Central Reno/Midtown

Neighborhood Network Plan
DRAFT

July 2025

Acknowledgments

The Central Reno/Midtown Neighborhood Network Plan was developed through collaboration with partner agencies and local organizations. Additionally, this project involved RTC staff from all departments including Planning, Public Transit, and Engineering. This planning process relied on engaging with residents and staff at local agencies with direct knowledge of current challenges within the neighborhood. Staff from partner agencies and members of the public provided detailed feedback and input during the planning process as part of the Neighborhood Network Plan Steering Committee. This group helped provide context to the public comments and inform the identification of recommended improvements. Those listed below helped to guide the development of the plan and will continue to support the implementation of project recommendations at their various roles at agencies and organizations throughout the community.

RTC Washoe Project Team

- Marquis Williams, RTC Planning
- Graham Dollarhide, RTC Planning
- LaShonn Ford, RTC Engineering
- Sara Going, RTC Engineering

Neighborhood Network Plan Steering Committee Member Organizations

- City of Reno (Fire, Police, Public Works)
- Reno-Sparks Indian Colony
- One Truckee River
- Midtown Merchants
- Washoe County School District
- Washoe County (Sustainability)

Each organization above was represented by one or more staff members during Steering Committee meetings. The Steering Committee also included two members of the public from the Central Reno/Midtown neighborhood.

Consultant Team

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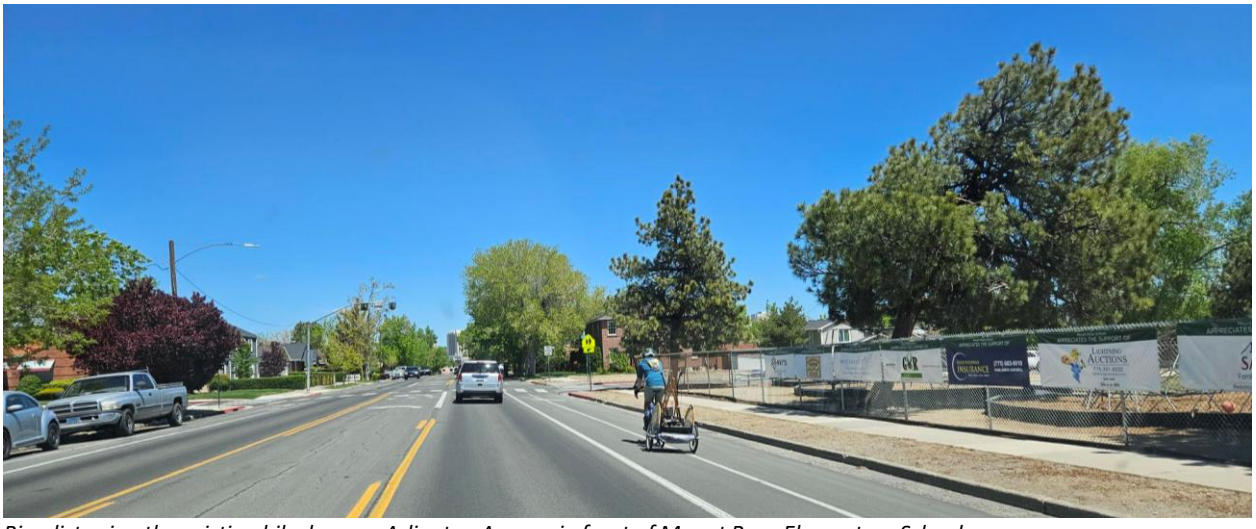
Chapter 1: Introduction

This Central Reno/Midtown Neighborhood Network Plan (NNP) focuses on enhancing active transportation options in the Central Reno/Midtown neighborhood by improving pedestrian and bicycling connections through quick-build style improvements. This NNP applies the regional vision, goals, and priorities from the regional RTC Washoe Active Transportation Plan while identifying quick-build improvements that can be rapidly implemented across the neighborhood to provide increased connectivity and comfort to people walking and biking. The RTC developed this plan through collaboration with partner agencies and direct engagement with members of the public through a variety of in-person and virtual methods. Combined with in-depth data analysis, the NNP focuses on issues for people walking and biking within the Central Reno/Midtown neighborhood and identifies immediate improvements to address needs through quick-build improvements.

Neighborhood Description

The Central Reno/Midtown neighborhood—generally defined by I-580 to the east, the Truckee River, S. McCarran Boulevard, Keystone Avenue, Plumb Lane, and Plumas Street—offers a variety of destinations (**Figure 1**). It features over 30 schools, parks with playgrounds, sports courts, and trails, including Virginia Lake Park. Entertainment is centered around the Virginia Street corridor, with venues like casinos, theaters, and museums. Employment hubs include Renown Regional Health Center and commercial areas along Virginia Street and Kietzke Lane. The neighborhood also offers community spaces like churches, libraries, and local markets.



Bicyclist using the existing bike lane on Arlington Avenue in front of Mount Rose Elementary School.

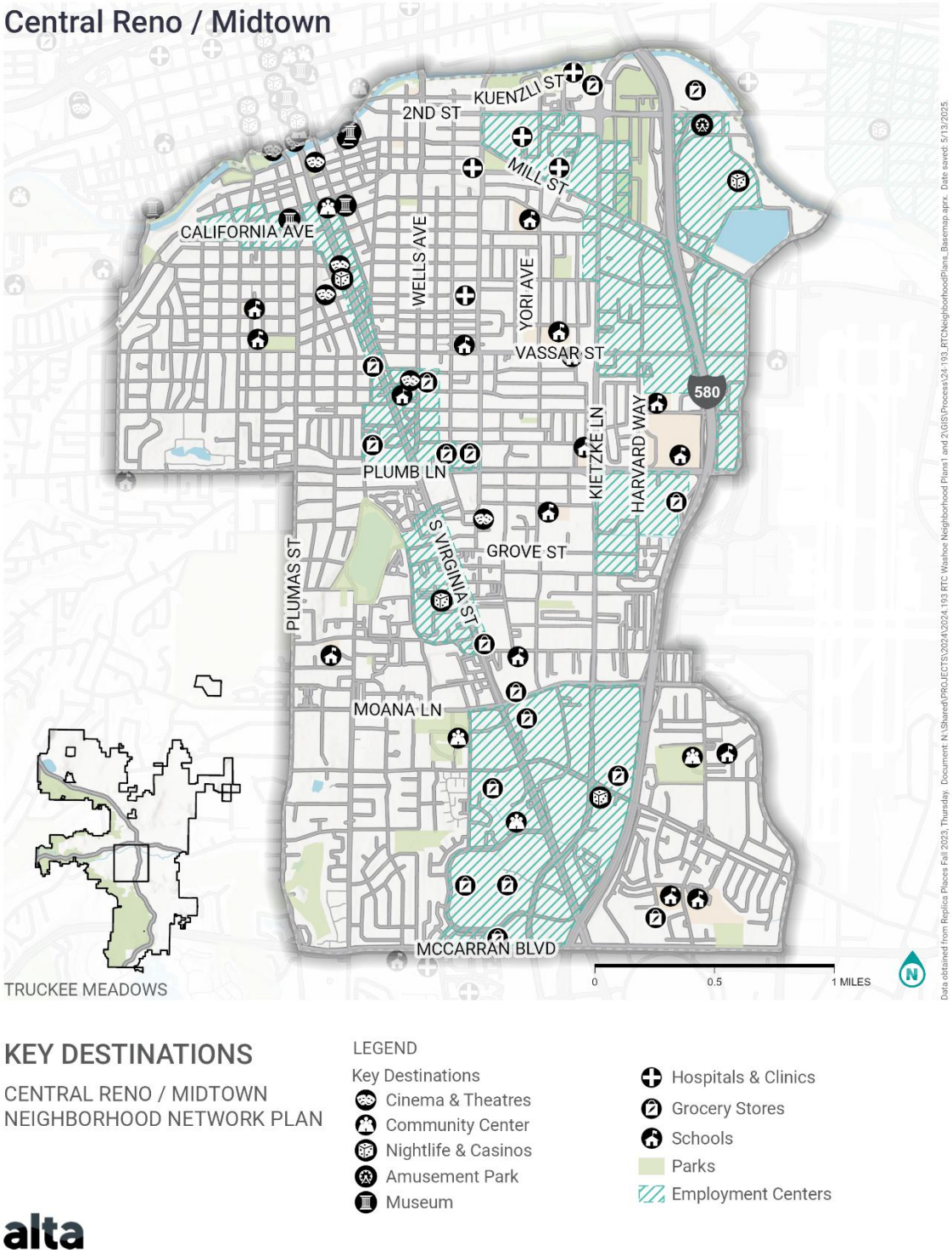


Figure 1. Central Reno/Midtown Neighborhood Area

Connections with Other Plans

This NNP discusses projects recommended for quick-build implementation through RTC's Active Transportation Program. Improvements identified in this plan are intended to be implemented rapidly throughout the neighborhood and are not inclusive of large-scale improvements, which are addressed through other planning processes such as the Regional Transportation Plan, specific area plans, corridor studies, and others.

Plan Process

This NNP follows the process outlined in the RTC Washoe Active Transportation Plan and applies a regional vision, goals, and analysis to the Central Reno/Midtown neighborhood. This process included two phases of public engagement featuring multiple in-person events and online elements. In addition to public engagement, the RTC used regional data analysis to identify neighborhood issues and areas of need based on demographics, roadway context, and crash history. By integrating community insights with data findings, the plan highlights and addresses the most pressing challenges for people walking and biking. The result is a quick-build implementation strategy designed to rapidly enhance connectivity and comfort throughout the neighborhood.

Plan Contents

This plan describes the planning process, data analysis findings, community engagement findings, and recommended improvements across four chapters as described below.

- Chapter 1 – Introduction
    - This chapter provides an overview of the project and connection with other planning processes.
- Chapter 2 – Neighborhood Profile
    - This chapter highlights demographic and socioeconomic data across the neighborhood and identifies areas of need.
- Chapter 3 – Biking and Walking in Central Reno/Midtown Today
    - This chapter presents key findings from community engagement and data analysis, offering a snapshot of current walking and biking conditions in the Central Reno/Midtown neighborhood.
- Chapter 4 – Addressing Central Reno/Midtown Needs
    - This chapter provides an overview of quick-build style improvements and identifies recommended quick-build improvements throughout the neighborhood.

Chapter 2: Neighborhood Profile

To better understand the context and needs of the neighborhood, the RTC reviewed various datasets to compare the Central Reno/Midtown neighborhood with the broader Reno/Sparks area—also known as the greater Truckee Meadows region—to identify focused needs within the neighborhood. This section includes a summary of socioeconomic data and a summary of the common destinations throughout the neighborhood for context. Additional information about datasets and analysis methodologies are included in Appendix A.

Neighborhood Demographics

The Central Reno/Midtown neighborhood has a young, diverse population with a high population density compared to the broader Reno/Sparks area. It is notably younger, with a higher proportion of people aged 20 to 39 and fewer people over 60. The neighborhood also has a larger percentage of Hispanic, Black, Native American, Asian, and multiracial individuals than the regional average.

Population density in Central Reno/Midtown is approximately 23 times higher than the regional average, with the densest areas around Plumb Lane, Kietzke Lane, and Virginia Street. The median household income varies significantly across the neighborhood, with some areas having very low incomes, particularly near Liberty Street and Virginia Street as seen in **Figure 2**. The average household income in the neighborhood is approximately $63,325, which is over $22,000 below the Reno/Sparks regional average of $85,969.

A significant portion of households (15%) in Central Reno/Midtown lack access to a vehicle, far surpassing the regional average of 7%. Areas like Plumb Lane and Kietzke Lane have the highest concentrations of vehicle-inaccessible households. Furthermore, the neighborhood faces housing affordability challenges, with 42% of households being cost-burdened—meaning they pay over 30% of their income on housing—which is higher than the regional rate of 31% of households being cost-burdened.

Bicyclist using the crosswalk to cross Plumb Lane at Virginia Street.

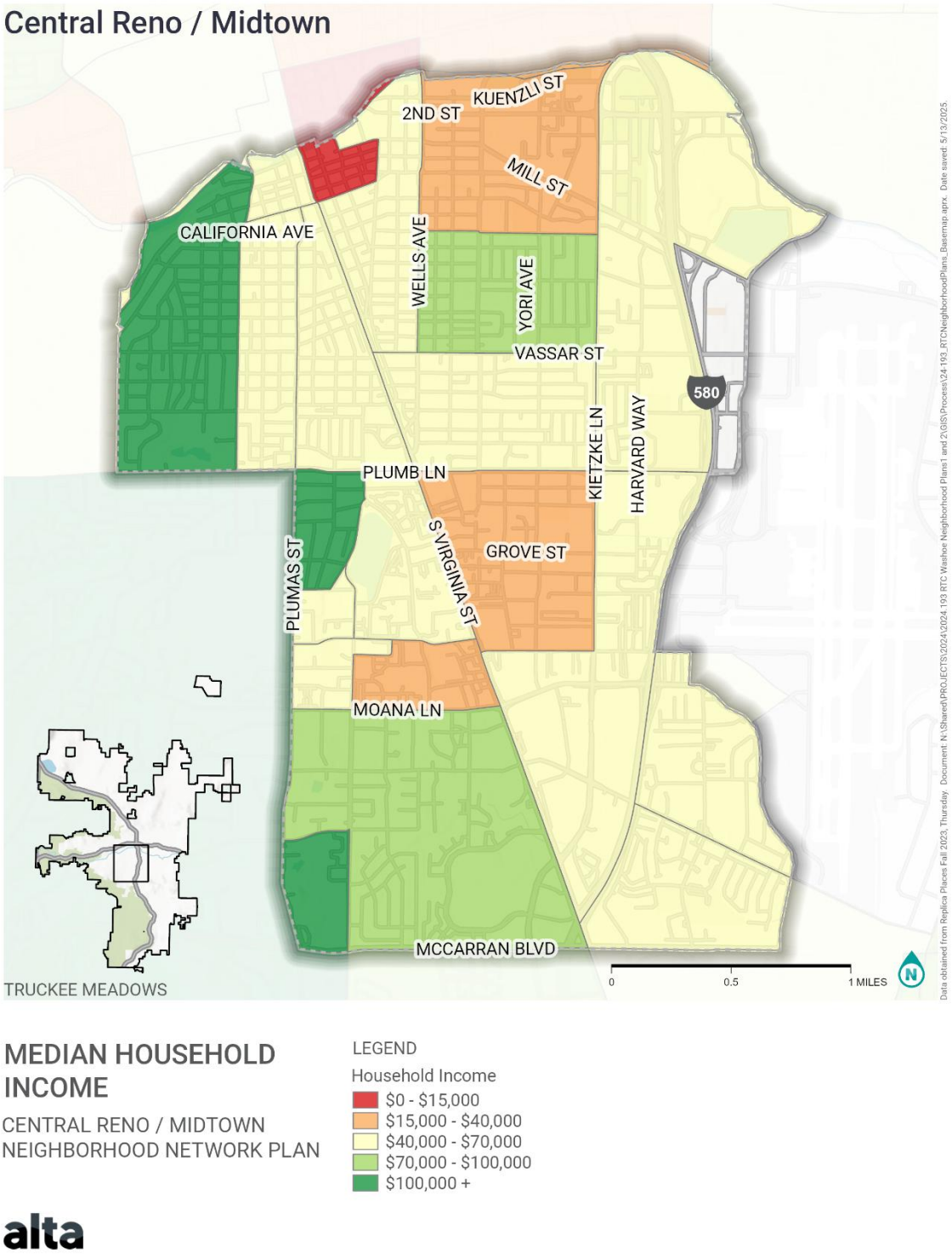


Figure 2. Median Household Income in Central Reno/Midtown

Existing Neighborhood Network

Pedestrian Facilities

Section of Vassar Street near Harvard Way with sidewalk gap.

The current sidewalk network in the neighborhood provides sidewalks on at least one side of the roadway for many streets; however, there are areas where sidewalk gaps exist (as shown to the right), which cause pedestrians to walk along or within the roadway and impacts overall connectivity. The RTC assessed sidewalk availability on arterials and collectors,[1] scoring them from zero (no sidewalks) to two (sidewalks on both sides) as shown in **Figure 3**. In Central Reno/Midtown, arterials scored an average of 1.71, and collectors scored 1.81, showing a generally well-connected network. However, gaps and a lack of sidewalk buffers along major roadways in the southeast corner of the neighborhood are safety concerns for community members, especially where missing facilities cause pedestrians to walk within the roadway. Refer to Appendix A for more details.

Bicycle Facilities

Existing bike lanes on roadways above 30 mph, such as on Kietzke Lane (shown above) can feel uncomfortable for most users because there is no physical separation between bicyclists and people driving.

The Central Reno/Midtown area has 23.4 miles of bike facilities as shown in **Table 1**. Of these, 20.3 miles (over 90%) are unprotected facilities (bike lanes and shared lanes), which can create higher-stress environments for people biking compared to protected facilities such as shared-use paths or protected bike lanes. Overall, the existing bicycle network in the neighborhood covers 51% of the 45.8 miles on arterial and collector streets in the neighborhood (**Figure 4**). Unprotected facilities such as bike lanes on roads above 30 miles per hour (mph) can be uncomfortable for most users. As a result, many long stretches of bike lanes, such as those on Kietzke Lane or Mill Street, provide connectivity but remain difficult routes. Additionally, the existing bike network in the neighborhood includes multiple gaps such as along Plumb Lane between Virginia Street and Harvard Avenue, Moana Lane between Plumas Street and Virginia Street, and multiple segments of Virginia Street. These gaps highlight opportunities to expand and improve the bike network in the area. For a more in-depth analysis, refer to Chapter 4 or Appendix A.

[1] **Arterials** provide longer through travel between major trip generators while **collectors** "collect" traffic from the local roads and connect smaller cities and towns with each other. For more information on the Functional Classification of Roadways, visit https://www.dot.nv.gov/home/showdocument?id=6654.

Table 1. Bicycle Facilities in Central Reno/Midtown by Mileage (Sept. 2024)

Protection	Facility Type	Mileage
Unprotected	Bike Lanes	16.7
	Shared Lane Facilities	4.6
Protected	Shared-Use Paths	2.1
	Separated Bike Lanes	0.0
	Total	23.4

Protected facilities – Facilities that are separate from vehicle traffic by a physical barrier or are in a separate right-of-way from vehicle traffic.

Unprotected facilities – On-street facilities marked with roadway striping that indicate the shared use of a travel lane by bicycles or dedicated space in a bike lane.

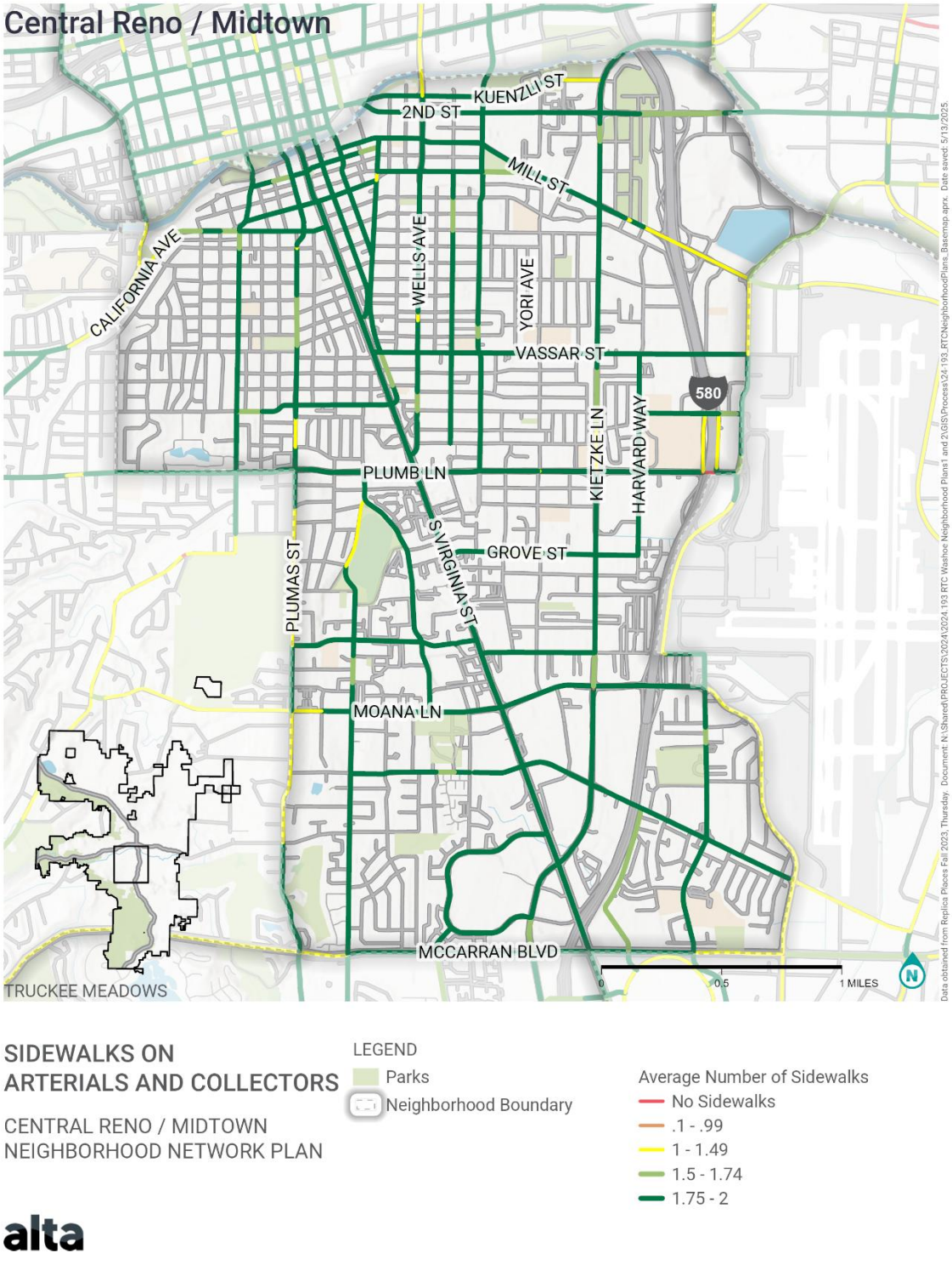


Figure 3. Sidewalks on Arterial and Collector Roads in Central Reno/Midtown

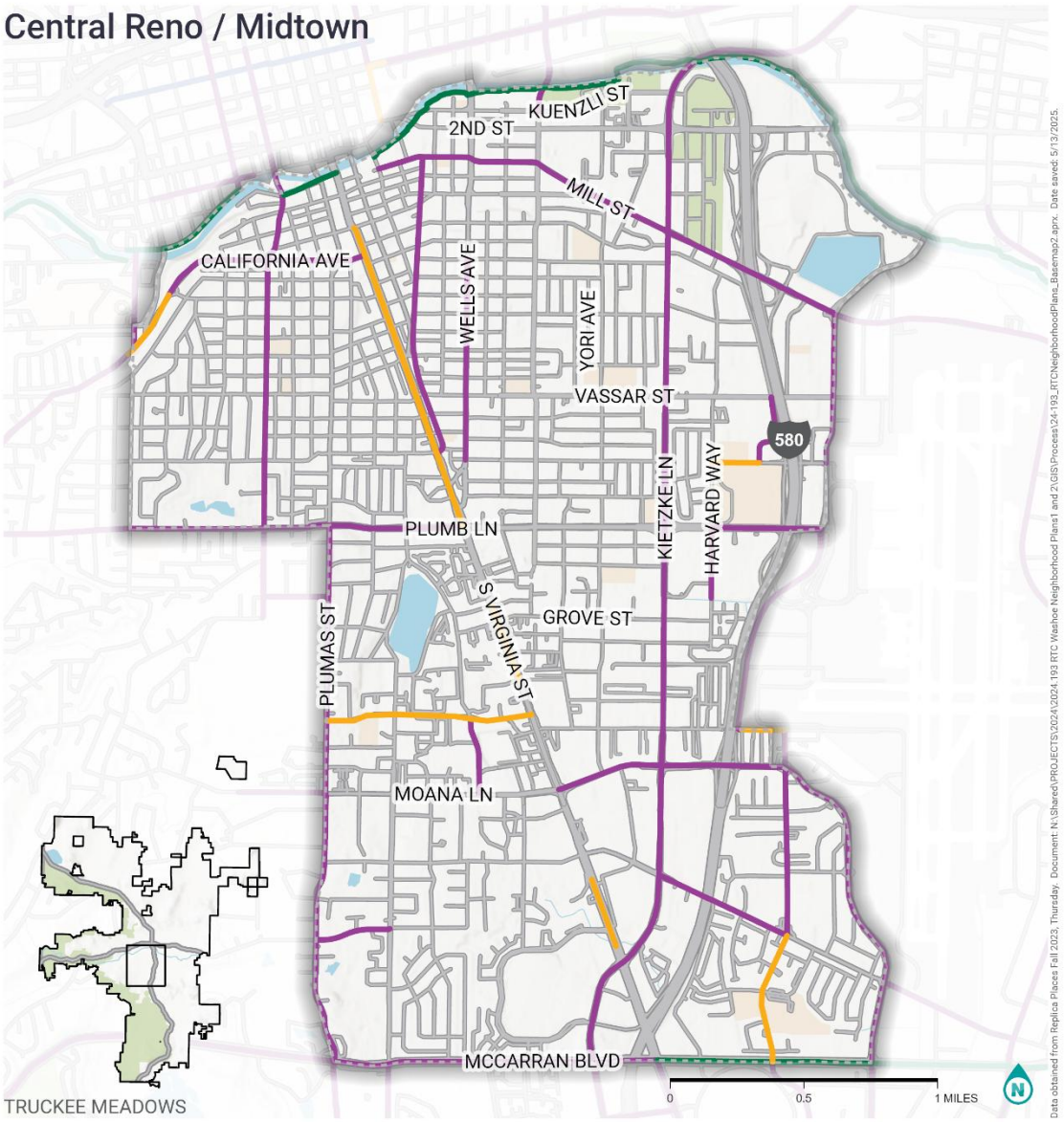


Figure 4. Existing Bicycle Facilities in Central Reno/Midtown

Chapter 3: Biking and Walking in Central Reno/Midtown Today

Community Engagement

The RTC engaged with community members and organizations within the Central Reno/Midtown neighborhood throughout the development of this Central Reno/Midtown Neighborhood Network Plan (NNP) across a variety of strategies including in-person and virtual meetings, in-person pop-ups, a walking audit, an interactive map, and Neighborhood Network Plan Steering Committee meetings. Engagement occurred across two distinct phases with the first phase focused on listening to the community and identifying issues and the second phase focused on community review and refinement of draft recommendations. This section summarizes the engagement efforts and findings from the Central Reno NNP process. For greater detail about specific meetings, please refer to Appendix B.

Phase 1

Community Workshop and Pop-Ups

During the first phase of engagement, the RTC connected with the community through a workshop and two pop-up events, collectively attended by over 125 participants. Engagement workshops are semi-structured events. Community members attend a presentation to learn about a project and are then invited to discuss issues and provide detailed feedback through facilitated activities. Pop-up events are informal outreach activities held in public spaces or community events to gather quick feedback and provide information and resources about projects. The community engagement workshop for this NNP took place at the Boys and Girls Club Carano Facility from 5:00 p.m. to 7:00 p.m. on November 13, 2024. The first pop-up event took place on December 5, 2024, at the Reno Public Market from 5:00 p.m. to 8:30 p.m. The second pop-up event was at the Reno-Sparks Convention Center on December 7, 2024, from 10:00 a.m. to 1:00 p.m.

Community Workshop at the Boys and Girls Club.

These events provided an opportunity for community members to share their concerns related to walking, biking, and accessing transit in the neighborhood. Large, detailed maps of the neighborhood were provided, along with sticky notes and pens for attendees to note locations of concern or highlight missing infrastructure or other challenges directly on the maps. In addition to the map exercise, participants were provided with an overview of the project and were connected with project resources to stay engaged, including the interactive online map and project website. All outreach materials were provided in both English and Spanish, including the interactive map.

Pop-up event at the Reno Public Market.

Pop-up event at the Reno-Sparks Convention Center.

Interactive Map

The interactive map allowed community members to identify areas of concern and provide comments on the existing network. Over 150 comments and over 500 votes on comments were received through the interactive map, as shown in **Figure 5**. Community members highlighted issues across the neighborhood, which included the following major themes:

1. **Crosswalk Safety**: Several comments emphasize the need for better crosswalk infrastructure, including light-up signs, pedestrian refuges, better visibility, and traffic signals that prioritize pedestrians.

2. **Lack of Bike Lanes**: Numerous comments highlight areas where bike lanes are either missing, inconsistent, or inadequate, urging for safer, continuous bike lanes, especially on popular routes (e.g., Vassar Street, Moana Lane, and Plumas Street).

3. **Traffic Calming**: High-speed vehicle traffic is a common issue, with requests for traffic calming measures such as roundabouts, stop signs, and road redesigns to make streets safer for pedestrians.

4. **Lighting Issues**: Poor street lighting, particularly in high-traffic areas or near bus stops, is a recurring concern for pedestrian and bicyclist safety.

5. **Sidewalks and Pathways**: There were calls for wider, more accessible sidewalks, particularly for wheelchairs and strollers, and improved connections for pedestrians, especially near hospitals, schools, and transit hubs. Additionally, many suggest creating or extending connected bike paths, particularly along the Truckee River, and improving access to key destinations such as Midtown, the airport, and shopping areas.

Additionally, community members frequently identified specific streets and intersections as barriers for walking and biking including Plumb Lane, Virginia Street, Kietzke Lane, and South Wells Avenue. Community members noted concerns about interactions with high-speed vehicles and a lack of separation on these streets generally.

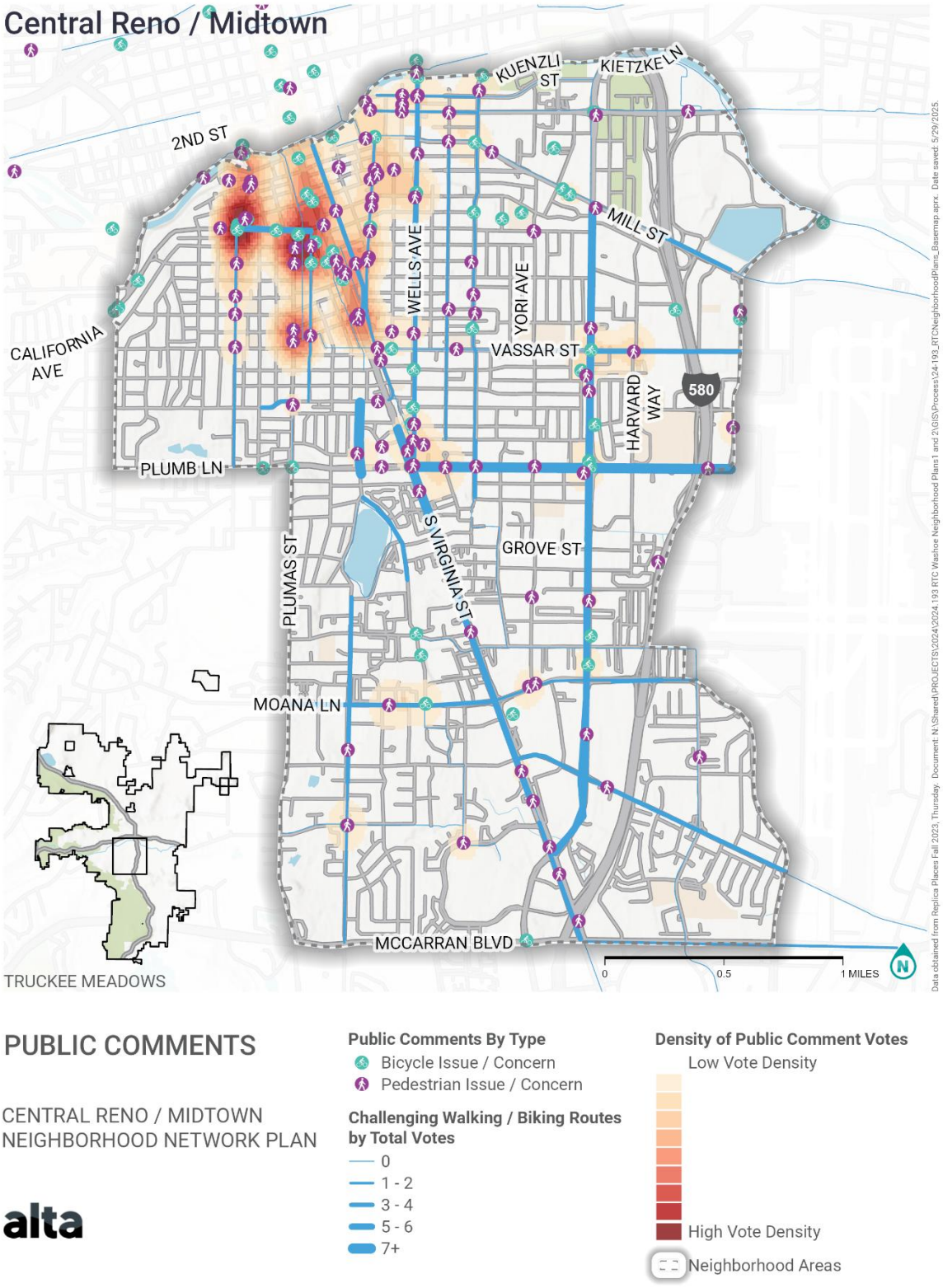


Figure 5. Interactive Map Comments

Neighborhood Network Plan Steering Committee

The Steering Committee was composed of community members and representatives from the City of Reno, Reno Fire Department, Reno Police Department, Washoe County School District (WCSD) Safe Routes to School, Reno-Sparks Indian Colony, Chamber of Commerce, Midtown Merchants, Northern Nevada Public Health, and One Truckee River. Community members were invited to join the committee during engagement events, where they could sign up to participate and share their insights throughout the planning process. Members met to assess existing conditions and take part in a walk audit, which identified key areas for improvement and directly informed the plan's recommendations.

Steering Committee small group exercise to identify known issues and potential solutions.

Walk Audit

On January 10, 2025, the Steering Committee conducted a walk audit within the Central Reno/Midtown neighborhood—an on-the-ground assessment in which participants walk through specific areas to evaluate infrastructure, accessibility, and overall safety for people walking and biking. The half-day effort focused on 10 key barriers identified through public comments and the existing conditions analysis. At each location, participants documented challenges and shared observations, which were then compiled into a summary of issues for further review (Appendix C). While not all sites reviewed are suitable for quick-build implementation, the findings helped shape the plan's recommendations and will continue to inform future large-scale roadway projects.

Members of the Steering Committee using a crosswalk on Kietzke Lane during the walk audit.

Phase 2

Steering Committee

Drawing on feedback from the community engagement process and the Steering Committee, the project team developed a draft set of recommendations. During the Steering Committee's final meeting, members reviewed the draft in small groups using three interactive online maps, which allowed them to explore and provide targeted comments on proposed improvements. This input played a key role in refining and finalizing the recommendations for the NNP.

Steering Committee discussing conceptual improvements as a group.

Active Transportation Plan (ATP) Process

During the development of the ATP (from 2023 to 2024), the RTC received 89 comments specific to the Central Reno/Midtown neighborhood. These comments highlighted challenges faced by people walking, biking, and accessing transit, and provided an early understanding of key issues in the area. These public comments helped provide a baseline understanding of existing issues within the neighborhood and provided context for the feedback gathered during the Central Reno NNP engagement process. A full summary of the ATP comments is provided in Appendix B of this Plan.

What We Heard from the Community

Over the course of the project, we engaged directly with over 125 community members and received over 750 interactions including comments and votes through the interactive map. Comments gathered during the project covered all elements of active transportation, from connections to transit stops to concerns about using shared-use paths. The project team focused on comments related to active transportation that could be addressed through quick-build implementation as part of this project but have archived all comments for future consideration. Across all comments received through this project, three key themes emerged as reoccurring concerns from community members as the leading issues for people walking and biking in the neighborhood:

Engagement Totals

500+ Votes on Comments

250+ Specific Comments

125+ Residents Engaged

Safety

- Community members expressed safety concerns related to crossing and traveling along roadways with high speeds and high volumes, with a particular emphasis on marked crosswalks around schools and parks.

Connectivity

- Sidewalk gaps and a disconnected bike network were identified by community members as leading issues impacting their decision to walk or bike.

Slower Speeds

- Community members expressed a desire for increased traffic calming elements and lower vehicle speeds on residential streets to improve safety and make walking and biking more welcoming for all users.

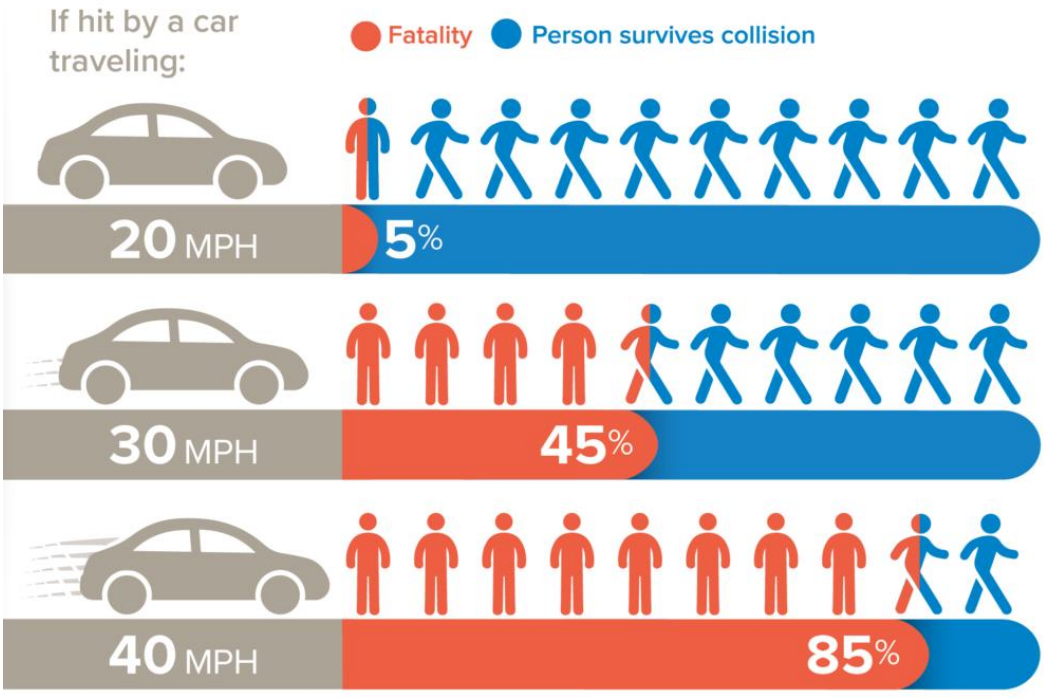
The themes identified through community input, combined with data analysis, played a central role in shaping the recommendation scenarios and determining which projects to move forward. Each recommendation was developed to respond directly to these priorities while remaining feasible within the neighborhood's scope and funding limitations.

Data Insights and Analysis: Understanding Trends

To better understand current conditions and identify opportunities to increase active transportation, the RTC analyzed datasets related to safety, equity, and roadway conditions for people walking and biking, as well as the potential for shifting short trips away from vehicle use. This analysis builds on the regional work completed for the ATP, with a focused lens on Central Reno to identify priority areas for improvement—particularly where data insights align with community feedback. For additional details on data sources and methodologies, refer to Appendix A.

Roadway Speeds

The posted speed limits for vehicles are a key factor in ensuring the safety and comfort of active transportation users across the transportation network. Higher vehicle speeds increase the risk of serious injury or death in the event of a crash, particularly for people walking and biking (**Figure 6**). Although this graphic is from 2000, the physics of vehicle-pedestrian crashes remain the same, making the data on injury risk by vehicle speed still relevant today. Within the Central Reno/Midtown neighborhood, roads with high-speed limits include McCarran Boulevard, South Virginia Street, E. Mill Street, and Kietzke Lane (). It is crucial to consider speed not only for safety but also for the comfort of people walking and biking, as higher vehicle speeds generally lead to a greater need for separation between vehicles and active transportation users. For this reason, posted speeds are a primary factor in the determination of the Bicycle Level of Traffic Stress (BLTS) and Pedestrian Experience Index, which are both further described below.



National Traffic Safety Board (2017) Reducing Speeding-Related Crashes Involving Passenger Vehicles. Available from: https://www.ntsb.gov/safety/safety-studies/Documents/SS1701.pdf

Figure 6. Risk of injury for people walking based on vehicle speeds.

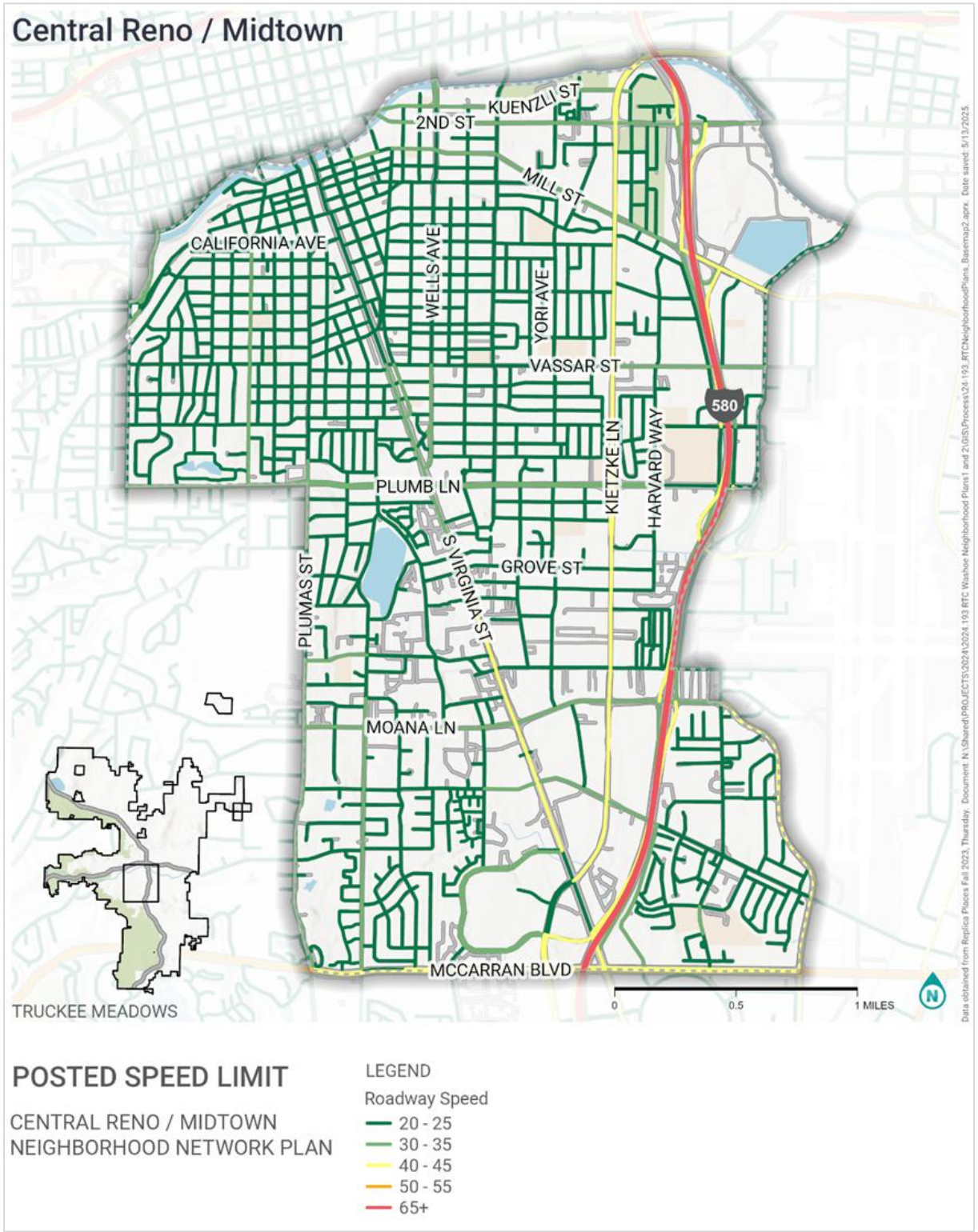


Figure 7. Posted Speed Limits in Central Reno/Midtown

Safety

The RTC conducted an analysis of arterials and collectors to identify roads and intersections with the greatest safety needs as part of the Truckee Meadows Vision Zero Action Plan. As a part of this plan, the RTC developed a High-Injury Network for the region, which identifies the places with the highest crash rates, level of frequency, and crash severity across the county. The Central Reno/Midtown area contains 21 High-Injury Network corridors and 32 intersections, representing a significant portion of the region's dangerous roadways (**Figure 8**). These findings highlight the need for targeted safety improvements, particularly on high-speed road segments and high-crash corridors.

Additionally, recent crash data (2019 to 2023[2]) highlights an ongoing need for safety improvements with a total of 305 crashes, including 19 fatalities and 271 injuries involving a person walking or biking. Of these, the majority (212) involved pedestrians, while 93 were related to bicyclists.

Table 2. Total Crashes by Mode

Total Crashes by Mode			
Crash Severity	**Pedestrians**	**Bicyclists**	**Total**
Fatal	18	1	19
Injury	179	92	271
Property	15	0	15
Grand Total	212	93	305

The intersection of Kietzke Lane and Roberts Street (shown above) is an example of a High Injury Network (HIN) intersection along a HIN corridor (Kietzke Lane from Kuenzli Street to Plumb Lane)

[2] *Data provided by Nevada Department of Transportation. Data excludes December 2023 due to limited availability.*

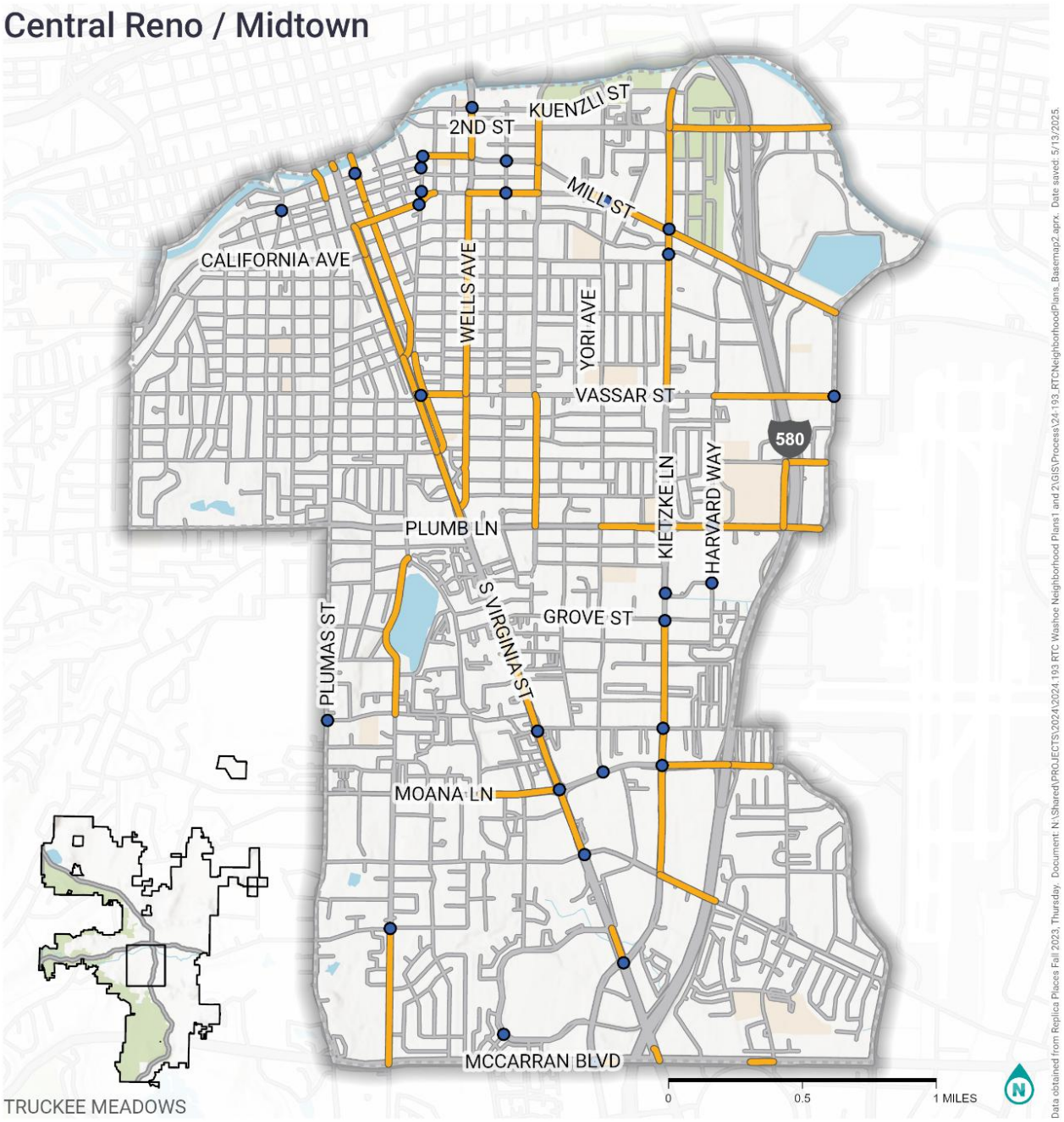


Figure 8. High-Injury Network in Central Reno/Midtown

Intersections vs. Segments

Crashes occurred nearly equally at intersections and roadway segments, but crashes resulting in a fatality or injury were more prevalent on road segments, accounting for 63% of fatalities and 54% of injuries. Notably, Kietzke Lane stands out among the top 15 corridors with seven fatal pedestrian crashes, which is as many crashes as the other 14 corridors combined.

Table 3. Corridors with High Crash Totals (2019 – 2023) (NDOT)

Rank	*Street Name*	Pedestrian Crashes		Bicycle Crashes		Total	Corridor Mileage	Crashes Per Mile
		Fatal	*Injury*	*Fatal*	*Injury*			
1	Virginia St.	1	32	0	16	49	3.6	13.73
2	Kietzke Ln.	7	11	0	14	32	3.9	8.29
3	Mill St.	0	12	0	5	17	1.9	9.18
4	Wells Ave.	1	14	0	2	17	1.6	10.52
5	Moana Ln.	0	6	1	4	11	1.7	6.37
6	Plumb Ln.	0	6	0	5	11	1.9	5.85
7	2nd St.	3	6	0	1	10	1.6	6.29
8	Kirman Ave.	1	4	0	4	9	1.7	5.29
9	Gentry Wy.	0	5	0	3	8	0.8	9.98
10	Sierra St.	0	5	0	2	7	0.3	20.47
11	Vassar St.	1	2	0	4	7	1.6	4.48
12	E. Peckham Ln.	0	2	0	4	6	2.0	3.06
13	Grove St.	0	5	0	1	6	1.0	6.23
14	Lakeside Dr.	0	5	0	1	6	2.3	2.59
15	Center St.	0	3	0	3	6	0.8	7.49

Intersections with multiple lanes such as the Plumb Lane and Virginia Street intersection (shown to the left) can be difficult for people walking and biking to navigate. For example, multi-lane intersections which lack dedicated space for bicyclists may result in a greater level of sidewalk riding as bicyclists seek a safe path through the intersection.

Equity

The ATP conducted a transportation-focused equity analysis to evaluate equity in active transportation, considering factors like health outcomes, socioeconomic status, vehicle access, health issues, and environmental impact. These variables were combined into a final composite equity index. In the Central Reno/Midtown neighborhood, most census tracts ranked in the top 20% for equity, indicating higher needs for active transportation improvements (**Figure 9**). However, two census tracts in the old southwest area (west of Plumas Street) ranked in the lowest 20%, highlighting disparities between the east and west sides of the neighborhood.

Areas with greater equity needs often have a higher dependence on walking, biking, and transit. Improvements to the active transportation network in these areas can provide more pronounced benefits based on the higher level of people using active transportation modes.

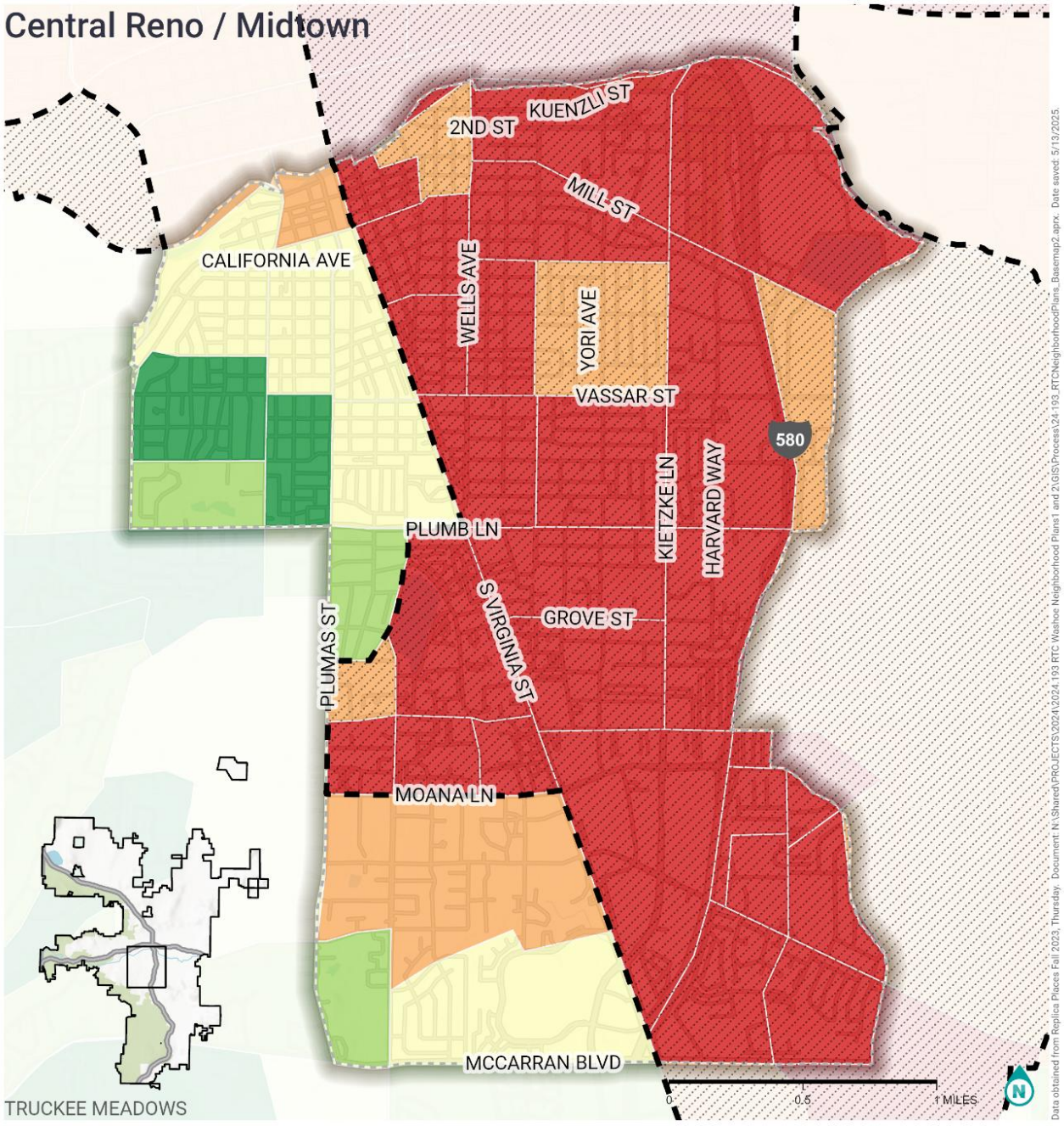


Figure 9. Transportation Equity in Central Reno/Midtown

Bicycle Level of Traffic Stress (BLTS)

BLTS measures how comfortable bicyclists feel on a roadway, considering factors like speed, number of lanes, and bike lane presence (**Figure 10**). BLTS is rated from level one (comfortable for bicyclists of all ages and abilities) to level four (high stress, suitable only for strong and fearless bicyclists). In the Central Reno/Midtown neighborhood, many roadways rank as BLTS 3 or 4, including Kietzke Lane, Virginia Street (south of Gentry Lane), Plumb Lane (Kietzke Lane to Virginia Street), Moana Lane (west of Virginia Street), and Vassar Street (east of Wells Avenue). These roads present challenging conditions for people biking due to high vehicle speeds, heavy traffic, and a lack of adequate bike infrastructure, creating a stressful and discouraging environment for biking.

Roadway conditions that are too stressful for bicyclists may result in greater levels of sidewalk riding despite the presence of a bike lane (as shown above).

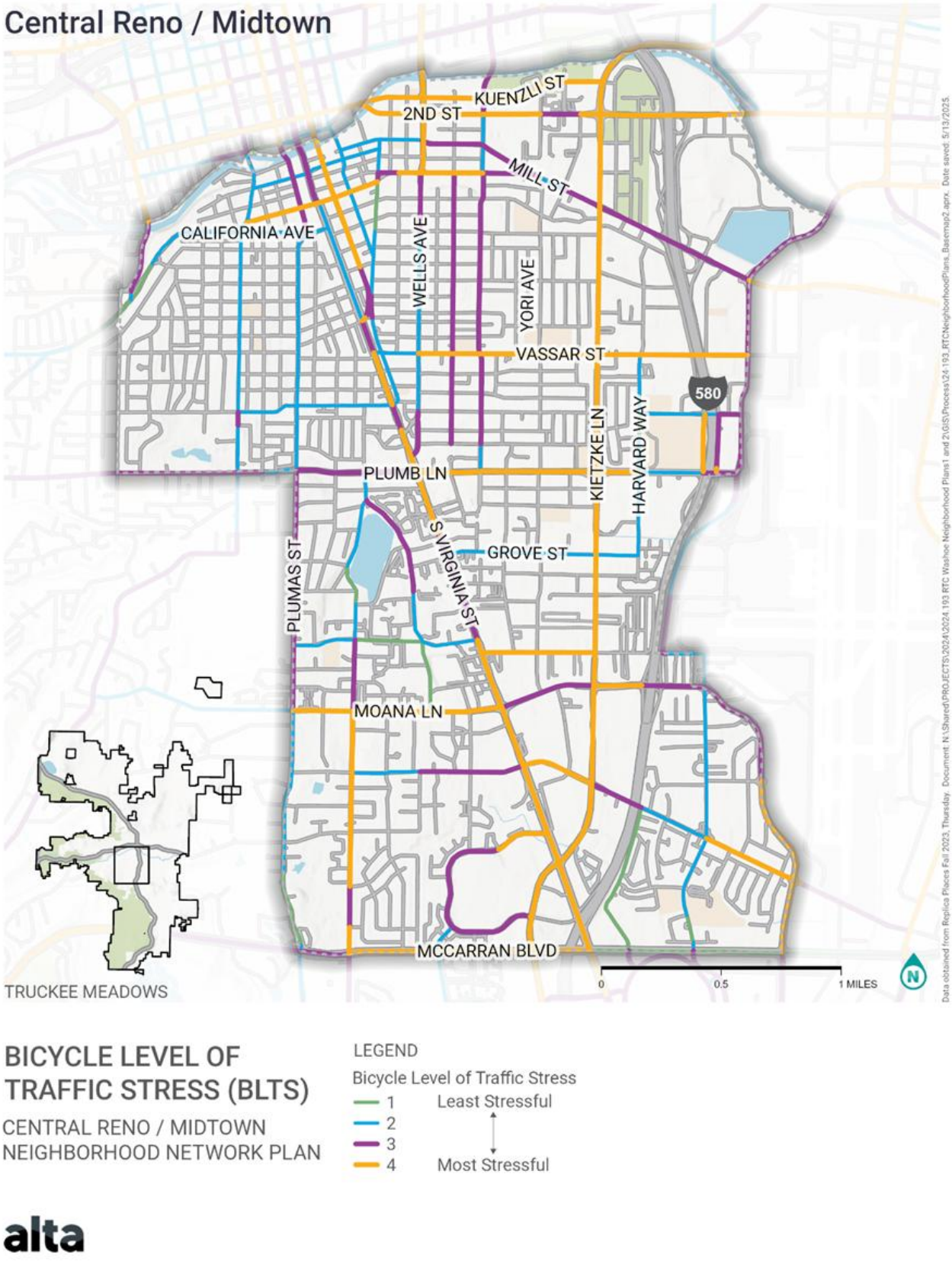


Figure 10. Bicycle Level of Traffic Stress in Central Reno/Midtown

Pedestrian Experience Index

A pedestrian-focused quantitative analysis conducted by researchers at University of Nevada, Reno, assessed the pedestrian experience along roadways in the Central Reno/Midtown neighborhood (**Figure 11**). The analysis assigned scores based on factors such as sidewalk presence, width, buffer space from vehicles, number of vehicle lanes, and roadway speed. Roadways received scores up to 85 points, with higher scores indicating a more comfortable pedestrian experience. The average score for Central Reno/Midtown was 57.63, indicating that most sidewalks are five to six feet wide and are present on one or both sides of the roadway, though buffer space is intermittent, and some areas have higher vehicle speeds and lane numbers. While many roadways scored relatively high, segments like Virginia Street (south of Plumb Lane), S. McCarran Boulevard, Moana Lane, and Greg Street had lower scores. Overall, 36% of the roadways in the area scored as bad or poor for pedestrian experience. Compared to the broader Reno/Sparks area, the Central Reno/Midtown network had a higher average pedestrian experience score, particularly for major and minor arterial roads.

The pedestrian experience is heavily influenced by sidewalk obstructions, poor sidewalk quality, a lack of sidewalks, and being too close to high traffic speeds and volumes as shown in the examples from Kietzke Lane above.

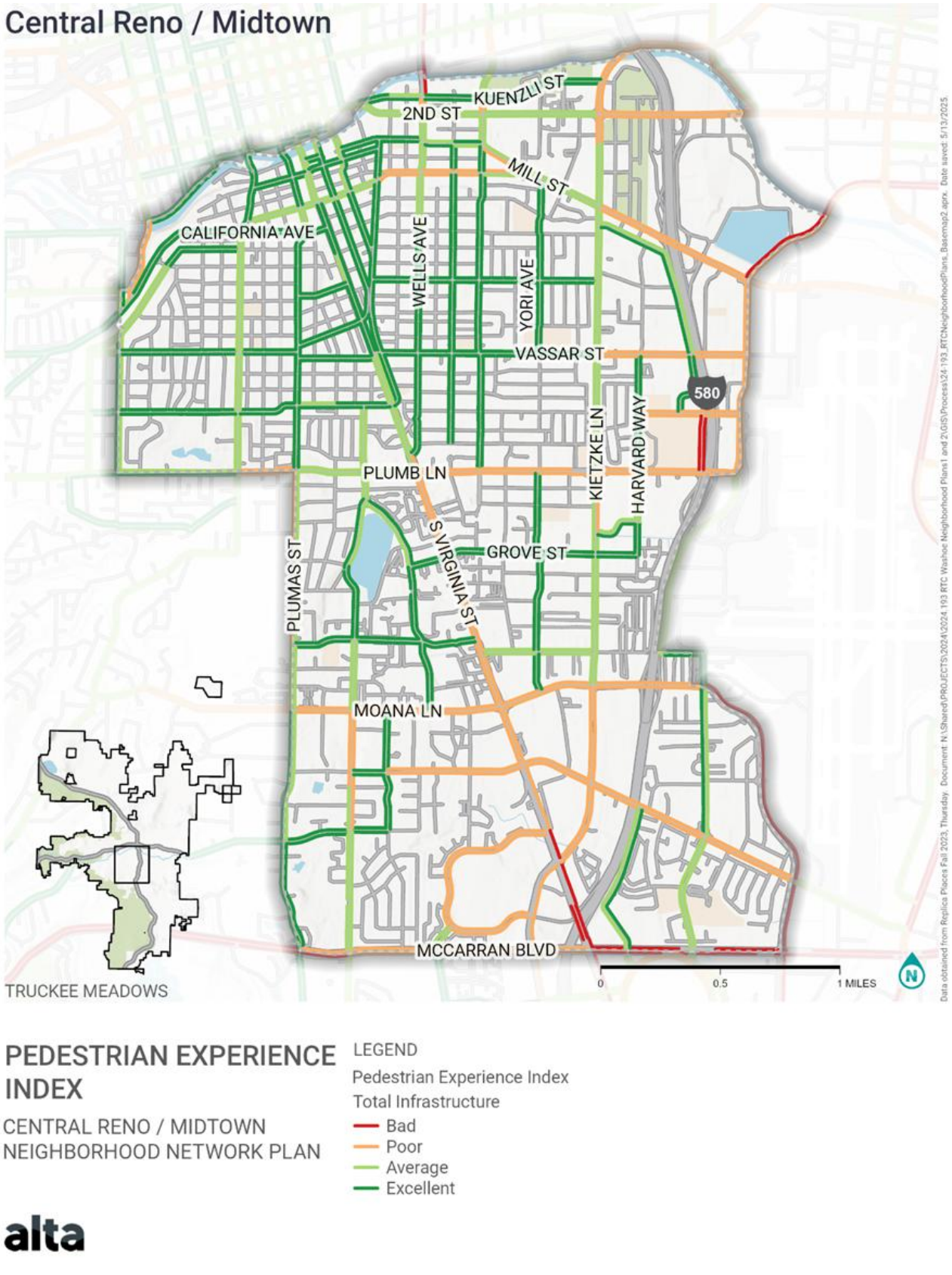


Figure 11. Pedestrian Experience Index in Central Reno/Midtown

Active Trip Potential

In addition to identifying current active transportation routes, it's crucial to recognize areas with strong potential for increased active transportation trips. This analysis is done by pinpointing regions where people commonly make short vehicle trips. These trips are categorized by distance, which helps determine the potential for mode shifts. Trips under one mile are seen as potential walking trips, trips between one and three miles as potential biking trips, trips between three and six miles as potential e-bike trips, and trips over six miles are considered less suitable for active modes (**Figure 12**). Within the Central Reno/Midtown neighborhood, there are several areas that see a high percentage of vehicle trips that are less than or equal to six miles and which have the potential to be converted to other modes. Overall, Central Reno/Midtown sees 10% more trips under three miles than the Reno/Sparks area, highlighting the significant potential for increased mode shift in the neighborhood. For additional description of these findings, please refer to Appendix A.

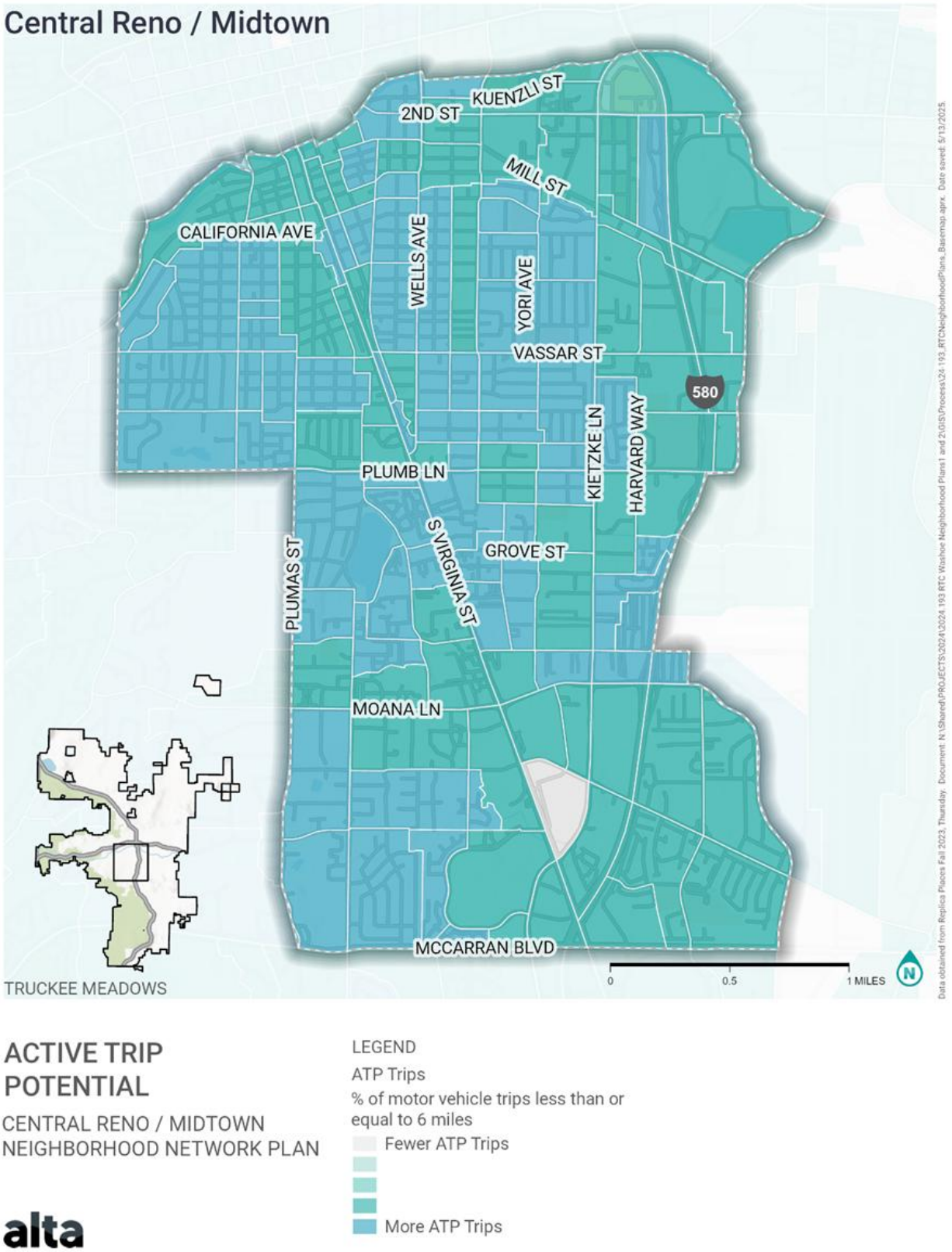


Figure 12. Active Trip Potential in Central Reno/Midtown

Gap Analysis

The Active Transportation Gap Analysis conducted by the RTC as part of the ATP assessed gaps in the region's network by combining evaluation factors (**Figure 13**) like Safety, Bicycle Level of Traffic Stress, Pedestrian Experience, Equity, and Active Trip Potential.[3] Each roadway segment was assigned a score between 0 and 40, with higher scores indicating more significant gaps in active transportation infrastructure. The Central Reno/Midtown area had an average score of 23.3, with most streets scoring between 20 and 30.

The top 10 streets with the highest average gap analysis scores, representing the greatest barriers to active transportation (**Figure 14**), include:

- Kietzke Lane
- Center Street
- S. Virginia Street
- Moana Lane
- Vassar Street
- Plumb Lane
- Wells Avenue
- Smithridge Drive
- Matley Lane
- Villanova Drive

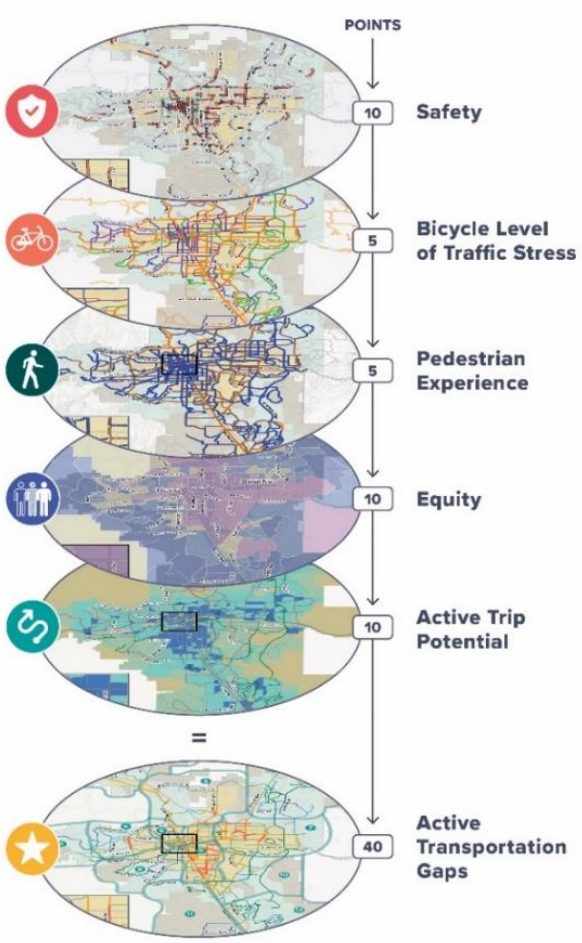


Figure 13. Active Transportation Gap Analysis Variables

[3] *The term "gap" represents a roadway section that acts as a barrier to active transportation in the region.*

Figure 14. Top 10 highest scoring corridors in Central Reno/Midtown

Chapter 4: Addressing Central Reno/Midtown Needs

The Neighborhood Network Plan (NNP) is a short-term plan that identifies roadway improvements, as well as policies and programs, to increase walking and biking in the neighborhood. This approach provides improvements to the existing network while also providing policies and programs that encourage, educate, and engage with the community about active transportation group rides, rules, and resources. This chapter describes the recommended programmatic and policy enhancements and network improvements within the Central Reno/Midtown neighborhood.

Neighborhood Network Plan Implementation Strategy

This NNP's recommendations are focused on short-term improvements to quickly address identified community needs while considering long-term improvements for future enhancements. Short-term improvements identified in this NNP use a quick-build implementation style that involves using low-cost materials and avoiding significant implementation costs such as moving curbs, building sidewalks, or reconstructing sections of the road. By working within the existing roadway space, these projects can be rapidly put in place to begin providing benefits to the community. This NNP also identifies potential projects for long-term implementation that applied the preferred facility type to the roadway from the RTC Street Typology Guide.[4] **Table 4** highlights the preferred separation of modes on arterials and collectors by land use context in Truckee Meadows from the Typology Guide. These long-term projects represent roadways with more complex challenges than may be addressed through quick-build implementation alone and therefore will be best addressed through a corridor-wide improvement project that holistically addresses the various transportation challenges for each unique corridor.

Table 4. Preferred Separation of Modes on Arterials and Collectors by Land Use Context (RTC Street Typology Guide)

Separation of modes	Example facility / facilities	Urban	Suburban	Rural
	One-way Cycle Tracks and sidewalk	★★★	★★	★★
	Shared Use Path	★★	★★★	★★★
	Bike lanes, traffic calmed streets	★	★	★
★★★ - Optimal level ★★ - Secondary level ★ - Least preferred level				

[4] *The RTC Street Typology Guide represents a systematic approach to prioritizing the safety and comfort of pedestrians and cyclists in Washoe County. For more information about the RTC Street Typology Guide, follow the hyperlink: RTC Active Transportation Plan.*

Programmatic and Policy Enhancements

Programmatic enhancements help active transportation users to be more confident while walking or biking and encourage them to get out into their community using a mode other than driving. Additionally, recommendations also consider policies to bolster accommodations for people walking and biking throughout the community by addressing potential barriers to active transportation. All recommendations are highlighted in **Table 5** with greater detail about each recommendation under each of the six Es of traffic safety (Equity, Education, Encouragement, Engineering, Engagement, and Evaluation). This approach represents a holistic approach to enhancing transportation safety beyond making updates to roadway design. **Table 6** through **Table 10** describe each recommendation, note the lead agency, provide an example of similar programs/policies, and highlight an order of magnitude of the level of effort for implementation on a scale of 1 through 5.

Table 5. Recommendations for the Six E's of Traffic Safety (described in greater detail in the tables below)

	Recommendation	Lead Agency	Level of Effort
Equity	*Guaranteed Ride Home Program*	RTC	♦♦♦
	Community-Based Organizations Outreach Programs	RTC	♦
Education	*Urban Biking and Scooting Class*	Department of Motor Vehicles/RTC	♦♦♦♦
	Traffic Ticket Reduction	Reno Police Department/Sparks Police Department/Washoe Sheriff's Office	♦♦♦♦
Encouragement	*Bike Maps*	RTC	♦
	Walk and Roll to Work/Wherever Days	RTC/Northern Nevada Public Health	♦♦
	Washoe County School District (WCSD) Bike Buses	WCSD/RTC	♦♦♦
Engineering	*Wayfinding Program*	RTC/City of Reno/City of Sparks/Washoe County	♦♦♦♦♦
	Develop a Construction Detour Policy	RTC/City of Reno/City of Sparks/Washoe County	♦♦♦♦♦
	Develop an Open Streets Program	RTC in collaboration with Sparks/Reno	♦
Engagement	*Neighborhood Mobility Listening Labs*	RTC in collaboration with Sparks/Reno	♦
	Farmers' Market Monthly Booths	RTC in collaboration with Sparks/Reno	♦
	Monitor Crash Data	RTC in collaboration with Sparks, Reno, and Washoe County	♦♦
Evaluation	*Assess Local Bicycle and Pedestrian Trips*	RTC in collaboration with Sparks, Reno, and Washoe County	♦
	Active Transportation Dashboard	RTC in collaboration with Truckee Meadows Regional Planning Agency (TMRPA)	♦

Equity

Equity is a major component throughout these proposed recommendations to focus efforts within areas that are heavily dependent on public transit or active transportation. Table 6 provides an overview of recommended bicycle and pedestrian equity policies and programs.

Table 6. Recommended Equity Policies/Programs

Recommendation	Description	Lead Agency	Level of Effort	Example Program / Policy
Guaranteed Ride Home Program	Provide bicyclists and pedestrians an option to receive a ride home when the individual is unable to bike or walk home up to a certain number of times per year. The alternative options could consist of late and frequent public transit times, car-sharing programs, and other forms of transportation support. This would operate similarly to the Guaranteed Ride Home Program for SmartTrips.	RTC	♦♦♦	Breaking Down Barriers to Bicycling in the US ACTC Guaranteed Ride Home
Community-Based Organizations Outreach Programs	Collaborate with community-based organizations in disadvantaged areas with a focus on Spanish-language organizations to improve the community's comfort and interest in planning projects such as the Reno Bike Project, Northern Nevada HOPES, Nevada Urban Indians, or the Children's Cabinet. This may include directed meetings with organizations that are project specific or at regular intervals to provide an update on projects and hear current issues. Working directly with interpreters, community-based organizations, and community champions to convene outreach events promoting walking and biking safety.	RTC	♦	Partnerships with Community-Based Organizations on Engagement Projects City of Lodi: Love Your Block Program

Education

Bicycle and pedestrian education helps those who are interested in active transportation to feel more comfortable, safe, and confident navigating streets and shared-use paths. **Table 7** outlines potential policies and programs that the RTC could consider.

Table 7. Recommended Education Policies/Programs

Recommendation	Description	Lead Agency	Level of Effort	Example Program / Policy
Urban Biking and Scooting Class	Create a program that educates people biking and scooting how to anticipate and respond to drivers and walkers. These classes could be held in partnership with driver's ed classes and the DMV, or through Reno Bike Project.	Department of Motor Vehicles/ RTC	♦♦♦♦	Urban Bicycling and Scooting 101 Class - Downtown Sacramento Partnership
Traffic Ticket Reduction	Work with local police departments to create a program that provides a bicyclist with a safety education course as a traffic court option. People who receive a safety-related citation/ infraction for moving violations would be permitted to attend a Basic Street Skills class to reduce or waive fines.	Reno Police Department/ Sparks Police Department/ Washoe Sheriff's Office	♦♦♦♦	Marin Traffic Citation Fee Active Transportation Commission (ATC)

Encouragement

Encouragement policies and programs help to create a lasting active transportation culture and can encourage overall mode share shifts. **Table 8** provides an overview of recommended bicycle and pedestrian encouragement policies and programs.

Table 8. Recommended Encouragement Policies/Programs

Recommendation	Description	Lead Agency	Level of Effort	Example Program / Policy
Bike Maps	The development of maps for public navigation available through the RTC website or other venues. Types of public bike maps include interactive maps and brochures. Bike maps would serve as recommendations of which routes to take throughout the community to explore the community or commute to work or school.	RTC	♦	Bicycle Friendly Community Idea book City of Oakland Bicycle Facilities Tour Map
Walk and Roll to Work/Wherever Days	Bolster collaboration with local community groups such as the Reno Bike Project, Truckee Meadows Bike Alliance, or the Kiwanis Club to sponsor more public walking and biking events such as Walk and Roll to Work/Wherever Days, Biketober, or May Bike Month.	RTC/ Northern Nevada Public Health	♦♦	Sacramento Area Bicycle Advocates
Washoe County School District (WCSD) Bike Buses	A bike bus is a fun group ride to school led by responsible adults with students joining along the way, like a standard school bus. Often the route travels along traffic calmed streets or on separated paths. The RTC could collaborate with WCSD to get bike buses started at schools with interest. This could include providing a training and starter-kit for parents/teachers administering the bike bus as well as providing logistical support for setting up and planning the route.	WCSD/ RTC	♦♦♦	How to Start a Bike Bus- PBOT Safe Routes to School

Engineering

Engineering recommendations support facilities that provide increased comfort and ease for people who bike and walk. **Table 9** summarizes proposed engineering policies and programs that work with existing bicycle and pedestrian infrastructure to improve the experience for people walking, biking, or accessing transit.

Table 9. Recommended Engineering Policies/Programs

Recommendation	Description	Lead Agency	Level of Effort	Example Program / Policy
Wayfinding Program	Implement a region-wide, well-branded, and comprehensive wayfinding program in concert with all roadway improvement projects which include an active transportation element to highlight low-stress routes and increase connectivity for those walking, biking, rolling, or taking transit.	RTC/City of Reno/ City of Sparks/ Washoe County	♦♦♦♦♦	Denver Pedestrian and Bicycle (D-Route) Wayfinding
Develop a Construction Detour Policy	The RTC could work with local agencies on a collaborative effort to update standards for accommodating people walking and biking when construction or events impact sidewalks, on-street bikeways, and shared-use paths.	RTC/City of Reno/ City of Sparks/ Washoe County	♦♦♦♦♦	City of Sacramento Draft Work Zone Detour Policy

Engagement

Engaging with residents on a regular basis can institutionalize safe walking and biking transportation systems. By prioritizing people who walk and bike, these programs help create safe environments for all users. **Table 10** displays the proposed engagement policies and programs for the RTC.

Table 10. Recommended Engagement Policies/Programs

Recommendation	Description	Lead Agency	Level of Effort	Example Program / Policy
Develop Open Streets Program	Promotes active transportation and people-centered spaces and emphasizes the potential of streets designed for people. Collaborate with local leaders, climate advocacy groups, and bike and pedestrian coalitions to offer informative booths for the public.	RTC in collaboration with City of Reno/City of Sparks/Washoe County	♦	Open Streets MPLS Open Streets Project
Neighborhood Mobility Listening Labs	Conducting informal listening sessions within the neighborhood presents a regular opportunity for residents to engage with active transportation planners and voice their specific concerns within the neighborhood. These could be held on a rotating basis as stand-alone events or as part of a larger community event.	RTC in collaboration with City of Reno/City of Sparks/Washoe County	♦	Multnomah County SRTS Community Event Tabling
Farmers' Market Monthly Booths	Regularly occurring community events such as the Idlewild Farmers' Market is a good opportunity for RTC planners to meet people where they are and gather key feedback. Hosting a regular booth at these events (on a monthly or quarterly basis) would present a strong opportunity for area residents to engage with active transportation planners and voice their specific concerns while hearing about project updates.	RTC in collaboration with City of Reno/City of Sparks/Washoe County	♦	Multnomah County SRTS Community Event Tabling

Evaluation

Efforts to evaluate and track progress toward reaching the NNP's goals are important for long-term success and project implementation. **Table 11** lists proposed policies and programs that can identify what's working, what's not working, and where additional efforts are needed following the completion of the plan.

Table 11. Recommended Evaluation Policies/Programs

Recommendation	Description	Lead Agency	Level of Effort	Example Program / Policy
Monitor Crash Data	Regularly review crash data for collisions involving people walking, biking, and rolling. The local police department can help the RTC assess traffic safety issues and track progress toward a safer community for people walking and biking.	RTC in collaboration with City of Reno/City of Sparks/Washoe County	♦♦	San Francisco Collision Report
Assess Local Bicycle and Pedestrian Trips	Conduct a regular assessment of bicycle and pedestrian trips on major roadways and recently improved corridors. Consider adding bicycle and pedestrian counting technology as an element of roadway projects that include multimodal elements.	RTC in collaboration with City of Reno/City of Sparks/Washoe County	♦	SFMTA Bicycle Counts NYC Bicycle Counts
Active Transportation Dashboard	Create and maintain an active transportation dashboard showing existing, planned, and in progress active transportation infrastructure. This GIS dashboard will display quarterly bicycle- and pedestrian-involved collision statistics and may include links to projects with specific benefits for active transportation and other resources throughout Truckee Meadows.	RTC in collaboration with Truckee Meadows Regional Planning Agency	♦	City of Oakland, Bicycle Facilities and Projects

Neighborhood Network Improvements

This section outlines the process used to make project recommendations and breaks those recommendations into three categories: (1) existing RTP projects, (2) Active Transportation Program projects, and (3) long-term needs. All recommendations are based on feedback the project team heard during the public engagement process, professional insights, and data described earlier in this document. These projects will be supplemented by planned projects from other programs including the Peckham Lane Multimodal Project, Moana Lane Rehabilitation Project, and Plumb Lane Multimodal Project (**Figure 15**).

Existing RTP Projects

Table 12 provides a breakdown of all improvements to the neighborhood network from the Regional Transportation Plan, RTC's 20 year long-range plan, which are in addition to Active Transportation Program projects. As these projects are designed and constructed, they will be supplemented by the short-term Active Transportation Program projects to create a more connected network. All neighborhood network recommended improvements (Active Transportation Program projects and RTP projects) in the Central Reno/Midtown neighborhood are shown in **Figure 15**.

Table 12. RTP Projects within Central Reno/Midtown Neighborhood (2025–2034)

Corridor	Extent	Project Type
Kietzke Ln.	Virginia St. to Mill St.	Multimodal
Mill St.	Kietzke Ln. to Terminal Wy.	Capacity
Mill St.	Lake St. to Gould St.	Multimodal
Peckham Ln.	Lakeside Dr. to Airway Dr.	Multimodal
Plumb Ln.	Kietzke Ln. to Terminal Way	Multimodal
S. Virginia St.	Plumb Ln. to Peppermill	Multimodal
S. Virginia St.	Moana Ln. to Meadowwood Mall Cir.	Multimodal

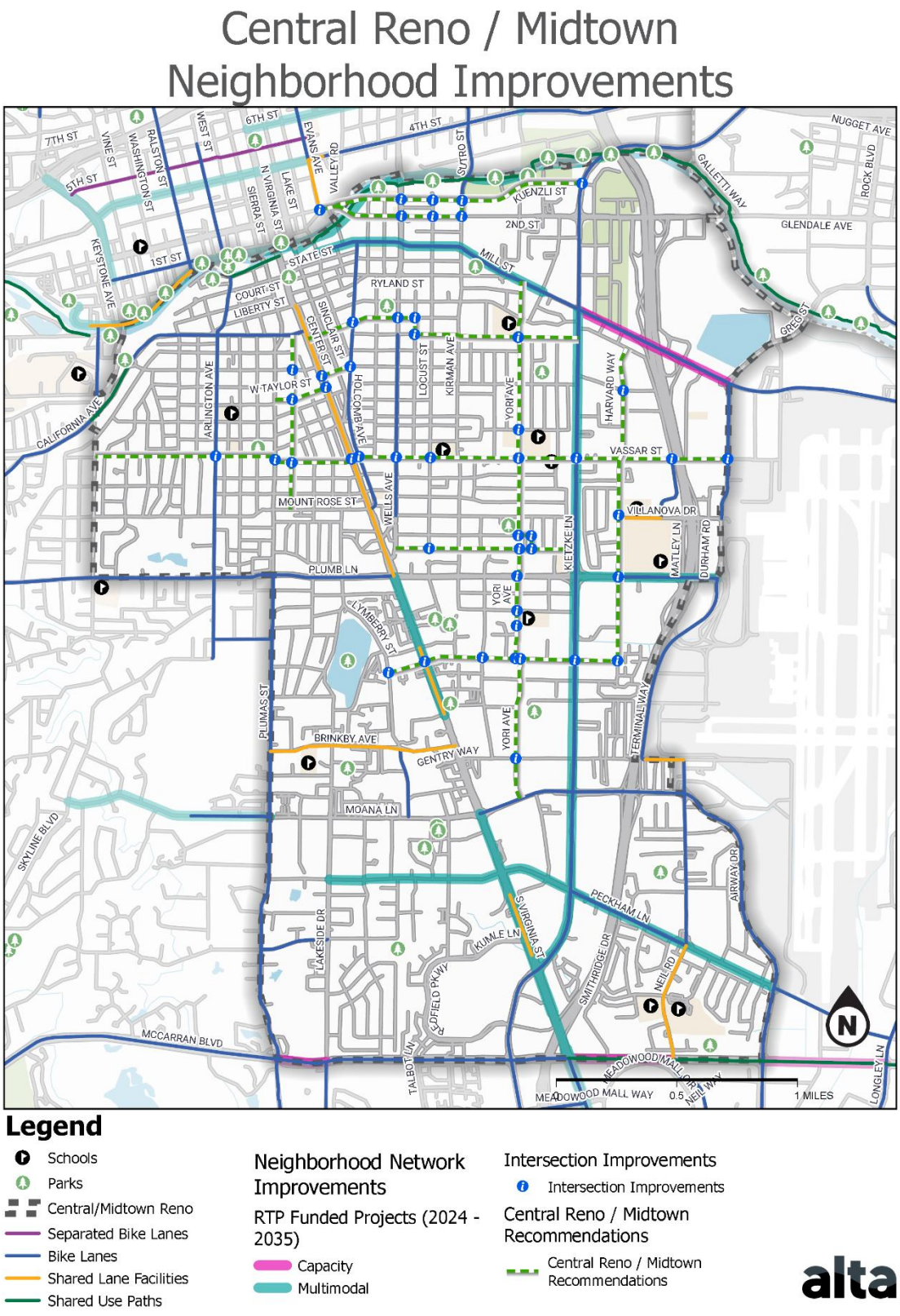


Figure 15. Central Reno/Midtown Neighborhood Network Improvements

Recommendation Selection Process

The project team identified three unique scenarios for Active Transportation Program projects in the neighborhood based on feedback from the community and data analysis findings. Each scenario considered a different overarching theme, which represented a key goal from the community engagement process including connecting north-south, building off the Biggest Little Bike Network, and connecting to schools and parks. To compare between scenarios, the project team evaluated each scenario based on elements of three key metrics:

1. Impact on achieving Active Transportation Plan goals
2. Improving access to key community destinations
3. Implementation considerations

Table 13. Project Evaluation Metrics

Evaluation Metric	Element
Active Transportation Plan Goals	• *Safety* • *Mode Share* • *Community Enhancement* • *Maintenance*
Community Access	• *Access to Hospitals* • *Access to Schools* • *Access to Parks*
Implementation Considerations	• *Primary Emergency Vehicle Route Considerations* • *Operational/Parking Considerations* • *Planning Level Cost Estimate*

Table 13 highlights each element of the evaluation metric. The final recommendations represent a combination of recommendations across all three scenarios. For more details about the project selection process, please refer to **Appendix D**.

Active Transportation Program Projects

The recommended improvements identified as Active Transportation (AT) Program projects in ***Figure 16*** will be considered for implementation as quick-build style projects using funds from the AT Program. In total, the Plan recommends 13.3 miles of roadways across the neighborhood to enhance walking and biking (**Table 14**). This includes just over 8.4 miles of new neighborhood byways, 4.5 miles of new protected bike lanes, and enhancements at over 45 intersections along these corridors. These projects are highlighted in **Table 15** and shown in ***Figure 16***; each project is further described in a standalone project cutsheet provided in Appendix E. Project cutsheets represent the planning level project concept with potential intersection improvements and conceptual corridor improvements. Additionally, each concept includes a typical cross section of each proposed facility type to showcase the potential configuration along the corridor. The exact layout of each improvement will be refined during the design phase of implementation.

Table 14. Central Reno/Midtown Active Transportation Improvements by Facility Type

Facility Type	Total Mileage	Total Estimated Cost
Neighborhood Byway	8.4	$ 3,151,061
Bike Lane	0.4	$ 11,790
Protected Bike Lane	4.5	$ 1,833,465
Total	13.3	$ 4,996,316

Table 15. Central Reno/Midtown Active Transportation Improvements

Corridor	Extent	Improvement Type	Mileage	Cost
2nd St.	Lake St. to Sutro St.	Protected Bike Lane	0.53	**$$$**
Kuenzli St.	Lake St. to Kietzke Ln.	Protected Bike Lane	1.05	**$$$$**
Kirman St.	2nd St. to Kuenzli St.	Protected Bike Lane	0.07	**$**
Yori Wy.	Mill St. to Moana Ln.	Neighborhood Byway	2.21	**$$$$**
Grove St.	Lymberry St. to Harvard Wy.	Neighborhood Byway	0.96	**$$$**
Casazza Dr.	Wells Ave. to Kietzke Ln.	Neighborhood Byway	0.71	**$$**
Vassar St.	Terminal Wy. to Kietzke Ln.	Protected Bike Lane	0.71	**$$$$**
Vassar St.	Kietzke Ln. to S Virginia St.	Neighborhood Byway	0.86	**$$$**
Harvard Wy.	Lake St. to Sutro St.	Neighborhood Byway	0.96	**$$$**
Taylor St./ Cheney St.	Lake St. to Kietzke Ln.	Neighborhood Byway	0.35	**$$**
Moran St.	2nd St. to Kuenzli St.	Neighborhood Byway	0.64	**$$**
Roberts St.	Mill St. to Moana Ln.	Neighborhood Byway	0.61	**$$**
Forest St.	Lymberry St. to Harvard Wy.	Cycle Track	0.72	**$$$**
Caliente St.	Wells Ave. to Kietzke Ln.	Neighborhood Byway	0.32	**$$**
Monroe St.	Terminal Wy. to Kietzke Ln.	Neighborhood Byway	0.74	**$$**
$ = Less than $100,000, **$$** = $101K–$250K, **$$$** = $251K–$500K, **$$$$** = $501K–$1M, **$$$$$** = $1M+				

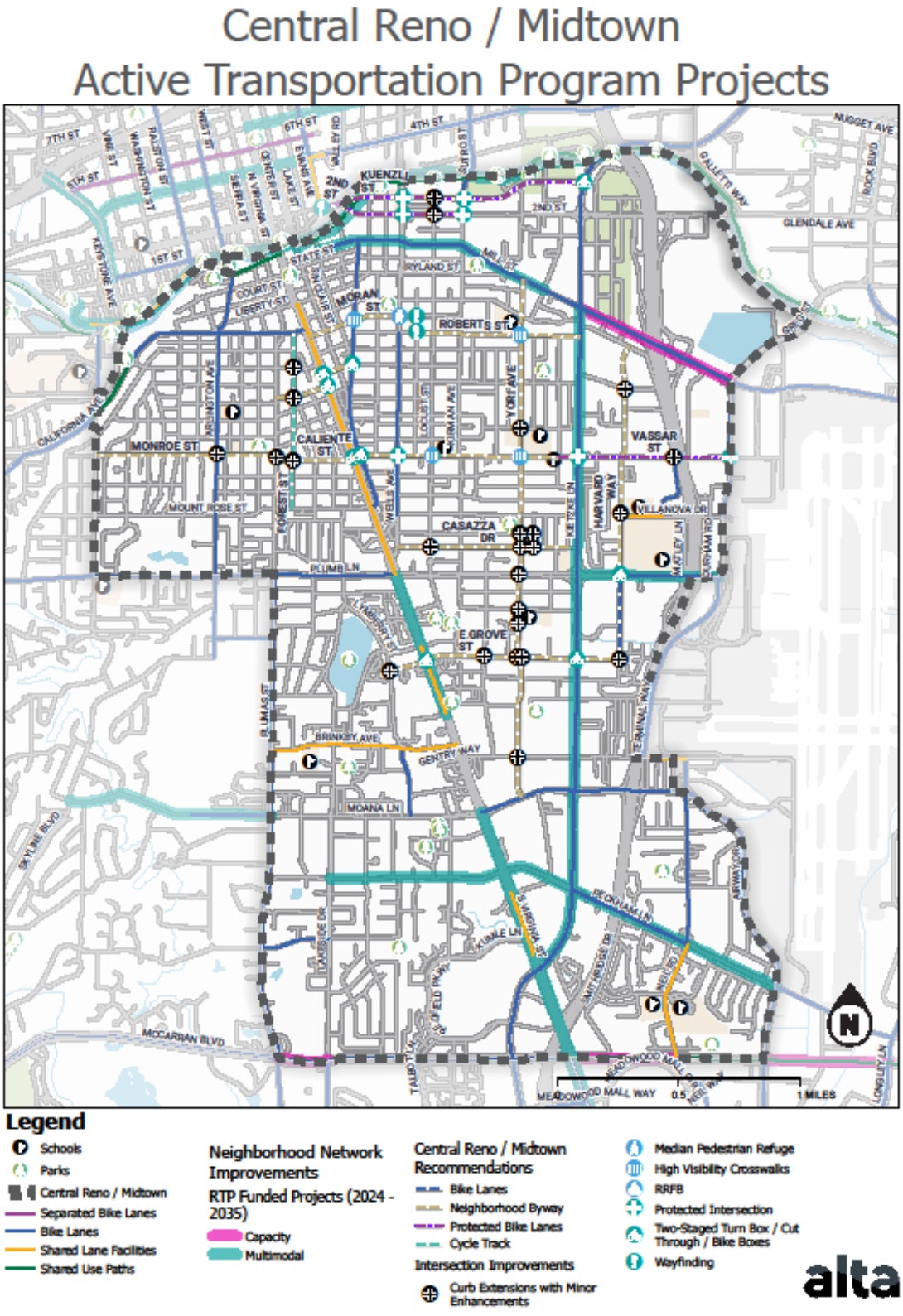


Figure 16. Central Reno/Midtown Active Transportation Program Projects

Long-Term Needs

Quick-build style improvements provide the added benefit of quickly addressing community needs. More complex roadways that require higher levels of improvements and more significant redesign to address identified needs are best addressed through more comprehensive roadway improvement projects. **Table 16** highlights roadway extents that were identified as barriers to active transportation in the neighborhood but that cannot be addressed through quick-build improvements alone. The Preferred Facility Type noted below is based on the Street Typology Guide from the Active Transportation Plan. These may be considered for long-term improvements during future planning efforts or implementation programs.

Table 16. Central Reno/Midtown Long-Term Needs

Corridor	Extent	Typology	Preferred Facility Type
2nd St.	Truckee River to Truckee River	Urban Arterial Major	One-Way or Two-Way Cycle Track 8' - 12' Sidewalk w/ 5' - 7' Buffer
Airway Dr.	Neil Rd. to McCarran Blvd.	Urban Arterial Major	One-Way or Two-Way Cycle Track 8' - 12' Sidewalk w/ 5' - 7' Buffer
Kietzke Ln.	Truckee River to McCarran Blvd.	Urban Arterial Major	One-Way or Two-Way Cycle Track 8' - 12' Sidewalk w/ 5' - 7' Buffer
McCarran Blvd.	Airway Dr. to Plumas St.	Urban Arterial Major	One-Way or Two-Way Cycle Track 8' - 12' Sidewalk w/ 5' - 7' Buffer
Plumb Ln.	Terminal Way to Sharon Way	Urban Arterial Major	One-Way or Two-Way Cycle Track 8' - 12' Sidewalk w/ 5' - 7' Buffer
Virginia St.	Wells Ave. to McCarran Blvd.	Urban Arterial Major	One-Way or Two-Way Cycle Track 8' - 12' Sidewalk w/ 5' - 7' Buffer
Wells Avenue	Virginia St. to Truckee River	Urban Arterial Major	One-Way or Two-Way Cycle Track 8' - 12' Sidewalk w/ 5' - 7' Buffer
Moana Ln.	Neil Rd. to Plumas St.	Urban Arterial Major/Minor	One-Way or Two-Way Cycle Track 8' - 12' Sidewalk w/ 5' - 7' Buffer / One-Way or Two-Way Cycle Track 6' - 8' Sidewalk w/ 5' - 7' Buffer
Terminal Way/Greg St.	Plumb Ln. to Truckee River	Urban Arterial Major/Minor	One-Way or Two-Way Cycle Track 8' - 12' Sidewalk w/ 5' - 7' Buffer / One-Way or Two-Way Cycle Track 6' - 8' Sidewalk w/ 5' - 7' Buffer
Arlington Avenue	Truckee River to Plumb Ln.	Urban Arterial Minor	One-Way or Two-Way Cycle Track 6' - 8' Sidewalk w/ 5' - 7' Buffer
California Avenue	Virginia St. to Keystone Ave.	Urban Arterial Minor	One-Way or Two-Way Cycle Track 6' - 8' Sidewalk w/ 5' - 7' Buffer
Kuenzli St.	Truckee River to Sutro St.	Urban Arterial Minor	One-Way or Two-Way Cycle Track 6' - 8' Sidewalk w/ 5' - 7' Buffer
Lakeside Dr.	Eastshore Dr. to McCarran Blvd.	Urban Arterial Minor	One-Way or Two-Way Cycle Track 6' - 8' Sidewalk w/ 5' - 7' Buffer
Liberty St./Ryland St.	Mill St. to Arlington Ave.	Urban Arterial Minor	One-Way or Two-Way Cycle Track 6' - 8' Sidewalk w/ 5' - 7' Buffer
Mill St.	Lake St. to Terminal Way	Urban Arterial Minor	One-Way or Two-Way Cycle Track 6' - 8' Sidewalk w/ 5' - 7' Buffer
Plumas St./ Sierra St.	Moana Ln. to Liberty St.	Urban Arterial Minor	One-Way or Two-Way Cycle Track 6' - 8' Sidewalk w/ 5' - 7' Buffer
Sutro St./ Kirman Avenue	Truckee River to Ryland St.	Urban Arterial Minor	One-Way or Two-Way Cycle Track 6' - 8' Sidewalk w/ 5' - 7' Buffer
Plumas St.	Moana Ln. to McCarran Blvd.	Suburban Arterial Minor	Shared-Use Path (12' path / 7' buffer) 5' -7' Sidewalk with 5' - 7' Buffer

Implementation

The AT Program projects recommended by this plan will be considered for implementation using AT Program funds and are intended to be implemented quickly across the neighborhood. The RTC will begin project design for identified quick-build improvements in 2025, with a goal to begin construction in Summer 2026. Projects will be constructed based on AT Program funds availability.

Stay Connected

We encourage you to stay connected through the process as project designs are refined and projects are implemented. RTC will regularly post project updates noting progress toward design and implementation for projects on the Central Reno/Midtown neighborhood webpage. You can also stay connected to RTC's broader efforts through the Citizens Multimodal Advisory Committee, RTC Board, and ongoing public announcements from the RTC.

Appendix A: Neighborhood Profile

Central Reno / Midtown

Neighborhood Profile

Neighborhood Network Plan

December 2024

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Table of Contents

Introduction, Plan Review, and Neighborhood Demographics

Introduction

As part of the *Walk and Roll Truckee Meadows Active Transportation Plan* (ATP), the Regional Transportation Commission (RTC) of Washoe County is developing Neighborhood Network Plans (NNPs) which aim to enhance active transportation options by improving pedestrian and bicycling infrastructure in twelve identified neighborhood areas. The NNPs will apply the regional vision, goals, and priorities while taking a community-driven approach that provides each community the opportunity to express their specific values, needs and desired solutions. Central Reno/Midtown is one of the first two communities engaged in this process as designated in the ATP. These areas encompass communities with some of the greatest active transportation need in the region, with high levels of pedestrian stress, low scores for pedestrian experience, and high levels of injuries on the network. This Neighborhood Network Plan will provide an in-depth look at the neighborhood area specific data that came out of the ATP process, as well as a review of relevant plans and demographic data.

Plan Review

Reimagine Reno is the City of Reno's Master Plan which guides development through the year 2036. Adopted in 2017, the plan has undergone several amendments and is meant to serve as a living document as the City continues to grow and evolve. The plan addresses a variety of issues that are either directly or indirectly related to active transportation and are relevant to the development of the Central Reno / Midtown Neighborhood Network Plan. While the plan is comprehensive in nature, it contains guiding principles and associated policies that are supportive of expanding and enhancing bicycle and pedestrian connections throughout the city.

Guiding principle four – Vibrant Neighborhoods and Centers

This guiding principle from *Reimagine Reno* emphasizes the need for the City to actively encourage the development of more diverse neighborhoods that are oriented around and designed for people. This is achieved through the implementation of several strategies, including encouraging the development of walkable community centers that provide services and amenities, and encouraging pedestrian and bicycle connections as part of new development. To foster the development of walkable communities, the plan sets policies such as supporting the development of walkable community centers[1], and designing community centers to facilitate safe and convenient pedestrian and bicycle access[2]. To encourage pedestrian and bicycle connections, the plan sets policies such as promoting safe, clear, and direct connections with adjacent and regional destinations[3], and prioritizing sidewalk and trail improvements that complete gaps between existing neighborhoods and other community destinations[4].

[1] Policy 4.4A: Walkable Centers

[2] Policy 4.4F: Multi-Modal Hubs

[3] Policy 4.5A: Connectivity and Access

[4] Policy 2.5B: Missing Links

Guiding principle five – Well Connected City and Region

This guiding principle from *Reimagine Reno* emphasizes the need for Reno to use its existing transportation facilities more efficiently, increase transit ridership and coverage, and improve access for all road users. It stresses the critical role that improving pedestrian and bicycle connectivity plays in filling gaps in the transportation network, and highlights the importance of higher intensity, walkable development. To achieve these goals, the plan employs numerous strategies, several of which support pedestrian and bicycle infrastructure. These include continuing to develop a well-connected and balanced transportation system that enhances mobility for all modes, actively managing the transportation system to improve reliability, efficiency, and safety, and encouraging the use of bicycling, walking, and other forms of alternative transportation. To support development of a balanced transportation system, the plan establishes policies such as striving to balance the safety and needs of all road users in the planning, development review, and decision-making in the City[5], collaborating with RTC, the City of Sparks, and other regional entities on the implementation of the *Reno Sparks Bicycle and Pedestrian Plan*[6] and *Complete Streets Master Plan*[7], and requiring the dedication of the necessary right-of-way to implement multi-modal improvements[8].

To actively manage the transportation system while supporting pedestrian and bicycle connections, the plan employs policies such as designing and managing the City's transportation system to ensure the needs and safety of road users are considered as part of capacity and congestion management[9], and requiring the consideration of pedestrian travel patterns, access to schools and parks, and opportunities to integrate multi-modal facilities, among others, when designing or redeveloping new or existing roadways[10]. The use of traffic calming and pedestrian safety features is encouraged to support neighborhood character and safety[11], and Safe Routes to School planning is recommended to reduce vehicle congestion and enhance transit, bicycle, and pedestrian connections in school zones[12]. To stimulate the use of bicycling, walking, and other forms of alternative transportation, the plan sets policies such as prioritizing pedestrian and bicycle improvements in places where transit service exists[13], and encouraging bikeways as part of coordinated trip reduction programs to support the use of bicycles for commuting[14].

[5] Policy 5.1A: Balanced Modes

[6] Policy 5.1C: Bicycle and Pedestrian Plan

[7] Policy 5.1D: Complete Streets Master Plan

[8] Policy 5.1F: Right-of-Way Preservation

[9] Policy 5.2D: System Capacity

[10] Policy 5.2E: Roadway Design and Classification

[11] Policy 5.2I: Traffic Calming and Pedestrian Safety

[12] Policy 5.2J: Safe Routes to School

[13] Policy 5.4D: First and Last Mile Connections

[14] Policy 5.4E: Bikeways and Supporting Facilities

Neighborhood Demographics

Data Explanation

Part of the development of the ATP involved an in-depth analysis of demographics and socioeconomic characteristics of the region and communities within it. This included leveraging data from the American Community Survey (ACS), crash data from the Nevada Department of Transportation (NDOT), the RTC Travel Demand Model, and Replica Places. This type of analysis is critical for better understanding the context and needs of a place and is used to inform the development of the plan and the strategies and policies it recommends. Each of the neighborhood network profiles will also include an overview of some of the important data relevant to the neighborhood context, and a comparison of the neighborhoods to the Reno/Sparks area as a whole.

Demographics

The Central Reno/Midtown neighborhood has a population that is younger and more diverse than the Reno/Sparks area with a higher level of population density than is typical across the region. As shown in Figure 1, this neighborhood has a larger proportion of people aged 20 to 39 than compared to the Reno/Sparks area and a slightly smaller proportion of adults over the age of 60. For example, those aged 25 to 29 represent over eleven percent of the total population within the neighborhood compared to approximately eight percent for the Reno/Sparks area. Additionally, those over 60 represent 22.6 percent of the total population in the Reno Sparks area compared to 20.2 percent in this neighborhood.

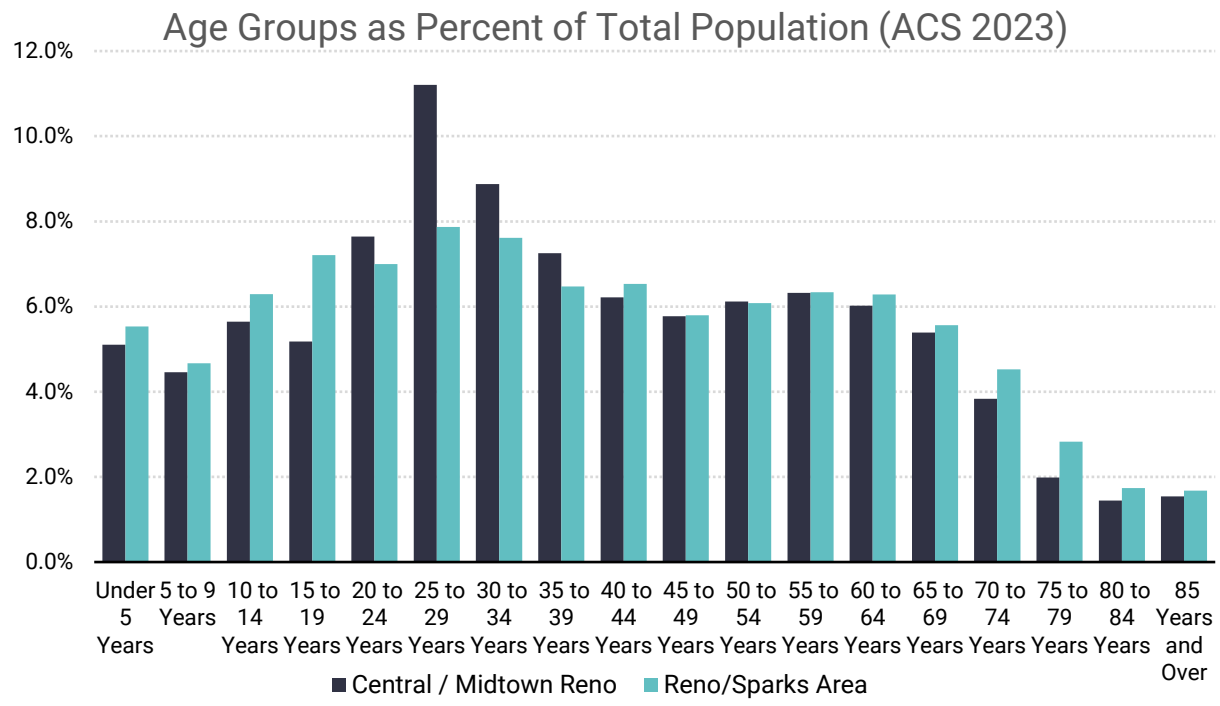


Figure 1 Age groups as percent of total population in Central Reno / Midtown and Reno / Sparks area

The Central Reno/Midtown neighborhood has a larger percentage of people of color than the Reno/Sparks area. The neighborhood has a larger population of Hispanic or Latino residents as well as Black, Native American, Asian, Native Hawaiian, and those who identify as two or more races, as shown in Figure 2.

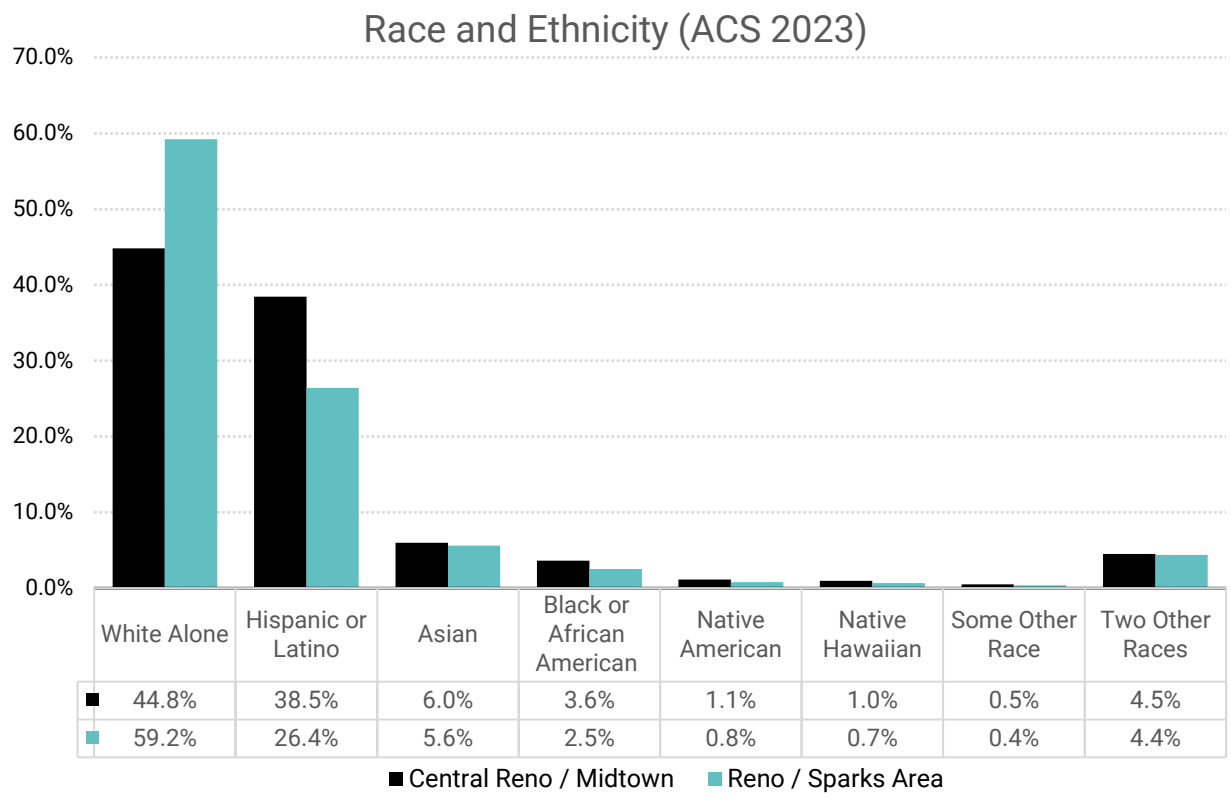


Figure 2 Race and ethnicity in Central Reno / Midtown and Reno / Sparks area

Population Density

Central Reno/Midtown has a population density that is approximately 23 times higher than the regional average, with about 6,903 people per square mile compared to just 300 people per square mile in the Reno/Sparks area. Within the neighborhood, the area with the highest population density is located between Plumb Ln, Kietzke Ln, Gentry Wy, and Virginia St, as shown in Figure 3.

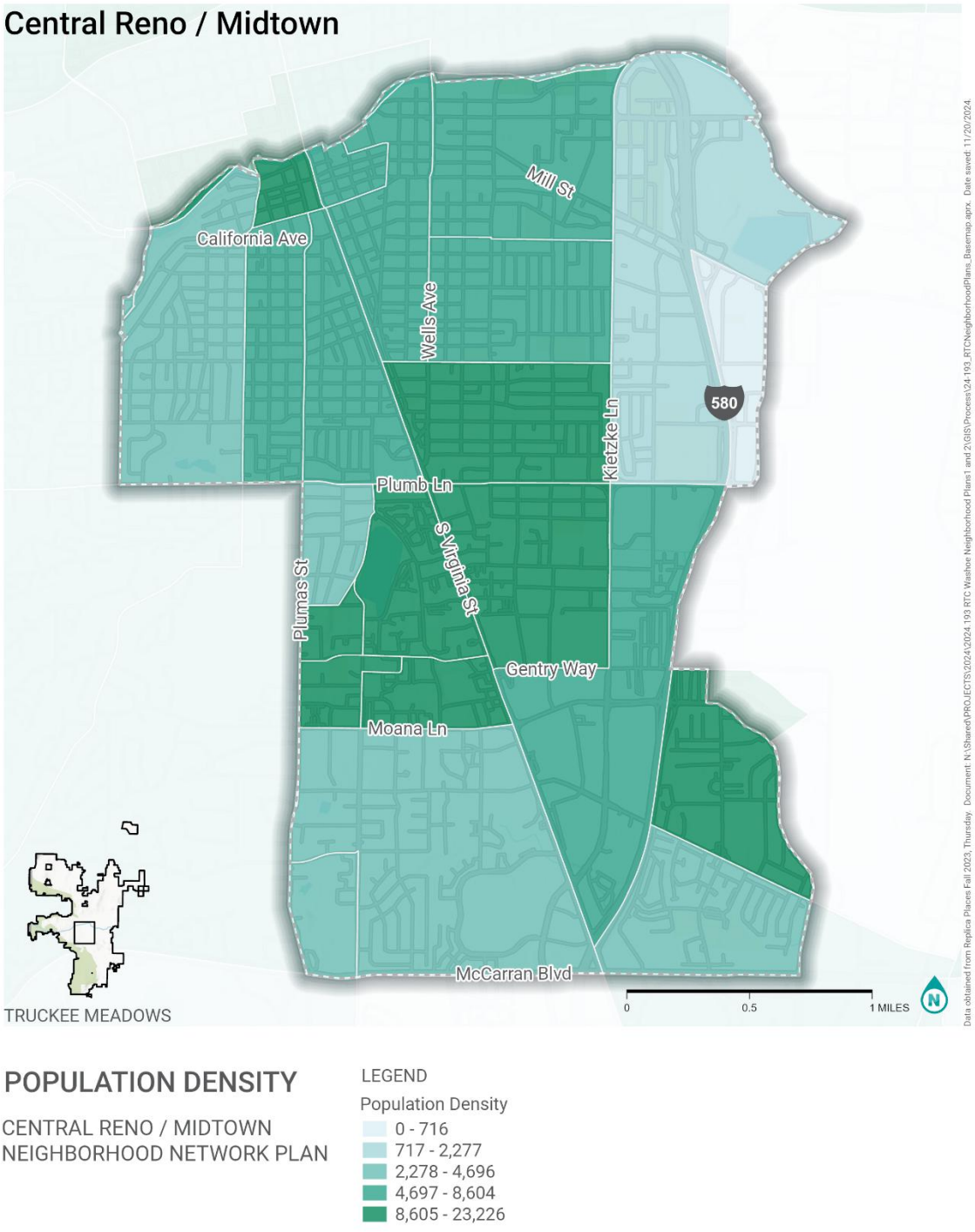


Figure 3 Population density in Central Reno / Midtown

Median Household Income

The Central Reno/Midtown neighborhood has a large array of household incomes as shown in Figure 4. There is a significant difference in household incomes across the neighborhood. Figure 4 highlights an area to the north in the neighborhood near Liberty St and Virginia St, which has a median household income of $14,621 compared to the northwest portion of the neighborhood (between Keystone Ave and Arlington Ave) which has a median household income of $125,625. It's important to note that the area shown in red includes subsidized housing and a low total number of households. Other areas such as between Plumb Ln, Virginia St, Kietzke Ln, and Gentry Wy, also have below average income levels with median household incomes of $35,396. On average, the median household income across the neighborhood ($63,325) is below the Reno/Sparks median household income ($85,969) by just over $22,000.

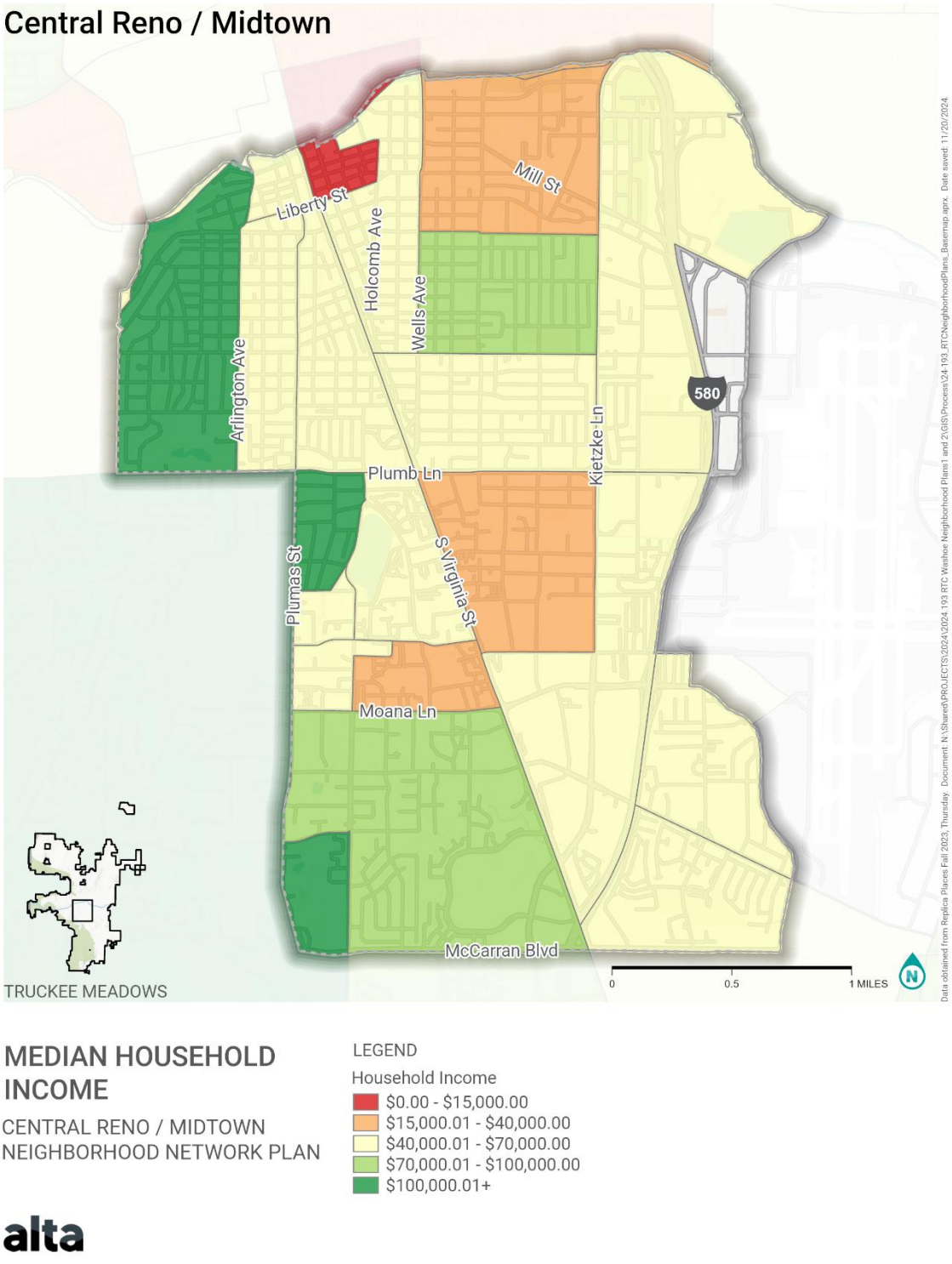


Figure 4 Median household income in Central Reno / Midtown

People without Access to a Vehicle

Figure 5 below shows the distribution of households in Central Reno/Midtown without access to a vehicle. In Central Reno/Midtown, **3,363 household- 15 percent of all households in the neighborhood-lack access to a vehicle**. This figure significantly exceeds the regional average, as only **7 percent of households across the Reno/Sparks area** experience similar challenges, totaling **12,223 households**. The area with the highest concentration of vehicle inaccessibility is located west of Virginia St, between Plumb Ln, Kietzke Ln, and Gentry Wy, where **30% of households** are without a vehicle. Additionally, a notable cluster of households without access to a vehicle exists along Kietzke Lane and in the northeast area of the neighborhood around Wells Ave and Mill St.

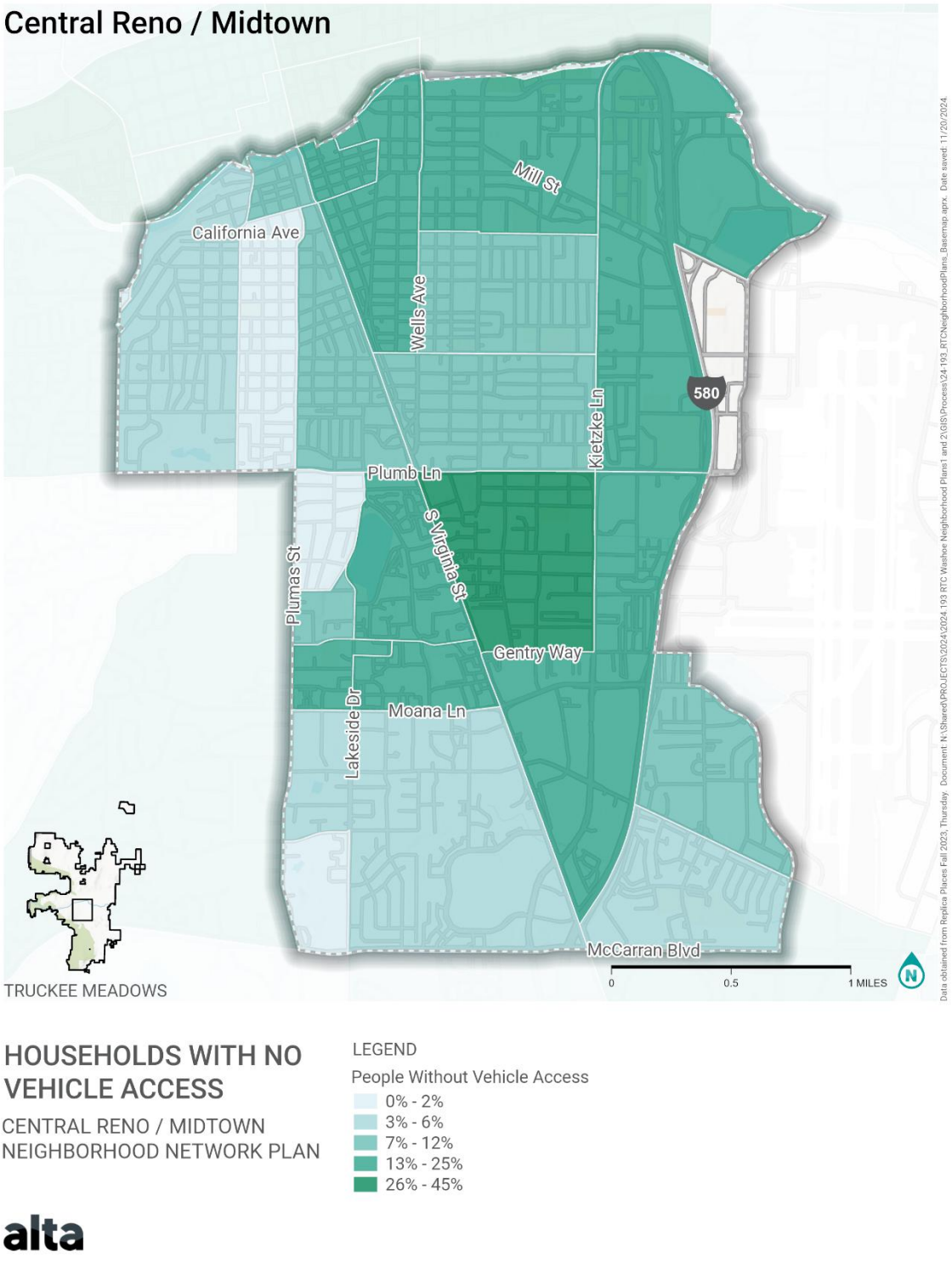


Figure 5 Percent of households without access to a vehicle in Central Reno / Midtown

Owner- and Renter-Occupied Household Burden

Housing cost burden refers to households that are paying 30 percent or more of their monthly income for their rent or mortgage payments. Figure 6 below shows the distribution of cost-burdened households throughout the Central Reno/Midtown area. Many of the census tracts throughout the neighborhood contain high rates of households that are cost burdened. The area bounded by Plumb Ln, Virginia St, Moana Ln, and Plumas St contains a tract with 61 percent of households paying more than 30 percent of their income, and 57 percent of households in the tract bounded by Wells Ave, Virginia St, and the Truckee River is housing cost burdened. Approximately 42 percent of households in the Central Reno/Midtown neighborhood are cost-burdened, compared to only 31 percent for the Reno/Sparks area.

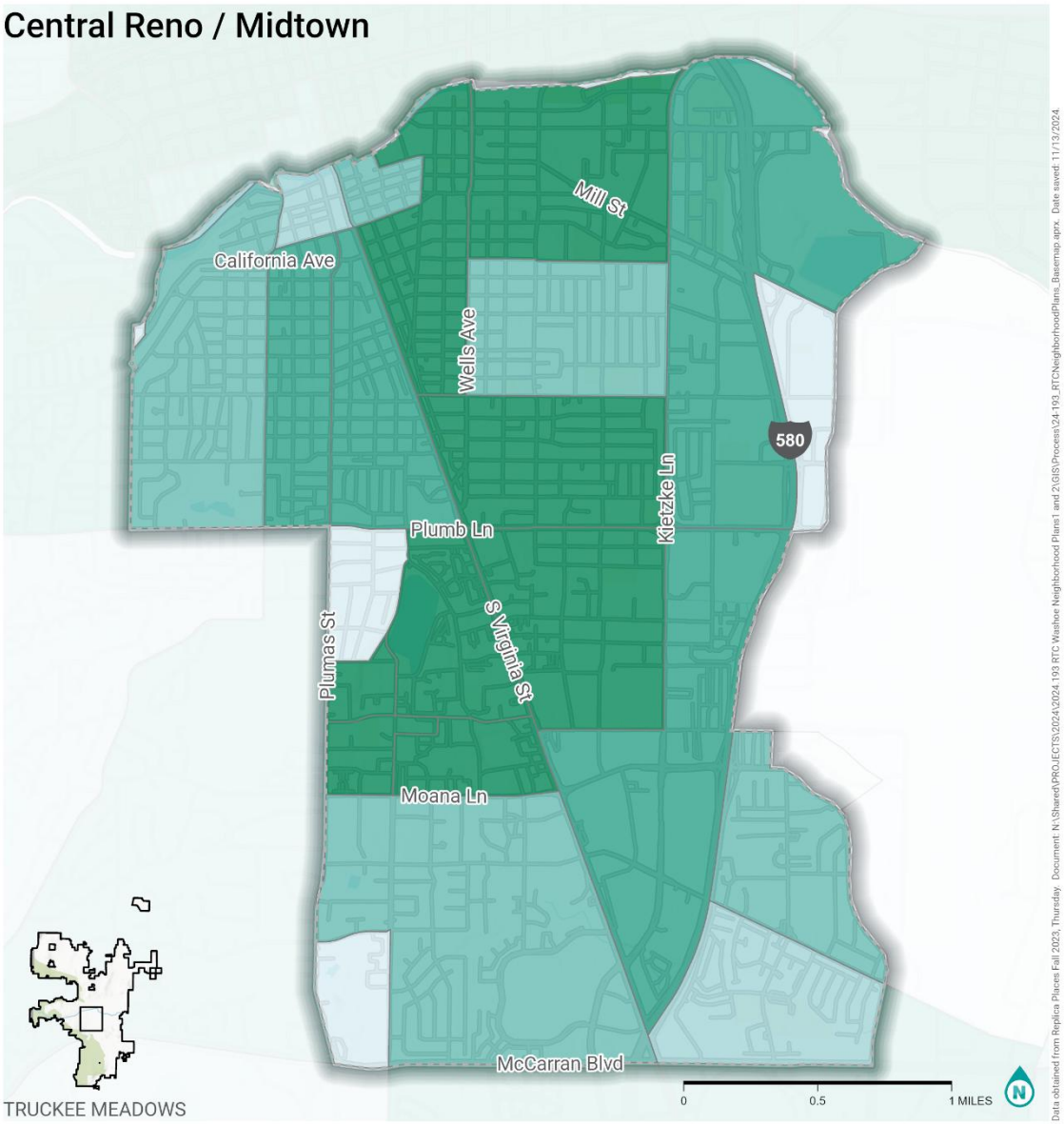


Figure 6 Percent of households who are paying 30 percent or more of their income for housing costs

Equity Index

The ATP used a transportation-focused equity analysis to measure equity through various criteria that are related to or impacted by active transportation usage. These included things such as health outcomes, socio-economic factors like poverty level, access to a vehicle, health issues, and environmental impact (Figure 7). The variables were assigned a percentile rank and combined together into a final composite index for the entire study area[15]. Figure 8 highlights the results of that regional analysis within the Central Reno/Midtown neighborhood. As shown, the majority of census tracts in the neighborhood fall within the top 20 percent in terms of equity. Two census tracts ranked in the lowest 20 percent of needs are located in the old Southwest to the west of Plumas Street. This highlights the significant difference across the neighborhood and the stark contrast between the west side and east side of the neighborhood with all census tracts to the east of Virginia St falling in the top 40 percent of equity needs across the region. Additionally, as shown in Figure 8, these areas are identified as part of the Justice 40 initiative, the latest federal equity analysis from the US Department of Transportation, which prioritizes investments towards historically underserved communities based on their own broad set of data criteria[16].

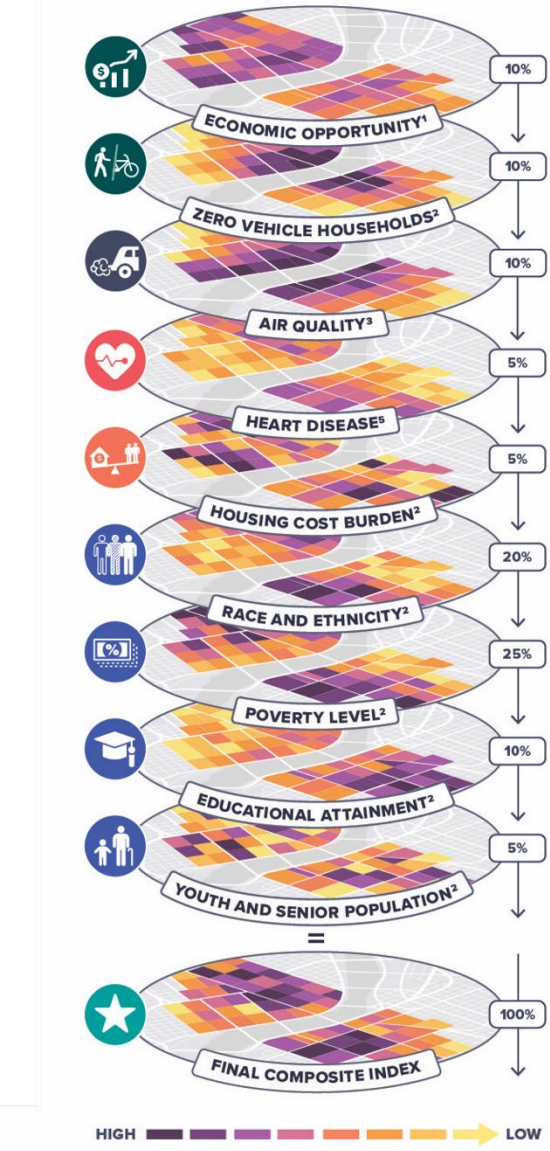


Figure 7 Equity Analysis Variables

[15] More information on the Equity Composite methodology available in the RTC ATP (page 25-26)

[16] More information on this analysis is available here: Justice40 Initiative | US Department of Transportation

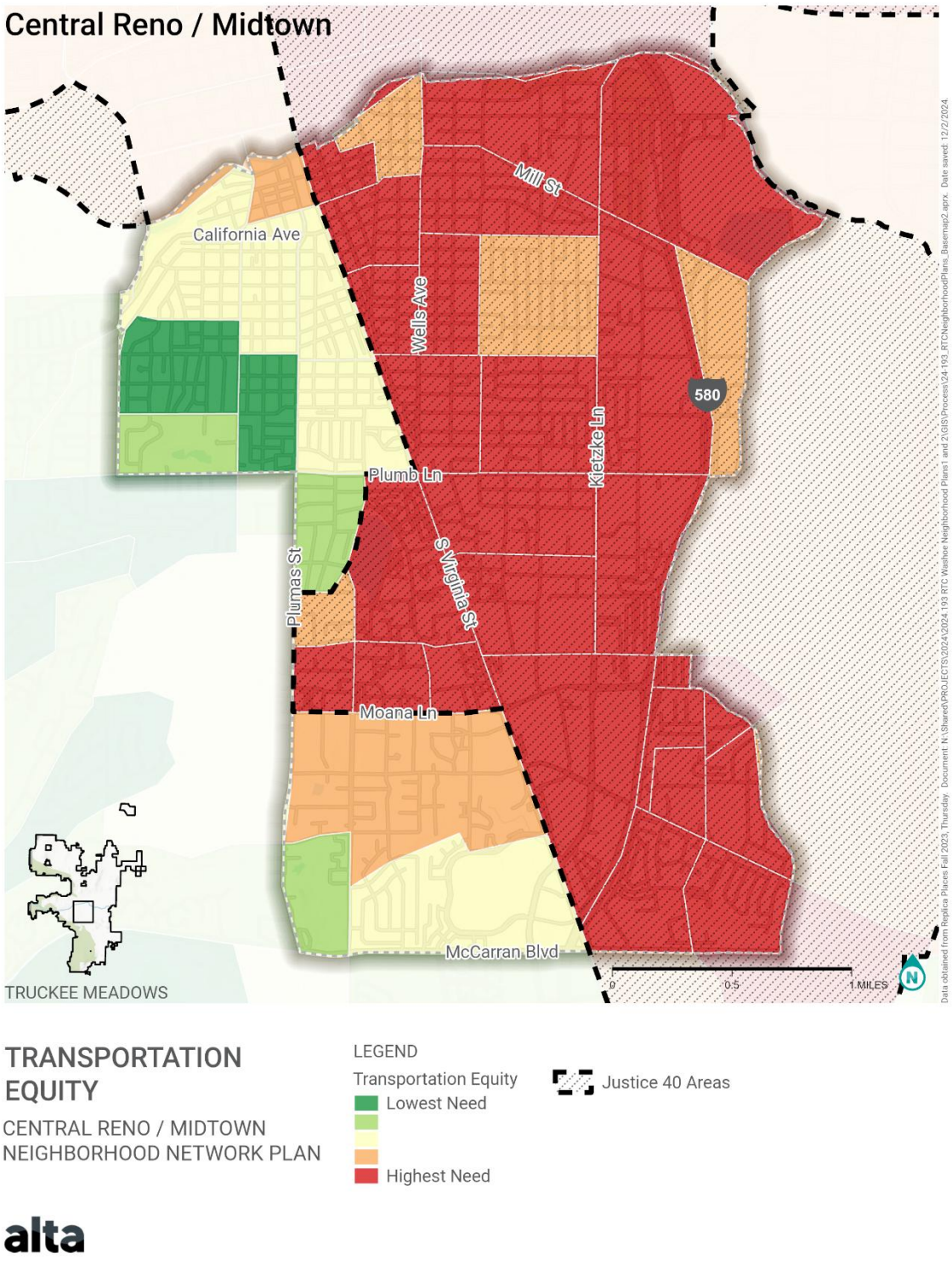


Figure 8 Transportation equity index and Justice 40 areas in Central Reno / Midtown

Key Neighborhood Destinations

Central Reno/Midtown is a dynamic neighborhood that contains a wealth of places for residents to engage with their community, access recreation, and meet the needs of their daily lives. This section highlights key destinations within the neighborhood including schools, parks, entertainment, employment, and community center; key destinations throughout the neighborhood area are highlighted in Figure 9.

Schools

There are several schools in the area for a variety of grade levels from preschool to 12th grade which are listed in Table 1.

Table 1 Schools that service Central Reno / Midtown

School Level	School Name
Early Education	• MunchkinLand Preschool • Sunflower Preschool • Little Golden Goose • Wooster Head Start • Aleph Academy • Brookfield School Little Campus • A Plus Learning Center • Kids R Us • Under the Magic Pine Tree • Smiling Hearts Preschool • Granny Purple's Kids-E-Care • UNR Early Head Start • Creative World Children's Academy • All about Kids 2 • Huc's Early Learning • Purple Door Preschool • Minds N Motion • Jovie of Reno • Little Learners • Beginnings Infant Toddler
Elementary / Middle Schools	• Echo Loder Elementary School • Corbett Elementary School • Little Flower Catholic School • Veterans Memorial Elementary School • Mount Rose K-8 • Our Lady of the Snows • Anderson Elementary School • Libby Booth Elementary School • Bailey Charter Elementary School • Pine Middle School • Vaughn Middle School

School Level	School Name
High Schools	• Earl Wooster High School • Reno High School* • Encompass Academy* • St. Nicholas Orthodox Academy • Academy For Career Education*

**Schools outside of the neighborhood but serving students within the neighborhood area.*
***List is not exhaustive*

Parks

Parks play an important role in the success and vitality of a community, providing opportunities for relaxation, recreation, and gathering, supplying vital ecosystem services like heat and air pollution mitigation, and contributing to the health of community members and cities. The Truckee River at the northern edge of the neighborhood provides a key recreation and leisure opportunity for residents and includes the Truckee River Path which is an important east/west connection for people walking and biking. The neighborhood is also dotted with numerous parks providing residents with opportunities to partake in a variety of outdoor activities and experience several types of natural environments. Parks like Powning, Riverwalk, Newlands, Liston, Yori, Plumas, and Stewart provide smaller, accessible community spaces with minimal amenities like children's playgrounds and walking paths. Larger parks like Wilkinson, Miguel Ribera, Tighe, Manzanita, Barbara Bennett, Pickett, and the Moana Springs Recreational Complex provide amenities like sports courts and fields, trails, and skateparks. Near the middle of Midtown is Virginia Lake Park which provides playgrounds, exercise equipment, paths, and a fishing dock.

Entertainment Centers

Entertainment centers are places and areas that provide residents with diverse opportunities for nightlife, dining, sporting events, theater, live music, performing arts, and cultural activities. Much of Central Reno/Midtown's entertainment occurs around or along the Virginia St corridor, including the Reno-Sparks Convention Center, the Atlantis and Peppermill Casinos, the Grand Sierra Resort and Casino, the Reno Little Theater, The Discovery Science Museum, the Nevada Museum of Art, and the Pioneer Center for the Performing Arts. Additional corridors of entertainment include Wells Ave, California Ave, Plumb Ln, Moana Ln, and Lakeside Dr.

Employment Centers

Employment centers are areas that are more densely populated with commercial, retail, and healthcare spaces, providing communities with ample employment opportunities, as well as opportunities to shop, eat, and socialize. There are several areas that comprise employment centers in the Central Reno/Midtown neighborhood, including Firecreek Crossing, the Renown Regional Health Center, Grand Sierra Resort, and the Wells Ave, Virginia St, and Kietzke Ln corridors. Additionally, the industrial area near the airport, including Terminal Wy, Mill St, and Vassar St, as well as California Ave with its concentration of insurance agencies and law offices, also serve as significant employment hubs.

Community Destinations

Community destinations provide additional spaces for residents to gather and build the social networks that foster thriving and resilient communities. These types of spaces can include churches, community centers, or other destinations that are visited frequently.

Table 2 Community destinations in Central Reno / Midtown

Community Destination Type	Location
Churches	• Living Stones Church • Faith Alive Christian Center • Pathfinder Church • Saint Therese Church of the Little Flower • Reno Revival Church • Cordero Church • Our Lady of the Snows Catholic Church • Lutheran Church of the Good Shepherd • Reno Buddhist Center • Saint Anthony Greek Orthodox Church • Skyline Church • Community Bible Church • Potters House Christian Fellowship Church • Rhema Christian Church • Slavic Christian Center • Center for Spiritual Living
Community Centers	• Neil Road Recreation Center • Moana Springs Community Aquatics and Fitness Center • Boys and Girls Club Carano Facility • Boys and Girls Club Neil Road Facility
Other Frequented Destinations	• Downtown Reno Library • Sierra View Library • Reno Public Market • Shirley's Farmers Market • Washoe County Court House • US District Court • City of Reno Municipal Court • Sparks Municipal Court • Bruce R. Thompson Courthouse and Federal Bulding

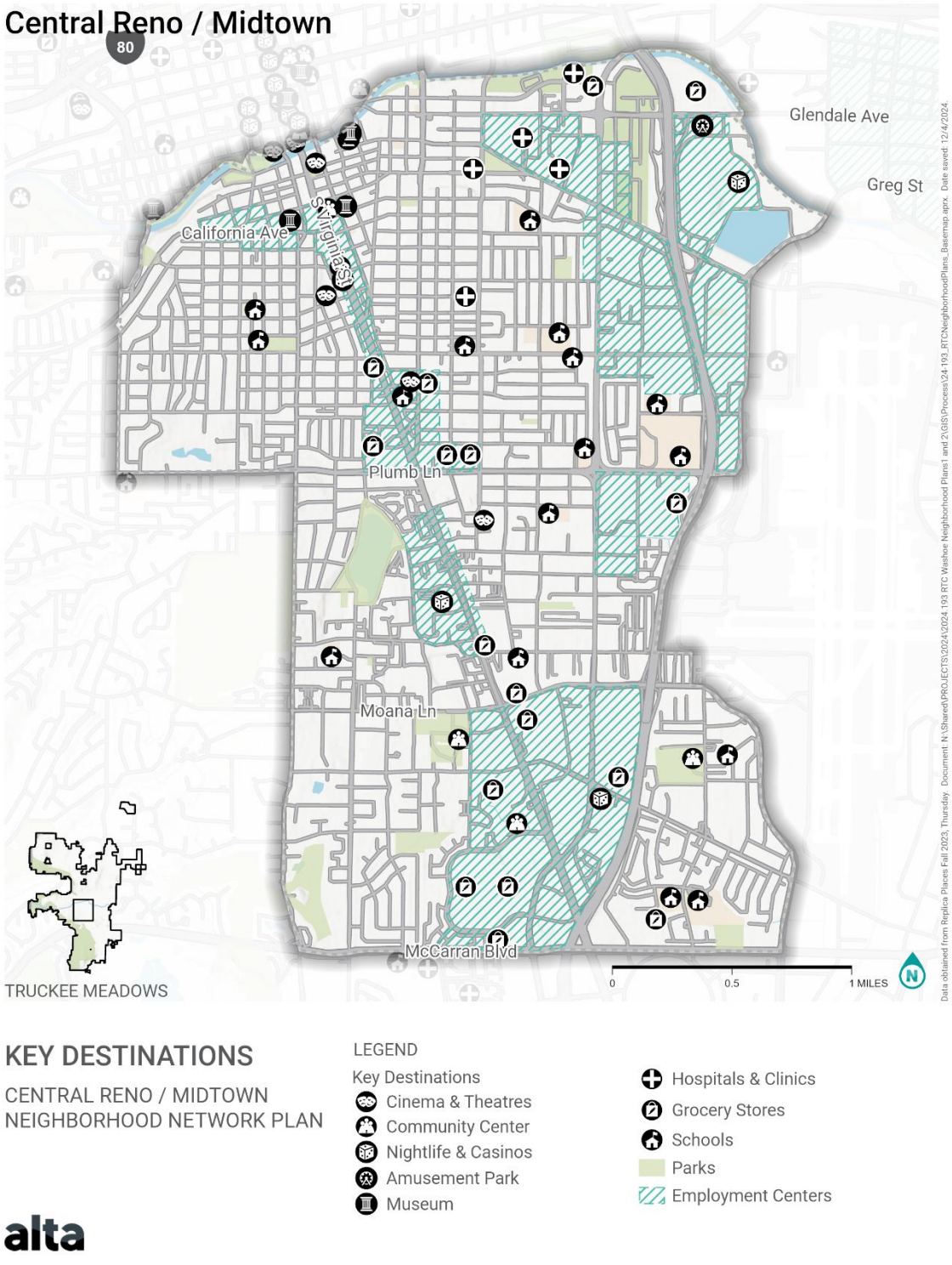


Figure 9 Key destinations in Central Reno / Midtown

Existing Neighborhood Network

Pedestrian Facilities

The pedestrian network is made up of sidewalks and crossing facilities like crosswalks and rectangular rapid flashing beacons (RRFBs). The RTC evaluated the presence of sidewalks along regional roadways as part of the ATP. Sidewalks help enhance safety and accessibility for pedestrians and those using mobility scooters or devices. The RTC recently collected sidewalk data to assess the availability of sidewalks on regional roadways. The analysis assigned a score to each roadway between zero and two, with zero indicating there were no sidewalks present on either side of the street and two indicating there were sidewalks on both sides. Within Central Reno/Midtown, the arterial street network earned an average score of 1.71, indicating a higher percentage of arterials in the area have sidewalks on both sides of the street. The collectors earned an average score of 1.81, indicating that even more collectors in the area have sidewalks on both sides of the street. In contrast, the Reno/Sparks area arterials and collectors earned average scores of 1.25 and 1.39 respectively. These scores point to a generally well-connected sidewalk network in the Central Reno/Midtown neighborhood. However, minor gaps in the network can still present significant challenges for people who are walking or using a mobility device. A gap where no sidewalk exists presents a major safety hazard if users are forced to walk in the roadway.

Bicycle Facilities

The bicycle network is made up of a variety of bicycle facilities, each providing bicyclists with varying degrees of safety and accessibility. Within the Central Reno/Midtown neighborhood there are a variety of facility types with the majority of miles provided as bike lanes (Figure 10). The area provides 4.6 miles of shared lane facilities, 16.7 miles of bike lanes, 2.1 miles of shared use paths and no separated bike lanes, for a total of 23.4 miles of bicycle facilities in the area (Table 3). This accounts for 51 percent of the area's 45.8 miles of regional roadway network. Much of this mileage comes in the form of standard bike lanes along higher speed arterials such as Kietzke Ln, Plumas St, Arlington Ave, and Mill St. Additionally, many gaps exist within the area's bicycle network, such as Plumb Ln between Virginia St and Harvard Ave, Moana Ln between Plumas St and Virginia St, and along multiple segments of Virginia St, where no bicycle facilities exist at all but would provide essential connections in the neighborhood. Overall, many opportunities exist in Central Reno/Midtown for expanding and enhancing the bicycle network.

Bicycle Facility Types:

- **Shared-Use Paths:** Pathways for pedestrians, bicyclists, and others, which are separate from vehicle traffic and include connections that are outside of the right-of-way.

Picture 1. Shared-Use Path example

- **Separated Bike Lanes:** Dedicated paths for bicyclists, which are physically separated from vehicle traffic by a barrier.
- **Bike Lanes:** Dedicated spaces for bicyclists on the roadway, which are marked by pavement markings and can be accompanied by additional signage.
- **Shared Lane Facilities**: Markings that indicate the shared use of a travel lane by bicycles and vehicles, including signed bicycle routes, "sharrows", and bike / bus lanes.

Table 3 Bicycle facilities in Central Reno / Midtown by mileage

Facility Type	Mileage
Shared-Use Paths	2.1
Separated Bike Lanes	0
Bike Lanes	16.7
Shared Lane Facilities	4.6
Total	23.4

Picture 2. Separated bike lane example

Picture 3. Bike lane example

Picture 4. Shared lane facility example

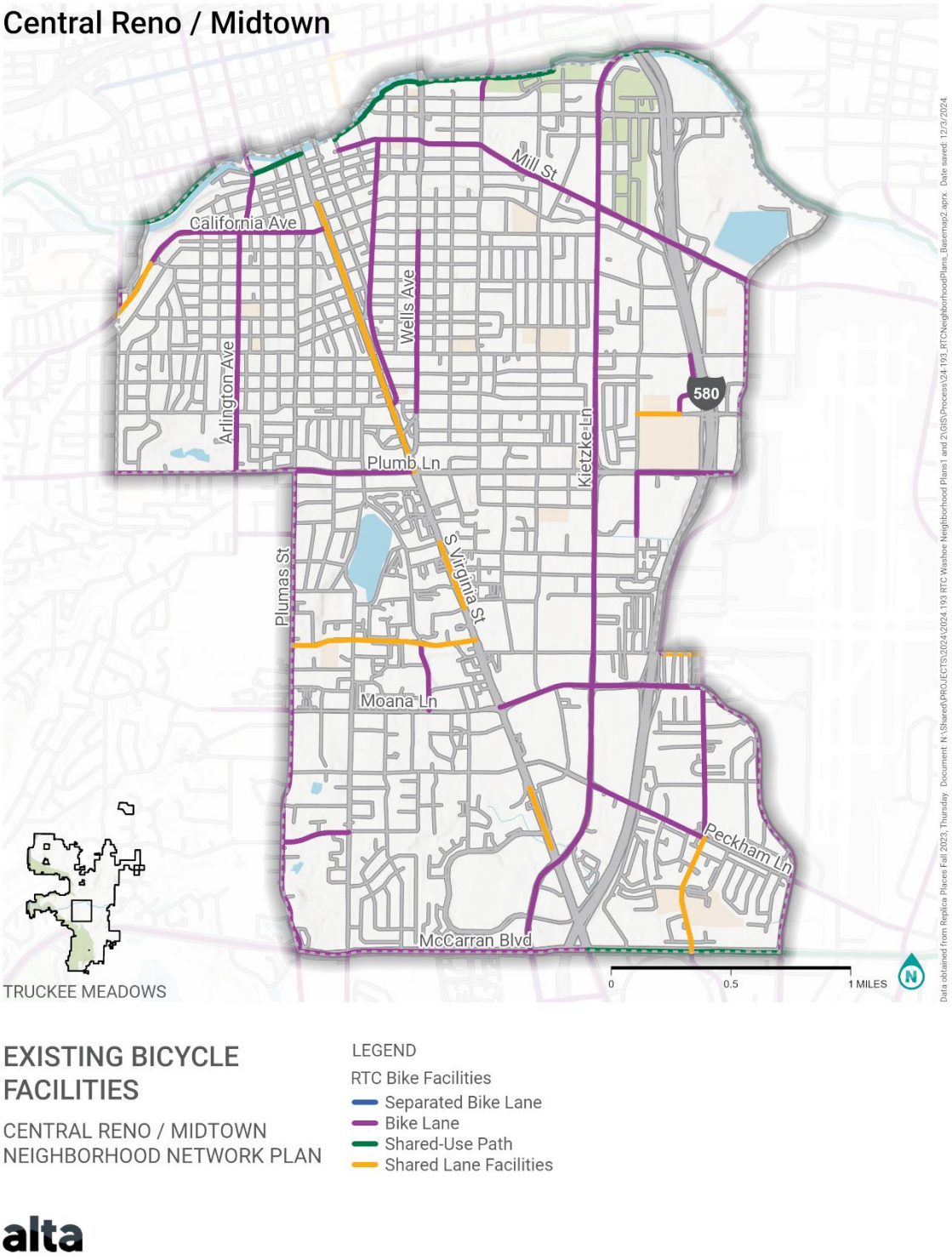


Figure 10 Existing bicycle facilities in Central Reno / Midtown

Network Context

Roadway Speeds

The posted speed for vehicles on the road is a major factor for active transportation safety and comfort throughout the transportation network. As vehicle speeds increase, there is a greater risk for serious injury and death in the event of a crash, especially for people walking or biking (Figure 11). The existing speed limits for roadways in the neighborhood are shown in Figure 12. This element is important for safety as well as overall comfort for people walking and biking because as the posted vehicle speeds increase, people walking and biking typically desire a greater level of separation from vehicles. For this reason, posted speeds are a primary factor in the determination of the Bicycle Level of Traffic Stress (BLTS) and Pedestrian Experience Index (PEI) which are both further described below.

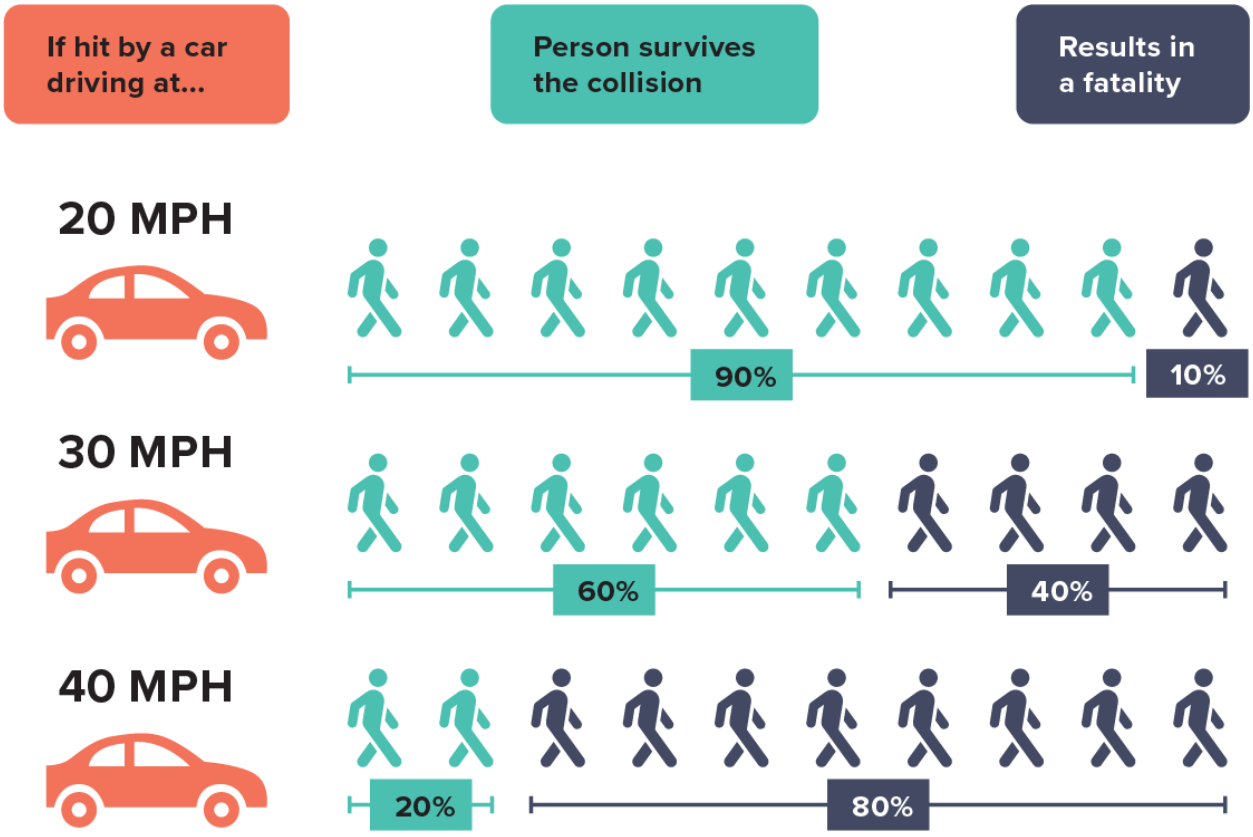


Figure 11. Risk of injury for people walking based on vehicle speeds (US Department of Transportation, Literature Reviewed on Vehicle Travel Speeds and Pedestrian Injuries. March 2000)

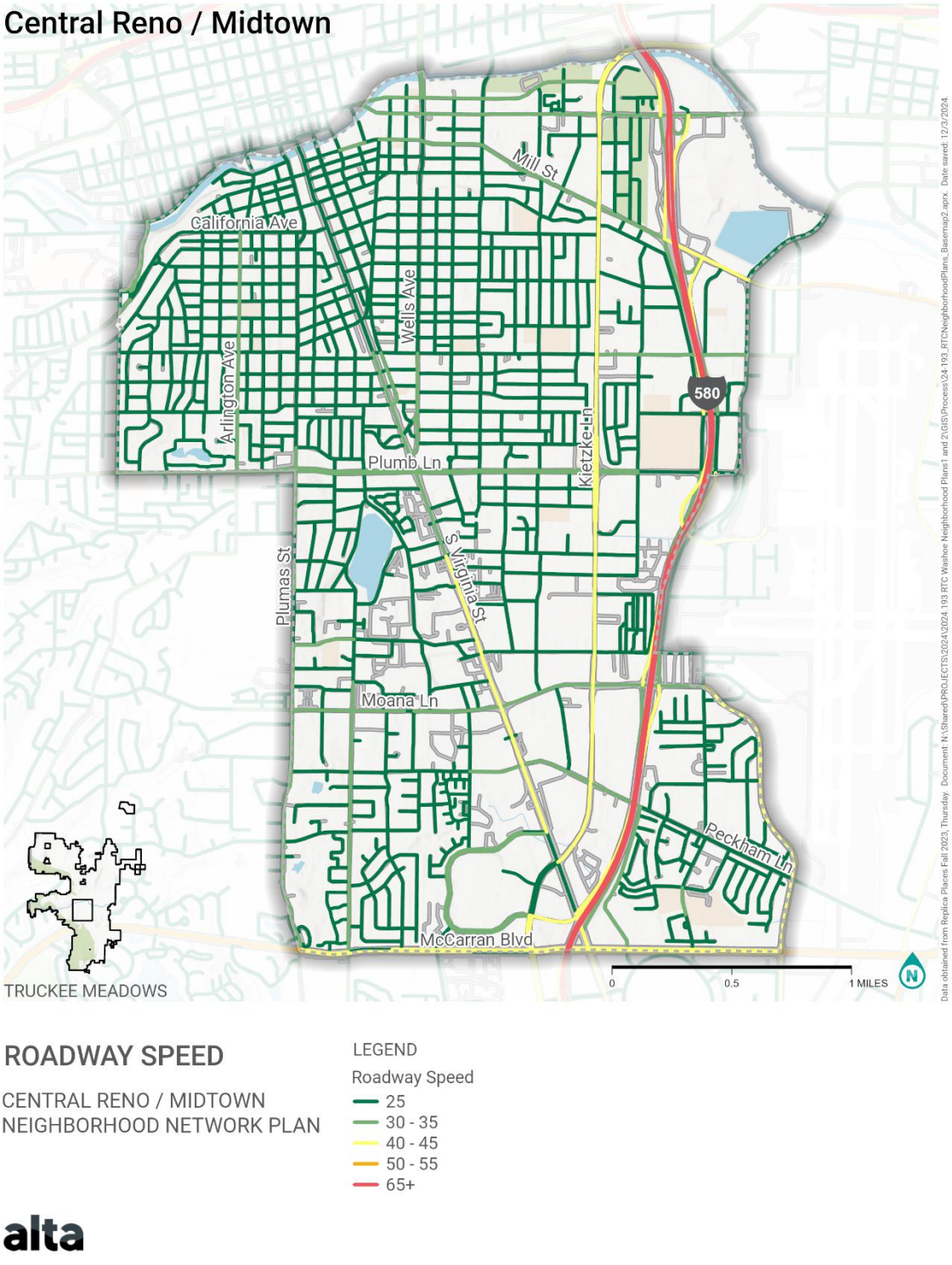
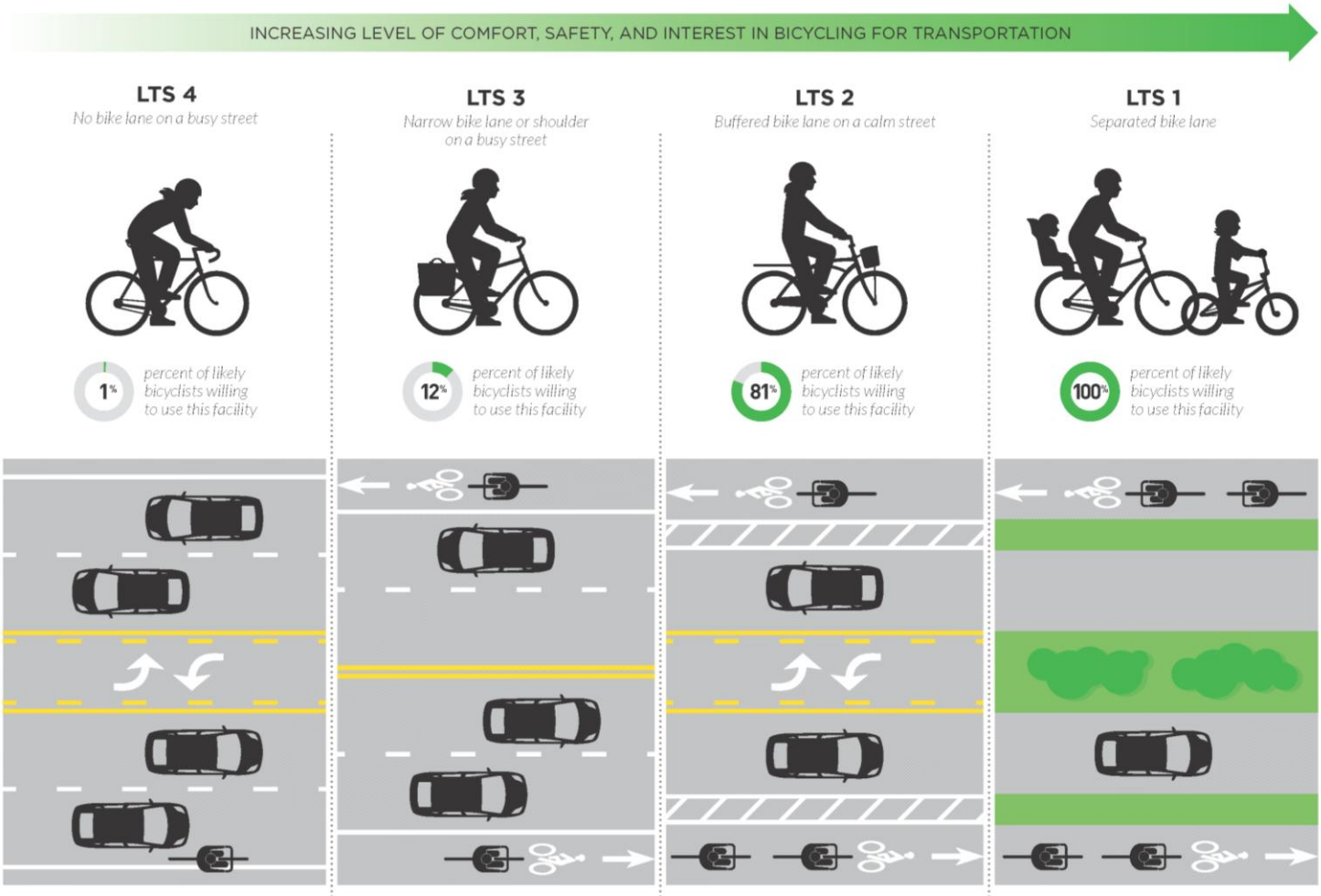


Figure 12 Existing speed limits on roadway network

Bicycle Level of Traffic Stress

Bicycle level of traffic stress (BLTS) estimates the level of comfort that bicyclists experience on a given roadway segment. It considers things such as posted speed, number of travel lanes, and the presence and type of bike lanes, and can help identify where gaps in a bike network exist. BLTS is measured from level one to four, with one representing roadways where bicyclists of all ages and abilities would feel comfortable riding, and level four representing high-stress roadways where only strong and fearless bicyclists would feel comfortable (Figure 13).

Figure 13 Diagram showing the four levels of bicycle level of traffic stress



The BLTS for regional roadways in the neighborhood is highlighted in Table 4. As shown in Figure 14, there are many roadways which rank as BLTS 3 or 4 across the neighborhood, including Kietzke Ln, Virginia St (south of Gentry), Plumb Ln (Kietzke Ln to Virginia St), Moana Ln (west of Virginia St), and Vassar St (east of Wells Ave). These roadways create challenging conditions for bicyclists, making them uncomfortable to navigate and difficult to cross. High vehicle speeds, significant traffic volumes, and the absence of adequate bicycle facilities or separation from motor vehicles contribute to a stressful and discouraging environment for biking.

Table 4 Average bicycle level of traffic stress scores for arterials and collectors

Roadway Classification	Central Reno/Midtown	Reno/Sparks Area
Arterials	3.1	3.06
Collectors	2.34	2.32
Average Total	3.01	2.91

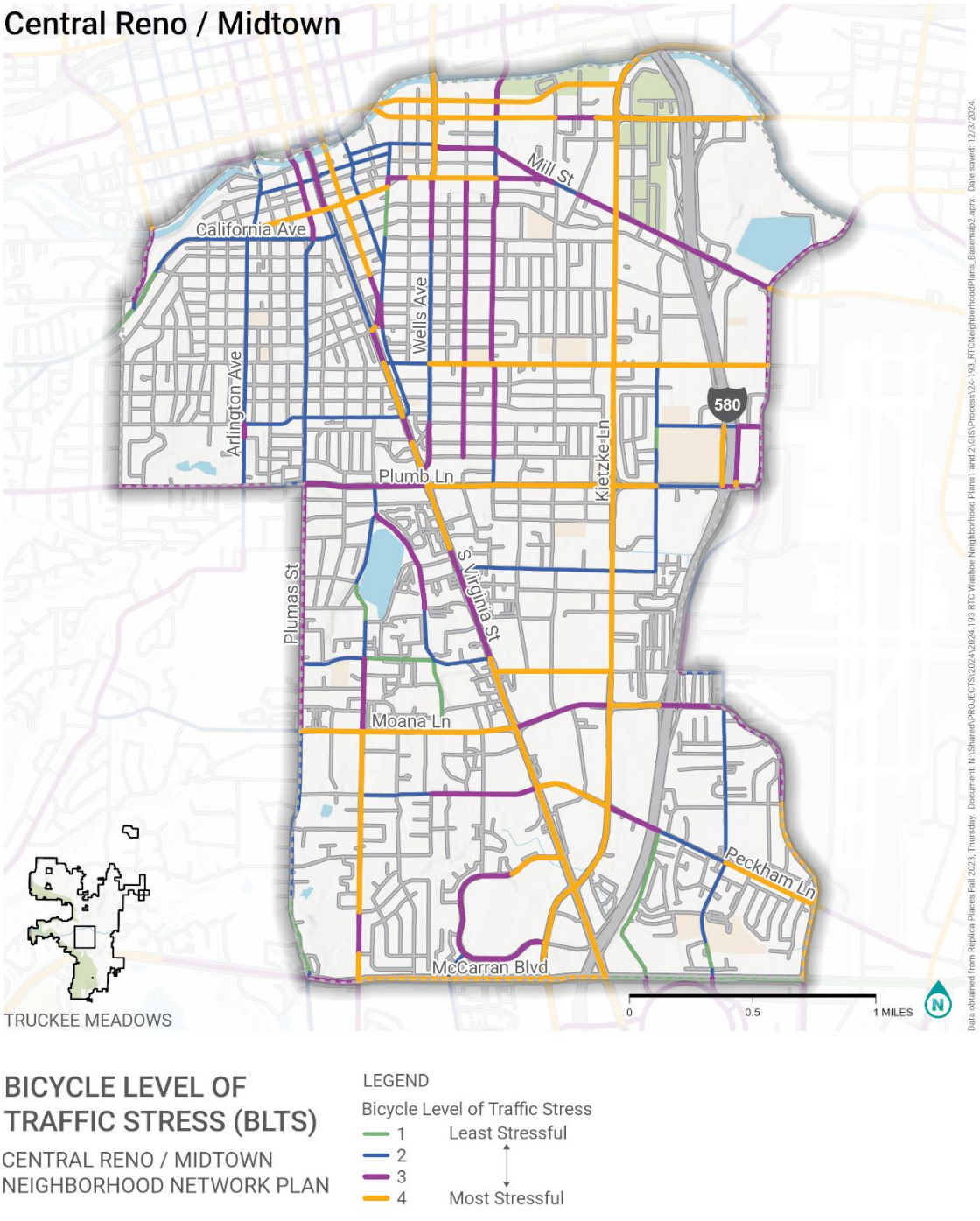


Figure 14 Bicycle level of traffic stress scores for the streets in the regional roadway network

Pedestrian Experience Index

Researchers at UNR conducted a pedestrian-focused quantitative analysis meant to provide a planning level understanding of the pedestrian experience along roadways. The metric they developed assigns scores based on factors such as the presence of sidewalks and their associated widths, existing buffer space from moving vehicles, number of vehicle lanes, and roadway speed. The cumulative score is assigned to each side of a roadway, with a total of 85 points possible. Higher scores represent roadways that provide a more comfortable pedestrian experience. The results of this analysis within the Central Reno / Midtown neighborhood are highlighted in Figure 15.

Central Reno/Midtown earned an average score of 57.63 for the pedestrian experience across all of its regional roadways. A score of 57 falls within the average range and means that sidewalks are typically five to six feet wide, are present on one or both sides of the road, provide buffer space between vehicles and pedestrians only intermittently, or may have higher speeds and number of lanes. Most of the roadways, as shown in Figure 15, have relatively high pedestrian experience scores. However, certain roadway segments, such as Virginia St (south of Plumb Ln), S McCarran Blvd, Moana Ln, and Greg St have lower PEI scores. Overall, 16.6 miles (36 percent) of the regional roadway network within Central Reno/Midtown have a pedestrian experience score that ranks as Bad or Poor.

Urban arterial roads in the Reno/Sparks area earned average pedestrian experience scores of 36 for major arterials and 50 for minor arterials. Urban collectors in the region earned average pedestrian experience scores of 53 for commercial collectors and 57 for residential collectors. When compared to the Reno/Sparks area, the regional roadway network in Central Reno/Midtown, which includes both types of arterial and collector typologies, earned a higher average pedestrian experience score.

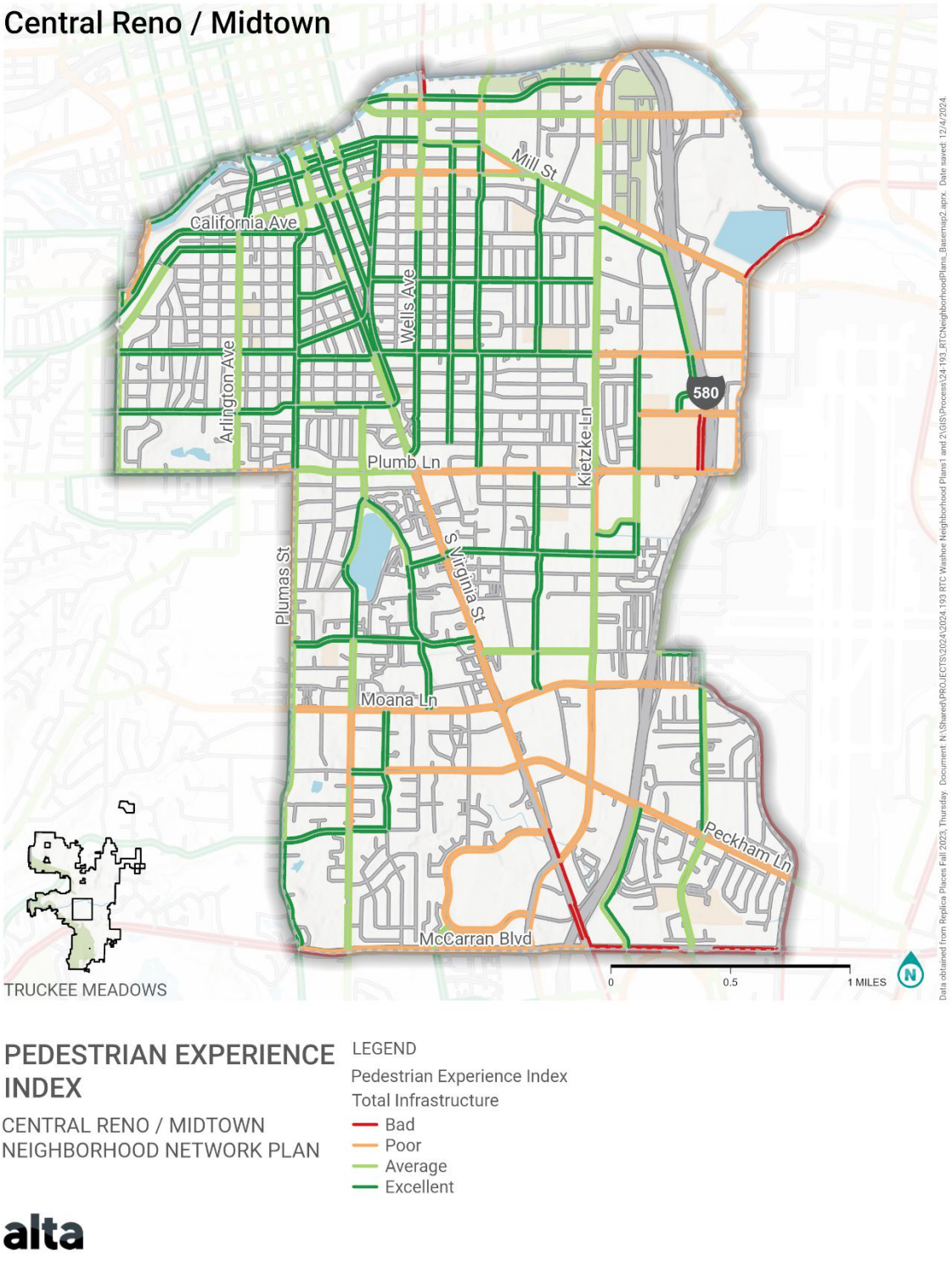


Figure 15 Pedestrian experience scores for the sidewalks in the regional roadway network

Traffic Safety

Crash Data

The project team reviewed the most recent five years of available crash data which covers 2019 - 2023[17]. Over this period, there were a total of 305 crashes involving someone walking or biking within the Central Reno/Midtown neighborhood, with 19 fatal crashes and 271 crashes causing an injury (Table 5). Many of these crashes involved a person walking, with 212 total pedestrian crashes, while 93 crashes involved a person biking.

Table 5 Total crashes by mode

Total Crashes by Mode			
Crash Severity	**Pedestrians**	**Bicyclists**	**Total**
Fatal	18	1	19
Injury	179	92	271
Property	15	0	15
Grand Total	212	93	305

Intersections vs. segments

There are roughly an even split of crashes between intersections and roadway segments (the area between intersections) for people walking and biking. However, **crashes on roadway segments accounted for two-thirds (63 percent)** of fatalities for people walking and biking and over half of all injury crashes (54 percent). Comparatively, 60 percent of crashes involving a person walking or biking which only resulted in property damage occurred at an intersection (Table 6). This difference highlights the higher likelihood of injury and even death on roadway segments for people walking or biking due to the typically higher vehicle speeds between intersections.

Table 6 Crash severity at intersections and on roads

Crash Severity	Pedestrians		Bicyclists		All Active Transportation	
	Intersections	Segments	Intersections	Segments	Intersections	Segments
Fatal	33%	67%	100%	0%	37%	63%
Injury	48%	52%	43%	57%	46%	54%
Property	60%	40%	-	-	60%	40%
All Crashes	48%	52%	44%	56%	47%	53%

[17] Data provided by NDOT. Data excludes December 2023 due to limited availability

Top Crash Corridors

Crash history helps highlight specific corridors which account for the majority of the crashes in the neighborhood. Out of a total of 45 corridors, the following 15 accounted for a total of **187 injury crashes (69 percent of the total)** and **15 fatal crashes (79 percent of the total)** involving a person walking or biking in the Central Reno/Midtown area (Table 7). ***Kietzke Ln stands out among these top 15 corridors in terms of total fatal crashes with seven fatal pedestrian crashes, which is as many as the other 14 top corridors combined***. Additionally, Virginia St includes a total of 48 injury crashes for people walking and biking, or nearly one-fifth of all injury crashes in the neighborhood during the study period from January 2018 to October 2025.

Table 7 Crash history on corridors with high crash rates

Rank	***Street Name***	**Pedestrian Crashes**		**Bicycle Crashes**		**Total**	**Crashes Per Mile**
		Fatal	*Injury*	*Fatal*	*Injury*		
1	Virginia St	1	32	0	16	49	13.73
2	Kietzke Ln	7	11	0	14	32	8.29
3	Mill St	0	12	0	5	17	9.18
4	Wells Ave	1	14	0	2	17	10.52
5	Moana Ln	0	6	1	4	11	6.37
6	Plumb Ln	0	6	0	5	11	5.85
7	2nd St	3	6	0	1	10	6.29
8	Kirman Ave	1	4	0	4	9	5.29
9	Gentry Wy	0	5	0	3	8	9.98
10	Sierra St	0	5	0	2	7	20.47
11	Vassar St	1	2	0	4	7	4.48
12	E Peckham Ln	0	2	0	4	6	3.06
13	Grove St	0	5	0	1	6	6.23
14	Lakeside Dr	0	5	0	1	6	2.59
15	Center St	0	3	0	3	6	7.49

High Injury Network

The RTC conducted substantial analysis of the regional roadway network to identify roads and intersections with the greatest safety needs as part of the Truckee Meadows Vision Zero Action Plan. As a part of this plan, the RTC developed a High-Injury Network (HIN) for the region, which identifies those places which have the highest crash rates, level of frequency, and crash severity across the county.

Central Reno/Midtown contains 21 HIN corridors and 32 HIN intersections. The corridors account for 14.34 miles, or nearly 17 percent of the region's HIN network, and almost 23 percent of the region's HIN intersections. Figure 16 highlights the streets and intersections that comprise the HIN in Central Reno/Midtown. Corridors such as Virginia St, Kietzke Ln, Wells Ave, and Mill St make up some of the more dangerous portions of the area's roadway network.

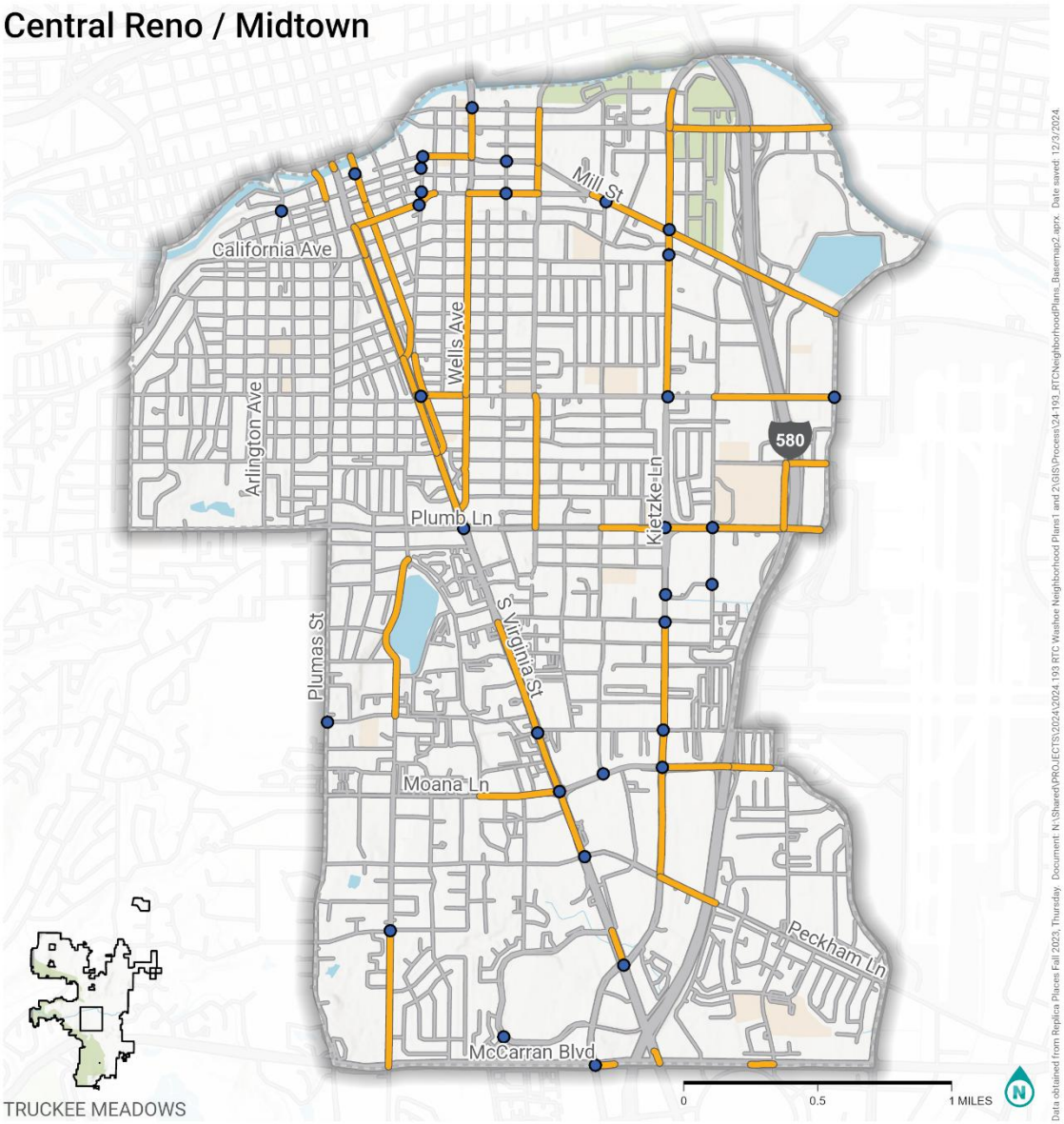


Figure 16 High injury network in Central Reno / Midtown

ATP Interactive Webmap Results

Part of the community engagement effort for the ATP involved providing the public with an interactive web map where they could pinpoint specific locations which were difficult or concerning as a bicyclist or pedestrian (Figure 17). They were also encouraged to mark locations which currently provided good or comfortable facilities. Respondents left a total of 89 comments for the Central Reno/Midtown area. Residents identified 35 bicycle-related issues, 35 pedestrian-related issues, seven network gap issues, and 10 issues related to other mobility deficiencies. Bicycle issues included poor wayfinding, inadequate facilities, poor visibility, and challenging crossings, among others. Pedestrian issues included sidewalk gaps, inadequate and infrequent crossings, and dangerous roadway conditions, among others. Other mobility issues included broader concerns such as confusing intersections and wayfinding, the need for improved transit, and poor roadway design. Several streets were identified as having multiple issues, including Mill St, Plumb Ln, Plumas St, Virginia St, McCarran Blvd, Kietzke Ln, and Wells Ave. In addition to those corridors, two intersections received multiple comments; Virginia St and McCarran Blvd, and Kietzke Ln and Plumb Ln.

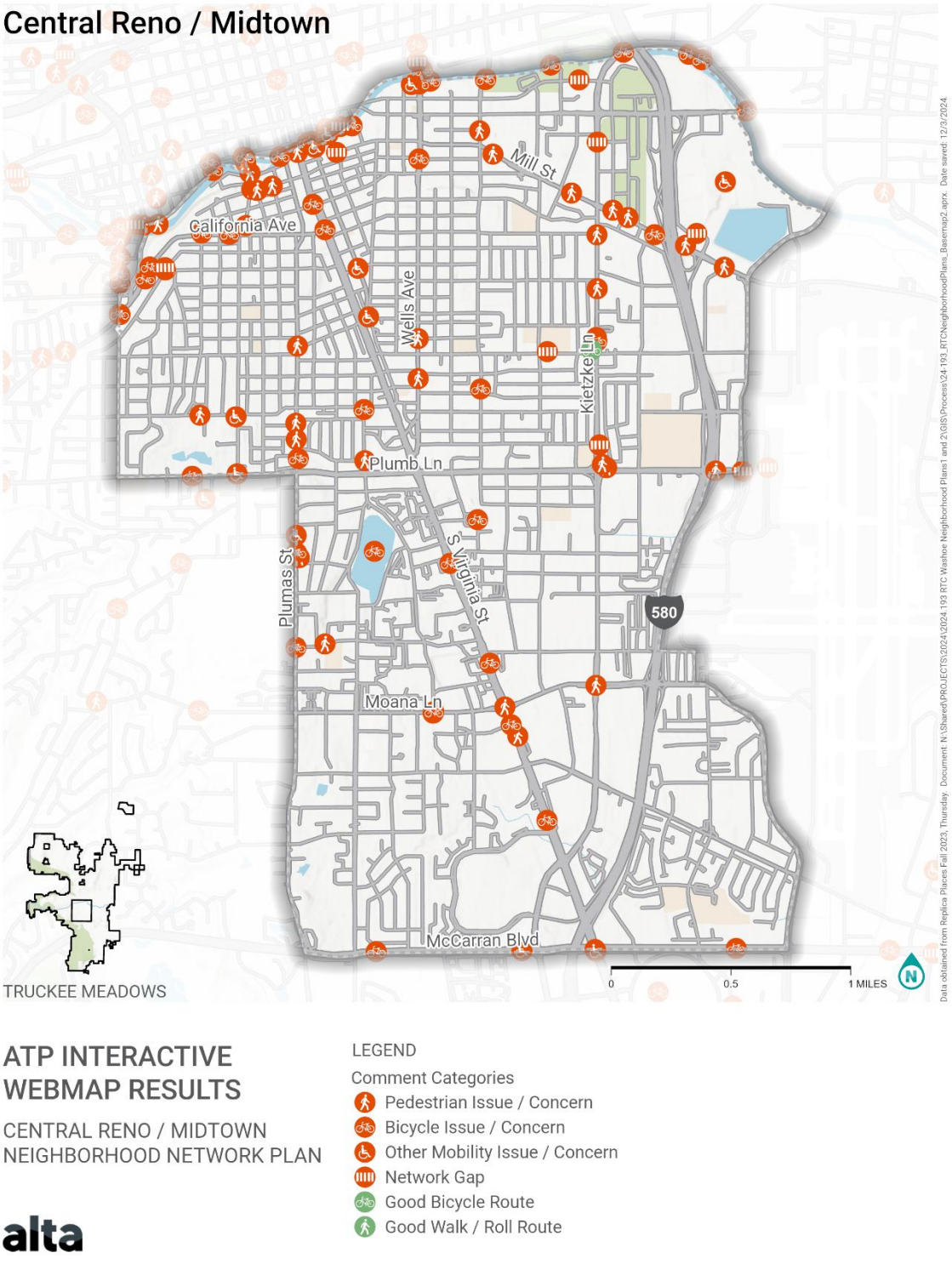


Figure 17 ATP Interactive Webmap comments

Active Trip Demand

Bicycle and Pedestrian Activity

The project team used Replica data to assess the level of walking and biking activity in the area[18]. Based on this data, there are an estimated total of 35,336 daily walking trips (4,628 trips per square mile) and 3,397 daily biking trips (445 trips per square mile) in the Central Reno/Midtown area (Table 8). When looking at the region, there are an estimated 181,779 daily walking trips and 17,035 daily biking trips which comes out to 586 and 55 trips per square mile respectively. This level of activity in the neighborhood represents nearly 20% of walking and biking trips in the region. This highlights the relatively high level and overall density of existing active trips within the Central Reno/Midtown neighborhood, demonstrating a strong demand for active transportation in the community.

Table 8. Estimated Biking and Walking Trips

Mode	Central Reno/Midtown		Reno/Sparks Area
	Total	*% of Total Area*	
Bicycling Trips	3,397	19.9%	17,035
Bicycling Trip Density (per square mile)	445	N/A	55
Walking Trips	35,336	19.4%	181,779
Walking Trip Density (per square mile)	4,628	N/A	586

Active Trip Potential

In addition to understanding where current active transportation trips occur, it is also important to understand which areas have a strong potential for increased active transportation trips. This analysis is accomplished by identifying areas where people take a high number of short vehicle trips. Figure 18 contains data from the RTC travel demand model, highlighting areas with high levels of short vehicle trips. Trips are classified based on their distance, with distance serving as an indicator of the suitability for various mode shifts. Trips under one mile were classified as potential walking trips, trips between one and three miles were classified as potential biking trips, trips between three and six miles were classified as potential e-bike trips, and trips over six miles were considered not suitable for active modes.

[18] Replica Data provides trip estimates based on activity-based travel demand modeling. This data provides a high-level estimate of trips by various modes throughout the area but does not represent recorded trip data.

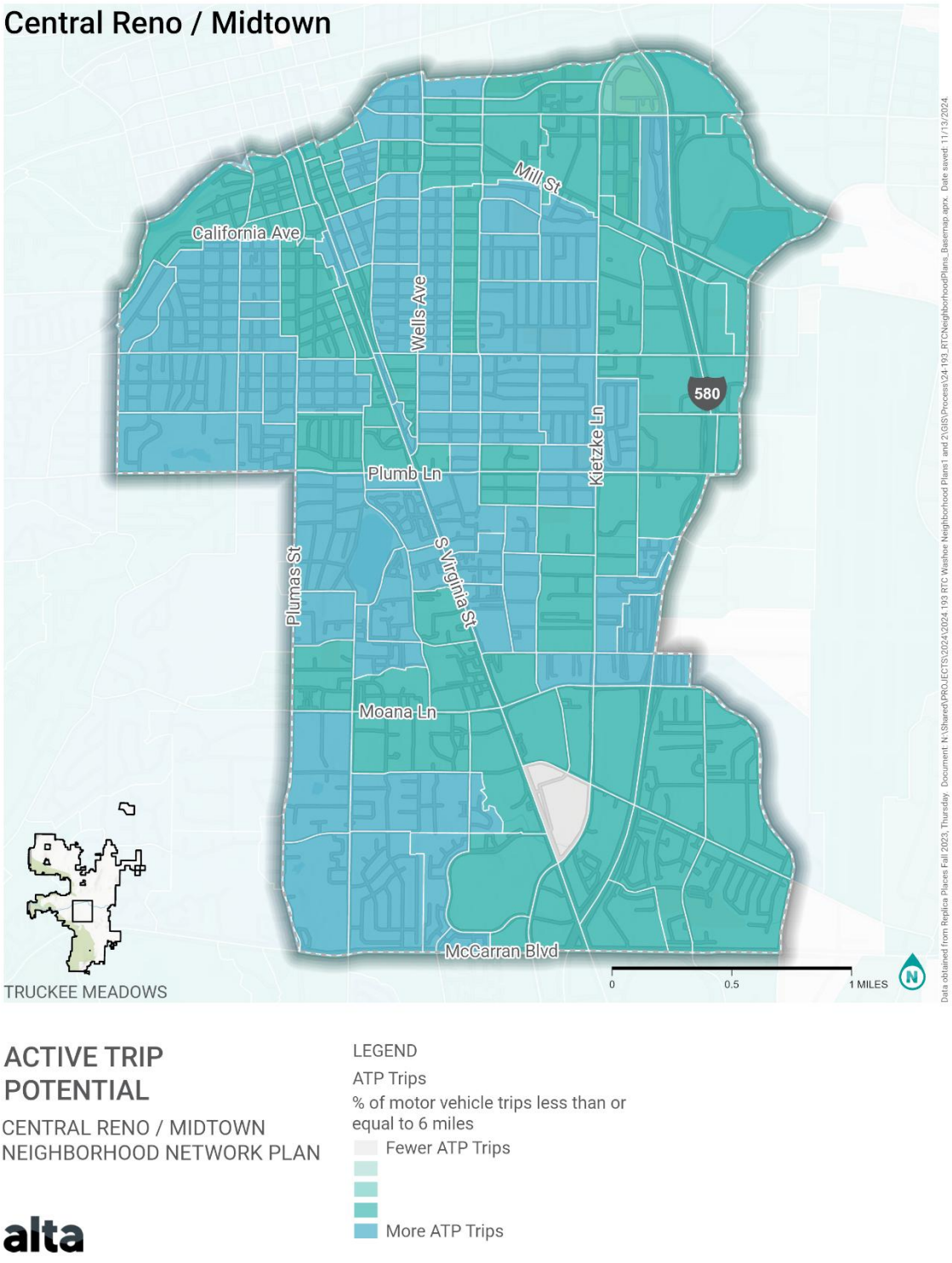


Figure 18 Active trip potential in Central Reno / Midtown

Within the Central Reno/Midtown neighborhood, there are a number of areas that see a high percent of vehicle trips that are less than or equal to six miles, which have the potential to be converted to other modes. South of Moana St, which is an area characterized by ample parks and retail spaces, a majority of the communities' trips fall under six miles, with many seeing nearly half of their trips fall under three miles. Several of the areas bounded by Sharon Wy, Plumas St, Virginia St, and the Truckee River also see high rates of vehicle trips under six miles, with most seeing over half of trips under three miles. Table 9 below shows the estimated total number of trips for the Central Reno/Midtown and Reno/Sparks areas. Central Reno/ Midtown sees ten percent more trips under three miles than the Reno/Sparks area, highlighting the significant potential for increased mode shift in the neighborhood.

Table 9 Percent of daily vehicle trips (Replica Data)

Trip Distance	Central Reno / Midtown		TMSA	
	Estimate	*Percentage*	*Estimate*	*Percentage*
Less than 1 mile	11,453	13.2%	259,087	10.4%
1 to 3 miles	31,224	36.0%	717,325	28.8%
3 to 6 miles	23,721	27.4%	695,067	27.9%
over 6 Miles	20,330	23.4%	820,599	32.9%
Total	86,728	100%	2,492,078	100%

Neighborhood Network Gaps

Active Transportation Gap Analysis

The RTC completed an Active Transportation Gap Analysis as part of the development of the *RTC Washoe Active Transportation Plan.* To identify gaps, the RTC combined the results of several analyses of the Truckee Meadows network, including Bicycle Level of Traffic Stress, Pedestrian Experience, Equity, Active Trip Potential, and the High Injury Network[19]. The analyses were combined by assigning a score to each individual analysis for each road segment (Figure 19). Segments could earn a score between zero and 40, with zero representing a roadway with no gaps and 40 representing a roadway with significant gaps.

The roadway network in Central Reno/Midtown earned an average overall gap analysis score of 23.3, with streets scoring as high as 29.4 and as low as 14.5. Most of the 45 streets earned an average score between 20 and 30. The following 10 streets reported the highest average gap analysis score (Figure 20).

Top Ten Active Transportation Network gaps:

1. Matley Ln (29.4)
2. Kietzke Ln (28.91)
3. Center Street (27.8)
4. S Virginia St (27.78)
5. Moana Ln (27.06)
6. Villanova Dr (27)
7. Vassar St (26.92)
8. Plumb Ln (26.74)
9. Smithridge Dr (26.67)
10. Wells Ave (26.09)

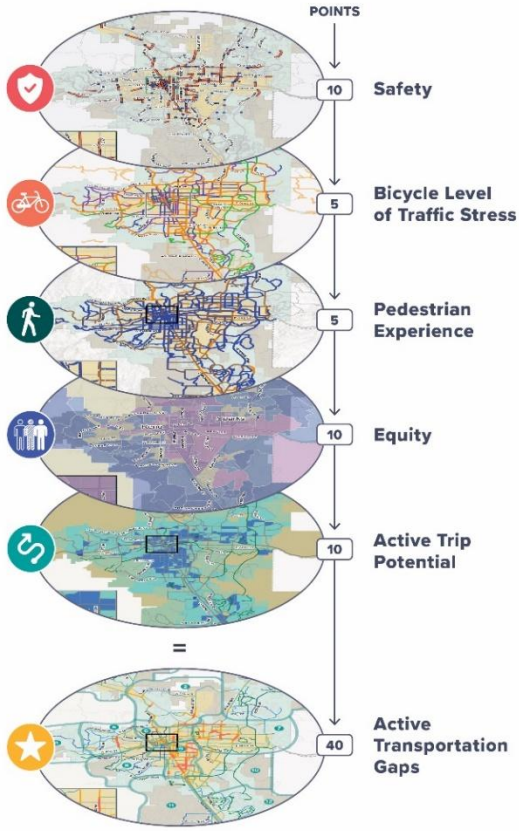


Figure 19. Active Transportation Gap Variables

The highest rated sections of these roadways, shown in red, represent to greatest barriers to active transportation travel in the neighborhood. While the gap analysis identified many of the same corridors that residents did during the ATP Interactive Webmap survey, there were two additional streets that were identified as presenting major challenges for pedestrians and bicyclists. Mill St received eight comments with respondents indicating issues related to a lack of crosswalks, sidewalk gaps, inadequate bicycle infrastructure, and dangerous roadway speeds. Plumas St also received eight comments identifying issues such as sidewalk gaps, inadequate bicycle infrastructure, confusing signage, and a need for additional crossings. It's important to note that Plumas St was also identified by residents as being difficult to cross and travel along while walking and biking but did not fall within the top ten highest active transportation network gaps nor in the regional HIN.

[19] *The term "gap" represents a roadway section that acts as a barrier to active transportation in the region.*

Figure 20 Top 10 highest scoring corridors in Central Reno / Midtown

Neighborhood Profile Summary

The Central Reno/Midtown neighborhood is relatively dense, ethnically diverse, and slightly younger population than the Reno/Sparks area as a whole. When compared to the region, Central Reno/Midtown has some of the highest equity needs in the region with a lower average household income and a higher rate of households with no vehicle access and housing cost burden, especially between Virginia St and Interstate 580. Central Reno/Midtown also contains a wealth of destinations that contribute to its vibrant and dynamic environment. With this wealth of destinations, the neighborhood has a high level of existing biking and walking trips relative to the greater Reno/Sparks area and a high potential for converting short-vehicle trips into active transportation trips. However, with the current active transportation network, residents often struggle to reach these destinations by walking or biking and may be hesitant to shift current short-vehicle trips to an active mode.

The existing transportation network provides different levels of comfort and connectivity for people biking and walking. The majority of bicycle facilities are bike lanes on arterial level roadways and many major roads lack bicycle accommodations. This results in a bicycle network that is largely uncomfortable within the neighborhood and connecting to nearby neighborhoods, as major arterials such as Kietzke Ln, Plumb Ln, S McCarran Blvd, and S Virginia St can act as barriers which are difficult to travel along and challenging to cross for people biking. Some major roadways like S Virginia St, Moana Ln, Greg St, and Kietzke Ln also provide a less comfortable experience for people walking, as sidewalks generally lack a buffer between high-speed and high-volume vehicle traffic and people walking.

Central Reno / Midtown:

38.5%
Hispanic (26.4% region avg.)

35%
More residents housing burdened vs region

23x
Regional housing density

2x
Lack of Vehicle Access

-$22K
Household Income below Region Average

Analysis of crash data also highlights major arterial roadways as safety issues for people walking and biking with fatal and serious injury crashes involving a person walking or biking within the neighborhood being largely concentrated along Kietzke Ln, Virginia St, Mill St, Wells Ave, Moana Ln, and Plumb Ln. Resident comments echoed this analysis, noting several safety concerns while walking or biking, particularly on Mill St, Plumb Ln, Plumas St, Virginia St, McCarran Blvd, Kietzke Ln, and Wells Ave. Additionally, the Virginia St/McCarran Blvd and Kietzke Ln/Plumb Ln intersections were highlighted by residents as particularly concerning.

B

Appendix B: Community Engagement Summary

MEMORANDUM

To: Marquis Williams, Project Manager, RTC Washoe

From: Cole Peiffer, Project Manager, Alta Planning + Design

Date: January 14, 2025

Re: **Neighborhood Network Plan – Phase 1 Community Engagement Summary**

Community Workshop – Boys and Girls Club

Workshop Summary

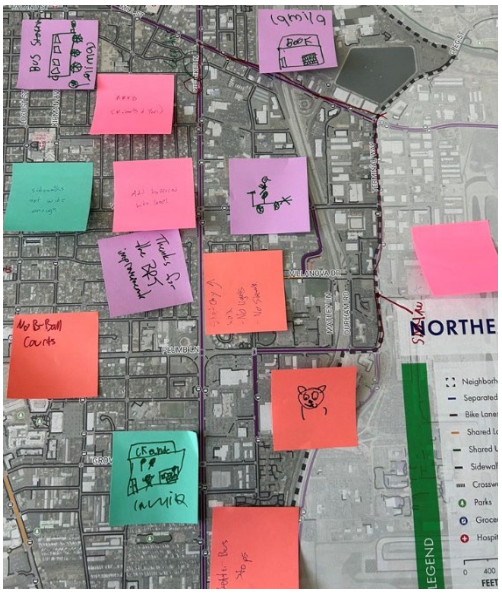
Date	Time	Attendees
Wednesday, November 13th, 2024	5:00-7:00 p.m.	48

The RTC hosted a community engagement workshop for the Central Reno/Midtown Neighborhood Network Plan (NNP). The event was covered by KOLO 8 News and took place at the Boys and Girls Club Carano Facility (1090 Bresson Ave) from 5:00 p.m. to 7:00 p.m. The workshop provided an opportunity for residents to share their input and concerns related to walking, biking, and accessing transit in the neighborhood. Three staff members from RTC and two consultants engaged with approximately 48 participants (21 adults and 27 children). The following summarizes the event and key takeaways:

Event Description:

Cole Peiffer, from Alta Planning + Design, provided a brief presentation outlining the Neighborhood Network Planning process and goals, which is part of the RTC's broader effort to improve active transportation options across the Reno/Sparks area. The Central Reno/Midtown area is the first focus of this effort, with other neighborhoods to follow.

After the presentation, participants were invited to engage in the following activities:



- **Interactive Map Exercise**: Attendees used large, detailed maps of the neighborhood to identify areas of concern related to walking, biking, and transit access. They noted locations of concern by providing feedback directly on maps, highlighting missing infrastructure, and other challenges.
- **Feedback Collection**: In addition to the map exercise, participants were encouraged to provide comments through an interactive online map, available via a QR code they could scan on the flyer given out at the event.
- **Language Support**: To ensure effective outreach and communication with Spanish-speaking attendees, Sierra Rodriguez-Torres from Alta Planning + Design served as a translator. She assisted several Latinx families by summarizing key points from the presentation and guiding them in navigating the online map to submit their feedback.

Key Takeaways:

Participants shared valuable feedback regarding their experiences and challenges when walking and biking in the Central Reno/Midtown area. Below are some of the key themes and concerns that emerged from the workshop and map comments:

- **Crossing Major Roads with Children**: Several attendees noted that crossing major roads with children can be difficult and unsafe, particularly where crosswalks or traffic signals are lacking or not well maintained.
- **Need for Improved Lighting**: A few participants highlighted the need for better street lighting, especially in areas with high foot traffic, to enhance safety during evening hours.

- **Kietzke Lane Gap**: There was strong feedback about the gap in walking and biking infrastructure along Kietzke Lane, which creates a barrier for those wishing to travel along this major corridor.

- **Sidewalk Gaps**: Missing sidewalks, particularly on residential streets, were a major concern. Attendees indicated that the lack of continuous pedestrian pathways makes walking in some areas unsafe or impractical.
- **Desire for Better Bike Connectivity**: Participants expressed interest in improving bike connections to key destinations, such as parks, schools, and commercial centers, as well as creating safer routes for bicyclists, especially on busy streets.
- **Traffic Speed and Safety Concerns**: Some residents mentioned concerns about high traffic speeds, particularly in areas near schools or parks, where increased traffic calming measures could improve safety for pedestrians and cyclists.

Next Steps:

The feedback from this workshop will be used to inform the development of the Neighborhood Network Plan for Central Reno/Midtown, focusing on the identification of key safety improvements, infrastructure gaps, and opportunities for enhanced active transportation options. The RTC will continue to gather public input through additional pop-up meetings in December and through the interactive online map, which will remain open for comments through December.

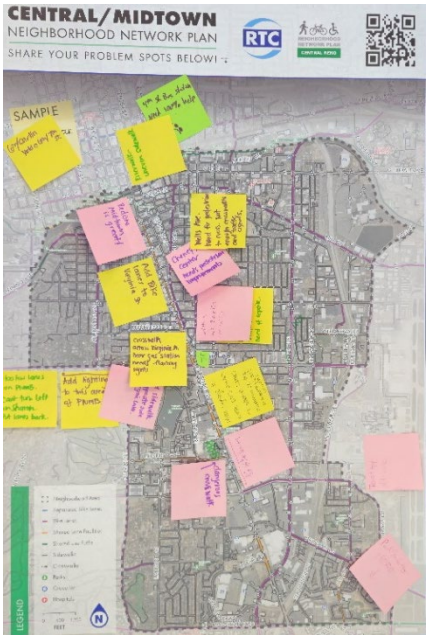
MEMORANDUM

Community Pop-Up 1: Reno Public Market

Pop-Up Summary

Date	Time	Attendees
Thursday, December 5th, 2024	5:00-7:00 p.m.	18

The RTC hosted a pop-up event at the Reno Public Market at 299 East Plumb Lane from 5:00 – 8:30 p.m. The pop-up event coincided with the venue's weekly Trivia Night and was covered by KOLO 8 News. The event featured two tables with flyers, giveaways, and a large map where attendees could leave feedback on where gaps exist for pedestrian and cycling infrastructure. Three staff members from RTC and three consultants engaged with approximately 18 people who shared their thoughts and suggestions for the neighborhood.



Facility Improvements

Lighting: Improved lighting was a key request for safety, especially at night.

Pedestrian Improvements: More crosswalks, visible pedestrian signals, and better infrastructure were suggested for high-traffic areas like Wells Avenue and Virginia Street.

Bike Lanes: Support for adding bike lanes on Virginia Street and in the Riverwalk area, with a focus on safer routes in alleyways.

Sidewalks: Requests for better sidewalk conditions in areas like Riverwalk, Midtown, Cheney/Center, and West Plumb.

Barriers

Lighting & Crosswalks: Insufficient lighting and unsafe crosswalks were major barriers.

Traffic Speeds: High vehicle speeds on streets like Virginia Street and Wells Avenue made walking and biking unsafe.

Alleyways: Disrepair in alleyways, especially near Wells District, limited bike access.

MEMORANDUM

Community Pop-Up 2: Reno-Sparks Convention Center

Pop-Up Summary

Date	Time	Attendees
Saturday, December 7th, 2024	10:00am-1:00p.m.	70

The RTC hosted a pop-up event at the Reno-Sparks Convention Center on December 7, 2024, coinciding with Jurassic Quest and the Magic of Santa Craft Faire. The event featured two tables with flyers, giveaways, and a large map for attendees to leave feedback about pedestrian and cycling infrastructure. Three staff members from RTC and two consultants engaged with approximately 70 people who shared their thoughts and suggestions for the neighborhood.

Facility Improvements

Lighting: Many attendees requested better lighting, especially for safety at night.

Pedestrian Improvements: There were calls for more RRFBs, crosswalks, and pedestrian signals in areas like Yori Park and other high-traffic locations.

Bike Lanes: Requests included improved bike lanes, especially on Arlington and the bike path from Lake St. to Greg St., with concerns about safety due to traffic and homelessness.

Stop Signs: One suggestion was adding stop signs near Yori Park for safer access.

Barriers

Lighting & Safety: Lack of lighting and unsafe paths, particularly along the bike path by the river, were concerns for many attendees.

Traffic: High traffic speeds and congestion, especially near Yori Park and the bike path, were identified as barriers for pedestrians and cyclists.

Homelessness & Disrepair: Concerns about homelessness, garbage, and disrepair on bike paths, especially from Lake St. to Greg St., were highlighted as safety issues.

Virtual Public Comment Map Summary

In addition to capturing comments on large detail maps during in-person events, comments were also received through a virtual public comment map from mid-November to December 20, 2024. Participants provided a total of 285 comments along with a total of 653 'like' votes for different comments. This section highlights the major takeaways from the map.

Pedestrian Safety & Infrastructure:

1. **Crosswalk Safety**: Several comments emphasize the need for better crosswalk infrastructure, including light-up signs, pedestrian refuges, better visibility, and traffic signals that prioritize pedestrians.
2. **Lighting Issues**: Poor street lighting, particularly in high-traffic areas or near bus stops, is a recurring concern for pedestrian safety.
3. **Sidewalks & Pathways**: There are calls for wider, more accessible sidewalks, particularly for wheelchairs and strollers, and improved connections for pedestrians, especially near hospitals, schools, and transit hubs.
4. **Traffic Calming**: High-speed vehicle traffic is a common issue, with requests for traffic calming measures such as roundabouts, stop signs, and road re-designs to make streets safer for pedestrians.

Cycling Infrastructure:

1. **Lack of Bike Lanes**: Numerous comments highlight areas where bike lanes are either missing, inconsistent, or inadequate, urging for safer, continuous bike lanes, especially on popular routes (e.g., Vassar Street, 4th Street, Market Street).
2. **Bike Lanes Conflict**: Bicyclists are often forced to share lanes with fast-moving vehicles, parked cars, or pedestrians, creating unsafe conditions.
3. **Better Bicycle Amenities**: There are calls for more bike racks, bike-friendly signage, and protected bike lanes, as well as clear bike lane transitions at key intersections.
4. **Integrated Bike Paths**: Many suggest creating or extending connected bike paths, particularly along the Truckee River, and improving access to key destinations such as Midtown, the airport, and shopping areas.

Transit & Multi-modal Connectivity:

1. **Public Transit Accessibility**: Several comments focus on the need for better bike and pedestrian access to public transportation hubs, like bus stops and train stations.
2. **Connectivity Gaps**: There is a desire for better links between neighborhoods, including creating bike and pedestrian pathways that connect key areas and eliminate gaps in the network.
3. **Micromobility Concerns**: Issues around access and infrastructure for micromobility (e.g., scooters, electric bikes) are noted, particularly in areas with no clear paths for these users or confusing intersections.

Urban Design & Traffic Flow:

1. **Road Diets**: Suggestions to reconfigure roads to prioritize pedestrians and cyclists, with wider sidewalks and bike lanes, and fewer lanes for cars in certain areas.
2. **High-Volume Roads**: Several high-speed roads are highlighted as barriers to safe pedestrian and bike travel, with suggestions to slow traffic and redesign streets for mixed use.
3. **Improving Intersections**: Many comments mention problematic intersections, particularly for cyclists and pedestrians, with requests for safer crossings, bike boxes, and clearer signage.

Specific Location Issues:

1. **Key Areas for Improvement**: There are mentions of specific streets and intersections, such as **Plumb Lane**, **Virginia Street**, **Wells Avenue**, and **South Wells Avenue**, which are seen as critical for improvement in terms of safety, connectivity, and multimodal infrastructure.
2. **Traffic Signals & Timing**: Problems with signal timing, particularly for cyclists (e.g., sensors that don't detect bikes), and poor pedestrian signal setups that lead to long waits or unsafe crossing conditions.

Long-term Planning & Infrastructure Expansion:

1. **Bike and Pedestrian Path Expansion**: Comments advocate for completing long-planned bike and pedestrian routes, such as the Truckee River Path, Gateway Park, and the

Peckham Bikeway, as well as creating new paths like the Vassar/Kietzke Bikeway and Manzanita Park Path.

2. **Multimodal Integration**: Several comments propose multimodal solutions, including roundabouts, shared-use paths, and connections to public transportation, aimed at improving overall connectivity for both vehicles and non-motorized users.
3. **Public Space Activation**: Some comments suggest turning underutilized spaces (like old railway areas or parking lots) into more pedestrian-friendly areas or commercial spaces that integrate cycling and walking infrastructure.

Comments that received the most votes include but aren't limited to:

1. **Dangerous Conditions for Bicycles**
    - *"Dangerous area for bikes as cars speed through to get to Liberty and drive in the bike lane like it's a driving lane."* (At the crossing of W Liberty St and S Virginia St.)
        - **11 votes**
    - *"People park in the bike lane here."*

      (On S Virginia St. between Court St. and W 1st St)
        - **12 votes**
    - *"Everyone drives in the bike lane here."*

      (On S Arlington St between W. Liberty St and California Ave)
        - **15 votes**
    - *"Literal death wish if entering Midtown from north of this intersection on a bike. Lovely merge into the car lane, but cars will force you onto the curb because they don't register your existence. Reckless driving all over this intersection because it incentivizes bad driving."* (**Same area as above**)
        - **11 votes**
    - *"Protected bike lanes are needed."* (**Same area as above**)
        - **11 votes**
2. **Pedestrian Safety Concerns**
    - *"Vehicles using the roundabout tend to not stop for pedestrians at this crossing and have had several vehicles hop onto the sidewalk."*

(Roundabout at S Center St and S Virginia St)

- **13 votes**

- *"Crossing Plumas anywhere around here is impossible with the fast speeds and parked cars blocking visibility*." (Near Plumas Park, Walker Ave and Martin St)

- **15 votes**

3. **Traffic and Speed Issues**

- *"Absolute highway madness on this slalom. I take the left edge of the right lane to keep cars from straddling lanes and killing me. Also, taking the right side of the right lane means you are invisible around the corner, and everyone drives about 40mph here."* (Plumas St. near California Ave)

- **13 votes**

- *" This has to be the most dangerous intersection in Midtown. Needs traffic calming, preferably a speed bump, but at least significantly narrower lanes. Just paint a bicycle gutter down Plumas, there's tons of space for it already."*

(Crossing at Plumas St and St. Lawrence St.)

- **14 votes**

Overall, the comments that were received reflect a strong desire for safer, more accessible infrastructure for pedestrians, cyclists, and micromobility users, along with a focus on improving connectivity, reducing traffic speeds, and better integrating multimodal transportation options.

Appendix C: Walk Audit Findings

Central Reno / Midtown Walking Audit Findings

Legend

- Limited Access to Destination
- Speeding Vehicles
- Parks

Disclaimer:
The findings included here represent the input collected during an in-person cross-discipline planning-level review of select corridors and intersections in Reno, NV. This effort did not include the collection of vehicle speed data or analysis of night-time lighting conditions. Additional analysis may be required when identifying specific improvements.

NEIGHBORHOOD NETWORK PLAN
CENTRAL RENO

RTC alta

Key Takeaways : Greg St

Participants observed and suggested the following:
- Due to speeding vehicles, the crosswalk at 21st Street and Greg Street is diffcult to navigate.
- Enhancing access to the Truckee River Path to create a clearer connection to the path through increased wayfinding and crossing infrastructure to support trail connectivity.

Central Reno / Midtown Walking Audit Findings

Legend

- Sidewalk Obstruction
- Widen Sidewalk
- Lighting Needed
- Limited Access to Destination
- Wayfinding Needed
- Landscaping Needed
- Road Diet
- Parks

Disclaimer:
The findings included here represent the input collected during an in-person cross-discipline planning-level review of select corridors and intersections in Reno, NV. This effort did not include the collection of vehicle speed data or analysis of night-time lighting conditions. Additional analysis may be required when identifying specific improvements.

NEIGHBORHOOD NETWORK PLAN
CENTRAL RENO

RTC alta

Key Takeaways : Kietzke Ln / Battle Born Wy

Participants observed and suggested the following:

- There is limited access to the Truckee River Path in this section which could be addressed with enhanced wayfinding and crossing facilities.
- A reduction of vehicle lanes by adding landscaping, widening sidewalks, and addressing sidewalk obstructions.
- Increased lighting under the I-580 bridge is needed.

Central Reno / Midtown Walking Audit Findings

Legend

- Unsafe Biking Conditions
- Change Lane Design
- Landscaping Needed

Disclaimer:
The findings included here represent the input collected during an in-person cross-discipline planning-level review of select corridors and intersections in Reno, NV. This effort did not include the collection of vehicle speed data or analysis of night-time lighting conditions. Additional analysis may be required when identifying specific improvements.

NEIGHBORHOOD NETWORK PLAN
CENTRAL RENO

RTC alta

Key Takeaways : Kietzke Ln / McCarra Blvd

Participants observed and suggested the following:

- McCarran Blvd and Kietzke Ln intersection is uncomfortable for people walking or biking.
- Reconfigure right turn lanes to reduce vehicle speeds and increase separation for people walking and biking.
- A landscaped buffer would increase pedestrian and bicycle comfort

Central Reno / Midtown Walking Audit Findings

Legend

- Unsafe Biking Conditions
- Change Parking
- Crosswalk Repainting
- Sidewalk Obstruction
- Widen Sidewalk
- Lighting Needed
- Poor Bus Stop Access / Comfort
- Remove Parking
- Road Diet

Disclaimer:
The findings included here represent the input collected during an in-person cross-discipline planning-level review of select corridors and intersections in Reno, NV. This effort did not include the collection of vehicle speed data or analysis of night-time lighting conditions. Additional analysis may be required when identifying specific improvements.

NEIGHBORHOOD NETWORK PLAN
CENTRAL RENO

RTC alta

Key Takeaways : Kietzke Ln / Mill St

Participants observed and suggested the following:

- Removing parking on this arterial to make biking safer and improve transit stop accessibility.
- Left turns for bicyclists at Mill Street are difficult.
- Crossing enhancements could include repainted crosswalks, lighting, and upgrades to a Pedestrian Hybrid Beacon at Roberts St.

Central Reno / Midtown Walking Audit Findings

Legend

- Unsafe Biking Conditions
- Crosswalk Needed
- Landscaping Needed
- High Vehicle Speeds

Disclaimer:
The findings included here represent the input collected during an in-person cross-discipline planning-level review of select corridors and intersections in Reno, NV. This effort did not include the collection of vehicle speed data or analysis of night-time lighting conditions. Additional analysis may be required when identifying specific improvements.

NEIGHBORHOOD NETWORK PLAN
CENTRAL RENO

RTC alta

Key Takeaways : Kietzke Ln / Moana Ln

Participants observed and suggested the following:

- Bike lane ends near the Moana Lane intersection leaving bicyclists in an uncomfortable mixing zone.
- Need for a mid-block crossing between Moana Lane and Peckham Lane.
- A landscaped buffer between high speed vehicles and people walking would enhance pedestrian comfort.

Central Reno / Midtown Walking Audit Findings

Legend

- Change Lane Design
- Crosswalk Needed
- Pedestrian Signal Change
- Landscaping Needed
- RRFB Needed
- Remove Porkchop Island
- Vehicles Not Yielding
- Missing Sidewalks
- Schools

Disclaimer:
The findings included here represent the input collected during an in-person cross-discipline planning-level review of select corridors and intersections in Reno, NV. This effort did not include the collection of vehicle speed data or analysis of night-time lighting conditions. Additional analysis may be required when identifying specific improvements.

NEIGHBORHOOD NETWORK PLAN
CENTRAL RENO

RTC alta

Key Takeaways : Plumb Ln / Kietzke Ln

Participants observed and suggested the following:

- Kietzke Lane lacks sidewalks and sufficient lighting north of Plumb Lane.
- Address right-turn safety by removing pork-chop islands or adding enhanced crossings with RRFBs in channelized right turns.
- Upgrading the RRFB between Margrave Dr and Apple St to a PHB to enhance pedestrian safety.

Central Reno / Midtown Walking Audit Findings

Legend

- Bike Lane Needed
- Comfortable Walking / Biking Conditions
- Missing Sidewalk
- Sidewalk Obstruction
- Bike Lane Needed
- Parks

Disclaimer:
The findings included here represent the input collected during an in-person cross-discipline planning-level review of select corridors and intersections in Reno, NV. This effort did not include the collection of vehicle speed data or analysis of night-time lighting conditions. Additional analysis may be required when identifying specific improvements.

NEIGHBORHOOD NETWORK PLAN
CENTRAL RENO

RTC alta

Key Takeaways : Plumb Ln / Virginia St

Participants observed and suggested the following:

- The landscaped buffer on the south side of Plumb Lane between Virginia Street and Kirman Avenue created a comfortable pedestrian environment.
- The bike lane on Plumb Lane should be extended east between Virginia Street to Kietzke Lane.

Central Reno / Midtown Walking Audit Findings

Legend

- Bike Parking Needed
- Bulb-outs Needed
- Change Lane Design
- Change Parking
- Crosswalk Needed
- Lighting Needed

Disclaimer:
The findings included here represent the input collected during an in-person cross-discipline planning-level review of select corridors and intersections in Reno, NV. This effort did not include the collection of vehicle speed data or analysis of night-time lighting conditions. Additional analysis may be required when identifying specific improvements.

NEIGHBORHOOD NETWORK PLAN
CENTRAL RENO

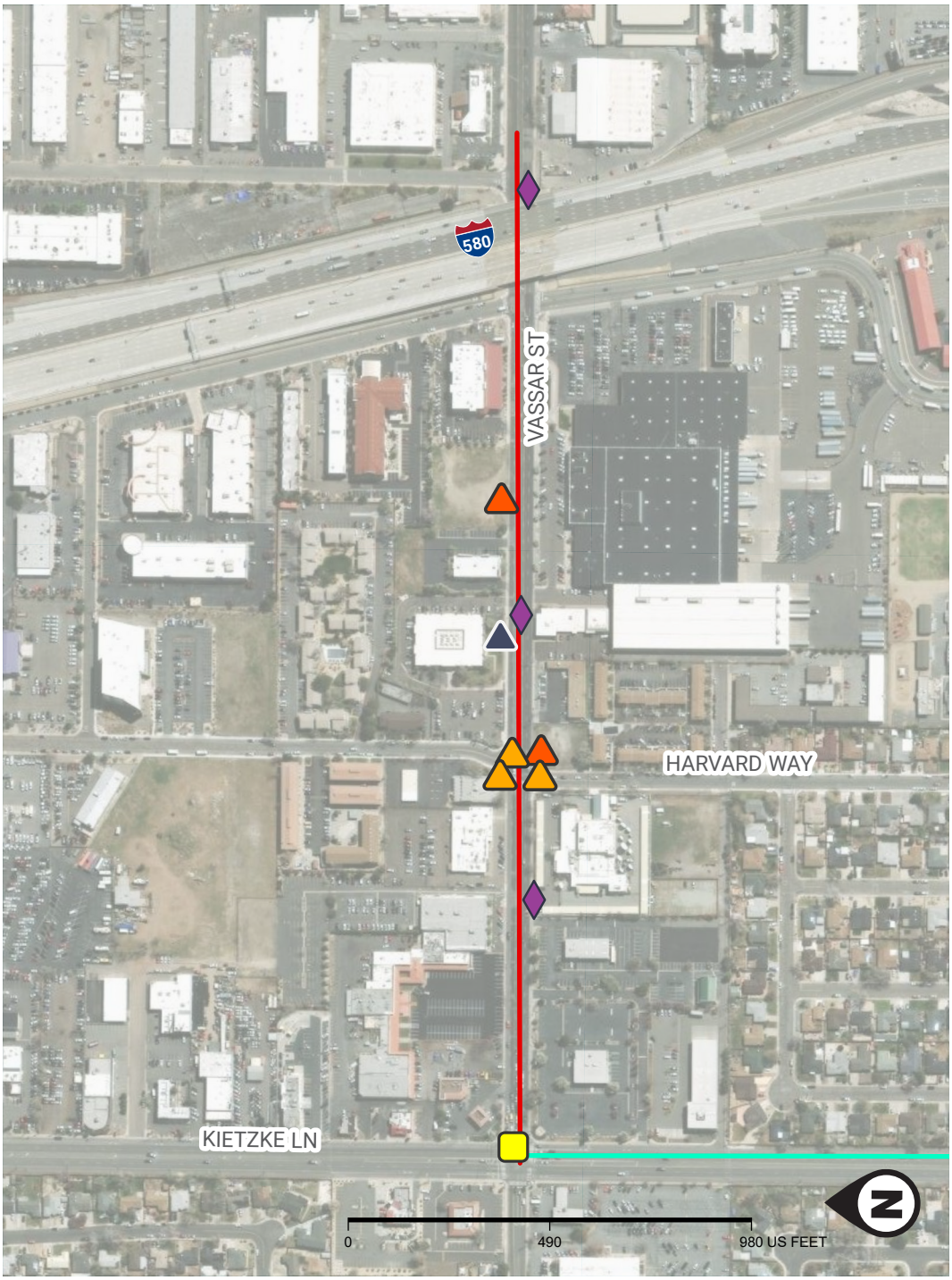
RTC alta

Key Takeaways : Sierra St / Plumas St

Participants observed and suggested the following:

- Consolidating lanes on Sierra St and Plumas St may help address uncomfortable weaving issues between California Ave and Marsh Ave.
- Enhance crossings on Plumas St at Marsh Ave and Saint Lawrence Ave.
- Need for increased bike parking options along California Ave.

Central Reno / Midtown Walking Audit Findings



Legend

- Bike Detection Needed
- Change Lane Design
- Missing Sidewalk
- Pedestrian Signal Change
- Sidewalk Obstruction
- High Speeds
- Missing Sidewalks

Disclaimer:
The findings included here represent the input collected during an in-person cross-discipline planning-level review of select corridors and intersections in Reno, NV. This effort did not include the collection of vehicle speed data or analysis of night-time lighting conditions. Additional analysis may be required when identifying specific improvements.

NEIGHBORHOOD NETWORK PLAN
CENTRAL RENO

RTC alta

Key Takeaways : Vassar St

Participants observed and suggested the following:

- Excess roadway capacity increases speeds in this section making the street feel uncomfortable.
- Buffered bike lanes to increase increase the level of comfort.
- This roadway has numerous sidewalk gaps and multiple sidewalk obstructions, which makes walking feel uncomfortable.
- Increased pedestrian crossing times at Harvard Way to support student crossings.

Central Reno / Midtown Walking Audit Findings

Legend

- Unsafe Biking Conditions
- Change Lane Design
- Comfortable Walking / Biking Conditions
- Sidewalk Obstruction
- Landscaping Needed
- Schools
- Parks

Disclaimer:
The findings included here represent the input collected during an in-person cross-discipline planning-level review of select corridors and intersections in Reno, NV. This effort did not include the collection of vehicle speed data or analysis of night-time lighting conditions. Additional analysis may be required when identifying specific improvements.

NEIGHBORHOOD NETWORK PLAN
CENTRAL RENO

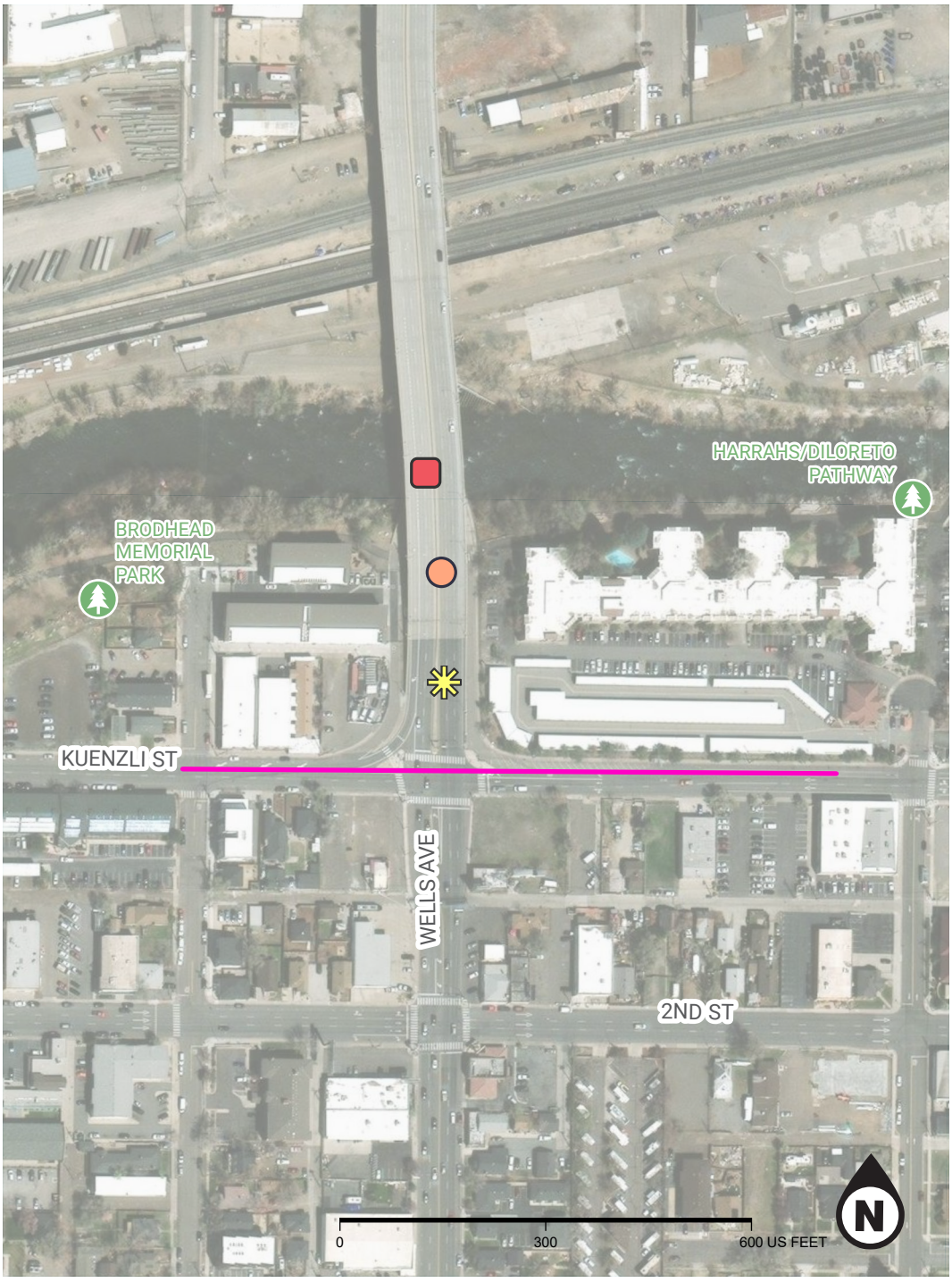
RTC alta

Key Takeaways : Virginia St / Moana Ln

Participants observed and suggested the following:

- Landscaped sidewalk buffer on the south side of Moana Ln creates a comfortable pedestrian environment.
- There are multiple sidewalk obstructions on Moana Ln west of Virginia St
- The westbound bike lane ends at Baker Ln creating uncomfortable condition for people biking.

Central Reno / Midtown Walking Audit Findings



Legend

- Unsafe Biking Conditions
- Lighting Needed
- Limited Access to Destination
- Bike Lane Needed
- Parks

Disclaimer:
The findings included here represent the input collected during an in-person cross-discipline planning-level review of select corridors and intersections in Reno, NV. This effort did not include the collection of vehicle speed data or analysis of night-time lighting conditions. Additional analysis may be required when identifying specific improvements.

NEIGHBORHOOD NETWORK PLAN
CENTRAL RENO

RTC alta

Key Takeaways : Wells Ave Bridge

Participants observed and suggested the following:

- Kuenzli Ln bike lanes end at Wells Ave and do not continue to the west.
- Poor existing connectivity to the Truckee River Path may be addressed through enhanced wayfinding, lighting, and removal of access point obstructions such as gating / fences.

Appendix D: Recommendation Scenarios

MEMORANDUM

To: Marquis Williams, Project Manager, RTC Washoe

From: Cole Peiffer, Project Manager, Alta Planning + Design

Date: January 31, 2025

Re: DRAFT Recommendation Scenario Development and Comparison – Central Reno/Midtown

Introduction

This document outlines the process for developing recommendation scenarios for the Central Reno/Midtown neighborhood area for the RTC Washoe Neighborhood Network Plan program. This memo highlights the approach used and facilities considered while developing recommendations, describes each of the three scenarios, and provides a comparison between all three for RTC's consideration and selection of a preferred alternative.

Recommendation Development Approach

Addressing Identified Needs

Alta analyzed multiple datasets from the recent Active Transportation Plan (ATP) in combination with public input to identify the key barriers to active transportation throughout the neighborhood. Based on this finding, the project team focused on addressing identified needs whenever possible through this plan. The project team first focused on addressing the largest barriers on larger roadways; however, many of these roadways were not strong candidates for quick-build projects due to current traffic volumes, significant levels of driveways, and complex operational challenges that go beyond the scope of quick-build projects (e.g., Kietzke Lane). In these instances, the project team identified proximate roadways that would be better candidates for quick-build improvements while still providing network benefits.

Some larger roadways identified as strong candidates for quick-build improvements include roadways that may be reconfigured within the existing roadway space to provide more comfortable connections for people walking and biking while maintaining vehicle connectivity and access.[1] These include roadways such as 2nd Street, Plumas Street, and Vassar Street.

The project team then reviewed the roadway network to create a denser network within the neighborhood by creating "neighborhood byways." These facilities (see more detailed description below) provide a low-stress traffic-calmed connection on residential type streets while maintaining on-street parking. These facilities are intended to provide connections to destinations within the neighborhood such as schools, parks, hospitals, and others.

[1] *It is important to note that quick-build improvements can vary significantly based on the materials used, total time installed, and maintenance needs. More detail on the assumed installation type for each facility is included below in the Facilities section.*

Furthermore, the project team focused on creating scenarios that generally fit within the RTC's estimated budget for quick-build improvements over the next five years. Proposed scenarios may need to be further refined based on budget considerations and available funding streams.

Scenario Themes

Each scenario follows a general theme to differentiate between scenarios and provide variability in the selection process; however, some projects are included in multiple scenarios based on their integral nature within the Central Reno/Midtown network (e.g., Casazza Drive).

Facilities

The facility types included in the recommendation development process are primarily quick-build style improvements that can be implemented relatively quickly with minimal costs as they do not require moving curb lines or traffic signals. Facilities considered during the development of recommendations are categorized below as corridor improvements or intersection/midblock crossing improvements.

Corridor Improvements

Improvements along the corridor help to expand the bicycling network and create more traffic-calmed streets within the neighborhood. The facility types include the following:

1. Neighborhood Byway – Low-speed and low-stress connections that are traffic calmed using speed humps and curb extensions. These traffic-calming measures help maintain low speeds and volumes of vehicles to create a scenario where people biking can comfortably share space with people driving. This improvement assumes the application of traffic calming through speed humps, speed cushions, and curb extensions.

Figure 1. Neighborhood Byway Example

2. Bike Lane – Bike lanes provide dedicated space for bicycle travel adjacent to vehicle traffic, which enables people biking to ride at their preferred speed. This facility is separated from vehicle traffic by a painted lane line or buffer. Quick-build bike lanes look similar to standard bike lanes.

Figure 2. Bike Lane Example

3. Buffered Bike Lane – This enhanced bike lane provides increased separation between people biking and people driving through a striped buffer, which creates a more comfortable environment for people biking. Quick-build buffered bike lanes look similar to standard buffered bike lanes.

4. Protected Bike Lane – The most comfortable on-street facility type for people biking, this facility provides a physical barrier between people walking and people driving with concrete parking stops, planters, parking, or other physical barriers. In a quick-build setting, barrier treatments are not intended to be permanent and may vary significantly based on costs, maintenance needs, and planned installation timing. For this effort, the project team assumed a painted buffer with flex-posts for protection.

5. Change to Two-Way – This recommendation type does not include providing a bicycle facility but instead is focused on the overall transportation network operations. This recommendation focuses on Kirman Avenue in Scenario 1 and considers transitioning Kirman Avenue to two-way operations in conjunction with the improvement on Locust Street.

Figure 3. Buffered Bike Lane Example

Figure 4. Protect Bike Lane Example

Intersection/Midblock Crossing Improvements

Intersections and midblock crossing locations are key areas for improvements to reduce vehicle speeds where people walking and biking interact with people driving. These improvements are focused along or near recommended corridor improvements. The improvements considered at intersections and midblock crossings include the following:

1. Pedestrian Hybrid Beacon (PHB) – This pedestrian-activated flasher improves crossings at unsignalized intersections or midblock crossings on major streets. PHBs include a signal head with two red lenses over a single yellow lens.

2. Rectangular Rapid Flashing Beacon (RRFB) – This pedestrian-activated flasher improves crossings at unsignalized intersections or midblock crossings on single or multi-lane roadways. This includes flashing amber lights which alert drivers to the person crossing. RRFBs are typically installed on roadways up to 35 mph.

Figure 5. Pedestrian Hybrid Beacon (PHB) Example

Figure 6. Rectangular Rapid Flashing Beacon (RRFB)

3. High-Visibility Crosswalks – This crosswalk type includes thick white bars to increase driver awareness to the crossing. This crosswalk design has been shown to increase driver awareness compared to the standard crosswalk design with two parallel white lines on the outside of the crosswalk.

4. Curb Extensions – This improvement reduces the total crossing distance for people walking, reduces speed of turning vehicles and increases pedestrian visibility at the crosswalk.

5. Raised Crosswalks – This improvement brings the crosswalk up to sidewalk level to increase pedestrian visibility and reduce vehicle speeds as they travel over the raised crosswalk. These are typically installed on lower-volume/lower-speed roadways.

6. Leading Pedestrian Interval (LPI) – This provides people walking with a 3- to 7-second head start when crossing at a signalized intersection by showing the walk symbol while people driving have a red light. This helps make pedestrians more visible at intersections and improves pedestrian safety.

7. Bicycle Wayfinding – Signage to indicate distance and direction to key destinations along a bike corridor, or within the network to help bicyclists stay on the most comfortable streets. This improvement was indicated in transition areas where riders may benefit from directional signage.

8. Bicycle Cut-Through – This is a type of modal filtering which modifies the existing median to provide bicyclists with a small opening to enable them to continue straight. This creates a more direct network for people biking with minimal impact to the overall roadway.

Figure 7. High Visibility Crosswalk Example

Figure 8. Quick-Build Curb Extensions Example

Figure 9. Quick-Build Raised Crosswalk Example

Figure 10. Leading Pedestrian Interval Example

9. Bicycle Jug Handle – This improvement provides a turn pocket for people biking, which allows them to stay out of the bike lane while waiting for a gap in traffic to cross the street.

10. Bike Box – An area at the front of a traffic lane at signalized intersections where people biking can wait ahead of vehicles to make left turns more easily. This makes bicyclists more visible, reduces delays for bicyclists, and helps keep vehicles from encroaching into crosswalks.

11. Pedestrian Median Refuge – A dedicated space for pedestrians to wait when crossing multi-lane roadways this dedicated space helps improve safety for people crossing at intersections.

Figure 11. Bike Cut Through Example

Figure 12. Bicycle Jug Handle Example

Figure 14. Pedestrian Median Refuge Island Example

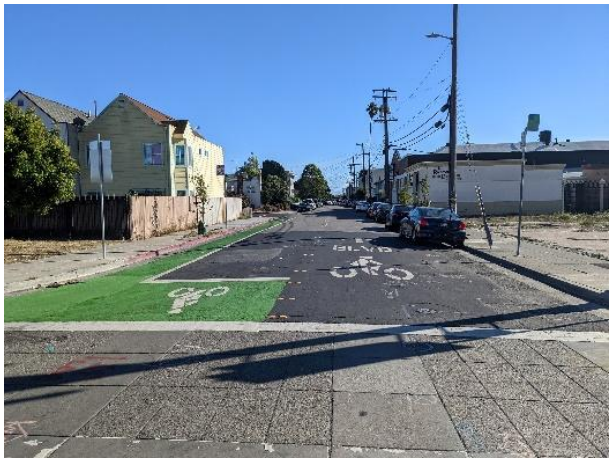


Figure 13. Bike Box Example

Recommendation Scenarios

This section highlights the recommendation scenarios for the Central Reno/Midtown neighborhood. Each scenario description includes an overview of the scenario theme, a project table with a rationale for each project, and a table showing all improvements included in the scenario. Projects are mapped for each scenario following the corresponding description and data.

Scenario 1

Theme: Connecting North–South

Description: Scenario 1 provides increased connectivity across the neighborhood with a focus on north/south connections with regular east–west connections. Public comments and our analysis highlighted the need for increased connectivity throughout the neighborhood, especially connecting north–south between Kietzke Lane and Plumas Street. This scenario focused on increasing connections from the Truckee River Path to McCarran Boulevard and targets improvements within the highest equity need portion of the neighborhood. This scenario includes nearly **13 miles of corridor improvements** with **30 identified improvements** at 23 specific intersections with a total planning level estimate of **$5.66 million** (Table 1).

Table 1. Scenario 1 Recommendations

Scenario 1 Recommendations			
Corridor Improvement Type	**Miles**	**Cost**	
Buffered/Protected Bike Lane	1.7	$	1,059,594
Buffered Bike Lane	1.5	$	396,223
Change to Two-Way	1.1	$	30,000
Neighborhood Byway	8.6	$	1,919,309
Sub-Total	12.9	$	3,405,126
Intersection Improvement Type	**Number**		**Cost**
Curb Extensions	19	$	133,000
Bicycle Jug Handle	1	$	15,000
High-Visibility Crosswalk	4	$	24,000
Rectangular Rapid Flashing Beacon (RRFB)	3	$	135,000
Pedestrian Hybrid Beacon (PHB)	3	$	1,950,000
Sub-Total	30	$	2,257,000
Total		$	5,662,126

Corridor and intersection improvements are shown in Figure 15. It's important to note that intersection improvements have been consolidated on the map legend for simplicity; a full list of the intersection improvements are included in Appendix A.

Recommendation Scenario 1

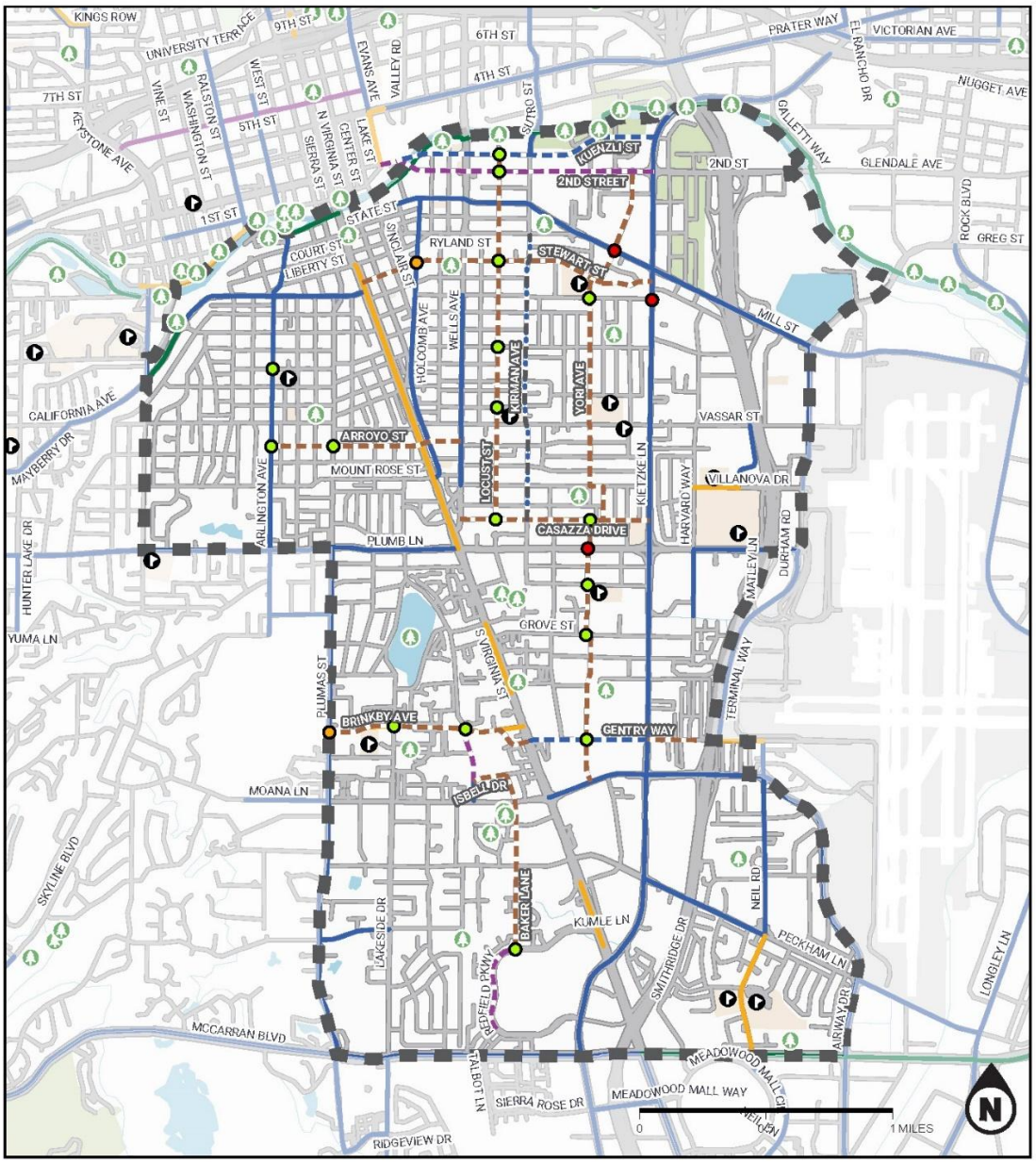


Figure 15. Scenario 1 Recommendations

Project Rationale

This section describes the project location, extent, facility type, rationale, and individual costs for including each identified corridor improvement in Scenario 1 in Table 2.

Table 2. Scenario 1 Project Descriptions and Rationale

Scenario 1					
Name	*Extent*	*Type*	*Miles*	*Rationale*	*Cost*
2nd Street	Lake Street to Kietzke Lane	Protected Bike Lane	1.09	This project reutilizes excess vehicle capacity between Lake Street/Kietzke Lane to create a more comfortable connection. Protection may be intermittent due to driveway considerations. This roadway also creates a key connection with north–south improvements on Locust Street and Yori Avenue.	$ 688,386
Lymberry Street	Brinkby Avenue to Isbell Drive	Protected Bike Lane	0.21	Enhances narrow existing bike lanes for improved comfort Links with Baker Lane for signalized crossing at Moana Lane. This would require removing parking on the east side of the roadway.	$ 134,453
Redfield Parkway	Baker Lane to Talbot Lane	Protected Bike Lane	0.37	Excess vehicle capacity allows for a buffered/protected bike lane and helps finish the north–south connection to McCarran Boulevard on Talbot Lane.	$ 236,754
Gentry Way	Kietzke Lane to Brinkby Avenue	Buffered Bike Lane	0.47	This roadway provides a potential east–west connection by reutilizing existing roadway space. This section of Gentry Way is 35 mph and would not support a shared-lane environment.	$ 123,336
Kuenzli Street	2nd Street to Kietzke Lane	Buffered Bike Lane	1.05	This recommendation works in concert with the 2nd Street improvement providing a westbound facility for bicyclists by reutilizing available roadway space.	$ 272,887
Kirman Avenue	Ryland Street to Casazza Drive	Change to Two-Way	1.13	In conjunction with improvements on Locust Street, this scenario recommends reconfiguring Kirman Avenue between Ryland Street and Casazza Drive to allow for two-way vehicle traffic. This roadway is included on the Primary Emergency Vehicle Route (PEVR).	$ 30,000

Scenario 1					
Name	*Extent*	*Type*	*Miles*	*Rationale*	*Cost*
Arroyo Street	Wells Avenue to Arlington Avenue	Neighborhood Byway	0.75	Reformatting a one-way neighborhood street to provide two-way vehicle traffic as well as traffic calming through speed humps and curb extensions. This roadway is not included on the PEVR and would be an easy candidate for traffic-calming elements.	$168,356
Baker Lane	Redfield Parkway to Isbell Drive	Neighborhood Byway	0.70	Moana Lane was identified as a major barrier for people walking and biking in this area, and Baker Lane provides one of the only signalized crossings between Lakeside Drive and Virginia Street. Baker Lane also provides good north–south connectivity to the Firecreek Crossing mall area and to the southern edge of the neighborhood. This roadway is included on the PEVR.	$ 155,846
Brinkby Ave	Gentry Way to Plumas Street	Neighborhood Byway	0.82	This roadway already has speed humps for a short section near Anderson Elementary and is not included in the PEVR. By extending the area where speed humps are present, it is possible to maintain highly utilized on-street parking while reducing vehicle speeds and creating a more comfortable bicycling connection.	$ 184,029
Casazza Drive	Wells Avenue to Kietzke Lane	Neighborhood Byway	0.75	This east–west route is critical for allowing bicyclists to continue traveling north–south past the Plumb Lane area. Casazza Drive creates an easy east–west connection linking the recommendations on Yori Avenue and Locust Street as well as the existing bike lanes on Wells Avenue. This roadway is included on the PEVR.	$ 167,205
Gentry Way	Kietzke Lane to Eastern Terminus	Neighborhood Byway	0.19	This section connects with residential areas in a low-speed and low-volume context.	$ 42,910
Isbell Drive	Baker Lane to Lymberry Street	Neighborhood Byway	0.13	This roadway connects Lymberry Street to Baker Lane, which is a critical crossing point across Moana Lane.	$ 29,636
Locust Street	Casazza Drive to Kuenzli Street	Neighborhood Byway	1.44	This one-way neighborhood roadway can be reconfigured to allow for two-way vehicle traffic along with traffic-calming elements such as speed humps. This scenario considers also changing	$ 322,666

Scenario 1					
Name	*Extent*	*Type*	*Miles*	*Rationale*	*Cost*
				operations on Kirman Avenue from one-way to two-way.	
Stewart Street	Kietzke Lane to Virginia Street	Neighborhood Byway	1.19	Stewart Street creates an easy east–west connection from Kietzke Lane to Virginia Street and will connect with the Biggest Little Bike Network (BLBN) once complete at Sinclair Street. Stewart Street is not included on the PEVR and would be a strong candidate for traffic calming.	$ 265,464
Yori Avenue/ Gould Street	Kuenzli Street to Casazza Drive (via Chaska Place and Grand Canyon Drive)	Neighborhood Byway	2.61	Yori Avenue would provide a key north–south connection through the neighborhood linking with multiple east–west connections including Gentry Way, Casazza Drive, Stewart Street, and 2nd Street. This improvement would also include two PHBs at Mill Street and Plumb Lane. This roadway is included on the PEVR.	$ 583,196

Scenario 2

Theme: Building Off the Biggest Little Bike Network

Description: Scenario 2 focuses on expanding out from the Biggest Little Bike Network (BLBN) by connecting to Virginia Street and Sinclair Street on Liberty Street and Thoma Street. Once connecting with the BLBN, all recommendations in this scenario connect to each other to create a cohesive network. This scenario also provides an east–west connection across the neighborhood along Vassar Street/Caliente Street/Monroe Street. This scenario includes approximately **11.3 miles of corridor improvements** and **24 identified improvements** at 15 specific intersections for a total planning level estimate cost of **$4.22 million** (Table 3).

Table 3. Scenario 2 Recommendations

Scenario 2		
Corridor Improvement Type	**Miles**	**Cost**
Neighborhood Byway	9.4	$ 2,107,956
Protected Bike Lane	1.9	$ 1,175,651
Sub-Total	11.3	$ 3,283,607
Intersection Improvement Type	**Number**	**Cost**
Curb Extensions	12	$ 84,000
High-Visibility Crosswalk	2	$ 12,000
Pedestrian Refuge Island	1	$ 50,000
Raised Crosswalk	1	$ 23,024
Bike Jug Handle	1	$ 15,000
Bike Cut-Through	1	$ 10,000
Bike Box	1	$ 2,000
Bicycle Wayfinding	1	$ 2,000
Leading Pedestrian Interval (LPI)	1	$ 5,500
Rectangular Rapid Flashing Beacon (RRFB)	2	$ 90,000
Pedestrian Hybrid Beacon (PHB)	1	$ 650,000
Sub-Total	24	$ 943,524
Total		$ 4,227,132

Corridor and intersection improvements are shown in Figure. It's important to note that intersection improvements have been consolidated on the map legend for simplicity; a full list of the intersection improvements are included in Appendix A.

Recommendation Scenario 2

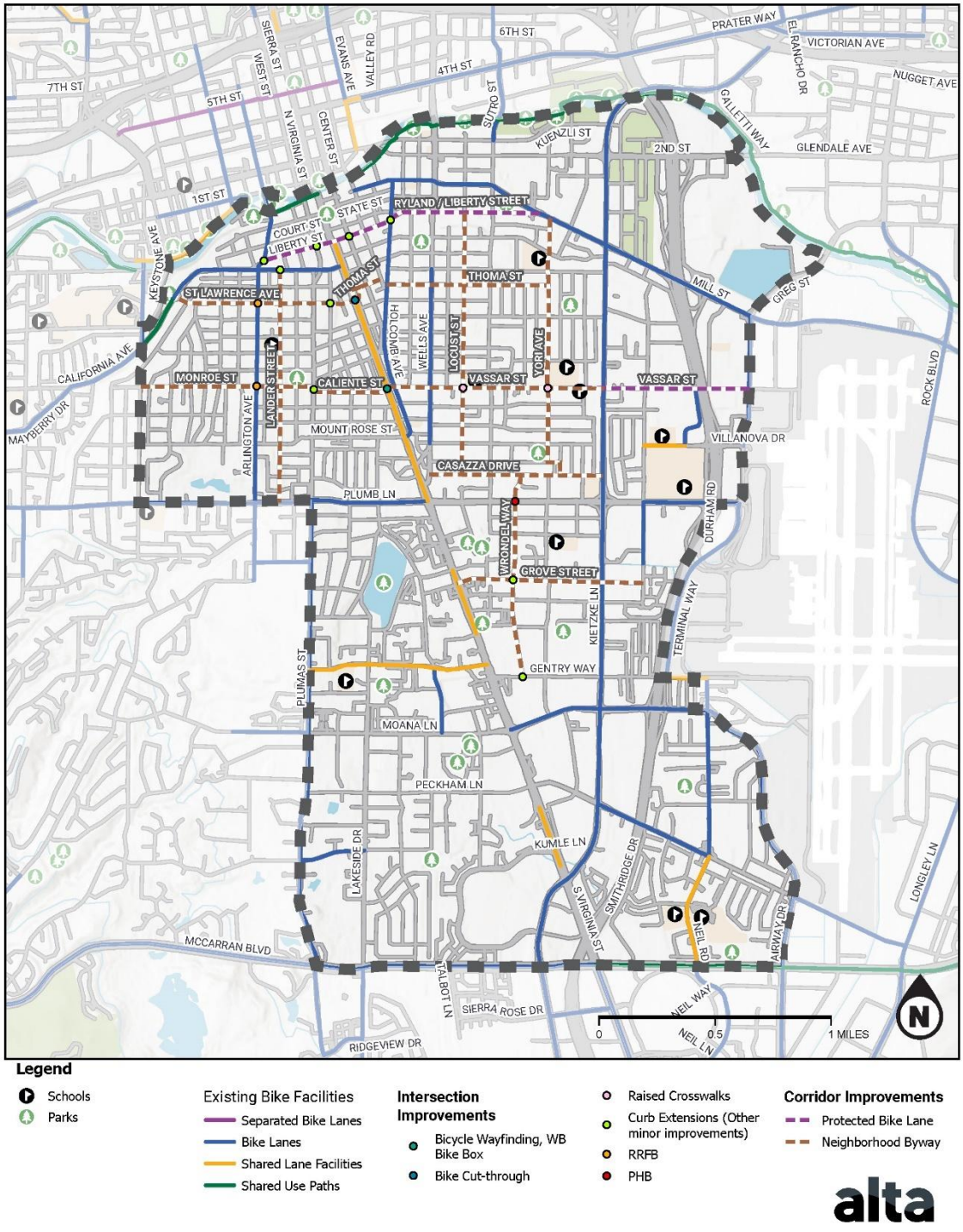


Figure 2. Scenario 2 Recommendations

Project Rationale

This section describes the project location, extent, facility type, rationale, and individual costs for including each identified corridor improvement in Scenario 2 in Table 4.

Table 4. Scenario 2 Project Descriptions and Rationale

Scenario 2					
Name	**Extent**	**Type**	**Miles**	**Rationale**	**Cost**
Ryland Street/ Liberty Street	Arlington Avenue to Mill Street	Protected Bike Lane	1.23	This 4- to 5-lane roadway has an average daily traffic volume (ADT) of 7,100 as of 2023 per the Nevada Department of Transportation (NDOT) and would be a strong candidate for a protected bike lane. This would create a viable way to continue east from the California Avenue bike lanes (connecting on Arlington Avenue). This would be a strong east–west connection in the south of downtown Reno and complement to 5th Street in the BLBN. This project would also connect with the BLBN on Virginia Street and Lake Street/Sinclair Street.	$ 778,108
Vassar Street	Cordone Ave to Terminal Way	Protected Bike Lane	0.63	The current roadway speeds on this section of Vassar Street were noted by walk audit participants and the public as being perceived as high. The wide roadway with relatively low volumes (5,400 ADT 2024 - NDOT) could be reconfigured to accommodate traffic volumes while reducing speeds and enhancing safety with protected bike lanes. This would extend the reach of the network east past Kietzke Lane, a key barrier in the neighborhood.	$397,543
Caliente Street	Plumas Street to Virginia Street	Neighborhood Byway	0.32	This roadway links Vassar Street and Monroe Street to create an east–west connection across the neighborhood. This non-PEVR roadway would be reconfigured to provide two-way traffic along with traffic-calming elements (alternative would be contra-flow bike lane configuration). Connections at Virginia Street and Plumas Street will require wayfinding and improvements to facilitate turning.	$ 72,306
Casazza Drive	Wells Avenue to Kietzke Lane	Neighborhood Byway	0.75	This east–west route is critical for allowing bicyclists to continue traveling north–south past the Plumb Lane area. Casazza Drive creates an easy east–west connection linking the recommendations on Yori Way and Locust Street, as well as the existing bike lanes on Wells Avenue. This roadway is included on the PEVR.	$ 167,205

Scenario 2					
Name	**Extent**	**Type**	**Miles**	**Rationale**	**Cost**
Grove Street	Virginia Street to Harvard Way	Neighborhood Byway	0.80	This relatively low-volume street (3,400 ADT 2023) provides a good east–west connection with a 25-mph speed limit. The addition of traffic calming, such as speed cushions and curb extensions, could maintain lower vehicle speeds while accommodating emergency vehicles and creating a more comfortable bicycle connection. This roadway is on the PEVR	$ 179,643
Lander Street	California Avenue to Plumb Lane	Neighborhood Byway	1.00	This north–south connection through the neighborhood already has modal filtering through the Our Lady of the Snows parking lot during the day and provides a low-volume and slow speed connection through the west side of the neighborhood. This would also connect with the east–west routes on Monroe Street and Saint Lawrence Avenue.	$ 224,279
Locust Street	Casazza Drive to Ryland Street	Neighborhood Byway	1.13	This one-way neighborhood roadway can be reconfigured to allow for two-way vehicle traffic along with traffic-calming elements such as speed humps of speed cushions to accommodate emergency vehicles. This scenario considers maintaining one-way operations on Kirman Avenue. This roadway is included on the PEVR.	$ 252,731
Monroe Street	Plumas Street to Sharon Way	Neighborhood Byway	0.74	This low-volume roadway (540 ADT 2023) is not included on the PEVR and would provide connection east–west to Caliente Street and further east to Vassar Street. The connection to Caliente Street will require short bike lanes on Plumas Street with bike jug handles (turn pockets) for bicycles turning left across Plumas Street.	$ 165,697
Saint Lawrence Avenue	Virginia Street to Keystone Ave (via Newlands Circle)	Neighborhood Byway	0.76	This connection would connect with the future Keystone Bridge project and extend east to Virginia Street providing enhanced crossings on Arlington Avenue, Forest Street, and Virginia Street. This would connect with Thoma Street for further east–west connection as well as the bicycle facilities on Virginia Street for north–south. This roadway is not included on the PEVR.	$ 170,173

Scenario 2					
Name	**Extent**	**Type**	**Miles**	**Rationale**	**Cost**
Thoma Street	Holcomb Avenue to Yori Avenue	Neighborhood Byway	0.79	This segment of Thoma Street extends from Sinclair Street, the southern edge of the BLBN, to Yori Way. This creates an east–west connection approximately between Ryland Street/Liberty Street and Vassar Street. An RRFB enhanced crosswalk at Holcomb Avenue would improve the crossing safety and network continuity. This road is not on the PEVR.	$ 176,367
Thoma Street	Virginia Street to Sinclair Street	Neighborhood Byway	0.07	This short section would allow eastbound bicyclists to cut through at the Saint Lawrence Avenue/Virginia Street intersection and travel with traffic through the Sticks parking lot to reach Thoma Street and continue traveling east to connect with the BLBN on Sinclair Street.	$ 14,786
Thoma Street/ Virginia Street	Center Street to Saint Lawrence Avenue	Neighborhood Byway	0.08	This short section would allow westbound bicyclists to travel along Thoma Street and take a left onto Virginia Street and then a right onto Saint Lawrence Avenue.	$ 18,111
Vassar Street	Cordone Avenue to Virginia Street	Neighborhood Byway	0.94	This section of Vassar Street directly fronts two public schools and connects Virginia Street to Kietzke Lane for a direct east–west connection. With a 25-mph speed limit and on-street parking, this roadway would benefit from speed humps to accommodate emergency vehicles while reducing vehicle speeds. Additionally, this would include curb extensions at Locust Street and Yori Avenue.	$ 209,300
Wrondel Way	Casazza Drive to Gentry Way	Neighborhood Byway	0.88	This north–south connection provides an additional option to cross Plumb Lane with a pedestrian-activated beacon and is not included on the PEVR. This would include upgrading the current RRFB at Wrondel Way/Plumb Lane to a PHB.	$ 196,612
Yori Avenue	Mill Street to Casazza Drive (via Chaska Place and Grand Canyon Drive)	Neighborhood Byway	1.17	This byway connects from Casazza Drive north to the RRFB at Mill Street via Chaska Place and Grand Canyon Boulevard. This would front two schools that include school zones on Yori Avenue. Yori Avenue from Grand Canyon Boulevard to Mill Street is included on the PEVR.	$ 260,748

Scenario 3

Theme: Connecting to Schools and Parks

Description: This scenario targets schools and parks as the key destinations for increased access and connectivity. Based on this focus, the recommended improvements are located throughout the neighborhood and provide more focused enhancements to the existing network while making targeted improvements to create a denser and more comfortable network. This scenario includes a total of **12.7 miles of corridor improvements** as well as **36 identified improvements** at 28 specific intersections for an estimated cost of **$5.97 million** (Table 5).

Table 5. Scenario 3 Recommendations

Scenario 3			
Corridor Improvement Type	**Miles**	**Cost**	
Bike Lanes	0.1	$	24,583
Buffered/Protected Bike Lane	1.6	$	1,013,374
Buffered Bike Lane	0.5	$	123,336
Neighborhood Byway	8.6	$	1,930,989
Protected Bike Lane	0.6	$	397,543
Protected Bikeway	1.2	$	783,471
Sub-Total	12.7	$	4,273,296
Intersection Improvement Type	**Number**	**Cost**	
Curb Extensions	24	$	168,000
High-Visibility Crosswalk	2	$	12,000
Raised Crosswalk	1	$	23,034
Leading Pedestrian Interval (LPI)	3	$	16,500
Pedestrian Refuge Island	1	$	50,000
Rectangular Rapid Flashing Beacon (RRFB)	3	$	135,000
Pedestrian Hybrid Beacon (PHB)	2	$	1,300,000
Sub-total	36	$	1,704,534
Total		$	5,977,831

Corridor and intersection improvements are shown in Figure 316. It's important to note that intersection improvements have been consolidated on the map legend for simplicity; a full list of the intersection improvements are included in Appendix A.

Recommendation Scenario 3

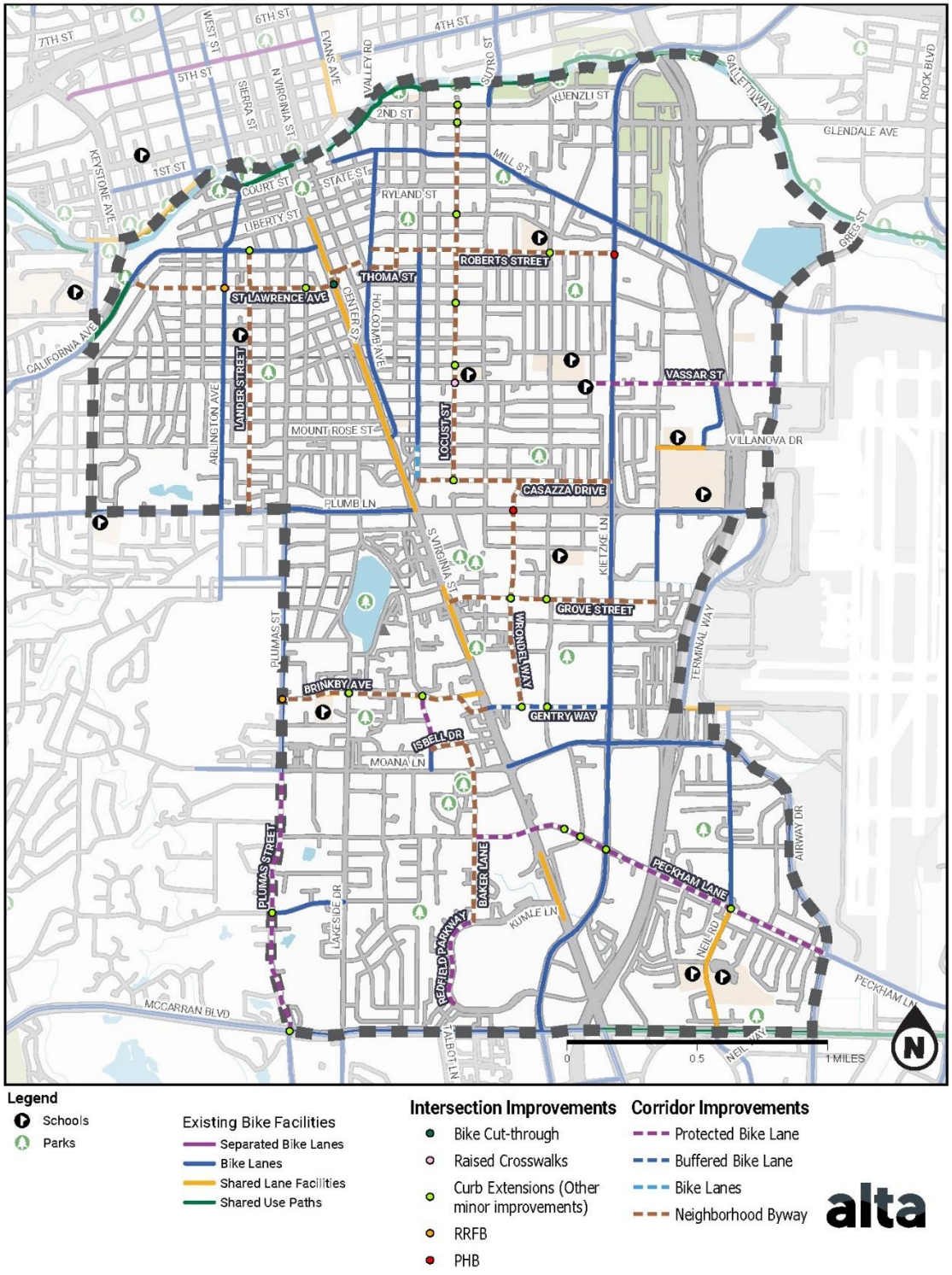


Figure 316. Scenario 3 Recommendations

Project Rationale

This section describes the project location, extent, facility type, rationale, and individual costs for including each identified corridor improvement in Scenario 3 in Table 6.

Table 6. Scenario 3 Project Descriptions and Rationale

Scenario 3					
Name	**Extent**	**Type**	**Miles**	**Rationale**	**Cost**
Wells Avenue	Casazza Drive to Regency Way	Bike Lanes	0.13	This would restripe Wells Avenue to continue bike lanes between Casazza Drive and Regency Way helping to close a small gap in the network and connect with improvements on Casazza Drive.	$ 24,583
Lymberry Street	Brinkby Avenue to Isbell Drive	Protected Bike Lane	0.21	Enhances narrow existing bike lanes for improved comfort. Links with Baker Lane for signalized crossing at Moana Lane. This would require removing parking on the east side of the roadway.	$ 134,453
Peckham Lane	Baker Lane to Airway Drive	Protected Bike Lane	1.24	This project would reutilize roadway space to close two gaps in the bicycle network on Peckham Lane with a protected bike lane. This would include curb extensions between Kietzke Lane and the convention center driveway. This would close a gap in the southeast portion of the neighborhood and also help people cross Kietzke Lane, which is a major barrier in the neighborhood.	$ 783,471
Plumas Street	Moana Lane to McCarran Boulevard	Protected Bike Lane	1.01	Plumas Street between Moana Lane and McCarran Boulevard presents a strong opportunity to repurpose underutilized parking to create a protected bike lane in the southwest corner of the neighborhood. This connection could showcase a high-quality facility type although would not connect to another low-stress bicycle facility.	$ 642,167
Redfield Parkway	Baker Lane to Talbot Lane	Protected Bike Lane	0.37	Excess vehicle capacity allows for a buffered/protected bike lane and helps finish the north–south connection to McCarran Boulevard on Talbot Lane.	$ 236,754

Scenario 3					
Name	**Extent**	**Type**	**Miles**	**Rationale**	**Cost**
Vassar Street	Cordone Avenue to Terminal Way	Protected Bike Lane	0.63	The current roadway speeds on this section of Vassar Street were noted by walk audit participants and the public as being perceived as high. The wide roadway with relatively low volumes (5,400 ADT 2024 – NDOT) could be reconfigured to accommodate traffic volumes while reducing speeds and enhancing safety with protected bike lanes.	$ 397,543
Gentry Way	Kietzke Lane to Brinkby Avenue	Buffered Bike Lane	0.47	This roadway provides a potential east–west connection by reutilizing existing roadway space. The section between Virginia Street and Kietzke Lane is 35 mph and would not support a shared-lane environment. This section is not included on the PEVR.	$ 123,336
Baker Lane	Redfield Parkway to Isbell Drive	Neighborhood Byway	0.70	Moana Lane was identified as a major barrier for people walking and biking in this area, and Baker Lane provides one of the only signalized crossings between Lakeside Drive and Virginia Street. Baker Lane also provides good north–south connectivity to the Firecreek Crossing mall area and to the southern edge of the neighborhood. This roadway is included on the PEVR.	$ 155,846
Brinkby Avenue	Gentry Way to Plumas Street	Neighborhood Byway	0.82	This roadway already has speed humps for a short section near Anderson Elementary and is not included in the PEVR. By extending the area where speed humps are present, it is possible to maintain highly utilized on-street parking while reducing vehicle speeds and creating a more comfortable bicycling connection.	$ 184,029
Casazza Drive	Wells Avenue to Kietzke Lane	Neighborhood Byway	0.75	This east–west route is critical for allowing bicyclists to continue traveling north–south past the Plumb Lane area. Casazza Drive creates an easy east–west connection linking the recommendations on Yori Way and Locust Street as well as the existing bike lanes on Wells Avenue. This roadway is included on the PEVR.	$ 167,205

Scenario 3					
Name	**Extent**	**Type**	**Miles**	**Rationale**	**Cost**
Grove Street	Virginia Street to Harvard Way	Neighborhood Byway	0.80	This relatively low-volume street (3,400 AADT 2023) provides a good east–west connection with a 25-mph speed limit. The addition of traffic calming, such as speed cushions and curb extensions, could maintain lower vehicle speeds while accommodating emergency vehicles and creating a more comfortable bicycle connection. This roadway is on the PEVR.	$ 179,643
Isbell Drive	Baker Lane to Lymberry Street	Neighborhood Byway	0.13	This roadway connects Lymberry Street to Baker Lane, which is a critical crossing point across Moana Lane.	$ 29,636
Lander Street	California Avenue to Plumb Lane	Neighborhood Byway	1.00	This north–south connection through the neighborhood already has modal filtering through the Our Lady of the Snows parking lot during the day and provides a low-volume and slow speed connection through the west side of the neighborhood. This would also connect with the east–west routes on Monroe Street and Saint Lawrence Avenue.	$ 224,279
Locust Street	Casazza Drive to Kuenzli Street	Neighborhood Byway	1.44	This one-way neighborhood roadway can be reconfigured to allow for two-way vehicle traffic along with traffic-calming elements such as speed humps. This scenario does not consider changing operations on Kirman Avenue from one-way to two-way.	$ 322,666
Roberts Street	Holcomb Avenue to Kietzke Lane	Neighborhood Byway	0.94	This east–west connection is not on the PEVR and connects with Kietzke Lane at an existing RRFB. This project would create a neighborhood byway between Kietzke Lane and Holcomb Avenue while also upgrading the RRFB to a PHB. To connect to the BLBN, there are short sections recommended on Wheeler Street and Thoma Street.	$ 209,281

Scenario 3					
Name	**Extent**	**Type**	**Miles**	**Rationale**	**Cost**
Saint Lawrence Avenue	Virginia Street to Keystone Avenue (via Newlands Circle)	Neighborhood Byway	0.76	This section would connect with the future Keystone Bridge project and extend east to Virginia Street, providing enhanced crossings on Arlington Avenue, Forest Street, and Virginia Street. This would connect with Thoma Street for further east–west connection as well as the bicycle facilities on Virginia Street for north–south. This roadway is not included on the PEVR.	$ 170,173
Thoma Street	Sinclair Street to Wheeler Street	Neighborhood Byway	0.09	This short section would allow bicyclists to cross Holcomb Avenue at Thoma Street/Sinclair Street and connect with Wheeler Street to connect with Roberts Street.	$ 21,101
Thoma Street	Center Street to Sinclair Street	Neighborhood Byway	0.10	This short section would connect with the BLBN on Sinclair Street for eastbound and westbound bicyclists.	$ 22,426
Thoma Street	Virginia Street to Center Street	Neighborhood Byway	0.07	This short section would allow eastbound bicyclists to cut through at the Saint Lawrence Avenue/Virginia Street intersection and travel with traffic through the Sticks parking lot to reach Thoma Street and continue traveling east to connect with the BLBN on Sinclair Street.	$ 14,786
Thoma Street/ Virginia Street	Center Street to Saint Lawrence Avenue	Neighborhood Byway	0.08	This short section would allow westbound bicyclists to travel along Thoma Street and take a left onto Virginia Street and then a right onto Saint Lawrence Avenue.	$ 18,111
Wheeler Street	Thoma Street to Roberts Street	Neighborhood Byway	0.07	This short section is not included on the PEVR and would facilitate the connection between Roberts Street and the BLBN for a continued east–west connection. This short section would also require focused wayfinding to show bicyclists the right way to connect between Sinclair Street and Roberts Street.	$ 15,193
Wrondel Way	Casazza Drive to Gentry Way	Neighborhood Byway	0.88	This north–south connection provides an additional option to cross Plumb Lane with a pedestrian-activated beacon and is not included on the PEVR. This would include upgrading the current RRFB at Wrondel Way/Plumb Lane to a PHB.	$ 196,612

Scenario Comparison

To compare scenarios, the project team analyzed three key metrics for each one. These are intended to help in decision-making and selection of a preferred alternative. These metrics include:

- Metric #1: ATP Goals – This metric ranks how well each of the scenarios furthers each of the four goals from the ATP based on a review of the scenarios, overlap with known safety issues and high-injury network, understanding of maintenance requirements and issues, and an assessment of how many trips each may generate based on increased Community Access (Metric #2).
- Metric #2: Community Access – This metric analyzes the potential increase in access and resulting induced trips to three key community destinations (schools, parks, and hospitals). This assessment used the Washoe ATP Accessibility Testing Toolkit provided to RTC Washoe as part of the ATP process. The analysis process and results are presented in the Community Access section.
- Metric #3: Implementation Considerations – The ease of implementation and coordination requirements with partner agencies are key considerations when identifying projects for quick-build implementation. This metric considers potential issues with implementing each scenario based on coordination around the PEVR network, evaluation and coordination around capacity reductions, and the planning level cost estimate.

ATP Goals

The project team reviewed the scenarios and compared them against each of the four ATP goals. See Table 7 for the results of this comparison. The review process for each goal is explained below:

- Safety – The project team reviewed the extent to which recommended projects overlap and address issues on RTC high-injury network corridors and intersections as well as roadways identified as leading barriers in the Regional Active Transportation Gap Analysis.
- Mode Share and Community – The team ran the Washoe Accessibility Testing tool to assess the degree to which the scenarios would induce new active trips to key community destinations including parks, schools, and hospitals. This helps to gauge benefits to mode share and the potential level of additional community benefits (e.g., health benefits from increased active trips). Findings from this analysis are further detailed in the Community Access section.
- Maintenance – This metric represents the potential level of effort to maintain the recommended projects compared to each other. This is based on the overall mix of recommended facility types and the potential widths of protected bike lanes. Protected bike lanes typically include a higher level of ongoing maintenance to sweep the bike lane and replace missing delineators/barrier treatments. Wider protected bike lanes allow for a wider variety of sweeping equipment, which reduces maintenance costs. Neighborhood byways typically have a lower overall level of maintenance effort outside of maintaining intersection treatments such as painted curb extensions with delineators.

Table 7. Scenario Comparison Metric #1 - ATP Goals

Metric		Scenario		
		1 – Connecting North–South	2 – Building Off the BLBN	3 – Connecting to Schools and Parks
ATP Goals	*Safety*	Medium	Medium	**High**
	Mode Share and Community	**Medium/High**	Medium	**High**
	Maintenance	**High**	Medium	Low

Community Access

Alta conducted an analysis using the Washoe Accessibility Testing toolbox that was developed by Alta and provided to the RTC during the ATP process in 2024. This tool helps to gauge the varying levels of access gain to different destination types based on bicycle network enhancements. This is represented by potential trips that may shift from vehicle to bicycle based on new low-stress connections in the bicycle network. The aggregate access gain to each destination type is shown for each scenario in Table 8 with overall analysis results shown graphically in Figure 417 through Figure. Additional maps highlighting results for each destination type (schools, parks, hospitals) included in Appendix B.

It is important to note that the estimated trips in Table 8 are intended to inform the planning process but are not intended to be refined or exact estimations of future bicycling trips.

Table 8. Estimated New Bicycle Trips to Community Destinations by Scenario

Total Estimated New Bicycle Trips To:	Scenario		
	1 – Connecting North–South	2 – Building Off the BLBN	3 – Connecting to Schools and Parks
Hospitals	1,561	633	1,361
Schools	838	730	2,062
Parks	6,732	3,969	11,935
Overall	9,131	5,332	15,358

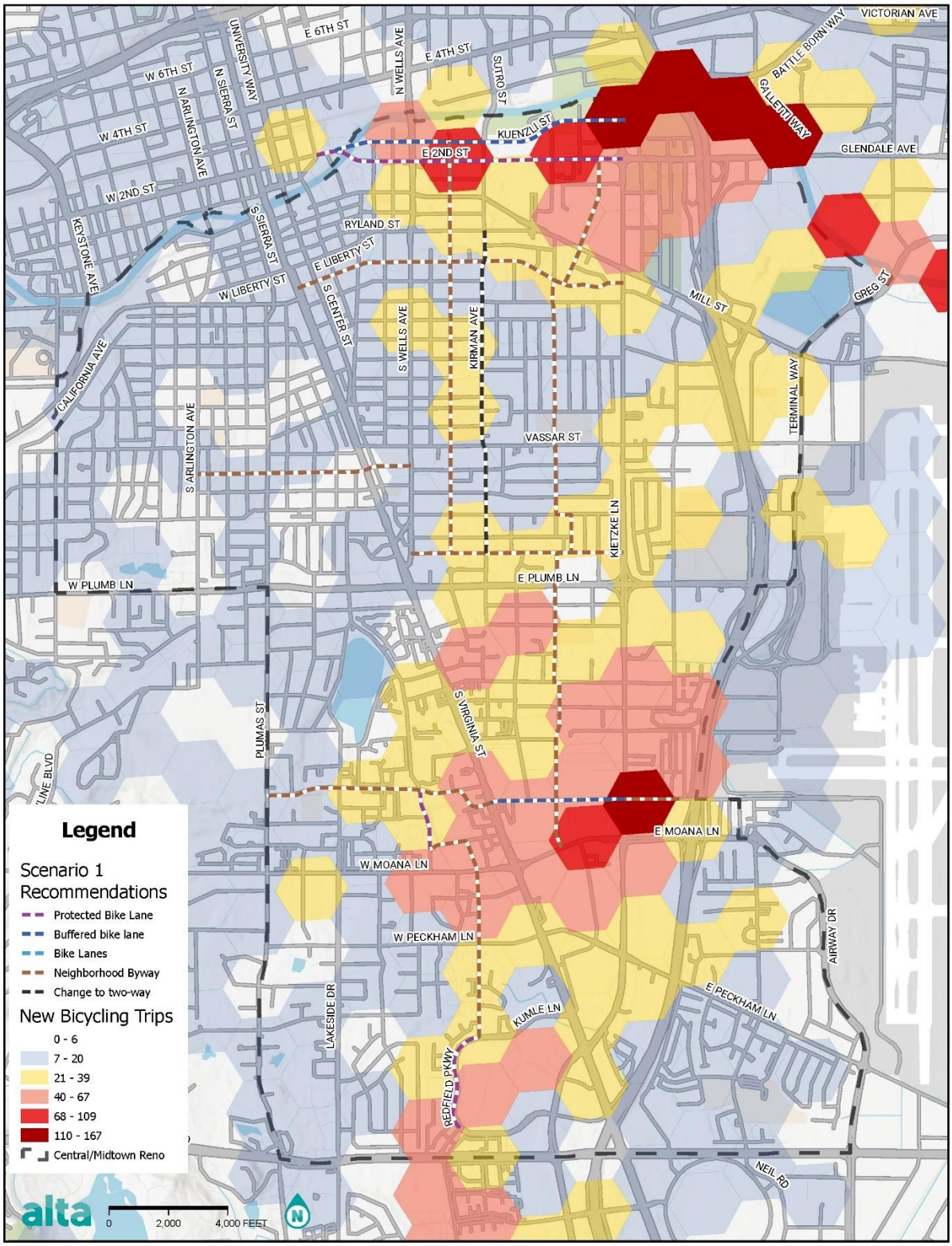


Figure 417. Scenario 1 – Overall Access Gains

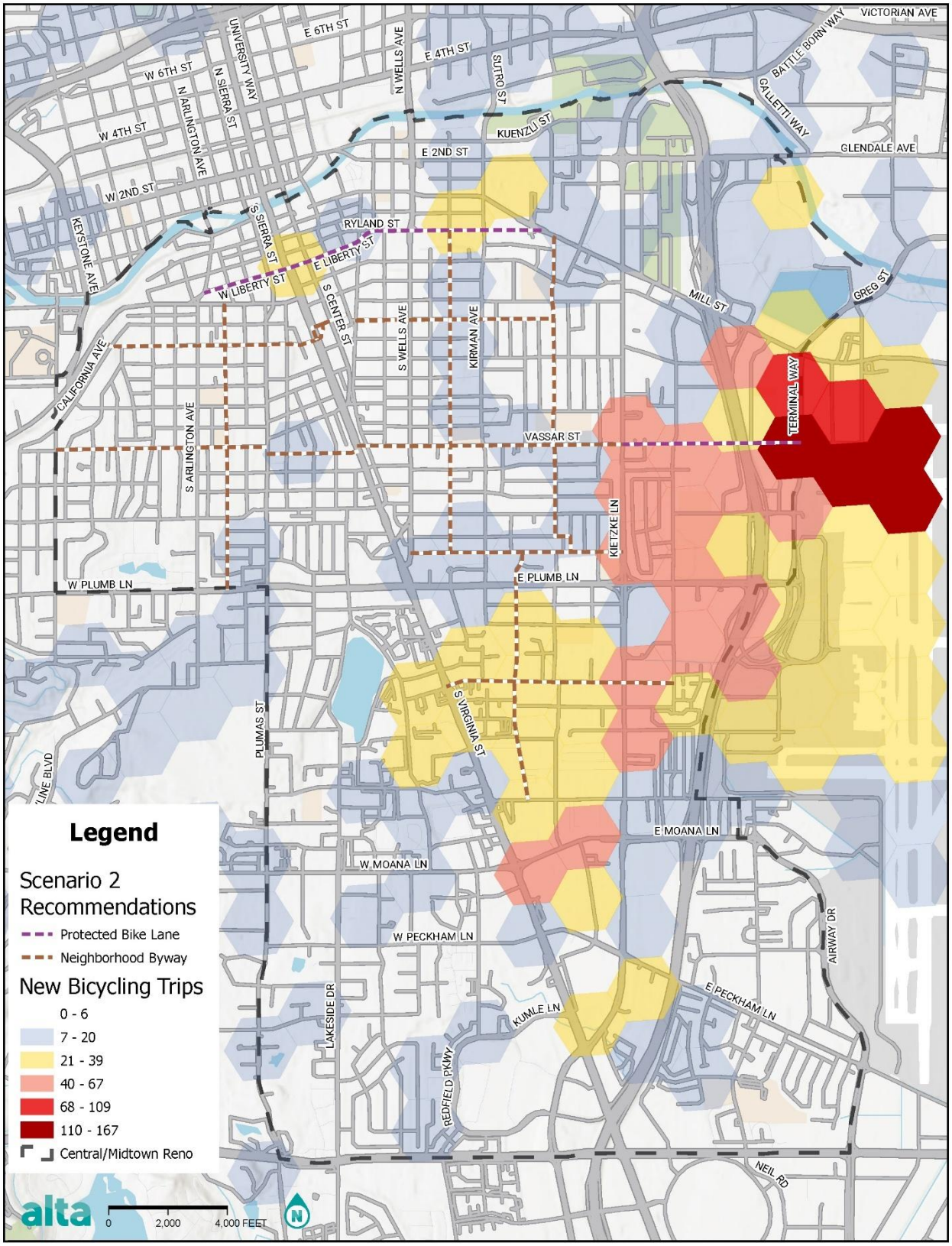


Figure 5. Scenario 2 – Overall Access Gains

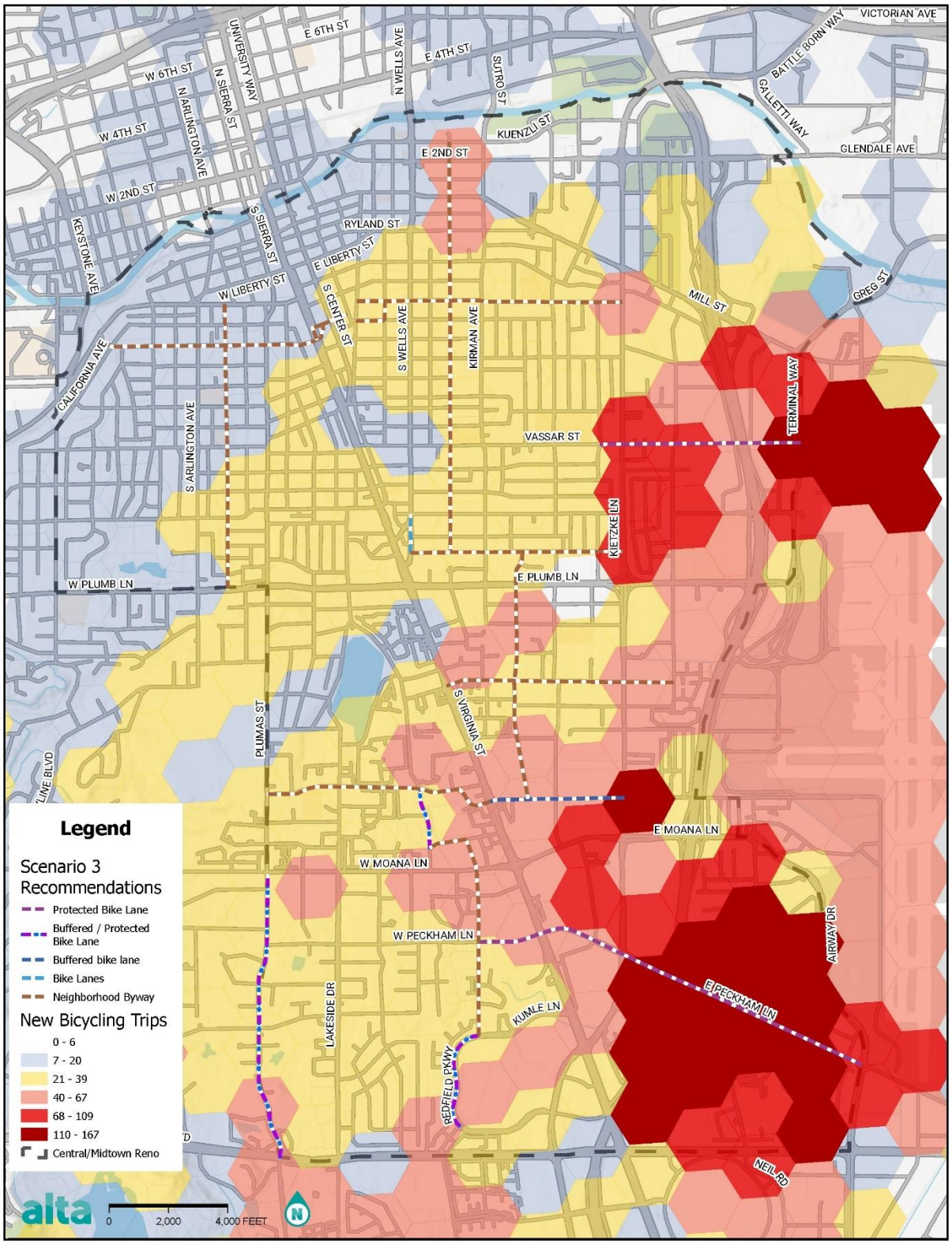


Figure 6. Scenario 3 – Overall Access Gains

Implementation Considerations

Implementation of recommended projects may be impacted by greater levels of coordination, analysis, design, or outreach that may result from projects that are seen as overly cumbersome to the general public or agency partners. This may include projects that result in noticeable traffic operational impacts, parking reductions in high demand areas or impact to City of Reno Fire and Police response times.

Primary Emergency Vehicle Route Network (PEVR) Considerations

The PEVR determines where vertical traffic-calming elements are permitted within the City of Reno. Roadways identified as neighborhood byways in the scenarios include some PEVR roadways. To implement these projects, it will be critical to have strong understanding of the appetites for experimentation from City of Reno staff with new traffic-calming elements such as speed cushions or to modification of the PEVR on select routes. Table 9 highlights the total percentage of recommendations that are located on the PEVR. This highlights that Scenario 1 has the largest percentage of PEVR roadways with a total of 60%, while Scenarios 2 and 3 have the same level at 41%.

Operational/Parking Considerations

Roadways identified in the scenarios represent generally strong candidates for capacity reductions or reutilization of roadway space. However, due to the more impactful nature of roadway reconfigurations it is important to factor in additional effort for engagement and outreach in addition to additional analysis to refine the conceptual design for some identified projects. Table 9 highlights the total percentage of projects in each scenario which requires capacity reduction or elimination of parking. These factors typically result in a higher level of outreach and engagement efforts compared to projects which do not adjust roadway or parking capacity.

Planning Level Cost Estimate

The scenario recommendations are intended to be scalable to fit within the available RTC budget with the understanding that planning level cost estimates, which are generated on per mile estimates, can be further refined during the final scenario selection process. The aggregate cost estimate for each scenario is shown in Table 9 for consideration. For a more detailed breakdown of planning level cost estimates, please see Appendix C.

Table 9. Implementation Considerations

Percentage of Roadways That:	Scenario		
	1 – Connecting North–South	2 – Building Off the BLBN	3 – Connecting to Schools and Parks
Are on the PEVR	60%	41%	41%
Require Capacity/Parking Reduction	27%	12%	18%
Total Planning Level Cost Estimate:	$ 5,662,126	$ 4,227,132	$ 5,977,831

Overall Scenario Comparison Matrix

Table 10 combines the results of the three comparison metrics into a simple table to support scenario selection and refinement. For simplicity, each scenario is given a ranking from 'Low' to 'Very High' based on how well it satisfies the metric. For the Implementation Considerations metric, each scenario is compared against each other for the portion of PEVR roadways and percentage of roadways which require capacity or parking reduction.

Table 10. Overall Scenario Comparison Matrix

Metric		Scenario		
		1 – Connecting North–South	**2 – Building Off the BLBN**	**3 – Connecting to Schools and Parks**
ATP Goals	Safety	Medium	Medium	**High**
	Mode Share and Community	**Medium/High**	Medium	**High**
	Maintenance	**High**	Medium	Low
Community Access	**Total Access Gains To:**			
	Hospitals	Medium	Medium	**High**
	Schools	**High**	Medium	**Very High**
	Parks	**High**	Low	**Medium/High**
Implementation Considerations	**Percentage of Roadways That:**			
	Are on the PEVR	**High**	Medium	Medium
	Require Capacity Reduction	Low/Medium	Low	Medium
	Total Planning Level Cost Estimate:	$5,662,126	$4,227,132	$5,977,831

Appendix A – Intersection Improvements

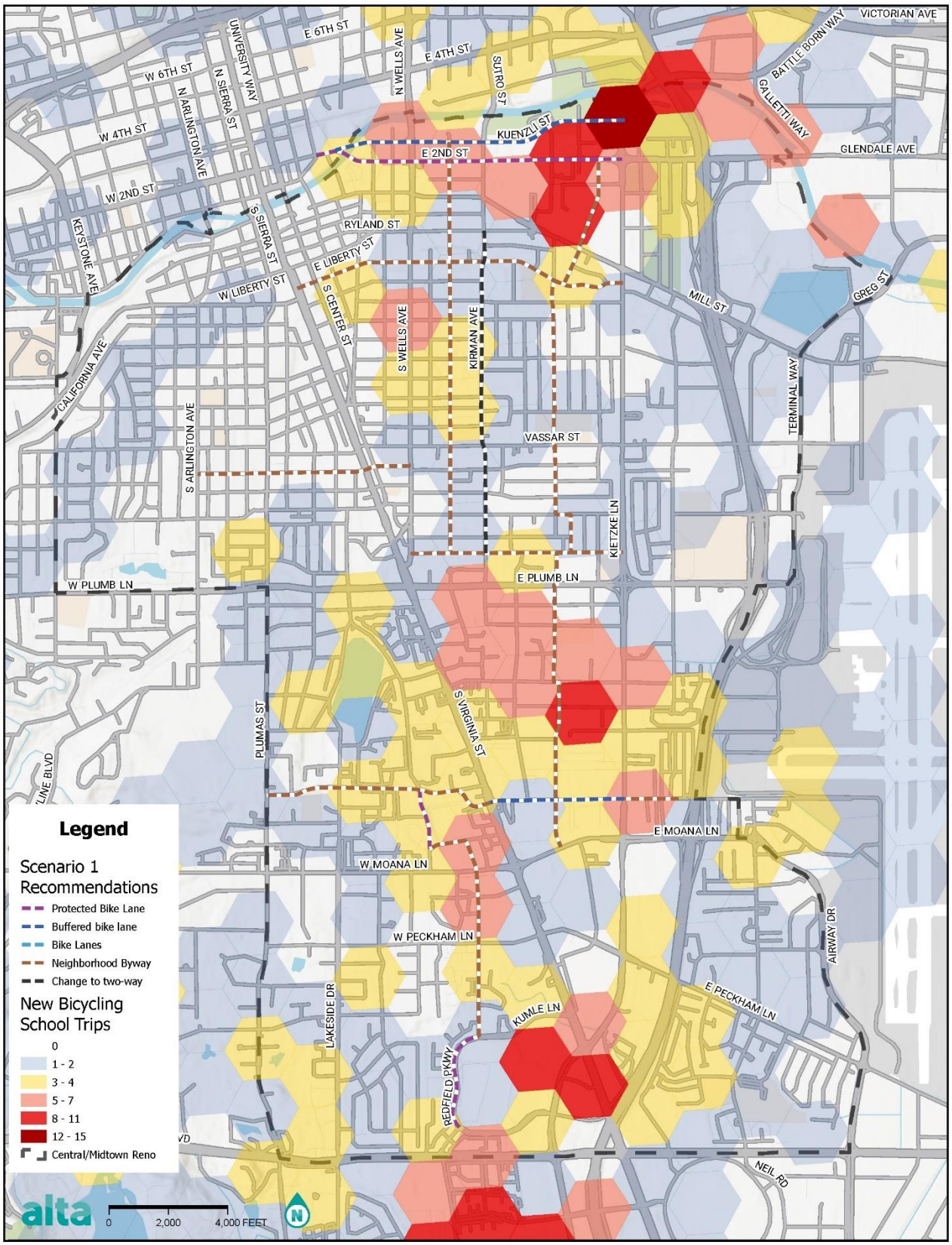
Scenario 1 Intersection Improvements			
Main Road	**Intersecting Street**	**Improvement(s)**	**Planning Level Cost Estimates**
Arlington Ave	W Taylor St	Curb Extensions	$ 10,000
Arroyo St	Arlington Ave	Curb Extensions, High-Visibility Crosswalk	$ 16,000
Arroyo St	Plumas St	Curb Extensions, High-Visibility Crosswalk	$ 22,000
Brinkby Way	Lakeside Dr	Curb Extensions	$ 10,000
Brinkby Way	Plumas St	Curb Extensions, High-Visibility Crosswalk, RRFB	$ 81,000
Casazza Dr	Locust St	Curb Extensions	$ 10,000
Casazza Dr	Yori Way	Curb Extensions	$ 10,000
Grove St	Yori Way	Curb Extensions	$ 10,000
Grove St	Yori Way	Curb Extensions	$ 10,000
Kietzke Lane	Roberts Lane	PHB	$ 650,000
Kirman Ave	E Taylor St	Curb Extensions	$ 10,000
Kirman Ave	Wonder St / Balzar Cir	Curb Extensions	$ 10,000
Locust St	2nd St	Curb Extensions	$ 10,000
Locust St	E Taylor St	Curb Extensions	$ 1,000
Locust St	Kuenzli St	Curb Extensions	$ 10,000
Locust St	Ryland St	RRFB	$ 50,000
Locust St	Stewart St	Curb Extensions	$ 10,000
Locust St	Wonder St	Curb Extensions	$ 10,000
Lymberry St	Brinkby Way	Curb Extensions	$ 10,000
Mill St	Yori Way	PHB	$ 650,000
Plumas St	St Lawrence Ave	Curb Extensions	$ 10,000
Plumas St	W Taylor St	Curb Extensions	$ 10,000
Redfield Pkwy	Baker Ln	Curb Extensions, Bike Jug handle	$ 25,000
Stewart St	Holcomb Ave	Curb Extensions, High-Visibility Crosswalk, RRFB	$ 61,000
Yori Way	Apple St	Curb Extensions	$ 10,000
Yori Way	Bresson Ave	Curb Extensions	$ 10,000
Yori Way	Plumb Lane	PHB, Curb Extensions	$ 660,000
Yori Way	Roberts St	Curb Extensions	$ 10,000

Scenario 2 Intersection Improvements			
Main Road	**Intersecting Street**	**Improvement(s)**	**Planning Level Cost Estimates**
Arlington Ave	Monroe St	Curb Extensions, RRFB	$ 55,000
Arlington Ave	St Lawrence Ave	Curb Extensions, High-Visibility Crosswalk, RRFB	$ 61,000
Lander St	California Ave	Curb Extensions, Relocate Crosswalk to westside, pedestrian refuge island	$ 22,000
Liberty St	Arlington Ave	Curb Extensions	$ 10,000
Liberty St	Center St	Curb Extensions	$ 10,000
Liberty St	Holcomb Ave	Curb Extensions, LPI	$ 15,500
Liberty St	Sierra St	Curb Extensions	$ 10,000
Plumas St	Caliente St	Curb Extensions, Short Bike Lane, Bike Jug Handles, Remove Parking	$ 25,000
Plumb Ln	Wrondel Way	PHB, Curb Extensions	$ 660,000
St Lawrence Ave	Foster Drive	Curb Extensions	$ 10,000
Vassar St	Locust St	Raised Crosswalks	$ 50,000
Virginia St	St Lawrence Ave	Bike Cut-Through	$ 20,000
Virginia St	Vassar St	Bicycle Wayfinding, WB Bike Box	$ 15,000
Wrondel Way	Gentry Way	Curb Extensions	$ 10,000
Wrondel Way	Grove St	Curb Extensions	$ 10,000
Yori Way	Vassar St	Raised Crosswalks	$ 50,000

Scenario 3 Intersection Improvements			
Main Road	**Intersecting Street**	**Improvement(s)**	**Planning Level Cost Estimates**
Arlington Ave	St Lawrence Ave	Curb Extensions, High-Visibility Crosswalk, RRFB	$ 55,000
Brinkby Way	Lakeside Dr	Curb Extensions	$ 10,000
Brinkby Way	Plumas St	Curb Extensions, High-Visibility Crosswalk, RRFB	$ 61,000
Casazza Dr	Locust St	Curb Extensions	$ 10,000
Grove St	Yori Way	Curb Extensions	$ 10,000
Grove St	Yori Way	Curb Extensions	$ 10,000
Kietzke Lane	E Taylor St	PHB	$ 650,000
Kietzke lane	Margrave Dr	PHB	$ 650,000
Kietzke Lane	Roberts Lane	PHB	$ 650,000
Kietzke Ln	Peckham Ln	Curb Extensions, LPI	$ 15,500
Kirman Ave	E Taylor St	Curb Extensions	$ 10,000
Kirman Ave	Wonder St / Balzar Cir	Curb Extensions	$ 10,000
Lander St	California Ave	Curb Extensions, Relocate Crosswalk to westside, pedestrian refuge island	$ 22,000
Locust St	2nd St	Curb Extensions	$ 10,000
Locust St	E Taylor St	Curb Extensions	$ 10,000
Locust St	Kuenzli St	Curb Extensions	$ 10,000
Locust St	Ryland St	RRFB	$ 50,000
Locust St	Stewart St	Curb Extensions	$ 10,000
Locust St	Wonder St	Curb Extensions	$ 10,000
Lymberry St	Brinkby Way	Curb Extensions	$ 10,000
Peckham Ln	Atlantis / Convention Center Driveways	Curb Extensions	$ 10,000
Peckham Ln	Colesiuem Way	Curb Extensions, LPI	$ 15,500
Peckham Ln	Neil Rd	Curb Extensions, LPI	$ 15,500
Plumas St	Manzanita Ave	Curb Extensions	$ 30,000
Plumas St	McCarran Blvd	Curb Extensions	$ 30,000
Plumas St	St Lawrence Ave	Curb Extensions	$ 30,000
Plumb Ln	Wrondel Way	PHB, Curb Extensions	$ 660,000
St Lawrence Ave	Foster Drive	Curb Extensions	$ 10,000
Vassar St	Locust St	Raised Crosswalks	$ 50,000
Virginia St	St Lawrence Ave	Bike Cut-through	$ 20,000

Scenario 3 Intersection Improvements			
Main Road	**Intersecting Street**	**Improvement(s)**	**Planning Level Cost Estimates**
Wrondel Way	Gentry Way	Curb Extensions	$ 10,000
Wrondel Way	Grove St	Curb Extensions	$ 10,000
Yori Way	Bresson Ave	Curb Extensions	$ 10,000
Yori Way	Roberts St	Curb Extensions	$ 10,000
Yori Way	Vassar St	Raised Crosswalks	$ 50,000

Appendix B – Destination Type Access Gains by Scenario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Buffered bike lane
Bike Lanes
Neighborhood Byway
Change to two-way
New Bicycling School Trips
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GALLETTI WAY
GLENDALE AVE
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KUENZLI ST
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KEYSTONE AVE
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RYLAND ST
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KIRMAN AVE
MILL ST
GREG ST
CALIFORNIA AVE
S ARLINGTON AVE
TERMINAL WAY
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PLUMAS ST
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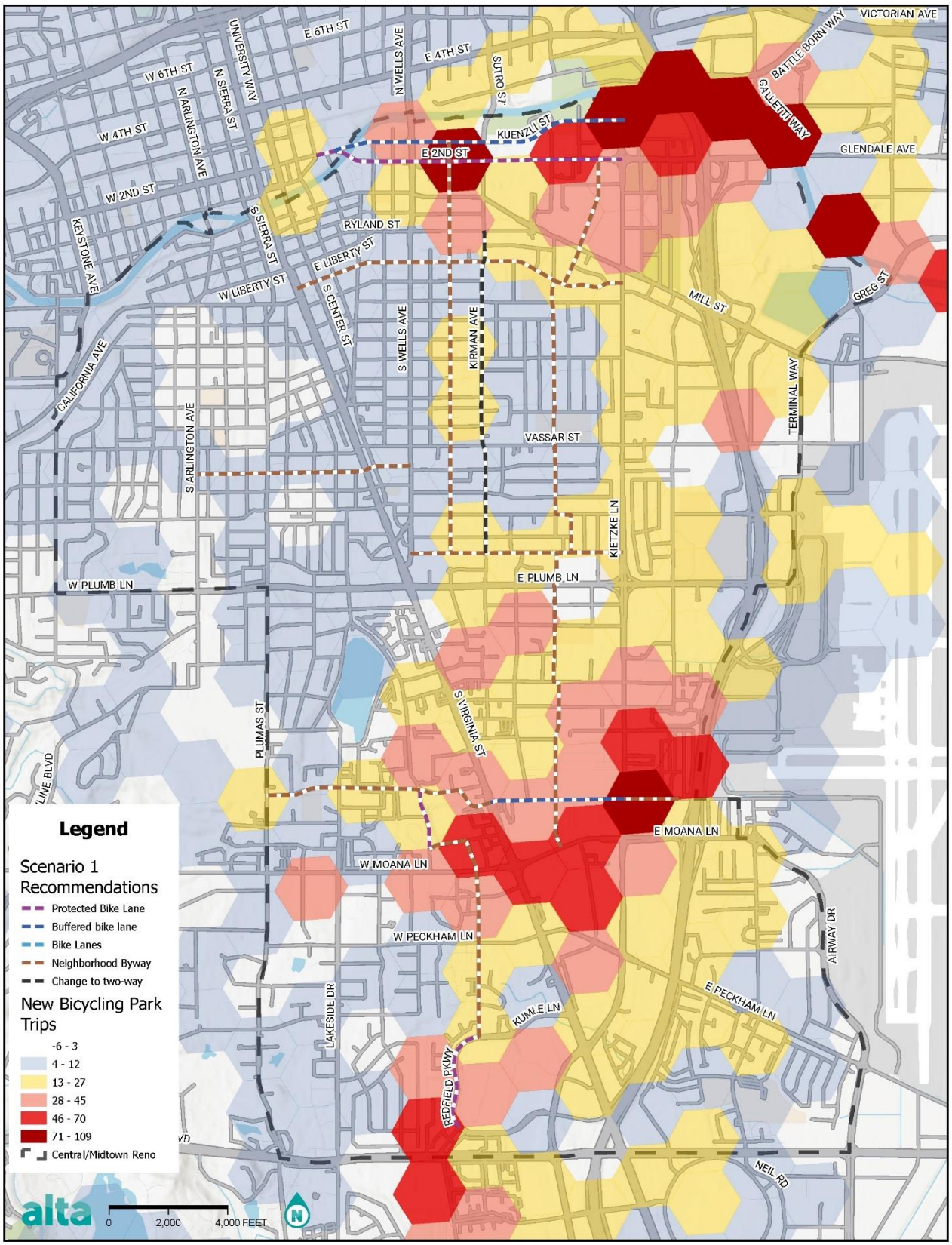
LAKESIDE DR
KUMLE LN
REDFIELD PKWY
NEIL RD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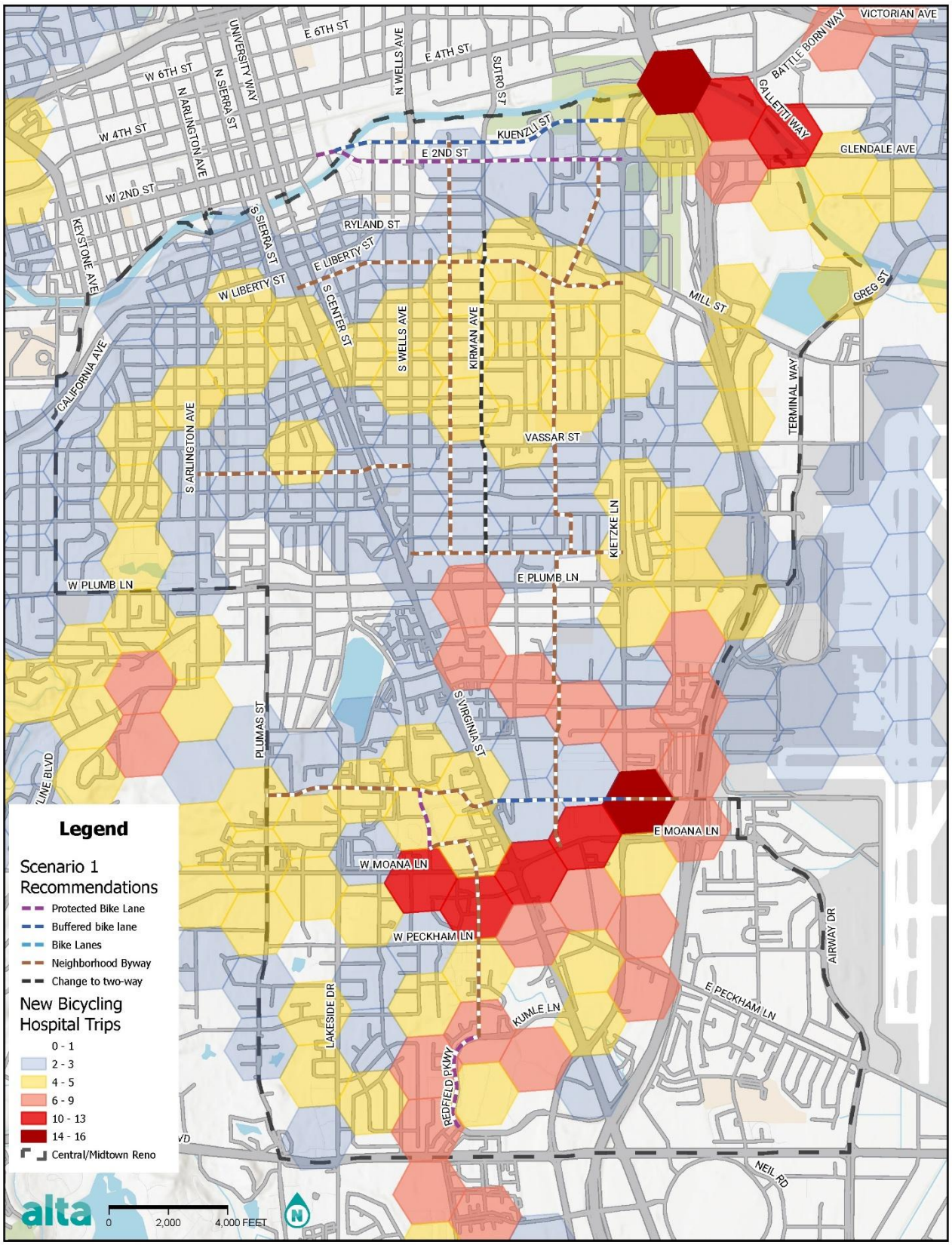
NEIL RD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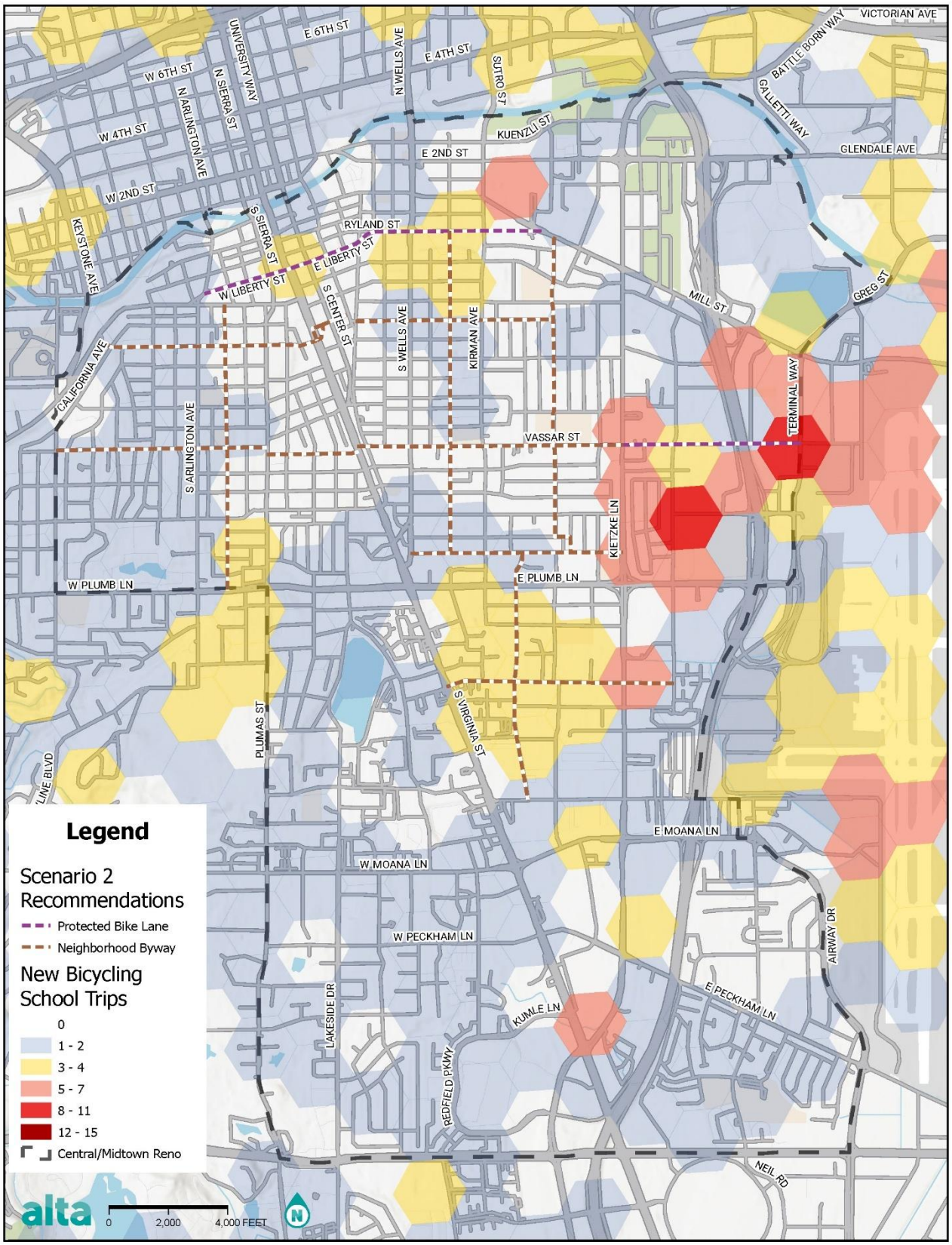
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Central/Midtown Reno
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UNIVERSITY WAY
N SIERRA ST
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LAKESIDE DR
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REDFIELD PKWY
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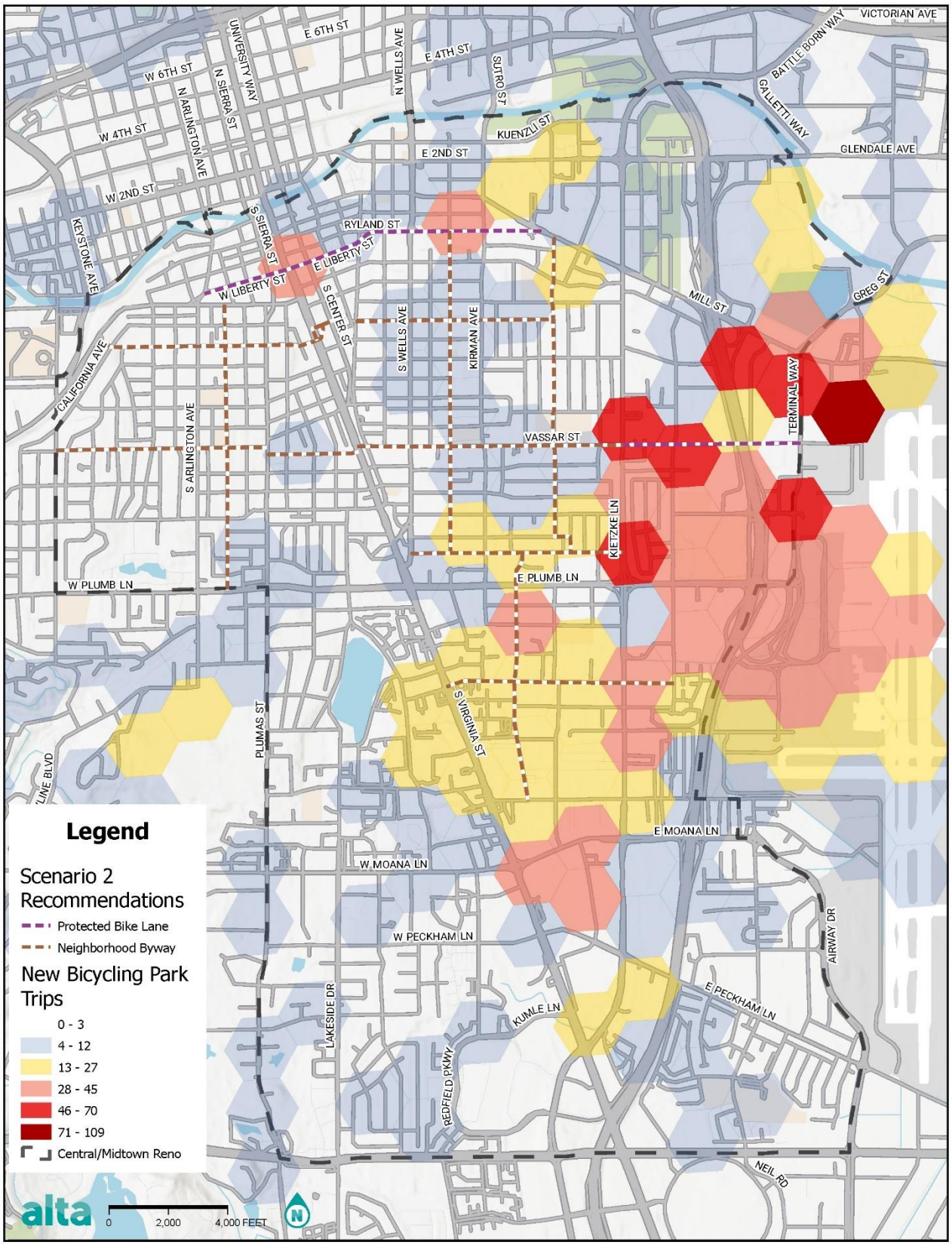
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Scenario 2 Recommendations
Protected Bike Lane
Neighborhood Byway
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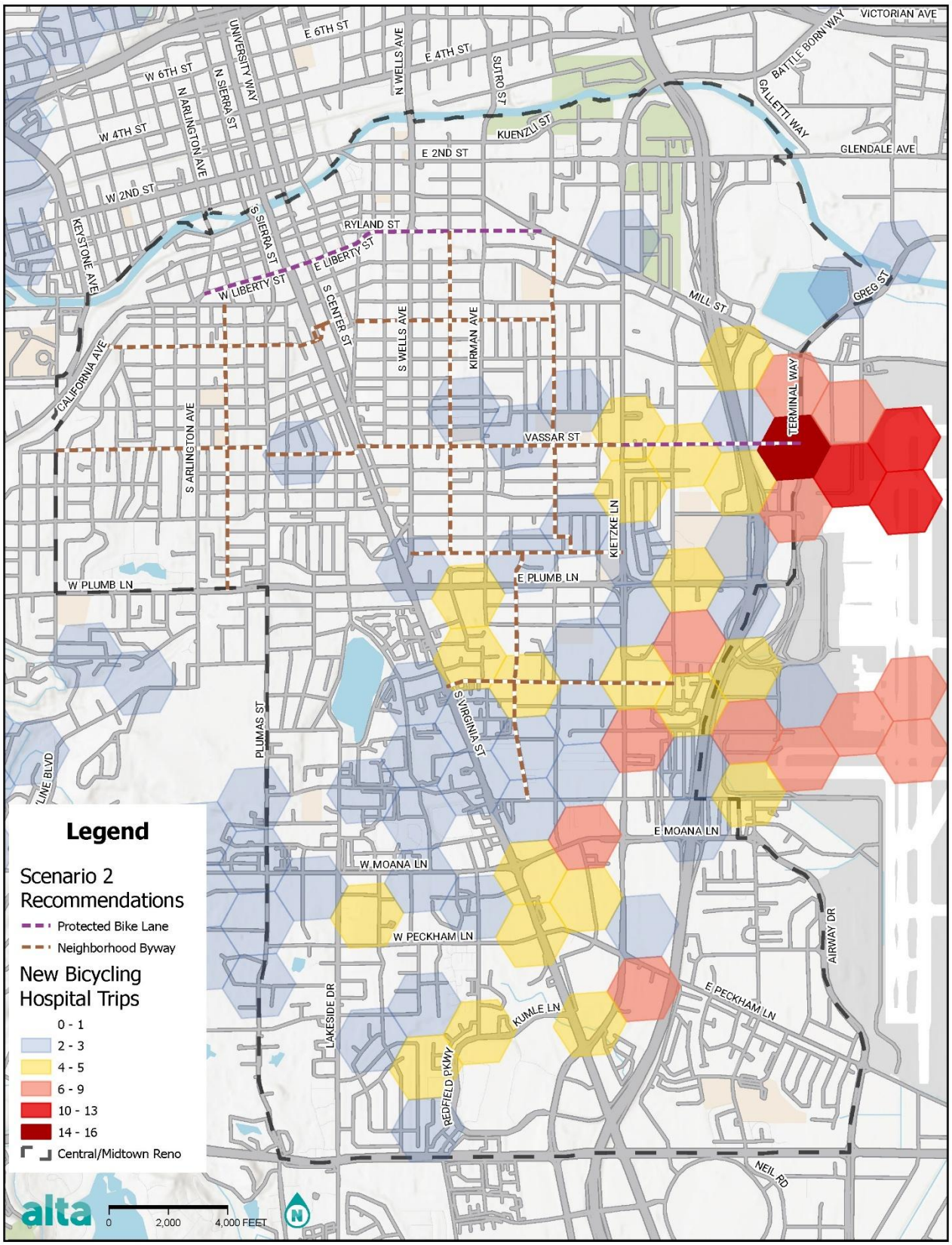
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Scenario 2 Recommendations
Protected Bike Lane
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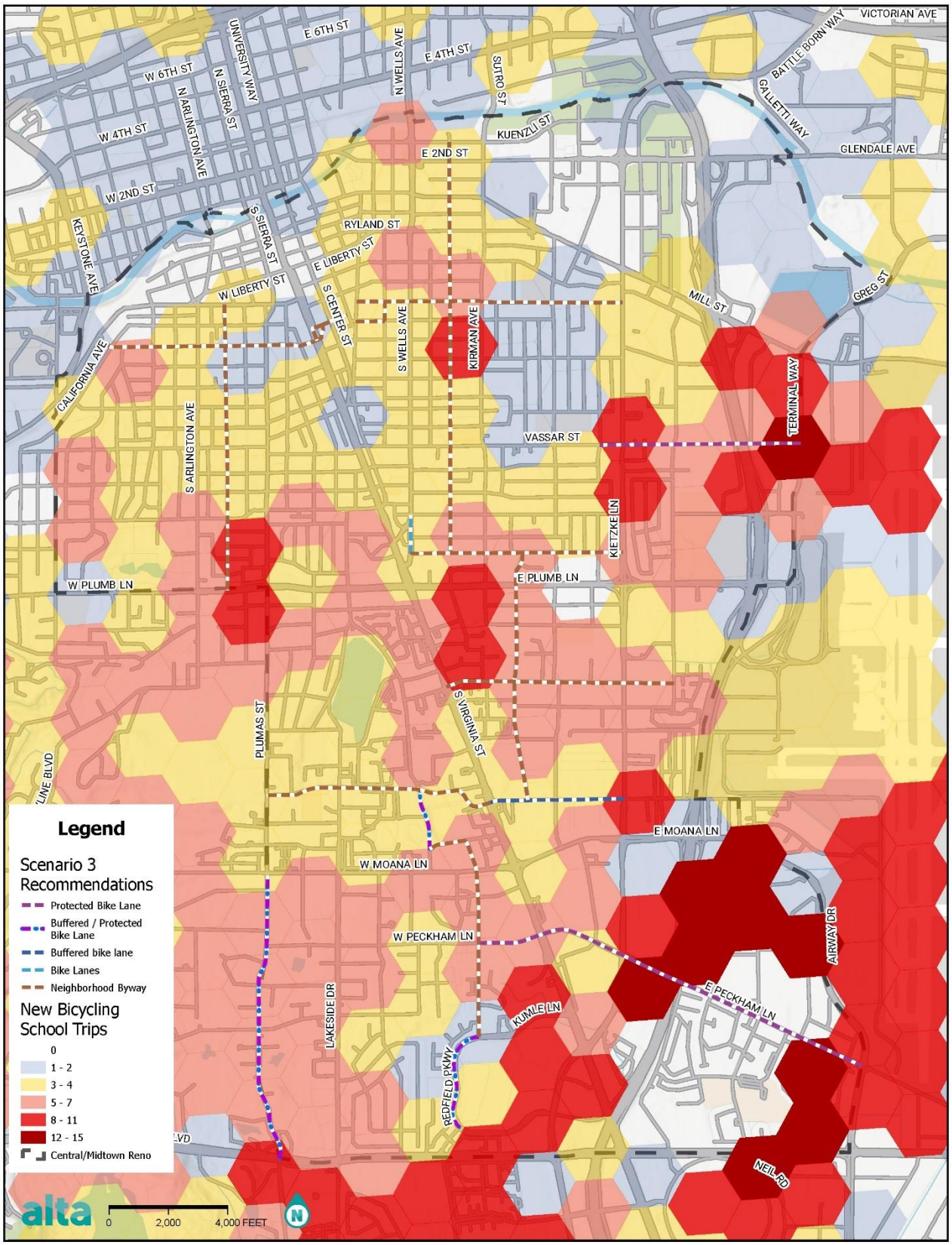
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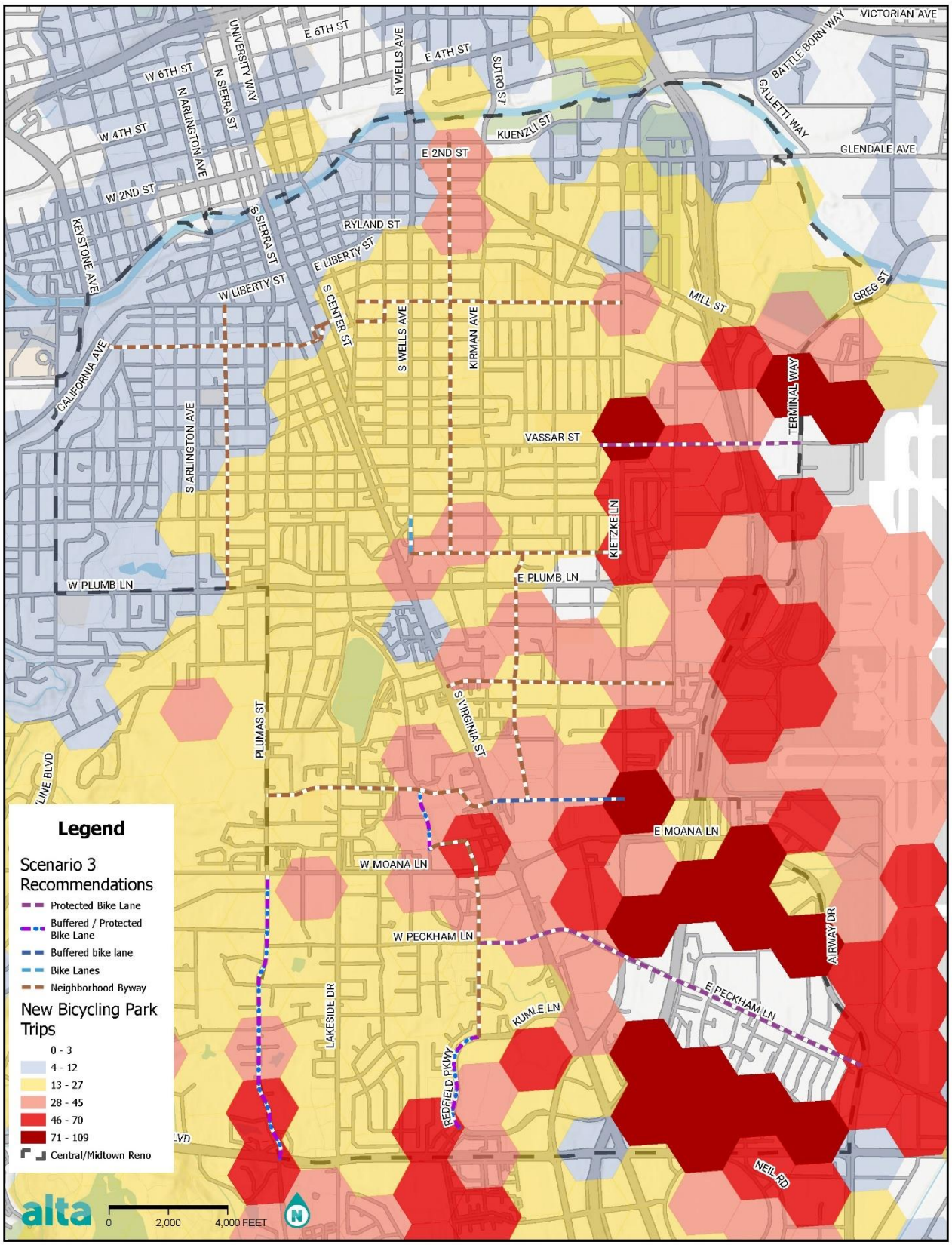
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Neighborhood Byway
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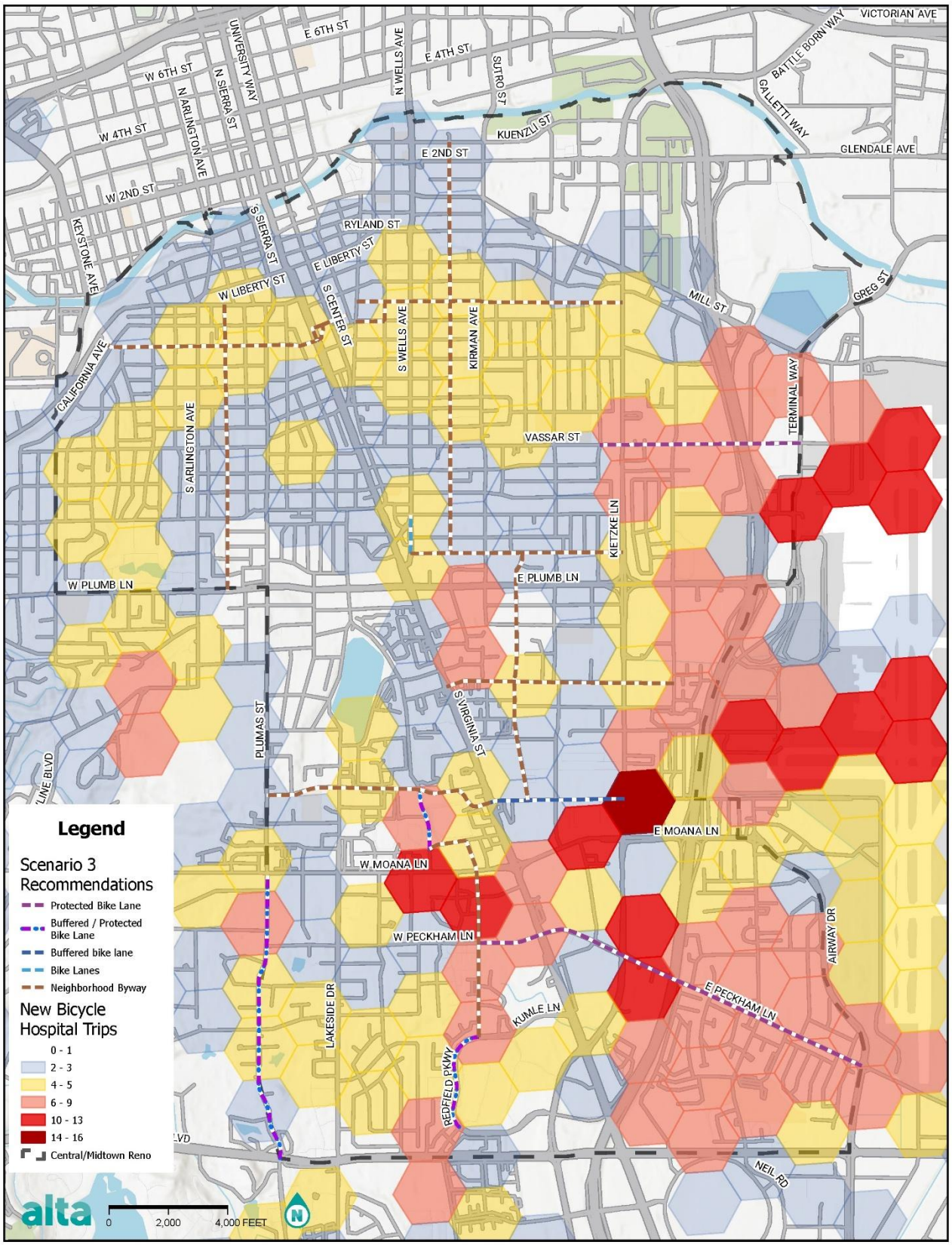
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Scenario 3 Recommendations
Protected Bike Lane
Buffered / Protected Bike Lane
Buffered bike lane
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Neighborhood Byway
New Bicycle Hospital Trips
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KUMLE LN
REDFIELD PKWY
NEIL RD

Appendix C – Cost Estimate Unit/Per Mile Costs

Corridor Improvement	Cost Per Mile
Bike Lane	$ 183,600
Buffered Bike Lane	$ 261,000
Protected Bike Lane	$ 633,600
Bicycle Boulevard	$ 52,800
Bicycle Boulevard with Intersection Traffic Calming (Curb Extensions and 2 new crosswalks every 1/4 mile)	$ 223,664

Intersection Improvement	Cost Per Installation
Pedestrian Hybrid Beacon (PHB)	$ 650,000
Median Refuge Island	$ 50,000
RRFBs	$ 45,375
Raised Crosswalk	$ 23,024
Midblock Crossing	$ 19,577
Bike Jug Handle	$ 15,000
Curb Extensions	$ 10,000
High-Visibility Crosswalk	$ 6,000
Leading Pedestrian Interval	$ 5,500
Leading Pedestrian Interval	$ 5,500
Bike Box	$ 2,000
Bicycle Wayfinding	$ 2,000

Appendix E: Project Cutsheets

HARVARD WAY

PROJECT DESCRIPTION

This project focuses on creating a north/south connection in the eastern portion of the neighborhood to support students walking and biking to school and enhance connectivity from Grove Street to Mill Street. The project originated from the Central Reno / Midtown Neighborhood Network Plan and aims to help enhance connectivity in conjunction with upcoming development in the area.

This project would build off of the existing bike lanes between Plumb Lane and Grove Street with the addition of safety and traffic calming elements north of Plumb Lane including curb extensions, leading pedestrian intervals and high visibility crosswalks. This treatment will help maintain low vehicle speeds and volumes and help create a more comfortable north / south connection.

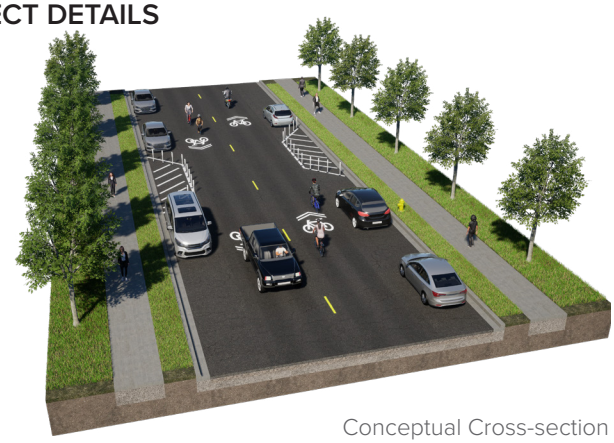
Harvard Way

CORRIDOR SEGMENT	IMPROVEMENT TYPE
Roberts St to Grove St	Neighborhood Byway

INCLUDED INTERSECTION ENHANCEMENTS	
Traffic Circle Bike Boxes	Curb Extensions Daylighting

PLANNING LEVEL COST ESTIMATE
$320,468

PROJECT DETAILS

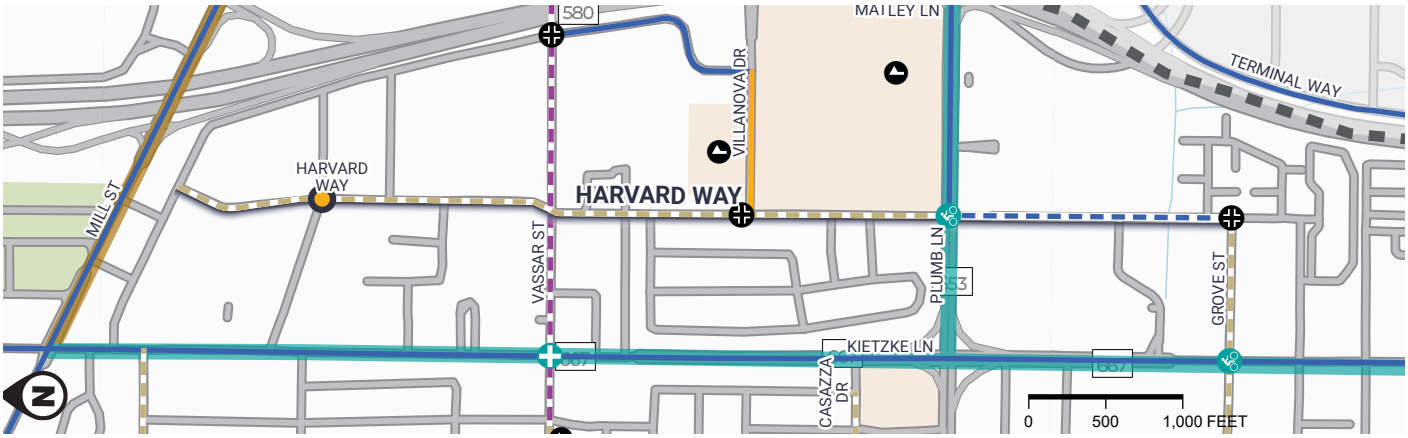


Conceptual Cross-section

Design Considerations

The proposed cross-section to the left represents the typical configuration for a neighborhood byway. Traffic calming elements along the route are intended to include curb extensions with neckdowns / chokers between intersections where parking utilization was observed to be relatively low. This project also includes potential modifications to signal timings which may need to be coordinated with additional analysis and improvements on major cross-streets such as Vassar Street.

PROJECT MAP



LEGEND

- Central/Midtown Reno
- school
- park

Existing Bike Facility
- bike lane
- shared use path
- shared lane

RTP Funded Project Type
- capacity
- multimodal

Central Reno Recommendations
- bike lane
- protected bike lane
- neighborhood byway

Intersection Concept Type
- curb extensions w/ minor enhancements
- protected intersection
- two-staged turn box / cut through / bike boxes
- traffic circle

2ND, KUENZLI & KIRMAN ST

PROJECT DESCRIPTION

This project would establish an east/west connection on the northern edge of the Central Reno / Midtown neighborhood and connecting to the Biggest Little Bike Network project at Evans Avenue. This project originated from the Central Reno / Midtown Neighborhood Network Plan and would provide a westbound protected bike lane on Kuenzli St and an eastbound protected bike lane on 2nd St with east/west travel continuing on Kuenzli St between Sutro St and Kietzke Lane with protected bike lanes.

Intersection improvements such as two-staged turn boxes at Sutro St/Kirman Ave will be crucial to assist bicyclists to safely continue east/west along this route. Additionally, a temporary bike lane on Kirman Avenue between Kuenzli St and 2nd St would help maintain protection and connectivity along the route but requires additional analysis to consider feasibility.

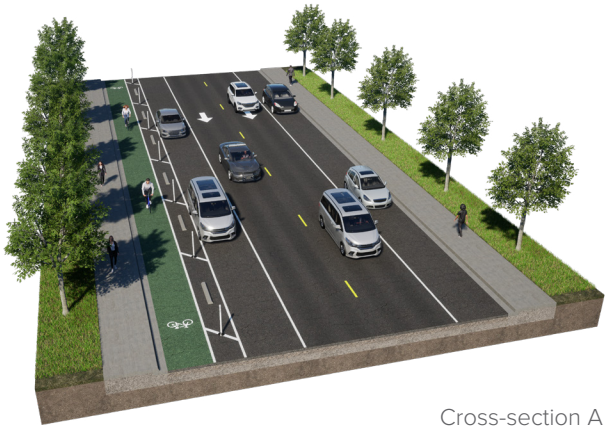
2nd, Kuenzli & Kirman Street

CORRIDOR SEGMENTS	IMPROVEMENT TYPE
Lake St to Sutro St Lake St to Kietzke Ln	Protected Bike Lane One-Way Protect Bike Lane

INCLUDED INTERSECTION ENHANCEMENTS	
Daylighting Protected Intersections	Curb Extensions Wayfinding Two-Staged Turn Box

PLANNING LEVEL COST ESTIMATE
$ 1,242,891

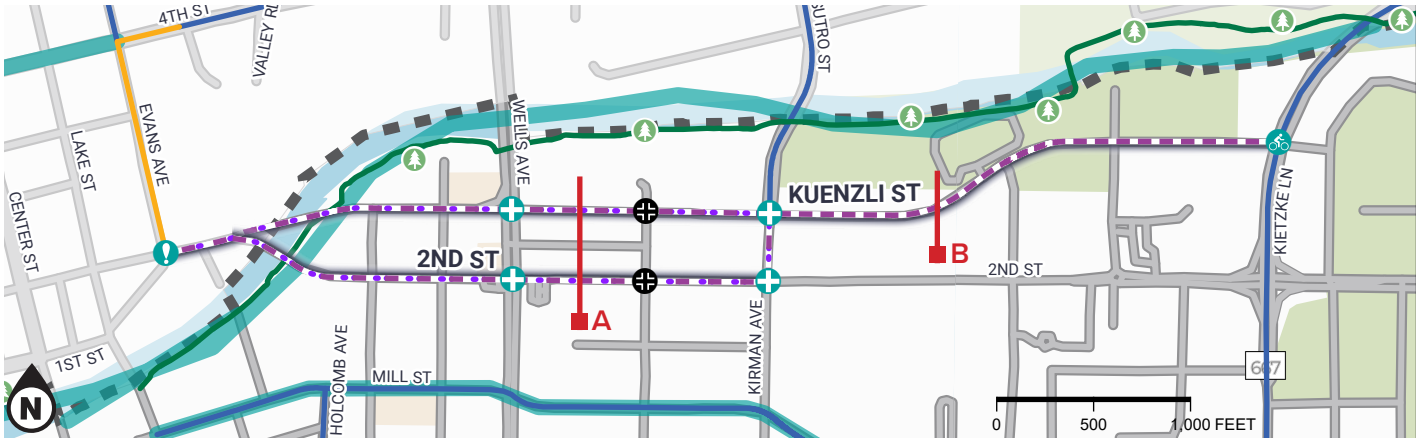
PROJECT DETAILS



Cross-section A

Cross-section B

PROJECT MAP



LEGEND

- Central/Midtown Reno
- school
- park

Existing Bike Facility

- bike lane
- shared use path
- shared lane

RTP Funded Project Type

- capacity
- multimodal

Central Reno Recommendations

- one-way protected bike lane
- protected bike lane

Intersection Concept Type

- curb extensions w/ minor enhancements
- protected intersection
- two-staged turn box / cut through / bike boxes
- wayfinding

YORI WAY

PROJECT DESCRIPTION

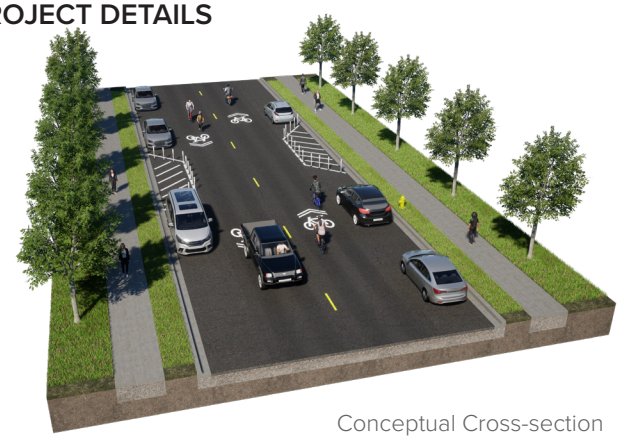
This project would turn Yori Way into a Neighborhood Byway by adding curb extensions and chokers to help maintain low vehicle speeds and a comfortable shared street environment. With this project, Yori Way will provide a long north/south connection through the majority of the Central Reno / Midtown neighborhood with activated crossings of multiple major roadways.

The project originated from the Central Reno / Midtown Neighborhood Network Plan and will connect with the planned quick-build improvements on Roberts St, Vassar St, Casazza Dr, and Grove St. Additionally, this project will help provide direct connections to multiple neighborhood schools including Booth Elementary, Loder Elementary and Vaughn Middle School.

Yori Way

CORRIDOR SEGMENT	IMPROVEMENT TYPE
Mill St to Moana Ln	Neighborhood Byway
INCLUDED INTERSECTION ENHANCEMENTS	
High Visibility Crosswalks Daylighting	Curb Extensions
PLANNING LEVEL COST ESTIMATE	
$696,778	

PROJECT DETAILS

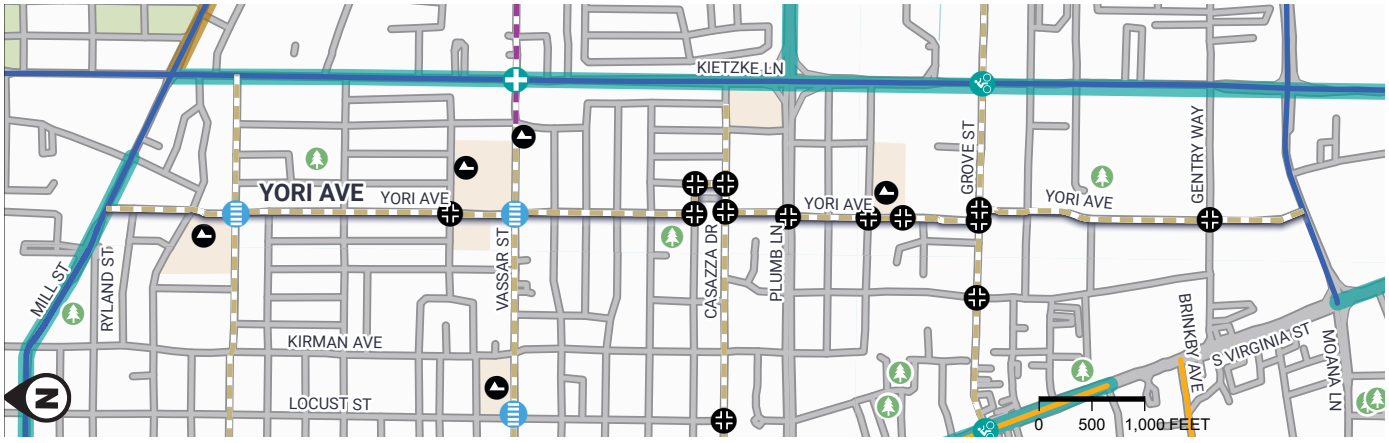


Conceptual Cross-section

Design Considerations

This project will compliment the recent traffic calming improvements on Yori Way at Roberts Street which include quick-build style curb extensions. This project will add curb extensions to reduce crossing distances and reduce turning vehicle speeds. Additionally, crossings at major roadways (ex. Plumb Lane) may be upgraded to overhead Rectangular Rapid Flashing Beacons (RRFBs) or Pedestrian Hybrid Beacons (PHBs) based on engineering judgment.

PROJECT MAP



LEGEND

- Central/Midtown Reno
- school
- park

Existing Bike Facility

- bike lane
- shared use path
- shared lane

RTP Funded Project Type

- capacity
- multimodal

Central Reno Recommendations

- bike lane
- protected bike lane
- neighbor-hood byway
- two-way cycle track

Intersection Concept Type

- curb extensions w/ minor enhancements
- protected intersection
- two-staged turn box / cut through / bike boxes
- high visbility crosswalk

GROVE STREET

PROJECT DESCRIPTION

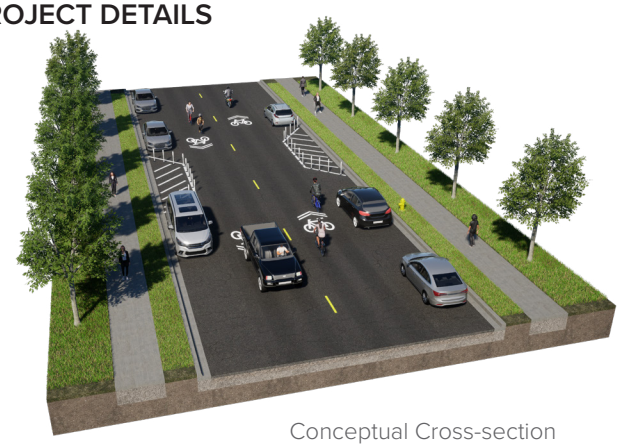
Grove Street provides a key east/west connection through the heart of the Central Reno / Midtown neighborhood and across two major roadways: Kietzke Lane and Virginia Street. This project will create a Neighborhood Byway on Grove Street by adding curb extensions, chokers, and shared lane symbols.

This treatment will help reduce overall crossing distances for pedestrians and help maintain low vehicle speeds along the corridor and through intersections. The project originated from the Central Reno / Midtown Neighborhood Network Plan and will connect with planned quick-build improvements on Yori Way and the existing bicycle lanes on Harvard Way and provide connectivity to the Virginia Lake recreation area.

Grove Street

CORRIDOR SEGMENT	IMPROVEMENT TYPE
Lymberry St to Harvard Way	Neighborhood Byway
INCLUDED INTERSECTION ENHANCEMENTS	
Curb Extensions Daylighting	Bike Boxes Bike Jug Handle
PLANNING LEVEL COST ESTIMATE	
$332,933	

PROJECT DETAILS

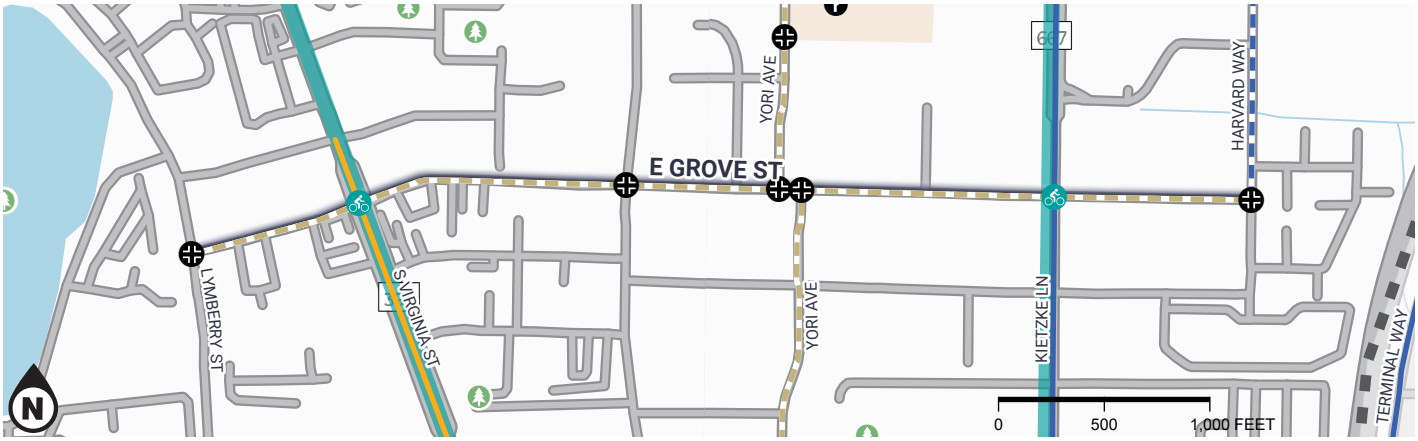


Conceptual Cross-section

Design Considerations

The addition of bicycle detection at the existing signalized intersections of Kietzke Lane and Virginia Street may be considered in order to enhance the use of this route for people biking. Additionally, the Neighborhood Byway design will help maintain parking along the corridor but there may be areas near driveways and intersections where parking space is reallocated to increase visibility and enhance safety.

PROJECT MAP



LEGEND

- Central/Midtown Reno
- school
- park

Existing Bike Facility
- bike lane
- shared use path
- shared lane

RTP Funded Project Type
- capacity
- multimodal

Central Reno Recommendations
- bike lane
- neighborhood byway

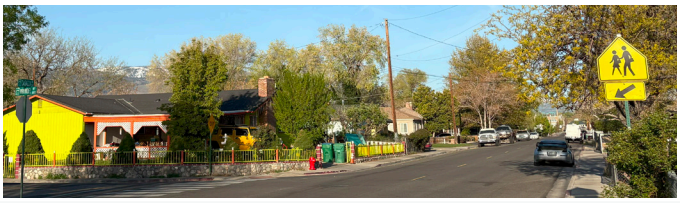
Intersection Concept Type
- curb extensions w/ minor enhancements
- two-staged turn box / cut through / bike boxes

CASAZZA DRIVE

PROJECT DESCRIPTION

Casazza Drive provides an alternative east/ west connection to Plumb Lane in the middle of the Central Reno / Midtown neighborhood. Improvements on Casazza Drive will help to enhance connectivity with local shopping destinations and will serve as an integral piece of the active transportation network by linking the planned quick-build improvements on Yori Way and the existing bike lanes on Wells Avenue.

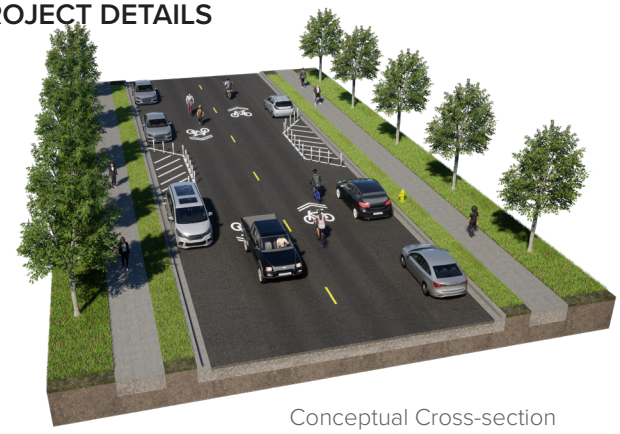
The project originated from the Central Reno / Midtown Neighborhood Network Plan and will help to enhance safety along this corridor and support low vehicle speeds in addition to adding traffic calming elements like curb extensions and intersection daylighting.



Casazza Drive

CORRIDOR SEGMENT	IMPROVEMENT TYPE
Wells Ave to Kietzke Ln	Neighborhood Byway
INCLUDED INTERSECTION ENHANCEMENTS	
Curb Extensions	Daylighting
PLANNING LEVEL COST ESTIMATE	
$222,851	

PROJECT DETAILS



Conceptual Cross-section

Design Considerations

The Neighborhood Byway design will help maintain parking along the corridor but there may be areas near driveways and intersections where parking space is reallocated to increase visibility and enhance safety. Additional connectivity may be achieved by striping in bike lanes on Wells Avenue from Casazza Drive to Grand Canyon Blvd with shared lane markings through the roundabout.

PROJECT MAP

LEGEND

- Central/Midtown Reno
- school
- park

Existing Bike Facility

- bike lane
- shared use path
- shared lane

RTP Funded Project Type

- capacity
- multimodal

Central Reno Recommendations

- bike lane
- neighborhood byway

Intersection Concept Type

- curb extensions w/ minor enhancements
- two-staged turn box / cut through / bike boxes

CALIENTE & MONROE STREET

PROJECT DESCRIPTION

This connection helps to create a continuous east/west link across the neighborhood by acting as an extension of the improvements on Vassar Street. This route connects to the proposed improvements on Forest Street and would also connect with the existing bike lanes on Arlington Avenue. Mount Rose Street may be considered as alternative to this corridor.

Caliente & Monroe Street

CORRIDOR SEGMENT	IMPROVEMENT TYPE
Virginia St to Plumas St Plumas St to Marsh Ave	Neighborhood Byway

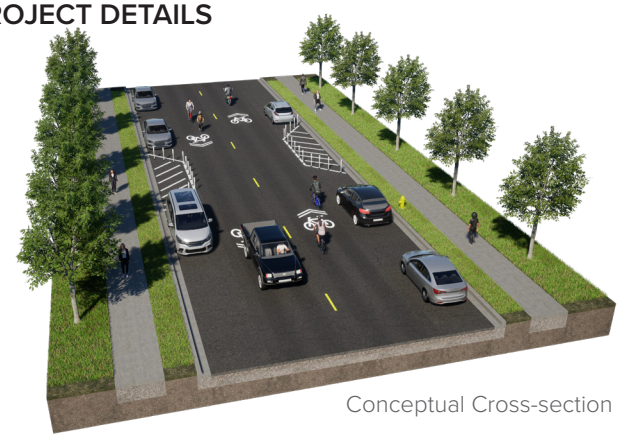
INCLUDED INTERSECTION ENHANCEMENTS

High Visibility Crosswalks Curb Extensions	Bike Boxes Bike Jug Handles

PLANNING LEVEL COST ESTIMATE

$313,992

PROJECT DETAILS

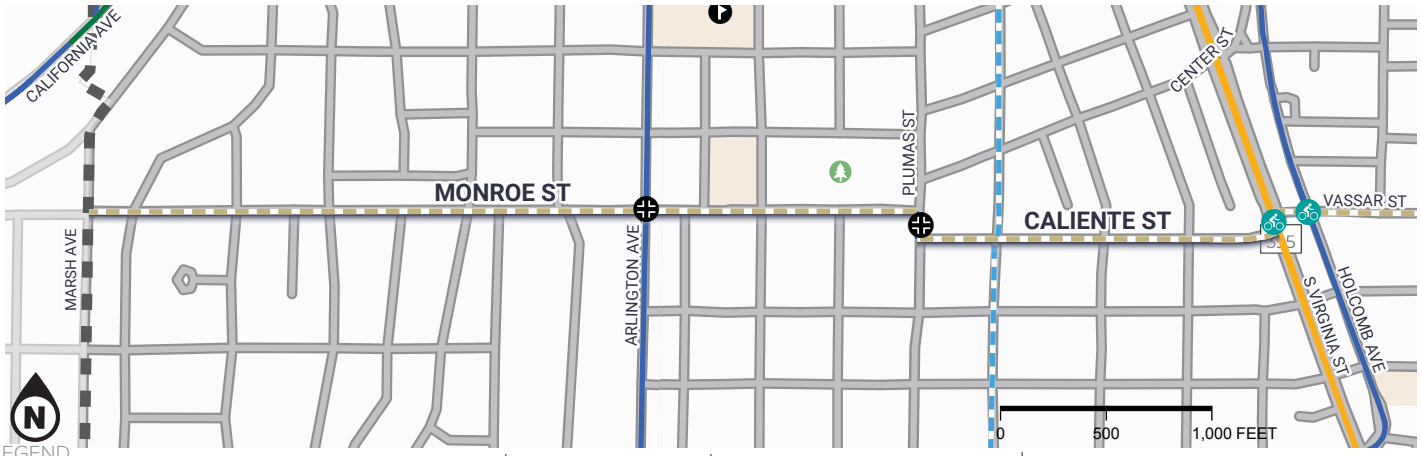


Conceptual Cross-section

Design Considerations

It is important to note that a Neighborhood Byway treatment on Caliente Street would require reconfiguring Caliente Street to work with bi-directional vehicle traffic or to create a contra-flow bike lane. Allowing bi-directional traffic is preferred and would require reconfiguration of the existing bulb-outs at the Virginia Street intersection. Additionally, in order to enhance the transition from Caliente Street to Monroe Street, a short bike lane with a bicycle jug handle is recommended. This would provide dedicated space for a bicyclist to turn while remaining outside of vehicle traffic.

PROJECT MAP



LEGEND

- Central/Midtown Reno
- school
- park

Existing Bike Facility
- bike lane
- shared use path
- shared lane

RTP Funded Project Type
- capacity
- multimodal

Central Reno Recommendations
- bike lane
- neighborhood byway

Intersection Concept Type
- curb extensions w/ minor enhancements
- two-staged turn box / cut through / bike boxes

VASSAR STREET

PROJECT DESCRIPTION

Vassar Street provides a helpful east/west connection through the Central Reno / Midtown neighborhood while connecting with multiple schools, the US Post Office, and popular commercial destinations along Virginia Street. This project will implement two configurations on either side of Kietzke Lane. West of Kietzke Lane, this project will create a Neighborhood Byway with curb extensions to support a slow-speed environment. East of Kietzke Lane, this project will reconfigure the existing roadway space to provide a protected bike lane in either direction while maintaining one vehicle lane in each direction and a two-way center turn lane.

The project originated from the Central Reno / Midtown Neighborhood Network Plan and will provide connections to the planned quick-build improvements on Yori Way and Harvard Way while also linking with the existing bike lanes on Holcomb Avenue, Wells Avenue, and Kietzke Lane.

Vassar Street

CORRIDOR SEGMENT	IMPROVEMENT TYPE
Terminal Way to S Virginia St	Protected Bike Lane Neighborhood Byway

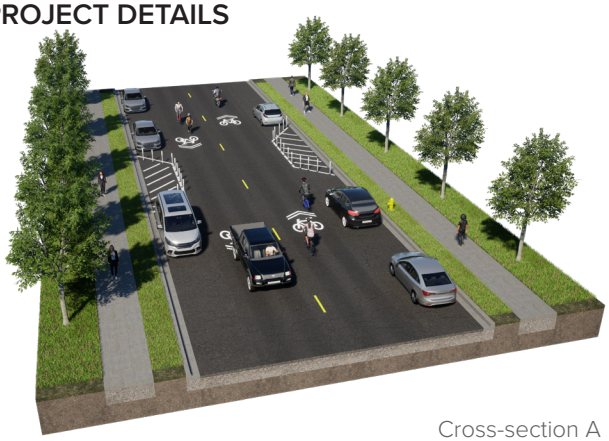
INCLUDED INTERSECTION ENHANCEMENTS

Protected Intersections Curb Extensions	Daylighting Bike Boxes

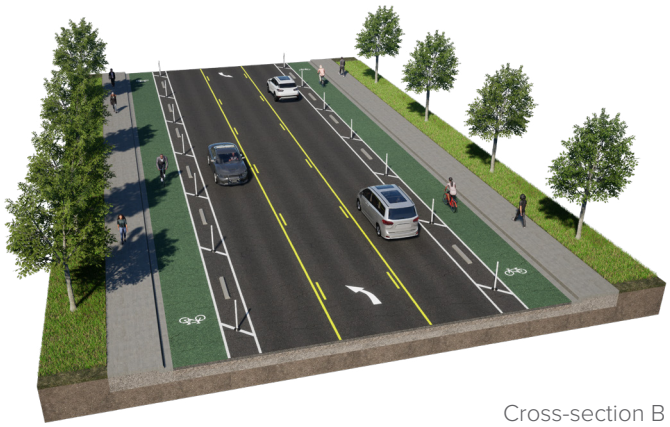
PLANNING LEVEL COST ESTIMATE

$948,302

PROJECT DETAILS



Cross-section A



Cross-section B

PROJECT MAP

LEGEND

- Central/Midtown Reno
- school
- park

Existing Bike Facility

- bike lane
- shared use path
- shared lane

RTP Funded Project Type

- capacity
- multimodal

Central Reno Recommendations

- protected bike lane
- neighborhood byway

Intersection Concept Type

- curb extensions w/ minor enhancements
- protected intersection
- two-staged turn box / cut through / bike boxes
- high visibility crosswalk

TAYLOR & CHENEY STREET

PROJECT DESCRIPTION

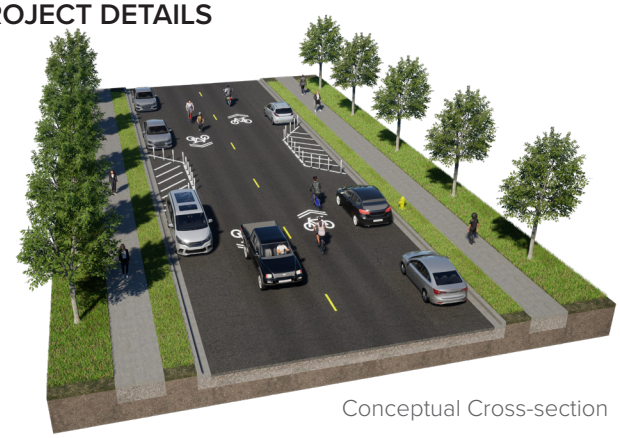
This connection uses two short street segments on Taylor Street and Cheney Street to create a connection across Virginia Street between Holcomb Avenue and the planned quick-build improvements on Forest Street.

The project originated from the Central Reno / Midtown Neighborhood Network Plan and will include utilizing a cut through in the existing median to allow bicyclists only to turn left from Taylor Street and Cheney Street onto Virginia Street. This route will connect with the existing high visibility crosswalk across Holcomb Avenue and an existing high visibility crosswalk at Plumas Street.

Taylor & Cheney Street

CORRIDOR SEGMENT	IMPROVEMENT TYPE
Holcomb Ave to Plumas St	Neighborhood Byway
INCLUDED INTERSECTION ENHANCEMENTS	
Daylighting Bike Cut-throughs	Curb Extensions
	PLANNING LEVEL COST ESTIMATE
	$141,310

PROJECT DETAILS

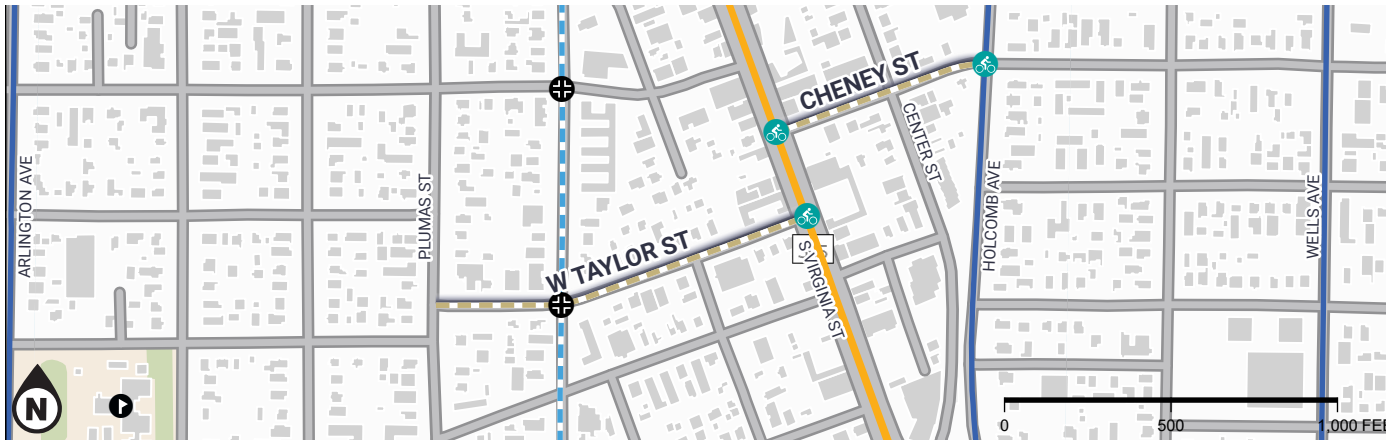


Conceptual Cross-section

Design Considerations

This route crosses Virginia Street in an area with a high level of pedestrian activity and would benefit from the addition of enhanced crosswalks at Virginia Street and Center Street. Additionally, the Neighborhood Byway design will help maintain on-street parking between Virginia Street and Kietzke Lane but there may be areas near driveways and intersections where parking space is reallocated to increase visibility and enhance safety.

PROJECT MAP



LEGEND

- Central/Midtown Reno
- school

Existing Bike Facility
- bike lane
- shared use path
- shared lane

RTP Funded Project Type
- capacity
- multimodal

Central Reno Recommendations
- two-way cycle track
- neighborhood byway

Intersection Concept Type
- curb extensions w/ minor enhancements
- two-staged turn box / cut through / bike boxes

MORAN & ROBERTS STREET

PROJECT DESCRIPTION

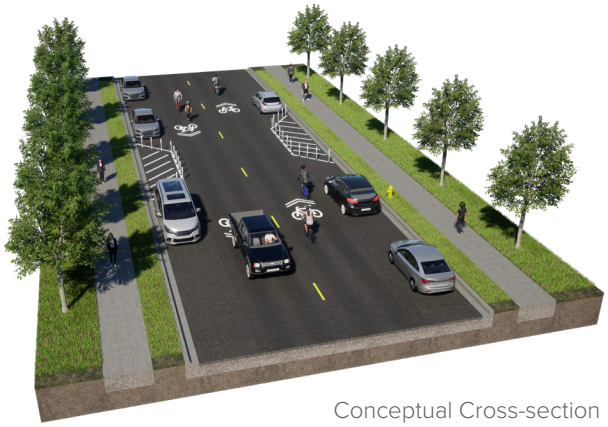
This project will create neighborhood byways on sections of Roberts Street and Moran Street to support east/west travel between Kietzke Lane and Virginia Street. Roberts Street and Moran Street are low-speed and low-volume roadways through the neighborhood which can provide connectivity enhancements between the Wells Avenue District, residential areas, and the Midtown commercial area.

Individuals traveling east/west will transition from Roberts Street to Moran Street at Wilson Street for a one block section which will include wayfinding signage and pavement markings. The project originated from the Central Reno / Midtown Neighborhood Network Plan and will also enhance the existing crossing on Wells Avenue by reducing the crossing distance with curb extensions.

Moran & Roberts Street

CORRIDOR SEGMENT	IMPROVEMENT TYPE
S Virginia St to Wilson St (Moran St)	Neighborhood Byway
INCLUDED INTERSECTION ENHANCEMENTS	
High Visibility Crosswalks Wayfinding	Median Pedestrian Refuge
PLANNING LEVEL COST ESTIMATE	
$399,678	

PROJECT DETAILS

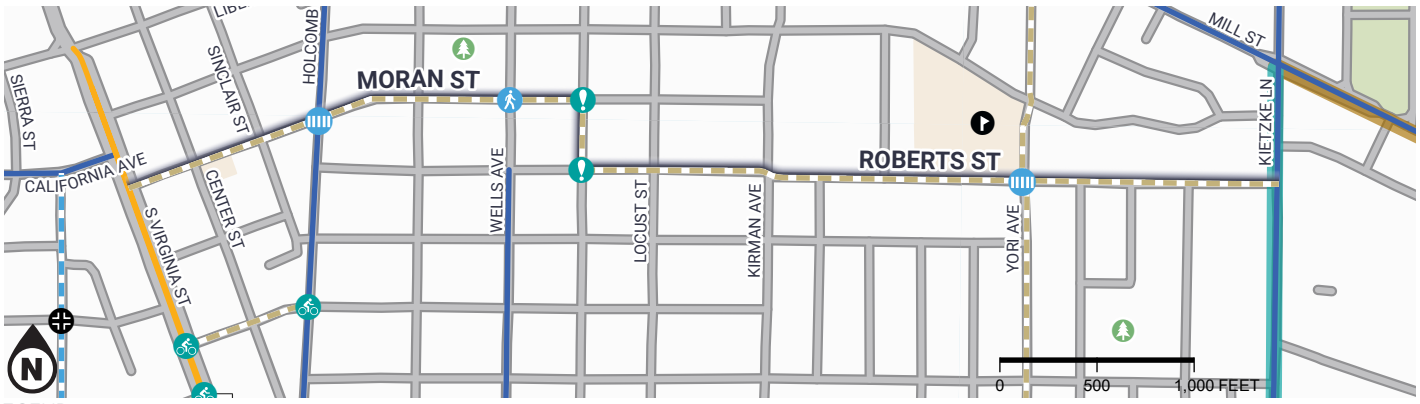


Conceptual Cross-section

Design Considerations

Wayfinding at the intersection of Moran Street / Virginia Street can help bicyclists continue west with the existing bike lanes on California Avenue. Eastbound movements of cyclists coming from California Avenue crossing Virginia Street will be considered in design, and will benefit from the addition of wayfinding signage. The Holcomb Avenue intersection presents a strong opportunity to add a marked crossing with curb extensions that is nearly equidistant between the existing crossings at Cheney Street and Ryland Street/Liberty Street. The Neighborhood Byway design will help maintain parking along the corridor but there may be areas near driveways and intersections where parking space is reallocated to increase visibility and enhance safety.

PROJECT MAP



LEGEND

- Central/Midtown Reno
- school
- park

Existing Bike Facility
- bike lane
- shared use path
- shared lane

RTP Funded Project Type
- capacity
- multimodal

Central Reno Recommendations
- two-way cycle track
- neighborhood byway

Intersection Concept Type
- curb extensions w/ minor enhancements
- high visibility crosswalk
- wayfinding
- two-staged turn box / cut through / bike boxes
- median pedestrian refuge

FOREST STREET

PROJECT DESCRIPTION

This north/south connection will link with the planned quick-build improvements on Caliente Street and the existing bike lanes on California Avenue. This route would provide a key uninterrupted link for bicyclists traveling north/southwest of Virginia Street and provide a proximate alternative to the shared lane facility on Virginia Street.

The project originated from the Central Reno / Midtown Neighborhood Network Plan and will help connect residential neighborhoods with the larger active transportation network and help provide crossing enhancements for pedestrians within this residential area.

Forest Street

CORRIDOR SEGMENT	IMPROVEMENT TYPE
California Ave to Mount Rose St	Neighborhood Byway
INCLUDED INTERSECTION ENHANCEMENTS	
Traffic Circle Curb Extensions	High Visibility Crosswalks
PLANNING LEVEL COST ESTIMATE	
$377,113	

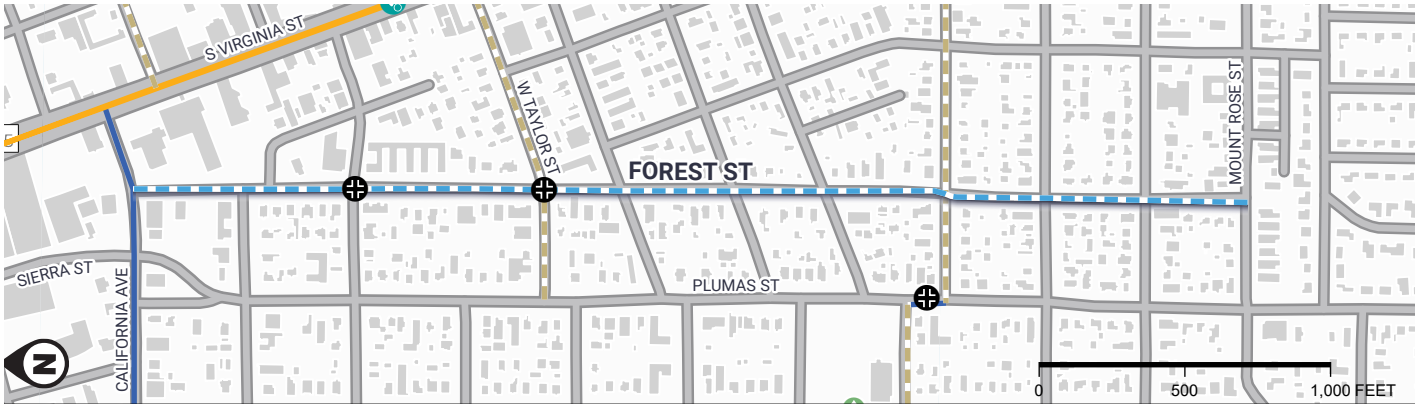
PROJECT DETAILS

Conceptual Cross-section

Design Considerations

This project would consolidate roadway space to provide a two-way cycle track with a wide buffer in conjunction with a southbound vehicle lane and one lane of parking. The proposed configuration could accommodate physical separation in key areas if delineators or other vertical elements are placed on the far side of the buffer space (as shown in the cross-section).

PROJECT MAP



LEGEND

- Central/Midtown Reno
- school
- park

Existing Bike Facility

- bike lane
- shared use path
- shared lane

RTP Funded Project Type

- capacity
- multimodal

Central Reno Recommendations

- two-way cycle track
- neighborhood byway

Intersection Concept Type

- curb extensions w/ minor enhancements