

McCarran Boulevard Corridor Study

Improving Safety and Mobility, and
Enhancing Economic Development Opportunities
Along McCarran Boulevard



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Acknowledgments

The McCarran Boulevard Corridor Study is a product of the vision and commitment of the Regional Transportation Commission (RTC) of Washoe County, the Nevada Department of Transportation (NDOT), other partner agencies and their dedicated staff, and members of the public throughout the Reno-Sparks metropolitan area.

Individuals within the following agencies have invested their time and resources in developing a shared vision for this important regional route.

STUDY PARTNERS

- » NDOT (co-lead)
- » City of Reno
- » City of Sparks
- » Washoe County
- » Washoe County School District
- » Reno-Tahoe International Airport
- » Truckee Meadows Regional Planning Agency
- » University of Nevada, Reno

CONSULTANT TEAM

- » CA Group
- » Parametrix

Various members of each agency participated in Technical Advisory Committee (TAC) meetings, providing insights, data, and decision-making at key points in the study process. Together with the community at large, this was a collaborative plan that sets the foundation for future improvements along McCarran Boulevard, allowing it to function as a major thoroughfare through Reno and Sparks for a variety of transportation users.

COLLABORATIVE PLAN

This collaborative plan, created with the community at large, sets the foundation for future improvements along McCarran Boulevard, and allows it to function as a major thoroughfare through Reno and Sparks for a variety of transportation users.

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Introduction

The recommendations from the McCarran Boulevard Corridor Study will improve safety and mobility, and enhance economic development opportunities along McCarran Boulevard.

The McCarran Boulevard Corridor Study was led by the Regional Transportation Commission (RTC) of Washoe County, in close collaboration with the Nevada Department of Transportation (NDOT). Project partners included Washoe County, the cities of Reno and Sparks, the Reno-Tahoe International Airport, and the University of Nevada, Reno.

Due to the length of the corridor, it impacts a wide diversity of neighborhoods and commercial centers. Constructed with the purpose of serving high-speed regional travel needs, sections of McCarran Boulevard now traverse densely developed communities with high volumes of pedestrian and bicycle activity.

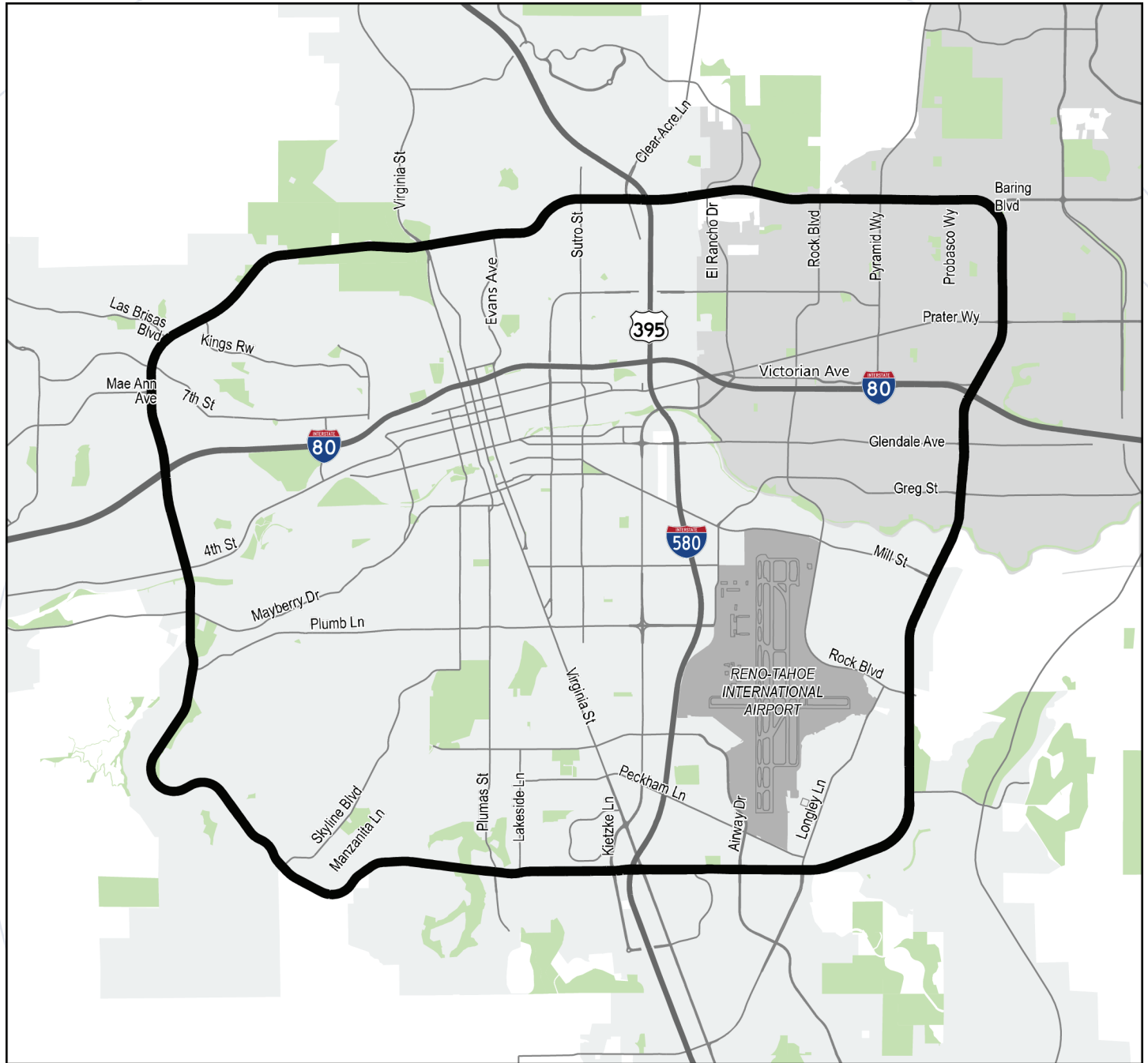
This study took an in-depth look at transportation issues and opportunities along McCarran Boulevard, including an analysis of existing conditions along the corridor. The existing conditions analysis considered traffic volumes, transportation safety, transit service, pedestrian and bicycle facilities, and land use.

Next, the study identified different types of transportation needs based on a combination of technical analysis and community/stakeholder outreach. The outcome is a set of recommendations for improving mobility and safety, and enhancing economic development opportunities along the corridor. This report outlines the process and major findings. More detailed technical analysis reports can be found in Volume 2.

FORWARD-LOOKING VISION

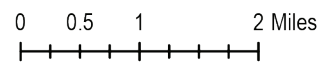
Although there have been several localized studies and improvements implemented along sections of McCarran Boulevard in recent years, a comprehensive forward-looking vision is needed to establish a consistent framework for improvements going forward.

Figure 1. Study Area Map



- McCarran Blvd
- City of Reno
- City of Sparks
- Parks
- Airport
- Freeway
- Major Street

MCCARRAN BOULEVARD CORRIDOR STUDY





^ Recently improved Pyramid-McCarran intersection (photo courtesy of RTC).

McCarran Today

Understanding existing conditions along the McCarran Boulevard corridor was an important first step in identifying areas that may need improvement. The study team conducted an extensive analysis of existing facilities and conditions, including safety, traffic congestion, land use, transit service, bicycle facilities, sidewalks, and trail connections.

SAFETY

Safety was identified as a critical issue along the corridor even before beginning the study. There have been a number of fatal and severe injury crashes along the corridor in recent years. The majority of crashes of all types and levels of severity are concentrated in a few areas along the corridor, most notably in the northeast quadrant. As expected, areas with higher traffic volumes, a greater number of access points, and denser development have higher crash rates.

Based on crash data collected between January 1, 2015, and January 1, 2020, overall crash rates along McCarran Boulevard are lower than those of similar roadways in Nevada. However, the corridor still experienced 13 fatal crashes, resulting in 14 fatalities within this 5-year period. Two of these fatalities involved pedestrians. Additional information about crash types and frequencies can be found in the Crash Data Report in Volume 2.

TRAFFIC CONGESTION

Traffic congestion is a concern for residents who use McCarran Boulevard to access jobs, housing, and shopping destinations. Several portions of McCarran Boulevard are congested today or are forecasted to become congested in the future. Some of the most congested spots along McCarran Boulevard include:

- » The area to the east of US 395
- » The area just north of I-80 (western McCarran)
- » The area just south of I-80 (eastern McCarran)
- » The areas to the east and west of I-580

Based on a level of service analysis for the corridor, most of the intersections along McCarran Boulevard operate at LOS D or better, which is desirable. However, a few intersections operate at LOS E, which is considered at capacity, either during the AM or PM peak hour. The intersection of McCarran Boulevard and Cashill Boulevard operates at LOS F during the AM peak hour. Additional information about traffic congestion and level of service is provided in the Traffic Report in Volume 2.

KEY STEPS

- » Identify desired corridor characteristics based on community and stakeholder input
- » Review existing conditions along the corridor
- » Identify different types of transportation needs, based on a combination of technical analysis and community/stakeholder outreach





^ Intersection of McCarran Boulevard and Cashill Road, in the Caughlin Ranch area.



^ McCarran Boulevard, adjacent to San Rafael Regional Park.



^ Reno-Tahoe International Airport (photo courtesy of airport staff).

LAND USE

Reno and Sparks are two of the fastest growing cities in Nevada, and the areas surrounding McCarran Boulevard are no exception. This growth contributes to overall traffic congestion but should also be considered strategically for specific area and intersection improvements.

CURRENT LAND USE

Although the character of McCarran Boulevard varies widely throughout the region, the predominant land uses along the corridor are single family residential and commercial. There are also industrial, multi-family residential, agricultural, parks, and vacant areas present, as well as the University of Nevada, Reno (UNR) and the Reno-Tahoe International Airport.

Generally, the corridor traverses four general types of land uses:

- » **Residential:** Much of the corridor is fronted by single- or multi-family residential, including a variety of home types, ages, and setbacks. Due to the volumes and speeds of traffic along McCarran Boulevard, homes are typically set back from the road and often include fencing or privacy walls. Thus, there is very little connection between the neighborhoods and the corridor, aside from the residential collectors used for access.
- » **Commercial/Freeway Influence Areas:** There are several sections of commercial development along the corridor, either in small pockets or longer stretches. Commercial development is often associated with Freeway Influence Areas, such as the one near McCarran Boulevard’s southern intersection with I-580.
- » **Industrial:** The eastern and southeastern sections of the corridor include higher concentrations of industrial land uses. Although some stretches include sidewalks – particularly near office parks – other sections are lacking pedestrian facilities.
- » **Parks and Open Space:** Several stretches of the corridor are bordered by parks and open space, including large regional parks, golf courses, skate parks, and smaller neighborhood pocket parks. Major parks along the corridor include the Rancho San Rafael Regional Park, Wildcreek Golf Course, Rattlesnake Mountain Skate Park, Huffaker Hills, and the Lakeridge Golf Course. Trail connections to more distant park facilities exist as well, specifically along the western portions of the corridor.

In addition, several schools are located along the corridor, requiring transportation access by students and parents. School circulation patterns rely heavily on vehicular, pedestrian, and bicycle travel and may impact portions of the McCarran corridor differently than typical commuting patterns.

TRAFFIC GENERATORS

There are two major traffic generators located along the corridor that warrant special consideration – the Reno-Tahoe International Airport, and UNR. The Reno-Tahoe International Airport is the second-busiest commercial airport in Nevada, serving approximately 4.7 million passengers a year. Airport-related traffic influences congestion and safety issues, particularly where McCarran Boulevard intersects with Longley Lane and Rock Boulevard.

UNR is home to 21,000 students and over 10,000 faculty and staff. The higher prevalence of pedestrians and bicyclists near the university contributes to a greater concentration of pedestrian and bicycle-related conflicts, particularly near Virginia Street and Evans Avenue.

FUTURE LAND USE

There are a number of vacant parcels of varying sizes along McCarran Boulevard. Understanding when and how these parcels are likely to change over time is an important component of planning for the corridor’s future. Major developments planned along the corridor include: the DP UNR Farms Industrial Park; future air cargo development near the Reno-Tahoe International Airport; the Reno Cyclery; and multi-family housing.

TRANSIT

Although there is no transit service running along the McCarran loop, there are a number of places where transit routes cross or briefly run along the corridor. RTC operates a total of 13 routes that either cross (10) or run along (3) McCarran Boulevard for a short distance. These routes typically have at least one stop along McCarran Boulevard, especially in areas with higher concentrations of jobs or services. The locations with the highest number of stops and crossings are western McCarran Boulevard between 4th Street and Kings Row, and southern McCarran Boulevard between Kietzke Lane and Longley Lane.

In addition to the 13 fixed routes, RTC operates an on-demand transit service called FlexRIDE whose service area overlaps this study’s planning area. There are several designated FlexRIDE zones throughout the RTC planning area, but the one adjacent to the study area extends north from McCarran Boulevard to Spanish Springs, and southeast into Sparks, serving key shopping, civic, and senior destinations.

This study considered the ways existing transit routes interface with McCarran Boulevard, as well as the potential need for additional transit service along the corridor - coordinating with the RTC Transportation Optimization Plan Strategies (TOPS) (short-range transit plan).

BICYCLE FACILITIES

Portions of McCarran Boulevard are popular cycling destinations, either for transportation or recreation along the corridor, or to access nearby parks and off-road trails.

Bicycle facilities are present along most of McCarran Boulevard, either in the form of bike lanes or a shared use path. Bike lanes are the predominant facility type, covering the majority of the corridor.

A shared use path is present along a 3.5-mile stretch of southeastern McCarran Boulevard, instead of bike lanes. This pathway serves primarily as a bicycle facility but can also accommodate pedestrians.

There are two notable gaps in the bicycle facility network: on the eastern side of McCarran Boulevard just north of I-80, and between Longley and South Virginia Street, just south of the Reno-Tahoe International Airport. These sections of the corridor have relatively high traffic volumes and frequent access points to businesses. These conditions are incompatible with bicycling, especially without a dedicated facility such as a bike lane or shared use path. However, there is a project proposed in the Regional



≈ FlexRIDE vehicle stopped for passengers (photo courtesy of RTC staff).



≈ Bike lane along McCarran Boulevard (photo courtesy of CA Group).

Transportation Plan to add bicycle facilities and sidewalks to the stretch of McCarran Boulevard between Greg Street and Prater Way. There are also several intersections and other locations where bicycle safety is of particular concern to residents.

SIDEWALKS

Pedestrian safety and comfort were two main drivers for conducting this study, necessitating a thorough inventory of both sidewalk presence and type. Sidewalks are present along about half of McCarran Boulevard, when both sides of the street are considered. However, the level of accommodation and comfort provided for pedestrians varies widely along the corridor. Some sections include relatively narrow, attached sidewalks with no amenities, while others include wider, detached sidewalks with planter strips, trees, and a variety of amenities.



^ Sidewalks and crosswalk near Mira Loma Park (photo courtesy of CA Group).

TRAILS

There are several parks and open space areas adjacent to McCarran Boulevard, and some include trails used for hiking and mountain biking. Rancho San Rafael Regional Park is a major regional park located in the northwestern quadrant of the McCarran loop and is the starting point for a number of popular trails. There are also several trails that cross the southwestern section of McCarran Boulevard.

There are several access points from McCarran Boulevard to the Truckee River and associated river walkways. Access to these parks and open space areas was a key consideration in this study.

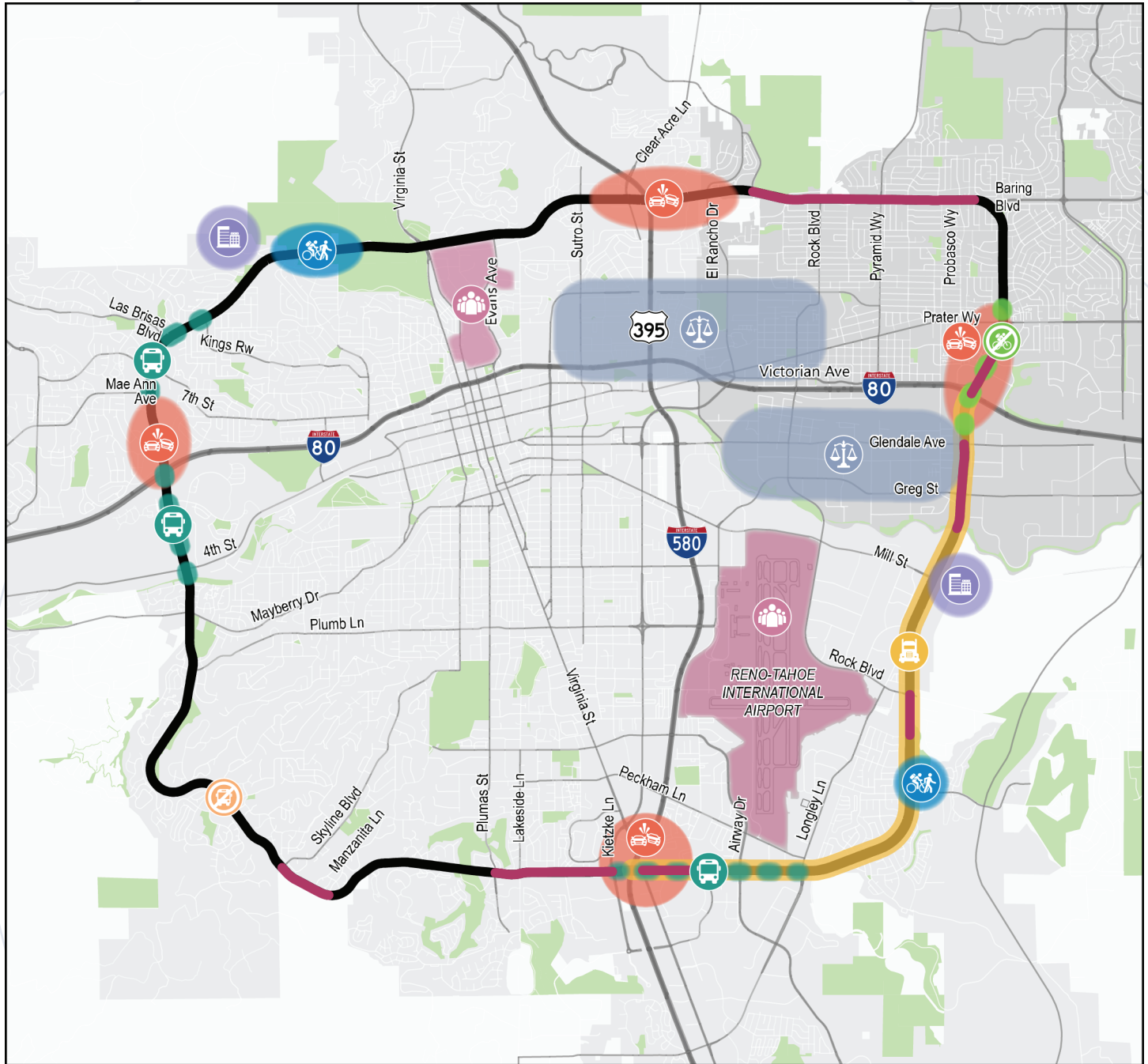
ISSUES AND OPPORTUNITIES

After gathering information about existing facilities and conditions, the study team created a summary of key issues and opportunities along the corridor. The issues and opportunities infographic and map below combine major findings discovered as part of the existing conditions inventory into a single location. These findings were used to help inform the development of the future vision for McCarran Boulevard and subsequent improvement alternatives to meet this vision.

≈ Figure 2. Issues and Opportunities Summary



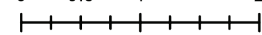
Figure 3. Issues and Opportunities Map



- | | | |
|----------------|----------------------|---------------------------------|
| McCarran Blvd | Transit Interface | Bike Facility Gap |
| City of Reno | No Existing Transit | Multi-modal Users |
| City of Sparks | High Crash Rate | Major Trip Generator/ Attractor |
| Freeway | High Truck Traffic | Underserved Communities |
| Major Street | Proposed Development | Constrained Right-of-Way |
| Parks | | |

MCCARRAN BOULEVARD CORRIDOR STUDY

0 0.5 1 2 Miles





Stakeholder and Public Engagement



Throughout the course of the McCarran Boulevard Corridor Study, a number of efforts were made to gather input from stakeholders and members of the public. Stakeholder outreach was conducted throughout the planning process, while public outreach was held in two distinct phases.

STAKEHOLDER AND AGENCY COORDINATION

The study team made presentations to the project's Technical Advisory Committee (TAC) throughout the project, comprised of staff from NDOT, the Reno-Tahoe International Airport, Washoe County, the City of Sparks, the City of Reno, the Washoe County School District, the Truckee Meadows Regional Planning Agency (TMRPA), and UNR. The meetings were conducted both virtually and in-person to solicit stakeholder comments on the existing conditions analysis (meeting #1), brainstorming of potential recommendations (meeting #2), and presentation of recommendations (meeting #3). Meetings #2 and #3 were conducted just prior to the first and second public meetings, respectively, to obtain stakeholder and agency support prior to soliciting public feedback.

The study team also held a series of meetings with leadership from RTC and NDOT. The purpose of these meetings was to review feedback received during the virtual public meeting and public comment period, and to reach consensus about the study direction moving forward. In particular, the group discussed tradeoffs between vehicular speed and multimodal accommodation/safety, as well as the role of transit along the corridor. This direction helped inform the alternatives development and recommendations phases.

STAKEHOLDER OUTREACH

In-person and virtual meetings were conducted throughout the process to discuss:

- » Existing conditions analysis
- » Corridor concept development
- » Presentation of recommendations

VIRTUAL PUBLIC MEETING

Although the ENGAGE platform was developed as a safe alternative to in-person meetings during the pandemic, it has become an effective alternative with longstanding viability. The platform allows residents to interact with the virtual public meeting 24 hours a day, seven days a week, during the open period (in this case, over the span of 30 days). No transportation or childcare is needed to participate in the meeting, and users can visit the site as often as they want, for as long as they want.




PUBLIC OUTREACH

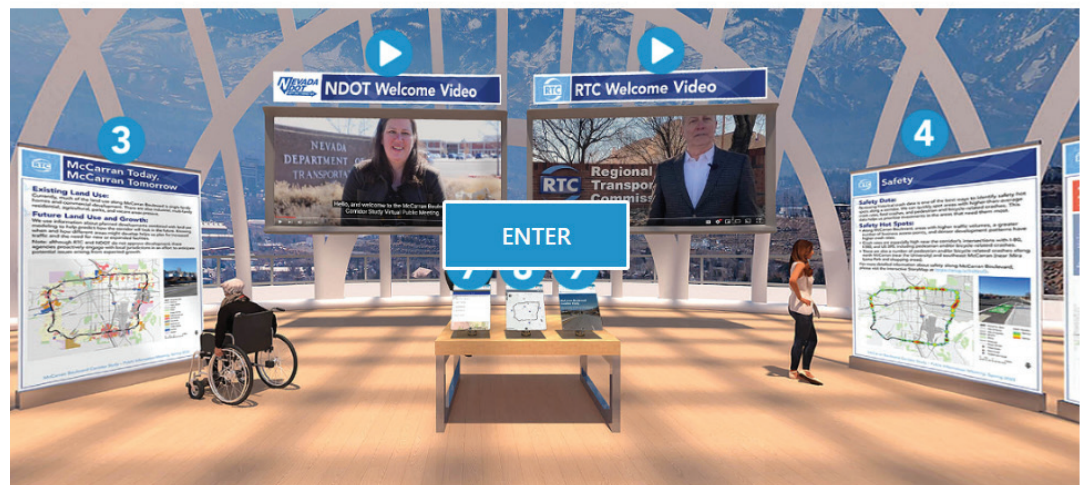
Public outreach was focused at two main points during the planning process – during the existing conditions/visioning step, and to receive input on draft recommendations.

The first public outreach effort was conducted between March 10 and April 11, 2022. In collaboration with RTC, the study team developed a set of interactive, web-based outreach platforms to provide convenient, on-demand engagement opportunities. This was focused around the ENGAGE website, which provided a virtual public meeting room where participants could watch introductory videos from RTC and NDOT representatives, view the project boards, access the online survey, view the Story Map web page, and leave comments in the interactive comment map. These platforms allowed study area residents, business owners, and other stakeholders to provide feedback about the most pressing needs, concerns, and opportunities along McCarran Boulevard, along with their thoughts about the future of the corridor.

Within the ENGAGE platform, a series of information boards were produced to provide information on the study elements and existing conditions. These were posted in English, Spanish, and screen reader-accessible formats.

∞ *Figure 4. Screen Capture of Landing Page and Entrance into ENGAGE Site*

 <p>Virtual Public Meeting</p> <p>Engage in a virtual public meeting at any time between Thursday, March 10 and Monday, April 11, 2022.</p>	 <p>Alternative Public Meeting</p> <p>If you use a screen reader, each display is available for review on our alternative public meeting page.</p>	 <p>Spanish Public Meeting</p> <p>Si habla español, cada pantalla está disponible para su revisión en nuestra página de reunión pública en español.</p>
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A summary of the types of comment mechanisms and feedback received is presented on the following page. For a full summary of the survey and comment results, as well as outreach materials, see the Outreach Summary in Volume 2.

SPRING 2022 PUBLIC COMMENT SUMMARY

The Spring 2022 public meeting was held virtually, allowing community members to view and interact the website materials at their leisure. As noted, participants could provide feedback in various manners, including responding to a survey, dropping notes on an interactive map, and sending in remarks via social media. The graphic to the right summarizes the activity and types of public comment.

Based on the feedback received, the top three concerns were related to:

- » Traffic congestion
- » Vehicular crashes/speeding
- » Not enough safe places to walk or bicycle

Comments tended to be clustered in the northwest and southwest quadrants of the corridor, and around east McCarran Boulevard between I-80 and Prater Way. Major comment themes included:

- » Too many lights/intersections/points of access interrupt traffic flow
- » Better bicycle facilities are needed, particularly separate and protected
- » Speeding is frequently reported along the corridor
- » Better/safer pedestrian facilities and crossing opportunities are needed
- » Additional transit service is desired along portions of the corridor

Survey respondents were divided in the priority for McCarran Boulevard to move a lot of vehicles quickly and efficiently (57%) versus accommodating a variety of travel modes (43%). Similarly, respondents were split over whether McCarran Boulevard should have consistent travel characteristics around the entire ring road (53%) or varying characteristics as land uses change (47%).



^ RTC Project Manager, Dan Doenges, presenting study recommendations on *The Road Ahead with RTC*, a weekly news segment that addresses transportation projects, needs, and solutions.



1

Interactive Virtual Public Meeting

813 UNIQUE VISITORS
2,762 PAGE VIEWS



2

Seven-Question Online Survey

679 RESPONSES



3

Interactive Comment Map

61 comments were received in the following categories:

Driving	17	Pedestrian	8
Bicycling	14	Transit	5
Safety	12	Accessibility	5



4

Social Media: Twitter and Facebook

RTC received a number of comments via social media and the most common suggestions included:

- Synchronize Signals
- Reduce Intersections
- Install Bicycle Lane
- Reduce Speed
- Designate as Freeway
- Install Cameras
- Complete Sidewalks
- Add Transit
- Repair Potholes

COMMENT PERIOD FOR RECOMMENDATIONS

A 30-day comment period was held to provide members of the public with the opportunity to weigh in on proposed recommendations for the McCarran Boulevard corridor. These recommendations were based on feedback from members of the public and agency stakeholders. The primary outreach materials were posted on the study's StoryMap web page, which was developed and updated throughout the study to build on the process and present new information. Story Map is a web-based tool that provides a seamless, convenient way to display interactive map elements along with more traditional web content such as text and images. In addition, the RTC project manager solicited input via local news segments, such as The Road Ahead.

A series of comments were received during the 30-day comment period. The primary topics of concern were bicycle facilities, congestion, safety, lighting, pavement condition, and growth. Comments received generally reiterated the need for proposed improvements, supporting recommendations made. Please see the Outreach Materials summary in Volume 2 for more information and inventory of feedback received.



Corridor Characteristics

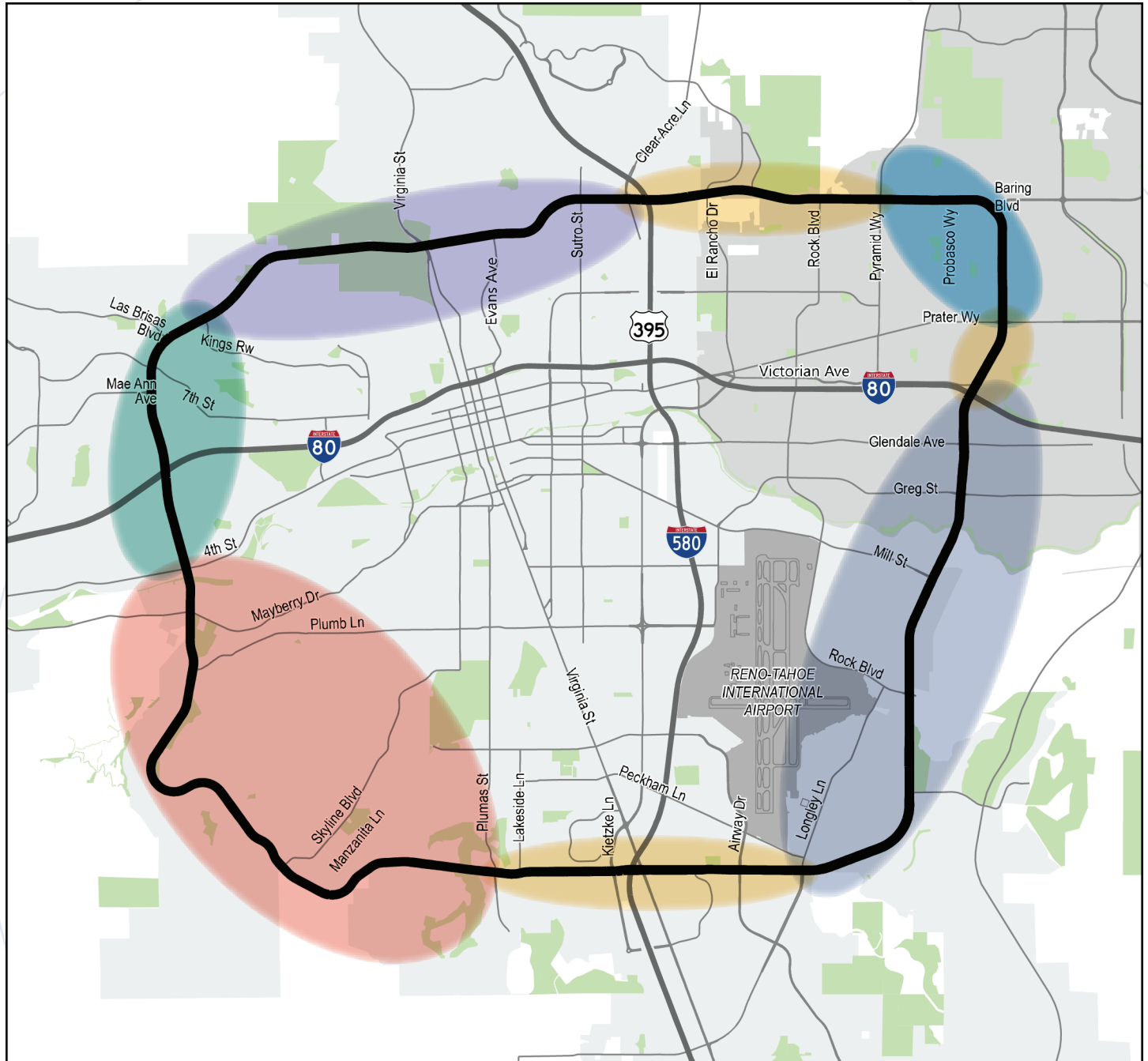
Building upon the character types established in the Existing Conditions Report and paired with the feedback received on corridor priorities during the initial public outreach period, the study team identified six types of roadway uses that encompass the corridor – described in Table 1 and illustrated in Figure 5.

The definition of these character areas helped frame the development and screening of alternatives in the next study phase, leading to differing corridor recommendations, generally grouped in these areas due to the unique characteristics of each.

≈ **Table 1. Corridor Characteristics Along McCarran Boulevard**

CORRIDOR TYPE	CORRIDOR AREA	CHARACTERISTICS
Industrial	I-80 to Longley Lane	Heavier freight movement Existing bicycle and pedestrian facilities
High Density Retail	Longley Lane to Plumas Street Clear Acre Lane to Pyramid Way Prater Way to I-80	Higher number of driveways and commercial and industrial land use Various levels of bicycle and pedestrian treatments, with a gap with no facilities between Longley and Neil
Caughlin Ranch	Plumas Street to 4th Street	Heavily residential Steeper terrain with numerous roadway curves Minimal pedestrian facilities; shoulder/bike lane combination
Low Density Retail	4th Street to Kings Row	Mixture of residential and light commercial land use Bicycle lanes throughout; no sidewalks from Las Brisas to Kings Row
San Rafael/UNR	Kings Row to Clear Acre Lane	Area of recreation and UNR campus Bicycle lanes, but limited pedestrian facilities
Sparks Residential	Pyramid Way to Prater Way	Primarily residential in flat terrain Bicycle lanes throughout; area of pedestrian concern from 4th Street to Baring

Figure 5. Corridor Characteristics



McCarran Blvd	Industrial: I-80 to Longley Lane	Low Density Retail: 4 th Street to Kings Row	<p>MCCARRAN BOULEVARD CORRIDOR STUDY</p> <p>0 0.5 1 2 Miles</p>
City of Reno	High Density Retail: Longley Lane to Plumas Street Clear Acre Lane to Pyramid Way Prater Way to I-80	San Rafael/UNR: Kings Row to Clear Acre Lane	
City of Sparks	Caughlin Ranch: Plumas Street to 4 th Street	Sparks Residential: Pyramid Way to Prater Way	
Freeway			
Major Street			
Parks			



Corridor Concept Development and Evaluation



Corridor concept development and evaluation included vehicular, pedestrian, bicycle, and transit modes. Key factors that were considered as part of this screening included safety for all modes, vehicular traffic delay, future development, and public and agency feedback.

A variety of modal concepts were developed to help alleviate congestion, mitigate safety concerns, and improve non-motorized facility conditions along the corridor. Improvement concepts have been classified by mode and focused in areas where outstanding needs have been identified.

VEHICULAR CONCEPTS

Future vehicular needs were evaluated by forecasting future traffic volumes in alignment with RTC's 2050 Regional Transportation Plan (RTP). Forecasts were used to project future density and potential delay along corridor segments and selected signalized intersections along the corridor.

Three corridor segments were found to be at or above capacity based on 2050 forecasts, suggesting the need for additional throughput:

- » Lakeside Drive to Plumas Street
- » Plumb Lane/Caughlin Parkway to I-80
- » El Rancho Drive to Pyramid Highway

Roadway capacity needs along the Plumb Lane to I-80 segment are driven by intersection delays rather than overall roadway capacity. While overall daily volumes within this segment are under the standard arterial capacity standards, signal delay at Plumb Lane, Mayberry Drive, and 4th Street requires additional lanes. These conditions resulted in the recommendation to add a lane between Plumb Lane and 4th Street and extend the additional lane to I-80.

The El Rancho Drive to Pyramid Highway segment is unique in character, as future volumes are anticipated to decrease with ultimate construction of the US 395/Pyramid Highway Connection project. However, full build-out of the project is not anticipated until the final years of the current 2050 RTP, resulting in a near-term need for additional capacity along McCarran Boulevard. The lane addition in this segment will make McCarran Boulevard consistent with the current footprint of the corridor

PROJECTED FUTURE TRAVEL DEMAND AND POTENTIAL DELAY

2050 forecasts predict three corridor segments to be at or above capacity:

- » Lakeside Drive to Plumas Street
- » Plumb Lane/Caughlin Parkway to I-80
- » El Rancho Drive to Pyramid Highway



to the west, to Clear Acre Lane. This continuity will promote better flowing traffic to and from the US 395 interchange to neighborhoods to the east.

∨ *Table 2. Roadway Concept Considerations*

CORRIDOR TYPE	CORRIDOR AREA	CHARACTERISTICS
Industrial	I-80 to Longley Lane	No additional laneage needed
High Density Retail	Longley Lane to Airway Drive	Additional lane each direction
	Neil Road to Virginia Street	Lane removal each direction dependent on preferred bicycle and pedestrian treatment
	Lakeside Drive to Plumas Street	Additional lane each direction
Caughlin Ranch	Northtowne Lane to El Rancho	Additional lane eastbound
	El Rancho Drive to Pyramid Way	Additional land each direction
Low Density Retail	4th Street to I-80	Potential additional lane each direction, dependent on the intersection treatment
San Rafael/UNR	Kings Row to Clear Acre Lane	Additional land each direction
Sparks Residential	Pyramid Way to Prater Way	No additional laneage needed

In addition to the roadway segments, 19 signalized intersections were analyzed for existing and 2050 operations. Fifteen roadway intersections were identified as needing improvements to maintain acceptable levels of delay in 2050.

TRANSIT

During the public comment period, there was limited support for additional and/or enhanced transit service (e.g., higher frequency bus or light rail). The study team reviewed this feedback with RTC Public Transportation and Operations Department, and based on existing ridership on fixed bus routes, increasing existing transit service is not currently feasible.

RTC continuously monitors ridership with yearly updates presented based on overall and route-specific ridership. Should ridership trends increase within the corridor, RTC will review for additional fixed route opportunities. Enhanced transit service such as light rail is not currently financially feasible based on overall corridor ridership and funding.

PEDESTRIAN AND BICYCLE

McCarran Boulevard currently provides a significant amount of dedicated bicycle lanes throughout the corridor, with two large gaps in the system. While not as extensive as bike lanes, a fair amount of the corridor currently has detached or attached sidewalk immediately adjacent to the roadway.

The intent of the concept development was to provide higher quality bicycle and pedestrian facilities, in lieu of maximizing bicycle and pedestrian facility coverage. This approach led the study team to consider numerous types of bicycle and pedestrian facilities, and the interaction with vehicular traffic. Table 3 provides a list of types of potential treatments; whether they are currently utilized within the corridor; benefits; and related concerns.

The study team discussed potential treatment concepts with local agencies and stakeholders and identified an approach that would encourage the use of bicycle and pedestrian facilities in lieu of vehicular trips. While standard bike lanes, curb, gutter, and sidewalk are used extensively in urban areas, they are typically used by individuals with limited transportation options (e.g., zero-car households). Bike lanes along McCarran are typically only used by competitive or experienced cyclists and are not enticing to recreational or new riders wanting to voluntarily reduce the dependence on vehicular travel.



∧ *Striped on-street bicycle lane.*

Table 3 Bicycle and Pedestrian Concept Considerations

TYPE OF TREATMENT	CURRENTLY UTILIZED	BENEFITS	CHALLENGES
Bike Lane	Yes – Extensively	Provides dedicated, striped bike lane on roadway surface	Bicyclists in close proximity to high-speed vehicular traffic with no buffer
Buffered Bike Lane	No	Provides dedicated, striped bike lane on roadway surface with a striped buffer for additional delineation for vehicles and bikes	Bicyclists within close proximity to high-speed vehicular traffic with small striped buffer
Curb, Gutter, and Sidewalk	Yes – Extensively	Provides 6-inch elevated concrete path for pedestrians	Pedestrians in close proximity to high-speed traffic even with adjacent bike lane
Protected Sidewalk	Yes – Limited	Provides additional separation or physical barrier to increase protection from errant vehicles	Requires a larger footprint and can create potential drainage concerns. Typically, higher level of cost.
Curb, Gutter, and Shared Use Path	Yes – Limited	Provide 6-inch elevated pathway for bicyclists and pedestrians outside of the roadway surface. Potential to encourage new users.	Requires a larger footprint and can create potential drainage concerns. Potential conflict between bicyclists and pedestrians. Typically, higher level of cost.
Protected Shared Use Path	Yes – Limited	Provide physically separated or protected pathway for bicyclists and pedestrians outside of the roadway surface. Potential to encourage new users.	Requires a larger footprint and can create potential drainage concerns. Potential conflict between bicyclists and pedestrians. Typically, higher level of cost.

Note: For this study, “protected” facilities can refer to various types of treatments ranging from a significant physical separation from vehicular traffic (>10 feet) to providing a significant physical barrier, such as concrete barrier rail, between the vulnerable user and vehicular traffic.

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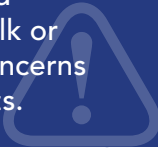


Corridor Improvement Recommendations

The corridor screening evaluated a series of improvements by type, including intersection treatments, roadway/travel lane improvements, and bike and pedestrian improvements. A variety of improvements were proposed along different segments of McCarran Boulevard, allowing a series of recommendations to be made that are context-sensitive to the surrounding area. The following recommendations were selected based on feedback from members of the public and agency stakeholders on how the corridor is currently used and priorities for the future.

TOP THREE CONCERNS

Traffic congestion, speed, and not enough safe places to walk or bicycle were the top three concerns driving corridor improvements.



INTERSECTION IMPROVEMENTS

Figure 6 illustrates intersection locations to be improved in the future. Precise improvements will be determined by intersection-specific studies, but Table 4 provides initial recommendations for consideration, based on the data reviewed as part of this study. Improvements may include such changes as additional turn lanes, extended signal timing, or new signal installations. All signalized intersections should be evaluated and modified as part of rehabilitation, ADA enhancement, capacity improvements, or bundled with other projects. Improvements may include realignment of signal heads, new poles and mast arms, lighting, and/or controller upgrades.

∨ *Table 4. Intersection Improvement Recommendations*

CROSS STREET	INTERSECTION IMPROVEMENTS
Prater Way	Additional southbound left turn lane and modify right turns to RTC standard turn pocket
Mira Loma Drive	Additional westbound left turn lane and NBR overlap phase
Longley Lane	Afternoon cycle increased to 150 seconds
Virginia Street	Extend eastbound left turn lanes (bridge concerns)
Lakeside Drive	Additional thru lane on all approaches and additional southbound left turn lane
Cashill Boulevard	Additional eastbound left and northbound left turn lanes and additional thru lanes north and south
Plumb Lane	Additional southbound left turn lanes and additional thru lanes north and south
Mayberry Drive	Additional southbound left turn lanes and additional thru lanes north and south
4th Street	Additional eastbound left and westbound left turn lanes and additional thru lanes north and south
Mae Ann Avenue	Additional eastbound left, westbound left, and northbound left turn lanes
7th Street	Additional eastbound left turn lane and additional thru lane east
Keystone Avenue	Developer proposed signal
Sutro Street	Modify right turns to RTC standard turn pocket; provide two thru lanes, one left, and one right in northbound and southbound directions
Clear Acre Lane	Additional thru lanes east and west. Northbound and southbound approaches to have one left, two thru, and one right
Northtowne Lane	Additional eastbound and westbound left turn storage

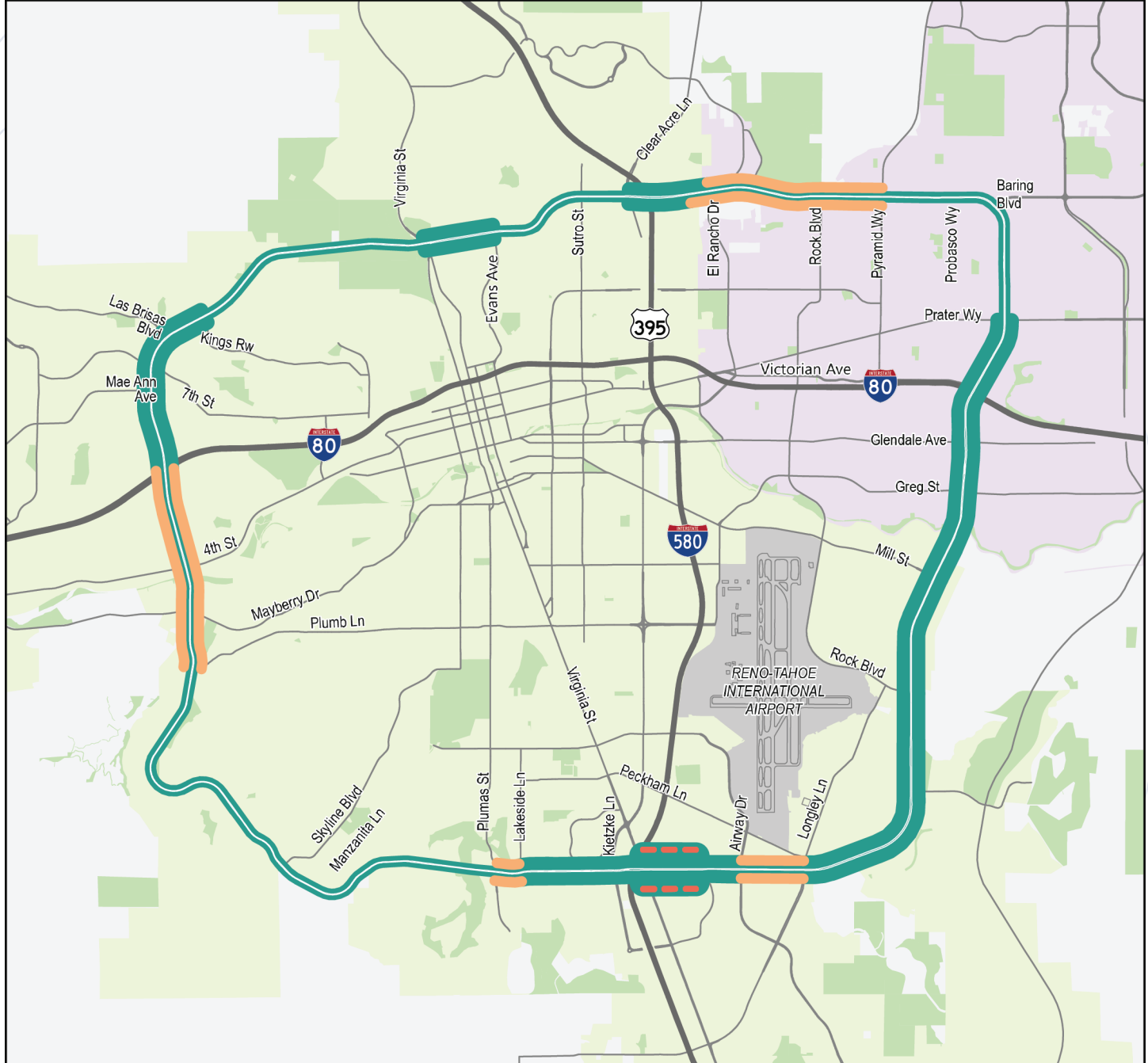
Figure 6. Recommended Intersection Improvement Locations



TRAVEL LANE RECOMMENDATIONS

Figure 7 illustrates recommended changes to existing travel lanes along McCarran Boulevard. Lane additions are proposed in four locations to extend capacity of the corridor surrounding the interstate interchanges. A lane reduction is only proposed in one location, near the south McCarran Boulevard/I-580 interchange to make the travel lane footprint more consistent.

Figure 7. Recommended Travel Lane Changes



- Freeway
- Major Street
- City of Reno
- City of Sparks
- Parks
- Two Existing Lanes
- Three Existing Lanes
- Four Existing Lanes
- Potential Lane Addition
- Potential Lane Reduction

MCCARRAN BOULEVARD CORRIDOR STUDY

0 0.5 1 2 Miles

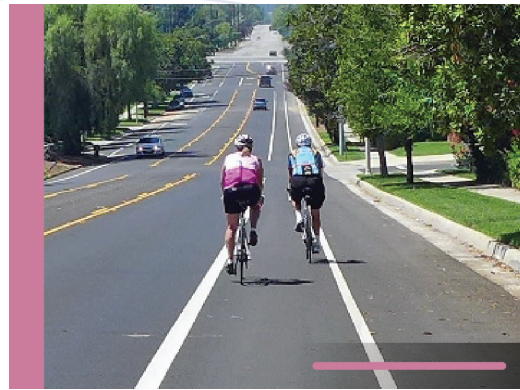
MULTIMODAL NETWORK IMPROVEMENTS

Figure 8 shows the multimodal network for McCarran Boulevard, including a combination of sidewalks, bike lanes, buffered/protected bike lanes, and protected shared use paths. Facility types have been chosen based on surrounding land uses, roadway configuration, and space availability on the street. These improvements include:



SIDEWALK

Red lines show areas that will have a sidewalk only.



BIKE LANE

Pink lines show areas that will include an on-street bike lane.



BUFFERED BIKE LANE

Purple lines show areas that will have a bike lane that is separated from vehicular traffic by a buffer or barrier. The type of separation will be determined during implementation.



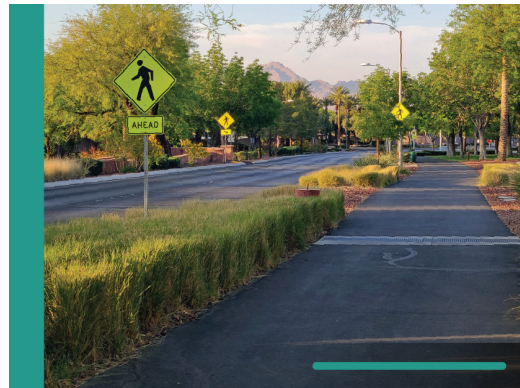
SIDEWALK AND BIKE LANE

Orange lines show areas that will include a sidewalk and an on-street bike lane.



SIDEWALK AND PROTECTED BIKE LANE

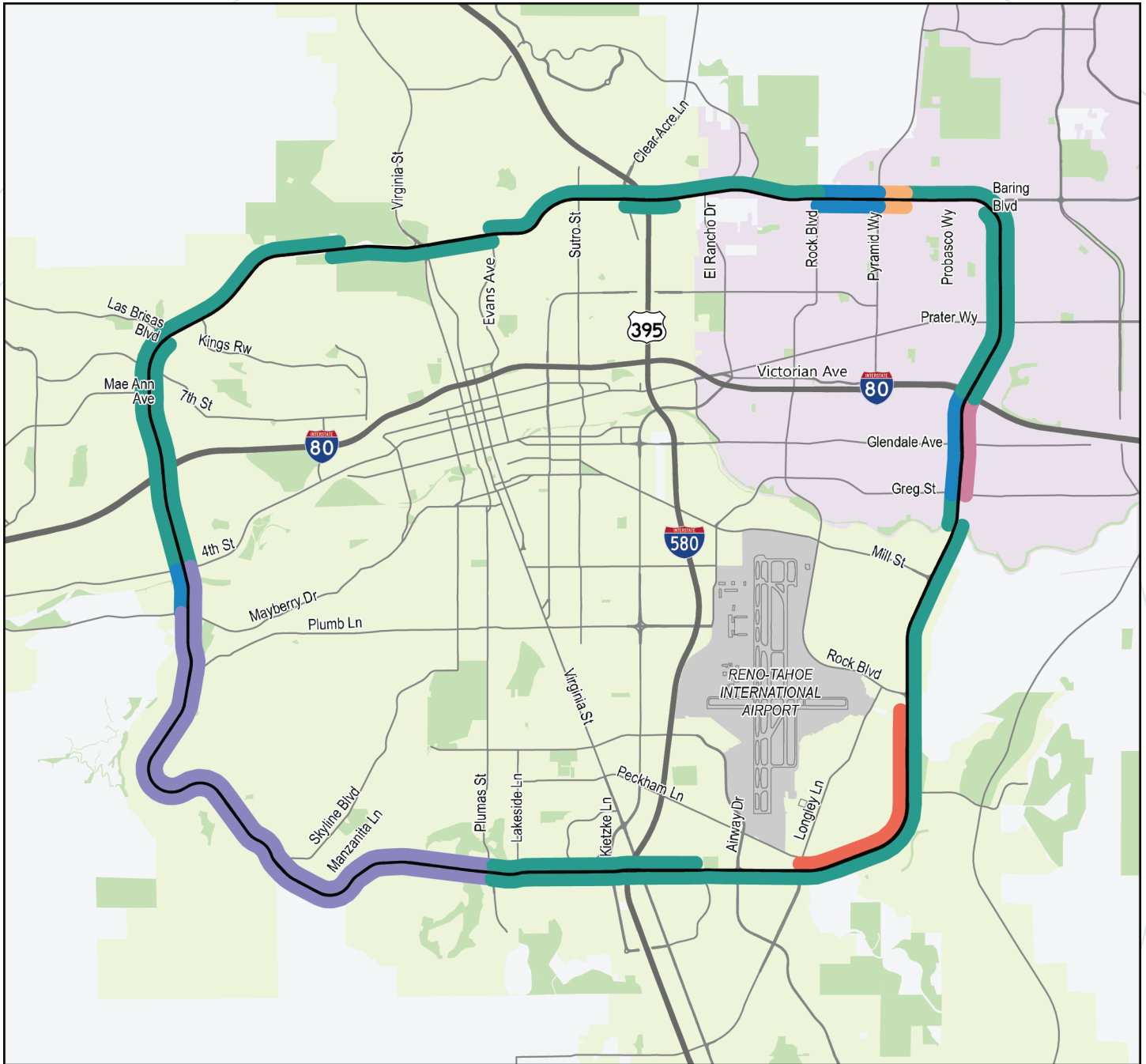
Blue lines show areas that will include a sidewalk and on-street bike lanes that are separated from vehicular traffic by a buffer or barrier. The type of separation will be determined during implementation.



PROTECTED SHARED USE PATH

Teal lines show areas that will include a pathway that accommodates bicycles and pedestrians. The pathway will be separated from vehicle traffic by a buffer or barrier. The type of separation will be determined during implementation.

Figure 8. Recommended Multimodal Network



- Freeway
- Major Street
- City of Reno
- City of Sparks
- Parks
- Sidewalk
- Bike Lane
- Buffered Bike Lane
- Sidewalk and Bike Lane
- Sidewalk and Protected Bike Lane
- Protected Shared Use Path

MCCARRAN BOULEVARD CORRIDOR STUDY

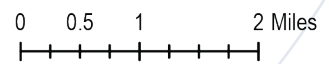


Table 5 further elaborates the bicycle and pedestrian treatments identified as a blueprint for providing supportive infrastructure around the McCarran loop.

≈ **Table 5. Multimodal Network Details**

LIMITS	MULTIMODAL ACCOMMODATION
Greg Street to Longley Lane	Southbound – Maintain existing curb, gutter, and sidewalk from south of Rock Blvd to Longley Lane Northbound – Utilize existing shared use path from Greg Street to Longley. Seek opportunities to provide additional separation or provide physical barrier from roadway.
Longley Lane to Neil Road	Westbound – No pedestrian or bicycle infrastructure. Eastbound – Provide protected shared use path.
Neil Road to South Virginia Street	Westbound – Remove one vehicular lane and provide protected shared use path. Eastbound – Remove one vehicular lane and provide protected shared use path.
South Virginia Street to Plumas Street	Westbound – Provide protected shared use path. Eastbound – Provide protected shared use path.
Plumas Street to Mayberry Drive	Westbound/Northbound – Provide buffered bike lane. Eastbound/Southbound – Provide buffered bike lane. Pedestrians to use internal neighborhood street network.
Mayberry Drive to 4th Street	Northbound – Provide buffered bike lane. Southbound – Provide protected shared use path.
4th Street to Kings Row	Northbound – Provide protected shared use path. Southbound – Provide protected shared use path.
Kings Row to US 395	Eastbound and Westbound – Provide protected shared use path on north side of McCarran and utilizing existing drainage culvert/animal crossing to south side of McCarran along San Rafael Park and UNR. Cross shared use path back to north side of McCarran at Evans Avenue.
US 395 to Rock Boulevard	Eastbound – Provide protected shared use path from US 395 to Northtowne Lane. Westbound – Provide protected shared use path.
Rock Boulevard to Pyramid Way	Eastbound – Provide protected shared use path. Westbound – Provide protected shared use path.
Pyramid Way to 4th Street	Eastbound – Utilize existing shared use path. Westbound – Utilize existing shared use path.
4th Street to I-80 (east)	Eastbound/Southbound – Provide protected shared use path. Westbound/Northbound – Provide protected shared use path.

MAINTENANCE CONCERNS

Development of shared use paths creates concerns in terms of ownership and maintenance responsibilities. As these projects are considered, additional NEPA and design development maintenance agreements will need to be discussed between NDOT, RTC, and local jurisdictions. These facilities often require smaller maintenance equipment and more labor hours to service, including snow removal. Maintenance funding should be considered when developing project costs and required funding.



Implementation Next Steps

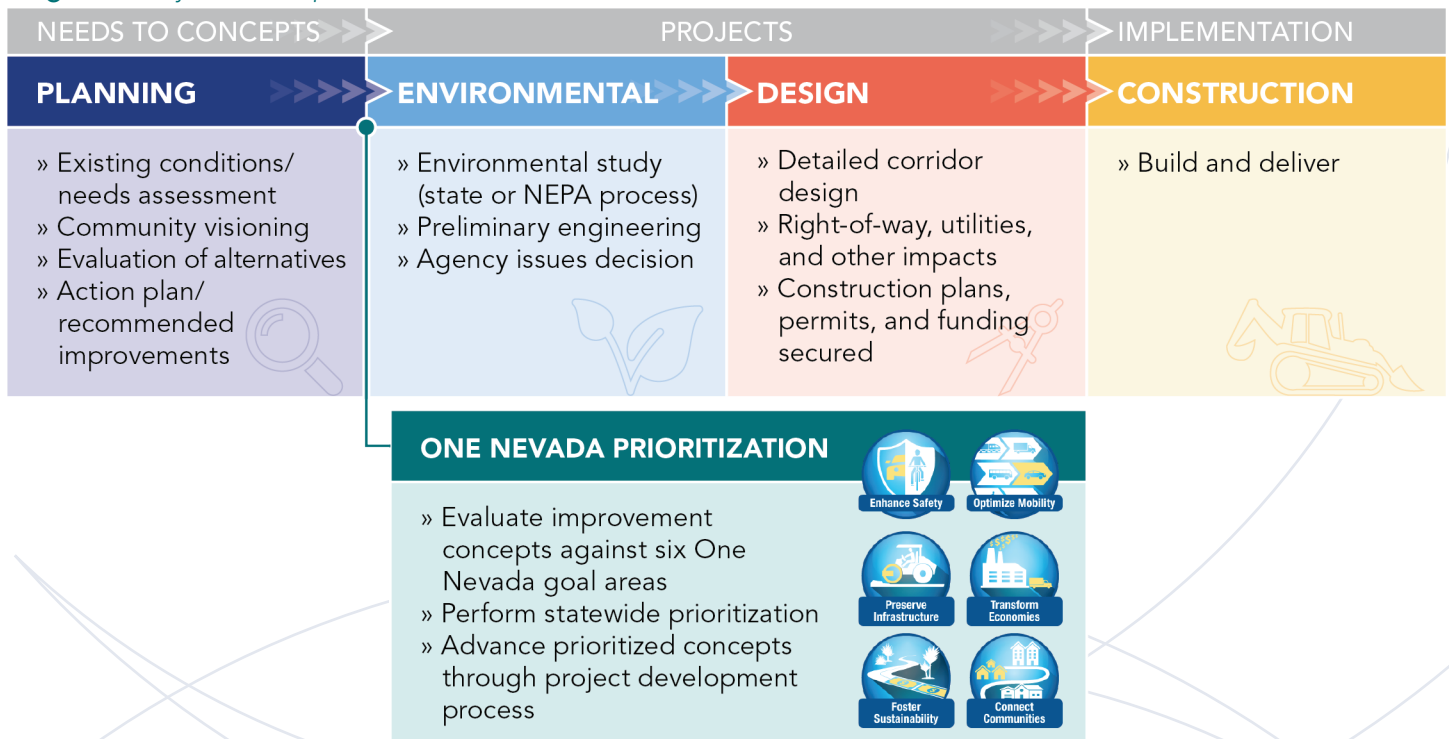
The next step of this process is to integrate corridor recommendations into RTC’s Regional Transportation Plan. Federal regulations require that the long-range planning document be updated every four years. The RTP is RTC’s long-range transportation plan as required under federal statute. It contains major transportation projects and programs for Washoe County for all modes of travel. It functions as the major tool for implementing long-range transportation planning.

The RTP captures the community’s vision of the transportation system and identifies the projects, programs and services necessary to achieve that vision which may be implemented by the RTC, member entities, and NDOT.

The current 2050 RTP was adopted in 2021, amended in 2023, with a wholesale update due in 2025.

Because McCarran Boulevard is an NDOT-owned facility, RTC will coordinate with NDOT on delivering these projects, including integrating project recommendations into NDOT’s One Nevada transportation planning process. The One Nevada Transportation Plan is NDOT’s state long-range transportation plan and is built on six critical goal areas that reflect the priorities of Nevada’s public and transportation partners. The One Nevada planning process is a policy framework for project development that allows more informed, data-driven, transparent, and responsive transportation investment decisions.

» Figure 9. Project Development Process





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www.rtcwashoe.com/mpo-corridor-plan/mccarran-boulevard-corridor-study/