BICYCLE & PEDESTRIAN MASTER PLAN

June 15, 2017

Your RTC. Our Community.

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INTRODUCTION

To support walking and bicycling, the Region will have an integrated system of safe, convenient and comfortable bicycle, pedestrian and other non-motorized facilities that provide access to schools, jobs, shopping, neighborhoods, community facilities, parks and regional trails.

ACKNOWLEDGEMENTS

The Regional Transportation Commission (RTC) of Washoe County were instrumental in the development, review and refinement of this plan. The RTC would like to express their appreciation to the Technical Advisory Committee members and Citizen's Advisory Committee members and their supporting staff for their participation and contributions.

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EXECUTIVE SUMMARY

May, 2017

The Reno Sparks region is a pleasant, thriving, healthy, and sustainable community that strives to meet the needs of all its citizens in an environmentally sensitive manner. Walking and bicycling as a means of transportation or for recreation and fitness requires safe and accessible infrastructure. High quality infrastructure for bicycling and walking contributes to a higher quality of life for people in the region by encouraging an active lifestyle and reducing automobile traffic with its associated noise pollution, congestion, and reliance on oil. The purpose of the Bicycle and Pedestrian Master Plan is to make the region as bicycle and pedestrian friendly as possible in order to encourage people of all ages, abilities, and means to walk and/or bicycle.

The Bicycle and Pedestrian Master Plan is part of the Regional Transpiration Commission's (RTC) Regional Transportation Plan (RTP). The RTP guides transportation investments in Reno, Sparks, and part of Washoe County over a 20-30 year period. This Bicycle and Pedestrian Master Plan is the official policy document addressing the development of bicycle and pedestrian facilities for transportation purposes in the Truckee Meadows.

The Bicycle and Pedestrian Master Plan describes public outreach and solicitation efforts through social media pertaining to projects and input on this document. The master plan also contains information on existing bicycle and pedestrian conditions, bikeway support facilities, types of bicyclists and pedestrians, data on bicycle and pedestrian crashes, existing programs in the Reno Sparks area as well as a sample of programs that can be used as tools to educate the public, and a list of funding sources that could be used by the Reno Sparks region for implementation of bike and pedestrian projects.

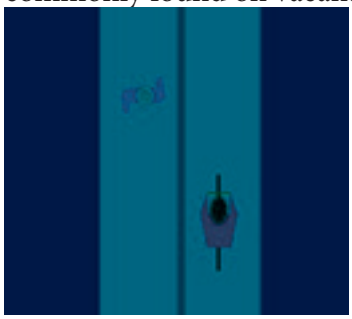
VISION STATEMENT:

To support walking and bicycling, the Region will have an integrated system of safe, convenient and comfortable bicycle, pedestrian and other non-motorized facilities that provide access to schools, jobs, shopping, neighborhoods, community facilities, parks and regional trails.

The Bicycle and Pedestrian Master Plan addresses the following types of bicycle and pedestrian facilities:

Shared Use Paths

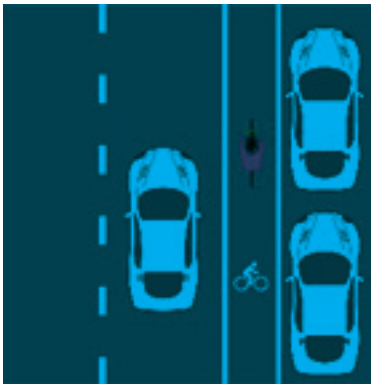
Shared use paths are facilities which are placed completely separated from the roadway for exclusive use of pedestrian and bicyclists. Shared use paths are built to avoid cross flow by motor vehicles and are therefore more commonly found on vacant rail corridors, along recreational areas such as creeks, or along busy roadways



Bike Boulevards and Sharrows
Shared bikeways indicate that bicycles share the vehicle travel lane and are marked with signs and pavement markings designating the shared travel way.

Enhanced Intersection
Enhanced intersections highlight potential conflict points between bicyclists and motor vehicles. The green pavement markings draw attention to drivers that bicyclists may be in the intersection. There are enhanced bikeways on Moana Lane and Keystone Avenue.

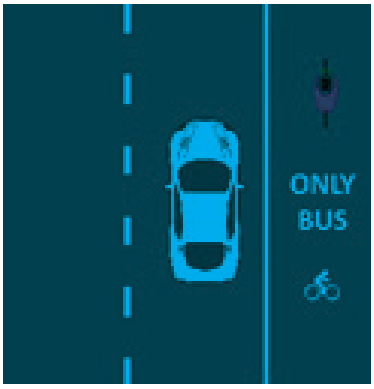
Bike Lane
Bike lanes are areas on the paved roadway that are marked for the semi-exclusive use of bicyclists. Cross flow is generally permitted near intersections and around driveways. Bike lanes can be seen throughout the Truckee Meadows.



Sidewalks
Sidewalks should be wide enough to support the expected pedestrian demand. The minimum width for sidewalks is 4 feet on residential and local roadways and 5 feet on collectors and arterials. 5 feet is desirable for two people to walk side by side comfortably. Sidewalks in areas with high pedestrian volumes, such as downtown areas and TODs should have widths of 6 feet or more.

In addition to sidewalks, certain aspects of pedestrian planning must involve careful consideration in the placement of facilities in order to accommodate pedestrian demand, such as mid-block crossings.

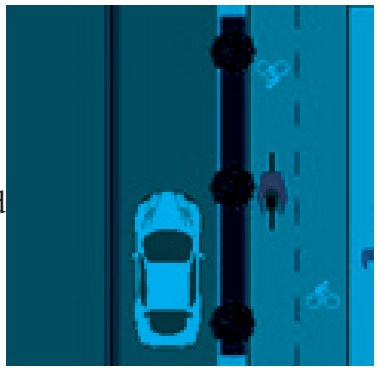
Bus Bike Shared Lane
A shared bus lane is a bus lane that allows cyclists to use it. These are marked with pavement markings and can be found on South Virginia Street in Reno.



Safety is a priority to the RTC. Collaborations with organizations and programs throughout the community that focus on safety, encouragement, and enforcement are highlighted in this plan. RTC is a partner with the Washoe County Safe Routes to School Program for example, this program teaches safety to children K-8th grades.

Improving Safety is one of RTCs performance measures. A current performance measure is to reduce the number of fatalities (vehicle, bike, and pedestrian)/ Number of fatalities per Vehicle Miles Traveled (VMT) by 50% by 2020. The 2016 status of this performance measure indicated 49 traffic fatalities (1.36 per 100 million VMT), including 24 auto occupants (0.67 per 100 million VMT), 1 cyclists (0.03 per 100 million VMT) and 15 pedestrians 0.42 per 100 million VMT) which indicates progress towards this goal.

Cycle Track
A cycle track is an exclusive bike facility that is physically separated from motor vehicle traffic and sidewalk so that each road user has a separate path to drive, ride, or walk on. Victorian Square in Sparks has a cycle track.



In 2016 4.5 miles of bike lanes were added, 2.8 miles of sidewalk were added, 1 mile of paved multi-use path was installed, seven crosswalks were replaced, four new

crosswalks were installed, four pair of crosswalk warning devices were installed, crosswalk lighting was installed at eight locations and 44 pedestrian ramps were installed. These improvements help achieve the performance target of adding 3-7% of implementing the Bicycle Pedestrian Master Plan per year and implementing 3-7% of the ADA Transition Plan per year.

PROPOSED IMPROVEMENT

New to this plan is a prioritized pedestrian project list and an updated bicycle project list. Projects were prioritized and ranked "high, medium, or low" priority based on a numerical point system. Proposed projects included in the Bicycle and Pedestrian Master Plan were identified through input from partnering agencies, the public, and existing plans and project lists such as:

- Existing 2011 Bicycle Pedestrian Master Plan
- Corridor Studies
- Complete Streets Master Plan
- Bus Stop ADA Accessibility Inventory
- Regional Sidewalk Inventory
- Partnering Agencies and Public Input

  The point system used to prioritize improvements was approved by the Technical Advisory Committee and Citizens Multimodal Advisory Committee. Projects were given points if they were:
- In an existing plan
- Located on a regional road or located on a non-regional road that would provide connectivity to an existing bicycle or pedestrian facility between, or leading to, regional roads
- Eliminate a gap in connectivity
- Located in a low income/economically challenged neighborhood
- Serve a block group with poverty level below the Washoe County Average
- Connect to transit
- Located near essential services (school, governmental, social services, affordable housing, medical services, etc.).
- Ease of constructability.

There were 339 miles of sidewalk identified in projects and 116 miles of bike infrastructure identified for implementation in this plan.

IMPLEMENTATION STRATEGIES

This document is complementary to the Regional Transportation Plan (RTP) and many projects are identified in the RTP for funding along with several corridor studies and complete street projects. There are some projects that have not been identified for funding however, the RTP is a 20 year document and with the performance measure of implementing 3-7% of projects in this master plan over the lifetime of the plan it is believed that this can be achieved.

Projects otherwise not specified in the Regional Transportation Project (RTP)

	Bicycle Projects	**Predestrian Projects**
High Priority Ranking	$1.933.363.31	$26,044,768
Medium Priority Ranking	$3,723,145.59	$38,124,761
Low Priority Ranking	$154,836.98	$25,956,568
Total	**$5,811,345.87**	**$90,126,098**

CONCLUSION

This Bicycle and Pedestrian Master Plan was driven by the feedback of local residents, partner agencies, the RTC Technical Advisory Committee and Citizen's Multimodal Advisory Committees. The project selection process was streamlined from the previous master plan. Projects in this master plan support the Regional Transportation Plan and were identified from the 2011 Bicycle Pedestrian Master Plan, Corridor Studies completed by the RTC, the Complete Streets Master Plan, Bus Stop ADA Accessibility Inventory, and Regional Sidewalk Inventory. The purpose of the Bicycle and Pedestrian Master Plan is to encourage investment in the bicycle and pedestrian infrastructure in the region and promote the use of active transportation as a viable mode for people of all ages, abilities, and means.

BACKGROUND

The Reno-Sparks Metropolitan region in Washoe County has made significant investments in the pedestrian and bicycle network since the adoption of the 2011 Reno Sparks Bicycle and Pedestrian Master Plan (RSBPMP). Over 50 miles of bicycle lanes, 20 miles of sidewalks, and 500 curb ramps have been constructed by RTC since 2011. This includes major projects such as the Southeast McCarran Boulevard widening, which widened the roadway from four to six lanes, added a multi-use path on the south/east side of the road, and included a separate multi-use bridge over the Truckee River, the installation of a cycle track on Nichols Boulevard from Victorian Avenue to McCarran Boulevard. Sidewalk and ADA improvements have been implemented on Harvard Way from Linden Street to Yale Way and Sivlerada Boulevard from E 9th Street to Fantastic Drive. Other significant bicycle and pedestrian improvements have been constructed on Sutro Street, West Plumb Lane, and Plumas Street. This revised Regional Transportation Commission (RTC) Bicycle Pedestrian Master Plan (BPMP) includes policies, measurable goals and recommendations for specific infrastructure improvements to enhance pedestrian and bicycle connectivity and mobility around the region. These recommendations cover a wide range of physical improvements, including rebuilding existing sidewalks, intersection crossing improvements, constructing new bicycle and pedestrian infrastructure and implementing recommendations such as new shared use paths as identified in various corridor studies and master plans. Included in this BPMP are updates highlighting implemented bicycle and pedestrian facilities and improvements in the region. This plan also provides a framework for prioritizing bicycle and pedestrian improvements throughout the region.

The Washoe County region is a thriving, healthy, and sustainable community that strives to meet the needs of all of its citizens in an environmentally sensitive manner. Walking and bicycling for recreation, health, or as a means of transportation require safe and accessible infrastructure as well as compliance with the Americans with Disabilities Act (ADA). High quality infrastructure for bicycling and walking contributes to a higher quality of life for people in the region by encouraging an active lifestyle and reducing automobile traffic, with its associated noise, pollution, congestion, and reliance on fossil fuel. The purpose of the RTC BPMP is to make the region as bicycle and pedestrian friendly as possible in order to encourage people of all ages, abilities, and means to walk and/or bicycle.

This RTC BPMP is to be used as a guide for achieving a comprehensive system of bicycle routes, pedestrian routes, and other related facilities that will result in a safe and convenient circulation system for pleasant, non-motorized travel. This document addresses goals, policies, standards, funding strategies, education, and intermodal linkages as they relate to non-motorized infrastructure throughout the Reno-Sparks region. It provides prioritized lists of specific projects for implementation of a balanced multi-modal system.

Walking and bicycling are low-cost, quiet, non-polluting, healthy forms of transportation that are ideal for many trips. They are also enjoyable activities that can improve personal health, promote a sense of community, and provide access to recreational amenities. A bicycle and pedestrian network benefits the entire community, including walkers, cyclists, and wheelchair users of all ages and abilities. This plan's primary goal is to increase the number of trips that people make by walking or bicycling by focusing on the trips people make the most - trips related to work, school, and other non-leisure activities. Recreational trips are also addressed in this document on a secondary level, as these trips are more difficult to monitor.

The RTC's Regional Transportation Plan (RTP) sets forth a blueprint for a system of bikeways in Washoe County. The RTC BPMP is part of the RTP, which guides transportation investments in Reno, Sparks, and portions of Washoe County. The RTC BPMP is the policy document addressing the development of bicycle and pedestrian facilities for transportation purposes in the Truckee Meadows. It supports the RTC guiding principles of: Safe and Healthy Communities, Economic Development and Diversification, Sustainability and Increased Travel Choices.

RELATIONSHIP TO POLICIES AND PLANS

The RTC BPMP is consistent with existing plans and policies at the Federal, State, and local level.

FEDERAL/NATIONAL POLICIES

There are five key policy sources at the Federal/National level:

Fixing America's Surface Transportation Act" (FAST Act)

This 5 year transportation bill was implemented in Federal fiscal year 2016. Highway funding increased by 15% and transit funding by 18%. Since 1991, the largest sources of funding for bicycle and pedestrian projects have been the Transportation Enhancements (TE) program, Surface Transportation Program (STP), Congestion Mitigation and Air Quality (CMAQ) program, Recreational Trails Program (RTP) and the Safe Routes to School (SRTS) program. In 2012, Moving Ahead for Progress in the 21st Century (MAP-21) combined the TE, SRTS, and RTP programs into one Transportation Alternatives Program (TAP).

Under FAST Act, TAP became the "Transportation Alternatives (TA) Set-Aside Program". Just as with the TAP, funding in the TA Set-Aside Program is available for more than just bike and pedestrian projects, which creates competition for funding. TA Set-Aside Program funding is distributed through competitive grant programs administered at the state-wide level by NDOT and at the regional level by RTC.

Safer People, Safer Streets: Summary of U.S. Department of Transportation Action Plan to Increase Walking and Biking and Reduce Pedestrian and Bicyclist Fatalities

The U.S. Department of Transportation implemented a new initiative, "Safer People, Safer Streets" in 2014. The initiative is to reduce the growing number of pedestrian and bicyclist injuries and fatalities through a comprehensive approach that addresses infrastructure safety, education, vehicle safety and data collection. The overarching goal is to promote design improvements to ensure safe and efficient routes for pedestrians and bicycles, promote behavioral safety, and provide education to help individuals make safer travel choices.

> *"Cities and towns across the country are taking steps to make biking an option for their residents, but we have a responsibility to make sure that it's a safe option, too…this isn't just an issue of recreation; it's an issue of equality, bringing people together, expanding the middle class, and helping people who are trying to get into the middle class. It's an issue of making sure, when someone's only or best option to get to work is a bike, that they have an option to ride it, and ride it in safety."* US Department of Transportation Secretary Anthony Foxx.

Americans with Disabilities Act Title III

The Americans with Disabilities Act Title III is legislation enacted in 1990 that provides civil liberties protection to individuals with disabilities with regard to employment, state and local government services, and access to public accommodations, transportation, and telecommunications. Title III of the Act requires places of public accommodation to be accessible and usable to all people, including those with disabilities. Public right-of-way, i.e. the street network, is considered a place of public accommodation, and facilities for disabled pedestrians must be provided wherever facilities for able-bodied individuals are provided. RTC follows the Proposed Guidelines for Accessible Rights-of-Way (PROWAG) when designing pedestrian facilities.

Guide for the Development of Bicycle Facilities

The American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities offers design guidance for accommodating bicycle facilities into transportation projects. It is currently being revised and this plan considers proposed additions/changes to the Guide.

Manual on Uniform Traffic Control Devices

The Manual on Uniform Traffic Control Devices (MUTCD) is published by the Federal Highway Administration (FHWA), and defines the standards used by road managers nationwide to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic.

Urban Bikeway Design Guide

The National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide provides cities with state-of-the-practice solutions that can help create complete streets that are safe and enjoyable. The (FHWA) has posted information on the MUTCD regarding approval status of all of the bicycle related treatments in the guide. In August, 2013 they issued a memorandum of officially supporting use of the document.

STATE PLANS AND POLICIES

The Nevada Department of Transportation (NDOT) has developed the following plans and policies related to bicycle and pedestrian planning:

Nevada Strategic Highway Safety Plan

Nevada's Strategic Highway Safety Plan (SHSP) is a statewide, comprehensive safety plan that provides a coordinated framework for reducing fatalities and serious injuries on all public roads. The SHSP strategically establishes statewide goals and critical emphasis areas developed in consultation with Federal, State, local, and private sector safety stakeholders. Nevada, under the leadership of the Nevada Department of Transportation, completed development of the first Strategic Highway Safety Plan (SHSP) in 2006. The plan was updated in 2011, 2015, and 2016. A broad range of state agencies and other organizations actively participated in the process through the Nevada Executive Committee (NECT) and the Technical Working Group (TWG). The NECTS approved to update the original SHSP with a new goal of zero fatalities. The Committee determined there are two elements to adopting a Zero Fatality goal – the goal itself and the communication of the goal so people understand every individual's goal, even those who are high-risk drivers (impaired, speeding, aggressive, etc.) is zero fatalities.

In addition to these guiding principles, FHWA asked the states to address three key objectives: first set a safety goal, second identify a short list of the highest priority safety strategies, and finally analyze safety investment practices to determine the most effective way to achieve the adopted goal consistent with federal regulations and state policies.

To help the State focus its highway safety efforts in areas where they can be the most effective, Nevada identified the emphasis areas where there was a relatively high number of fatalities. Five Critical Emphasis Areas (CEAs) were identified at Nevada's first safety summit held in June, 2004. In March, 2014, Motorcycle Safety was added as the 6th identified critical emphasis area.

Critical Emphasis Areas:

- Impaired Driving (reducing impaired driving)
- Intersections (improving the design and operation of highway intersections)
- Lane Departures
- Motorcycle Safety
- Occupant Protection (seatbelt use)
- Pedestrians (making walking and street crossing safer)

Nevada State Bicycle Plan

The Nevada Statewide Bicycle Plan, adopted in 2013 focuses on infrastructure and connectivity needs for rural areas in Nevada.

The Nevada Statewide Bicycle Plan recommendations are general and could be used to complement the Metropolitan Planning Organization (MPO) Bicycle Plans such as this one, which address bicycle and pedestrian infrastructure in the state's urbanized areas. The two primary goals of the Nevada State Bicycle Plan include increasing levels of bicycling throughout Nevada, and reducing crashes involving bicyclists and motor vehicles.

Access Management Standards and Road Design Guide

The NDOT Access Management System and Standards and NDOT Road Design Guide provide basic design

standards, policies, and procedures for implementing and constructing bicycle and pedestrian facilities within the State of Nevada. Nevada's access management standards and design guidelines are consistent with AASHTO design guidelines.

NDOT Complete Streets Policy

NDOT is currently developing a Complete Streets Policy that will guide roadway design for the agency. The draft policy encourages design for all modes of transportation and provides for narrower lane widths.

NDOT Process for Evaluation of Uncontrolled Crosswalk Locations

In January, 2016 the Nevada Department of Transportation created a process for the evaluation of uncontrolled crosswalk locations. The process should be used to evaluate existing or proposed uncontrolled crosswalk locations. The process is broken into seven criteria from a preliminary field review, to data collection and a crosswalk decision matrix to implementation which was developed by the Safety Division.

REGIONAL/LOCAL PLANS

Regional Transportation Plan

The RTC's 2035 Regional Transportation Plan (RTP) developed four guiding principles that provide the basis for the goals and selection of transportation investments. These guiding principles are being carried forward to the 2040 RTP, which is under development as of the date of this document. The guiding principles are:

Safe and Healthy Communities: Community safety and health are closely tied to transportation infrastructure including bicyclists and pedestrians.

Economic Development and Diversification: Transportation infrastructure investments can position Washoe County for a sustained economic recovery.

Sustainability: Transportation has an important role in environmental, economic, and social sustainability in Washoe County and RTC promotes sustainability by offering alternatives to driving including riding transit, walking, and biking.

Increased Travel Choices: Increasing travel choices means providing safe and convenient options for walking, biking, driving and using transit.

The RTP has nine goals to help guide the development of future transportation improvements in Washoe County, all of which have bicycle and pedestrian components. The goals promote multi-modal transportation and generally encourage a reduction of personal automobile use. They were developed through the public participation process to support the RTP guiding principles. The RTC Bicycle and Pedestrian Master Plan is intended to be the Bicycle and Pedestrian Element of the 2040 RTP; consequently, the RTP guiding principles and goals are incorporated throughout this plan. The RTP goals are:

- Improve Safety
- Integrate Land Use & Economic Development
- Promote Healthy Communities and Sustainability
- Manage Existing Systems Efficiently
- Integrate All Types of Transportation
- Focus on Regional Connectivity

- Promote Equality & Environmental Justice
- Improve Freight & Goods Movements
- Invest Strategically

RTC Complete Streets Master Plan

The RTC Complete Streets Master Plan was adopted in July, 2016. The plan identifies the RTC's long range strategy for Complete Street treatments in the Reno-Sparks metropolitan area. The plan includes:

- A comprehensive analysis of multimodal safety issues relating to complete streets design
- Assessment of the impact to traffic capacity and operations of the roadway network as a result of complete streets
- A long range plan for future complete street treatments in the region
- Public outreach through multiple community workshops and other outreach activities

Complete Streets can include a variety of elements and are designed to improve safety and accommodate local land use characteristics. Some of the potential components of Compete Streets can include sidewalks, bike lanes, shared use paths, enhanced crosswalks, reduction in the number of travel lanes, and bus stops. Because each Complete Streets design is customized to meet corridor needs, not all of these elements will be presented in each Complete Streets design.

Washoe County Master Plan

The *Washoe County Master Plan*, is provided in three (3) volumes and serves as the official Master Plan for Washoe County.

Volume One – contains elements that have general applicability throughout the County;
Volume Two – contains area plans covering each of the County planning areas; and
Volume Three – contains the specific plans, community plans, and joint plans contained within the various planning areas.

The Master Plan is used to determine the most desireable location of each type of development. The plan has policies and maps designed to define development suitability and conserve natural resources (e.g. protect critical environmental areas, define water resources, enhance visual and scenic corridors, etc.) It also includes growth forecast as well as policies and maps reflecting desires related to land uses and transportation. Finally, the Master Plan has standards and maps to guide provisions of public services and facilities. The public services and facilities are implemented through the Capital Improvement Program.

City of Reno Master Plan

As of the date of this document, the City of Reno is in the process of updating their master plan. The new Re-imagine Reno plan will reflect the community's desire for enhanced pedestrian and bicycle connections between neighborhoods and centers, and is intended to help prioritize transit supportive infill and redevelopment (generally within the McCarran Loop) while providing opportunities for less intensive mixed-use development in outlying locations where transit is not in place. Re-imagine Reno will evaluate land use and transportation policies and goals in the context of urban, suburban, and neighborhood corridors. Public input received as part of the plan process indicated strong support for increasing bicycle and pedestrian infrastructure.

City of Sparks Master Plan

The City of Sparks Master Plan, Ignite Sparks, is the official adopted plan for the City of Sparks. The plan is comprised of goals and policies which address the following elements: land use, housing, population, parks and recreation, transportation, conservation, community facilities and area plans. The written goals and policies, in conjunction with the Land Use Map, provide guidance for decisions affecting growth, the use and development of lands, preservation of open space, and the expansion of public facilities and services. The master plan identifies a complete street network for multimodal infrastructure.

Truckee Meadows Regional Plan

The 2012 Truckee Meadows Regional Plan (Regional Plan) provides a blueprint for development in Washoe County over the next 20 years. The Regional Plan directs where growth will occur, identifies development constrained areas that are not suitable for future development, sets priorities for infrastructure development and addresses natural resource management. The Regional Plan also coordinates provision of services and capital improvements from the local governments and affected entities in the region. The 2012 Truckee Meadows Regional Plan was adopted by the Regional Planning Governing Board on July 18, 2013, and is currently being updated as of the date of this plan.

Ozone Advance Path Forward

The U.S. Environmental Protection Agency (EPA) establishes health-based National Ambient Air Quality Standards (NAAQS) for six criteria pollutants including ozone. The ozone NAAQS was first established in 1979, then strengthened in 1997, 2008, and 2015. Ozone concentrations are strongly linked to population, employment, and on-road vehicle miles traveled (VMT). Growth in these three categories increases air pollutant emissions and ozone concentrations. Current ozone monitoring data show that Washoe County may not meet the 2015 ozone NAAQS. EPA is expected to finalize attainment, or non-attainment, designations in October 2017.

Ever since EPA promulgated the 2008 ozone NAAQS, the Washoe County Health District, Air Quality Management Division (AQMD) has been very proactive to encourage voluntary initiatives to improve air quality and avoid violating the ozone standard. Short-term initiatives targeted technology (i.e., smog check programs and clean school busses) and behavior (i.e., Employee Trip Reduction and Safe Routes to School). Long-term initiatives focused on shaping land use development patterns and the built environment. These initiatives were intended to increase transportation choices and reduce the impacts of on-road motor vehicles.

The Ozone Advance Path Forward and Bicycle Pedestrian Master Plan have similar goals and objectives. Specifically, Goal 1, reduce ozone precursor emissions from on-road motor vehicles, strategy 1, minimize Vehicle Miles Traveled (VMT). Long-term improvements will be achieved by shaping land use patterns to increase transportation choices and reduce the community's dependence on the automobile. The full document is available on the Washoe County, NV Air Quality Management Division website.

OUTREACH

The RTC BPMP is an update of the 2011 Reno Sparks Bicycle Pedestrian Master Plan. The plan was developed through extensive public outreach and collaboration with local stakeholders and public agencies including the City of Reno, City of Sparks, Washoe County, the Nevada Department of Transportation, and the Citizens Multimodal Advisory Committee. An internal steering committee comprised of representatives from each of these organizations met throughout the development of this plan from February, 2015 to June, 2017. Discussions

held during the steering committee meetings included discussions with the City of Sparks, City of Reno, and Washoe County staff related to applicable bicycle and pedestrian ordinances and municipal codes. The Nevada Department of Transportation also provided feedback based on state requirements and Nevada Revised Statues. The plan was presented to the Traffic Roundtable, a committee representing local jurisdictions and traffic engineering partners, on several occassions.

During the revision of the BPMP, the RTC included displays and information about the BPMP at all applicable public outreach events, these meetings the revised 2015 Reno/Sparks Bicycle Map was available for the public to provide comments on the map. The public was asked to review the map for bicycle infrastructure connectivity. The RTC conducted public outreach in April, 2015 during the Earth Day event at Idlewild Park in Reno.

During outreach efforts of the Truckee Meadows Bike Share Feasibility Study, staff discussed the revision of the RTC BPMP. Meetings for the Bike Share Feasibility Study were held in March and April, 2015. Outreach occurred in Reno and Sparks during the following:

- University of Nevada Reno (UNR) Earth Day event at UNR (outreach to the students)
- UNR (outreach to the faculty) at UNR
- Scheels retail store (outreach to residents and visitors)

Two Virginia Street Bus RAPID Transit Extension Project public outreach meetings took place in the spring of 2015. During these meetings, RTC staff was available to discuss the RTC BPMP update with the public and take any public comments pertaining to this plan.

In July, 2016, RTC adopted the Complete Streets Master Plan (CSMP). Due to the similar attributes of these plans, these plans were developed concurrently and public comments gathered during outreach for either plan were applied to the development of recommendations contained in both plans. Beginning September, 2015, public workshops for both the BPMP and CSMP were held in Reno and Sparks and the public was invited to provide input on bicycle and pedestrian connectivity and needs in the region. The public was invited to attend all RTC workshops through various outlets including social media outreach, press releases, RTC e-news, and The Road Ahead, a partnership between RTC and KOLO News 8. The last outreach event was an open house in April, 2017. This event was open to the public to comment on the draft document and projects as well as the draft 2040 RTP.

POLICIES AND GOALS

The RTC BPMP's vision statement reflects the diversity of a wide range of stakeholders. These stakeholders are key to implementation of the Plan's goals and policies. The vision statement summarizes the fundamental, long-term objectives for walking and bicycling in Washoe County. The vision describes the purpose of the Plan.

Vision Statement:

> **To support walking and bicycling, the Region must have an integrated system of safe, convenient and comfortable bicycle, pedestrian and other non-motorized facilities that provide access to schools, jobs, shopping, neighborhoods, community facilities, parks and regional trails.**

Regional Transportation Plan

As discussed in Chapter 1, the RTC's Regional Transportation Plan (RTP) implemented four guiding principles and nine goals. The guiding principles are Safe and Healthy Communities, Economic Development and

Diversification, Sustainability, and Increased Travel Choices. These principles include focal points that recur throughout the RTP and the RTC BPMP. The goals and policies of the updated RTC BPMP support these guiding principles by creating measurable outcomes under the umbrella of the guiding principles which were described in Section 1: Introduction of this Plan.

The RTP has nine goals which all have bicycle and pedestrian components to help guide the development of future transportation improvements in Washoe County. The goals in the RTP were developed through the public participation process to support the RTP guiding principles. These goals highlight the areas where transportation investments can significantly impact quality of life for the region. The goals promote multi-modal transportation and generally encourage a reduction of personal automobile use and were developed through the public participation process to support the RTP guiding principles.

The RTC BPMP is intended to be the Bicycle and Pedestrian Element of the RTP and under each goal identified in the RTP are desired outcomes that support this Plan's vision statement and improve biking and walking in the Region.

The following table shows the goals of the RTC BPMP and the RTP goals they support.

RTP Guiding Principle									
Goal	Improve Safety	Integrate Land Use and Economic Development	Promote Healthy Communities & Sustainability	Manage Existing Systems Efficiently	Integrate all Types of Transportation	Focus on Regional Connectivity	Promote Equality & Environmental Justice	Improve Freight & Goods Movement	Invest Strategically
Enhance pedestrian and bicycle safety to reduce injuries and fatalities and to make walking and biking comfortable and inviting.	✓	✓	✓		✓	✓			✓
Expand walking and bicycling networks, remove barriers, and enhance connections with transit and travel destination.	✓	✓	✓	✓	✓	✓	✓		✓
Provide temporary traffic control plans for constructions zones and provide marked detours with adequate signage for bicyclists and pedestrians.	✓	✓	✓	✓	✓	✓			
Implement goals, policies, and programs outlined in the Strategic Highway Safety Plan.	✓	✓	✓	✓	✓	✓			✓
Encourage project sponsors to consider the needs of bicyclists and pedestrians when designing, reviewing, and approving all development and transportation projects and accommodate those needs, whenever possible.	✓	✓	✓	✓	✓	✓	✓		✓
Maintain or improve "Bronze" award of Bicycle Friendly Community status awarded by the League of American Bicyclists. Re-apply in a timely basis	✓	✓	✓	✓	✓	✓	✓		✓
Update the Bicycle and Pedestrian Master Plan every four years along with project priorities and cost estimates.	✓	✓	✓	✓	✓	✓			✓
Conduct quarterly bicycle, pedestrian and wheelchair counts through the Bicycle, Pedestrian, & Wheelchair Data Collection Program. Utilize data by tracking trends and changes in an annual report, including	✓	✓	✓	✓			✓		✓

RTP Guiding Principle									
Goal	Improve Safety	Integrate Land Use and Economic Development	Promote Healthy Communities & Sustainability	Manage Existing Systems Efficiently	Integrate all Types of Transportation	Focus on Regional Connectivity	Promote Equality & Environmental Justice	Improve Freight & Goods Movement	Invest Strategically
but not limited to, the development and roadway alternatives analyses using an overall mode share percentages.									
Include bicycle and pedestrian upgrades in roadway rehabilitation projects where appropriate.	✓	✓	✓	✓	✓	✓			✓
Implement prioritized bicycle and pedestrian projects as part of RTC's Pavement Preservation Program.	✓	✓	✓	✓	✓	✓	✓		
Develop a bicycle and pedestrian network that serves all users.	✓	✓	✓	✓	✓	✓	✓		✓
Support walking and biking as everyday modes of transportation and recreation and vital elements of a livable community through encouragement, marketing, information.	✓	✓	✓						✓
Implement Complete Streets Policy.	✓	✓	✓	✓	✓	✓	✓	✓	✓
Support education, encouragement, enforcement, and engineering activities, related to bicycle and pedestrian efforts.	✓		✓		✓				✓
Update the bicycle map showing bicycle facilities for public distribution both in print and via the RTC's website annually.	✓		✓	✓	✓	✓	✓		✓
Ensure that the bicycle system serves transit stops and stations.	✓	✓	✓	✓	✓	✓	✓		✓
Prioritize ADA compliant sidewalks on streets within ¼ mile of transit stops.	✓		✓	✓	✓	✓	✓		✓
Effectively balance the needs of all transportation users to promote travel choices, ensuring that bicyclists and pedestrian needs are prioritized in appropriate locations.	✓	✓	✓	✓	✓	✓	✓		✓

RTP Guiding Principle									
Goal	Improve Safety	Integrate Land Use and Economic Development	Promote Healthy Communities & Sustainability	Manage Existing Systems Efficiently	Integrate all Types of Transportation	Focus on Regional Connectivity	Promote Equality & Environmental Justice	Improve Freight & Goods Movement	Invest Strategically
Implement 3-7% of plan improvements for bicycle and pedestrian facilities per year.	✓		✓		✓	✓	✓		✓
Identify Local, State, and Federal funding programs along with specific funding requirements. Review the programs, requirements, and deadlines on an annual basis.					✓	✓	✓		✓
Prepare joint funding applications where appropriate to maximize funding opportunities.	✓		✓	✓	✓	✓			✓

PEDESTRIAN AND BICYCLE NETWORK

This RTC Bicycle and Pedestrian Plan sets forth a blueprint to attain the RTP goal of creating an integrated and active transportation system by developing a network of bicycle facilities and reducing pedestrian deficiencies, especially in areas of high pedestrian need. Active transportation supports healthy communities and sustainable, multimodal transportation solutions that connect people to where they need to go. Providing "active transportation" travel choices such as walking, bicycling, and taking public transit to get to school, to work, and to access essential services provides road users healthier and more sustainable options to travel around the Truckee Meadows Region. An integrated regional transportation system must provide mobility options that are appropriate within the context of the surrounding land use and that address the needs of neighborhoods, commercial districts, and the movement of goods. RTC seeks to have an interconnected multi-modal transportation system that gives residents more travel choices. To this end, the RTC has developed a Complete Streets Master Plan (CSMP) in conjunction with updating the RTC BPMP. This CSMP was adopted in July, 2016. The CSMP defines RTC's complete street program and policy statement.

There are many components which can make up a complete street and complement bicycling and walking. Some of these components include:

- Bicycle facilities such as bicycle lanes, shared paths, cycletracks, or boulevards
- Pedestrian facilities including the installation or enhancement of sidewalks and crosswalks
- Pedestrian crossing treatments - pedestrian crossings/refuge areas in median islands or as curb extensions
- Intersection improvements including installation of roundabouts and other safety enhancements
- Reducing pedestrian crossing time by reducing lane width of underutilized travel lanes
- Improved Pedestrian Scale Aesthetics including the installation of inviting street aesthetics for non-vehicular transportation users such as benches, wider sidewalks with street art, interesting bicycle parking facilities, and garbage receptacles

This plan is also closely tied to the Reno-Sparks Americans with Disabilities Act (ADA) Transition Plan and the Washoe County Pedestrian Safety Action Plan. The bicycle element of the plan builds upon existing facilities throughout the Reno-Sparks area, focusing on access to major destinations, including employment areas, retail areas, schools, and parks. This chapter also reviews existing conditions in areas of high pedestrian demand in the Reno-Sparks area. Design specifications for pedestrian and bicycle facilities are provided in the *RTC Bicycle and Pedestrian Plan Design Best Practices* (Appendix 1).

The RTC has a Traffic Data Collection Program that is designed to collect multimodal traffic counts and provide analysis. The data collected is for bicycle, pedestrian and wheelchair counts at various locations throughout the region. Results are published in quarterly and annual reports. The analysis is used to track the performance measures identified in the Regional Transportation Plan relating to the growth in alternative modes such as walking, biking, and transit. This data also supports RTC efforts to track changes in alternative mode use where complete street improvements have been made. In the fall of 2016, the count program expanded by including four Washoe Country Safe routes to School (SRTS) Schools. This data is used to evaluate the success of SRTS bby measuring the number of students that walk, bike or skateboard to and from school.

REASONS FOR WALKING AND BICYCLING

Bikeways and pedestrian infrastructure are used by a wide range of people including children biking and walking to school and commuters biking and walking to work. Types of events for pedestrians and bicyclists include exercising, racing, organized health walks, wine walks, or touring. While some people rely on biking or walking along with transit as their primary means of transportation, others bike and walk only for recreational purposes. Walking and biking help reduce traffic congestion, especially in the vicinity of public schools; improve air quality by decreasing vehicle emissions; are inexpensive forms of transportation and are healthy activities. In general, biking and walking trips can be categorized into three groups: commuter trips, shopping trips or errands, and recreational.

COMMUTER

Commuter trips consist of employees and students walking, biking or riding to work or school on a scooter, skateboard, or other form of non-motorized travel. Depending on the length of the commute and the type of employment, commuters may need shower and locker facilities at their place of employment. Commuters can usually carry everything that they need with them when using active transportation in backpacks or panniers (baskets mounted to the side of a bicycle).

Increasing the use of active transportation options among students is a goal of the Safe Routes to School (SRTS) Program in the Washoe County School District. Elementary and middle schools are usually located within easy walking or bicycling distance, up to a couple of miles, of the residential areas they serve; sometimes parents escort their young children to school via a walking school bus or bike train. The SRTS Program has a full-time school police officer dedicated to create an increasing mode shift toward active transportation in the number of students walking and bicycling to school. High school students might also walk or bike to school, although their schools are typically located farther away from their homes. Since teenagers have better motor skills and a better understanding of traffic laws than younger children, they are more capable of safely navigating more challenging routes to school and do not require parental escorts.

SHOPPING TRIPS/ERRANDS

Active transportation is ideal for short errand trips, such as to the store, bank, or doctor for example. For trips that are less than a couple of miles in length, riding a bicycle usually takes the same amount of time as driving a car, especially when considering the time allotted to park a car.

RECREATIONAL

Bicycling and walking for exercise and recreation are popular activities among people in the region. The extent to which pedestrians walk and bicyclists ride for exercise can vary. Some ride just a few miles for extra physical activity, while others ride long distances, multiple days per week, or while training for an event. Recreational bicyclists range in age from children who ride with their parents to the elderly who prefer bicycling because it is a gentle form of exercise.

BICYCLIST AND PEDESTRIAN NEEDS

The Reno-Sparks area provides an excellent environment for bicycling and walking, including picturesque scenery, existing regional trails and on-street facilities, a temperate climate, and areas with relatively flat terrain. However, heavy vehicular traffic near some pedestrian and bicycle facilities and gaps in connectivity between major points of interest remain a significant challenge for multi-modal users.

Major barriers between Reno and Sparks, and between North Reno and South Reno include the Truckee River, Interstate 80 (I-80), Interstate 580 (I-580) and US 395. These features form significant barriers which create unique challenges to providing safe, desirable, and cost-effective bicycle connections between neighborhoods and services. Older parts of the region, like along Virginia Street in downtown Reno, are also challenging as right-of-way is generally constrained, making construction of new facilities difficult.

Since the adoption of the first Reno-Sparks Bicycle and Pedestrian Master Plan, seven corridor studies have been completed: Keystone Avenue Corridor Study, 4th Street/Prater Way Study, Oddie Boulevard/Wells Avenue Corridor Study, Mill Street/Terminal Way Corridor Study, Sun Valley Corridor Study, Virginia Street Corridor Study, and Sparks Boulevard Corridor Study. Each of these corridor studies are unique, however, they all recommend complete streets elements and alternative transportation improvements.

TRIP TYPES

When designing a bicycle and pedestrian system it is important to consider the purpose of a bicycling or walking trip, which helps identify common needs among the user groups. Recreational bicyclists and commuting bicyclists can differ greatly in their choice of route. Recreational riders and walkers are typically more interested in scenic routes leading to parks or other areas-of-interest, while commuters and shoppers are usually interested in the shortest and safest route between two points. Complete Streets are implemented to add transportation choices for all roadway users, whether the trip is for recreation or a necessity such as for employment or an appointment. The RTC focuses on regional roadways to provide mobility for people's day-to-day needs; therefore, the RTC BPMP focuses on commuter or shopping trips (replacing a car trip), but also considers recreational trips.

COMMUTER AND STUDENT DESTINATIONS AND NEEDS

Commuter and student destinations include downtown employment centers, office parks, and schools. Targeting bikeway and walkway improvements for commuters is important because most roadway congestion, and a significant portion of air contaminant dispersion, occurs during the morning and evening peak travel periods when most people are traveling to work or school.

Commuters and students have similar travel behaviors, which is typically to take the most direct route from origin to destination. For elementary school students, this may consist of residential or collector streets with few crossings of major arterials. For middle school and high school students, pedestrians and bicyclists may have to cross several arterials to reach their school. College students and adult bicycle commuters are generally willing to ride less than five miles, however, some may ride significantly longer distances. In the fall of 2015, the University of Nevada, Reno, was awarded a Bronze Level Bicycle Friendly University from the League of American Bicyclists. This is the first college in Nevada to achieve the Bicycle Friendly University award. Receiving this award demonstrates that the recent improvements to bicycle infrastructure are enhancing the

quality of life in the community.

Commuters and students typically travel on, or have to cross, high-speed roadways during peak periods of traffic to destinations that may have high levels of congestion. One of the most dangerous locations of a student's commute is the drop-off/pick-up zone in front of elementary and middle schools where many vehicles search for parking or drop-off/pick-up spaces.

Those commuting to school or work as pedestrians or bicyclists have simple and obvious needs. They require:

- ✓ Physically separated bicycle lanes or wide curb lanes along arterials and collectors with unobstructed sidewalks
- ✓ Signalized intersections wherever busy arterials must be crossed with detection that responds to bicycles
- ✓ Pedestrian countdown timers with ample crossing time,
- ✓ Periodic maintenance of the pavement conditions of sidewalk
- ✓ Adequate storage for bicycles, scooters, and skateboards at their destination points

Bicycle and pedestrian commuters with longer trips can utilize transit for a portion of their trip. RTC RIDE, RTC RAPID, and RTC INTERCITY buses have bike racks with space for at least two bicycles, which helps extend the ranges of commuting bicyclists in the Reno-Sparks area.

CONNECTING TO PUBLIC TRANSIT

RTC transit service is comprised of RTC RAPID, RTC RIDE, SIERRA SPIRIT, and RTC INTERCITY. RTC RAPID is a Bus Rapid Transit line that operates along S Virginia Street and provides 1.1 million annual rides. RTC RIDE is comprised of 22 local routes and provides 6.2 million annual rides. SIERRA SPIRIT is a downtown Reno circulator that provides 141 thousand annual rides. RTC INTERCITY is a commuter bus between Reno and Carson and provides 24.6 thousand annual rides. Combined, RTC transit services provides 7.5 million annual rides. Almost every transit user is also a pedestrian or bicycle rider who travels to and from bus stops on foot, bicycle, or mobility device. Effective transit service is a key component of reducing private automobile use and encouraging more pedestrian and bicycle activity for both recreation and commuting.

All our buses are equipped with bicycle racks. 16 buses have racks that can hold 3 bikes and 52 buses have racks that can hold 2 bikes. We have a bike repair station at RTC 4TH STREET STATION and also RTC CENTENNIAL PLAZA.

The RTC has 1,028 bus stops throughout its system. There are shelters at 127 stops or one in every eight stops. There are benches at 579 stops or 57% of all stops. Pedestrian access to bus stops is important to encourage transit use especially among the disabled and senior population. The RTC is always improving bus stop accessibility including sidewalk access. The photos show a bus stop at Industrial Ave and Glendale Ave in Sparks that was recently improved. The bus stop improvement included a pad for the stop and sidewalk access all the

way to Glendale Ave.

RECREATIONAL DESTINATIONS AND NEEDS

The Reno-Sparks area has a diverse recreational system that includes parks and trails, which appeal to a wide variety of users including bicyclists and pedestrians. Reasons for recreational bicycling and walking are equally as diverse, and can include children or adults riding and walking to a nearby park or community center, casual riders or pedestrians seeking physical activity, and more seasoned cyclists on a riding tour. Recreational activities are generally sought for pleasure, often have a recreational facility as a final destination, and are discretionary by nature.

Recreational bicyclists and pedestrians can generally be categorized into two groups. The first group includes casual bicyclists and pedestrians who typically make short trips and often include young children, families, and older adults. The second group includes more experienced and athletic riders and walkers who generally seek scenic back roads and more remote areas.

SAFETY PROGRAMS

Safety is the RTC's top priority and is a leading concern for both existing and potential users of the pedestrian and bicycle networks. The perception of safety and safety awareness/training are significant factors that contribute to a person's decision to walk or bicycle or allow for their children to walk or bike. This is a valid concern, given the potentially serious implications of a bicycle or pedestrian-vehicle collision. Therefore, bicycling and walking safety programs for both children and adults are an important component of this plan and should continue to be implemented throughout the region.

TYPES OF FACILITIES

BICYCLE FACILITIES

Bikeway planning and design in Nevada typically rely on the guidelines and design standards established by the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities. Local jurisdictions typically provide their own additional standards and design guidelines for their region. All jurisdictions in the region generally provide three distinct types of bikeway facilities: shared-use paths, bicycle lanes, and shared roadways. In addition to these types of facilities, 1.3 miles of a cycle track has been installed in the City of Sparks on Nichols Boulevard from Victorian Avenue to Howard Way connecting downtown Sparks to the Sparks Marina. Community interest in development of cycletracks in other corridors has also been expressed.

SHARED-USE PATHS

Shared-use paths are facilities separated from the roadway, for the exclusive use of bicyclists and pedestrians, with minimal cross flow by motor vehicles. Shared-use paths are typically located within open space corridors along creeks, beside or underneath high voltage power line corridors, within vacant rail corridors, along busy highways or freeways, or in community or city-parks.

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BICYCLE LANES

Bicycle lanes are within the paved street and are identified with striping, stencils, and signs for semi-exclusive use by bicyclists. Vehicle cross flow is generally permitted at intersections and driveways. Bicycle lanes provide a significant benefit to safe and efficient bicycle circulation. Conflicts between bicycles and automobiles are reduced when on-street bicycle lanes are installed. Having separate identifiable areas on the street for bicycles and autos places the travelers in more predictable, and therefore safer locations. Buffered bicycle lanes can be provided on roadways with sufficient width providing cyclists with a greater sense of security as they can travel farther away from vehicle traffic. Climbing bicycle lanes can be used on streets with limited right-or-way and steep grades. The climbing bicycle lane is placed on the uphill travel lane and typically coupled with shared lane markings (explained in Shared Roadways section below) on the downhill travel lane. More detailed explanations of various bicycle lane designs are provided in the Bicycle & Pedestrian Facility Design Best Practices (Appendix 1.)

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SHARED ROADWAYS (SHARED LANES)

Shared roadways provide right-of-way for bicycles in the vehicle travel lane with signs and pavement markings designating the shared travel way. Examples of enhanced shared roadway facilities include sharrows, and bicycle boulevards. A Shared Lane Marking (or "sharrow") can be marked in the outside lane of a shared roadway to show the suggested path of travel for bicyclists. This is often done when the route has on-street parking, in order to encourage cyclists to ride a safe distance away from the parked vehicles' "door zone." Sharrow markings can also be used at intersections with multiple turn lanes to show bicyclists the recommended lane for through travel. Sharrows also raise awareness for drivers that cyclists should be expected on the street and given sufficient room. A sign stating "Bicycle May Use Full Lane" is often included (but not required). A Bicycle Boulevard is another shared roadway treatment that can be used on low-volume (preferably 500 to 3,500 ADT), low-speed roadways. Bicycle Boulevards usually include traffic calming devices to discourage high-speed through vehicle traffic.

CYCLE TRACKS

A cycle track is an exclusive bicycle facility that combines the user experience of a separated path with the on-street infrastructure of a conventional bike lane. A cycle track is physically separated from motor traffic and distinct from the sidewalk. Cycle tracks have different forms but all share common elements: they provide space that is intended to be exclusively or primarily used for bicycles and are separated from motor vehicle travel lanes, parking lanes, and sidewalks. This type of bike facility is best suited to corridors with minimal driveways and vehicle turn movements. The Urban Bikeway Design Guide published by National Association of City Transportation Officials (NACTO), includes design guides for cycle tracks.

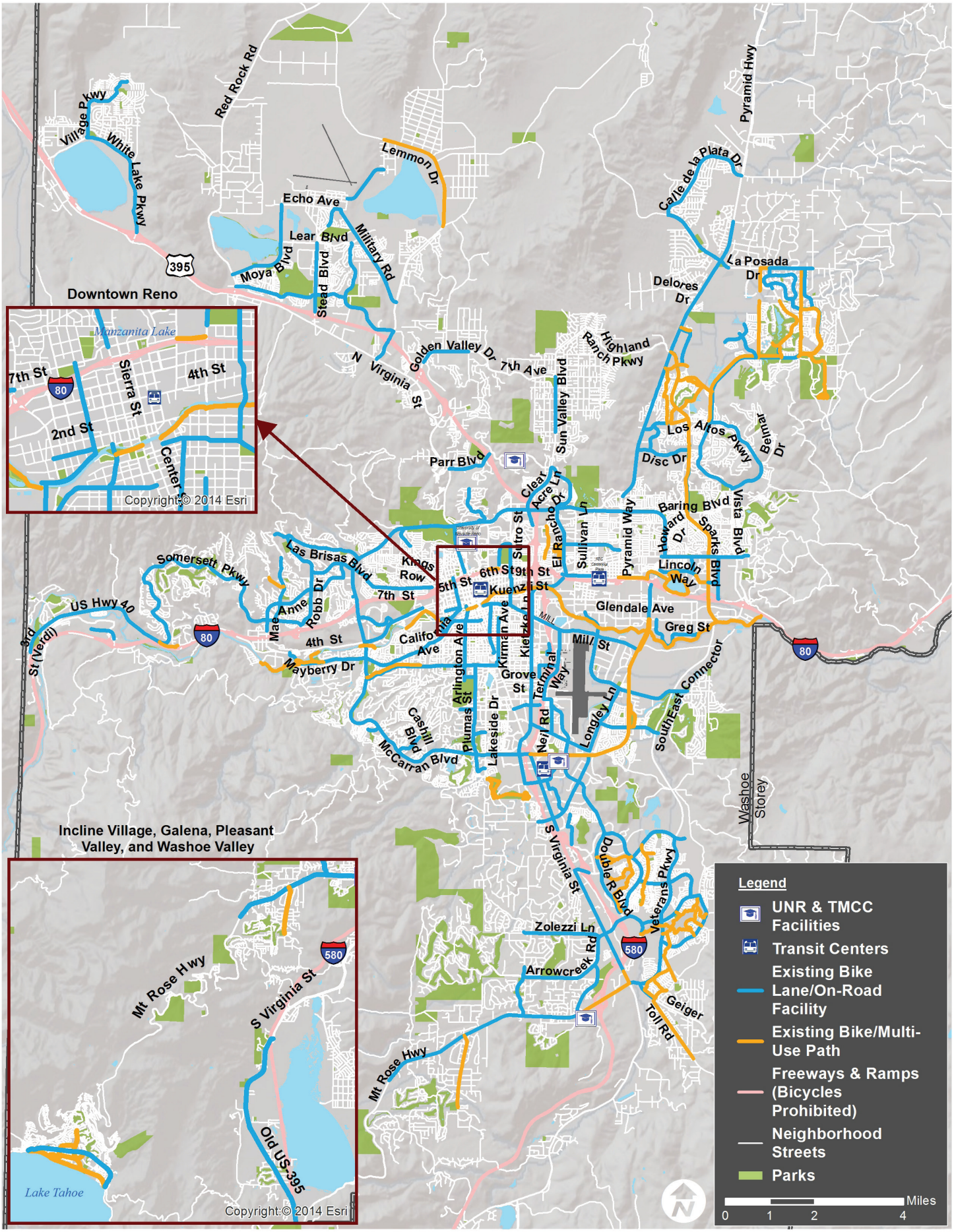
BICYCLE SUPPORT FACILITIES

Bikeway support facilities can include short-term and long-term bicycle parking, shower and locker facilities, bicycle stations, and trailheads and staging areas. Bikeway support facilities are described in more detail in the Support Facilities section of this chapter.

EXISTING BICYCLE CONDITIONS

As of the spring of 2015, the urbanized area of Washoe County has approximately 302 miles of bikeway facilities which is an increase of 97 miles since the original Plan was completed. The 302 miles of bikeway facilities consist of 226 existing bike lane miles, 76 existing bike path miles, and 1.3 miles of cycle track.
The RTC produces a bike map illustrating local facilities that is updated regularly and is located on the RTC website as a PDF and an interactive map. It is available in print in both English and Spanish. The RTC website directs individuals to over 30 locations where the maps are distributed to the community for free.

Figure 1 existing bike facilities (April, 2017)



KEY CORRIDORS

ON-STREET NORTH-SOUTH ROUTES

The Reno-Sparks region lacks a well-connected north-south bicycle system. In Reno, bicycle lanes are provided on Double R Boulevard, Airway Drive, and El Rancho Drive. The majority of Kietzke Lane and West McCarran Boulevard also have bicycle lanes with small missing sections throughout. Other roadways such as Wells Avenue, Terminal Way, Holcomb Avenue, Clear Acre Lane, and Sun Valley Boulevard provide short segments of north-south bicycle facilities, but connections between the facilities are not available. In Sparks, Pyramid Highway and Sparks Boulevard provide bicycle facilities for north-south travelers. Vista Boulevard also provides a section of bicycle lanes.

ON-STREET EAST-WEST ROUTES

West 7th Street in Northwest Reno provides approximately 2 miles of bicycle lanes from west of McCarran Boulevard to Keystone Avenue for east-west travelers. Other roadways such as Victorian Avenue, Mill Street, and California Avenue provide short segments of east-west bicycle facilities, but connections between the facilities are not available.

OFF-STREET NORTH-SOUTH ROUTES

A separated bicycle path exists on Sparks Boulevard between Lincoln Way and Disc Drive. Although the path is separated from vehicle traffic, the section of the trail between O'Callaghan Drive and Baring Boulevard switches to the opposite side of the road requiring cyclists to cross vehicle traffic at intersections. The asphalt path is striped for two-way travel north of Baring Boulevard.

OFF-STREET EAST-WEST ROUTES

The Truckee River Trail is a shared-use path that provides a good east-west route for bicyclists in Reno and Sparks. The Truckee River Trail is a bike path that runs through downtown Reno along the Truckee River. One of the biggest challenges along the Truckee River Trail is providing connections to/from intersecting or adjacent roadways. The Tahoe-Pyramid Bikeway is being developed by a nonprofit group dedicated to connecting the Truckee River by foot or bicycle from its source at forested Lake Tahoe to its desert terminus, Pyramid Lake. The planned route will descend over 2,000 feet in 116 miles, using a combination of existing dirt and paved roads, plus some sections of new trail and bridges. As part of the Tahoe-Pyramid Bikeway, the Truckee River Trail extends from Verdi, west of Reno, to the east side of Sparks past Vista Boulevard. Large sections of the trail are constructed, however there is still much to be done before

the trail will be complete. The sections of the trail between Truckee and Verdi, Sparks and Mustang, and USA Parkway and Wadsworth are not completed and are not open to bicyclists.

Through Reno and Sparks, the trail is fairly well connected. In downtown Reno, the Truckee River Trail shares the route with pedestrian traffic from Arlington Avenue to Lake Street. In addition, there is an awkward transition at Lake Street, where bicyclists have to use stairs to continue on the trail. The portion of the trail along Riverside Drive is designated as a Bicycle Boulevard, requiring bicyclists to share the route with vehicles. The portion of the trail through Idlewild Park and along Idlewild Drive creates some confusion for cyclists because a facility is provided, but signs are posted indicating "No Bicycles Allowed on Trail."

EXISTING PEDESTRIAN CONDITIONS

An inventory of the pedestrian facilities on regional roads was collected as part of the 2011 ADA Transition Plan. This section provides a summary of pedestrian conditions throughout Reno and Sparks. A description of the existing infrastructure including gaps in the sidewalk network, sidewalk obstructions, and bus stop amenities in key pedestrian areas is provided. The ADA Transition Plan is scheduled to be updated in 2017.

INVENTORY OF EXISTING ISSUES

The data collected for the ADA Transition Plan was geocoded, mapped, and analyzed to determine issues and opportunities on major regional roads. Understanding the quality of pedestrian facilities in Washoe County is essential for determining future opportunities for improvement. The following issues were evaluated in the facilities assessment:

- Sidewalk Condition: surface condition, missing sidewalk, width, cross slope, etc.
- Sidewalk Obstructions: deteriorating pavement/pot holes, protruding vegetation, fire hydrants, signs, street light and utility poles, street trees, newspaper kiosks, guy-wires, excessive cross slopes, etc.
- Safety and ADA Compliance: curb ramps, crosswalk conditions and locations, sidewalk-cross slopes (particularly at driveways)
- Intersections: control type - signalized or unsignalized, presence of marked crosswalks
- Bus Stop Amenities: shelter, benches, wheelchair seating, landing, garbage receptacles

In 2015 RTC had the sidewalk network digitized for all regional roads. This data collection effort identified gaps in the sidewalk network as well as sidewalks that are narrower than 4 feet wide.

SIDEWALK CONDITIONS AND CURB RAMPS

The sidewalks throughout Reno and Sparks vary greatly in condition. Newer areas of construction and areas that have recently been upgraded or rehabilitated have good sidewalk conditions with few obstructions. Sidewalks in older neighborhoods generally have high concentrations of obstructions with segments of deteriorated sidewalks. The majority of driveway approaches in residential areas do not meet ADA standards.

Curb ramps provide safe access to the sidewalk for mobility impaired pedestrians, such as wheelchair users or those with canes by providing a gradual transition from the crosswalk or roadway to the sidewalk. According to ADA requirements, curb ramps are required at every street corner to ensure access between the sidewalk and street.

Access and Connectivity

A well-connected network of streets and pedestrian walkways provides more incentive for people to walk. Good connectivity includes safe, convenient street crossings, and access to transit. Walking and transit go hand in hand, as most transit riders typically supplement their trip with some form of pedestrian travel at the beginning and end of their trips.

Many roadways throughout the region have sidewalks and crosswalks at intersections; however, the conditions of the sidewalks are varied. While some sections of sidewalk are in good condition, other sections are deteriorated, with some sections missing completely.

The downtown areas of Reno and Sparks are generally well connected and walkable, however some of the outlying sections of the region can be difficult to reach as a pedestrian. An example is the Summit Sierra shopping mall. There are no existing sidewalks on Virginia Street from just south of Damonte Ranch Parkway to the mall property. Pedestrians wishing to access the mall would have to use the unpaved shoulder of Virginia Street and cross a multi-lane off-ramp from I-580.

Pedestrian Count Program

RTC conducts quarterly pedestrian, wheelchair, and bicycle counts at approximately 40 locations across the metro area. These counts are used to evaluate the impact of infrastructure investments and study utilization trends over time. This data collection program has documented that the pedestrian mode share is about 10 times greater on roadways with sidewalks compared to roadways with no sidewalks.

OTHER CHALLENGES TO CREATING A WALKABLE ENVIRONMENT

To develop a pedestrian-friendly environment, it is important to consider other challenges faced by pedestrians in the area. Obstacles to walking contribute to individual decisions and attitudes about walking. Identifying the most common kinds of obstacles will help to determine the appropriate measures to be taken. The most common obstacles include:

Missing Infrastructure: As noted, some areas within the region lack basic pedestrian infrastructure. Basic pedestrian infrastructure begins with sidewalks and curb ramps, but also includes well-marked street crossings, pedestrian push buttons at actuated signalized intersections, and other accessories that facilitate safe, convenient pedestrian travel.

Lack of Pedestrian Sensitivity: Areas with buildings oriented away from the sidewalk appear uninviting to pedestrians and are closed off from the activity of the street. Additionally, some sidewalks and pedestrian facilities, while well-intentioned, are not conducive to easy and comfortable pedestrian access. Narrow meandering sidewalks increase pedestrian travel distances.

Wide, High-Speed Arterial Roadways: In addition to freeways and rail tracks, a major barrier to pedestrian travel is wide, high-speed arterial roadways. Many roadways have been built with multiple travel lanes to accommodate peak traffic levels. However, during non-peak hours, these wide roadways can encourage high-speed travel above established speed limits. High vehicle speeds are problematic for pedestrians as they limit the time that pedestrians can safely cross the street, making them vulnerable to more severe collisions. Creating a walkable environment includes addressing ways to manage speeds, including such measures as landscaping, synchronized signal timing to slow traffic, and lane reconfiguration to narrow excessively wide roadways.

Maintenance and Funding: Maintenance of sidewalks presents an additional issue as funding of new pedestrian projects is often a concern.

Planning for pedestrians requires an understanding of two key concepts:

- Pedestrian demand is the extent to which people want to walk to a particular place and is influenced by land use and development types including mixes and intensities of activities, the presence of public spaces and parks, and the availability of transit facilities.
- Pedestrian walkability refers to the ease, comfort, and safety of walking, and is influenced by connectivity, accessibility, the sense of safety (real and perceived, from traffic and crime), and the quality of the pedestrian environment.

Pedestrian walkability and demand are interdependent, and an evaluation of pedestrian conditions involves consideration of both.

A destination or corridor can be categorized based on its levels of pedestrian walkability and demand. An area may have desirable destinations, such as retail, office parks, and schools, but may be a difficult or unsafe place to walk. This may be due to inadequate sidewalks, infrequent street crossing opportunities or lack of a direct route. Such destinations could have high demand, but low walkability. Alternatively, a corridor may be walkable because of improved facilities, but may lack pedestrian generators. Such a destination would have high walkability and low demand.

The optimum pedestrian environment would have high walkability and high demand. Consequently, all plans and guidelines must work toward achieving high levels of both if the aim is to increase pedestrian travel.

COMPLETED BICYCLE AND PEDESTRIAN PROJECTS

The Regional Transportation Commission has implemented several projects that were identified in Appendix H of the 2011 Bicycle and Pedestrian Master Plan. Table 2 below identifies completed projects and planned projects from Appendix H in the original Reno Sparks Bicycle Pedestrian Master Plan.

The Regional Transportation Commission has implemented several projects since the inception of the 2011 Bicycle Pedestrian Master Plan. The total miles of implemented infrastructure are shown in Table 2 below. RTC produces a bicycle map every two years with updated completed and proposed bicycle projects. These maps are distributed throughout the community to help bicyclists identify routes to their destinations by utilizing the most up to date information.

Table 2 Existing Bicycle and Pedestrian Infastructure

Existing Infastructure	Length in Miles
Bake Lane Miles	446
Multi-use Paths	78
Sidewalks	385
	909 miles

SAFETY, EDUCATION, ENCOURAGEMENT AND ENFORCEMENT PROGRAMS

SAFETY

Safety is a major concern for both existing and potential users of the bicycle and pedestrian networks, and safety perception is a significant factor that contributes to a person's decision to bicycle or walk, or allow their children to bicycle or walk.

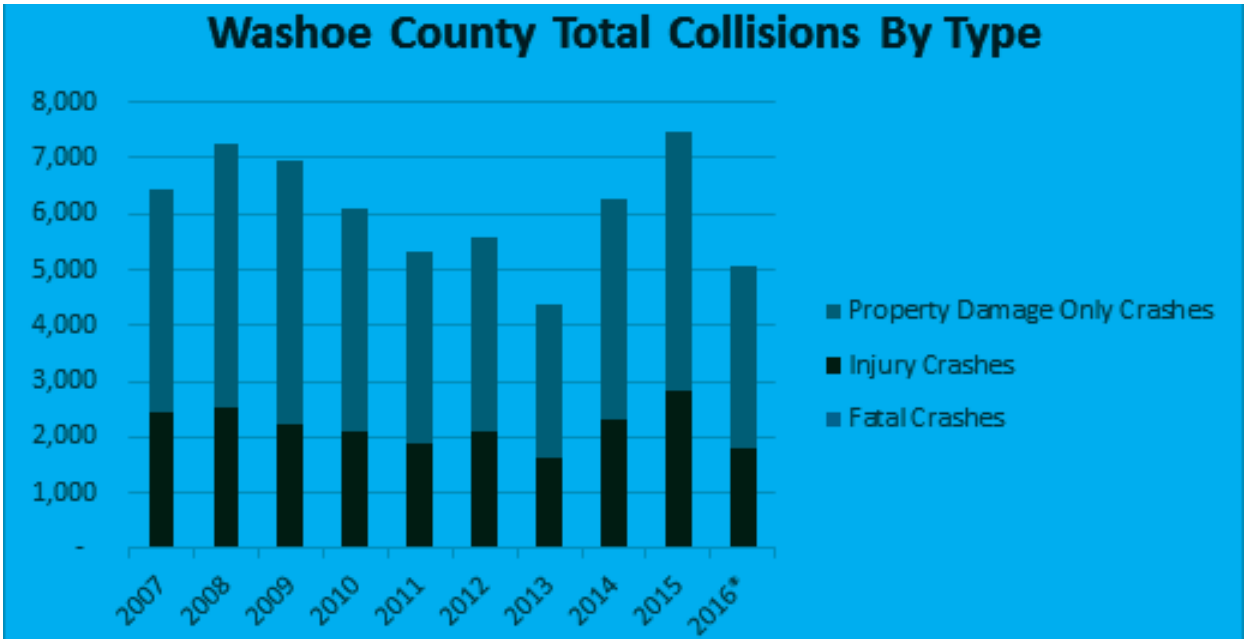
A regional Pedestrian Safety Action Plan (PSAP) was developed in 2011 to evaluate pedestrian safety in Washoe County. The PSAP provides a summary of existing safety measures and goals for future implementation of programs and policies to reduce the number of pedestrian accidents throughout Washoe County.
The City of Reno published a Pedestrian Safety Action Plan in 2017 to address the increasing number of pedestrian fatalities. Their study emphasized the importance of safety awareness, noting that over 60% of pedestrian fatalities involved an impaired pedestrian or driver.

Crash Analysis

The Nevada Office of Traffic Safety (OTS) provides monthly reports about fatalities in the state. Year to date data for 2016 (reported on February 2, 2017) reveals that as of December 31, 2016, 49 traffic fatalities have occurred in Washoe County. Twenty-four of these fatalities have been vehicle occupants, fifteen were pedestrians, eight were motorcyclists, one was a bicyclist and one was a moped/other. The full report is available in Appendix 2.

The Nevada Department of Transportation (NDOT) provided RTC with a database of crash occurrences for the Truckee Meadows for January 1, 2016 – September 1, 2016. This level of detail is not yet available for the entire 2016 calendar year. RTC conducted an analysis of crash patterns and factors of this data. Figure 3 shows collisions, by type (fatal, injury, property damage) for all of 2007 – September 1, 2016. Figure 3: Washoe County Collision by Type 2007 – September 1, 2016

Figure 3



Low-Light Conditions

Lighting remains a significant factor in many of the crashes involving pedestrians and bicyclists for both fatalities and injuries, as shown in Figures 4 and 5. 38 collisions with bicyclists occurred in 2016, and one of the 37 collisions was a fatality. During this period, 24% (9 collisions) involving bicyclists occurred during low-light conditions. There were 65 pedestrian collisions that occurred between January 1 and September 1, 2016 with 15 of them resulting in fatalities. Roughly half (48% or 30 collisions) of the crashes involving pedestrians occurred during low-light conditions. Three of the pedestrian collisions occurred where lighting conditions were unknown or not reported. In previous years low light conditions were a factor for many of the fatalities with bicyclists. The data from 2016 revealed that the one bicycle fatality occurred during the daylight.

The data shows that 30 pedestrian fatalities during this timeframe occurred during low-light conditions. Safety is RTC's number one priority. During 2016, RTC provided multi-functional safety lights to pedestrians and bicyclists during outreach events. Lighting is also a component of roadway and intersection improvements. Informing the public about safety is a goal of the NDOT Zero Fatalities Program and Washoe County Safe Routes to School Program as well. RTC is an active partner in both of these programs. RTC also uses The Road Ahead, www.StreetSmartNV.com, and other outreach opportunities such as the quarterly Family Health Festivals through the Healthy Communities Partnership to increase pedestrian and bicyclist awareness about how to be seen by motorists. There is also safety information on the RTC Washoe County Bike Map that is updated every other year and is printed in both English and Spanish.

Safety is RTC's number one priority and every year the RTC carries out new construction projects and outreach initiatives aimed at improving safety across the Truckee Meadows area. RTC provides the public with multi-functional safety lights during outreach events. Outreach events provide an opportunity to reach pedestrians and bicyclists to share safety material and discuss programs such as the local Safe Routes to School program and the statewide Zero Fatalities Program which are both programs that have a collaboration with RTC. Other methods to provide safety information to the public about being a safe and seen pedestrian and bicyclist include utilizing The Road Ahead with RTC, a weekly segment on KOLO 8, websites and message boards at RTC 4th STREET STATION, the transit center in downtown Reno.

To improve lighting near bus stops, the RTC has initiated a Solar Lighting Project. Funded through the Transportation Alternatives Set-Aside program, this project will install solar lights at 30 bus stops throughout the region. This will increase visibility for pedestrians walking to and from bus stops. In an effort to improve visibility of potential collisions at intersections between bicyclists and vehicles, RTC, City of Reno, City of Sparks, and Washoe County are working collaboratively to install green bike legends at various intersections. These retroreflective bike stamps will be installed as a result of a joint Traffic Alternatives Set-Aside funding opportunity. Funding for these two projects is available in Federal fiscal years 2016 and 2017.

Figure 4: 2016 Collisions with Bicyclists, Lighting Conditions

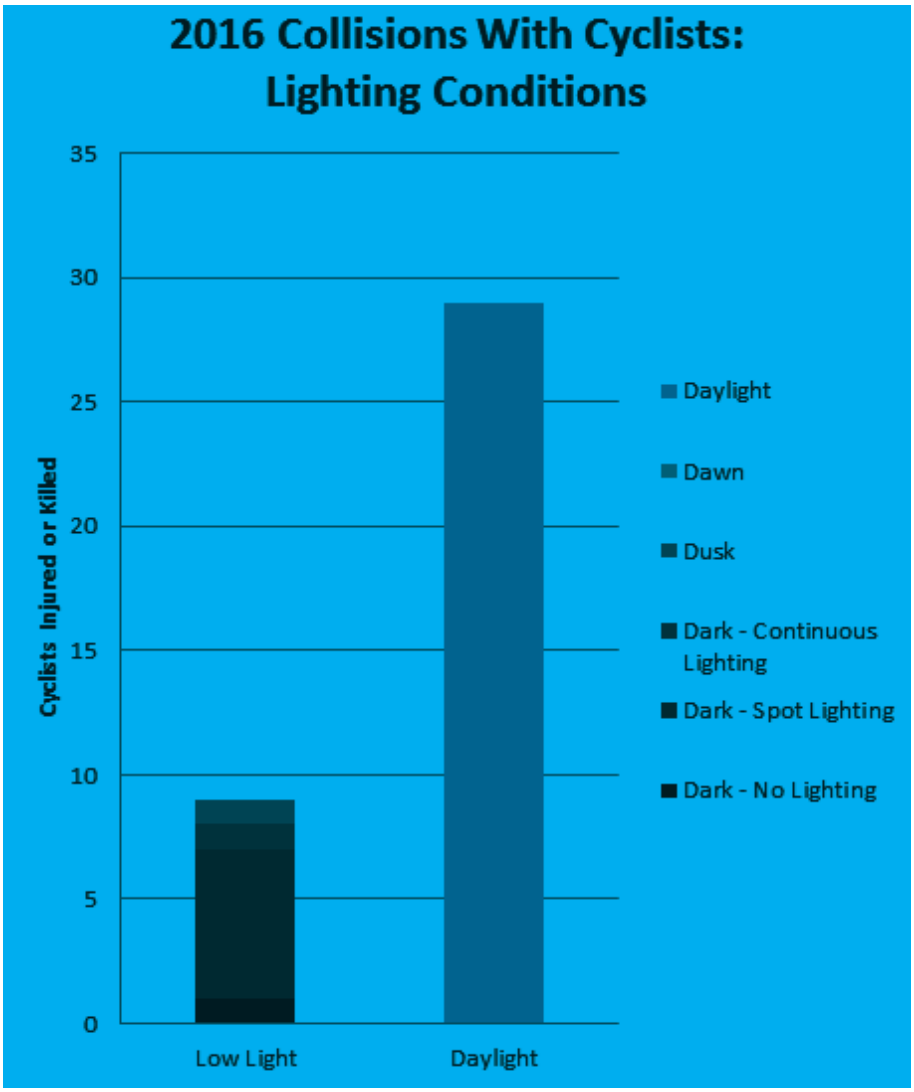
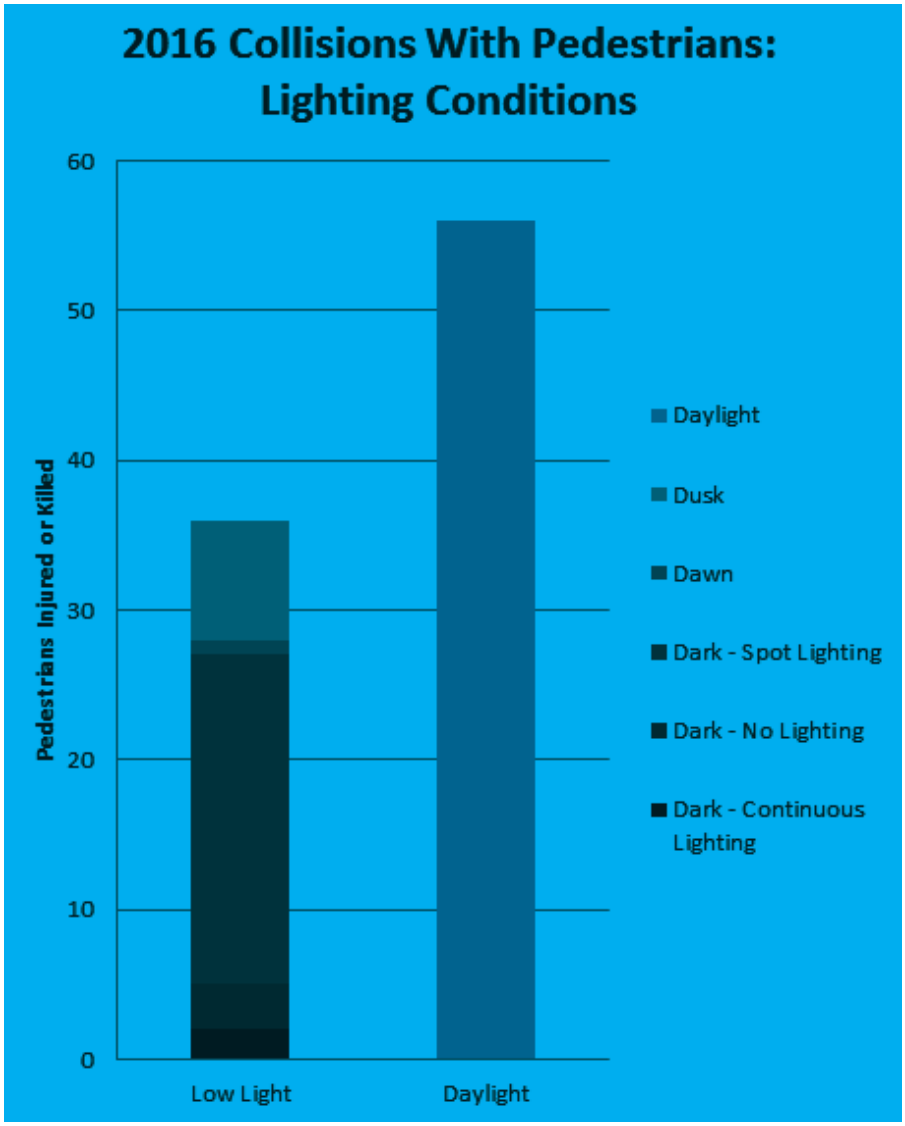


Figure 5: 2016 Collisions with Pedestrians, Lighting Conditions



The January 1 – September 1, 2016 data demonstrates that roadway speed is another significant factor in bicyclist and pedestrian fatalities. According to the National Highway Traffic Safety Administration, a pedestrian involved in a collision with a motor vehicle has better chance of survival with vehicles traveling at lower speeds (Figure 6).

Figure 6: Relationship of Vehicle Speed to Odds of Pedestrian Death in Collision

Vehicle Speed	Odds of Pedestrian Death
20 mph	5%
30 mph	45%
40 mph	85%

In 2016, between January 1st – September 1st, the one fatality involving a bicyclist occurred on a roadway with a posted speed limit of 50 mph (see Figure 7). 2016 data in this same time period reveals that, of the 15 pedestrian fatalities, one fatality also occurred on a roadway with a posted speed limit of 50 mph. (see Figure 6). According to www.StreetSmartNV.com, vehicle stopping distances increase with travel speed. While it takes 69 feet for a vehicle to stop when travelling at 20 miles per hour during normal conditions, it takes 260 feet for a

vehicle to stop when traveling 60 miles per hour. As shown in Figures 7 and 8, the majority of collisions occur on roadways with posted speed limits of 30 mph or greater. RTC developed a Complete Streets Master Plan (CSMP) in July 2016, which identified a long range strategy for Complete Streets treatments in the Reno-Sparks metropolitan area. Complete Streets provide attractive transportation options for all roadway users, including vulnerable users such as pedestrians and bicyclists. The CSMP included a review of existing reports and data; analysis of the safety and traffic impacts of complete streets; extensive community outreach; and development of a Complete Streets policy and master plan.

Figure 7: 2016 Collisions with Bicyclists, Roadway Speed

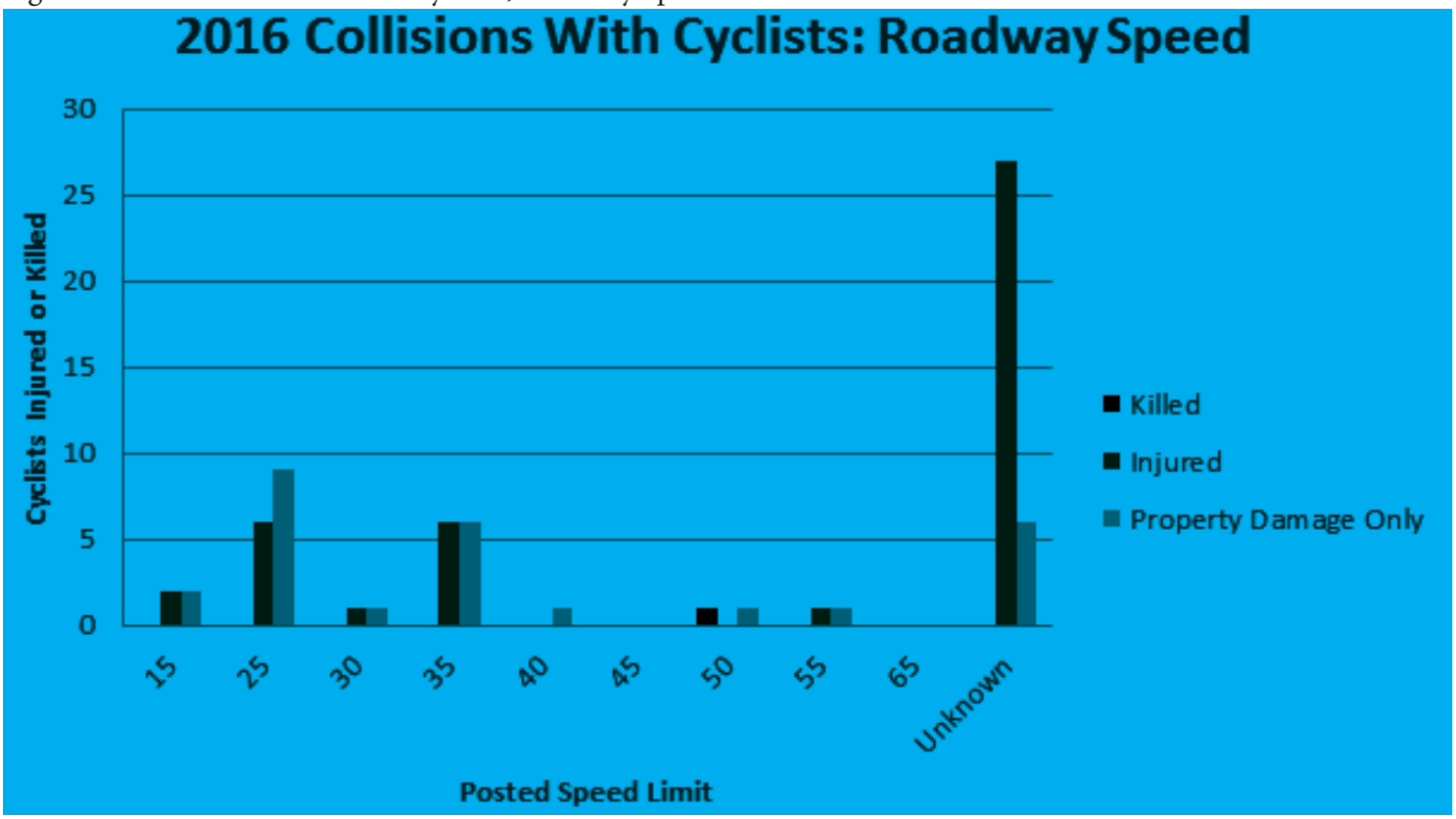
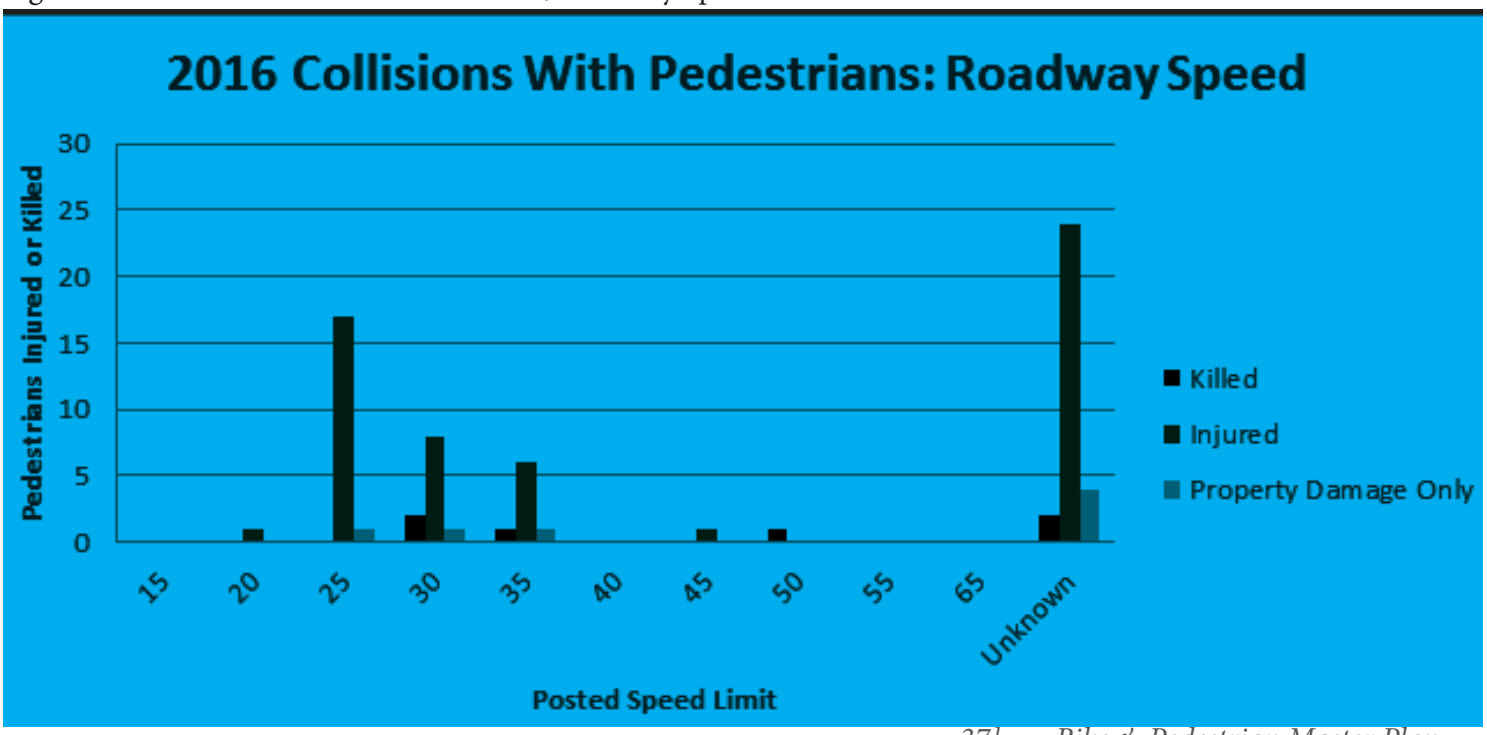


Figure 8: 2016 Collisions with Pedestrians, Roadway Speed



The driver condition of crashes between January 1 – September 1, 2016 involving pedestrians reveals that four percent involved alcohol, two percent involved inattentive or distractive drivers and two percent the drivers reported an obstructed view (Figure 9). As shown in Figure 9 during this same time period, three percent of the crashes involving bicyclists were due to drug impaired drivers and three percent were caused by inattentive or distractive drivers. Impaired driving is one of the critical emphasis areas of NDOT's Zero Fatalities Program. Eighteen percent (12 crashes involving pedestrians) and 18% (7 crashes involving bicyclists) were reported that the driver conditions were unknown.

Figure 9: 2016 Collisions with Pedestrians, Driver Condition

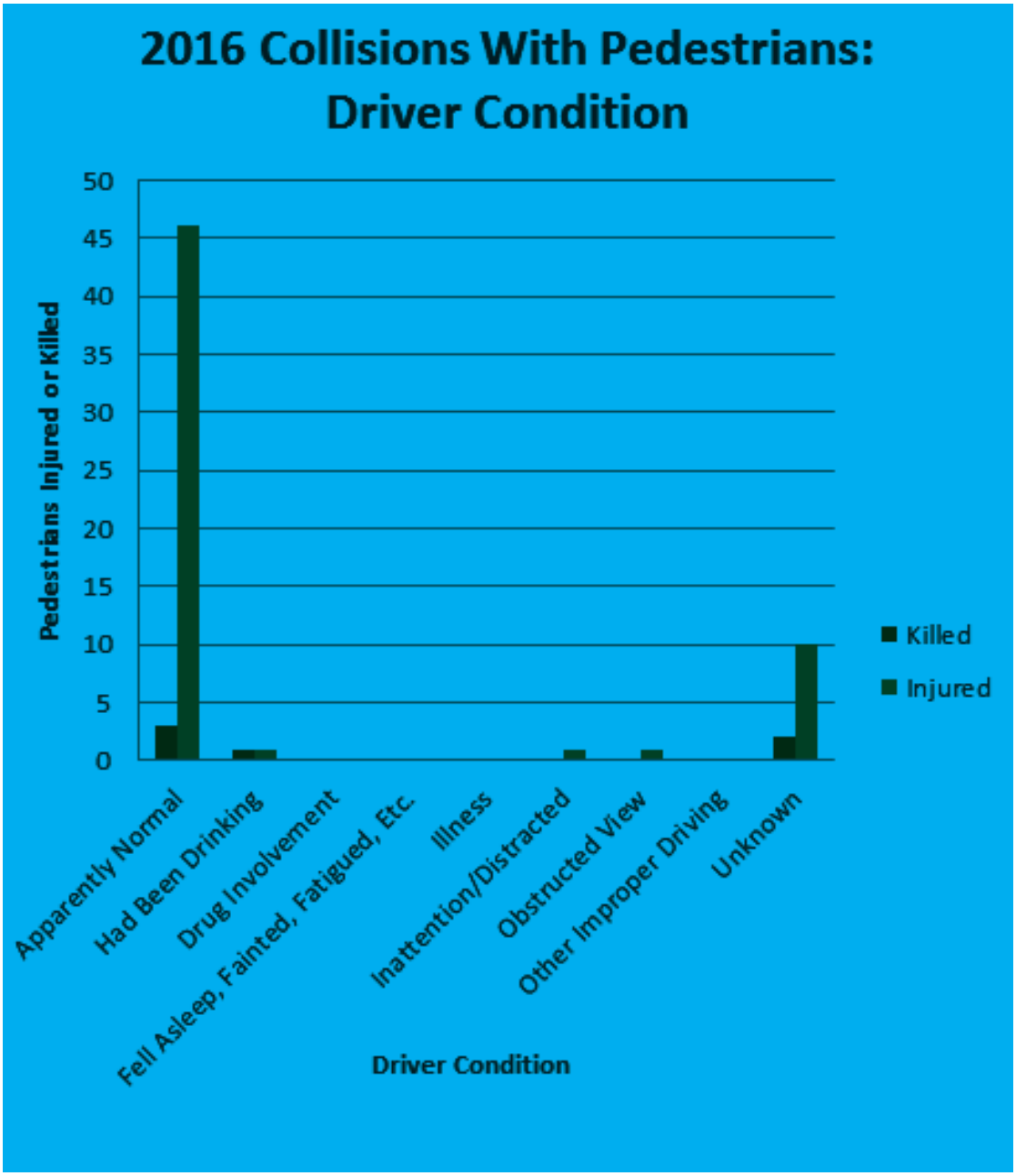
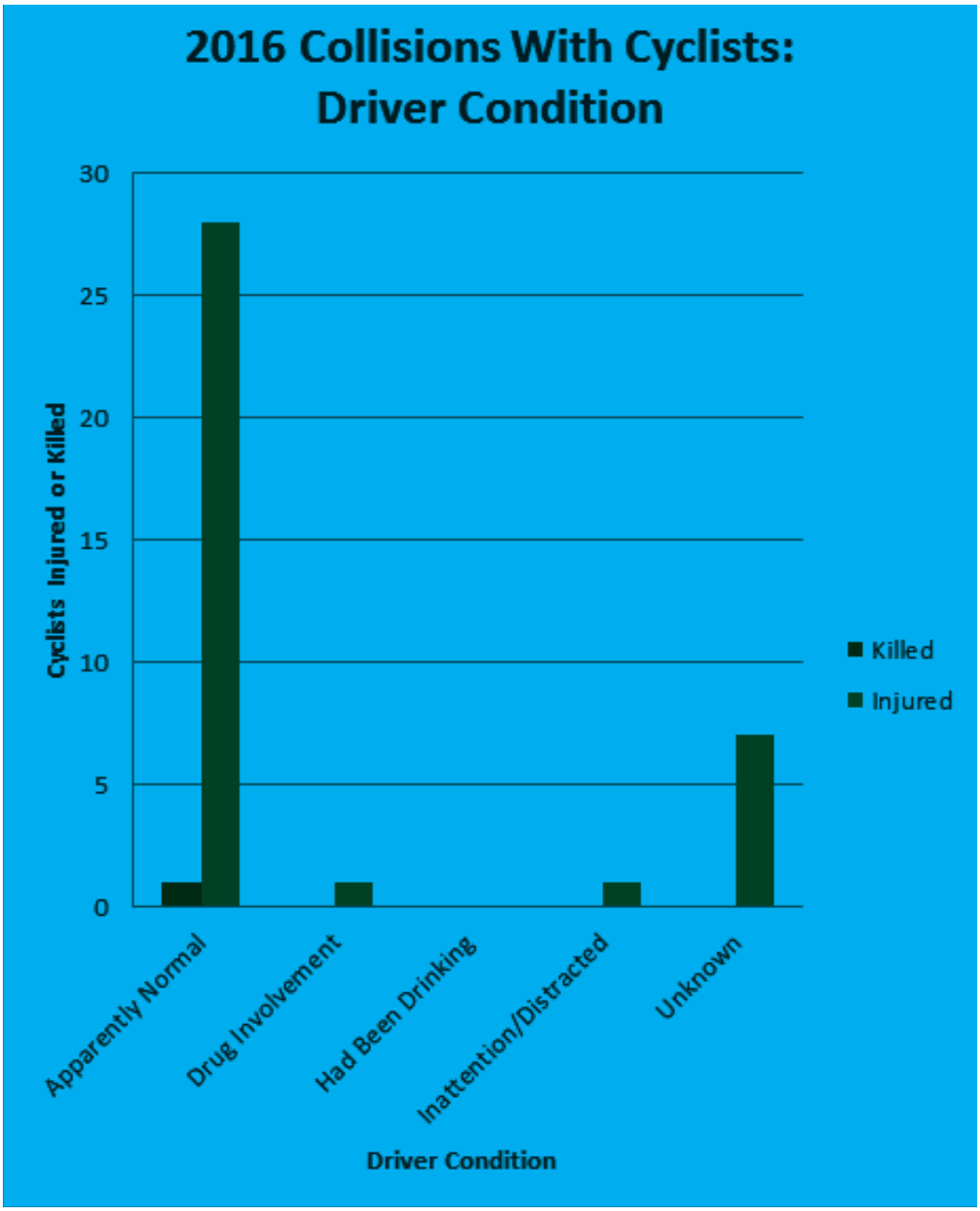


Figure 10: 2016 Collisions with Bicyclists, Driver Conditions



Additional Regional Safety Planning Activities

The Strategic Highway Safety Plan (SHSP) is produced by NDOT in cooperation with many regional agencies including the RTC. The SHSP is a state-wide plan that covers six critical emphasis areas and suggests many safety improvement strategies using the 4E approach: education, enforcement, engineering and emergency response. RTC participates in the statewide SHSP committee.

Safety is a key element of the RTC transportation planning program. The Complete Streets Master Plan was adopted in July, 2016. This plan identified pedestrian and bicycle projects and many components of multi-modal transportation options.

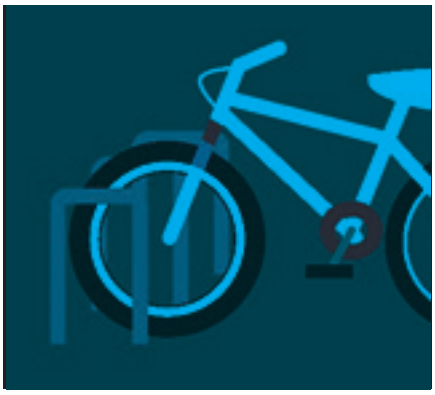
Funding for the Safe Routes to School (SRTS) Program in Washoe County is included in the RTC Regional

Transportation Improvement Program. The SRTS program supports safety and education regarding alternative transportation options including bicycling and walking to students K-8th grades, parents, and school personnel. RTC and the Northern Nevada Center for Independent Living offer free public transit travel training (mobility training) for seniors and people with disabilities. The program teaches how to use RTC public transit and utilize the many safety and mobility features in a safe and supportive environment. Participants will practice on actual transit vehicles and be encouraged to learn the skills needed for greater mobility independence through the use of public transit.

EXISTING SAFETY, EDUCATION, ENCOURAGEMENT, AND ENFORCEMENT PROGRAMS

EDUCATION OUTREACH AND ENCOURAGEMENT PROGRAMS

Bike Rack App



The RTC created a free app for the public to help identify bike rack locations. The free RTC Bike Rack app was used with smart mobile devices so that the public could input where existing bike racks were located and where they were needed. This application was utilized to help the RTC in identifying where additional bike racks were needed. Another use of the RTC Bike Rack app was to utilize information when one was planning a trip as the Bike Rack App took the hassle out of looking for a bike rack. Users were able to upload pictures and information about existing bike racks including the number of stalls and condition.

Citizens Multimodal Advisory Committee (CMAC)

In September, 2015, the Regional Transportation Commission Board approved consolidation of the Citizens Advisory Committee (CAC) and the Bicycle Pedestrian Advisory Committee (BPAC). This new committee is called the Citizens Multimodal Advisory Committee (CMAC).
CMAC provides input to the RTC on policy issues relative to public transportation, the regional street and highway system, pedestrian and bicycle facilities, and multimodal transportation planning. Members of the CMAC are encouraged to attend special public meetings pertaining to the plans, policies, and programs of the RTC to assist in the deliberation and expression of public input on these matters. Membership is comprised to the extent possible of the following:

- Four individuals who use RTC RIDE
- Two individuals who use RTC ACCESS
- Four individual who represent bicycle/pedestrian
- Five individuals who represent general multimodal transportation

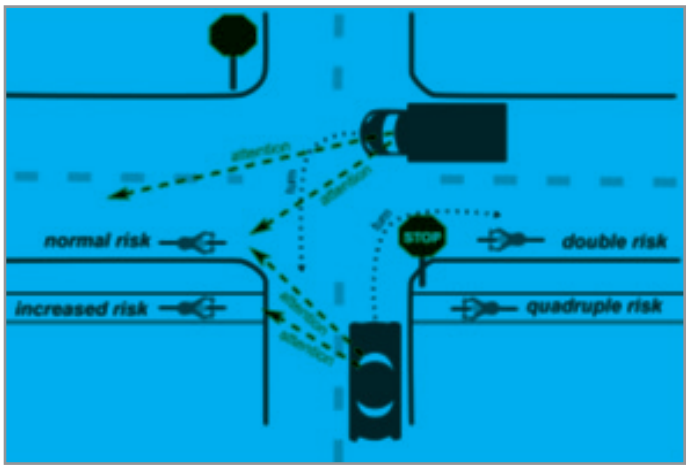
The Committee meets monthly on the first Wednesday of each month at 5:30pm.

Printed Bicycle Maps

The RTC regularly creates free bicycle maps that show the location of the existing paved bicycle facilities in the Truckee Meadows region including shared use paths, bicycle lanes, and shared roadways. In 2015, the Bike Map was available to the public in English and Spanish at over 30 locations including local bicycle shops, community parks and recreation centers, and the RTC. It is one of the most popular giveaway items at public outreach events. The map is very useful to riders as the foldable map allows it to be carried easily on rides. The map is printed on a durable tear and water-resistant paper.

RTC SMART TRIPS

The RTC administers a trip reduction program marketed under the name RTC SMART TRIPS. The purpose of the program is to encourage sustainable transportation choices including bicycling and walking. One component of the program is an online trip matching service, RTC TRIP MATCH at www.rtctripmatch.com that makes it fast, easy and convenient for people to look for carpool, bike, walking and bus buddies. The trip matching feature is intended to encourage bicycling and walking, and increase safety for bicyclists and pedestrians. The program allows users to select their preferred mode of transportation and customize the route for each trip profile they create. For example, a person may be interested in a bike buddy for trips to work, and a walking buddy for a trip to the movies. The web service includes a commute calendar that allows participants to record trips made by any sustainable mode and see a running total of the dollars they are saving, the amounts of air pollutants they are reducing, and the calories they are burning when using active travel modes.



The RTC SMART TRIPS program has published the following brochures pertaining to safety (and available at www.rtcwashoe.com):

Riding Bicycles on Sidewalk Brochure:
The brochure is intended to educate bicyclists on laws and safety issues related to bicycling on the sidewalk. Drivers mainly look for traffic in the roadway, and do not expect cyclists on sidewalks when turning into driveways or intersections, making these conflicts points. The brochure also addresses safety issues and the legality of riding the wrong way against vehicle traffic.

Cycling at Night Brochure:
The brochure provides information about Nevada laws related to cycling at night, and safety tips including information about headlights and rear reflectors, high visibility clothing, defensive riding, and effective trip planning.

Triggering Traffic Lights with Bicycles Brochure:
The brochure provides positioning techniques and information about what to look for in the travel lane. The brochure also provides a hotline number (775-355-ROAD) to call with complaints about specific signalized intersection locations that have trouble detecting bicycles.

Street Smart

The RTC's Street Smart program (www.StreetSmartNV.com) is a pedestrian safety awareness effort. The RTC, working with staff from the Washoe County Health Department, applied for a three year grant in 2009 to form a partnership with other organizations to conduct a concentrated effort to promote and increase safe walking.

The goals of the Street Smart program are:

- Increase pedestrian safety awareness and education within the community
- Encourage safe walking through the promotion of the benefits
- Make it fast, easy, and efficient for people to locate walking companions
- Reduce the number of pedestrian injuries and fatalities within Washoe County

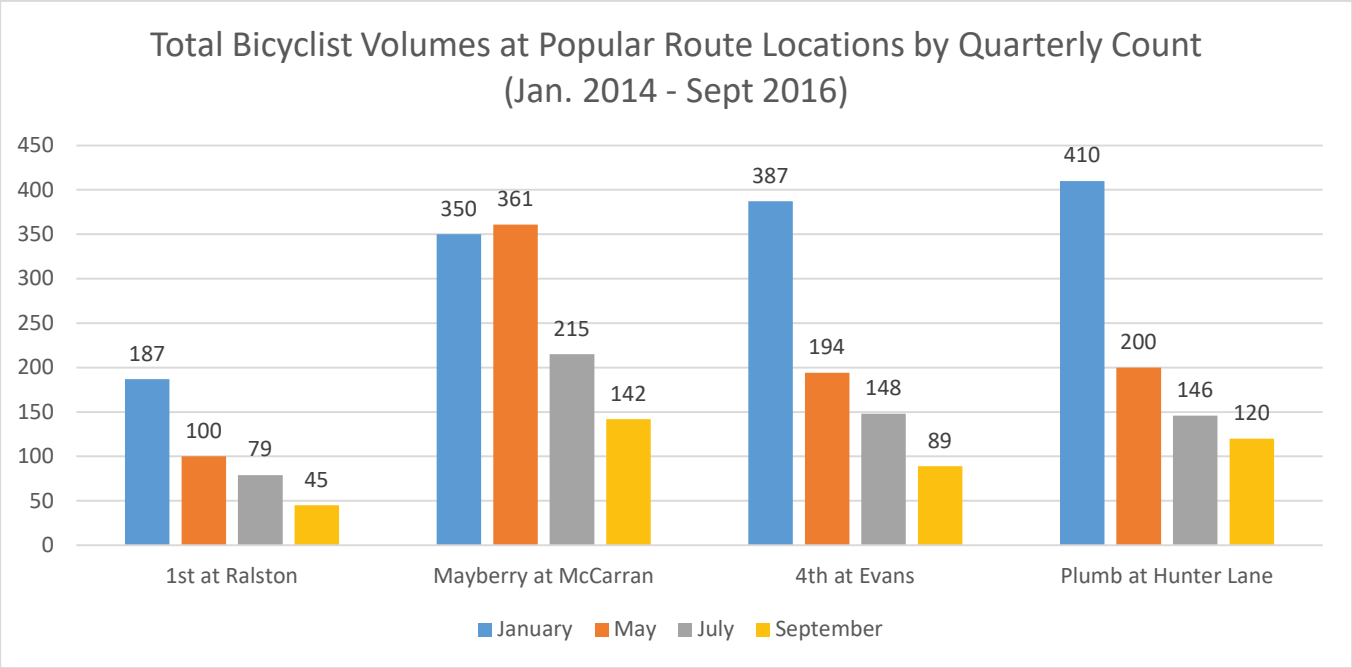
A key project aim was creating educational elements during the course of the project that could be utilized beyond the grant periods. One essential example is the pedestrian safety website, www.StreetSmartNV.com, which has been maintained by the RTC SMART TRIPS program following the end of the grant cycle. The website encourages pedestrian safety through educational material and illustrations along with aiming to increase the number of walking trips.

Hosted Bicycle Challenges

The Truckee Meadows Bicycle Alliance (TMBA) is a group of organizations and individuals dedicated to promoting safe bicycle commuting in the Truckee Meadows. Since 2005, TMBA has organized an annual Bike Week challenge encouraging members of the community to bicycle instead of drive for one week in May. According to the TMBA website, www.bikewashoe.org, over 1,043 riders registered for Bike to Work Week in 2016, translating into the following estimated benefits to the community and environment:

- 1,043+ registrants (332 registrants logged trips)
- 14,838 miles logged
- 536,451+ calories burned
- 7.1 tons of carbon dioxide (CO2) emissions saved
- 532 vehicles removed from the road

These types of programs motivate bicyclists of all ages and skill levels. The chart below demonstrates that the month of May, Bike Month, has higher bicycle counts compared to months without hosted bicycle challenges (source: Bicycle and Pedestrian Count Program).



Bike Week in Washoe County has expanded greatly since its inception. In 2015 and 2016, hosted bicycle challenges were held each day of the week as outlined below.

- **Rack Em Up** is a component of the Washoe County Health District Air Quality Management Division's (AQMD) Keep It Clean program. The AQMD joined with Safe Routes to School to invite all Washoe County Schools to participate in the Bike to School Week "Rack Em Up" Contest whereby the schools with the most bicycles in their bike racks are declared winners. The contest awards 1st, 2nd and 3rd place prizes.

- **Bike Up to the Drive-Up** is a collaboration with the Washoe County Library during Bike Week. Members of the community are invited to ride to the library instead of drive for this week in May. The Downtown Reno, Northwest Reno, South Valleys and Spanish Springs libraries participated in the "Bike Up to the Drive-Up" promotion which premiered in 2015.

- **Spoker Ride** is a benefit fun ride during Bike Week that is part of the Juvenile Diabetes Research Foundation's (JDRF) Ride to Cure Diabetes program. Riders collect playing cards and turn in their best poker hand to win prizes. Participants have a choice of routes. Families can enjoy a 10-mile course collect seven playing cards for each registered rider; participants riding a 25-mile loop through Verdi also collect seven playing cards; riders who select the 50-mile course collect nine playing cards.

- **Cyclofemme** is a worldwide celebration of women on bikes. On Mother's Day, riders of all ages and diversity across 25 different countries share in the joy of cycling regardless of gender, age, or bicycle preference.

- **MidTown Monday and Bike Around Bingo** debuted in 2015. This event is located in the MidTown district. Participants start at the Statewide Lighting parking lot where children's' activities, bike valet and bike clinics occur. Participants can also visit local participating business to receive a mark on Bingo Cards. In 2016 the event was held on a weekend to attract more attendance.

- **Ladies Night and Dan's Night Events** are hosted by Reno Bike Project. Ladies Night is a great way for women to learn how to work on their bicycles in a supportive and open environment. An experienced volunteer mechanic demonstrates bicycle maintenance in an informal setting, beginning with a demonstration and brief discussion. Dan's Night is a free informal workshop taught by experienced volunteer mechanics that is open to cyclist-mechanics of all skill levels interested in learning how to repair and maintain their bicycles.

- **Mayoral Challenge** is a fun and leisurely ride in which bicyclists have the opportunity to ride alongside public officials endorsing the community benefits of bicycling. The course extends from Reno City Hall to Sparks City Hall. The route alternates direction each year. This event is followed up with Ride for Reading.

- **Ride for Reading** is hosted by Washoe County Safe Routes to School and Washoe County School District Read and Succeed program to promote literacy and healthy living through the distribution of books via bicycle to children from low-income neighborhoods.

- **Tour de Safety**, hosted by Washoe County School District and Safe Routes to School, is an opportunity to participate in a community bike ride. Students, parents, and staff ride their bikes from Cold Springs Middle School to the 7-Eleven located in Cold Springs.

- **Family Fun Ride** is sponsored by the Kiwanis of Sparks where families ride together beginning at Cottonwood Park. The event includes free games, music, bike safety checks, bike decorating, a bike parade, bike rides, and entertainment.

- **We HeART Bikes** is a "Slow Roll" hosted by the Reno Bike Project designed to accommodate cyclists of every age and experience level. Participants ride from the Reno Bike Project to The Holland Project arriving in time to enjoy the We HeArt Bikes Show which displays cycling-related art in various mediums.

- **Coffee Shop Stop** offers an incentive for riding on Bike to Work Day which falls at the end of Bike Week. Participating businesses offer cyclists who show their helmets a cup of tea, coffee and in some cases kombucha. The Reno Bike Project encourages commuter camaraderie by hosting a Pancake Breakfast on the last Friday of Bike to Work Week.

Open Streets

Open Streets is a hosted ride that is part of the Cyclovia movement that is spreading throughout the United States aimed at promoting healthy, vibrant communities. Reno Open Streets encourages physical activity of all Reno residents by transforming streets in a designated area diverting vehicular traffic and giving that space to residents to celebrate, walk, bike, dance and play. In 2015 the first RenoOpen Streets event was held in downtown Reno. The program expanded in 2016 and was held in Reno during the month of July and Sparks in the month of August.

Kiwanis Bike Program

The Reno-Sparks Kiwanis Bike Program is a local organization that provides bicycling education programs teaching bicycle repair and safe riding practices for at risk youth throughout northern Nevada. In their community outreach programs throughout the year, the Kiwanis hosts camps and clinics at their shop and Bike Clubs for middle schools. The Kiwanis Bike Program donates over 600 bicycles and over 1,500 helmets annually for underserved kids through schools and youth programs, and offers "earn a bike" opportunities through which youth and young adults can "pay" for a bike with volunteer hours in lieu of cash. They reach over 2500 youth each year through their various bicycling education programs.

Bicycle Friendly Community

In the fall of 2015 Reno, Sparks, and Washoe County were recognized as a

bike friendly community by the League of American Bicyclists at the bronze level. Among the criteria considered when awarding this designation were the number of arterial streets with bike lanes, total bike network mileage and amount of public education about bicycling. In the fall of 2011, the area was first awarded the bronze level and the Truckee Meadows was the first community in the state of Nevada to receive the distinction. The Bicycle Friendly Community award provides official recognition for areas actively supporting bicycling, providing safe accommodations for cycling, and encouraging people to bicycle for transportation and recreation. Applications can be awarded Platinum, Gold, Silver, Bronze, and Honorable Mention designations.

Bicycle Friendly Business

In the winter of 2016 RTC was recognized for its efforts to encourage everyone, including its employees, to choose sustainable and healthy modes of travel. The RTC was designated as a Bicycle Friendly Business by the League of American Bicyclists at the silver level. The RTC is among 1,200 businesses and organizations across the country to receive the recognition. The league considered the RTC's commitment to having bike amenities and facilities as well as on-going bike safety education efforts in making its decision.

In awarding the RTC a silver designation, the League of American Bicyclists considered accommodations for bicyclists at RTC facilities including bike racks, video surveillance for bike parking and a bike fix-it station at RTC 4th STREET STATION.

Walk Friendly Communities Program

The City of Sparks received an honorable mention Walk Friendly City designation based on their Draft Comprehensive Plan. Sparks received the honorable mention community award due to impressive public involvement, a remarkable sidewalk network and engineering treatments, and an excellent traffic calming program.

FAQ Guides and Children Educational Booklets

The Nevada Department of Transportation has created and distributed three educational booklets. The first "A Guide to Frequently Asked Questions" is designed to address questions commonly asked by cyclists and motorists. It also contains Nevada Revised Statutes (NRS) citations that clarify the answers to those questions as well as helpful tips to increase safety. The next two publications are bicycle and pedestrian specific and are geared towards children ages eight to fourteen. The Nevada Department of Transportation produces and distributes this information for free to the public.

Corridor Plans and Safety Management Plans

Corridor planning is used to identify safety concerns and infrastructure solutions. The RTC has conducted plans for several regional corridors that have been incorporated into the investments shown in the RTP project listing. These plans incorporate safety analysis, needs for multimodal investments such as bicycle lanes and sidewalks, and other operational needs. Projects in several corridor plans have advanced to design and delivery,
including Keystone Avenue bicycle lanes and sidewalks, Sun Valley Boulevard sidewalk and crosswalk

improvements, sidewalk and crosswalk improvements throughout the North Valleys, and multimodal improvements in the 4th Street/Prater Way Bus RAPID Transit Extension project.

In a continued effort to reduce the severity of crashes and improve roadway safety, transportation and safety experts take part in NDOT's Road Safety Assessments (RSA) and Safety Management Plans (SMP) along with various corridors within the region. The assessments and plans are conducted in partnership with NDOT, RTC, and local government agencies.

RSA's and SMP's are formal safety performance reviews of existing or future road or intersections by multidisciplinary teams which are preformed to support corridor studies and identify short, medium, and long term safety improvements. RSA's qualitatively estimate and report on potential road safety issues and opportunities for improvements in safety for all roadway users.

Safety Management Plans take the RSA to the next level by developing preliminary roadway plans which may be used to implement recommended safety improvements. RSA's have been used to include safety enhancing improvements on numerous RTC roadway projects, such as the 4th/Prater BRT project and the Virginia Street BRT Extension. A SMP for 2nd Street and Arlington Avenue is currently underway, which will provide the groundwork for additional safety improvements along the corridor. Other safety focused improvements under construction include Sun Valley Boulevard pedestrian improvements (6th Avenue, Gepford Parkway, and Skaggs Circle intersections), Kietzke Lane Pedestrian Safety improvements (Roberts Street, Taylor Street, Apple Street and Grove Street intersections), and North Virginia Street Safety Improvements (Talus Way, Moraine Way, and Hoge Road intersections).

Safety Planning Initiatives

As noted in the introduction section of this plan, the RTC utilizes existing statewide and local plans. These plans include, but are not limited to The Strategic Highway Safety Plan (SHSP), produced by NDOT, and local planning documents published by local jurisdictions. Coordination and collaboration is key with implementation the plans

Safety is a key element of this plan. The update of the BPMP, which will focus on pedestrian safety issues, was initiated in January, 2015. The CSMP was accepted by the RTC Board in July, 2016.

Safe Routes to School

The Washoe County School District Safe Routes to School (SRTS) program aims to increase the number of students walking, bicycling, and using alternative modes of transportation to and from school. Studies show that active children arrive to school ready to learn. Increasing the number of students that get to and from school by active transportation also improves children's health by reducing air pollution and decreasing traffic congestion which ultimately contributes to healthier and safer school zones.

The Washoe County Safe Routes to School program educates parents, students, school faculty, community leaders, and drivers about pedestrian and bicycle safety, especially around schools and within school zones while encouraging parents and students K-8th to utilize active transportation modes.

Community Safety Initiatives

The RTC partnered with the City of Reno, Washoe County and the City of Sparks for an extensive media campaign highlighting pedestrian safety and the dangers of distractions. The media campaign involved the production of two television spots, which aired locally and are also available on RTC's Facebook page. The theme of the safety message is for people to Look Up and Look Out for Each Other. The safety messages depict the potentially deadly results that can occur if people are distracted, such as by mobile devices. The RTC also produced several television and online segments for the Road Ahead with RTC YouTube channel, "Safety is our Priority", which were intended to inform the public about how to cross roads safely. The RTC also maintains StreetSmartNV.com, a web site dedicated to education about pedestrian safety. Safety messages are also shared on a regular basis via the RTC's Facebook and Twitter pages, and through RTC TV on YouTube. Safety is the RTC's top priority and the RTC is dedicated to continuous public outreach and educational efforts to make this a safer, more livable community for everyone to enjoy.

NDOT hosted the first Nevada Traffic Safety Summit in March, 2015 and the second in 2016. The focus was for safety partners to work together to review existing Critical Emphasis Areas and Strategies and define new ones to be included in the 2016-2020 Strategic Highway Safety Plan. RTC participated in this event and continues to focus on the Critical Emphasis Areas outlined in the Strategic Highway Plan.

RTC and the Northern Nevada Center for Independent Living offer free public transit travel training (mobility training) for seniors and people with disabilities. The program teaches riders how to use RTC public transit and utilize the many safety and mobility features in a safe and supportive environment. Participants practice on actual transit vehicles and are nurtured to learn the skills needed for greater mobility independence through the use of public transit.

ENFORCEMENT PROGRAMS

Police Bicycle Patrol

In Downtown Reno, police regularly patrol on bicycles on weekends and during major events.

Radar Speed Signs

Radar speed signs feature a changeable message sign linked to a radar unit; the signs display a vehicle's actual speed as the vehicle approaches the sign. Radar speed signs can be mounted permanently to a pole or alternatively they can be mounted to a trailer (also known as a "speed trailer") and deployed on a temporary basis. Studies in the United States have shown that radar speed signs are an effective way of slowing traffic. Slower vehicle traffic creates a safer and more comfortable walking and bicycling environment for bicyclists and pedestrians. Placement of temporary radar trailers should be strategically located so that they don't interfere with the path of a bicyclist or pedestrian.

Directed Enforcement

Directed enforcement operations are used to identify motorists who dangerously violate the right-of-way of bicyclists and pedestrians in the roadway, particularly motorists who do not stop for a pedestrian in a crosswalk; drive in bicycle lanes; don't allow the required three feet between a bicyclist and their vehicle; or do not exercise the "move over" law. Similarly, directed enforcement operations also detect bicyclists and pedestrians who commit moving violations. Directed enforcement operations are most effective on roadways and intersections with high bicycle and pedestrian volumes.

Directed enforcement operations should be conducted on a recurring basis since changes in motorist behavior can be short-term. In addition to, or in lieu of, fines, officers can issue educational materials that inform drivers and bicyclists of the rules of the road. By working with local news media, the enforcement operations can reach a broader segment of the public in addition to residents who are pulled over. Directed enforcement operations can also be developed to target children who bicycle without helmets.

Joining Forces

Joining Forces is a specific National Highway Traffic Safety Administration (NHTSA) and Office of Traffic Safety (OTS) grant program that currently funds pedestrian enforcement operations each year, but no bicycle operations to date. Several multi agency enforcement operations occur each year specific to pedestrian education for both drivers and pedestrians.

Nevada Highway Patrol (NHP) Bicycle Education

NHP began bicycle enforcement measures in June, 2015. The outreach efforts include educational literature (instead of a citation) at least through the summer. There is also a very visible media component associated with the enforcement which will help educate the public with bicycle laws. These activities will include Washoe County Sheriff's Office, as well as Reno and Sparks Police Departments.

PROPOSED IMPROVEMENTS

This section includes recommendations for improvements to the Truckee Meadow's pedestrian network based on the existing conditions, collision analysis and input from the Technical Advisory Committee, Citizens Multimodal Advisory Committee, and the general public.

As part of all roadway construction projects, RTC strives to bring sidewalks and bus stops into compliance with ADA standards. Where feasible, street trees are provided to offer shade and a buffer between pedestrians and oncoming traffic. When adequate space is available, bicycle lanes and on-street parking also provide an additional buffer between sidewalks and moving vehicles.

At a minimum, five foot sidewalks, high visibility striping at crosswalks, and advanced yield lines, should be required on all roads and comply with ADA standards. Note that sidewalks less than five feet in width require a passing space every 200 feet, as referenced in the Design Best Practices. The Cities of Reno and Sparks require 10 foot minimum sidewalks in Transit Oriented Development Districts to accommodate higher levels of pedestrian traffic.

The ADA Transition Plan, Complete Streets Master Plan, and corridor studies all provide comprehensive lists of pedestrian and sidewalk improvements and recommendations throughout Reno, Sparks, and Washoe County. RTC coordinates with the local jurisdictions and NDOT to install audible traffic signals in appropriate locations. The improvements identified in the ADA Transition Plan provide access for everyone.

PROPOSED BIKEWAY NETWORK

A bikeway network consists of routes that are designed to be the primary system for bicyclists traveling through the region. It is important to recognize that by law, unless explicitly prohibited (as they are on I-80 and I-580/US 395 within the urbanized area), bicyclists are allowed on all streets and roads regardless of whether the streets

and roads are a part of the bikeway network. The bikeway network is a tool that allows jurisdictions to focus and prioritize implementation efforts where they will provide the greatest community benefit. Streets or corridors selected for inclusion in the network should be targeted for specific improvements such as the installation of bicycle lanes, shared-use paths, or signage.

This plan also includes criteria for defining different types of bicycle facilities, a project list, and education and safety programs. Complete design standards for this region are provided in the ***Reno-Sparks Bicycle and Pedestrian Design Best Practices.***

The proposed system was developed according to the following planning criteria:

Coverage: The system should provide equitable, reasonable access from all areas of the region to both experienced/confident and casual/less confident riders.

Purpose: Each link in the system should serve one or more of these purposes: commuting, connection, and recreation, with a focus on commuting. On-street facilities should be continuous and direct, and off-street facilities should have a minimal number of arterial crossings and uncontrolled intersection crossings.

Connection to Employment/Retail Centers: Downtown Reno, Downtown Sparks, business parks, major retail, and other employment centers should be accessible from all neighborhoods via a reasonably direct system.

Connection to Transit: The bicycle network should provide access to major transit hubs and stops to provide the opportunity for linking bicycle and transit trips.

Connection to Schools and Other Community Facilities: Schools and community facilities such as community centers, libraries, and government and emergency facilities should be accessible by bikeways. While not serving every residential street, the bikeway system should provide access routes with special treatments at busy intersections, such as bicycle loop detectors or signage.

Connection to Parks and Open Space: Parks and open space should be accessible by bikeways so that residents are able to bicycle from home to both local and regional recreation.

PROPOSED FACILITIES

A prioritized list of recommended on and off-street bicycle facility improvements is presented in the Project Prioritization section of this chapter and a table of facilities is provided in Appendix 2 .

The ultimate goal of this plan is to provide a continuous network of bicycle facilities with the greatest degree of bicycle comfort possible. The Design Best Practices provides details for constructing bicycle facilities including:

- Paths
- Bicycle lanes
- Shared roadways
- Accommodating bicycles at intersections
- Other innovative bicycle treatments

The basic and enhanced levels of improvements are summarized in the Appendix 2 Design Best Practices provides design features for basic and enhanced levels of improvement.

SUPPORT FACILITIES

Every transit trip has two basic components: 1) the route selected by the cyclist or pedestrian and 2) the "end-of-trip" facilities (or support facilities) available at the destination. A lack of adequate support facilities at the destination can be one of the biggest deterrents to cycling or walking for many active transportation participants. Support facilities come in many forms depending on the destination at which they are placed. Some support facilities include:

- Bicycle parking
    - Long-term and short-term parking
- Showers and locker facilities
- Bicycle stations
    - May include tune-up and repair stations
- Park and Ride facilities
- Trailheads and staging areas
    - Include bicycle racks, public telephones, restrooms, drinking water and wayfaring signs
- Bike share stations
    - Bike share destinations are attractive destinations for pedestrians
- Shopping and business districts
- Aesthetically pleasing street furniture, art and landscape

BICYCLE SHARING PROGRAMS

Bicycle Sharing programs in the US are gaining in popularity. Bicycle sharing programs provide community bicycles at key locations that people can rent. In most cases the bikes can be returned at any rental location within the region.

A bicycle share program encourages bicycle use by providing bicycle stations throughout a region with bicycles for the public to rent or borrow for a nominal fee or no fee. Typically renters are given a bicycle for an allotted amount of time and can return the bicycle to any station throughout the region. Bike share provides an alternative to auto use and reduces vehicle miles traveled (VMT), and aids in the reduction of auto emissions, which improves air quality.

The RTC conducted a Bike Share Feasibility Study in 2014-15. The study revealed that Bike Share is a possibility for this region and that a public-private partnership would be the most effective way to implement and oversee the day-to-day operation of the program. This program would make bicycles available to the public via kiosks or stations which would be located near employment centers, high density residential areas, transit centers, and other key destination areas within the Truckee Meadows.

PROJECT PRIORITIZATION

KEY CORRIDOR PROJECTS

The RTC has identified several corridors as key projects for major rehabilitation and reconstruction. The following corridors will include improvements for transit, vehicles, bicyclists and pedestrians:

- 4th Street/Prater Way – Evans Avenue to Pyramid Way
- Sun Valley - Scottsdale Road and Highland Ranch Parkway
- Virginia Street – Liberty to Plumb Lane and 8th Street to 17th Street
- Wells Avenue/Oddie Boulevard – Kuenzli Street to Pyramid Way
- Sparks Boulevard Corridor - Greg Street to Pyramid Highway.
- Keystone – California Avenue to I-80
- Mill Street/Terminal Way
    - Mill Street – Lake Street to Terminal Way
    - Terminal Way – Mill Street to Plumb Lane

Several corridor studies have been completed since the inception of the previous Bicycle and Pedestrian Plan. RTC conducted community-based corridor improvement plans to address multimodal safety and other transportation plans. Recommended improvements to these corridors focused on pedestrian safety, improving crosswalks, lighting, sidewalks, and bike lanes. The completed corridor studies are located on the RTC website at www.rtcwashoe.com. The following section further details each of the proposed corridor plans.

Corridor Projects		
Project Name	**Project Summary**	**Photo**
Sun Valley Boulevard Corridor Study	Multimodal improvements from Clear Acre Lane/Sun Valley Boulevard from Scottsdale Road to Highland Ranch Parkway in the North/South direction and Chocolate Drive to Yukon Drive in the East/West direction	
4th Street / Prater Way Corridor Study	Multimodal improvements from Keystone Avenue to Vista Boulevard	

Corridor Projects		
Project Name	**Project Summary**	**Photo**
Virginia Street Corridor Investment Plan	Multimodal analysis of pedestrian, bicycle, transit, and automobile for potential transportation improvements on Virginia Street between North McCarran Boulevard to Mt. Rose Highway	
Oddie Boulevard/ Wells Boulevard Corridor Study	Multimodal improvements, design & right-of-way from Kuenzli to Pyramid Way	
Sparks Boulevard Multi-Modal Corridor Study	Multimodal improvements on Sparks Boulevard from Greg Street to Pyramid Highway.	
Keystone Avenue Corridor Study	Multimodal transportation improvements with strategy for developing Complete Streets improvements	

Corridor Projects		
Project Name	**Project Summary**	**Photo**
Mill Street/Terminal Way Corridor Study	Multimodal transportation study along Mill Street between Lake Street and Terminal Way and Terminal Way between Plumb Lane and Mill Street.	

Projects with Unique Bicycle and Pedestrian Components

SouthEast Connector/Veterans Parkway

The SouthEast Connector (to be called Veterans Parkway) will be a 5.5 mile stretch of north-south roadway extending from the intersection of Sparks Boulevard and Greg Street at the northern terminus, to the existing intersection of Veterans Parkway and South Meadows Parkway at the southern end. The road will be three lanes in each direction, with new signalized intersections at Mira Loma Drive and Pembroke Drive. A separated multi-use path will be constructed along the roadway Utilizing valuable input received from federal, state, and local agencies; regional environmental groups; and local business and community organizations, the project team has developed strategies to optimize traffic operations; enhance the environment within the corridor; and maximize the safety of drivers, bicyclists and pedestrians.

Evans Street Bicycle and Pedestrian Improvements

Evans Avenue is a vital link for the University of Nevada, Reno to downtown. The Evans Avenue Projectwill upgrade bicycle/pedestrian facilities from McCarran Boulevard just north of the University to 2nd Street with its proximity to 4th Street Station, Aces Ballpark and downtown Reno. This project will provide a multi-use path from McCarran Boulevard to Jodi Way. This path will enhance the safety for pedestrian and bike riders coming from university housing to their classes at UNR. From Jodi Way to 9th Street, a bicycling climbing lane will be striped to enable bike riders to have their own lane to climb the hill. From 9th Street to 4th Street, new bike lanes will be added on both sides of the roadway. On street parking will remain in this area, but bicycles will now have their own lane to ride in which should also slow speeds in the neighborhood. From 4th Street to 2nd Street, due to narrow roadway widths, sharrows will be installed to allow vehicles and bikes to share the lane.

4thStreet/Prater Way

4th Street from Evans Avenue and Prater Way to Pyramid Way is a 3.2 mile stretch of east-west roadway connecting RTC 4th STREET STATION in Reno with RTC CENTENNIAL PLAZA in Sparks, the area's two major transit transfer facilities. The project scope is to move the overhead utilities underground, construct new sidewalks and widen existing sidewalks, add street lighting, planters, road improvements 4 pairs of RTC RAPID transit stops, and bike lanes. The RTC RAPID outbound transit stops will be located just east of Sutro Street; west of Galletti Way; east of El Rancho Drive; and west of 15th Street. The inbound the transit stops will be west

of 15th Street; east of El Rancho Drive; west of Galletti Way; and west of Sutro Street. Bicycle facility improvements include: sharrows from Evans Avenue to Record Street to allow vehicles and bikes to share the lanes more compatibly in both eastbound and westbound directions and bike lanes in both eastbound and westbound directions from Record Street in Reno to 9th Street in Sparks. At Prater Way and Victorian Avenue the eastbound bike lane will also turn down Victorian Avenue as well as continue on Prater Way. Due to limited roadway width from 9th Street to Pyramid Way, the bike lanes will turn into sharrows in both the eastbound and westbound directions alerting vehicle drivers of the need to share the lane with bicyclists.

Virginia Street Bus RAPID Transit Extension Project (Planning stages)

The RTC has worked hand-in-hand with the community by designing the future of Virginia Street. The Virginia Street Bus RAPID Transit Extension project focuses on Virginia Street near the University of Nevada, Reno and through Midtown. The goals of the project include making the University, Downtown Reno, and Midtown more connected, extending RAPID transit to the University, and bringing the project area to compliance with the Americans with Disabilities Act (ADA).

Community engagement activities include public meetings, door-to-door Midtown business visits, an online public survey, and more than 5,000 mailings to encourage public participation. As a result the RTC has created designs for Virginia Street based on community input and guidance by the Reno City Council. This project continues to be refined and the RTC project team will continue to work on the design in partnership with the public.

Planned Bicycle Projects

As part of the Regional Pavement Preservation Program the RTC identifies roadways in need of preventive maintenance. The Pavement Preservation Program is central to implementation of the region's Complete Streets strategies, including the addition of bicycle lanes and sidewalks on the roadway. During road reconstruction projects, many bicycle and pedestrian improvements can be incorporated into the scope of work. In the Slurry Seal program, the addition of bicycle lane striping can easily be incorporated as it does not add significant cost of the project. A number of roadway maintenance projects thus far have included the addition of bicycle facilities. For example, the vehicle travel lanes on California Avenue and Arlington Avenue were reduced from two lanes in each direction to one lane in each direction and a two-way left-turn lane. The space recovered from the extra vehicle lane was used to include bicycle lanes on the roadway.

RANKING PROPOSED BICYCLE AND PEDESTRIAN IMPROVEMENTS

Proposed Projects included in the Bicycle Pedestrian Master Plan were identified through input from partnering agencies, the public, and existing plans and project lists. Projects were identified from the following resources:

- Existing 2011 Bicycle Pedestrian Master Plan
- Corridor Studies
- Complete Streets Master Plan
- Bus Stop ADA Accessibility Inventory
- Regional Sidewalk Inventory
- Partnering Agencies and Public Input

A point system was used to prioritize improvements (Appendix 3). There were 102 bicycle projects and 212 pedestrian projects that ranked between 0-19 points with 19 being the highest ranking. Points were given to proposed projects that met the following criteria:

- In an existing plan
- Located on a regional road or located on a non-regional road that would provide connectivity to an existing bicycle or pedestrian facility between, or leading to, regional roads
- Eliminate a gap in connectivity
- Located in a low income/economically challenged neighborhood
- Serve a block group with poverty level below the Washoe County average
- Connect to transit
- Located near essential services (school, governmental, social services, affordable housing, medical services, et98)
- Located in an area surrounding employment or residential density above the county median
- Ease of constructability

A separate list was developed for both pedestrian and bicycle projects. A regional road sidewalk inventory was completed as part of the Compete Streets Master Plan, and this data was used along with the above criteria to prioritize pedestrian projects. The American's with Disabilities Act (ADA) Transition Plan also addresses pedestrian improvements pertaining to ADA needs.

Figure: 11 Planned Pedestrian Projects Map

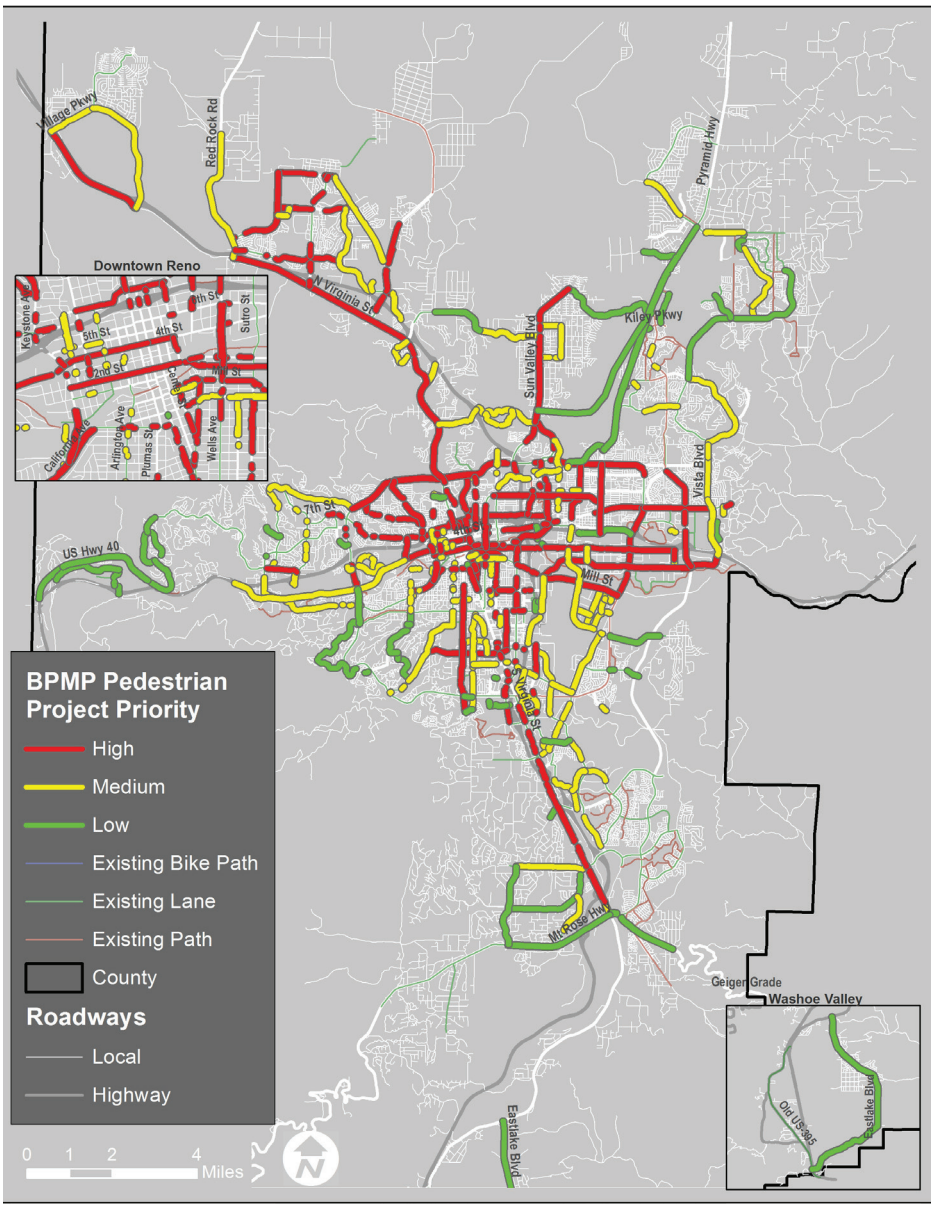


Figure: 12 Planned Pedestrian Project List
(Green = Low Priority, Yellow = Medium Priority and Red = High Priority)

Jurisdiction	Location	Limits	Length (miles)
Reno	1st St	Winter Street to Washington Street	0.04
Washoe County	3rd St (Verdi)	Trelease Lane to Hansen Drive	1.92
Reno	4th St	I-80 to Stoker	8.04
Reno	4th Street	N Virginia Street to Evans Avenue	0.22
Reno	4th Street	Stoker Avenue to Tacchino Street	1.27
Reno	4th Street	Vine Street to N Virginia Street	0.65
Reno	5th St	Vine Street to Ralston Street	0.15
Reno	6th St	Evans Avenue to Morril Avenue	0.08
Washoe County	7th Ave	Sun Valley Boulevard to Golden Valley Road	2.74
Reno	7th St	Rio Rico Court to Canal Street	1.17
Reno/Sparks	9th Street/ G Street	Spokane Street to El Ranch Drive	1.20
Reno	9th Street/University Terrace	Washington Street to Evans Avenue	0.72
Reno	Airway Dr	Evelyn Way to Home Gardens Drive	1.51
Reno	Apple St	Kirman Avenue to Wrondel Way	0.18
Reno	Arlington Ave	3rd Street to Monroe Street	0.16
Reno	Armstrong Ln	Susileen Drive to Yuma Lane	0.72
Reno	Arrowcreek Parkway	Thomas Creek Road to Zollezzi Lane	2.15
Reno	Avenida de Landa	Somersett Parkway to Silverado Creek Drive	0.67
Reno	Beaumont Pkwy	Clubhouse Drive to Avenida De Landa	0.80
Reno	Boomtown Garson Rd	Between Ramps	0.36
Reno	Booth St	California Ave to Idlewild Drive	0.16
Washoe County	Bridge St	US 40 to S Verdi Road	0.18
Reno	Brinkby Ave	Plumas Street to Lymbery Way	0.62
Reno	Buck Dr	North Hills Boulevard to Lemmon Drive	0.17
Reno	Business 395	Panther Drive to US 395	0.92
Reno	Cabela Dr	S Verdi Road to Boomtown Garson Road	0.42
Reno	California Ave	Hunter Lake Drive to S Virginia Street	1.31
Sparks	Calle de Oro Pkwy	Cadiz Avenue to Wingfield Springs Road	.39
Reno	Capitol Blvd	S McCarran Boulevard to Rock Boulevard	0.56
Reno	Carlyle Dr	N Yorkshire Drive to S Yorkshire Drive	0.42
Reno	Cashill Blvd	Skyline Boulevard to Marthiam Avenue	0.86

Jurisdiction	Location	Limits	Length (miles)
Reno	Caughlin Pkwy	S McCarran Boulevard to Caughlin Square	3.95
Reno	Center St	Burns Street to E 9th Street	0.10
Reno	Clear Acre Ln	Wedekind Road to El Rancho Drive/Dandini Boulevard	1.05
Reno	Colbert Dr	Longely Lane to Maestro Drive	0.21
Sparks	Cordoba Blvd	La Posade Dr to End of Sidewalk 250 ft. South	0.05
Reno	Corporate Blvd	Mill Street to Capital Boulevard	0.77
Reno	Dandini Blvd	Spectrum Boulevard to Clear Acre Lane	3.00
Sparks	David Allen Pkwy	Kiley Parkway to Lazy 5 Parkway	0.56
Reno	Dell Webb Pkwy E	Cricketwood Circle to Tarelton Way	0.63
Reno	Dell Webb Pkwy W	Somersett Ridge Parkway to Somersett Park-way	1.85
Washoe County	Delores Dr	Peralta Way to Pyramid Way	1.62
Sparks	Disc Drive	Harrier Way to Vista Boulevard	0.79
Reno	Double Diamond Pkwy	Double R Boulevard to Trademark Drive	0.56
Reno	Double R Blvd	Double Diamond Parkway to Maestro Drive	1.28
Reno	Durham Rd	Plumb Lane to Villanova Drive	0.32
Washoe County	E 5th Ave	Sun Valley Boulevard to Lupin Drive	0.35
Washoe County	E 8th Ave	Sun Valley Boulevard to Lupin Drive	1.00
Washoe County	Eagle Canyon Dr	Neighborghood Way to W Calle De la Plata	1.66
Washoe County	Eastlake Blvd	Old US 395 to Interstate I580 Exit 44	20.71
Reno	Echo Ave	Moya Boulevard to Military Road	1.21
Reno	Edison Way	S Rock Boulevard to Mill Street	1.56
Reno/Sparks	El Rancho Dr	Prater Way to Clear Acre Lane	2.73
Reno	Energy Way	S Rock Boulevard to Edison Way	0.77
Reno	Enterprise Rd	Evans Avenue to Valley Road	0.15
Reno	Equity Ave	Corporate Boulevard to Financial Boulevard	0.29
Reno	Evans Ave	N McCarran Boulevard to E Plaza Street	1.35
Sparks	Farr Ln	Queen Way to Wedekind Road	0.14
Reno	Financial Blvd	Equity Avenue to Mill Street	0.25
Reno	Foothill Rd	Broken Hill Road to Virginia Street	0.49
Sparks	Franklin Way	Kleppe Lane to E Greg Street	0.40
Sparks	Galleria Dr	Papaya Drive to Los Altos Parkway	0.14
Reno/Sparks	Galleti Way	Glendale Drive to Prater Way	0.37
Reno	Gateway Dr	S Meadows Parkway Offenhauser Drive	1.05

Jurisdiction	Location	Limits	Length (miles)
Reno	Geiger Grade	Virginia Street to Toll Road	3.13
Reno	Gentry Way	S Virginia Street to Wrondel Way	0.04
Sparks	George Ferris Dr	Legends Bay Drive to Scheels Drive	0.14
Sparks	Glendale Ave	Meredith Way to Galletti Way	4.24
Reno	Golden Valley Dr	Estates Road to 7th Avenue	2.02
Reno	Greenbrae Dr	Sullivan Lane to Rock Boulevard	0.24
Reno/Sparks	Greg St	Mill Street to I80	7.55
Sparks	Highland Ranch Pkwy	Pyramid Highway to Sun Valley Boulevard	3.74
Sparks	Holcomb Ave	Mill Street to Vassar Street	0.45
Reno	Hunter Lake Dr	Foster to Plumb	0.36
Reno	Hunter Lake Dr	Plumb Lane to Yuma Lane	0.53
Reno	Idlewild Dr	Hunter Lake Drive to Cowan Drive	0.06
Sparks	Industrial Way	Glendale Avenue to Greg Street	0.61
Reno	Keystone Ave	McCarran to Jones St	2.12
Reno	Keystone Ave	Jones St to California Ave	0.95
Reno/Sparks	Kietzke Ln	S McCarran Boulevard to Victorian Avenue	3.26
Sparks	Kiley Pkwy	Pyramid Highway to Roundabout	0.23
Sparks	Kings Row	N McCarran Boulevard to Keystone Avenue	1.04
Reno	Kirman Ave	Ryland Street to Apple Street	0.81
Reno	Kuenzli St	E 2nd Street to Kietzke Lane	0.34
Sparks	La Posada Dr	Rockwell Boulevard to Cordoba Boulevard	1.56
Reno	Lakeside Dr	Plumb Lane to Ridgeview Drive	2.22
Reno	Lancaster Dr	Yorkshire Drive to Westminster Parkway	0.37
Reno	Las Brisas Blvd	N McCarran Boulevard to Silverado Creek Drive	2.39
Reno	Lear Blvd	Moya Boulevard to Military Road	1.77
Reno	Lemmon Dr	Ramsey Way to N Virginia Street	2.82
Reno	Liberty St	Hatch Street to Holcomb Avenue	0.06
Reno	Locust St	Colorado River Boulevard to Ryland Street	0.43
Reno	Longley Ln	S Virginia Street to Pembroke Drive	3.49
Sparks	Loop Rd	Vista Boulevard Down Salomon Circle .4 Miles	1.10
Sparks	Los Altos Pkwy	Pyramid Way to Vista Boulevard (S Los Altos)	2.58
Reno	Lund Ln	Northtowne Lane to Wedekind Road	0.14

Jurisdiction	Location	Limits	Length (miles)
Washoe County	Lupin Dr	E 8th Avenue to E 5th Avenue	1.47
Reno	Lymberry St	Lakeside Drive to W Moana Lane	1.04
Reno	Mae Anne Ave	Intersection with Ishi Point Drive	0.01
Reno	Mae Anne/ Mesa Park	W 4th Street to La Salle Heights	1.26
Reno	Maestro Dr	Colbert Drive to Double R Boulevard	0.61
Reno	Marthiam Ave	Cashill Boulevard to Susileen Drive	0.30
Reno	Matley Ln	E Plumb Lane to Villanova Drive	0.44
Reno	Mayberry Dr	W 4th Street to California Drive	2.13
Reno	McCarran Blvd	4th to Clear Acre	7.90
Reno	McCarran Blvd	Lakeside to 4th	1.75
Reno/Sparks	McCarran Boulevard	Clear Avre Lane to Mill Street	6.26
Reno	Meadowood Mall Cir	Meadowood Mall Circle to Meadowood Mall Circle	2.09
Reno	Meadowood Mall Way	Kietzke Lane to I580	0.05
Sparks	Merchant St	Sullivan Lane to Exchange Street	0.27
Sparks	Meredith Way	Kleppe Lane to E Glendalle Avenue	0.42
Reno	Military Rd	Lemmon Drive to Echo Avenue	3.49
Reno	Mill St	E McCarran Boulevard to Lake Street	4.26
Reno	Mira Loma Dr	S McCarran Boulevard to SE Connector	0.56
Reno	Moana Lane	Skyline Boulevard to S Virginia Street	2.46
Reno	Mount Rose St	S Arlington Avenue to Watt Street	0.35
Reno	Moya Blvd	Red Rock Road to Echo Avenue	3.45
Reno	Mt Charleston St	Stead Boulevard to Echo Avenue	0.18
Reno	Mt Rose Hwy	Thomas Creek Road to S Virginia Street	3.84
Reno	N Virginia St	Red Rock Rd to Maple Street and Village Pkwy to White Lake Pkwy	21.07
Sparks	N Wingfield Hills Boulevard	Vista Boulevard to Lazy 5 Parkway	0.69
Reno	N Wingfield Pkwy	Vista Boulevard to Wingfield Springs Road	0.27
Reno	Neil Rd	S McCarran Boulevard to Gentry Way	1.01
Reno	North Hills Blvd	Buck Road to Wal-Mart	1.12
Sparks	Nugget Ave	Rock Boulevard to Pyramid Way	2.52
Reno	Oddie Blvd	Sutro Street to Pyramid Way	4.56
Sparks	Orovada St	Greenbrae Drive to Silverado Boulevard	0.03
Reno	Parr Blvd	N Virginia Street to NB US395 Exit	1.24

Jurisdiction	Location	Limits	Length (miles)
Reno	Peckham Ln	Lakeside Drive to Longely Lane	2.32
Reno	Pembroke Dr	S McCarran Boulevard to SE Connector	2.47
Reno	Pete's Way	E Prater Way to 900 ft S. of Prater Way	0.33
Reno	Plumas St	Ridgeview Drive to La Rue Avenue	4.19
Reno	Plumb Ln	S McCarran Boulevard to Watt Street	0.17
Reno	Prater Way	Pyramid Way to N McCarran Boulevard	1.04
Reno	Prater Way	Westview Boulevard to I80	1.98
Reno	Production Dr	Lear Boulevard to Resource Drive	0.36
Reno	Prototype Dr	Gateway Drive to Double R Boulevard	0.82
Reno	Putnam Dr	Washington Street to N Sierra Street	0.45
Sparks	Pyramid Highway	Oddie Boulevard to Queen Way	0.15
Sparks	Pyramid Highway	Queen to Winnemucca Ranch	10.39
Sparks	Pyramid Highway	McCarran Boulevard to Nugget Avenue	1.64
Sparks	Queen Way	Farr Lane to Pyramid Way	0.07
Reno	Raggio Pkwy	Dandini Parkway (West) to Dandini Parkway (East)	1.30
Reno	Ralston St	W 2nd Street to I80	0.08
Reno	Red Rock Rd	Silver Knolls Boulevard to N Virginia Street	5.92
Reno	Redfield Pkwy	Baker Lane to Kumle Lane	0.05
Reno	Resource Dr	Moya Boulevard to Production Drive	0.36
Reno	Ridgeview Dr	Plumas Street to Lakeside Drive	0.24
Reno	Rio Poco Rd	Bayridge Lane to Matich Drive	0.12
Reno	Robb Dr	I80 to Lancer Street	0.81
Reno/Sparks	Rock Boulevard	Prater Way to McCarran Boulevard	1.37
Sparks	Rock Boulevard	Victorian Avenue to S McCarran Boulevard	4.16
Reno	Ryland St	Holcomb Avenue to Mill Street	0.72
Reno	S Verdi Rd	S Verdi Court to Cabela Drive	3.28
Reno	S Virginia St	Moran St to McCarran Blvd	0.57
Reno	S Virginia St	McCarran to Mt Rose Hwy	5.45
Reno	S Virginia St	W Liberty to Mary Street	0.11
Reno	San Rafael Drive	Washington Street to Putnam Drive	0.28
Reno	Sharlands Ave	Robb Drive to Mae Anne Avenue	0.65
Reno	Sierra Highlands Dr	N McCarran Boulevard to Cassandra Way	0.33
Reno	Sierra Rose Dr	Talbot Lane to Kietzke Lane	0.43
Reno	Sierra St	Maple Street to College Court	0.20

Jurisdiction	Location	Limits	Length (miles)
Reno	Silver Lake Rd	Red Rock Road to Sky Vista Parkway	2.01
Reno	Silverada Blvd	Oddie Boulevard to E 9th Street	0.18
Reno	Sinclair St	Mill Street to Thoma Street	0.19
Reno	Sky Mountain Dr	Summit Ridge Court to Misty Ridge Lane	0.50
Reno	Sky Valley Dr	Misty Ridge Lane to Summit Ridge Drive	0.27
Reno	Sky Vista Blvd	Vista Knoll Parkway to Lear Boulevard	2.43
Reno	Skyline Blvd	S McCarran Boulevard to Plumb Lane	4.19
Reno	Smithridge Dr	S McCarran Boulevard to E Peckham Lane	1.27
Reno	Somersett Pkwy	Heavenly View Trail to Del Webb Parkway	0.42
Reno	Sommerset Ridge Pkwy	US 40 to Del Webb Parkway	1.45
Reno	South Virginia Street	Zolezzi Lane to Geiger Grade	0.43
Sparks	Sparks Blvd	Baring Blvd to Greg St	2.06
Sparks	Sparks Blvd	Kiley Pkwy to Los Altos Pkwy	0.30
Reno	State St	S Center Street to Holcomb Avenue	0.16
Reno	Stead Blvd	N Virginia Street to Echo Avenue	1.09
Reno	Stoker Ave	W 4th Street to W 7th Street	0.69
Sparks	Sullivan Ln	El Rancho Drive to Ponderosa Drive	1.35
Reno	Summit Ridge Dr	Sky Mountain Drive to W 4th Street	0.91
Washoe County	Sun Valley Blvd	Highland Ranch Parkway to Dandini Boulevard	5.44
Reno	Susileen Dr	Marthiam Avenue to Armstrong Lane	1.86
Reno	Sutro St	Paint Brush Drive to Sunvilla Boulevard	0.32
Reno	Talbot Ln	Sierra Rose Drive to 650 ft. S of S. McCarran Boulevard	0.13
Reno	Terminal Way	Gentry Way to Plumb Lane	0.71
Reno	Terminal Way	Plumb Lane to Mill Street	1.58
Washoe County	Thomas Creek Dr	Zolezzi Lane to Mount Rose Highway	3.79
Sparks	US 395 Connector	Sun Valley Boulevard to Pyramid Highway	3.97
Reno	US Hwy 40	Bridge Street to Somer sett Ridge Parkway	4.50
Reno	Valley Rd	Enterprise Road to E 6th Street	0.73
Reno	Vassar St	S Virginia Street to Market Street	0.45
Reno	Village Pkwy	N Virginia Street White Lake Parkway	2.14
Reno	Villanova Dr	Durham Road to Terminal Way	0.07
Reno	Vine St	University Terrace to 3rd Street	0.68

Jurisdiction	Location	Limits	Length (miles)
Sparks	Vista Blvd	Los Altos Parkway (south) to I-80	2.56
Sparks	Vista Blvd	Hubble to Los Altos (north)	1.36
Sparks	Vista Boulevard	Baring Boulevard to Frisco Way	0.93
Reno	Vista Knoll Pkwy	Sky Vista Parkway to 2nd Parking Lot Entrance	0.23
Reno	W Golden Valley Rd	Yorkshire Drive to N Virginia Street	0.51
Reno	Washington St	W 12th Street to 3rd Street	0.32
Reno/Sparks	Wedekind Rd	Sutro to McCarran	1.86
Sparks	Wedekind Rd	McCarran to Pyramid	1.94
Reno	Wedge Pkwy	Arrowcreek Parkway to Ghost Rider Drive	0.95
Reno	Wells Ave	Sutro Street to Ryland Street	1.30
Reno	Wells Avenue	Moran Street to E 2nd Street	0.27
Reno	West 2nd Street	Keystone Avenue to Truckee River	2.44
Reno	White Lake Pkwy	Village Parkway to N Virginia Street	5.95
Sparks	Wingfield Springs Rd	Calle De Oro Parkway to N Wingfield Parkway	1.85
Reno	Wrondel Way	Apple Street to E Grove Street	0.38
Reno	Yori Avenue	Plumb Lane to Moana Lane	0.93
Reno	Yuma Ln	Armstrong Lane to Hunter Lake Drive	0.14
Reno	Zolezzi Lane	S Virginia Street to Jeppson	3.05
		Miles of sidewalk to be constructed:	339

Figure 12 planned bike Projects map

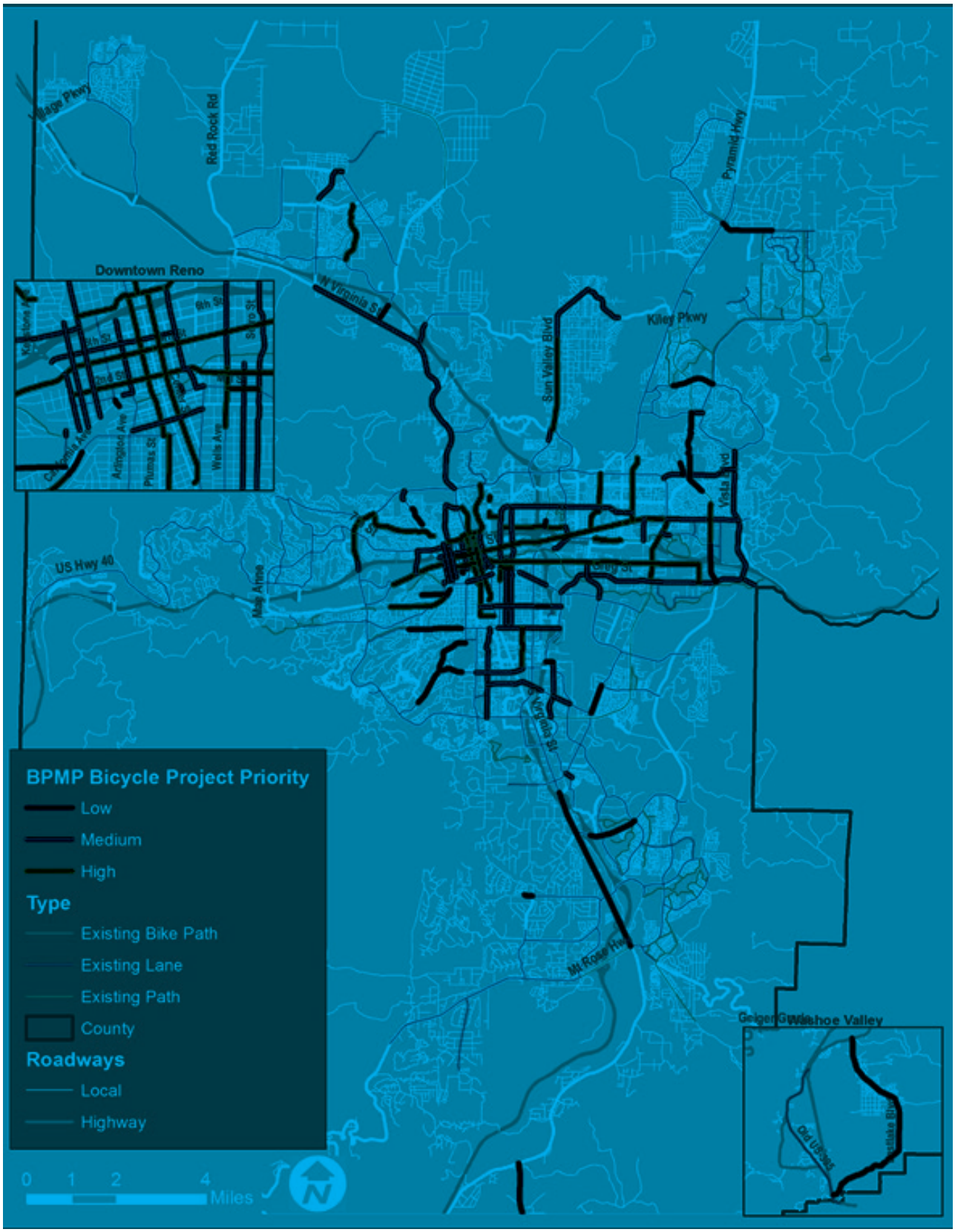


Figure: 13 Planned Bicycle Project List
(Green = Low Priority, Yellow = Medium Priority and Red = High Priority)

Jurisdiction	Location	Limits	Improvements	Length (miles)
Reno	4th Street	N Virginia Street to Evans Avenue	Enhanced sidewalks and bike lanes. Consider lane reduction	0.22
Reno	4th Street	Summit Ridge Drive to Keystone Avenue	Enhanced sidewalks and bike lanes. Consider lane reduction	1.25
Sparks	4th Street	Prater Way to Queen Way	Bike Lane	1.44
Reno	4th Street	Vine Street to N Virginia Street	Enhanced sidewalks and Bike Lanes	0.70
Sparks	4th Street/Prater	Evans Avenue to Pyramid Highway	Bike Lane	3.15
Reno	5th Street	Keystone Avenue to Evans Avenue	Bike lanes. Consider Lane Reduction	1.00
Reno	7th Street	Canal Street to Washington Street	Bike Lane	0.36
Reno/Sparks	9th Street/G Street	Wells Avenue to El Rancho Drive	Enhanced sidewalks and Bike Lanes	1.46
Reno	9th Street/ University Terrace	Washington Street to Evans Avenue	Sidewalks and Bike Lanes	0.77
Reno	Arlington Avenue	I80 Ped Bridge to 1st Street	Bike lanes. Consider Lane Reduction	0.65
Reno	Baring Boulevard	McCarran Boulevard to Vista Boulevard	Bike Lane	1.64
Sparks	Booth Street	Riverside Drive to Idlewild Drive	Bike Lane	0.08
Reno	Caliente Street	S Virginia Street to Forest Street	Bike Lane	0.25
Reno	California Avenue	Booth Street to Idlewild Drive	Bike Facility	1.25
Reno	California Avenue	Newlands Circle to Booth Street	Bike Facility	0.24
Reno	Center Street	S Virginia Street to 9th Street	Bike Lane	1.56
Sparks	Disc Drive	Sparks Boulevard to Vista Boulevard	Enhanced sidewalks and Bike Lanes	0.25
Reno	E Leonesio Drive	Crystal Lane to Dandini Boulevard	Bicycle Facilities	0.24
Washoe County	Eastlake Boule-vard	Old US 395 to I580 Interchange	Bike Lanes or Multiuse Path	10.29
Reno	Echo Ave	Military Road to Mt Vida	Bike Lane	0.15
Sparks	El Rancho Drive	G Street to Galletti Way	Sidewalks and Bike Lanes	0.64
Reno	Erica Greif Bike Route	Somersett Ridge Pkwy to 4th St.May-berry Dr	Bike Route	3.15
Reno	Evans Avenue	McCarran Boulevard to 9th Street	Bike Lane	1.14

Jurisdiction	Location	Limits	Improvements	Length (miles)
Reno	Evans Street	Holcomb Avenue to 9th Street	Ped/Bike Bridge and Bike Lanes	0.92
Reno	Forest Street	Mount Rose Street to California	Bike Lane	1.04
Reno	Foster Drive	Hunter Lake Drive to Booth Street	Bike Lane	0.50
Reno	Gentry Way	Terminal Way to Neil Road	Bike Lane	0.16
Reno	Glendale Avenue	Galletti Way to Meredith Way	Bike Lane	3.47
Sparks	Golden Valley Road	N Hills Boulevard to N Virginia Street	Bike Lane	0.70
Sparks	Goldy Way	Baring Boulevard to Spanish Springs Road	Bike Lane	0.28
Sparks	Greg Street	Mill Street to Vista Boulevard	Sidewalks and Bike Lanes	4.27
Washoe County	Highland Ranch Pkwy	Sun Valley Drive to Midnight Drive	Bike Lane	1.01
Reno	Huffaker Lane	Bluestone Drive to Longely	Bike Lane	0.15
Sparks	I Street	Pyramid Way to 4th Street	Bike Lane	0.22
Reno	Keystone Ave	McCarran Boulevard to Durango Court	Bike Lane	0.21
Reno	Keystone Avenue	Riverside Drive to 4th Street	Bike Lane	0.45
Reno	Keystone Avenue	Coleman Drive to Peavine Road	SB Sharrows NB Bike Lane	0.44
Reno	Kings Row	McCarran Boulevard to Keystone Avenue	Bike Lane	1.62
Reno	Kirman Avenue	Plumb Lane to 4th Street	Bike lanes. Consider Lane Reduction	1.88
Sparks	La Posada Drive	Pyramid Highway to Cordoba Boulevard	Bike Lane	1.16
Reno	Lake Street	Mill Street to Truckee River Trail	Bike Lane	0.05
Reno	Lakeside Drive	Plumb Lane to McCarran Boulevard	Bike Lane	2.04
Reno	Lemmon Drive	N. Virginia Street to US395 SB Ramps	Bike Lane	0.43
Reno	Liberty Street	Arlington Avenue to Holcomb Avenue	Bike Lane	0.57
Sparks	Lincoln Way	McCarran Boulevard to Howard Drive	Bike Lane	0.18
Reno	Locust Street	Plumb Lane to Taylor Street	Bike lanes. Consider Lane Reduction	1.56
Reno	Longley Lane	Peckham Lane to Mira Loma Drive	Bike Lane	0.66
Sparks	Los Altos Parkway	Ion Court to Vista Boulevard	Bike Lane	0.95
Sparks	McCarran Boulevard	Greg Street to Prater Way	Sidewalks and Bike Lanes	1.48
Reno	Mill Street	Wells Avenue to Kirman Avenue	Bike Lane	0.25

Jurisdiction	Location	Limits	Improvements	Length (miles)
Reno	Mill Street	Ryland Street to I580 On-Ramp	Sidewalks and Bike Lanes	0.66
Reno	Moana Lane	Plumas Street to Yori Avenue	Sidewalks and Bike Lanes	1.05
Reno	Moana Lane	Skyline Boulevard to Pioneer Drive	Bike Lanes	0.53
Reno	N Virginia Street	17th Street to 9th Street	Bike Lanes	0.64
Reno	N Virginia Street	Stead Boulevard to McCarran Boulevard	Bike lanes or Off-street shared-use path	6.28
Reno	N. McCarran Blvd	Sierra Highlands Drive to W 7th Street	Bike Lanes	0.62
Reno	N. McCarran Blvd	W. 7th Street to Kings Row	NB Bike Lanes	0.61
Sparks	N. McCarran Blvd	I-80 Interchange to Sierra Highlands Drive	NB Bike Lanes	0.26
Washoe County	Neil Road	McCarran Boulevard to Gentry Way	Bike Lanes	1.27
Sparks	Oddie Blvd	Rock Boulevard to Pyramid Way	Striped Buffer	0.53
Reno	Oddie Blvd	Rock Boulevard to Sutro Street	Cycle Track	1.96
Reno	Oddie Blvd	Oddie Boulevard to Paradise Park	Multi-Use Connection	0.02
Sparks	Oddie Blvd	Oddie Boulevard to Ardmore Park	Multi-Use Connection	0.01
Reno	Peckham Lane	Neil Road to Airway Drive	Bike Lanes	0.40
Reno	Peckham Lane	Smithridge Drive to Harvard Way	Bike Lanes	1.26
Reno	Plumb Lane	N Virginia Street to Terminal Way	Bike Lanes	1.35
Remo	Plumb Lane	Phillips Street to Ferris Lane	Bike Lanes	1.17
Sparks	Prater Way	Pyramid Way to McCarran Boulevard	Enhanced sidewalks and Bike Lanes	1.04
Reno	Prater Way	McCarran Boulevard to Vista Boulevard	Bike Lanes	1.61
Reno	Ralston Ped Bridge	1st Street to Barbara Bennett Park	Ped/Bike Bridge	0.06
Sparks	Rock Boulevard	Prater Way to McCarran Boulevard	Sidewalks and Bike Lanes	1.37
Reno/Sparks	Rock Boulevard	Mill Street to Greg Street	Bike Lane	0.94
Reno	Sadleir Way/ Valley Road/En-terprise Road	Cranleigh Drive to Wells Avenue	Bike Lane	0.46
Reno	San Rafael Drive	Washington Street to Sierra Street	Sidewalks and Bike Lanes	0.35
Reno	Sierra Street	California Avenue to University Terrace/9th Street	Bike Lane	1.18
Reno	Silverada Boulevard	9th Street to Hiko Avenue	Bike Lane	0.14
Reno	Sky Vista Pkwy	Lear Blvd to Silver Lake Road	Share Use Path	1.34

Jurisdiction	Location	Limits	Improvements	Length (miles)
Reno	Skyline Boulevard	Cashill Boulevard to Arlington Avenue	Bike Lane	1.84
Reno	South Meadows Parkway	I580 Exit 80 to Double Diamond Parkway	Bike Lane	1.07
Reno	South Virginia Street	Geiger Grade to Exit 57 On-Ramp	Sidewalks and bike lanes. Consider lane reduction	3.80
Sparks	Sparks Blvd	Lincoln Way to Express Street	Bike Lane	0.93
Sparks	Sparks Blvd	Greg Street to Lincoln Way	Multi-Use Path 10 ft. Min.	0.86
Sparks	Sparks Blvd	Disc Drive to Springland Drive	Multi-Use Path	1.89
Sparks	Sparks Blvd	Sparks Boulevard to Truckee River Drain	Ped/Bike Bridge	0.01
Sparks	Stanford Way	Victorian Avenue to Prater Way	Bike Lane	0.49
Reno	Stead Blvd	Echo Avenue to Mt Babcock	Bike Lane	0.75
Reno	Stoker Avenue	W 4th Street to W 7th Street	Bike Lanes. Consider a lane reduction project	0.88
Washoe County	Sun Valley Blvd	El Rancho Drive to 7th Avenue	Bicycle Facilities	2.05
Washoe County	Sun Valley Blvd	7th Avenue to Highland Ranch Park-way	Bike Lane	1.43
Sparks	Sutro Street	Oddie Boulevard to 4th Street	Bike Lane	0.86
Reno	Vassar Street	Wheeler Avenue to Kietzke Lane	Bike Lane	0.90
Reno	Vassar Street	I580 to Terminal Way	Bike Lane	0.21
Reno	Vassar Street	Vassar Street to Harvard Way	Ventana Parkway to Thomas Creek Road	0.42
Reno	Victorian Avenue	16th Street to Pyramid Way	Bike Lane	0.59
Sparks	Vine Street	Riverside Drive to University Terrace	Sharrows/Bike Lane	0.84
Reno	Vista Boulevard	Los Altos Parkway to Truckee River Bike Path	Sidewalks and Bike Lanes	3.27
Reno	Washington Street	Putnam Drive to Riverside Drive	Bike Lane	1.59
Sparks	Wells Avenue	2nd Street to Moran Street	Bike lanes and bike/ped fac over Truckee River	0.49
Reno/Sparks	Wells Avenue	Kuenzil Street to Sutro Street	Multi-Use Path	1.34
Reno	West 2nd Street/ Glendale	Keystone Avenue to Galletti Way	Enhanced sidewalks, landscaping, bike lanes	2.64
Reno	Yori Avenue	Moana Lane to Plumb Lane	Sidewalks and Bike Lanes	0.95
Reno	Zolezzi Lane	Ventana Parkway to Thomas Creek Road	Bike Lane	0.18
			Total	116

Construction Costs

Unit cost summaries for the construction of bikeway facilities and pedestrian-related facilities in the Truckee Meadows are provided in Tables 3 and 4 below. These estimates are based on costs experienced in the Reno-Sparks area and other communities throughout the west, with small increases to account for engineering, construction management, inspection, and contingency costs. More detailed estimates should be developed following the preliminary engineering stage as individual projects advance towards implementation.

Bicycle Facilities

For purposes of this Bicycle and Pedestrian Master Plan, conceptual construction costs for the proposed bikeway system were based on the following:

New Shared Use Paths would be constructed on generally flat right-of-way with no grade separation and minimal grading needed; cost of right-of-way acquisition and trail amenities are not included.

New Bicycle Lane costs include three categories: 1) signing/striping only with minimal or no roadway improvements, 2) signing/striping and roadway widening with no curb/gutter, and 3) signing/striping, roadway widening with curb/gutter improvements/construction. The cost of right-of-way is not included.

New Shared Roadway costs include three categories: 1) signage only, 2) signage and pavement stencils ("sharrows"), and 3) bicycle boulevard construction with signing/striping and traffic calming devices such as bollards, medians, and speed humps. The cost of right-of-way is not included.

TABLE 3
CONCEPTUAL UNIT COST ESTIMATES FOR BIKEWAY CONSTRUCTION

Facility Type	Estimated Cost per Mile
Shared Use Path – Construct path with minimal grading needed	$1,000,000
Bicycle Lane – Signing/Striping Only	$25,000
Bicycle Lane – Signing/Striping with Additional Width (No Curb/Gutter Improvements)	$100,000
Bicycle Lane – Signing/Striping with Additional Width and Curb/Gutter Improvements	$350,000
Shared Roadway – Signing Only	$2,650
Shared Roadway – Signing with Sharrows	$6,000
Bicycle Boulevard	$115,000

Notes: Costs are in 2015 dollars. Right-of-way costs are not included in estimates.
Source: RTC, 2015

TABLE 4 CONCEPTUAL UNIT COST ESTIMATES FOR SIDEWALK-RELATED CONSTRUCTION	
Facility Type	**Estimated Cost per Mile**
Relocate Utility Pole	$7,000
Relocate Street Sign	$250
Relocate/Remove Tree	$1,200
Bus Stop Shelter and Installation	$20,000
Bus Stop Bench and Installation	$20,000
Shared Roadway – Signing with Sharrows	$1,500
Sidewalk Construction	$15 / sq. ft
Truncated Dome Installation	$800
Curb Ramp and Truncated Dome Installation	$4,000
Notes: Costs are in 2015 dollars. Right-of-way costs are not included in estimates. Source: RTC, 2015	

Pedestrian Facilities

For purposes of this Bicycle and Pedestrian Master Plan, conceptual construction costs for the proposed pedestrian improvements were based on the following assumptions:

- Cost estimates do not include demolition costs.
- Cost of relocating utility poles and fire hydrants does not include engineering costs or undergrounding of utilities.

Note that the cost estimates provided in Tables 3 and 4 are meant to provide "ballpark" estimates, and do not include right-of-way acquisition or other design elements that may cause an increase in the overall cost of a project. A detailed cost estimate should be performed as an individual project moves to construction.

Shared use path maintenance includes cleaning, resurfacing, and re-striping the asphalt path, repairing bridges and other structures, cleaning drainage systems, removing trash, and landscaping. While this maintenance effort may not be incrementally significant, it does have the potential to develop substantial expenses if it is not done periodically.

The estimated annual maintenance expense for a shared use path is approximately $25,000 per mile. For bicycle lanes, the cost consists of maintaining pavement markings and striping. The estimated annual maintenance cost is approximately $1,600 per mile. Shared roadways will require maintenance of signs located along the route. The estimated annual maintenance cost is $150 per mile.

FUNDING

Federal transportation legislation, Fixing America's Surface Transportation Act (FAST Act) requires that the Regional Transportation Plan (RTP) be based on a financial plan that demonstrates how the program of projects can be paid for and implemented. The program of projects includes all modes of transportation, such as transit (both operations and maintenance), roadway widenings, construction of new roadways, operations and maintenance of the roadway network, and bicycle and pedestrian facilities.

The financial plan must:

- Demonstrate how the adopted transportation plan can be implemented/funded
- Identify resources from public and private sources that are reasonably expected to be made available to carry out the plan
- Recommend any additional financing strategies for needed projects and programs

The financial plan must also be shown in Year-of-Expenditure (YOE) dollars. Converting all costs and revenues to YOE dollars assumes a more accurate depiction of the financial outlook with long-range transportation plans.

FEDERAL FUNDING SOURCES

Federal revenues for transportation are collected nationally and allocated back to each of the states through a series of formulas and grants under the existing transportation legislation. On December 4, 2015, the latest transportation bill, the FAST Act, was signed into law. The FAST Act authorizes $305 billion over fiscal years 2016 through 2020 for highway, highway and motor vehicle safety, public transportation, motor carrier safety, hazardous materials safety, rail, and research, technology, and statistics programs.

The primary funding source provided by the federal government is the Highway Trust Fund (HTF) through the programs in the FAST Act. The HTF is comprised of the Highway Account (funds highway and intermodal programs) and the Mass Transit Account. Federal motor fuel taxes have not increased since 1993, and with fuel consumption declining primarily due to more fuel efficient vehicles, there is concern about maintaining the current revenue streams.

FAST Act Programs generally available for bicycle and pedestrian facilities include:

- Surface Transportation Block Grant Program (STGB) – flexible funding that may be used for projects to preserve or improve conditions and performance on any Federal-aid highway, bridge projects on any public road, facilities for non-motorized transportation, transit capital projects, and public bus terminals and facilities

- Transportation Alternatives Set-Aside (TA Set-Aside) – funds can be used for a variety of alternative transportation projects such as bicycle or pedestrian improvements and safe routes to school programs

Generally, federal funding programs require a state or local contribution of funds toward the cost of a project which is referred to as matching funds. The typical match for street and highway programs in Nevada is five percent and for transit programs it is twenty percent for capital projects.

STATE FUNDING SOURCES

State funding sources include gas tax, special fuel (diesel) tax, vehicle registration fees, motor carrier fees, driver's license fees, and petroleum cleanup funds.

REGIONAL FUNDING

Regional funding sources include fuel tax, general funds from the local agencies, sales and use tax, passenger fares and other revenue such as regional road impact fees (RRIF) paid by private developers, the Truckee River Flood Project, bus advertising and rental income.

The Regional Transportation Plan describes funding on a federal, state, and regional level in detail.

IMPLEMENTATION STRATEGIES

The FAST Act continues the requirements developed under MAP-21, which created a data-driven, performance-based multimodal program to address the many challenges facing the U.S. transportation system. Performance management will lead to more efficient investment of transportation funds by focusing on national transportation goals, increasing accountability and transparency, and improving decision making.
The Regional Transportation Plan provides details on the national performance goals for federal highway programs established by MAP-21. The performance target for implementing bike lane miles added and percent of RTC BPMP is 3-7% per year. The miles of sidewalks added or enhanced and percent of the ADA Transition Plan completed per year has a performance target of 3-7% of plan implemented per year. These performance targets address both national and regional safety goals.

	Bicycle Projects	**Predestrian Projects**
High Priority Ranking	$1.933.363.31	$26,044,768
Medium Priority Ranking	$3,723,145.59	$38,124,761
Low Priority Ranking	$154,836.98	$25,956,568
Total	**$5,811,345.87**	**$90,126,098**