimize the potential for erosion • Obtain a Section 401 Water Quality Certification issued by NDEP, Bureau of Water Quality Planning, as required for water quality assurances if a Section 404 Department of Army permit is issued by the U.S. Army Corps of Engineers. 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, Bureau of Water Pollution Control.

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		• 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. NDEP stated that it would not require permanent water quality controls. However, water quality specialists with Sparks, Reno, and Washoe County expressed concerns about maintaining compliance with the Truckee Meadows Water Authority permit if roadway discharge were untreated. The reduced stormwater runoff from the Arterial Alternatives (which includes the Selected Alternative) would require fewer and smaller water quality basins than proposed for the Freeway Alternatives evaluated in the Draft EIS. The detention basin areas have not changed, but basin depths have been reduced. • Continue to coordinate with the Nevada Division of Water Resources, TMWA, NDEP, and Washoe County Department of Water Resources to avoid and minimize impacts to public groundwater wells and well head protection areas. • Plug and abandon water or monitor wells, or boreholes that may be located on either acquired or transferred lands as required in Chapter 534 of the Nevada Administrative Code. Any water or monitor wells are the ultimate responsibility of the owner of the property at the time of the transfer. If artesian water is encountered in any well or borehole, it shall be controlled as required in NRS 534.060(3). • Use of water on the project for construction, dust control, or maintenance should be provided by an established utility or under permit or waiver issued by the State Engineer's Office. If artesian water is located in any well or borehole it shall be controlled as required in NRS 534.060(3). • Dewatering for alleviation of hazards caused by the rise of ground water from secondary recharge is provided by the provisions of NRS 534.025 and NRS 534.050(2).
Wetlands and other Waters of the U.S.	RTC and/or NDOT and construction contractor	Per the USACE and EPA Compensatory Mitigation for Losses of Aquatic Resources Final Rule (Final Rule) (40 Code of Federal Regulations [CFR] Part 230) (Final Rule) (2009), the USACE is taking an "environmentally preferable" approach to the mitigation of impacts to waters of the U.S. The Final Rule states that the USACE will "assess the likelihood for ecological success and sustainability, the location of the compensation site relative to the impact site and their significance within the watershed" when making mitigation determinations, and "compensatory mitigation requirements must be commensurate with the amount and type of impact that is associated with the particular permit." Per Section 404 of the CWA, impacts to wetlands and other water features must be avoided, minimized, or mitigated (in order of preference). Although the Act requires compensatory mitigation only from those wetlands and other water features considered jurisdictional by the USACE, based on 23 CFR Part 777 it is FHWA policy to mitigate all wetland impacts (jurisdictional and non-jurisdictional). All impacted wetlands and other water features will be mitigated in accordance with current USACE mitigation policies and the conditions of the USACE Section 404 Permit and 23 CFR Part 777. RTC and/or NDOT will use BMPs to offset the extent and duration of any temporary or indirect impacts. Appropriate BMPs to prevent and minimize temporary or indirect impacts to wetlands will be followed during construction. These BMPs could include:

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		• Protect wetland areas not impacted by the project from construction activities by temporary and/or construction limit fencing. • Install sediment control measures where needed 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. Seed, mulch, and mulch tackifier will be applied in phases throughout construction. • Develop a stormwater management plan with appropriate BMPs to minimize adverse effects to water quality and quantity (see Water Resources and Water Quality). • 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. • Locate construction staging areas at a distance of greater than 50 feet from adjacent stream/riparian areas to avoid disturbance to existing vegetation, avoid point source discharges, and to prevent spills from entering the aquatic ecosystem, including concrete washout. • Reclaim temporary impacts to waters of the U.S. and adjacent habitat with native plant and shrubs. • With proper use and management of BMPs for stormwater and construction disturbances, minimal sediment should reach wetland areas. The toes of new construction will be stabilized with silt fence or erosion logs. This project is anticipated to qualify for a Section 404 Nationwide permit or permits. After avoidance and minimization measures are conducted during final design, the Study team will further define Section 404 permit requirements. Based on the above considerations and information available at this time, FHWA has determined that there is no practicable alternative to the proposed new construction in wetlands. The proposed action will incorporate all reasonable measures to minimize harm to wetlands. Therefore, the requirements under EO 11990 have been met.
Floodplains	RTC and/or NDOT	Impacts were minimized at Calle de la Plata through design refinements that reduced the project footprint. During final design, and consistent with EO 11988 and Washoe County's Flood Hazard Ordinance 416, floodplain impacts will be minimized to the extent possible. 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 the following actions: • Minimizing fill in the floodplain. • Using retaining walls and other design features where practical. • Avoiding, to the maximum extent practicable, longitudinal encroachment of the floodplain. • Reconfiguring the floodway, if possible, in instances where the flood elevation would be increased.

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		By performing the actions above, 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 LOMR will be completed and mitigation measures included in the design to protect affected properties. Consistent with 23 CFR 650 Subpart A and FHWA regulation, RTC, working with FHWA and NDOT, will continue to coordinate with Washoe County, the cities of Sparks and Reno, FEMA, and the USACE as necessary to identify and include appropriate mitigation measures in the final design of the project. Because of the anticipated placement of earthen fill, construction of retaining walls, and placement of culverts within floodplains, a Conditional LOMR and LOMR may be required from FEMA prior to construction of the Selected Alternative. Through adherence to these mitigation measures, the Lead Agencies will comply with EO 11988, 23 CFR 650 Subpart A, FHWA and FEMA.
Vegetation and Noxious Weeds	RTC and/or NDOT and construction contractor	RTC and/or NDOT will implement a series of measures to avoid, minimize, and mitigate impacts to vegetation from the Selected Alternative. The measures listed below are in addition to those identified in FEIS Section 3.10 *Water Resources and Water Quality*. Specifically, RTC and/or NDOT 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 for the project. BLM will review and approve the plan for BLM easement areas. • Avoid disturbance to existing trees, shrubs and vegetation, to the maximum extent possible. • Revegetate all disturbed areas with native grass, shrubs, and forb species. Seed, mulch and mulch tackifier will be applied in phases throughout construction. • Use erosion control blankets, where feasible, on steep, newly seeded slopes to control erosion and to promote the establishment of vegetation. Slopes should be roughened at all times and concrete washout contained. • Limit work areas as much as possible to minimize construction impacts to vegetation. • Include non-structural BMPs when possible, such as litter and debris control, and landscaping and vegetative practices. • All gravel, sand and earth materials brought into the project area from other offsite sources must be certified as weed free, per NDOT standard specifications.
Wildlife	RTC and/or NDOT and construction contractor	RTC and/or NDOT will follow appropriate BMPs to prevent and minimize temporary impacts to vegetation and wildlife during construction. These BMPs could include: • During final design, identify BMPs required to be implemented during construction for vegetation removal and revegetation to minimize habitat impacts associated with vegetation removal. This will be done in coordination with BLM for construction activities that will occur on BLM lands.

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		• Implement an Integrated Weed Management Plan for the project. BLM will review and approve the plan for BLM easement areas. • Avoid disturbance to existing trees, shrubs and vegetation, to the maximum extent possible. • Update biological surveys prior to or as part of the development of each phase of the project. • To avoid impacts to nesting birds in accordance with the Migratory Bird Treaty Act (MBTA), a qualified biologist will conduct a nesting bird survey between March 1 and August 31 prior to each construction phase. If active nests are found, coordination with NDOW and USFWS is required to determine an appropriate course of action, which may include, but is not limited to, a delay in construction to avoid the breeding season. For construction activities that occur on BLM lands, coordination with the BLM wildlife biologist shall occur and such surveys will be conducted in accordance with BLM protocols. • Protect wetland areas not temporarily impacted by the project from construction activities by temporary and/or construction limit fencing. • Evaluate opportunities to incorporate specific measures to enhance wildlife connectivity as needed during final design. • Revegetate all disturbed areas with native grass, shrubs, and forb species. Seed, mulch, and mulch tackifier will be applied in phases throughout construction. • Develop a stormwater management plan with BMPs to minimize adverse effects to water quality. • 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. • Use erosion control blankets, where feasible, on steep, newly seeded slopes to control erosion and to promote the establishment of vegetation. Slopes should be roughened at all times and concrete washout contained. • Limit work areas as much as possible to minimize construction impacts to vegetation.
Special Status Species	RTC and/or NDOT and construction contractor	RTC and/or NDOT will follow appropriate BMPs to prevent and minimize effects to special-status species during construction. Specifically, RTC and/or NDOT will: • During final design, identify BMPs required to be implemented during construction for vegetation removal and revegetation to minimize habitat impacts associated with vegetation removal. This will be done in coordination with BLM for construction activities that will occur on BLM lands. • Implement an Integrated Weed Management Plan for the project. BLM will review and approve the plan for BLM easement areas. • Avoid disturbance to existing trees, shrubs and vegetation, to the maximum extent possible. • Update biological surveys prior to or as part of the development of each phase of the project.

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		• For construction phases in areas with viable habitat, conduct pre-construction botanical surveys within the project limits during the appropriate bloom time for special-status plant species. • To avoid impacts to nesting birds in accordance with the Migratory Bird Treaty Act (MBTA), a qualified biologist will conduct a nesting bird survey between March 1 and August 31 prior to each construction phase. If active nests are found, coordination with NDOW and USFWS is required to determine an appropriate course of action, which may include, but is not limited to, a delay in construction to avoid the breeding season. For construction activities that occur on BLM lands, coordination with the BLM wildlife biologist shall occur and such surveys will be conducted in accordance with BLM protocols. • Protect wetland areas not temporarily impacted by the project from construction activities by temporary and/or construction limit fencing. • Revegetate all disturbed areas with native grass, shrubs, and forb species. Seed, mulch, and mulch tackifier will be applied in phases throughout construction. • Use erosion bales, erosion logs, silt fence, or other sediment control devices as sediment barriers and filters adjacent to wetlands, surface waterways, and at inlets where appropriate. • Use erosion control blankets, where feasible, on steep, newly seeded slopes to control erosion and to promote the establishment of vegetation. Slopes should be roughened at all times and concrete washout contained. • Limit work areas as much as possible to minimize construction impacts to vegetation. • Prior to construction on BLM lands, coordination shall occur with the BLM to establish whether surveys for BLM sensitive species (e.g., burrowing owl, pygmy rabbit, kangaroo mouse, etc.) are warranted and to obtain species-specific survey protocols. • During construction, remove garbage or trash produced from construction activities promptly and properly to help avoid attracting wildlife. • Implement RDFs as outlined in Appendix C.
Visual Quality	RTC and/or NDOT and construction contractor	This section describes mitigation strategies that will be employed or considered during final design to minimize adverse visual impacts that may result from the project. • RTC and/or NDOT will install screening walls in EJ areas to screen views of the proposed improvements, if supported by the affected neighborhoods. • RTC and/or NDOT will design traffic noise barriers, screening walls, and retaining walls such that they blend into the surrounding environment. This will be accomplished by selecting proper color and material type and texture through coordination with local agencies and stakeholders, and by considering the aesthetic recommendations presented in the Pyramid Highway Corridor Management Plan (RTC, 2002). • New street lighting will employ counter measures to minimize light trespass and glare impacts.

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		• RTC and/or NDOT will coordinate with city staff during the final design process to identify opportunities to mitigate visual impacts at the Spanish Springs Library. • RTC and/or NDOT will 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. • RTC and/or NDOT will minimize cut/fill areas where feasible and design them to blend in with the surrounding environment to minimize visual impacts. This can be achieved through landscaping and aesthetics, revegetation, the introduction of varied slopes to better match the contours of the hills, and the placement of short walls that would not only shorten the overall slope, but would also break up the continuous flat surface. • RTC and/or NDOT will 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. • Construction activities are anticipated to occur primarily during the daytime. If nighttime construction is required, procedures will be taken to direct the light inward toward the construction site to minimize glare for residents/motorists in the immediate vicinity. **BLM Parcel** RTC and/or NDOT will implement the following measures to reduce visual impacts to the BLM parcels in the Study Area: <u>Land form mitigation</u> • Prohibit dumping of excess material on downhill slopes. • Design alignment to follow existing grades to the extent practicable. • Shape cuts and fills to appear as natural forms. • Cut rock areas so forms are irregular. • Seed areas of cuts and fills with native grasses. • Place alignments to blend with topographic forms in shape and placement. <u>Vegetation mitigation</u> • Retain existing vegetation by: ◆ Using retaining walls on fill slopes where reasonable and feasible. ◆ Reducing surface disturbance. • Enhance revegetation by: ◆ Choosing native plant species ◆ Stockpiling and reuse topsoil

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		◆ Fertilizing, mulching, and water replacement vegetation • Minimize impact on existing vegetation by: ◆ Making partial cuts instead of clear cuts ◆ Using irregular clearing shapes. ◆ Feathering/thin edges. ◆ Controlling construction access ◆ Using existing roads. ◆ Limiting work within construction area. ◆ Minimizing clearing size (i.e., strip only where necessary). ◆ Seeding cleared areas with grass. <u>Structures mitigation</u> • Minimize structure contrast by considering: ◆ Using earth-tone paints and stains. ◆ Using natural stone surfaces. ◆ Selecting paint finishes with low reflectivity. ◆ Using native building materials. ◆ Using natural appearing forms to complement landscape. ◆ Taking 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 above.
Historic	RTC and/or NDOT and construction contractor	In consultation with FHWA, RTC, SHPO, BLM, tribal governments, and other involved parties, NDOT developed a Memorandum of Agreement (MOA) that outlines mitigation measures that will be undertaken to address the adverse effect to one archaeological site as a result of the Selected Alternative. Such mitigation measures include, but are not limited to: • Minimize area of disturbance to the extent practicable. • Control construction access. • Limit work within construction area. • 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 MOA. The MOA is provided in Appendix B.

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
Hazardous Materials	RTC and/or NDOT and construction contractor	Contaminated soil and hazardous materials will be analyzed and properly disposed of at an approved facility. In addition, if the contaminated soil and hazardous materials are found to exceed regulatory amounts, 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 in areas where excavation is to be conducted to assess whether any of the utilities are contained in Transite™ asbestos pipe. If subsurface utilities are determined to be housed in Transite™ asbestos pipe, and the utilities will be relocated for the project, special handling, and possibly asbestos abatement will be required. In addition, abandoned utilities may also be found in areas where excavation is to be conducted. Special handling and possible asbestos abatement will be required. Several properties adjacent to the right-of-way include structures. Two properties, the Chevron (former Terrible's #830) adjacent to La Posada Drive and the 7-Eleven service station #32822 adjacent to Eagle Canyon Drive, would be fully acquired as a result of the Selected Alternative. The buildings and structures were not inspected for the possible presence of asbestos-containing materials (ACM), lead-based paint (LBP), or petroleum hydrocarbons in soil. Prior to commencement of activities that may disturb suspect material, inspections for ACM and LBP 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 (releases, USTs versus manufacturing or wastewater facilities) relative to the proposed improvements. Additional evaluations should initially include facility-specific Phase I ESAs pursuant to the current ASTM Designation 1527 standard in effect for all properties within the Selected Alternative footprint, with follow-on Phase II investigations conducted, if justified by the Phase I Environmental Site Assessment (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	RTC and/or NDOT and construction contractor	The Study team attempted to minimize impacts to parks and recreation resources during the preliminary design performed for this Study, and will look for opportunities to further minimize impacts during the final design process. RTC and/or NDOT will undertake the measures listed below to mitigate impacts to parks and recreation resources. FEIS Section 3.16 Visual Quality and the Visual Quality section of this table provide additional information about mitigation measures for visual impacts. • Lazy 5 Park. Maintain access during construction. • Wedekind Park. Minimize cut/fill areas of the US 395 Connector to blend in with the surrounding environment to minimize visual impacts to park users to the extent practicable. The existing access to the trailhead parking at the northern portion of Wedekind Park, which is currently accessed via a driveway on the south side of Disc Drive just east of Pyramid, would be preserved and slightly improved.

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		• Design fill slopes at the Disc Drive/Pyramid Highway intersection to mimic the natural landscape and revegetate all disturbed areas. Revegetation will include reseeding with native grasses and use of native shrubs as appropriate. Similarly, design of the proposed permanent water quantity/quality basin will also mimic natural landscape to the extent possible and will also be revegetated. During construction, best management practices will be employed for erosion control. Property acquisition will be completed under the Uniform Relocation Act. • 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 the park so that it is consistent with the park's planned uses and amenities. Sun Valley open space parcel. The Selected Alternative would require total acquisition of this parcel. Therefore, 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.
Farmland	N/A	The NRCS agreed with the conclusion that no prime or unique farmland would be impacted by the project. Therefore, no further coordination with the local NRCS office is necessary, and avoidance and/or mitigation measures are not required.
Energy	RTC and/or NDOT and construction contractor	No energy mitigation measures would be needed for traffic operations. However, energy conservation measures could be considered during construction to minimize overall project energy needs. For example, an energy plan could be implemented that would encourage construction contractor to adopt several construction energy conservation measures including, but not limited to: • Using energy-efficient equipment. • Incorporating energy-saving techniques during construction. • Avoiding unnecessary idling of construction equipment. • Consolidating material delivery whenever possible to promote efficient vehicle utilization. • Scheduling delivery of materials during non-rush hours to minimize fuel lost to traffic congestion, thereby maximizing overall vehicle fuel efficiency. • Encouraging project employees and construction contractor employees to carpool. • Maintaining equipment and machinery in good working condition, especially those using fossil fuels.
Cumulative Effects	RTC and/or NDOT	To avoid additional impacts to the identified resources of concern, local authorities and planning entities must continue to review and scrutinize development proposals to ensure that new development is consistent with local area planning goals. Local planning jurisdictions can reduce environmental impacts through the implementation of: • Smart growth goals and policies identified in the *Washoe County Master Plan Land Use and Transportation Element.* Smart growth is defined as a collection of land use planning techniques that features compact, mixed-use, sustainable development with the objective of creating more attractive, livable, economically strong communities while protecting natural resources. Within suburban Washoe County, this form of sustainable development will begin to be used to meet

Table 6. Summary of Mitigation Measures for the Selected Alternative (Arterial Alternative 3)

Resource	Responsible Party	Mitigation Measures
		the needs of the present without compromising the ability of future generations to meet their own needs (Washoe County, 2011). • Programs identified in the Washoe County PM_{10} and CO SIPs to reduce air emissions from mobile sources as control strategies and contingency measures for non-attainment and maintenance areas (Washoe County Health District, 2014a and 2014b). • Water resource policies identified in the WRWC *Comprehensive Regional Water Management Plan Draft 2016-2035 Update*. This plan provides goals and policies to deal with current and future water problems in the Regional Study Area, including issues related to municipal and industrial water supply, water quality, sanitary sewerage, sewage treatment, storm water drainage, and flood control. • Education, monitoring, BMPs, and reporting programs identified in the 2011 *Truckee Meadows Regional Storm Water Quality Management Program*. This program has been designed to manage urban stormwater discharge to the Truckee River. These initiatives can provide economic, social, and environmental benefits to the Regional Study Area. The next step is for local jurisdictions to strictly enforce these principles through their development review process. Local authorities and planning entities should also require appropriate avoidance or mitigation as part of any new development project. Resources most at risk that could be protected are water resources, air quality, and EJ populations. For transportation projects, RTC and/or NDOT will ensure that all best management practices and mitigation measures specified in this Final EIS are followed appropriately.

7.0 MONITORING OR ENFORCEMENT PROGRAM

Implementation of this document, including the above referenced mitigation measures, will be administered through construction contracts developed for projects within this area. FHWA and NDOT are ultimately responsible for monitoring and enforcing mitigation measures. Mitigation measures will be implemented as described in Chapter 6.0.

If the design or scope of the project changes during the final design or construction phases (for example, if the construction footprint extends outside the area analyzed in the FEIS), NDOT and FHWA will conduct a reevaluation. The reevaluation will determine, through a review of current information and the information in the FEIS, whether the FEIS and this ROD remain valid or whether additional analysis and/or NEPA documentation is needed. A reevaluation provides evidence for FHWA in determining whether or not the preparation of a new NEPA document is necessary to advance the project to the next stage (23 CFR § 771.129]c]).

All of the mitigation measures in Chapter 6.0 will be incorporated into the contract(s), plan(s), and specifications as applicable and will be monitored according to any applicable construction/post-construction monitoring plans. Ensuring mitigation measures are included the contract(s), plan(s), and specifications is the responsibility of FHWA and NDOT. No FHWA or NDOT approval or permission to proceed with construction shall be granted until all practicable efforts have been made to implement the required applicable mitigation measures.

Permits and related approvals require coordination with Nevada Division of Environmental Protection (Bureau of Water Quality Planning) and the U.S. Army Corps of Engineers (USACE) to ensure compliance with stormwater regulations and regulations protecting streams and possibly wetlands. Stream and wetland impacts require compliance with Section 404 of the Clean Water Act. Water quality certification, pursuant to Section 401 of the Clean Water Act, may be required from the Nevada Division of Environmental Protection (Bureau of Water Quality Planning). If construction equipment is required to enter any of the ephemeral stream channels, then a Temporary Working in Waterways Permit issued by Nevada Division of Environmental Protection (Bureau of Water Pollution Control) will be obtained.

As part of the development of best management practices for the project, NDOT's construction contractor must file a Notice of Intent with NDEP's Bureau of Water Pollution Control to obtain coverage under the General Permit for Stormwater Discharges Associated with Construction Activity (NVR100000). A Stormwater Pollution Prevention Plan will be developed before the Notice of Intent is submitted. The plan will outline temporary and permanent erosion and sediment controls, locate stormwater discharge points, and describe best management practices to be

implemented to prevent or reduce, to the maximum extent practical, stormwater pollutant discharge associated with construction activities. Doing so will satisfy requirements for a National Pollution Discharge Elimination System permit and Section 402 of the Clean Water Act.

NDOT will coordinate with FHWA and the SHPO to implement the provisions of the MOA, which is provided in Appendix B of this document.

NDOT's or RTC's construction contractor will coordinate with the Washoe County Health District – Air Quality Management Division to obtain a dust control permit prior to the start of construction.

8.0 PUBLIC AND AGENCY INVOLVEMENT AFTER FEIS

8.1 DISTRIBUTION OF FEIS

The FEIS was distributed for a 30-day review period from June 29, 2018 to July 30, 2018. The Notice of Availability (NOA) of the FEIS was published in the July 29, 2018 *Federal Register*. The NOA, dates for the 30-day comment period, and methods and deadline to provide comments on the FEIS were published as listed below. Notices are provided in Appendix D.

- *Reno Gazette-Journal* newspaper on June 24, 2018
- *Ahora Latino Journal* newspaper on June 29, 2018
- RTC's website at: www.pyramidus395connection.com
- NDOT's website at: https://www.nevadadot.com/doing-business/about-ndot/ndot-divisions/engineering/environmental-services/environmental-documents-and-projects

The FEIS was distributed for review as follows:

- The FEIS was sent to the local, state, and federal agencies and Native American tribes listed in Chapter 8.0 of the FEIS via an emailed electronic link or other format (such as computer disk or hard copy) as requested.
- The FEIS was available for download on RTC's website at: www.pyramidus395connection.com
- Copies of the FEIS were also available by request from NDOT Headquarters, Environmental Services Division, Room 104, 1263 S. Stewart St., Carson City, NV 89712; telephone: (775) 888-7013.
- Hard copies of the FEIS were available for review at the following locations during the 30-day comment period:

- Spanish Springs Library, 7100A Pyramid Lake Highway, Sparks, Nevada
- Sparks Library at 1125 12th Street, Sparks, Nevada
- Sun Valley General Improvement District Offices at 5000 Sun Valley Boulevard, Sun Valley, Nevada
- RTC Offices at 1105 Terminal Way, Suite 108, Reno, Nevada
- NDOT District II offices, 310 Galletti Way, Sparks, Nevada

8.2 COMMENTS ON FEIS

While several members of the public visited the viewing locations to review the FEIS during the 30-day review period, no public comments on the FEIS were received.

Comments on the FEIS were received from the EPA and BLM. Comments and responses are summarized in Table 7. Full comments and responses are provided in Appendix E.

Table 7. FEIS Comment Summary

Agency	Summary of Comments	Responses
BLM	• Nesting bird surveys should be conducted between March 1 and August 31 (instead of April 1 and August 31 as stated in the FEIS) to cover the whole nesting period of general migratory birds and raptors. Please change these dates throughout the FEIS.	• This change has been noted in Section 9.0 and Table 6 of this ROD.
EPA	• Encourages NDOT and RTC to continue efforts to minimize impacts through project design modifications where possible. • Recommends that FHWA, NDOT, and RTC coordinate with the U.S. Army Corps of Engineers (USACE) regarding jurisdictional delineation of wetlands and impacts in the Study Area. Also requests that EPA be included in these discussions if impacts are found to be significantly larger than amounts disclosed in the FEIS. • Recommends integrating "green infrastructure" into project design where feasible for stormwater management and treatment, use of natural washes to protect water quality and flood control, and use of natural bottom culverts to promote naturally functioning hydrology. • Encourages NDOT and RTC to continue to work with affected EJ communities through project design and construction to seek measures to mitigate visual, noise, and other impacts.	• NDOT and RTC will continue to work to further minimize project impacts during the final design process. • FHWA, NDOT, and RTC will coordinate with the USACE regarding wetlands and involve EPA as requested. • Such green infrastructure will be considered during final design. • NDOT and RTC will work with affected EJ and other communities during final design to further mitigate project impacts.

9.0 CLARIFICATIONS OR CORRECTIONS TO FEIS

The FEIS stated that nesting bird surveys will be conducted between April 1 and August 31 prior to each construction phase and shall be conducted in accordance with BLM protocols on BLM lands. In response to BLM's comment on the FEIS, nesting bird surveys will be conducted between March 1 and August 31 to cover the whole nesting period of general migratory birds and raptors. This change applies to the following sections of the FEIS, and is reflected in Table 6 of this ROD:

- Section 3.14.2.1 General Wildlife: Last sentence on page 3-222
- Section 3.14.4 Wildlife Mitigation: Second bullet on page 3-229
- Section 3.15.4 Special Status Species Mitigation: Sixth bullet on page 3-258
- Section 6.7, Table 6-6 Mitigation Measures:
    - Wildlife section, fourth bullet on page 6-48
    - Special Status Species section, fourth bullet on page 6-49

10.0 CONCLUSION/SIGNATURES

The environmental record for the Pyramid Highway/US 395 Connection project includes the DEIS and Section 4(f) Evaluation (August 2013), the FEIS and Section 4(f) Evaluation (June 2018), and all associated technical reports prepared in support of the DEIS and FEIS. The documents noted above are incorporated by reference and constitute the documentation required by NEPA and Title 23, United States Code (U.S.C.).

Having considered the environmental record noted above, the mitigation measures presented herein, the written comments offered by agencies and the public on this record, and the written responses to comments, the FHWA has determined that (1) adequate opportunity was offered for the presentation of views by all parties with a significant economic, social, or environmental interest; (2) fair consideration has been given to the preservation and enhancement of the environment and to the interests of the communities in which the project is located; and (3) all reasonable steps have been taken to minimize adverse environmental effects of the proposed project. It is the decision of FHWA to advance the project. In so doing, FHWA concludes that the Pyramid Highway/US 395 Connection project complies with all applicable provisions of the National Environmental Policy Act, specifically 42 U.S.C. 4332.

December 7, 2018
Date

Susan Klekar
Division Administrator
Federal Highway Administration

The Federal Highway Administration may publish a notice in the Federal Register, pursuant to 23 USC §139(l), indicating that one or more federal agencies have taken final action on permits, licenses, or approvals for a transportation project. If such notice is published, claims seeking judicial review of those federal agency actions will be barred unless such claims are filed within 150 days after the date of publication of the notice, or within such shorter time period as is specified in the federal laws pursuant to which judicial review of the federal agency action is allowed. If no notice is published, then the periods of time that otherwise are provided by the federal laws governing such claims will apply.