LEMMON DRIVE
PROJECT

STUDY AREA

The study area is along Lemmon Drive from Fleetwood Drive to Ramsey Way.

Scan this code to access to the project website.↓

RTC

NEVADA DOT
SAFE AND CONNECTED

Lemmon Drive Traffic Improvements & Resiliency Project

All information presented is preliminary and subject to revision

LEMMON DRIVE PROJECT

WHY IS THE PROJECT NEEDED?

Project Need

In 2017, Lemmon Drive was overtopped by floodwaters and faced emergency closures and an extensive mitigation response, which disrupted the community's access, highlighting the need for a more resilient roadway. Washoe County has limited financial and human resources to continously provide flood mitigation for Lemmon Drive and private property. The total cost for maintenance, HESCO barrier replacement, and continous pumping for the 2017-2019 flood event was $11.6 million (Washoe County, 2022).

In addition, multimodal enhancements were identified as a community need in the RTC's North Valleys Regional Transportation Study.

Project Purpose

- Provide a safe and reliable regional road with at least one dry lane in each direction of travel during a 100-year flood event (which is a 1% yearly chance of roadway being under water), as determined by FEMA Base Flood Elevation
- Provide safe access for all multi-modal users with enhanced shared use path opportunities and safer pedestrian crossings
- Reconstruct and upgrade Lemmon Drive to meet current design standards, 2050 RTP regional needs, and address any deficiencies or safety concerns in the existing roadway alignment
- Reduce maintenance costs and burdens on Washoe County and City of Reno during flood events

THE PROJECT WOULD:

- ✓ Provide safe and reliable access to Lemmon Valley area during regulatory flood events
- ✓ Provide a new multi-use path for walking and biking
- ✓ Build the road in a way that doesn't cause more flooding
- ✓ Build flood mitigation basins near the road to help with potential future flooding
- ✓ Allow first responders to access homes more quickly during flood events

THE PROJECT WOULD NOT:

- ⃠ Have adverse effect to the mapped floodplain
- ⃠ Provide additional land for development
- ⃠ Have an impact on emergency-response times for medical emergencies/structural fires

Scan the QR code to access to the project website.↓

RTC

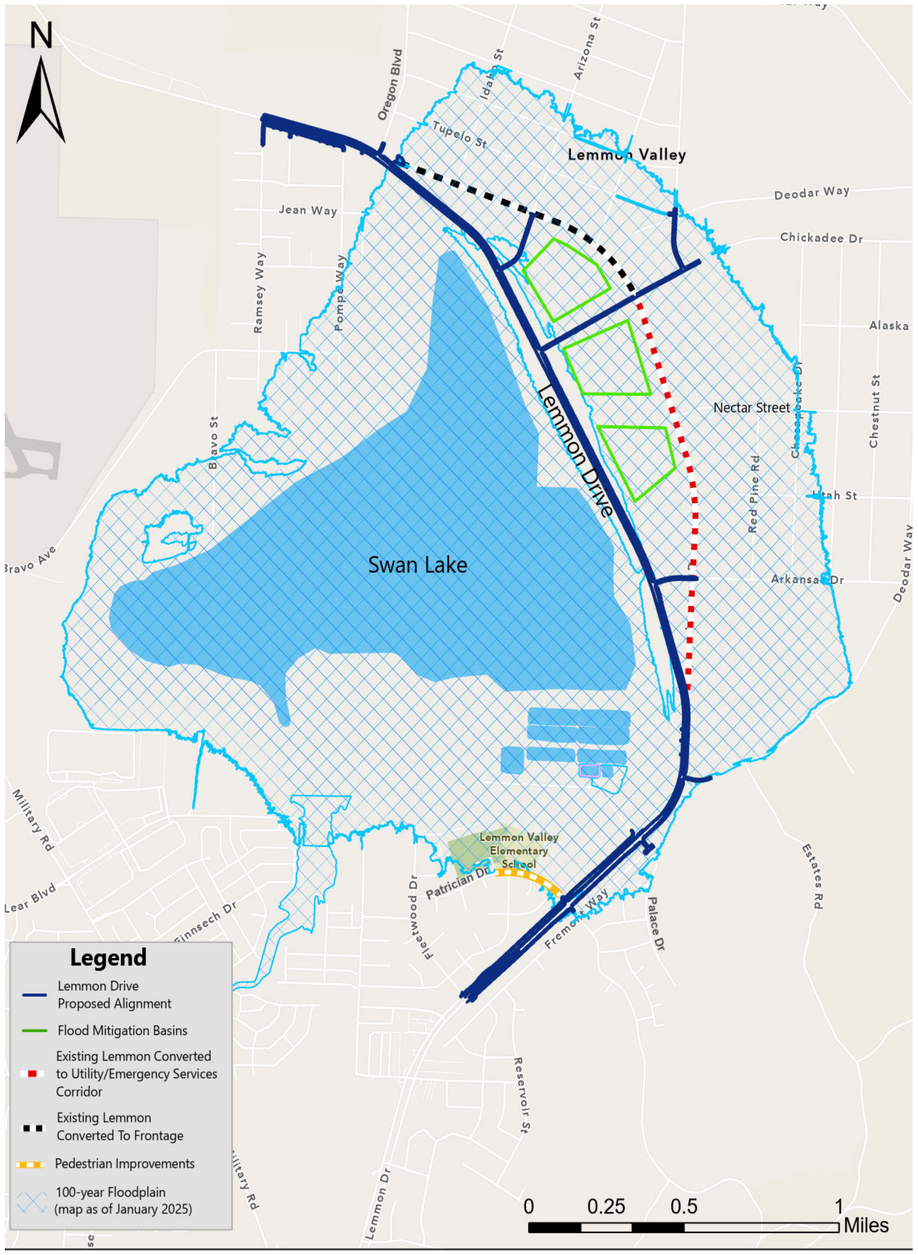
NEVADA DOT SAFE AND CONNECTED

Lemmon Drive Traffic Improvements & Resiliency Project

All information presented is preliminary and subject to revision

LEMMON DRIVE
PROJECT

PREFERRED (BUILD) ALTERNATIVE



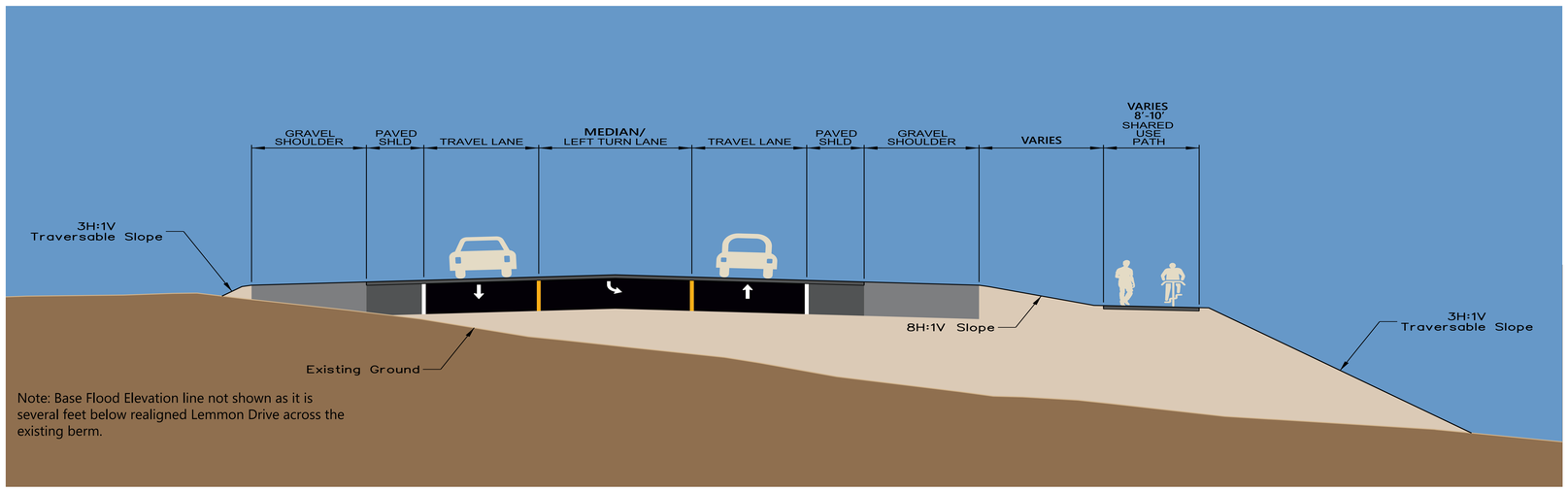
The Preferred Alternative would reconstruct and raise the existing roadway profile from Fleetwood Drive to Palace Drive along the existing alignment. Dedicated left- and right-turn lanes would be provided at the intersections of Fleetwood Drive, Patrician Drive, and Palace Drive. As the roadway extends north, dedicated right-turn lanes would be provided at Arkansas Street, Chickadee Drive, Arizona Street, and Oregon Drive. Just north of Deodar Way, the roadway alignment would shift west of the existing roadway. This realigned segment of the roadway would run along the east side of an existing berm, allowing the roadway to be constructed above the existing Federal Emergency Management Agency (FEMA) 100-year flood elevation Arkansas Street, Chickadee Drive, and Arizona Street would be extended to tie into the realigned Lemmon Drive. Near Oregon Drive, the roadway alignment would shift back into the existing alignment with reconstruction extending to Ramsey Way.

FLOOD MITIGATION

Since the existing roadway does not provide sufficient flood mitigation, appropriate flood mitigation measures will be incorporated into the preferred alternative. As required by Washoe County Code, the flood mitigation basins will be developed with 1.3 to 1 mitigation requirements. For every 1 cubic yard of material added to the floodplain, 1.3 cubic yards will be removed.

SAFETY

Existing speed limits to be maintained.
Roadway slope designed to be traversable with a maximum height of 16 feet.
Project would have 6-foot paved shoulders and a gravel shoulder between travel lanes and the roadway slope.



Note: Base Flood Elevation line not shown as it is several feet below realigned Lemmon Drive across the existing berm.

Scan the QR code to access to the project website.↓

RTC NEVADA DOT SAFE AND CONNECTED

Lemmon Drive Traffic Improvements & Resiliency Project

All information presented is preliminary and subject to revision

LEMMON DRIVE
PROJECT

STUDY PROCESS

What is NEPA?

» NEPA is the National Environmental Policy Act (1969), requiring federal agencies to assess the environmental effects of proposed actions before making decisions.

» Using the NEPA process, agencies evaluate the environmental, social, and economic effects of proposed actions. Agencies also provide opportunities for public involvement throughout the process.

Scan this code to access to the project website.↓

RTC

NEVADA DOT
SAFE AND CONNECTED

Lemmon Drive Traffic Improvements & Resiliency Project

All information presented is preliminary and subject to revision

LEMMON DRIVE PROJECT

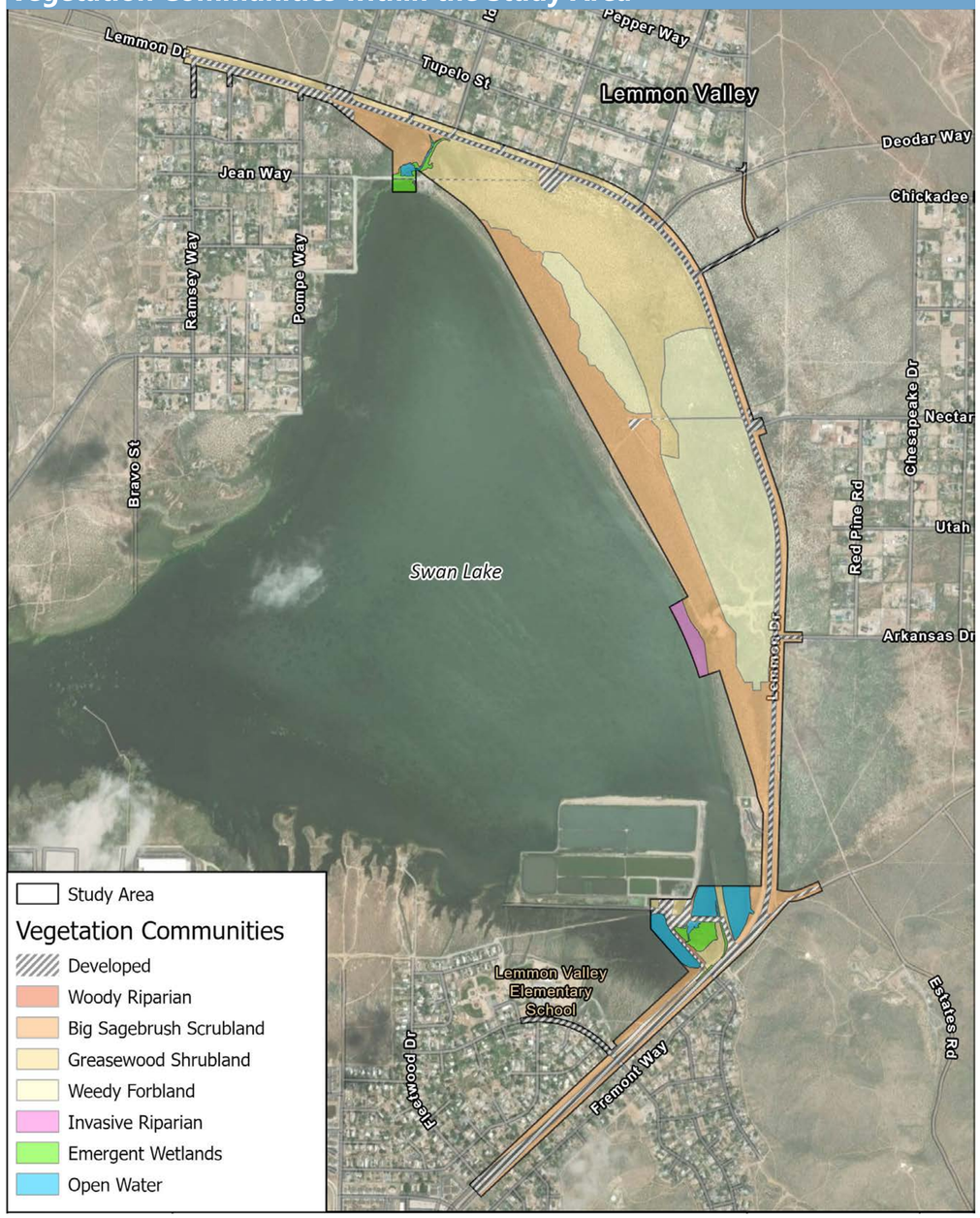
BIOLOGICAL RESOURCES

The project is located within Lemmon Valley, north of Reno, Washoe County, Nevada. Vegetation communities in the study area provide a variety of habitat types for nesting birds. Swan Lake is a designated Important Bird Area (IBA), but the study area does not overlap with the IBA boundaries, and its status as an IBA does not impose any regulatory requirements. Construction activities can impact nesting migratory birds; therefore, nesting surveys will be conducted and construction will be minimized during nesting season. While habitat will be lost during the initial construction phase of the project, post-construction restoration efforts are expected to support the re-establishment of native vegetation and provide long-term habitat recovery.

Summary of Vegetation Communities Located within the Study Area

Vegetation Community	Vegetation Community Description	Study Area (Acres)	Temporary Impacts (Acres)	Permanent Impacts (Acres)
Developed	Areas that are part of the built environment. Includes roadways, trails, sidewalks, ornamental landscaping, and other non-vegetated areas.	42.53	1.85	12.56
Greasewood Shrubland	Areas containing a mix of greasewood, grasses and forbs.	103.05	30.47	34.82
Big Sagebrush Shrubland	Areas containing a mix of big sagebrush, grasses, and forbs.	118.12	29.66	18.56
Woody Riparian	Areas dominated by woody riparian vegetation	0.72	0	0.01
Emergent Wetlands	Wetlands that are dominated primarily by herbaceous vegetation	5.31	0	0.20
Open Water	Areas containing open water.	10.04	0	0.03
Weedy Forbland	Areas dominated by weedy and invasive forbs	97.13	54.93	37.34
Invasive Riparian	Areas dominated by introduced riparian woody species such as *Tamarix* spp.	3.51	0	0
	Total	**380.41**	**116.91**	**103.52**

Vegetation Communities within the Study Area



Scan this code to access to the project website.

RTC NEVADA DOT SAFE AND CONNECTED

Lemmon Drive Traffic Improvements & Resiliency Project

All information presented is preliminary and subject to revision

LEMMON DRIVE PROJECT

ENVIRONMENTAL RESOURCES LITTLE TO NO IMPACTS

Cultural Resources

Section 106 of the National Historic Preservation Act requires federal agencies to consider the effects of their projects on historic properties and provides the State Historic Preservation Officer (SHPO), Native American tribes, other interested parties, and the Advisory Council on Historic Preservation a reasonable opportunity to comment on the projects.

Field surveys and office research were conducted to determine if the project would have an adverse effect on cultural resources within the project's area of potential effects (APE). There are two historic resources (archaeological sites) within or adjacent to the APE that have been determined as eligible for listing in the National Register of Historic Places (NRHP).

The project design was assessed for direct and indirect effects to NRHP eligible historic properties, and it was determined the project would have No Adverse Effect. NDOT and RTC will use the NEPA public involvement process to comply with Section 106 National Historic Preservation Act (NHPA) public involvement requirements.

Section 4(f)

Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966 is a federal law that protects publicly owned parks, recreation areas, and wildlife or waterfowl refuges, as well as significant historic sites.

There are four Section 4(f) park and recreation resources in the study area: Lemmon Valley Horseman's Arena, Lemmon Valley Park, Lemmon Valley Trails, and the Swan Lake Nature Study area.

The project would not result in a Section 4(f) use of the Lemmon Valley Horseman's Arena, Lemmon Valley Park, Lemmon Valley Trails, or the Swan Lake Nature Study area.

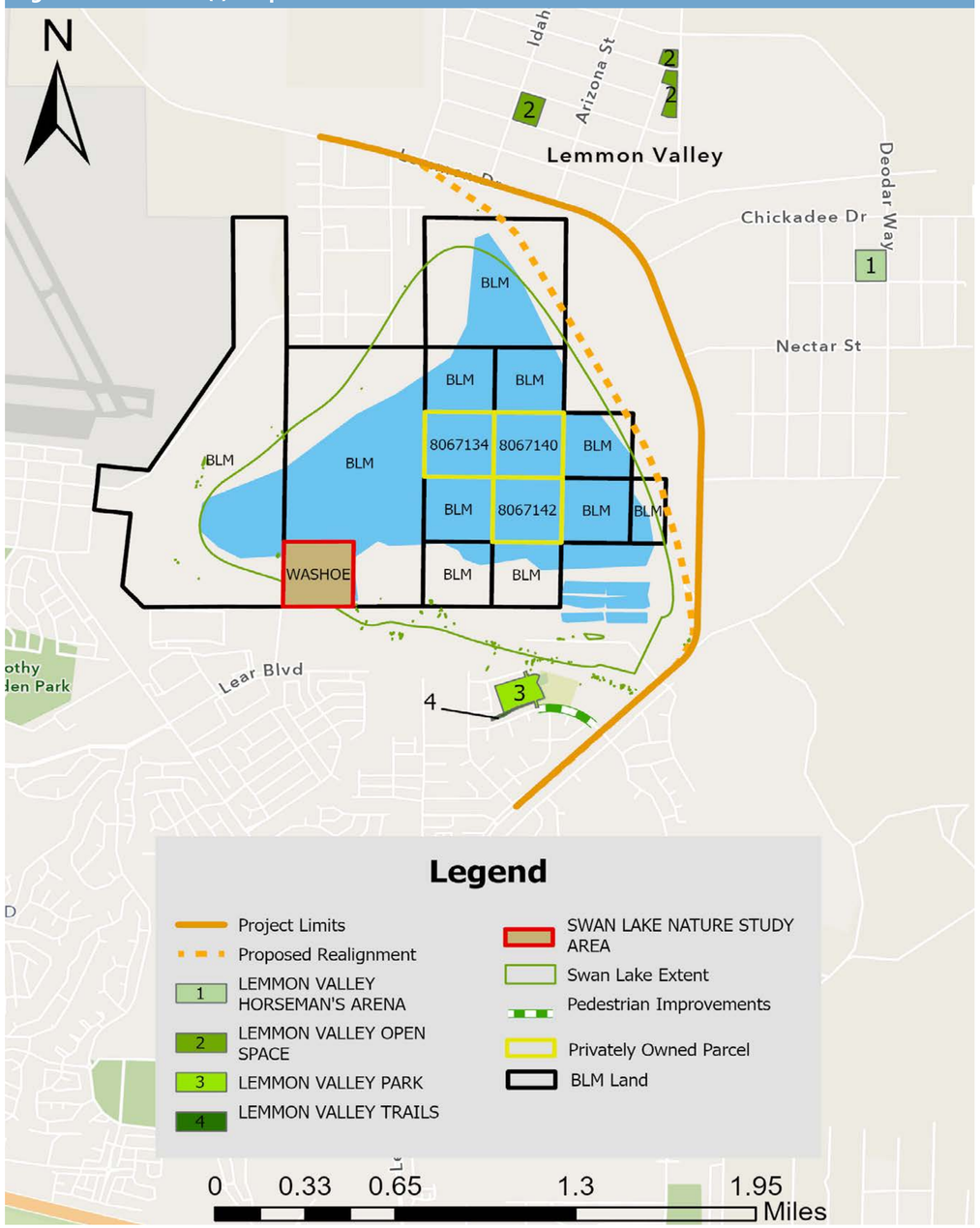
According to field investigations and office research, two historic resources were found to be eligible for the NRHP. The project would not result in the use of any Section 4(f) architectural or archaeological resources.

Traffic Noise

Traffic noise levels were evaluated using FHWA's Traffic Noise Model (TNM) version 2.5. Under Existing, No Build, and Build conditions, predicted traffic noise levels for the project do not approach or exceed the Noise Abatement Criteria (NAC).

No abatement measures are proposed because there would be no traffic noise impacts associated with the proposed project.

Figure 3.1 Section 4(f) Properties



Scan this code to access to the project website.↓

RTC NEVADA DOT SAFE AND CONNECTED

Lemmon Drive Traffic Improvements & Resiliency Project

All information presented is preliminary and subject to revision

LEMMON DRIVE PROJECT

ENVIRONMENTAL RESOURCES
LITTLE TO NO IMPACTS

Air Quality

The study area is located within Hydrographic Area 092B, which is within an attainment area. The study area is located outside of Hydrographic Area 87, Washoe County, Nevada, which is designated as a maintenance area for carbon monoxide (CO) and particulate matter smaller than 10 micrometers in diameter (PM10) and attainment/unclassifiable for all other criteria pollutants. Because the project is located within an attainment area, 40 Code of Federal Regulations (CFR) Parts 51 and 93 are not applicable. Because the project is located within an attainment area, transportation conformity is not required.
The project is not expected to cause adverse effects on air quality during operation or expected to exceed the NAAQS; therefore, mitigation measures are not required.
Construction of the project is anticipated to disturb more than a quarter acre of land, therefore, the project will be required to obtain a Dust Control Operating Permit from the Northern Nevada Public Health Air Quality Management Division.

Hazardous Materials

An Initial Site Assessment was prepared to identify, to the extent feasible, any Recognized Environmental Conditions (REC) in the study area. A site reconnaissance was conducted and regulatory database reports were reviewed. Based on the observations recorded from the field reconnaissance, review of historical aerial photographs, and regulatory database review, no hazardous material sites or REC were identified within or adjacent to the study area.
If areas of possible contamination are encountered during project construction activities, further investigation and analysis may be necessary at that time.

Per- and Polyfluoroalkyl Substances (PFAS)

Since the discovery of PFAS in Swan Lake and other locations within Lemmon Valley, there has been considerable discussion in the media as well as outreach from the City of Reno and the Washoe County. RTC reviewed the proposed project and the available PFAS data for Swan Lake surface water and Lemmon Valley soil and groundwater finds that:

1. PFAS is widespread in surface water, groundwater, soil, and consumer products throughout the United States and the State of Nevada.
2. The concentrations of PFAS in Swan Lake surface water appear to be higher than PFAS concentrations in other surface water bodies in Nevada.
3. Potential exposure and health risks associated with PFAS in Swan Lake are likely minimal since it is not used as a source of drinking water, nor will it be directly used for construction water.
4. Potential health risks associated with PFAS in groundwater are unknown since groundwater samples have not been collected in the area to the east of the proposed project and exposure would only occur if a private well was used as a drinking water source.
5. Exposure and health risks associated with PFAS in soils in Lemmon Valley are unknown as regulatory agencies have not developed soil standards for PFAS.
6. Finally, the impact of the proposed project on these current conditions is not likely to change following completion of the project. The project will have no impact on current concentrations of PFAS in Swan Lake surface water or Lemmon Valley groundwater and soils.

Scan this code to access to the project website.↓

RTC NEVADA DOT SAFE AND CONNECTED

Lemmon Drive Traffic Improvements & Resiliency Project

All information presented is preliminary and subject to revision

LEMMON DRIVE
PROJECT

FLOODPLAINS AND WATER RESOURCES

Floodplains

The project is located at the downstream end of the closed Swan Lake Basin. Washoe County, the FEMA designated representative for administration of the Flood Control Act, determined that given its location and design, the project would not require a Conditional Letter of Map Revision (CLOMR). The Preferred Alternative was overlaid onto the current Federal Emergency Management Agency (FEMA) floodplains. Impacts to floodplains would result from widening the existing berm for the relocated Lemmon Drive which would introduce fill into the floodplain.

Washoe County ordinances (Truckee Meadows Regional Drainage Manual) require volumetric mitigation within the floodplain at a ratio of 1.3 cubic yard of excavation for every 1 cubic yard of fill placed as mitigation for fill placement and additional impervious surfaces constructed within the closed basin.

Final volumetric mitigation calculations would be confirmed during final design.

Considering the volumetric mitigation, no impacts to the regulated floodplains or 100 year-year floodplain boundary are expected.

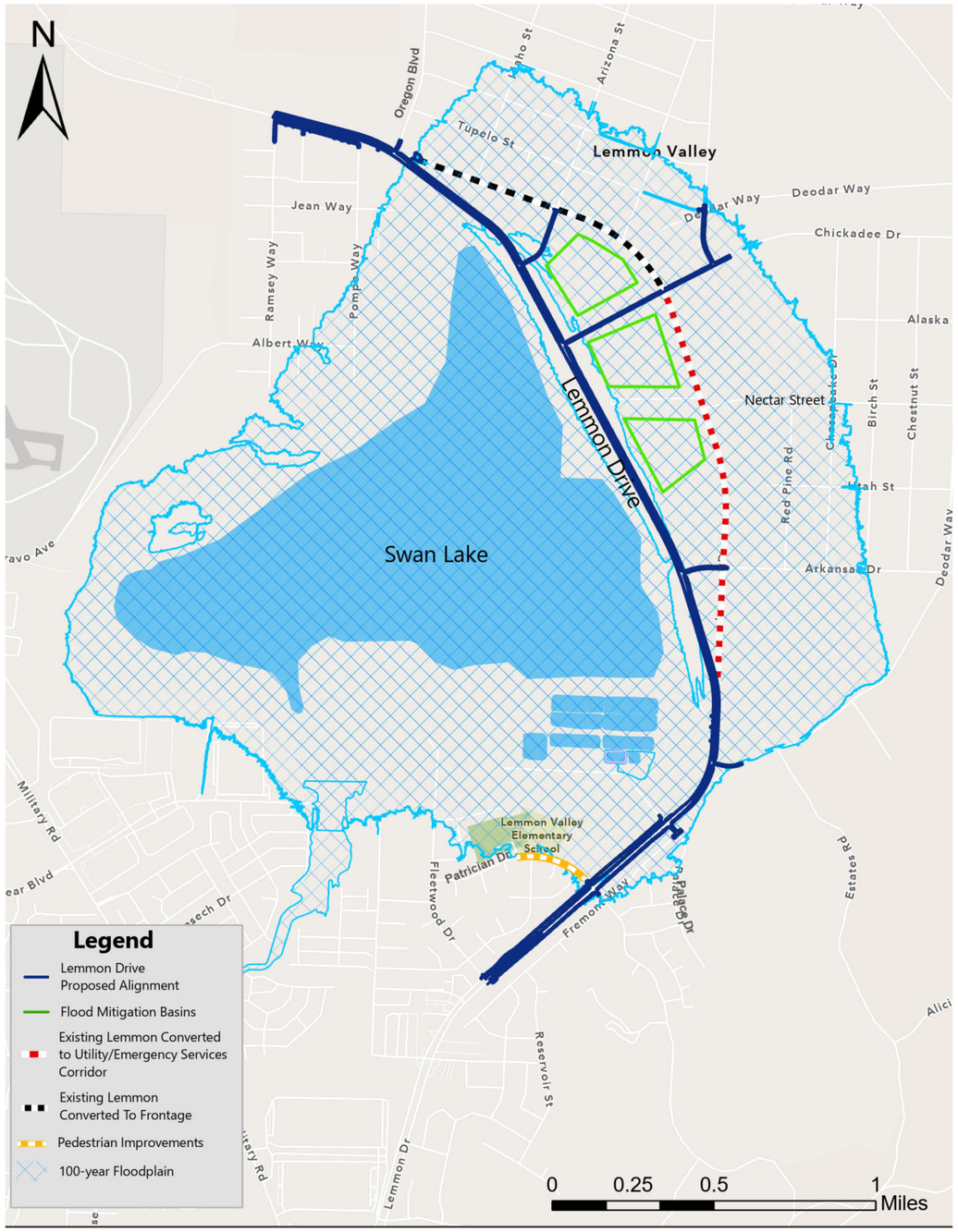
Water Quality

The Preferred Alternative would result in negligible impacts to water quality due to added improvements like curbs, gutters, and culverts to manage runoff. The project maintains existing drainage patterns and utilizes erosion control measures to prevent pollution and maintain water quality.

The drainage design will ensure that there are no water quality impacts draining to Swan Lake. The NDOT Construction Site BMP Manual and Stormwater Quality Manuals identify numerous best management practice (BMP) measures that may be implemented to address specific site conditions, construction processes, and other features unique to various projects. During final design and pre-construction, RTC, the construction contractor, and NDEP will evaluate the Build Alternative and identify which BMPs will be implemented.

Surface Water

The Preferred Alternative would result in an increase in impervious surface area, which would generate additional runoff. The drainage design will ensure that runoff from the widened and relocated Lemmon Drive is adequately collected by the drainage system that includes drop inlets, storm drain, channels and culverts, and conveyed to mitigation basins and in a manner that maintains historic drainage patterns to the maximum extent practical.



Scan this code to access to the project website.↓

RTC

NEVADA DOT
SAFE AND CONNECTED

Lemmon Drive Traffic Improvements & Resiliency Project

All information presented is preliminary and subject to revision

LEMMON DRIVE
PROJECT

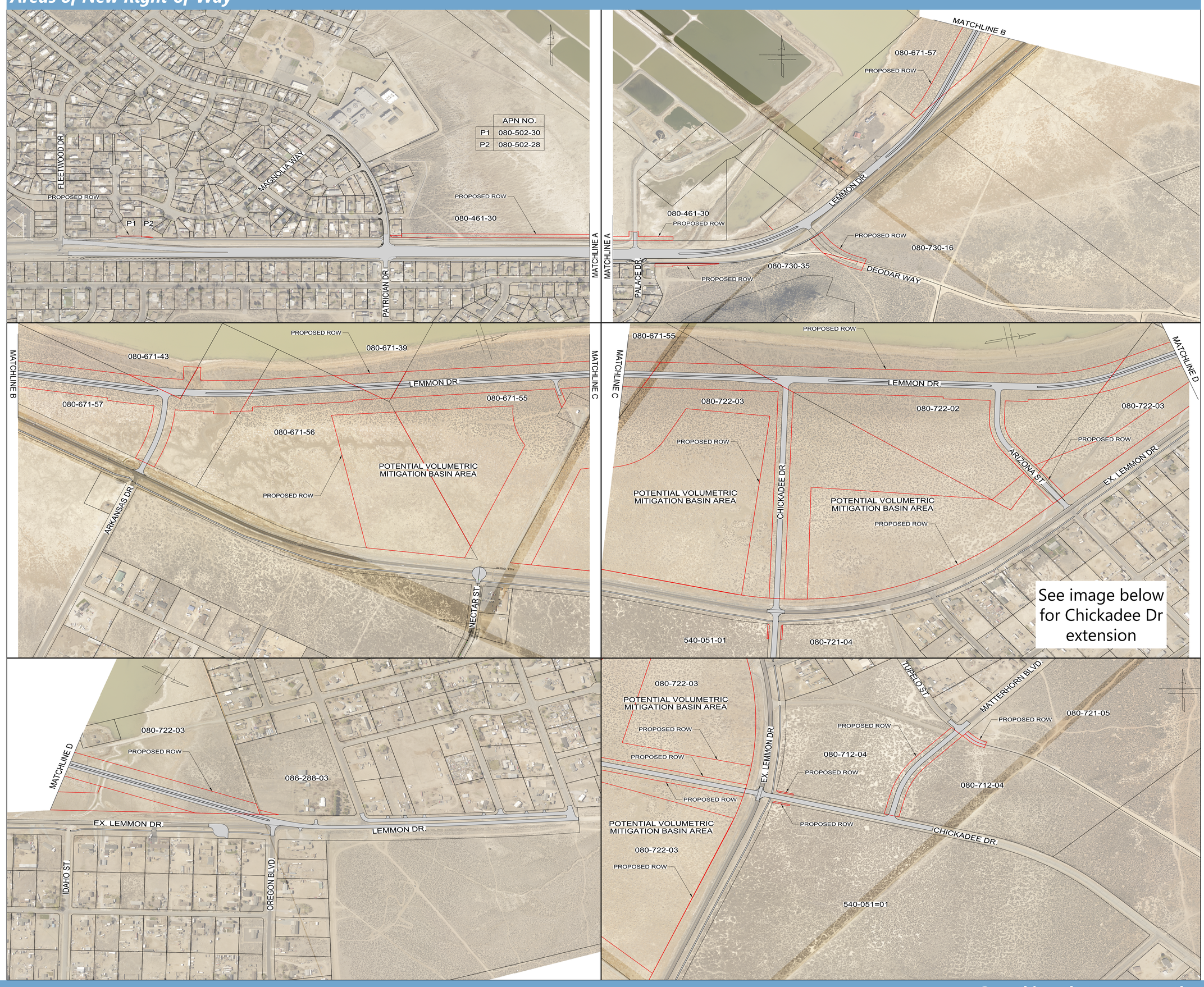
LAND USE AND SOCIOECONOMICS

The project is located within Lemmon Valley, which is a northern suburb of the Reno-Sparks metropolitan area. The Lemmon Valley area has a wide array of land uses and communities ranging from rural, industrial, and suburban. Zoning near Lemmon Drive is primarily single-family residential, low-density suburban, parks, greenways, open space, and medium-density suburban. NDOT and RTC Washoe assessed the project's compatibility with existing land use plans and concluded that the project is consistent with local planning activities. The Preferred Alternative would require acquisition of new right-of-way, however it would not displace any residences or businesses.

Table 3.4 Areas of New Right-of-Way

Parcel Number	Proposed Right-of-Way (acres)	Volumetric Mitigation (acres)
080-450-01	0.025	--
080-461-30	1.229	--
080-671-55	6.972	12.157
080-671-56	3.423	14.903
080-671-57	12.117	--
080-721-04	2.010	--
080-721-05	0.095	--
080-722-03	15.277	59.637
080-722-16	0.659	--
540-051-01	0.025	--
080-502-30	0.048	--
080-532-28	0.012	--
080-671-39	1.311	--
080-671-43	0.984	--
080-722-02	12.003	6.552
080-730-35	0.452	--
086-288-03	0.050	--

Areas of New Right-of-Way



Scan this code to access to the project website. ↓

RTC

NEVADA DOT
SAFE AND CONNECTED

Lemmon Drive Traffic Improvements & Resiliency Project

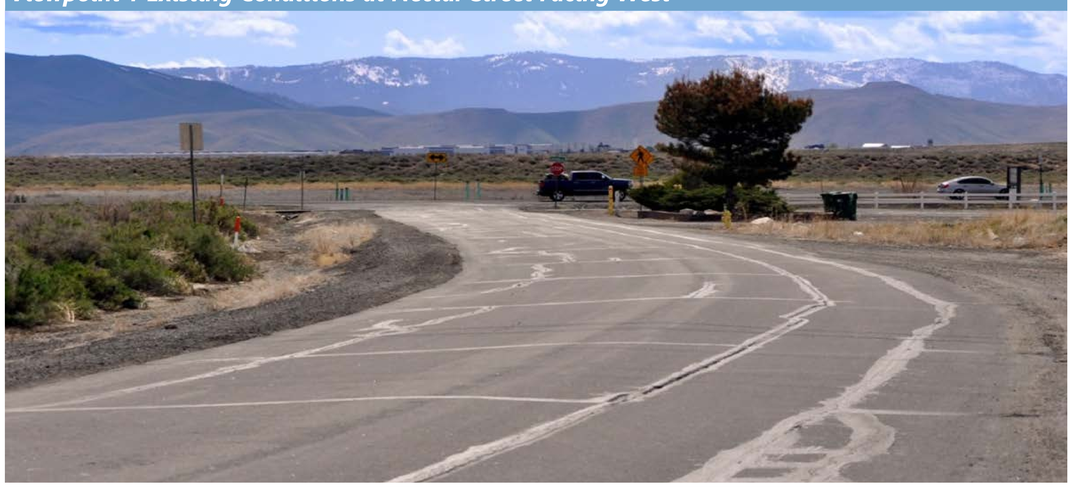
All information presented is preliminary and subject to revision

LEMMON DRIVE PROJECT

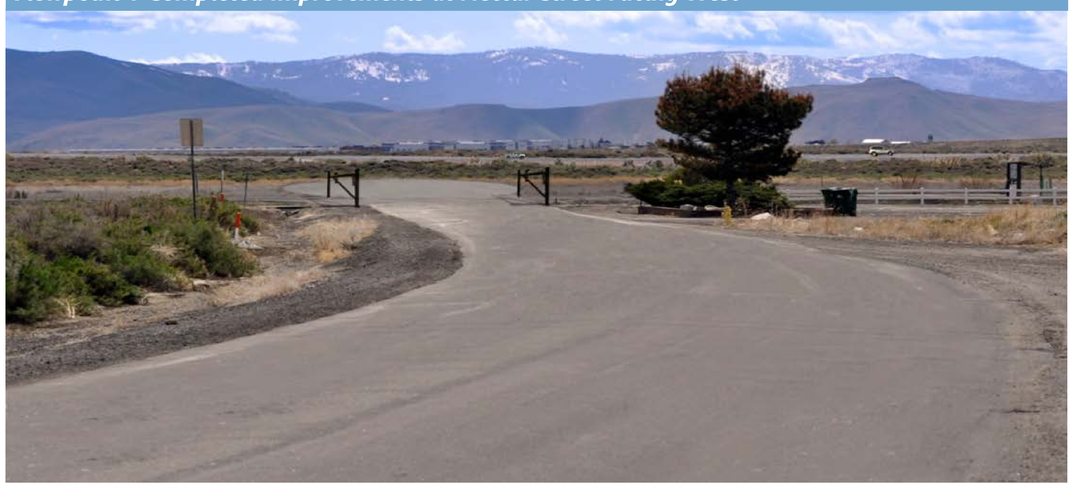
VISUAL RESOURCES

The existing visual quality is typical for a rural and suburban community and would not be substantially altered by the Preferred Alternative. The realigned roadway would be further from the existing roadway for the majority of the project limits, which results in a less prominent view than existing conditions. Therefore, the potential for the Preferred Alternative to cause impacts to visual resources, viewers, or visual quality is negligible. Impacts to visual resources will be mitigated through landscaping and aesthetic enhancements.

Viewpoint 1 Existing Conditions at Nectar Street Facing West

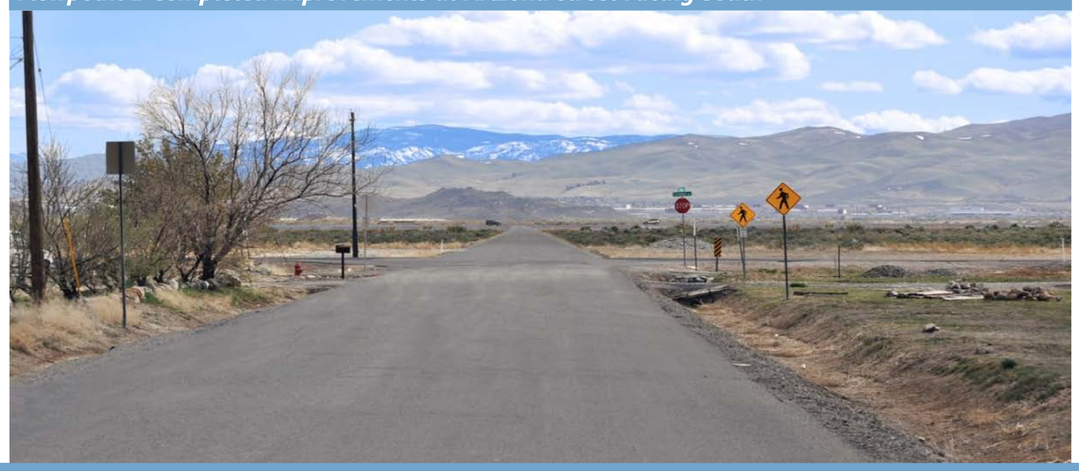


Viewpoint 1 Completed Improvements at Nectar Street Facing West



Viewpoint 2 Existing Conditions at Arizona Street Facing South

Viewpoint 2 Completed Improvements at Arizona Street Facing South



Scan this code to access to the project website.↓

RTC NEVADA DOT SAFE AND CONNECTED

Lemmon Drive Traffic Improvements & Resiliency Project

All information presented is preliminary and subject to revision