LAKE TAHOE REGION BICYCLE AND PEDESTRIAN PLAN

2010



Establishing the Foundation for a World-Class Bicycle and Pedestrian Community at Lake Tahoe





FHWA Credit/Disclaimer:

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SECTION I: INTRODUCTION

Let's bike and walk! Lake Tahoe's quiet forests, expansive meadows and sunny beaches invite and attract all types of outdoor enthusiasts. Lake Tahoe is a favorite playground for not only the 54,000 Basin residents, but also visitors from central California, Nevada and around the world. The Tahoe Regional Planning Agency (TRPA) and the Tahoe Metropolitan Planning Organization (TMPO) seek to improve bicycling and walking Region-wide in order to protect this beautiful natural environment, provide multiple mobility options, and maintain healthy communities.

Lake Tahoe communities have identified biking and walking opportunities as critical components of a well-rounded transportation system. A strong bicycle and pedestrian network draws people out of their cars, boosting the economy, improving air quality, and creating attractive, healthy communities. Connected bicycle paths, sidewalks, and transit can provide the backbone of a people-oriented transportation system that supports neighborhoods, commercial districts, and recreation areas. This connected transportation system that centers on non-motorized travel will also help Lake Tahoe meet TRPA environmental thresholds and greenhouse gas reduction targets.

Ultimately, Lake Tahoe communities envision an efficient and attractive bicycle and pedestrian network that encircles the Lake, providing complete connections between people and places.

The Lake Tahoe Bicycle and Pedestrian Plan (BPP) presents a guide for planning, constructing, and maintaining a regional bicycle and pedestrian network and support facilities and programs. The network includes on-street bicycle lanes and bicycle routes, and off-street paths and sidewalks. The BPP includes maps and prioritized project lists for the bicycle and pedestrian network, and lays out policies for local governing bodies and transportation agencies. Finally, to help ensure implementation, the BPP identifies potential funding sources and specifies recommended designs to encourage consistency and safety Region-wide.

The BPP serves as the Bicycle and Pedestrian element to both the TMPO Regional Transportation Plan (*Mobility 2030*), and the TRPA Transportation Plan (part of the TRPA Regional Plan). The TMPO is the federally-designated metropolitan planning organization for the Tahoe Region, and is responsible for transportation planning and distribution of federal transportation funding.

STUDY AREA

The study area of the BPP includes the Lake Tahoe Basin, which straddles the California-Nevada border and lies between the Sierra Nevada Crest and the Carson Range (Figure 1, next page). Approximately two-thirds of the Basin is in California and one-third is in Nevada. In total, the Basin watershed contains 501 square miles with the Lake representing almost 200 square miles. The Basin includes the incorporated area of the City of South Lake Tahoe, CA, portions of El Dorado and Placer Counties, CA, portions of Douglas and Washoe Counties, NV, and the rural area of Carson City, NV.



Population and employment centers are clustered around the urbanized communities highlighted on Figure 1. Other nearby areas with significant populations include the Carson Valley, NV (25 miles), Reno, NV (37 miles), and Truckee, CA (15 miles).

Most of the area can be characterized as rolling to mountainous terrain with limited areas of level terrain along the north and south shores of the Lake. Approximately 85% of land in the Basin is publicly owned and managed by the US Forest Service and other state agencies.



Figure 1: Study Area

Agency Roles and Responsibilities

Implementation of the BPP is a multi-agency effort, and the BPP fulfills multiple agency requirements. As a TMPO document, the BPP is incorporated by reference into the TMPO Regional Transportation Plan, *Mobility 2030*, and meets federal requirements for bicycle and pedestrian planning. The BPP is also part of the TRPA Regional Plan. Projects listed in the BPP are eligible for federal, state, and local grants. To apply for these grants, in most cases local jurisdictions will need to formally adopt the BPP.

The primary responsibility for construction and maintenance of the bicycle and pedestrian network lies with local jurisdictions, including counties, the City of South Lake Tahoe, public utility districts, state transportation agencies, regional transportation districts and public lands agencies. Private developers also play an important role in implementation of the network by constructing and maintaining segments that cross their property. The Goals and Policies (page 60) and Prioritized Project List (page 77) are intended to assist and guide in project implementation.

The TRPA's primary implementation role is in carrying out the Goals and Policies, including writing supportive code. The TRPA will have an active role in the implementation of certain policies, such as working with project developers to accommodate bicyclists and pedestrians. Other policies direct the TRPA to collaborate with local jurisdictions and agencies, for instance in identifying and obtaining funding for projects. Finally, there are many instances where the TRPA will have an advisory role,



Photo: Tara Pielaet

by encouraging local agencies to increase walkability and bikeability through better signage, increased maintenance, or public outreach.

The BPP may be updated annually if there are sufficient technical changes.

CITIZEN AND COMMUNITY INPUT

The TRPA/TMPO held multiple meetings to solicit input on the BPP update. At three preliminary meetings, local planners, advocates and agency staff identified additions to the BPP that would strengthen their ability to provide for biking and walking needs. Staff also facilitated open houses with the public to review draft Goals and Policies, proposed project lists, and prioritization criteria.

Jurisdictions and stakeholders suggested the following additions to the BPP:

- Prioritize projects Region-wide so that Basin agencies can work together to construct projects that complement the existing network.
- Increase the focus on maintenance of existing facilities.
- Highlight the benefits of biking and walking to the environment, economy, and public health.
- Improve the TRPA's ability to require concurrent construction of bicycle and pedestrian facilities with new development, roadway and other capital projects.
- Provide consistent design guidance, particularly where there is flexibility in national or state standards.
- Update regularly the proposed project list and the status of high-priority projects.

The public indicated that bicycle and pedestrian planning should be prioritized as follows:

- 1. Path and lane construction and connectivity
- 2. Path, lane and sidewalk maintenance
- 3. Safety and education
- 4. Programs and events

They also indicated the following prioritization for project construction:

- 1. Fixes gap in existing network
- 2. Destination connectivity
- 3. Safety
- 4. Multi-modal connectivity
- 5. Predicted use
- 6. Environmental Impact
- 7. Cost/Benefit
- 8. Funding availability

The TRPA/TMPO meeting dates and locations were as follows:

- Jurisdiction and Stakeholder Meeting, Tahoe City, CA, October 2005
- Jurisdiction Meeting, Incline Village, NV, November 2008
- Lake Tahoe Bicycle Coalition (LTBC) Meeting, Stateline, NV, February 2009
- South Shore Public Open House, South Lake Tahoe, CA, October 2009
- North Shore Public Open House, Tahoe City, CA, October 2009
- Jurisdiction and Stakeholder Meeting, Stateline, NV, February 2010

In addition, TRPA/TMPO staff attended the meetings of multiple local groups to request input on the BPP. The list of contacts and detailed input from the public and the local agencies are presented in Appendix H.



CONSISTENCY WITH OTHER PLANS

In order to ensure consistency with other planning efforts, a large number of documents were reviewed and incorporated into the BPP. A complete list is included in Appendix L, Consistency Review. Several of particular note are summarized here.

The *Tahoe Regional Planning Compact* states that the goal of transportation planning shall be:

a) To reduce dependency on the automobile by making more effective use of existing transportation modes and of public transit to move people and goods within the region

b) To reduce to the extent feasible air pollution which is caused by motor vehicles

In addition, Article I(b) of the Compact established TRPA's responsibility to set environmental threshold carrying capacities. The environmental thresholds were adopted in 1982, by TRPA Resolution 82-11. The thresholds cover various environmental components of the Tahoe Region, including air and water quality standards that are linked to transportation.

The **TRPA** and the **TMPO Regional Trans**portation Plan, Mobility 2030 contain gen-

eral transportation goals and policies, many of which relate to biking and walking. The goals and policies of *Mobility 2030* serve as the basis for the goals and policies of the BPP. The Goals, Policies, and Actions section of the BPP is also consistent with the Goals and Policies of the Regional Plan. *Lake Tahoe Community Plans* are part of the TRPA Regional Plan and outline bicycle and pedestrian policies and projects for specific neighborhoods in the Tahoe Region.

The California Bicycle Transportation Act

(*BTA*). As California's Department of Transportation, Caltrans is the agency responsible for implementing bicycle and pedestrian facilities. Caltrans funds local facilities through its Bicycle Transportation Account (BTA). The BTA requires applicants to have adopted or updated a bicycle plan within the past five years. The adopted bicycle plan must comply with CA Streets and Highways Code Section 891.2, and include the eleven elements listed below. California cities and counties, with adoption of the BPP, will be eligible to receive BTA funding.

Elements for BTA eligibility:

- Estimated number of existing and future bicycle commuters;
- Land use and settlement patterns;
- Existing and proposed bikeways;
- Existing and proposed bicycle parking facilities;
- Existing and proposed multi-modal connections;
- Existing and proposed facilities for changing and storing clothes and equipment;
- Bicycle safety and education programs;
- Citizen and community participation;
- Consistency with transportation, air quality, and energy plans;
- Project descriptions and priority listings;
- Past expenditures and future financial needs.

California Highway Design Manual, Chapter 1000: Bikeway Planning and Design, Fifth Edi-

tion, California Department of Transportation (Caltrans), July 1, 1995 and the American Association of State Highway and Transportation Officials (AASHTO) Guides for the Development of Bicycle Facilities (1999) and Pedestrian Facilities (2004) identify specific design standards for bicycle and pedestrian accommodation, both off-street and on-street. They also provide classification systems for different types of bikeways (see page 15). Appendix A, Design and Maintenance Recommendations, is consistent with both Chapter 1000 and the AASHTO Guides.

The Nevada Department of Transportation (NDOT) plans for bicycling and walking in Nevada. NDOT's *Nevada Bicycle Transportation Plan (2005)*, recommends that local agencies adhere to the AASHTO bicycle facility design standards.

The Federal Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition and the California MUTCD, 2010 Edition define the standards used by road managers to install and maintain traffic control devices on all public streets, highways, bikeways, and private roads open to public traffic. The Federal MUTCD is published by the Federal Highway Administration (FHWA), and the California MUTCD is published by Caltrans. Caltrans must officially adopt into the California MUTCD any new standards from updates to the Federal MUTCD. The Federal MUTCD was updated in December 2009, and Caltrans has until January 15, 2012 to adopt the newest standards. Appendix A, Design and Maintenance Recommendations



is consistent with both the Federal MUTCD and the California MUTCD.

Finally, *Local Jurisdiction Plans and Local Agency Plans*, including general plans and transportation plans, contain project lists and policies that relate to bicycle and pedestrian planning in specific communities in the Basin. While most Basin jurisdictions refer to the BPP for their bicycle and pedestrian project lists, each has their own set of policies that relate to the promotion of bicycling and walking for transportation and recreation purposes. Some plans, such as the City of South Lake Tahoe General Plan or the North Lake Tahoe Resort Association Infrastructure and Transportation Integrated Work Plan include project lists or maps that have been incorporated into the BPP.

BIKEWAY CLASSIFICATIONS



Caltrans Chapter 1000 and the *AASHTO Guide for the Development of Bicycle Facilities (1999)* provide for three distinct types of bikeway classifications as generally described below and depicted in Figure 2 on the following page. The Class I, Class II, and Class III types are unique to California, while the State of Nevada classifies bicycle facilities as Shared-Use Path, Bicycle Lane, and Signed Shared Roadway (previously Bike Route).

Class I/Bike Route



Class II/Bike Route



Class III/Bike Route

For consistency with other regional documents and past practices, the BPP refers to facilities as follows:

- Class I/Shared-Use Path Provides a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross-flow from vehicles minimized.
- Class II/Bike Lane Provides a striped lane for one-way bicycle travel on a street or highway.
- Class III/Bike Route Provides for shared use with bicycle or motor vehicle traffic, typically on lower volume roadways.

Shared Use Path (Class I)

Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with crossflow minimized.





Bike Lane (Class II)

Provides a striped lane for one-way bike travel on a street or highway.





Signed Shared Roadway (Class III/Bike Route)



Figure 2. Bikeway Classifications

USER GROUPS

One of the major challenges of planning bicycle and pedestrian facilities at Lake Tahoe is providing for the needs of different user groups. The diverse population of visitors and residents at Lake Tahoe guarantees a wide variety of preferences for facility types, including bicycle lanes and shared use paths. Both must be provided in order to meet the TRPA and TMPO goals of improving mobility and reducing environmental impacts.

The following description of user groups is adapted from the SR-89 Cascade to Rubicon Bay Bikeway Study (2003). These descriptions are generalizations, and the average user may have characteristics of more than one group. Rollerbladers and skateboarders are not addressed explicitly but could fall into any of the categories described here. The BPP does not address mountain bikers, hikers, and equestrians, who generally use the unpaved trail system, managed by the U.S. Forest Service. More information on the unpaved trail system can be found on maps available through the Lake Tahoe Basin Management Unit and local outdoor retailers.



Casual Users

This group includes families with young children, tourists or others out for a recreational ride or stroll and seeking a relaxed trip with attractive scenery. Casual cyclists generally prefer riding off-street on shared-use paths. They are typically not comfortable riding in traffic, and will avoid riding on busy streets, riding on the sidewalk if necessary. Tourists, often on rental bicycles, may ride more slowly than others due to their interest in the scenery and lack of familiarity with local routes. Tourists are not as adept as local riders at navigating confusing routes or traffic situations, thus clear signage is helpful. Bike routes that extend through low-traffic residential streets are

generally acceptable for casual cyclists, even if not the most direct route between destinations.

Casual users may drive to a bike path, seeking designated parking areas or parking along the side of the road. Recreational destinations are important attractions for casual users.



Commuter and Utilitarian Cyclists

Commuters and utilitarian cyclists are those who use their bicycles to ride to work or school or to complete small errands such as shopping or visiting friends. They prefer on-road routes or separated shared-use paths, depending upon the age and ability of the rider. These cyclists are usually looking for direct routes between their neighborhoods and shopping and employment areas, although they may deviate a significant distance for a route that is perceived to be safer. Commuter and utilitarian cyclists can often access their destinations along neighborhood streets, and designation of cross-town bicycle routes is a low-cost way to quickly provide good access for many riders. A large portion of this group is made up of "choice" riders who will decide whether or not to ride based on the availability of safe routes. The average cycling trip to work is 2.13 miles (National Household Travel Survey (NHTS) (2001-2002)).



Commuter and Utilitarian Pedestrians

Similar to their cycling counterparts, commuting and utilitarian pedestrians (this includes wheelchair users) are those who walk to work or school or errands. This user group generally needs sidewalks and paths that are separated from traffic and cleared of snow in the winter. They may also be comfortable walking on quiet, neighborhood streets. Many pedestrians are accessing transit. Paved, cleared continuous paths leading from neighborhoods to transit stops are vital for encouraging transit use and for providing safety for passengers getting on and off buses. Pedestrian commuting and walking trips generally range from about 0.25 miles to 1.5 miles in length (NHTS).



Road Cyclists

Road cyclists are those who use bicycling for intensive recreational purposes or exercise. Roadways are the type of facility that best accommodates their desire for higher speeds, longer distances, and fewer conflicts with other recreational users. Typical trip distances for the road cyclist can range from 20 to over 100 miles. While the average road cyclist would likely prefer to ride on roads with little or no traffic, they are generally comfortable riding in traffic if necessary. To this end, a road cyclist will tend to ride in a manner similar to a motor vehicle (e.g. riding in the vehicle lane when approaching traffic signals or making left turns) and in those cases may be referred to as "vehicular cyclists." Many of the scenic roadways around and entering Lake Tahoe provide ideal terrain for road cyclists. Improvements such as widening, adding bicycle lanes, and placing "Share the Road" signs can enhance the experience and encourage more riders to visit Lake Tahoe.

How To Use This Plan

The BPP is a handbook for multiple stakeholders. Various users will find different sections useful. The following text clarifies terminology used throughout the document and highlights each section of the BPP.

Terminology

Much of the text in this Plan refers to the bicycle and pedestrian "network" or bicycle and pedestrian "facilities." For the purposes of this document the "network" includes shared-use paths, bicycle lanes, bike routes, wide shoulders, and sidewalks. "Facilities" includes the network as well as other support facilities such as bicycle storage racks, lockers, crossing treatments and street markings. Shared-use paths may be referred to as "paths" or "trails." For more details on terminology, see the Definitions and Acronyms section, page 90.

Section 2. Benefits of Bicycling and Walking

Useful to those wishing to make the case for biking and walking in Lake Tahoe, whether to support a project, event, or overall culture shift.

Section 3. Benchmarks and Progress

Highlights progress and accomplishments made since the 2003 plan and sets new benchmarks for the current BPP.

Section 4. Infrastructure and Programs

Describes existing bicycle and pedestrian facilities and programs, and highlights needed improvements to promote safe biking and walking.

OVERVIEW OF PLAN

Section 1: Introduction

Section 2: Benefits of Bicycling and Walking

Section 3: Benchmarks and Progress

Section 4: Infrastructure and Programs

Section 5: Analysis of Demand/ Bicycle Trail User Model

Section 6: Goals, Policies, and Actions

Section 7: Proposed Network

Section 8: Cost and Funding Analysis

Section 9: Implementation

Section 10: Useful Links

Definitions and Acronyms

References

Appendix A, Design and Maintenance Recommendations

Appendix B, Maps and Project Lists

Other Appendices

Section 5. Analysis of Demand/Bicycle Trail User Model

Estimates existing and future demand for the bicycle and pedestrian network using the Tahoe Bicycle Trail User Model. The model, developed specifically for the Lake Tahoe Region, will be used to help estimate the impacts of biking and walking Region-wide for the Regional Plan update. It can also be used to estimate biking and walking on individual path segments. Jurisdictions, departments of transportation, funders, and other long-term bicycle planners will find the model useful for estimating potential use of planned paths.

Section 6. Goals, Policies, and Actions

Sets the policy framework for decisions relating to biking and walking in the Lake Tahoe Region, incorporating the recommendations in the Infrastructure and Programs section. Local jurisdictions, departments of transportation, transit agencies, and TRPA environmental review staff will find Policies and Actions here that relate to their activities. This section also houses a Bicycle and Pedestrian Accommodation Policy (similar to "Complete Streets").

Section 7. Proposed Network

Includes the complete list and map of the bicycle and pedestrian network proposed in the Region, which includes recommendations made in the Infrastructure and Programs section. It also includes a shorter, prioritized list of projects.

Section 8. Cost and Funding Analysis

Includes a summary of costs and projected revenue sources for priority projects. This section also lists potential grant sources for construction of bicycle and pedestrian facilities, maintenance, and outreach.

Section 9. Implementation

Graphically depicts who is responsible for bicycle paths that are on the ground and how bicycle paths progress from planning to implementation in the Tahoe Region. It also depicts how projects are incorporated into the TMPO Regional Transportation Plan (*Mobility 2030*) and the Environmental Improvement Program (EIP). The multi-billion dollar EIP encompasses hundreds of projects designed to restore Lake Tahoe's clarity and environment. This section will be helpful for agencies who want to make sure that their projects are lined up for as much funding and support as possible.

Section 10. Useful Links

Highlights web links to other organizations and documents.

Definitions and Acronyms

Includes a list of definitions for transportation terms and acronyms.

References

Lists references cited throughout the BPP.

Appendix A: Design and Maintenance Recommendations

Identifies preferred designs for best accommodating bicyclists and pedestrians in roadway projects, new and existing development, and on bicycle facilities. This section will be especially useful to local jurisdictions, private developers building new commercial, multi-family, or tourist accommodation projects, and TRPA project review staff. All project implementers will want to refer to this section for consistency Regionwide, and to provide the amenities and features most commonly requested by the public that are approved in federal and state design manuals.

Appendix B: Maps and Project Lists

All maps and project lists are presented near the end of the document for easy reference and comparison.

Other BPP Appendices:

- C. Utility Providers
- D. Roadway Information for Nevada Facilities
- E. Funding Memo
- F. Bike Trail User Model
- G. Environmental Findings



Web Appendices: www.tahoempo.org

H. Comments on Draft BPP I. Maintenance Memo J. Crosswalk Memo K. Use Estimation L. Consistency Review This page left intentionally blank

SECTION 2: BENEFITS OF BICYCLING AND WALKING



Bicycling and walking can provide multiple benefits to Lake Tahoe communities, including reducing air pollution, meeting greenhouse gas reduction targets, improving the local economy, and improving public health. Beyond the tangible benefits, biking and walking are pleasurable, relaxing outdoor activities that residents and visitors to Lake Tahoe seek out and enjoy. Biking and walking are critical for meeting the TRPA Compact goals of attaining environmental thresholds and reducing dependency on the private automobile.

How do we quantify the benefits of bicycling and walking? How do we evaluate the benefits versus the costs of building facilities? To answer these questions at a general level, the TRPA/TMPO compiled data from Tahoe surveys and research from other areas. Major findings include:

- The built-out bicycle and pedestrian network is estimated to reduce Vehicle Miles Traveled (VMT), a TRPA air quality threshold indicator, by 8,500 miles on a peak summer day.
- Overnight and day visitors who visit Lake Tahoe primarily for cycling purposes are estimated to bring between \$6 and \$23 million in local direct expenditures annually to Lake Tahoe communities. This compares favorably to an average of \$3 million per year (over the last 10 years) spent on construction of the existing network.
- Neighborhood design, including the proximity of transportation systems, parks, and paths, is related to physical activity levels. Changing the built environment, such as introducing traffic calming, paths, and bicycle infrastructure increases levels of physical activity in the community.

The following pages describe in more detail the variety of benefits, as well as some of the costs associated with shared-use paths and bicycle and pedestrian-friendly communities.

ENVIRONMENTAL BENEFITS

Shared-use paths can have impacts on multiple environmental threshold areas, including air quality, water quality, soils, wildlife, and recreation. The overall impact appears to be either positive or neutral on each of these threshold areas.

Vehicle Miles Traveled (VMT) is a TRPA air quality threshold indicator. VMT is linked to emission of nitrogen oxides, particulate matter, hydrocarbons, and greenhouse gas. Shared-use paths can both reduce VMT (as people shift from their cars to biking and walking) and contribute to VMT (as some may elect to drive to a path as a recreation amenity). To quantify potential impacts, LSC Consultants, with assistance from Alta Planning and Design, developed a Tahoe Bicycle Trail User Model that accounts for both the vehicle trip generation and reduction attributable to bicycle facilities. Estimates from the model indicate that if the full network were constructed, biking and walking trips would reduce VMT by approximately 8,500 miles on a peak summer day. This translates into a reduction of approximately 1,400 metric tons per year of carbon dioxide, a key greenhouse gas (U.S. Environmental Protection Agency). Lake Tahoe paths with greater proximity to population centers and popular destinations have the greatest potential to reduce VMT. Scenic paths far from population centers with unlimited parking are less likely to reduce vehicle trips, and in some cases may increase them (TMPO).

The Lake Tahoe Total Maximum Daily Load (TMDL), a program of research dedicated to identifying the primary sources of **water quality** degradation in Lake Tahoe, did not find that shared-use paths have a significant positive or negative impact on water quality. While paths in sensitive areas can impact stream environment zones (SEZ), and must be mitigated to allow ecosystem function to continue, these paths are not associated with the same runoff impacts as roadways due to the lack of road sanding



or heavy vehicle use. While shared-use paths can reduce VMT and hence atmospheric deposition, the primary strategies of the TMDL are currently focused on treatment of roadway runoff, advanced vacuum sweeping techniques and application of alternative roadway abrasives. The strategies do not focus on construction of paths. Over time, shared-use paths and bicycle lanes may positively affect water quality by reducing the need for impervious surfaces such as additional vehicle lanes or parking spaces.

Shared-use paths have a positive impact on the TRPA **recreation** threshold. Paths often provide excellent non-auto access to Lake Tahoe's recreation destinations, in addition to serving as recreation attractions. Even though biking or walking on a path sometimes involves a car trip, biking or walking as a recreation activity is generally considered to impact environmental thresholds less than other recreation activities such as boating, jetskiing, driving around the Lake, or off-roading.

Paths can have adverse impacts on **wildlife** and **sensitive plant species**, and are not permitted in wildlife protection areas or buffer zones, unless proven mitigation measures are implemented.

ECONOMIC IMPACTS

Bicycle paths provide many economic benefits including increased property values, direct expenditures at local businesses, employment opportunities, and personal savings from reduced vehicle use. Bicycle paths can increase the draw of the Region, encouraging visitors to extend their stay and spend more money. Surveys show that Lake Tahoe bicycle paths and bicycling events, such as America's Most Beautiful Bike Ride (AMBBR), an event with over 3,500 registered riders, attract users with relatively high disposable income.

Specific survey findings from the Lake Tahoe Bicycle Coalition and the TRPA indicate:

 Over 52 percent of Lake Tahoe path users have annual income levels of over \$100,000, and 65 percent have a college degree or higher.

- Fifty-six percent of AMBBR survey respondents have incomes over \$100,000, and 75 percent have at least a college degree.
- Twenty-seven percent of AMBBR respondents spent more than \$2,500 on the purchase of their bicycle.

Many areas have conducted studies to understand the extent of **direct expenditures** related to bicycling on state and local economies. In 1999, the Maine Department of Transportation estimated that direct spending by bicycle tourists in Maine totaled \$36.3 million. The Colorado Department of Transportation found the total economic benefit from bicycling to the State of Colorado to exceed \$1 billion annually. The Mineral Wells to Weatherford Rail-Trail near Dallas, Texas, was estimated to generate local revenues of \$2 million annually in 1999 (Rails-to-Trails Conservancy).

Lake Tahoe visitor direct expenditures related to bicycle paths can be calculated from local data. Tahoe-specific studies show the average daily expenditure for visitors is approximately



\$124 per day (TMPO; Lake Tahoe Visitors Authority (LTVA); North Lake Tahoe Resort Association (NLTRA); TRPA/Tahoe Coalition of Recreation Providers (TCORP)). This is probably a high estimate, as it is not broken down by visitor activity while in the Region. For a low estimate, the research in Maine, which has many similar characteristics to Lake Tahoe, found an average daily expenditure of approximately \$30 for visitors who participated in partial day bicycle trips. Tahoe bike path surveys show that approximately 30 percent of path users come to Lake Tahoe primarily for cycling purposes, or approximately 188,800 people annually (TRPA/ TCORP; TMPO). Multiplying these by the estimated expenditure yields a low estimate of \$6 million per year and a high estimate of \$23 million per year directly related to bicycling and bicycle paths in Lake Tahoe.

Visitors are attracted to regions that offer a variety of activities, and the opportunity to bicycle or walk can play an important role in enticing visitors. A study conducted by the LTVA in 2008 stated that length of stay is "probably the most important factor to influence the economic impacts on the Tahoe Region..." Expanding bicycling and walking opportunities could encourage people to extend their stay. Approximately 13% of visitors surveyed in a North Carolina Northern Outer Banks study stated that their visit duration was longer by an average of three to four days due to the excellent bicycling opportunities (Lawrie).

Property value is another source of economic benefit to the Tahoe Region related to bicycle paths. Multiple studies show increases in property values based on proximity to a bicycle path or greenway. A 1998 study of property values along the Mountain Bay Trail in Brown County, Wisconsin showed that lots adjacent to the trail sold faster and for an average of 9 percent more than similar property not located next to the trail (Rails-to-Trails Conservancy). Several other studies also show a range of increases in property values and faster sales times for houses in proximity to trails and greenways (Los Angeles County Metropolitan Transportation Authority).

There are **other economic benefits** of bicycling and walking that are not so easily quantified, such as job creation and savings from fuel consumption, car payments, car maintenance, and car storage. Savings from these sources can free up discretionary income and allow both residents and visitors to spend more in Lake Tahoe communities.



Bicycle Dollars Spent Annually in Lake Tahoe

Estimated direct expenditures range between \$6 and \$23 million per year directly related to bicycling and bicycle paths in Lake Tahoe. Source: TMPO

HEALTH IMPACTS

In recent years, public health professionals and urban planners have become increasingly aware that the impacts of motor vehicles on public health extend far beyond the negative effects of air pollution that include asthma and other respiratory diseases. Reliance on the automobile has led to lack of physical activity, which in turn has been linked with cardiovascular disease, thromboembolic stroke, hypertension, type 2 diabetes, and osteoporosis (Haskell). During the past 20 years there has been a dramatic increase in obesity in California and Nevada as well as the United States as a whole. In 2008, California's obesity rate was approximately 22 percent, compared to less than 10 percent in 1990. Nevada's obesity rate was approximately 27 percent in 2008 compared to approximately 17 percent in 1999 (1990 data was not available for Nevada) (Centers for Disease Control and Prevention (CDC)).

The Centers for Disease Control/American College of Sports Medicine recommended in 2007 that all healthy adults aged 18 to 65 years need moderate-intensity physical activity at least three days each week (CDC). Community design, including the provision of bicycle paths, influences the ability of local residents to attain these levels of exercise through their daily activities, such as commuting to work or school, or taking a recreational walk.

In addition to individual health benefits, physical activity provides fiscal savings by reducing health care costs and lost days of work.



- Annual per capita health cost savings from physical activity have been found to vary between \$19 and \$1,175, with a median value of \$128.
- Multiplying the \$128 median value of annual per capita health cost savings by the population of Lake Tahoe communities yields over \$7 million of health care cost savings annually.

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SECTION 3: BENCHMARKS AND PROGRESS



The 2003 Bicycle and Pedestrian Master Plan was the launching point for major improvements to the bicycle and pedestrian network, as well as the catalyst for strengthening policy language. The 2003 Plan also set several ambitious benchmarks. This section charts the Region's progress toward those benchmarks and describes new strategies for meeting bicycle and pedestrian goals.

New Facilities

The 2003 plan envisioned 60 additional miles of bicycle and pedestrian facilities by 2008, and 174 additional miles of bicycle and pedestrian facilities by 2023. As a measure of success, between 2003 and 2010 approximately 13 miles of the proposed network were built (Table 1). In addition, another 19 miles, mostly of bicycle lanes, are currently in construction or scheduled to be within the year, bringing the total to 31 miles. (See the "status" column in Table 18, Proposed Bicycle and Pedestrian Project List, Appendix B.) These miles of bikeway fill important gaps in the network.

New Policies

Since 2003, several new policies have been implemented at TRPA to help facilitate concurrent construction of facilities in new and re-development and roadway projects. In the past, although projects were listed in the Bicycle and Pedestrian Plan, they



were sometimes overlooked by developers and project reviewers. While many new projects did include the proposed bicycle and pedestrian components, such as the Sierra Shores development in South Lake Tahoe, and the Caltrans water quality improvements in the North Shore, a few projects invested significant capital into improvements without providing for the bicycle facilities called out in the BPP.

| Facility Name | Responsible Agency | Miles |
|---|--------------------------|-------|
| Sawmill 1A Shared-Use Path (2007) | El Dorado County | 1.2 |
| Sawmill 1B Shared-Use Path (2008) | El Dorado County | 0.3 |
| 15th Street Bike Path and Bridge (2003) | City of South Lake Tahoe | 0.3 |
| 15th Street Bike Lanes (2008) | City of South Lake Tahoe | 0.3 |
| Lyons Avenue (2006) | City of South Lake Tahoe | 0.3 |
| Ski Run Blvd Shared-Use Path - 2004 | City of South Lake Tahoe | 1 |
| South Lake Tahoe Ballfields Shared-Use Path (2003) | City of South Lake Tahoe | 0.5 |
| (2007) | City of South Lake Tahoe | 0.3 |
| Lakeside Trail Shared-Use Path - Phases IB, IIA, IIB, III, IV (2004-2007) | TCPUD | 0.4 |
| SR 28 through Incline Sidewalk 2006 | Washoe County/IVGID | 2.1 |
| Country Club Sidewalk (Incline Village) | Washoe County/IVGID | 0.5 |
| Incline Way Sidewalk (Incline Village) | Washoe County/IVGID | 0.1 |
| Tanager Sidewalks (Incline Village) | Washoe County/IVGID | 0.2 |
| College Way Bike Lanes (Incline Village) | Washoe County/IVGID | 0.4 |
| Kings Beach to North Stateline Bike Lanes (2009) | Caltrans | 0.9 |
| SR 89 Emerald Bay Road Bicycle Route | Caltrans | 3.6 |
| USFS Tallac Historic Site Trail | USFS | 0.6 |
| Total | | 13 |

Table 1. Facilities constructed since adoption of 2003 Bicycle and Pedestrian Master Plan

To address this problem, TRPA staff incorporated a bicycle and pedestrian checklist into its project application process, and created an interactive, online map: http://gis.trpa.org:82/BIKEMAP. By visiting this site, project applicants can determine the proximity of their project to proposed and existing facilities and include them into their plans at the earliest stage. In addition, TRPA staff has held multiple meetings with Caltrans and NDOT planners, designers, and engineers to discuss the need for bicycle and pedestrian accommodation. Building on this, the 2010 BPP includes policy language on accommodation of bicyclists and pedestrians ("Complete Streets" language) that is anticipated to be adopted into the TRPA Code of Ordinances with the Regional Plan update. On-going meetings with Caltrans and NDOT are also called for as part of this BPP.

Notable accomplishments in the period from 2003 to 2010 include:

- Completion of the first phases of the Sawmill Bike Path in Meyers, which will eventually connect the existing Pat Lowe Memorial Trail to the South Tahoe "Y"
- Over three miles of new sidewalk in the Incline Village Commercial Area
- New bicycle lanes in the Incline Village and Kings Beach areas
- Shared-use paths on both sides of Ski Run Boulevard in South Lake Tahoe
- Missing links on the Lakeside Bike Trail in Tahoe City
- City of South Lake Tahoe allocation of \$25,000 towards community bicycle racks

- Completion of the 15th Street Bike Trail in the City of South Lake Tahoe
- Sixty thousand copies of the Lake Tahoe Bicycle Trail Map distributed
- Bicycle and pedestrian checklists in TRPA project applications, plus on-line, interactive map of proposed bicycle and pedestrian network
- Recognition of the City of South Lake Tahoe as a bronze-level League of American Bicyclists (LAB) Bicycle-Friendly Community 2006, 2008
- Recognition of North Lake Tahoe-Truckee Resort Triangle with "Honorable Mention" by LAB Bicycle Friendly Community Program.

Cascade to Rubicon Bay Bikeway Study

Another important plan published concurrently with the 2003 Bicycle and Pedestrian Master Plan is the Caltrans State Route 89—Cascade to Rubicon Bay Bikeway Study. This plan researched several ways to improve bicycle access along the severely constrained section of roadway around Emerald Bay.

There were three major recommendations from this study:

- Widen the highway from 2 to 4 feet where feasible. Divert riders onto a combination of on-street neighborhood routes and new Class I/ Shared-Use Paths where topography allows.
- Facilitate a bicycle ferry from Camp Richardson to Meek's Bay.
- Expand existing transit to better serve bicyclists around the Emerald Bay Area.

Improvements to transit have occurred around the Emerald Bay Area, implementing some of the goals of the SR-89 study. During the summer, there is now hourly service from both Tahoe City and South Lake Tahoe to Emerald Bay by trolley with bicycle racks.

While this section of roadway remains one of the most difficult sections of the round-the-lake bikeway to complete, feasible improvements have been identified and are included in the BPP. Some lower cost improvements, such as routing bicyclists through the Rubicon neighborhood on a Class III/Bike Route could happen in a short timeframe.



Improvements to transit have occurred around the Emerald Bay area.

BENCHMARKS AND MONITORING

Setting benchmarks and monitoring progress helps track the effectiveness of plans, projects, and programs. The TRPA runs a robust monitoring program to track progress toward the benchmarks listed below.

In 1999, the Federal Highway Administration (FHWA) and the National Highway Traffic Safety Administration established two goals pertaining to bicyclists and pedestrians: 1) to improve safety and 2) to increase use by the year 2022. Specifically, the national goals were to reduce the number of bicycle and pedestrian injuries and fatalities by 10 percent and increase the number of trips made by biking and walking to 15 percent. The goals of the 2010 BPP mirror the broader performance measures of the Federal Highway Administration, while establishing specific benchmarks attainable for a 20-year horizon.

In order to track progress, the 2010 BPP sets the following performance benchmarks:

| Benchmark 1: | Double the percentage of commuters who bicycle or walk to work from 3.8 percent of all employed residents to 7.6 percent of all employed residents per U.S. Census data by 2023. |
|--------------|--|
| Benchmark 2: | Increase the percentage of residents and visitors who bicycle and walk to commercial and recreation destinations from 16 to 25 percent in the summer, and from 13 to 20 percent in the winter by 2023. By 2030, increase to 30 percent in the summer and 25 percent in the winter. |
| Benchmark 3: | Implement 20 percent (approximately 45 miles) of all recommended facility improvements within five years (by 2015). |
| Benchmark 4: | Implement 40 percent (approximately 90 miles) of all recommended facility improvements within ten years (by 2020). |
| Benchmark 5: | Decrease the bicycle and pedestrian accident rate. |

Section 6, Goals, Policies, and Actions on page 60 is the strategy to achieve these benchmarks. The actions specified in Section 6 are the new, near-term activities that will move the Region closer to meeting the benchmarks set here.

The first two benchmarks address the percentage of trips made by biking and walking, which is a good measure of air quality improvement and the success of the BPP. Almost all of the goals, policies, and actions in Section 6 relate to achieving these two benchmarks. Benchmark 1 is measured through U.S. Census journey-to-work data, and will be evaluated when the next U.S. Census is available, anticipated near the end of 2010. Although "journey-to-work" data only

captures resident trip patterns, it is an extremely useful measurement because it is easily comparable to other regions. Current journey-to-work data are shown in Table 9 on page 54.

Since visitor travel is not captured by Census journey-to-work data, TRPA developed performance measures and associated monitoring protocols that capture the biking and walking rates of both residents and visitors. These studies focused on travel to commercial and recreation destinations. In the 2006/2008 studies, the percentage of people who bicycled to commercial or recreation areas in the summertime was 4 percent, and the percentage who walked was 12 percent. In the winter, the percentage who bicycled was 1 percent and the percentage who walked was 12 percent. These surveys are conducted every four years. Benchmark 2 is related to these performance measures.

Completion of the pedestrian and bicycle network and improvement of pedestrian crossings, as called for in Goal 1 are crucial to achieving the non-auto mode shares specified in Benchmarks 1 and 2. Benchmarks 3 and 4 are direct measures of on-theground network completion.



Biking and Walking Rate Performance Benchmark

Benchmark 5 relates to pedestrian and bicyclist safety. As with the goal of increasing the mileage of on-the-ground facilities, reducing the number of pedestrian and bicycle-related collisions also contributes to shifting more people out of their cars. This benchmark should be tracked by comparing the rate of pedestrian and bicycle-related collisions in relation to overall collisions. The rate of collisions was not tracked in past documents, so a comparison cannot be made at this time, however the current rate is about 1%. Goals 1 and 2 and associated policies help achieve Benchmark 5.

BPP GOALS

GOAL 1:

A complete bicycle and pedestrian network that provides convenient access to basin destinations and destinations outside the Basin.

GOAL 2:

To raise awareness of the bicycle and pedestrian network and encourage safe and increased bicycling and walking

GOAL 3:

To provide environmental, enconomic, and social benefits to the Region through increased bicycling and walking.

SECTION 4: INFRASTRUCTURE AND PROGRAMS



This section describes the status of bicycle and pedestrian facilities in the Region as of 2010, as well as support facilities and programs. The discussion focuses on connectivity and gaps in the network, safety issues, and multi-modal connections, and includes recommendations for future improvements. Existing facilities include shared-use paths, bicycle lanes, bicycle routes, and sidewalks. Table 2 (page 36) breaks out the mileage of existing bicycle and pedestrian facilities by jurisdiction. See Appendix B, Figure 8 for a map displaying the existing bicycle and pedestrian facilities within the Lake Tahoe Basin and Table 17, Existing Bicycle and Pedestrian Network, for a list of these projects.

BICYCLING

The infrastructure that supports bicycling in the Region includes shared-use paths, bicycle lanes and routes, and end-of-trip support facilities such as bicycle parking and showers.

Shared-Use Paths

Existing shared-use paths are concentrated in the north shore communities of Tahoe City, CA and Incline Village, NV and the south shore community of South Lake Tahoe, CA. Over 13 miles of nearly continuous Class I/Shared-Use Path stretches from the mid-point of Tahoe's west shore at Sugar Pine Point State Park through Tahoe City and north to Squaw Valley. There are other segments of 1 to 5 mile-long paths scattered throughout Stateline, NV, Meyers, CA, El Dorado County, CA, and Kings Beach, CA.

Major gaps in the network are along the east shore of Lake Tahoe, around Emerald Bay and Homewood on the west shore, between Tahoe City and Kings Beach, Crystal Bay and Incline Village, and Meyers, CA and South Lake Tahoe, including connections to both the South Tahoe "Y" and Stateline. There are also localized gaps. There are two gaps in South Lake Tahoe's otherwise continuous network. One is a section along the Lake from El Dorado



Beach to Ski Run Blvd, and the other is a section along Harrison Avenue, a short street near U.S. Highway 50 fronting several blocks of businesses. (See Figure 8, Existing Bicycle and Pedestrian Network Map in Appendix B.)

There are also missing links in the Lakeside Trail in Tahoe City, and at Homewood, on the west shore. These gaps in otherwise continuous paths are the highest priority for completion. Next in priority are extensions to existing paths that begin to complete the round-the-lake network, such as Phase 1 of the Nevada Stateline-to-Stateline Bikeway (see Chapter 7, Proposed Network, page 74)

Bicycle Lanes and Bicycle Routes

South Lake Tahoe, El Dorado County and Incline Village are the communities with significant bicycle lanes and routes. South Lake Tahoe and Meyers have bicycle lanes on six of the eleven major connectors or arterials. All of these bicycle lanes feed directly into cross-town corridors by connecting to either shared-use paths or signed, stenciled bicycle routes. An 8-mile, continuous bicycle lane is located along Pioneer Trail in the South Shore. Three and a half miles of continuous bicycle lane along State Route 28 connect Incline Village from end to end. Two bicycle lane and shoulder projects, on State Route 28 from Dollar Hill to Kings Beach in the North Shore, and on State Route 89 from Meyers to the El Dorado/Alpine County line in the South Shore are under construction at the time of printing of the BPP.

South Lake Tahoe uses bicycle routes as important connections in cross-town corridors. With the exception of the two significant gaps mentioned on the previous page, a combined system of shared-use paths and bicycle routes connects the South Tahoe "Y" to Stateline on both the east and west sides of U.S. Highway 50. South Lake Tahoe has recently undertaken an effort to add a "sharrow" stencil to its on-street routes. The on-street route system could be further enhanced by adding directional signage to U.S. Highway 50 alerting riders that an alternative route exists.

Bicycle Parking and Showers

End-of-trip infrastructure such as bicycle racks, bicycle lockers and showers also promote bicy-



South Lake Tahoe "sharrow"

cling by increasing its security and convenience. In the Lake Tahoe Region, almost all schools, libraries, transit stations, and recreation centers have some form of bicycle rack. Some government buildings, office buildings, retail centers, public spaces and parks have designated bicycle parking. "Bike to Work, School, Play" riders who participated in an end-of-event survey in 2009 reported that 22 out of the 26 different work locations represented had adequate bicycle parking for employees. Thirteen out of the 26 employers had showers available for employees.

The City of South Lake Tahoe, working in collaboration with the Lake Tahoe Bicycle Coalition initiated a new program in 2010 distributing bicycle racks to public centers and businesses.

| Jurisdiction | Class I Path | Class II Bike Lane (1) | Class III Bike Route | Sidewalk | Total |
|--|----------------------------------|---|-------------------------------------|----------|-------|
| El Dorado County, CA | 9 | 7 | 4 | 0 | 20 |
| City of South Lake Tahoe | 8 | 8 | 9 | 4 | 29 |
| Placer County, CA | 14 | 2 | 2 | 1 | 19 |
| Douglas County, NV | 2 | 0.1 | 1 | 1 | 5 |
| Washoe County, NV | 10 | 4 | 7 | 6 | 26 |
| Carson City, NV | 0 | 0 | 0 | 0 | 0 |
| Total | 43 | 21 | 22 | 12 | 99 |
| Note 1: Miles of roadway with Bike Lan | es. For maintenance purposes, th | is figure should be doubled since bicycle | lanes are on both sides of the road | lway. | |

| Table 2. | Miles | of existing | j bicycle and | pedestrian | facilities |
|----------|-------|-------------|---------------|------------|------------|
|----------|-------|-------------|---------------|------------|------------|
All commercial, tourist, recreation and residential centers should have short-term bicycle parking, such as inverted "U" racks. Bicycle lockers should be considered in locations where bicyclists may need to leave their bicycle for several hours, such as at a transit center. Until recently, TRPA only required the installation of secure bicycle parking for employers with more than 100 employees (TRPA Code of Ordinances, Chapter 97). However, bicycle storage is now required as part of all new developments. Project applicants and TRPA project review staff should refer to Appendix A, Design and Maintenance Recommendations for specifics on amount and type of bicycle storage required.

WALKING

A safe and comfortable walking environment is vital to the success of tourist-centered communities. At some point, virtually all travelers become pedestrians, walking from their parked car to a storefront, stepping off a bus, or strolling from their accommodations to the Lake. Planning for pedestrian safety and convenience requires integrating pedestrian needs into street design and building design from the earliest stages. In addition to sidewalks and paths, slow vehicle speeds, convenient and safe crossings, and mixed land-uses also support walking.

Sidewalks

Pedestrians use both sidewalks and shared-use paths for walking. The provision and maintenance of sidewalks is not consistent among the communities in Lake Tahoe. Both Tahoe City and Incline Village have emphasized construction and maintenance of their sidewalk network in providing an attractive frontage and access to businesses and recreation areas along major travel routes. Significant gaps in the sidewalk network are most noticeable in South Lake



Inverted "U" bicycle parking at Heavenly Village in South Lake Tahoe.

Tahoe and Kings Beach. Both of these communities have high volumes of pedestrians, many of whom access transit along the main highway. Most sidewalks along U.S. Highway 50 in South Lake Tahoe are planned to be constructed by 2012 through a Caltrans water quality project. The sidewalks in Kings Beach are planned to be constructed through an upcoming commercial core improvement project.

Crossing Protection

There are few marked crossings at unsignalized crossing points in the Lake Tahoe Region, particularly along the state highways. In recent years, the trend has been removal of marked crosswalks by roadway agencies due to concerns that traditional crosswalk markings do not afford enough protection for pedestrians on busy roadways. Exceptions include a flashing beacon on the West Shore Trail at the crossing of Sequoia Avenue and State Route 89 in Sunnyside, and crosswalks in the downtown areas of Tahoe City, Kings Beach, North Stateline and other limited locations. Crosswalks have been maintained on some residential streets and lower volume streets, particularly near schools.

While the current high traffic volumes and speeds on most major roadways in the Lake Tahoe Region may mean that traditional crosswalks (two painted lines) are not appropriate, removing crosswalks altogether discourages walking and biking and does not meet the goals of pedestrian and bicycle-friendly communities. There are a variety of crossing treatments that can be considered during project design to enhance safety and walkability for pedestrians, depending on vehicle speeds and volumes.

Advance stop bars are placed 30 to 50 feet in front of the crosswalk and are generally accompanied by a "yield here to pedestrians" sign. The main purpose of advance stop bars is to provide a better line of sight between the pedestrian and an approaching driver whose view may be partially blocked by another car that has already stopped at the crosswalk.

In-roadway warning signs are placed in the roadway, between travel lanes to alert drivers to the presence of a crosswalk. The purpose of these signs is to remind drivers of the state law to yield or stop for pedestrians in the crosswalk. These signs have been used successfully in Tahoe City during the summer.

Finally, flash-

ing beacons

may be used to

alert drivers to

crossing pedestrians. Some

flashing beacons

are designed

to flash only

when activated

by a pedestrian, while others

flash constantly.

Pedestrian-

ing beacons have

activated flash-



In-roadway warning sign.

a much higher vehicle compliance rate than constantly-flashing beacons. The "Sequoia



The "HAWK" Pedestrian Crossing

Crossing" of SR 89 by the West Shore Trail south of Tahoe City is a good example of a flashing beacon activated by a pedestrian or cyclist.

HAWK (High-intensity activated crosswalk) beacons are an innovative new form of pedestrian signal, which have been used extensively in Tucson, Arizona. The HAWK signal displays a solid red phase to drivers while pedestrians see a "Walk" phase. The signal then changes to a flashing "Don't Walk" phase for pedestrians and a flashing red phase for vehicle traffic so that vehicles may proceed if the crosswalk is clear. Evaluations of HAWK beacons on both 4-lane and 6-lane roadways report a driver yielding rate exceeding 95 percent (Fitzpatrick). HAWK signals are approved for use in Nevada but not yet in California.

A detailed discussion of crossing treatments and some traffic calming measures appropriate for different locations in Lake Tahoe is included in Appendix A, Design and Maintenance Recommendations.

In addition to physical improvements, education can increase the effectiveness of existing crossings. Some communities have undertaken crosswalk enforcement operations in coordination with local police departments to educate drivers on pedestrians' right to cross the road. In Las Cruces, New Mexico, local police officers dressed as superheroes attempted to cross at marked crosswalks to draw attention to the need for vehicles to stop at crossswalks.

Street Design

Other treatments can be applied to streets and highways to increase walkability, particularly in urban centers or areas with high pedestrian volumes. In some cases, treatments may physically slow traffic, for instance with speed humps. In other cases, road design, including narrower roadways, street trees or pedestrian refuge islands naturally signals drivers to drive more slowly in order to safely navigate the roadway.

Pedestrian refuge islands can be installed in the middle of multi-lane roadways at intersections or mid-block locations. They reduce pedestrian exposure to motor vehicles, allow pedestrians to consider traffic coming from one direction at a time and provide a place for slower pedestrians to rest or wait. These island can also include paver stones or vegetation to aesthetically break up large expanses of asphalt.

Street trees and furniture can increase appeal for pedestrians as well as slowing vehicle speeds by effectively reducing driver sight-distance. Street trees and furniture also provide a buffer between vehicles and pedestrians by cutting down on noise and increasing the feeling of safety.

Road diets are becoming popular in locations where roadways have been designed much wider than is necessary for existing or anticipated traffic. Particularly on 4-lane roadways without a center turn-lane, where average daily traffic is less than 15,000 cars per day, there are opportunities for redesign. In such cases, incorporating a center turn-



Crosswalk enforcement operation in Las Cruces, New Mexico.



Street trees and furniture increase appeal.

lane, and converting width from an outside lane to wider sidewalks, pedestrian refuge islands, bicycle lanes, and other features increases safety and mobility for all users. Placer County is planning this type of re-design in the community of Kings Beach.

Land Use Design

Finally, land use design plays perhaps the most important role in creating walkable and bikeable communities. A mix of residential, retail and other commercial uses increases the population living within walking distance of their destinations. The opportunity to live and stay in downtown areas decreases the need for housing in outlying areas, and ultimately will be one of the greatest factors in reducing longdistance commuting by vehicle.

The preferred alternative proposed for the update of the 20-year TRPA Regional Plan envisions a shift of this type in the location and form of new and re-development. This alternative proposes walkable, mixed-use nodal centers, with incentives to shift existing development out of sensitive, outlying areas. A focus on "Complete Streets" and safe access for users of all modes of transportation will provide a means for people to travel safely to their destinations without the need to rely on an automobile.

REGIONAL AND MULTI-MODAL CONNECTIONS

Full connectivity between populated areas and major attractions, both inside and outside the Region, is important if the bicycle and pedestrian network is to adequately serve residents and visitors. Visitors who wish to enjoy Lake Tahoe by bicycle or foot may wish to arrive in the Region without their car. Once here, in order to travel between communities at the Lake, they require good connections via regional bikeways and transit. The extent of



existing regional and multi-modal connections is discussed below, and a map of major trip attractors, generators and transit connections is shown in Figure 9 (Major Trip Attractors and Generators, Appendix B).

Regional Connections

Because Lake Tahoe communities are relatively small, most of the existing bicycle and pedestrian network is focused on connecting communities to recreation areas and providing strong internal connections. Some regional bicycle travel, however, occurs between communities in the Lake Tahoe Region and areas outside the Region such as Truckee, CA, Reno, NV, Gardnerville/Minden, NV, and Carson City, NV. California State Routes (SR) 89 and 267 provide direct access to and from Truckee. There is a shared-use path along SR 89 from Tahoe City to Squaw Valley Ski Resort. Bicycle lanes or wide shoulders are planned for the near future along both of these roadways, and a bicycle path paralleling SR 267 will eventually connect Kings Beach to Northstar Resort and the Martis Valley. Placer County and the Town of Truckee have expressed interest in completing a shared-use path connecting Squaw Valley to the Truckee Legacy Trail Network, and are

also working with Caltrans on a bicycle and pedestrian tunnel in Truckee to improve connections between Tahoe City and Truckee.

U.S. Highway 50 and Nevada State Routes 207 and 431 provide connections to and from Carson City, Gardnerville/Minden, and Reno. State Route 431 is currently signed as a bicycle route. A possible future connection between Stateline, NV and the Gardnerville/Minden area could be made via an existing dirt trail along the old Pony Express trail in Douglas County to a planned paved, shared-use path on the Carson Valley side.

Bicyclists were observed along each of the routes listed above during summer field visits, with the highest concentration of bicyclists on the shared-use path along SR 89 between Truckee and Tahoe City.

Multi-Modal Connections

Multi-modal connections in the Region are important when barriers to continuous bicycle and pedestrian travel exist. In the Lake Tahoe Region, these barriers include topography, distance or lack of continuous bicycle and pedestrian facilities. Transit service is provided by several publicly-operated transit systems, tourist-oriented trolley services, and privately-operated shuttle systems and taxi services. On the South Shore, a consortium of public and private transit providers, including El Dorado County, the City of South Lake Tahoe, Douglas County, Heavenly Resort, and several casinos operate BlueGO, a coordinated transit system. Service on the north shore is operated by Placer County, with funding from Washoe County Regional Transportation Commission to serve the Nevada portion of the North Shore. This service is known as the Tahoe Area Regional Transit (TART) system.



In addition to fixed-route systems, BlueGO provides flex route and demand-response service to Douglas County and El Dorado County, including the City of South Lake Tahoe. Specific transit stops and service areas are displayed in Figure 9, Appendix B. All BlueGO and TART buses are equipped with bicycle racks.

Transit service to communities outside of the Region is relatively good, with service provided by BlueGO from the South Shore to Carson City and the Minden/Gardnerville area; South Tahoe Express between the South Shore and Reno, NV; North Lake Tahoe Express between North Shore, Truckee, and Reno; and by Amtrak to Sacramento and train connections to other major destinations throughout California. Both Amtrak and BlueGO provide carrying capacity for bicycles on these inter-regional connections.

SAFETY AND OUTREACH

Safety is a major concern for users of the bicycle and pedestrian network. People often cite their perceptions about safety as the reason they do not bicycle or walk more often. Given the potential for serious injuries involving accidents with motor vehicles, this concern is understood. In addition to the physical improvements described on the previous pages, such as enhanced crossing treatments and traffic calming, safety education for both children and adults is an important component of a comprehensive plan. Existing bicycle and pedestrian safety programs in the Lake Tahoe Region are summarized in Table 3 on the following page.

As indicated in Table 3, law enforcement agencies in the Region are actively involved with student education through bicycle rodeos or other events. These events are particularly useful in demonstrating how bicyclists and pedestrians are to use the roadway system safely.

Beyond safety education, outreach programs that encourage biking and walking are a vital part of Lake Tahoe's planning effort. Many individuals wish to ride or walk more often, but lack information on bicycle routes, basic bicycle maintenance, and ways to incorporate riding into their commute to work. Outreach and events put on



by local agencies and organizations can make bicycling and walking fun activities and can be useful ways to disseminate important tips.

Local agencies and advocacy groups have put significant effort into providing a well-publicized and popular "Bike to Work, School, and Play Challenge" each year, attracting over 700 participants in 2009, many of whom were students. Two schools in South Lake Tahoe have started bicycle clubs, and the South Lake Tahoe police, California Highway Patrol, and El Dorado County Sheriff's departments continue to hold their "Bicycle Rodeo" event for kids annually. In addition, the Lake Tahoe Bicycle Coalition distributes a popular Lake Tahoe Bike Trail Map.

Bike to Work, School, and Play Week attracted over 700 participants in 2009, many of whom were students.

| Agency | Contact Number | Programs Offered |
|---|-------------------|---|
| | | Bicycle Rodeos late May / early June |
| CHP - South Lake Tahoe Area | (530) 577-1001 | - Skills Instruction - Free Bicycle Inspection and Repair |
| | | - Helmet Program |
| | | Pedestrian Safety Education Program |
| CHP - North Tahoe Area | (530) 582-7570 | "When in Doubt Don't Step Out" |
| | | Works in conjunction with schools to conduct bike safety programs |
| Nevada Highway Patrol | (775) 684-4808 | No programs currently offered |
| Placer County Sheriff Kings Reach Area | (520) 581 6260 | No programe currently offered due to budget constraints |
| - Rings Beach Area | (550) 581-6565 | no programs currency offered due to budget constraints |
| Placer County Sheriff - Tahoe City Area | (530) 581-6300 | No programs currently offered |
| | | Annual Bike Derby at Rideout Community Center |
| Tahoe City Public Utility District | (530) 583-3796 | North Tahoe/Truckee Bicycle Map |
| El Dorado County Sheriff - South Lake Tahoe | (500) 570 0000 | Work in conjunction with CHP and Kiwanis to conduct bicvcle |
| Area | (530) 573-3000 | education programs |
| | | Annual Bicycle Rodeo (June) |
| Washoe County - Incline Village Constable's | (775) 832-4103 | - Skills Instruction |
| Оппсе | | - Free Heimet Program - Challenge Course |
| | (775) 240 0200 | |
| washoe County School District | (775) 348-0200 | Safe Routes to School Program |
| Douglas County Sheriff | (775) 586-7250 | No programs currently offered in Lake Tahoe |
| City/County of Carson City | (775) 887-2020 | No programs currently offered in Lake Tahoe |
| | (, | |
| South Lake Teheo Police Department | (520) 542 6100 | South Tahoe Middle School Police Activities League (PAL) Bike Club |
| South Lake Tange Police Department | (550) 542-6100 | Department to conduct bicycle rodeos |
| | | |
| Tahoe Truckee School District | (530) 541-2850 | No District program offered |
| | | Bicycle and Pedestrian Program |
| | | - Safe Routes to School Program |
| | | - Safety Education |
| | | Office of Traffic Safety -Ped/Bike education programs and grants |
| State of Nevada | (775) 888-RIDE | Lake Tahoe/Nevada State Park |
| | | -Mountain Bike Safety Patrol |
| | | Nevada Bicycle Advisory Board |
| | | -Education Outreach |
| | | -Bicycle/Pedestrian program and outreach |
| | | Bicycle and Pedestrian Programs |
| State of California | (916) 653-2750 | -Interactive videos to schools |
| | | -"From A to Z by Bike" book nand-outs |
| Lake Tahoe Community College | (530) 541-4660 | Mountain biking and road riding courses |
| | | No District program offered |
| Lake Takes Unified Cake - District | (520) 544 2050 | -PAL Bike Club at South Tahoe Middle School: Bike safety, bike |
| Lake Tanoe Unified School District | (530) 541-2850 | Babcat Outdoor Club at Rijou Community School: Rike skille & |
| | | safety, bike maintenance, bike rides |
| Douglas County School District | (775) 792 5124 | No District program offered |
| | (113)102-3134 | - Up to individual sites to coordinate programs |
| Tahoe Regional Planning Agency | www.tahoempo.org | Lake Tahoe Bike Challenge |
| | | Bike Week/Bike Month |
| Lake Tahoe Bicycle Coalition | www.tahoebike.org | Bike Film Fest |
| | | Bicycle Awards |
| | | Lake Lande Dike Hall Map |

Table 3. Bicycle and pedestrian safety and outreach program summary

MAINTENANCE

Local agencies in the Tahoe Region have made a significant investment in the construction of pedestrian and bicycle facilities, providing valuable recreational and transportation benefits to local residents and visitors. The TRPA/TMPO has found through public input and discussions with local agencies that Tahoe area shared-use paths and sidewalks are sometimes not maintained at a high enough standard to meet user needs. Major maintenance issues in Lake Tahoe include lack of consistent snow removal from sidewalks and paths during the winter months, forcing users into the street, and insufficient long-term sidewalk and bicycle facility maintenance, such as crack repair and re-striping.

Basin agencies have successfully addressed facility maintenance in some locations, using a variety of strategies. The following highlights the obstacles agencies face, the costs of maintenance, and ideas from Lake Tahoe and other areas that could be considered when developing long-term maintenance strategies.

Obstacles to Proper Maintenance

Based on input from Lake Tahoe public agencies, there are three main obstacles to success-

ful shared-use path and sidewalk maintenance programs in the Lake Tahoe Region.

- Lack of dedicated funding
- Lack of proper equipment
- Confusion or conflicts regarding responsibilities

The first and most common issue is a lack of dedicated funding. Grants are typically not available for maintenance activities, but are available for construction of new facilities. Second, proper equipment or appropriately trained personnel may not be available. For example, shared-use paths require narrow snow-blowers for snow removal, but jurisdictions may not own these machines, or the machines may not be capable of removing the heavily-packed snow pushed on to paths by snow-plows. Third, there may be confusion or conflicts between different parties regarding whose responsibility it is to maintain sidewalks and shared-use paths. In most cases in Lake Tahoe, where there is no business improvement district or other type of assessment district, maintenance of sidewalks falls to the private property owner. Jurisdictions are responsible for enforcing this private maintenance role, but they may lack the funding or political will to effectively do so.



Maintenance Costs

Costs for maintaining paths vary widely, based on the level of maintenance provided by an agency. Annual per-mile costs of path maintenance range from a low of \$1,050 for basic maintenance of a path in the City of South Lake Tahoe to a high of \$14,000 per mile for landscaping, snow removal and path maintenance in the Ski Run Business Improvement District. Table 4 summarizes the costs for maintaining facilities in selected areas of the Tahoe Region, based on conversations with members of each agency.

| Agency | Costs | Notes |
|--|--|---|
| City of South Lake Tahoe | \$1,050 per mile per year for basic maintenance of Class I paths | No snow removal. |
| Ski Run BID (City of South Lake Tahoe) | \$14,000 per mile per year to maintain landscaping and Class I path \$4,500 per mile for slurry seal | Includes snow removal. |
| Tahoe City Public Utility District | \$11,000 per mile per year to maintain, repair, restripe and plow (once) paths | Annually, \$5,000 to \$6,000 is spent for snow removal and \$25,000 to \$30,000 for repairing cracks on the entire path system |
| North Tahoe Public Utility District | \$8,000 per mile per year to maintain trail and blow snow | |

Table 4: Costs of maintaining paths and sidewalks in the Tahoe Region (2008)

Strategies for Improving Maintenance

Many formulas can work to improve sidewalk and path maintenance. Successful models in Lake Tahoe and other regions seek to minimize costs overall, and to plan in a source of maintenance funding before paths are constructed. Maintenance funding should cover short and long-term costs, including snow removal, crack repair, sweeping and striping, and maintenance of adjacent infiltration devices.

MINIMIZE COSTS BY CONSOLIDATING MAINTENANCE RESPONSIBILITIES.

Private property owners and jurisdictions can reduce expenditures by entering into cooperative maintenance agreements. Cooperative maintenance agreements allow for a single entity, such as the local public agency or a private contractor, to carry out snow removal and other maintenance. This can reduce the cost and time associated with individual property owners setting up separate maintenance contracts or doing the work themselves. The agreements also ensure that an entity with adequate staff, equipment and experience carries out the work. The Ski Run Business Improvement District in South Lake Tahoe is an example of this. Another way to consolidate maintenance responsibility is for private property owners to have the option to transfer responsibility to the local public agency. The City of Madison, WI, incentivizes this through a program whereby private property owners are charged only 50 percent of the cost to do repairs and snow removal if they allow the City to conduct the work. In other communities, such as Mammoth Lakes, CA, Davis, CA and Vail, CO, the Public Works Department is responsible for maintaining sidewalks and paths. Jurisdictions can also pool funds to cost-share special equipment purchases.

PURSUE INNOVATIVE FUNDING SOURCES FOR ON-GOING AND LONG-TERM MAINTENANCE THAT IS LINKED TO THE MILEAGE OF THE FACILITIES.

Maintenance of paths and sidewalks is one of many community needs that must compete for scarce funds. Dedicated funding sources for maintenance can help address this. South Shore's Measure S--a property tax assessment passed in 2000 for construction and maintenance of recreation facilities--set aside \$5,000 per year per mile for maintenance of 25 miles of planned shared-use paths in the City of South Lake Tahoe and El Dorado County. The two jurisdictions are able to use this funding as a local match when pursuing grant funds for path construction. Vail, CO, applies a 1 percent Real Estate Transfer tax to all real estate transactions, a portion of which is allocated to path maintenance. When establishing a funding mechanism to provide for sidewalk and path maintenance, it should be structured to reflect the average lifespan of sidewalks and paths, and allow for increases in inflation and the mileage of the facilities.

Permitting and granting agencies such as the TRPA, the CTC, and the North Lake Tahoe Resort Association (NLTRA), can assist this process by being diligent in requiring projects to show adequate maintenance funding as part of grant and permit applications and by assisting implementers to identify additional sources of maintenance funding. TRPA could also consider incentivizing maintenance of facilities by tying maintenance to its annual building allocation system.

For additional details on existing maintenance challenges and recommendations, please see Appendix I (Maintenance Memo, www.tahoempo.org).

COLLISION ANALYSIS

Perceptions of safety directly influence the choice to bike or walk. Poor sight distances, crime or threats from motor vehicles may cause people to switch away from biking or walking. Overall, both accident and crime rates are low in Lake Tahoe compared to other areas. However, hazards to bicyclists and pedestrians do exist. Examples include:

 Areas where sidewalks are discontinuous or uncleared of snow, forcing pedestrians and wheelchair users into the street



- Where sight distances for crossing are poor, due to parked cars, signs, or roadway curvature
- Areas where shared-use paths or sidewalks cross multiple driveways and sidestreets

The BPP analyzes accident data and provides information on safety improvements.

Accident Data

LSC Transportation Consultants conducted an extensive analysis on pedestrian and bicycle collisions with vehicles between 2003 to 2007. A few improvements have been made since 2007, however the data from this period is still considered current. Table 5 shows the total accidents by regional jurisdiction. Table 6 on the following page shows accident rates at specific Basin locations. The data only includes accidents involving a motor vehicle.

| Jurisdiction | Total Accidents (1) | Pedestrian | Bicycle | Injury (2) | Fatal |
|------------------------------|---------------------|------------|---------|------------|-------|
| El Dorado County, CA | 19 | 7 | 12 | 18 | 1 |
| City of South Lake Tahoe, CA | 155 | 67 | 88 | 157 | 3 |
| Placer County, CA | 77 | 33 | 44 | 72 | 7 |
| Carson City, NV | 0 | 0 | 0 | 0 | 0 |
| Douglas County, NV | 5 | 5 | 0 | 2 | 0 |
| Washoe County, NV | 7 | 6 | 1 | 0 | 4 |
| Total | 263 | 118 | 145 | 249 | 15 |

Note 1: Accident rates are not available at the time of printing the BPP, however in the future, accident rates, rather than total accidents, should be reported. Accident rates take into account bicycle and pedestrian collisions in comparison to the amount of overall activity by bicyclists, pedestrians, and motor vehicles.

Note 2: The sum of injuries and fatalities may be higher than total accidents because sometimes the number of people in the party was greater than 1.

Source: Reported accidents according to the California Statewide Integrated Traffic Records System (SWITRS) and Nevada Highway Patrol.

Table 5. Lake Tahoe Region bicycle and pedestrian accident summary 2003-2007

As Table 6 indicates, there were 29 locations with two or more accidents in the six year period. The most significant "hot spot" was the U.S. 50/Friday Avenue intersection, which has since been improved with a full intersection signal. Other intersections with relatively high accident rates include SR 28 and Fox Street, Bear Street, Coon Street and Grove Street on the North Shore, and U.S. 50 and Stateline and Park Avenue on the South Shore. It should also be noted that only one of the 29 high accident intersections is not on the state highway system.

| | | # Accidents | 6 | | |
|--|---------------------------|---------------------------------|----------------------------|--|---|
| Location (1) | Bicycle | Pedestrian | Total | Annual Average Daily Traffic (AADT), 2002- 2007 (2) | Accident Rate per Average Daily Traffic |
| Pioneer Trail & Wildwood (unsignalized) | 2 | 0 | 2 | n/a | n/a |
| SR 28 & Fox Street (unsignalized) | 0 | 4 | 4 | 14883 | 0.027% |
| SR 28 & Grove Street (unsignalized) | 2 | 1 | 3 | 11733 | 0.026% |
| US 50 & Friday Ave (new signal) | 1 | 7 | 8 | 33667 | 0.024% |
| US 50 & Stateline (signal) | 0 | 7 | 7 | 33667 | 0.021% |
| SR 28 & Bear Street (unsignalized) | 0 | 3 | 3 | 14883 | 0.020% |
| SR 28 & Coon Street (signal) | 1 | 2 | 3 | 14883 | 0.020% |
| SR 28 & SR 267 (signal) | 2 | 1 | 3 | 18100 | 0.017% |
| US 50 & Park Avenue (signal) | 4 | 1 | 5 | 33667 | 0.015% |
| US 50 & Pioneer Trail (East) (signal) | 4 | 1 | 5 | 33667 | 0.015% |
| US 50 & Blue Lake (unsignalized) | 1 | 4 | 5 | 33833 | 0.015% |
| SR 28 & Southwood Blvd (signal) | 0 | 2 | 2 | 13758 | 0.015% |
| SR 89 & Fountain (unsignalized) | 2 | 0 | 2 | 14767 | 0.014% |
| SR 28 & Beaver Street (unsignalized) | 0 | 2 | 2 | 14883 | 0.013% |
| US 50 & Edgewood Circle (unsignalized) | 3 | 0 | 3 | 32116 | 0.009% |
| US 50 & Glorene (unsignalized) | 1 | 2 | 3 | 33583 | 0.009% |
| US 50 & Herbert (unsignalized) | 3 | 0 | 3 | 33833 | 0.009% |
| US 50 & Sierra (signal) | 2 | 1 | 3 | 33833 | 0.009% |
| US 50 & 4H Camp Road (unsignalized) | 2 | 0 | 2 | 23317 | 0.009% |
| US 50 & Kingsbury Grade (signal) | 0 | 2 | 2 | 23317 | 0.009% |
| US 50 & Lake Tahoe Blvd (signal) | 1 | 1 | 2 | 33583 | 0.006% |
| US 50 & Midway (unsignalized) | 2 | 0 | 2 | 33667 | 0.006% |
| US 50 & 3rd Street (signal) | 1 | 1 | 2 | 33833 | 0.006% |
| US 50 & Al Tahoe Blvd (signal) | 2 | 0 | 2 | 33833 | 0.006% |
| US 50 & Lyons (signal) | 1 | 1 | 2 | 33833 | 0.006% |
| US 50 & Ski Run (signal) | 1 | 1 | 2 | 33833 | 0.006% |
| US 50 & Tahoe Keys (signal) | 1 | 1 | 2 | 33833 | 0.006% |
| US 50 & Tallac (signal) | 0 | 2 | 2 | 33833 | 0.006% |
| US 50 & Truckee Drive (unsignalized) | 1 | 1 | 2 | 33833 | 0.006% |
| Note1: Locations with more than one record Note 2: Annual Average Daily Traffic Count t www.tiims.org. | led bicycle taken from | or pedestrian nearest inters | accident, i section wit | including accidents w h available data. See | vithin 100 ftt of intersection e "August Traffic Volumes", |

Source: California Statewide Integrated Traffic Records System, and NDOT

Table 6. High accident locations in the Tahoe Region

Other data of interest include the type of location where accidents happen. As shown in Table 7, the majority of accidents occurred at unsignalized locations, or at mid-block crossings without a Class I/Shared-Use Path crossing. Only 17 percent of total accidents occurred at signalized intersections.

| Location Type | Pede | strian | Bic | ycle | Тс | otal |
|--|--------|---------|--------|---------|---------|---------|
| | Number | Percent | Number | Percent | Number | Percent |
| Public Street Intersection Unsignalized | 51 | 52% | 64 | 46% | 115 | 49% |
| Public Street Intersection Signalized | 16 | 16% | 25 | 18% | 41 | 17% |
| Midblock Location Without Class I/Shared-Use Path | 27 | 28% | 49 | 35% | 76 | 32% |
| Midblock Location With Class I/Shared-Use Path | 1 | 1% | 1 | 1% | 2 | 1% |
| Public Street Intersection Signalized With Trail Crossing | 3 | 3% | 0 | 0% | 3 | 1% |
| Total | 98 | 100% | 139 | 100% | 237 | 100% |
| Note: Intersection accidents include all accidents within 100 feet | | | | | | |
| Source: California Statewide Integrated Traffic Records System, and NDOT | | | | | - | |

Table 7. Accident location type

Since this data was collected, two marked shared-use path crossings have not been re-painted along the SR 89 West Shore Trail due to safety concerns. These locations could be good candidates for the installation of enhanced crossing treatments. It will be important to note any change in collision rates at these locations in the next update of the BPP if these crossings are not re-marked or otherwise enhanced.

Safety issues can be addressed in multiple ways. Intersections can be improved through enhanced pedestrian treatments. Another solution includes increasing driver, bicyclist and pedestrian awareness. Several states have incorporated bicycle and pedestrian safety into their driving tests. At Lake Tahoe, possible education activities, in addition to those shown in Table 3 on page 43 could include bicycle safety classes through Parks and Recreation Departments or Barton Health Extension. Bicycle rental and retail shops can distribute safety information and maps and encourage safe riding. In addition, police need to enforce traffic laws for drivers, bicyclists and pedestrians, creating a safe atmo

sphere for all.

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Actual use of the bicycle and pedestrian network is perhaps the most important indicator of the quality of the system, although biking and walking rates are also closely tied to land use, population density, and visitation. A quality biking and walking network to support surrounding land uses is critical to achieving increased biking and walking levels. This section analyzes both existing use and future demand for the system.

POPULATION AND EMPLOYMENT TRENDS

The following discussion contains estimates and forecasts of existing and future population and employment levels that can be used to determine trends and how they affect demand for bicycle and pedestrian facilities.

Existing Population and Employment

According to the 2000 census, the Region had an estimated total population of approximately 60,000 and an estimated total employment level of about 49,500. Table 8 shows updated population estimates by County based on the Tahoe Transportation Model.

Future Resident Population, Visitor Population, and Employment

According to the U.S. Census Bureau, the resident population of the Region increased by approximately 7,000 between 1990 and 2000. While the 2010 census data is not yet available, indicators such as school enrollment, gaming employment and traffic volumes indicate that population in the Tahoe Region has declined since 2000 (*Mobility 2030*). With the current recession (2009-2010) and a shift away from gaming as a primary economic driver, accurately estimating population and employment levels for the coming decade is difficult. A major focus of the TRPA Regional Plan Update, and of planning in general in Lake Tahoe, is on how to re-make the Region into a thriving residential and tourist attraction. Improved bicycle and pedestrian facilities play a strong role in this shift. "Smart growth" principles that support bikeable and walkable communities are central in this planning effort.

As part of the TRPA Regional Plan Update, several alternative planning scenarios are under study. The population, employment and travel estimates associated with these scenarios will be analyzed in 2010 and 2011.

Future growth and changes in population and employment are important to bicycle and pedestrian planning for two reasons. First, new developments often require upgrades to existing roadways, which may create an opportunity to construct new bicycle and pedestrian facilities. Second, changes in land-use patterns can make bicycling or walking more convenient.

| Jurisdiction | Population | Percent of Total |
|--|----------------------------|-------------------------------|
| City of South Lake Tahoe | 22854 | 42% |
| El Dorado County (Tahoe portion) | 9484 | 17% |
| Placer County (Tahoe portion) | 8874 | 16% |
| Washoe County (Tahoe portion) | 7765 | 14% |
| Douglas County (Tahoe portion) | 5370 | 10% |
| Total: | 54347 | 100% |
| Note: From population synthesizer in the Tah | oe Transportation model ba | sed on Census 2000 population |

Table 8. Tahoe Region population, 2005 Census.

BICYCLE AND PEDESTRIAN TRAVEL DEMAND

Bicycle and pedestrian trips are not easily measured or projected for an entire region without extensive data collection efforts. While data is still somewhat limited, the TRPA has recently undertaken a monitoring program and development of a Bicycle Trail User Model. Both of these efforts increase understanding of current use of the bicycle and pedestrian network, and also help project future use as more links are completed. Available data includes the 2000 Census, user surveys and user counts, and Basin-wide mode share surveys.

| Mode | Percent of Work Trips |
|----------------------------------|-----------------------|
| Drive Alone | 77% |
| Carpool | 12% |
| Transit | 2% |
| Bicycle or Walked | 3% |
| Worked at Home | 4% |
| Other | 2% |
| Total | 100% |
| Source: 2000 Census Journey-to-W | ork |

Existing Demand

A common term used in describing demand for bicycle and pedestrian facilities is "mode share" or "mode split." Mode split refers to the percentage of people who choose to take different forms of transportation including walking, bicycling, public transit, or driving. From the 2000 Census, mode split information is available for the journey-to-work trip. Table 9 presents this information for the Lake Tahoe Region. As shown in Table 9, bicycle and pedestrian trips represent approximately 3 percent of home-based work trips for Lake Tahoe residents. These numbers are fairly consistent with mode splits across California and Nevada. However, many other tourist-based mountain resort areas have higher bicycle and walking rates, as shown in Figure 3 below.

Table 9: Existing journey-to-work mode split summary

for the Lake Tahoe Region



Figure 3. Bicycling and walking journey-to-work comparison among other regions and cities (2000 census)

As mentioned in the Benchmarks and Progress section, journey-to-work data does not tell the whole story for Lake Tahoe. According to local surveys, over 70 percent of visitors participate in walking activities while almost 40 percent bicycle on paved paths. TRPA mode split surveys of both residents and visitors show overall biking and walking rates to recreation and commercial areas to be about 13 percent in winter and 16 percent in summer.

Another way of understanding existing usage is to review user counts. While user counts can fluctuate annually based on external factors such as visitation, economy, or weather, they are still a useful tool for identifying popularity of the bicycle and pedestrian network. Combined with written user surveys, the TRPA/TMPO has begun to establish a body of knowledge on how and why people use the bikeways and sidewalks in Lake Tahoe.

Usage on the monitored facilities ranges from a low of around 200 passes per day on an on-street bicycle route to over 1,000 passes per day on popular shared-use paths. A sidewalk near Stateline, NV, attracts over 5,000 pedestrians on a busy summer day. A sum of the existing usage on all monitored facilities yields over 16,000 users per day.

Table 10 on the following page shows per day usage estimates by facility based on 2007 and 2009 TRPA/ TCORP surveys and counts. Note that the totals are for Class I/Shared-Use Paths only. The counts need to be repeated in the coming years as part of TRPA's on-going monitoring effort.

| | | | - | | Estima | ated Peak S | ummer Dail | y Use (7AM | 1 to 7PM) o | n Facility | | | | |
|---------------------------|---|-------------------|-------------------|---------------|------------|--------------|----------------|-------------|-------------|-------------------------|------------------|------------------|-----------------|------------|
| | | | Total | | Bicyc | lists | | | | Walker/Other | | | | |
| | | | | | | | | | | | | Bicyclists | 1 | Total Peak |
| | | | | I | Bike to | Bike to | Drive to | I | Walk to | | Drive to | Adjacent | Bicyclists | Facility |
| Facility | State Recreation | Facility Type | Iotal | lotal | Irall | l rail | Irail | lotal | Irall | Visitor: Walk to I rail | Irail | Street | In Corridor | Use |
| | Area, E. of | | | | | | | | | | | | | |
| NOTUL STIDLE ITAI | Lake Forest, at N. | Class I | oCo | 377 | 00 | 140 | 4 ⁵ | 677 | - 10 | 60 | 07 | <u> </u> | 420 | 9 |
| North Shore Trail | Rd. | Class I | 546 | 366 | 211 | 83 | 72 | 180 | 104 | 41 | 35 | 50 | 416 | 79 |
| West Shore Trail | 64 Acres, S Boundary | Class I | 916 | 797 | 142 | 241 | 415 | 118 | 21 | 36 | 62 | 16 | 813 | 147 |
| West Shore Trail | Kaspian, at Restrooms | Class I | 792 | 640 | 344 | 181 | 114 | 152 | 82 | 43 | 27 | 14 | 654 | 106 |
| Tnickee River Trail | 64 Acres, Near Bike Bridge | Class I | 1 246 | 1 000 | 172 | 258 | 570 | 246 | 42 | 63 | 140 | 1 6 | 1 016 | 219 |
| | US 50 150 feet east of Lakeview, on the | Ciaco | | | ŗ | 5 | <u>,</u> | r | ī | | | | | ŗ |
| El Dorado Beach | bike path | Class I | 693 | 541 | 303 | 202 | 36 | 152 | 85 | 57 | 10 | | | 120 |
| Camp Richardson | Resort sign | Class I | 1.685 | 1.260 | 383 3 | 401 | 476 | 425 | 129 | 135 | 161 | 1 | | 273 |
| | Northwest corner of Elks Point Road/U.S. | | | | | | | | | | | | | |
| Elks Point Road | 50 | Class I | 357 | 171 | 71 | 71 | 28 | 186 | 78 | 78 | 31 | | | 49 |
| Incline Lakeshore Path | Beach | Class I | 1.856 | 364 | 184 | 46 | 133 | 1.492 | 756 | 189 | 547 | 1 | | 253 |
| | At TV Rec Area at | | ~~~ | | | | | | | | | | | |
| National Ave. | National Ave./SR28 | None | 231 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 231 | | 0 |
| | Meyers (Sawmill Bike | | | | | | | | | | | | | |
| US 50 (1) | Path) | Class I | 70 | 56 | 15 | 30 | 11 | 14 | 4 | 8 | 2 | 46 | 102 | 12 |
| Helen Avenue Trail | Near South Y | Class I | 183 | 117 | 1 | I | 1 | 66 | I | I | I | 1 | | 16 |
| Pioneer Trail | Trout Creek | Class II | 293 | 161 | 1 | 1 | 1 | 132 | 1 | 1 | 1 | 0 | 161 | 26 |
| Pioneer Trail | Stateline S. of US 50 | Class II | 611 | 70 | 1 | 1 | 1 | 541 | ı | - | | 300 | 370 | 61 |
| SR 89 | N. of US SU (Alpina Café) | Class III | 205 | 205 | 1 | 1 | 1 | 0 | I | I | I | 0 | 205 | 1 |
| US 50 | West of Stateline | Sidewalk | 5,952 | 238 | I | I | I | 5,714 | I | 1 | 1 | 80 | 318 | 910 |
| US 50 | S. of Airport | None | | 1 | 1 | I | 1 | ı | 1 | | 1 | 27 | 27 | 1 |
| Total: Existing Tahoe Reg | pion Class I Facilities | | 8,950 | 5,690 | 2,055 | 1,694 | 1,941 | 3,260 | 1,443 | 753 | 1,064 | 1 | 1 | 1 |
| Source: Table A in Appen | ndix B of the Impacts M | emorandum, base | d in turn on MC |)ST RECENT | survevs an | d counts co | onducted by | / TCORP. TO | CPUD and T | RPA. | | | | |
| Note 1: Counts on the Sa | awmill Bike Path were co | onducted before t | the trail was off | ficially open | to the pub | lic. Note 2: | Daily figure | es for many | locations a | are estimates based upo | on limited avail | able hourly coum | ts, as shown in | Table A of |
| Appendix B of the Impac | ts Memorandum. | | | | | | | | | | | | | |

Table 10. Estimated bike trail, lane, route, and sidewalk use on existing facilities

Future Demand/ Bicycle Trail User Model

Future bicycle and pedestrian trips will depend on a number of factors such as demographics, availability of well-connected facilities, and location, density, and type of future land development. For many years the TRPA has maintained a transportation model that estimates future vehicle trips based on different land use scenarios. The model does not estimate changes in bicycling and walking, however. Bicycling and walking are increasingly part of the solution to reduce greenhouse gas emissions, improve mobility, and create more community-oriented places. The ability to estimate the number of trips that will occur via these modes is also becoming more important. A few general models exist to predict bicycle path use, but most rely on journey-to-work data, and none are geared toward the unique tourist environment of Lake Tahoe. To inform both the TRPA Regional Plan and the BPP, a simple model was created that can predict both regional bicycling and walking rates and expected use on individual facilities in the Lake Tahoe Region. 1

Using the Tahoe Bicycle Trail User Model, TRPA/ TMPO estimated future daily and annual use for a complete regional network, assuming high quality, well-maintained Class I/Shared-Use Paths on all major corridors in the Tahoe Region (Figure 4, next page). This yielded approximately 40,000 trips on the entire network on a peak summer day (2.5 percent of all trips), and almost 6 million annual trips assuming no winter path maintenance. The estimated 40,000 daily trips represent a four-fold increase over current bicycling and walking rates on Class I/ Shared-Use Paths.² Assuming the same rates of



commuting that were reported in the 2007 TRPA/ TCORP surveys, approximately 40 percent (16,000) of these daily trips would be for commute purposes.

¹ For more details on how to use the Tahoe Bicycle Trail User Model, and for the interactive model itself, please see Appendix F. You may link to the interactive model documents from the Tahoe Metropolitan Planning Organization website, http://www.tahoempo.org.

 $^{^2}$ Current rates are probably higher than the 9,000 mentioned in Table 10 on the previous page, since not all existing paths were monitored.



Figure 4. Bicycle Trail User Model corridors

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SECTION 6: GOALS, POLICIES AND ACTIONS



The goals, policies, and actions of the BPP are intended to provide specific direction on how the Tahoe Regional Planning Agency, the Tahoe Metropolitan Planning Organization, and other local, state, regional, and federal agencies and organizations can improve bicycling and walking in Lake Tahoe.

THREE MAJOR GOALS OF THIS PLAN

- **GOAL 1:** Complete a bicycle and pedestrian network that provides convenient access to Basin destinations and destinations outside the basin
- **GOAL 2:** Raise awareness of the bicycle and pedestrian network and encourage safe and increased bicycling and walking
- **GOAL 3:** Provide environmental, economic, and social benefits to the Region through increased bicycling and walking.

THE GOALS, POLICIES, AND ACTIONS IN THIS BICYCLE AND PEDESTRIAN PLAN FOLLOW THESE GUIDELINES:

Goals are a statement of a target, an ambition, or an end state toward which the TRPA and other agencies and organizations are working.

Policies provide direction for the TRPA and other agencies on how to meet the goals. The policies often describe critical activities in which local agencies are already engaged as part of their day-to-day work.

Actions are specific tasks that TRPA or other agencies will or could do to implement the goals and policies in the BPP. In some cases, actions refer to a one-time plan or project (such as the adoption of a change to the TRPA's code); in others, the action is on-going and will occur over a period of years. The actions specified here are generally new actions that should be undertaken to meet the benchmarks specified in the BPP.

Each goal is followed by several focused goals, which express various aspects of the goal in more detail. Each focused goal is accompanied by policies.

The goals of the Lake Tahoe Bicycle and Pedestrian Plan expand on the more general transportation goals of the Tahoe Regional Planning Compact (Public Law 96-551), the TRPA Regional Plan, and the TMPO Regional Transportation Plan, *Mobility 2030. Mobility 2030* identifies the following overarching vision for the future of transportation in the Tahoe Region:

TRANSPORTATION VISION

An innovative multi-modal transportation system is in place that gives priority to viable alternatives to the private automobile, appeals to users and serves mobility needs, while improving the environmental and socioeconomic health of the Basin.

The role of the BPP is to provide the goals, policies and actions necessary to support the bicycling and walking aspect of this Region-wide vision. Several of the BPP goals, policies, or actions were derived from *Mobility 2030*, and these are indicated with "M2030."

Once the BPP is approved by the TRPA, the policies in this section will become part of the Regional Plan. These policies will be implemented through the Code of Ordinances.

Several policies and actions refer to recommendations or requirements that may vary with circumstances. An example is the amount of bicycle storage--such as racks or lockers--recommended with new development. In these cases, readers are referred to another section or appendix (such as Appendix A, Design and Maintenance Recommendations).

While many actions are currently underway or will be underway soon, not all actions are listed. The BPP highlights the highest priority actions.

Finally, the goals, policies and actions listed on the following pages are intended to help the TRPA and other agencies address the 5 "E's" promoted by the League of American Bicyclists in its "Bicycle-Friendly Communities" initiative.

| The 5 "E's" represent a comprehen- sive approach to bicycle and pedes- trian planning. | Engineering | The 5 E's Goal 1: Complete a bicycle and pedestrian network that provides convenient access to Basin destinations and destinations outside the Basin. |
|--|---|--|
| | Encouragement Education Enforcement | Goal 2: Raise awareness of the bicycle and pedestrian network and encourage safe and increased bicycling and walking |
| | Evaluation | Goal 3: Provide environmental, economic, and social benefits to the Region through increased bicycling and walking. |



GOAL 1: COMPLETE A BICYCLE AND PEDES-TRIAN NETWORK THAT PROVIDES CONVENIENT ACCESS TO BASIN DESTINATIONS AND DESTINATIONS OUTSIDE THE BASIN

FOCUSED GOAL: A COMPLETE BICYCLE AND PEDESTRIAN NETWORK

Construct, upgrade, and maintain a complete regional network of bicycle and pedestrian facilities that connects communities and destinations. (M2030)

Policies

1.1 To the extent possible, accommodate all users, encompassing a wide range of abilities and travel objectives, by the bicycle and pedestrian network.

1.2 Encourage the adoption of the Lake Tahoe Bicycle and Pedestrian Plan by local agencies and work collaboratively to achieve implementation. (M2030)

1.3 All hard-surface bicycle and pedestrian facilities should conform to the most recent design standards adopted by Caltrans and the Nevada Department of Transportation (NDOT), except where unique standards have been established by TRPA in consideration of environmental conditions and regional consistency.

1.4 Prioritize constructing pedestrian and bicycle facilities in urbanized areas of the Region, facilities that increase connectivity of the bicycle network, and facilities that can be constructed concurrently with other projects. (M2030) (See Table 19, Prioritization Criteria, in Appendix B.)

1.5 Projects should go forward, regardless of where they are on the priority list, when an opportunity or eminent loss of an opportunity makes implementation favorable or necessary.

1.6 The bicycle and pedestrian network shall conform to the requirements of the Americans with Disabilities Act (ADA).

1.7 Design shared-use paths to support emergency vehicle access where possible.

1.8 Actively pursue funding for priority projects and programs.

1.9 To facilitate cost savings, coordinate project construction with the needs of utility providers, particularly water suppliers and communications providers. (Note: For a list of water suppliers, refer to Appendix C)

1.10 Pursue "experimental status" for unique designs from the Federal Highway Administration where adherence to published standards is not feasible, or where different standards would provide safety, economic, environmental, or social benefits.

FOCUSED GOAL: BICYCLIST AND PEDESTRIAN ACCOMMODATION

Create and maintain bikeable, walkable communities through existing and new development. (M2030)

Policies

1.11 Include pedestrian and bicycle access equal to or greater than private vehicle access as a feature of new development and redevelopment projects proposed in proximity to major bicycle and pedestrian routes. (M2030)

1.12 Incorporate segments of the bicycle and pedestrian network into new and redeveloped commercial, tourist, multi-family, public service and recreation projects consistent with the Lake Tahoe Region Bicycle and Pedestrian Plan. Implementation of the facilities will be through construction, easements, or in-lieu fees as appropriate to the scale of development. (M2030)

1.13 Increase bicycle and pedestrian support facilities, such as sidewalks, bicycle racks, bicycle lockers, and bike-share programs at commercial and tourist centers, recreational areas, transit centers, lodging properties, and government buildings. (M2030) (See the Design and Maintenance Recommendations)

1.14 In addition to those bicycle and pedestrian facilities shown in the BPP, consider shared-use paths and sidewalks where a connection to the existing network is needed to provide improved safety or convenience.

1.15 Accommodate bicyclists and pedestrians as described in the Lake Tahoe Bicycle and Pedestrian Plan in all roadway improvement projects. Include specialized pedestrian crossing treatments, traffic calming, and bicycle-activated signals as appropriate to the scale of the project. (M2030) (See the Design and Maintenance Recommendations)



1.16 Construct, upgrade, and maintain pedestrian and Class II bicycle facilities (bike lanes) meeting AASHTO standards where feasible along major travel routes when the edge of roadway¹ is altered or improved. Where bicycle lanes are not feasible due to environmental or land ownership constraints, provide as much shoulder area as possible for safe bicycle passage.

¹ curbline

1.17 Implement a "Lake Tahoe Scenic Bike Loop" with the widest possible shoulder on the Lake side of the highways circling Lake Tahoe where bicycle lanes are not feasible or have not yet been constructed. (See the Design and Maintenance Recommendations)

1.18 Where shared-use paths intersect with driveways or roadways, give priority to bicyclists in accordance with the Manual on Uniform Traffic Control Devices (MUTCD). (M2030)

1.19 Consider innovative shared roadway treatments (e.g. off-peak only parking/bike lanes that can be used for vehicles during peak flows, sharrows, etc.) in constrained areas where roadway is limited.

Focused goal: Transit Integration

Integrate the transit, bicycle and pedestrian networks to provide seamless transitions and stimulate both increased transit ridership and increased use of the bicycle and pedestrian network. (M2030)

Policies

1.20 Provide secure bicycle storage on all transit vehicles and at all major transit stops and stations.

1.21 Maximize bicycle carrying capacity on new transit vehicles using best available technology. (M2030)

1.22 Prioritize sidewalk improvements that provide pedestrian access to transit stops (See Table 19, Prioritization Criteria, in Appendix B.)

Focused goal: Maintenance

Maintain the bicycle and pedestrian network to a high standard that encourages ridership and improves the safety of all users. (M2030) (See Design and Maintenance Recommendations section)

Policies

1.23 Where feasible, maintain the year-round use and condition of identified sidewalks and bike facilities. (M2030) (Note: See Figure 12, Shared-Use Path and Sidewalk Maintenance Map, in Appendix B).

1.24 Pursue innovative funding that covers the costs of on-going and long-term maintenance and that increases as the mileage of facilities to be maintained increases. (See Appendix I, Maintenance Memo)

1.25 Require a maintenance plan before issuing a permit or funding for any bicycle and pedestrian facilities. The maintenance plan shall specify a strategy for long and short-term funding for the life of the project.

1.26 Up to 25 percent of a Air Quality Mitigation Funds may be set aside for operations and maintenance of completed or future EIP projects, including EIP bicycle path projects.

1.27 Consider creative funding mechanisms for bicycle path and sidewalk maintenance. Examples include, but are not limited to: non-profit maintenance partnerships, bicycle registration programs, renting conduit under shared-use paths to utility companies, or forming business improvement districts (See Appendix I, Maintenance Memo)

1.28 Encourage jurisdictions and private property owners to minimize maintenance costs by consolidating maintenance responsibilities. (See Appendix I, Maintenance Memo)

1.29 Design and construct all portions of the bicycle and pedestrian network to reduce longterm maintenance costs and encourage efficient operation. (see Design and Maintenance Recommendations)

1.30 Maintain and upgrade infiltration devices along paths as appropriate over time.

1.31 Encourage jurisdictions and roadway agencies to snow-clear, sweep, and stripe bicycle routes where needed before major cycling events.

5-Year supportive actions for Goal 1

The following actions should be pursued within a 5-year time frame to support Goal 1. The actions are organized by responsible party.

TRPA/TMPO ACTIONS:

- Collaborate with local agencies and organizations to implement the BPP, focusing on high priority projects. Facilitate workshops to highlight new BPP elements.
- Incorporate priority BPP projects into the Regional Transportation Plan (RTP), the Environmental Improvement Program (EIP), the TMPO Transportation Improvement Program (TIP), and the Statewide Transportation Improvement Program (STIP).
- Update the TRPA Code of Ordinances to provide detailed specifications on bicycle and pedestrian accommodation in new and re-development and roadway projects.



- Incorporate Appendix A, Design and Maintenance Recommendations, Appendix B, Maps and Project Lists, and Goal 1 and associated policies into TRPA project review.
- Conduct annual training with TRPA permit review staff and Memorandum of Understanding (MOU) partners on how to incorporate the BPP into development project design.
- Support research on the impact of raised boardwalks on vegetation and SEZ function, with a goal of reducing coverage mitigation requirements for boardwalks if they are shown to have reduced impacts compared to hard coverage.
- Meet with NDOT, Caltrans and local jurisdictions to develop plans to incorporate striping and regular maintenance of bicycle lanes and wide shoulders into all roadway improvement projects, including routine maintenance.

STATE AND LOCAL JURISDICTION ACTIONS

To meet Goal 1, state and local jurisdictions could consider undertaking the following actions:

- Identify specific locations in need of pedestrian crossing improvements and determine appropriate crossing treatment. Include specific crossing improvement locations as projects on the "proposed project list."
- Maintain an up-to-date inventory of the condition of sidewalks and paths to facilitate budgeting for future repair work and to prioritize improvements. (Local jurisdictions)
- Consider ordinances that address snow storage on bicycle paths, such as specifying a "use period" when bicycle paths must be cleared of snow. (Local jurisdictions)
- Work with property owners responsible for sidewalk maintenance to establish a plan of action for restoration and on-going maintenance of sidewalks. (Local jurisdictions)
- Enforce sidewalk maintenance by responsible property owners. Where enforcement is not possible, develop voluntary maintenance programs with positive publicity for participants. (Local jurisdictions)



GOAL 2: RAISE AWARENESS OF THE BICYCLE AND PEDESTRIAN NETWORK AND ENCOURAGE SAFE AND INCREASED BICYCLING AND WALKING.

Focused Goal: Education and Outreach

Cultivate enthusiasm for bicycling and walking at Lake Tahoe and awareness of the bicycle and pedestrian network through education, outreach, and signage. (M2030)

Policies

2.1 Encourage and support all Basin communities to seek recognition as League of American Bicyclists' "Bicycle Friendly Communities."

2.2 Provide clear and consistent signage to help bicyclists identify the best routes to reach their destination safely, quickly, and easily.

2.3 Use signage and traffic control devices consistent with the Manual on Uniform Traffic Control Devices (MUTCD) and those established by federal, state, and local standards to ensure a high level of safety for bicyclists, pedestrians, and motorists.

2.4 Promote National "Bike to Work" and International "Walk to School" days and other events to encourage biking and walking. (TRPA, local jurisdictions, local advocacy groups)

Focused Goal: Enforcement

Encourage safe bicycling and walking through enforcement of traffic and parking violations.

Policies

2.5 Encourage all state and local law enforcement agencies to cite drivers, cyclists, and pedestrians who create unsafe and unlawful cycling and walking conditions.

2.6 Encourage all state and local law enforcement agencies to enforce parking restrictions at recreation destinations, especially where nearby bicycle or pedestrian facilities provide a convenient alternative to driving.

5-YEAR SUPPORTIVE ACTIONS FOR FOCUSED GOAL 2

The following actions should be pursued within a 5-year time frame to support Goal 2. The actions are organized by responsible party.

TRPA/MULTIPLE ENTITY ACTIONS:

 Develop a Region-wide bike route numbering or naming system consistent with local wayfinding signage and the U.S. Bicycle Route System that directs cyclists onto the best possible route for bicycle travel to their destination. Consider naming routes after historic Washoe Tribe routes where information is available. (TRPA, local jurisdictions)



 Meet with local school officials to develop safe routes to schools programs. Help apply for funding where needed. (TRPA, TMPO, CA & NV Safe Routes to Schools Coordinators, LTBC, local jurisdictions, health departments, others)

- Convene a multi-agency group that meets with local law enforcement and district attorneys to provide training updates on applicable bicycle and pedestrian laws, determine what enforcement actions will be supported, and encourage increased enforcement that supports BPP goals. (TRPA)
- Develop employer incentive programs to encourage biking and walking to work. (TRPA)
- Conduct public workshops on "Complete Streets" and new strategies for land use and transportation integration.

- Continue and expand the current bicycle education program for school children. Coordinate efforts
 by the California Highway Patrol, Nevada Highway Patrol, the state DOTs and local law enforcement
 agencies with Safe Routes to School and Bike Week activites.
 (Local schools, law enforcement, DOTs, LTBC)
- Continue and expand adult bicycle education programs through the local colleges, parks and recreation departments or other local agency departments that teach adults how to ride defensively. (Bicycle advocacy groups, local parks and recreation departments, adult educational institutions)
- Include bicycle and pedestrian safety information as part of visitor packages offered through the visitor centers, hotels, resorts, and bicycle rental shops. (TRPA, LTBC, chambers of commerce)
- Support distribution and updating of Lake Tahoe Bike Trail Maps. (TRPA, local jurisdictions)
- Conduct outreach to minority and non-English speaking communities about safe bicycling and walking practices. (TRPA, local jurisdictions, LTBC)

LOCAL JURISDICTION ACTIONS

To meet Goal 2, local jurisdictions could consider undertaking the following action:

• Integrate bicycle route numbering or naming system into wayfinding signage plans.

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GOAL 3: PROVIDE ENVIRONMENTAL, ECONOMIC, AND SOCIAL BENEFITS TO THE REGION THROUGH INCREASED BI-CYCLING AND WALKING.

FOCUSED GOAL: REDUCED ENVIRONMENTAL IMPACTS

Reduce vehicle miles traveled (VMT), emissions, erosion, runoff, and other environmental impacts through careful implementation of the bicycle and pedestrian network.

Policies

3.1 Minimize roadway capacity or parking facilities where they can be effectively replaced by transit, bicycling and/or walking facilities.

3.2 Seek partnerships and opportunities for environmental restoration in conjunction with BPP facility implementation.

3.3 Include design features, landscaping, signage, or barriers on shared-use paths through sensitive environmental areas to discourage pets and humans from leaving the path.

3.4 Incorporate Best Management Practices (BMPs) into bicycle and pedestrian facility design to filter all sheet flow associated with project improvements.

Focused goal: Evaluation

Attain bicycle and pedestrian goals and environmental thresholds through performance measures consistent with the Regional Transportation Plan and the Regional Plan for the Lake Tahoe Basin.

3.5 Conduct biannual monitoring of the bicycle and pedestrian network to track use levels over time. This data will be provided to local operational authorities to aid in prioritizing construction, maintenance and enforcement.

3.6 Develop measures for tracking bicycling and walking impacts on local economies. (M2030)

3.7 Track bicycle and pedestrian accident rates and identify high-priority locations for safety improvements with each update of the BPP.
5-YEAR SUPPORTIVE ACTIONS FOR GOAL 3

The following actions should be pursued within a 5-year time frame to support Goal 3. The actions are organized by responsible party.

TRPA/TMPO ACTIONS:

- Conduct non-auto mode share surveys every four years to determine the change in bicycling and walking as a portion of total mode split Region-wide. (TRPA)
- Report on the results of the monitoring program with every update of the BPP, and through the biannual TMPO Transportation Monitoring Report. (TRPA)
- Evaluate monitoring and act on results to further advance the policies contained herein, up to and including amending the BPP, as appropriate.
- Update project maps and lists every 2 years. Provide an annual progress report to interested groups, such as the Lake Tahoe Bicycle Coalition or TRPA/TMPO Governing Board.
- Update the entire BPP every 5 years, emphasizing improvements called for in survey/monitoring reports.
- Assist employers in meeting requirements associated with TRPA Code Chapter 97 "Employer-Based Trip Reduction Program."

LOCAL JURISDICTION ACTIONS (ON-GOING)

To meet Goal 3, local jurisdictions could consider undertaking the following actions:

- Provide plastic doggie-bags at strategic locations along popular paths to encourage path users to pick up after their pets.
- Provide for trash receptacles and associated trash collection along paths.

SECTION 7: PROPOSED NETWORK



This section describes the proposed bicycle and pedestrian network for the Region, including paths, lanes, routes and sidewalks. This network was developed based on previous planning efforts and direct input from the public and interested agencies and groups.

All proposed alignments identified in the BPP are conceptual, with only the beginning and the end of the proposed path being project specific. As projects go into detailed planning and design, more precise alignments will be developed. For more information on how projects progress from a line on the map to a constructed facility on the ground, see Section 9, Implementation, page 84.

PROPOSED SHARED-USE PATHS, BICYCLE LANES, BICYCLE ROUTES, AND SIDEWALKS

Recognizing the needs of different bicycling user groups, the proposed network focuses on providing both a strong off-street network of shared-use paths and sidewalks as well as on-street bicycle lanes on all major highways and collectors. Where bicycle lanes cannot be constructed due to topographic constraints, shoulder widening and signage are called for.

New signed bicycle routes are included on the project list, particularly in South Lake Tahoe. Bicycle routes can be implemented quickly and easily. With good directional signage, these routes can provide an excellent network, particularly for bicycle commuters.

New sidewalks are called for in all Lake Tahoe communities, but particularly in South Lake Tahoe and Kings Beach. Figure 11, Existing and Proposed Bicycle and Pedestrian Network, in Appendix B shows proposed sidewalks where sidewalks are currently missing or in extremely poor condition.



MAPS AND PROJECT LISTS

The combined existing and proposed bicycle and pedestrian network map is shown in Figure 11, in Appendix B. Table 18, also in Appendix B, shows the full list of proposed projects, including project mileage and project costs. The proposed network includes a total of 162 miles of new bicycle and pedestrian shared-use paths, bicycle lanes, bicycle routes, and sidewalks, and 80 miles of non-standard facilities (Table 11). A breakout of proposed mileage by jurisdiction is shown in Table 11, below.

To facilitate timely construction of the network, the complete project list and map show all currently planned projects. While it is highly unlikely that these projects will all be constructed within the next twenty years, including them on the list highlights where important linkages are needed, and makes projects eligible for funding should an opportunity arise to construct. The proposed network includes all Environmental Improvement Program (EIP) bicycle and pedestrian projects. However, not all of the proposed projects in the BPP are EIP projects.

All projects on the BPP proposed list underwent an initial screening process. Projects that are included on the proposed list are determined to be important links in the network and feasible to construct. See Table 12, below, for the screening criteria. Projects that were proposed but that were screened out are listed on the "Proposed Projects, Screened Out" list (Table 21, Appendix B).

| Jurisdiction | Class I Path | Class II Bike Lane | Class III Bike Route | Sidewalk | Other (1) | Total |
|--------------------------|--------------|--------------------|----------------------|----------|-----------|-------|
| El Dorado County, CA | 22 | 9 | 14 | 0 | 39 | 84 |
| City of South Lake Tahoe | 8 | 10 | 8 | 7 | 0.1 | 33 |
| Placer County, CA | 16 | 15 | 1 | 4 | 28 | 62 |
| Douglas County, NV | 14 | 1 | 1 | 2 | 15 | 34 |
| Washoe County, NV | 12 | 12 | 0 | 6 | 10 | 40 |
| Carson City, NV | 4 | 0 | 0 | 0 | 5 | 9 |
| Total | 76 | 47 | 24 | 20 | 98 | 262 |

Note 1: Includes shoulder widening, path upgrades, and Bicycle Ferry

Table 11. Length of Proposed Network by Class

| For a pro following | pject to be included in the "proposed project list" of must be true: | of the Bicycle and Pedestrian Plan, at least one of the |
|------------------------|---|---|
| Number | Criteria | Explanation |
| 1 | Needed because of high existing or predicted use and does not duplicate another route | Existing or predicted use to be verified using the TRPA Bicycle and Pedestrian Use Models. The threshold for "high" use is 100 or more users on any day (roughly 8 users per hour). Of the corridors monitored in the Tahoe Basin, the 20% with the lowest usage had under 100 riders per day. |
| 2 | Planning or design already started | |
| 3 | Can be built concurrently with another project | |
| 4 | Provides safe route to school | A safe route to school may be a route identified in a school's "Safe Routes to School" plan, or, in the absence of a plan, any route within a 1-mile radius of a school. Does the project connect two facilities that were not linked before? Does the project fix a section that deterred pedestrians and bicyclists from using another, complete |
| 5 | Fills a gap in existing network | path, for example due to lack of maintenance? Does the project upgrade a section that was not built to current design standards? |
| And all o | f the following must be true: | |
| 6 | There is reasonable belief that right-of-way (ROW) acquisition is possible | |
| 7 | Environmental impacts can be mitigated | |
| 8 | Design can meet Federal, State, and/or Tahoe- specific design standards | As specified in the "Design Guidelines" section of the BPP, AASHTO, MUTCD, and the California Highway Design Manual. |

Table 12. Screening Criteria

PRIORITIZED PROJECT LIST

The BPP includes a limited prioritized project list, in addition to the full list of projects. While the prioritized list is by no means cast in stone, it should serve as a general guide for local jurisdictions, TRPA/TMPO staff, granting agencies, and local advocacy groups as to which projects best serve the stated needs of local communities. Recognizing funding limitations, it is not mandated to build the paths in the BPP by a certain date, nor in the order in which they appear on the list. In fact, there are certain instances when projects that are not high on the prioritized list should be constructed ahead of those that are:

- When an opportunity, such as a road widening or re-paving, makes implementation favorable
- When an eminent loss of an opportunity, such as the sale of a right-of-way, makes implementation necessary
- When resolution of a major obstacle, such as access to flood channel right-of-way, makes implementation necessary

The prioritization process was developed over time with input from the local jurisdictions and the public. TRPA/TMPO developed a set of prioritization criteria and asked public workshop attendees to weight these criteria at two public workshops. These weights, with some adjustments, were applied to eight prioritization criteria for each individual project. TRPA staff and the local jurisdictions then scored each project and sorted by highest score. The public's weighting can be seen in Appendix H, Comments on Draft BPP, on the TMPO website at www.tahoempo.org. Since jurisdictions are likely to work simultaneously on projects that are at different stages of development, the TRPA/TMPO split projects into two categories:

- "Planning-Level"--projects that have not undergone any level of planning to date
- "Design-Level"--projects for which some level of planning has already been started.

The prioritized list includes the top six-eight projects from each of the jurisdictions around the Lake: Douglas County, South Lake Tahoe, El Dorado County, TCPUD, NTPUD, and Washoe County. Projects on the prioritized list are incorporated by reference into the RTP, which makes them eligible to move onto the annual Federal Transportation Improvement Program (FTIP) list.

Criteria for prioritizing proposed projects:

- Closing gaps Closing gaps between existing facilities improves functionality of the existing network.
- Estimated Use and Cost/Benefit -- Highpriority bicycle and pedestrian facilities should reflect use levels that are commensurate with the level of investment required for construction and maintenance. Predicted use levels were based on the Bicycle Trail User Model (Appendix F). For a full explanation of how predicted use was developed for project prioritization, see Appendix K, Use Estimation (www.tahoempo.org).
- Improves network Proposed facilities should not closely parallel existing facilities, unless they are providing for a different user group.

- **Multi-modal connectivity** New facilities should support transit and walking modes.
- **Safety** The network should provide the highest level of safety possible while eliminating major safety concerns such as narrow roadways. Projects that can address a location where accidents have occurred receive higher points.
- **Connectivity** The network should provide connections to major activity centers, multimodal transfer locations, and to routes that provide access to neighboring counties. This is captured through the "Estimated Use" criterion.
- Environmental Impact While environmental impacts must be mitigatable for projects to
 pass the initial screening, projects that are in more sensitive areas will face more challenges.
 Projects that cross more than 5 percent of stream environment zones, are within a wildlife
 habitat buffer, or have other known environmental issues receive negative points.
- **Timeline (design-level projects only)** Projects which are further along in the planning and design process receive higher scores, recognizing the investment in time and resources.
- **Regional Equality** The network should provide balanced access from all portions of the Region's population centers for both commuting and recreation routes.

Table 19 in Appendix B shows the detailed prioritization criteria and weights. Table 20 in Appendix B shows the scored, prioritized project lists.



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SECTION 8: COST AND FUNDING ANALYSIS



Implementation of the proposed bicycle and pedestrian network will require funding from local, state, and federal sources and coordination with multiple agencies. To facilitate funding efforts, this section presents conceptual construction cost estimates for the proposed network.

COST ESTIMATES

Table 14, below contains a unit cost summary for the construction of bicycle and pedestrian facilities in the Region. These cost estimates are based on actual costs experienced in the Region and similar communities in California and Nevada. However, they should be used only to develop conceptual construction cost estimates. More detailed estimates should be developed after preliminary engineering as individual projects advance to implementation.

The total cost of the network is higher than that expected for bicycle facilities in communities with level terrain. Higher unit cost estimates were used given the unique topographic characteristics and environmental constraints of the Region. A summary of the network costs by jurisdiction and type of facility is presented in Table 15 on the following page. Conceptual construction cost estimates for individual routes are contained in Table 17, Proposed Bicycle and Pedestrian Project List in Appendix B. Conceptual construction costs for Lake Tahoe's proposed network were based on the highest unit costs for Class II/Bike Lane facilities, the moderate unit costs for Class I/Shared-Use Path, and the low unit costs for Class III/Bike Route facilities. This approach results in unit costs for Class II/Bike Lanes that include some roadway widening. Additionally, certain unit costs were adjusted based on known project costs.

| Facility Type | Estimated Cost per Mile |
|---|-------------------------|
| Class III/Bike Route | · |
| signing only | \$5,000 |
| signing plus minor road improvements | \$40,000 |
| signing plus moderate roadway improvement | \$150,000 |
| signing plus major roadway improvement | \$300,000 |
| Class II/Bike Lane | |
| signing and striping only | \$5,000 |
| signing and striping plus minor roadway improvement | \$50,000 |
| signing and striping plus moderate roadway improvemen | \$300,000 |
| signing and striping plus major roadway improvement | \$500,000 |
| Class I/Shared Use Path | |
| construct asphalt path on graded right of way with drainage and new sub-base | \$1,000,000 |
| construct asphalt path on un-graded right of way with drainage and new sub-base | \$2,000,000 |
| construct asphalt path with some boardwalking and/or bridges | \$4,000,000 |
| Sidewalk | |
| Five-foot wide sidewalk | \$1,000,000 |

| Table 14. Conceptua | l unit cost | estimates fo | r bikeway | construction |
|---------------------|-------------|--------------|-----------|--------------|
|---------------------|-------------|--------------|-----------|--------------|

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| Jurisdiction (Lake Tahoe portion) | Class I/Shared Use Path | Class II/Bike Lane | Class III/Bike Route | Sidewalk | Other (1) | Total |
|-----------------------------------|-------------------------|--------------------|----------------------|--------------|--------------|---------------|
| El Dorado County, CA | \$50,196,100 | \$6,098,109 | \$69,694 | \$0 | \$42,372,584 | \$98,736,487 |
| City of South Lake Tahoe, CA | \$19,064,561 | \$35,898,343 | \$476,519 | \$38,344,179 | \$200,000 | \$93,983,601 |
| Placer County, CA | \$36,186,317 | \$3,375,957 | \$4,201 | \$10,240,513 | \$16,734,677 | \$66,541,665 |
| Douglas County, CA | \$50,038,538 | \$641,922 | \$3,240 | \$11,845,721 | \$15,604,125 | \$78,133,546 |
| Washoe County, CA | \$43,600,894 | \$8,851,323 | \$0 | \$10,797,488 | \$5,966,526 | \$69,216,232 |
| Carson City, NV | \$16,014,259 | \$0 | \$0 | \$0 | \$0 | \$16,014,259 |
| Total | \$215,100,670 | \$54,865,653 | \$553,653 | \$71,227,902 | \$80,877,912 | \$422,625,790 |

Table 15. Total cost of proposed network by jurisdiction

Table 15 shows a total cost for constructing the proposed network of approximately \$423 million. This total consists of approximately \$163 million for new facilities in Nevada and approximately \$259 million for new facilities in California.

The Tahoe Scenic Bike Loop was assigned the cost of a Class III/Bicycle Route in places where there is currently no facility. This is most likely the first step in creation of the route. In places where there is already a Class III/Bicycle Route, or where the responsible agency is already planning a Class II/Bike Lane, the bicycle lane cost was assigned.

FUNDING STRATEGY

Much of the existing bicycle and pedestrian network was constructed by local agencies. With an approximate total length of 98 miles, the existing network represents a substantial investment. To add approximately 95 miles of high priority facilities to this network will require an investment close to \$200 million, which equates to an annual cost of \$10 million per year over 20 years in constant 2009 dollars (Table 20, Prioritized Project List, in Appendix B).

Although some of the proposed network will be constructed as part of future development and roadway projects, a substantial portion of the total cost will rely on public funding. Descriptions of and links to known available funding sources, including state bond funding, federal planning grants, and smaller grants such as the California Bicycle Transportation Account and the National Scenic Byways Program, are provided in Appendix E, Funding Memo.

Reasonably foreseeable revenue sources are identified in Table 16, on the following page. All priority projects which are to be carried over from the BPP to the RTP must have an identified reasonably foreseeable revenue source.

The following options should be considered by the Region for fulfilling the funding commitment necessary to complete and maintain the proposed network:

- Prepare joint applications with other local and regional agencies for competitive funding programs at the state and federal levels
- Use existing funding sources as matching funds for state and federal funding
- Include bicycle and pedestrian projects in local traffic impact/mitigation fee programs
- Include proposed bikeways as part of roadway projects involving widening, overlays, or other improvements.

Local jurisdictions should also take advantage of private contributions, if appropriate, in developing the proposed network. This could include a variety of resources such as volunteer labor during construction, or monetary donations towards specific improvements.

| Local Sources | Assumptions | Type | 2010-2012 | 2013-2017 | 2018-2022 | 2023-2030 |
|---|----------------------------|----------------|--------------|--------------|--------------|---------------|
| North Lake Tahoe Resort Association Transient Occupancy Tax | Approximately 1/3 of tota | planning, cons | \$3,000,000 | \$7,000,000 | \$7,000,000 | \$10,000,000 |
| Tahoe-Douglas Transportation District Transient Occupancy Tax | | 1 | \$30,000 | \$50,000 | \$50,000 | \$50,000 |
| Washoe County Regional Transportation Commission | \$50K per year | | \$150,000 | \$250,000 | \$250,000 | \$400,000 |
| | \$250K per vear during | | | | | |
| | recession, increasing to | | | | | |
| | \$500K/year then to | | | | | |
| TRPA Air Quality Mitigation Fund | \$750K/year in later years | } | \$750.000 | \$2,500,000 | \$3,750,000 | \$6.000.000 |
| | \$50K per year during | 1 | | | | · |
| | recession, increasing to | | | | | |
| Placer County Development Fees | \$100K/year | | \$150,000 | \$500,000 | \$500,000 | \$800,000 |
| Other Local Sources | \$855K/year | | \$2,565,000 | \$4,275,000 | \$4,275,000 | \$6,840,000 |
| | | | | | | |
| State Sources | Assumptions | | 2010-2012 | 2013-2017 | 2018-2022 | 2023-2030 |
| California Tahoe Conservancy | | planning, cons | \$3,227,000 | \$4,000,000 | \$4,000,000 | \$8,000,000 |
| Nevada Bond Sales (Question 1) | | planning, cons | \$4,000,000 | | | |
| State Transportation Improvement Program (STIP) | 50% of allocation | construction | \$1,000,000 | \$1,000,000 | \$1,000,000 | \$1,000,000 |
| California Bicycle Transportation Account | | } | \$250,000 | \$500,000 | \$500,000 | \$800,000 |
| Recreational Trails Program | \$200,000 every two year | ş | \$200,000 | \$400,000 | \$600,000 | \$400,000 |
| Safe Routes to Schools | | { | \$50,000 | \$150,000 | \$150,000 | \$200,000 |
| Transportation Planning Grant program | \$200,000 every two year | S | \$200,000 | \$400,000 | \$400,000 | \$800,000 |
| Other State Sources | \$500K/year | . | \$1,500,000 | \$2,500,000 | \$2,500,000 | \$4,000,000 |
| Federal Sources | Assumptions | | 2010-2012 | 2013-2017 | 2018-2022 | 2023-2030 |
| Federal Lands Highway Program (1/2 percent) | | { | \$2,500,000 | \$2,500,000 | \$2,500,000 | \$2,500,000 |
| Congestion Mitigation and Air Quality Program (CMAQ) | 60% for bike/ped | | \$744,000 | \$1,500,000 | \$1,500,000 | \$1,500,000 |
| Regional Surface Transportation Program | 60% for bike/ped | } | \$650,000 | \$1,320,000 | \$1,320,000 | \$1,320,000 |
| National Scenic Byways Program | | planning, cons | \$400,000 | \$1,000,000 | \$400,000 | \$1,000,000 |
| Transportation, Community, and System Preservation (TCSP) | | | \$50,000 | \$100,000 | \$100,000 | \$200,000 |
| Alternative Transportation in Parks and Public Lands (ATPPL) | | } | \$0 | \$250,000 | \$250,000 | \$250,000 |
| Transportation Enhancement (TE) | | | \$200,000 | \$200,000 | \$200,000 | \$200,000 |
| Other Federal Sources | \$500K/year | | \$1,500,000 | \$2,500,000 | \$2,500,000 | \$4,000,000 |
| Private or Concurrent Sources | | | | | | |
| Caltrans | | Į | \$12,000,000 | \$12,000,000 | \$12,000,000 | \$12,000,000 |
| Other Private or Concurrent Sources | \$550K/year | | \$1,650,000 | \$2,750,000 | \$2,750,000 | \$4,400,000 |
| Total | | | \$36,766,000 | \$47,645,000 | \$48,495,000 | \$66,660,000 |
| Total to 2030 | į | } | | | | \$199,566,000 |
| Note: Not all revenue sources can be used for all proiects. | | | | | | |

Table 16: Bicycle and pedestrian facility funding sources for the Lake Tahoe Region

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SECTION 9: IMPLEMENTATION



The previous sections have described the process for identifying needed bicycle and pedestrian improvements, and have highlighted the conceptual alignments of new facilities. Physical implementation of projects is the next step, and can face significant obstacles. These obstacles include securing funding and right-of-way, working with property owners to come to agreement on route alignment and property acquisition, and meeting environmental standards and other permitting requirements. In Lake Tahoe, the mountain topography and complicated regulatory environment can make implementation of projects difficult.

The following pages describe the basic steps needed to implement projects in Lake Tahoe. The other sections in the BPP offer some strategies for overcoming obstacles, such as funding.

PROJECT IMPLEMENTATION

The primary responsible implementing entities for the bicycle and pedestrian facilities in Lake Tahoe are the local jurisdictions and other special districts. This includes the City of South Lake Tahoe, El Dorado County, Placer County, Douglas County, Carson City, Washoe County, California State Parks, Nevada Division of State Parks, United States Forest Service, Tahoe City Public Utility District and North Tahoe Public Utility District. The California Tahoe Conservancy (CTC), while administering major funding sources, is not typically a project implementer. In the case of the South Tahoe Greenway, however, the CTC is implementing planning, design, and environmental review. Other project implementers include Caltrans, NDOT, and private developers, who may construct projects from the BPP concurrently with roadway improvements, new, or re-development.

The flow-chart in Figure 5, below shows how bicycle and pedestrian projects are implemented. Project implementers usually start by pursuing planning funds for high priority projects listed in the BPP. Next, they conduct initial feasibility, design, property acquisition (where needed) and environmental review of the project, including necessary public outreach. During this time they also pursue funding for the construction of the project. After these steps are complete, the implementer submits the project to TRPA and other local agencies for the necessary permits. Once construction funds are secured, construction begins. After project completion, the implementing agency is responsible for maintaining the project over time, unless maintenance agreements have been made with other agencies.

Funding for different stages of project planning, construction, and maintenance are available from different sources. Planning funding is often available from federal and state sources, while construction funding is most often found from state sources, such as California and Nevada bond measures. Maintenance funding is almost never available from state and federal sources, and must be obtained at the local level, through local sales taxes, assessment districts, or other local sources. For more details on funding sources, see Appendix E, Funding Memorandum.





FEDERAL FUNDING PROCESS

Most grant sources require that bicycle and pedestrian projects be listed in an approved bicycle or pedestrian plan before they can be eligible for funding. This can be a stand-alone bicycle and pedestrian plan, or a bicycle and pedestrian element of a regional transportation plan. Some funding sources, particularly federal sources, also require that projects be listed in other plans, such as the Lake Tahoe Environmental Improvement Program (EIP), and the TMPO Regional Transportation Plan (*Mobility 2030*). The BPP priority project list will directly populate the RTP¹ and the EIP project lists. Amendments to the BPP priority project list will trigger amendments to the corresponding documents for consistency.

The RTP is a 20-year, financially-constrained document. Therefore, the RTP must show reasonably projected revenues for all projects. This rule of financial constraint helps planning and implementing agencies to be realistic about the sequencing and prioritization of projects, and can spur agencies to increase funding efforts. The RTP is updated every four years, but can be amended as needed.

Once a project has received federal funding, it is listed in the Federal Transportation Improvement Program (FTIP). This is the document that programs, or commits, specific funds to specific transportation projects. This commitment is particularly important for flexible funding sources, which can be used for multiple projects. The FTIP is the authorization to use federal funds, not to exceed the amount programmed. A project cannot commence use of federal funds unless it is listed in the FTIP. The FTIP is a four-year funding document, but it is updated every two years, and amended as needed. Figure 6, below shows the federal funding process.





Figure 6.

TRPA PROJECT REVIEW PROCESS

Part of the project implementation process includes project review for consistency with local and regional ordinances. The TRPA is responsible for ensuring that projects are consistent with the Regional Plan by reviewing them and issuing permits for construction. In addition, projects--particularly development projects--may need permits from local jurisdictions to ensure consistency with local policies and building codes.

Depending on the scale of the project, implementers complete between 30 and 90 percent design and the necessary environmental review as required by TRPA, California Environmental Quality Act (CEQA), and the National Environmental Protection Act (NEPA). Early coordination with permitting entities is recommended to identify potential issues in the preliminary design phase, preventing costly changes later. Figure 7 below illustrates this process. The process is similar for varying types of projects, including bicycle paths, new development, or roadway improvement projects. Some projects are exempt from project review because the activity is routine or has a minor impact. Road overlays often fall into this category. Once TRPA has received the project application, staff reviews the project for consistency with the Regional

Plan, including the BPP. In the case of new, redevelopment, or roadway improvement projects, staff reviews projects to ensure that they incorporate elements of the BPP, such as providing appropriate levels of bicycle parking, and constructing or maintaining proposed or existing facilities.

Depending on the scale of the project, staff may either approve the project, or take it to the Hearings Officer or Governing Board for approval. Requirements for when a project must go to the Hearings Officer or the Governing Board are explained in the TRPA Code of Ordinances, Chapter 4. Projects that go to the Hearings Officer or Governing Board require a public notice that includes notification of property owners within 300 feet of the project, as well as notice in local newspapers. Conditions may be imposed upon the project during the staff, Hearings Officer, or TRPA Governing Board review. Examples of these conditions include features to increase safety for bicyclists and pedestrians, or modifications to bicycle paths to ensure protection of the surrounding environment.

After approval of the project at the staff, Hearings Officer, or Governing Board level, a permit is issued and the project may begin construction. A more detailed summary of the project review process can be found in the TRPA Code of Ordinances, Chapter 4, Project Review and Exempt Activities.



SECTION 10: USEFUL LINKS



There are many other agencies and organizations, both within and outside of the Lake Tahoe Region that provide valuable resources regarding biking and walking. A few of them are listed here.

Tahoe Metropolitan Planning Organization (TMPO)

www.tahoempo.org

The TMPO website provides links to the websites for current projects in the planning phases around Lake Tahoe, including the South Tahoe Greenway, the North Tahoe Bike Trail, and the Nevada Stateline to Stateline Bikeway. There are also links to bicycle and pedestrian monitoring studies, as well as other transportation plans and studies. The TMPO website includes a link to an interactive GIS map of the bicycle and pedestrian network.

Lake Tahoe Region Bicycle and Pedestrian Plan

www.tahoempo.org/bikeplan_update.aspx?SelectedIndex=2

Link to the on-line version and see up-to-date project lists and project status.

Interactive Bicycle Map

gis.trpa.org:82/BIKEMAP

The direct link to the interactive GIS map of existing and proposed bicycle and pedestrian facilities in Lake Tahoe.

Lake Tahoe Bicycle Trail User Model

www.tahoempo.org/bike_trail_model.aspx?SelectedIndex=2

Download and use this model to estimate existing and future use of individual bicycle paths in Lake Tahoe, or the network as a whole.

Lake Tahoe Bicycle Coalition

www.tahoebike.org

The Lake Tahoe Bicycle Coalition's website provides links to a printable map of the Region's bicycle network, local events, and ways to get involved in promoting bicycling in Lake Tahoe.

Tahoe Transportation District

www.tahoetransportation.org

The Tahoe Transportation District is the lead agency for several regional projects, including the Nevada Stateline to Stateline Bikeway, the U.S. Highway 50 Stateline Core Project, and the Lake Tahoe Waterborne Ferry.

Lake Tahoe Water Trail

www.laketahoewatertrail.org

The Lake Tahoe Water Trail provides an opportunity to plan a custom paddle trip around the 72-mile shoreline of Lake Tahoe.

US Forest Service Lake Tahoe Basin Management Unit (LTBMU

www.fs.fed.us/r5/ltbmu

The LTBMU manages over 450 miles of unpaved trails for hikers, mountain bikers, and equestrians.

DEFINITIONS AND ACRONYMS

AASHTO – American Association of State Highway and Transportation Officials
ADA – Americans with Disabilities Act
ADT – Average Daily Traffic
AMBBR – America's Most Beautiful Bike Ride

Bicycle and pedestrian network – shared-use paths, bicycle lanes, bicycle routes, wide shoulders, and sidewalks.

Bicycle and pedestrian facilities – shared-use paths, bicycle lanes, bicycle routes, wide shoulders, and sidewalks plus all other bicycle and pedestrian support facilities such as bicycle storage racks, lockers, crossing treatments and street markings.

Bikeway - shared-use path, bicycle lane, bicycle route or wide shoulder.

Bicycle storage - bicycle racks, locker, or other location for safely and securely storing bicycles.

BID – Business Improvement District
BPMP – 2003 Lake Tahoe Bicycle and Pedestrian Master Plan
BPP – 2010 Lake Tahoe Region Bicycle and Pedestrian Plan
BTA – California Bicycle Transportation Act, California Bicycle Transportation Account
CA MUTCD – California Manual on Uniform Traffic Control Devices
Caltrans – California Department of Transportation
CDC – Centers for Disease Control and Prevention
CEQA – California Environmental Quality Act
CFDs – Community Facilities Maintenance Districts
CHP – California Highway Patrol

Class I/Shared-Use Path – Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with cross-flow from vehicles minimized.

Class II/Bike Lane – Provides a striped lane for one-way bicycle travel on a street or highway.

Class III/Bike Route – Provides for shared use with bicycle or motor vehicle traffic on streets and highways.

CTC – California Tahoe Conservancy
EIP – Environmental Improvement Program
Facilities – shared-use paths, lanes, routes, sidewalks, bicycle storage, lockers, showers, crosswalks, street furniture, and other bicycle and pedestrian amenities.

FHWA – Federal Highway AdministrationFTIP – Federal Transportation Improvement ProgramHAWK – High-Intensity Activated Crosswalk

Jurisdictions – includes all agencies responsible for constructing and maintaining routes, including cities, counties, public utility districts, and the USDA Forest Service.

LAB – League of American Bicyclists

Lake Tahoe Scenic Bike Loop – envisioned to provide bicycle lanes meeting AASHTO standards on the highways encircling Lake Tahoe. Where lanes cannot be constructed, or until they can be constructed, the loop should provide 3-5 feet of shoulder on the lake side where possible.

LTVA – Lake Tahoe Visitors Authority LTBC – Lake Tahoe Bicycle Coalition M2030 – Lake Tahoe Regional Transportation Plan, Mobility 2030 (TMPO Plan)

Measure S – a bond measure for the City of South Lake Tahoe and Lake Tahoe portion of El Dorado County that pays for a variety of maintenance activities, including maintenance of bike paths.

Mobility 2030 – Lake Tahoe Regional Transportation Plan (TMPO Plan)

Mode split or mode share -- percentage of people who choose to take different forms of transportation, such as walking, bicycling, transit, or driving.

MOU – Memorandum of Understanding MUTCD – National Manual on Uniform Traffic Control Devices NDOT – Nevada Department of Transportation NEPA – National Environmental Policy Act NHP – Nevada Highway Patrol NHTS – National Household Travel Survey NLTRA – North Lake Tahoe Resort Association

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NTPUD – North Tahoe Public Utility District

PAL – Police Activities League

PBID – Parcel and business improvement district

Pedestrian -- someone who travels by foot or by wheelchair

PPP – Public Participation Plan

PUDs – Public Utility Districts

RET – Real Estate Transfer Tax

Routes – shared-use paths, lanes, routes, and sidewalks.

RTP – Lake Tahoe Regional Transportation Plan (Mobility 2030)

RTPA – Regional Transportation Planning Agency

RTTPC – Resort Triangle Transportation Planning Coalition

SAFETEA -LU – Safe Accountable Flexible, Efficient Transportation Equity Act: A Legacy for

Users (the Federal Transportation Bill)

SEZ – Stream environment zone

Sharrow – a street marking that can be used to indicate that bicyclists and vehicles share the road

SLT – South Lake Tahoe

SNPLMA – Southern Nevada Public Lands Management Act

SSTMA – South Shore Transportation Management Association

STIP – Statewide Transportation Improvement Program

SWITRS – California Statewide Integrated Traffic Records System

TAC – Lake Tahoe Bicycle and Pedestrian Plan Technical Advisory Committee

TART – Tahoe Area Regional Transit

TCORP – Tahoe Coalition of Recreation Providers

TCPUD – Tahoe City Public Utility District

TIP – Transportation Improvement Program

TMPO – Tahoe Metropolitan Planning Organization

TNT-TMA - Truckee North Tahoe Transportation Management Association

TOT – Transient Occupancy Tax

TRPA – Tahoe Regional Planning Agency

TWSA – Tahoe Water Suppliers Association

VMT – Vehicle Miles Travelled

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CHAPTER 1 - Introduction

This appendix presents an overview of bicycle and pedestrian facility designs, based on appropriate MUTCD and Highway Design Manuals, and as supplemented by AASHTO best practices and Tahoe-specific design guidelines. The purpose is to provide readers and project designers with an understanding of the facility types that are proposed in the Plan, and with specific treatments that are recommended or required basin-wide.

Bicycle and Pedestrian Design Standards

The Lake Tahoe Bicycle and Pedestrian Plan Design and Maintenance Guidelines present standards and recommendations that specifically provide for consistency in the Lake Tahoe Region, or where details are needed beyond what is provided by state and federal design standards. All projects must also meet state and federal design standards, as well as other TRPA design guidelines including scenic requirements and best management practices. Therefore, in addition to these Lake Tahoe Design Guidelines, planners and designers should also refer to the following documents and their subsequent updates when planning and designing bicycle and pedestrian facilities.

The California portion of the Lake Tahoe region is governed by the California MUTCD and the Nevada portion is governed by the Federal Highway Administration (FHWA) MUTCD. As of January 21, 2010, the California Department of Transportation (Caltrans) has revised the California MUTCD 2010 to include FHWA's 2003 MUTCD Revision 2 dated December 21, 2007. FHWA has released the new 2009 MUTCD but it is not effective in California until Caltrans and the California Traffic Control Devices Committee (CTCDC) review it and incorporate the changes into California MUTCD through formal efforts. California has until January 15, 2012 to accomplish this task although it is anticipated that it will be done sooner. In the event that a specific treatment is in the California or Federal MUTCD, but not in the other, it may be necessary to go through experimental testing procedures. Experimental testing is overseen by the CTCDC in California and the FHWA in Nevada.

California Manual on Uniform Traffic Control Devices, 2010 Update <u>http://www.dot.ca.gov/hg/traffops/signtech/mutcdsupp/ca_mutcd2010.htm</u>

Manual on Uniform Traffic Control Devices (MUTCD), Federal Highway Administration <u>http://mutcd.fhwa.dot.gov/</u>

Caltrans Policies and Directives http://www.dot.ca.gov/hq/traffops/signtech/signdel/policy.htm

including:

Traffic Operations Policy Directive 09-06 "Provide Bicycle and Motorcycle Detection on all new and modified approaches to traffic-actuated signals in the state of California."

Caltrans Highway Design Manual http://www.dot.ca.gov/hq/oppd/hdm/hdmtoc.htm

Caltrans Design Information Bulletins <u>http://www.dot.ca.gov/hq/oppd/dib/dibprg.htm</u> including: DIB 80-01 Roundabouts DIB 82-03 Design Information Bulletin 82-03 "Pedestrian Accessibility Guidelines for Highway Projects"

Caltrans Standard Plans

http://www.dot.ca.gov/hq/esc/oe/project_plans/HTM/06_plans_disclaim_US.htm

ADA Accessibility Guidelines for Buildings and Facilities (ADAAG) <u>http://www.access-board.gov/adaag/html/adaag.htm</u>

Revised Draft Guidelines for Accessible Public Rights-of-Way, Access Board <u>http://www.access-board.gov/prowac/draft.htm</u>

Guidelines for the Development of Bicycle Facilities, AASHTO Guidelines for the Planning, Design, and Operations of Pedestrian Facilities, AASHTO https://bookstore.transportation.org/home.aspx

A Policy on Geometric Designs of Highways, AASHTO <u>https://bookstore.transportation.org/Item_details.aspx?id=110</u>

Tahoe Regional Planning Agency Code of Ordinances http://www.trpa.org/default.aspx?tabindex=2&tabid=172

Disclaimer

This appendix is not intended to replace existing state or national mandatory or advisory standards, nor the exercise of engineering judgment by licensed professionals. The facts and circumstances of a specific project may warrant different designs or standards than are specified here.

Cost estimates cited in the document reflect 2008 dollars and are included for reference only. All costs are for equipment and materials, and do not include labor. Actual costs to construct the facilities may vary depending on market fluctuations, design specifications, engineering requirements and availability of materials.

CHAPTER 2 - Bikeway Classifications

2.1

Bikeway Classification Overview

Discussion

Caltrans has defined three types of bikeways in Chapter 1000 of the Highway Design Manual: Class I/Shared Use Path, Class II/Bike Lane, and Class III/Bike Route. Nevada does not have similar class designations, but uses the AASHTO terms, which include "shared use path", "bike lane" and "signed shared roadway". For consistency with other regional and prior plans, this document uses the generic terms "shared use path", "bike lane" and "bike route". Both AASHTO and Caltrans have similar design standards for these facilities. Facilities using federal or state funding will generally be required to meet the standards below. TRPA recommends that all facilities, regardless of funding source, meet the standards below.

Design Summary

Path Width:

8 feet is the minimum allowed for a two-way bicycle path and is only recommended for low traffic situations.

10 feet is recommended in most situations and will be adequate for moderate to heavy use.

12 feet is recommended for heavy use situations with high concentrations of multiple users such as joggers, bicyclists, rollerbladers and pedestrians. A separate track (5' minimum) can be provided for pedestrian use.

Bike Lane Width with Adjacent On-Street Parking:

5' minimum recommended when parking stalls are marked

Bike Lane Width without Adjacent Parking:

4' minimum when no gutter is present (rural road sections) 5' minimum when adjacent to curb and gutter (3' more than

the gutter pan width if the gutter pan is greater than 2') Recommended Width: 6' where right-of-way allows

Lane Width for Bicycle Route With Wide Outside Lane:

Fourteen feet (14') minimum is preferred. This can include a striped shoulder. Fifteen feet (15') should be considered if heavy truck or bus traffic is present. Bike lanes should be considered on roadways with outside lanes wider than 15 feet. This treatment is found on all residential streets, collectors, and minor arterials.

Design Example



Figure 2-1: Shared Use Path



Figure 2-2: Bike Lane



Figure 2-3: Bike Route/Signed Shared Roadway



CHAPTER 3 - Shared Use Paths

3.1 Pathway Design

A shared use path allows for two-way, off-street bicycle use and also may be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users. Within the Lake Tahoe Basin, shared use paths are often found in urbanized areas and connecting urbanized areas to popular recreation sites or other population centers. Shared use paths can also include amenities such as lighting, signage, and fencing (where appropriate).

General Design Practices:

Shared use paths can provide a desirable facility for users of all skill levels preferring separation from traffic. Some of the elements that enhance off-street path design include:

- Frequent access points from the local road network;
- Placing directional signs to direct users to and from the path;
- Limiting the number of at-grade crossings with streets or driveways;
- Identifying and addressing potential security problems up front;
- Whenever possible, and especially where heavy use by bicycle users can be expected, separate pedestrian ways should be provided to reduce conflicts.

Both the California Highway Design Manual Chapter 1000 and the AASHTO Guide for the Development of Bicycle Facilities generally recommend against the development of shared use paths directly adjacent to roadways, although at Lake Tahoe, due to geographical constraints, this is often necessary. Also known as "sidepaths", these facilities create a situation where a portion of the bicycle traffic rides against the normal flow of motor vehicle traffic. This can result in an unsafe situation where motorists entering or crossing the roadway at intersections and driveways do not notice bicyclists coming from their right, as they are not expecting traffic coming from that direction.

Shared use paths may be considered along roadways under the following conditions:

- The path will generally be separated from all motor vehicle traffic.
- Bicycle and pedestrian use is anticipated to be high.
- In order to provide continuity with an existing path through a roadway corridor.
- The path can be terminated at each end onto streets with good bicycle facilities, or onto another well-designed path.
- The total cost of providing the proposed path is proportionate to the need.

As bicyclists gain experience and realize some of the advantages of riding on the roadway, many stop riding on paths adjacent to roadways. Bicyclists may also tend to prefer the roadway as pedestrian traffic on the bicycle path increases. When designing a bikeway network, the presence of a nearby or parallel path should not be used as a reason to not provide adequate shoulder or bicycle lane width on the roadway, as the on-street bicycle facility will generally be superior to the "sidepath" for experienced bicyclists and those who are cycling for transportation purposes. Bicycle lanes should be provided as an alternate (more transportation-oriented) facility whenever possible.

Bicycle paths must also include the proper "Best Management Practices" (BMPs) for treating runoff from the facility. These designs are not included here, but path designers can find more information on the TRPA's BMP website at: <u>http://www.tahoebmp.org</u>.

3.1.1 Pathway Design

Discussion

Ten-foot wide paths are usually best for accommodating all uses, and better for long-term maintenance and emergency vehicle access. When motor vehicles are driven on shared use paths, their wheels often will be at or very near the edges of the path. Since this can cause edge damage that, in turn, will reduce the effective operating width of the path, adequate edge support should be provided. Edge support can be either in the form of stabilized shoulders, a concrete "ribbon curb" along one or more edges of the path, or constructing additional pavement width or thickness. Constructing a typical pavement width of 10 feet, where right-of-way and other conditions permit, lessens the edge raveling problem.

TRPA supports 8-foot wide paths where there is moderate anticipated usage or where it can reduce SEZ impacts.

Facilities using federal or state funding will generally be required to meet the AASHTO and/or Caltrans standards. TRPA recommends that all facilities, regardless of funding source, meet the standards in this section.

Surfacing and Path Construction

Thicker surfacing and a well-prepared sub-grade will reduce deformation over time and reduce long-term maintenance costs. At a minimum, off-street paths should be designed with sufficient surfacing structural depth for the sub-grade soil type to support maintenance and emergency vehicles.

Asphalt and concrete are the most common surface treatment for multi-use paths, however the material composition and construction methods used can have a significant determination on the longevity of the pathway. Concrete is not as durable in cold climates and may not be suitable on a large scale for Lake Tahoe. Alternative surface materials such as decomposed granite may be appropriate in some circumstances. Each jurisdiction needs to consider durability and snow removal needs (grooming vs. clearing) when selecting an alternative surface material such as decomposed granite. Surface selection should take place during the design process.

The following pathway construction design is recommended for improved durability and low maintenance at Lake Tahoe:

• Asphalt Option: 4 inches of type B asphalt over a minimum of 9 inches of 1.5 inch minus crushed gravel base material. An asphalt path has the advantage of melting out more quickly after a snowfall under sunlight than a concrete path.

If trees are adjacent to the path, a root barrier should be installed along the path to avoid root uplift.

Recommended Design



Discussion (continued)

Snow Removal/Grooming

Multi-use paths can serve non-motorized uses year-round. In the winter months these paths can be cleared of snow for pedestrian and bicycle use, or groomed to serve as crosscountry ski routes. During these months it is important that snow removal and grooming equipment have ease of access to these paths. Any gates, bollards, or other access control measures that restrict access to the paths should be removable for winter maintenance equipment. Path access points and at-grade crossings should be kept clear of snow accumulations and burming from adjacent on-street snow removal operations. In times of heavy snow accumulations, snowblower vehicles should be employed to move the snow as far from the multi-use path as possible. Where large snowpack elevation differentials exist, effort should be made to provide a smooth transition.

Design Summary

Width

8 feet minimum paved path width (Caltrans). AASHTO recommends a paved width of 10 feet.

A 3-4 foot native surface path may be considered alongside shared-use paths for runners.

Paving

Hard, all-weather pavement surfaces are usually preferred over those of crushed aggregate, sand, clay or stabilized earth (AASHTO).

Separation From Highway

When two-way shared use paths are located adjacent to a roadway, wide separation between a shared use path and the adjacent highway is desirable. Bike paths closer than 5 feet from the edge of the shoulder shall include a physical barrier to prevent bicyclists from encroaching onto the highway (Caltrans). Where used, the barrier should be a minimum of 42 inches high (AASHTO).

Snow Storage: If a facility is to be plowed or blown in the winter, shoulder width should be increased to provide adequate snow storage. In constrained locations, snow many need to be trucked out instead of stored on-site. As an alternative to snow clearance, a facility may be groomed to allow cross-country skiers and snowshoers to use it.

Design Example



Guidance

- Caltrans Highway Design Manual (Chapter 1000 Section 1003.1(1) and (2), and 1003.5)
- AASHTO Guide for the Development of Bicycle Facilities, Chapter 2
- California MUTCD Chapter 9B. Signs Guidelines for Accessible Public Rights-of-Way

Cost

 Shared Use Path: \$350,000 - \$2,000,000 per mile (Note 1: This assumes an asphalt or concrete path (not including boardwalks or bridges. Note 2: The concrete option is likely to cost 50 percent more than a standard asphalt pathway.)

3.1.2 Boardwalks

Discussion

Boardwalk construction may be used in sensitive areas such as stream environment zones and in areas of steep slopes. Boardwalk construction is typically much more expensive than standard paved paths. Cyclists may prefer paved paths over boardwalks because of the smoother surface and better traction typically associated with paved applications. Boardwalks should be considered in relation to environmental needs, budget, and potential use needs and management issues.

Design Summary

Design Criteria

Design criteria for boardwalks must meet AASHTO design recommendations for paved shared-use paths. Paths should also be designed to structurally support the weight of a small truck or a light-weight maintenance vehicle.

Width

Path width should be a minimum of 10 feet when no rail is used. A 12 foot width is preferred in areas with high anticipated use and whenever rails are used. AASHTO recommends carrying the clear area (or 2 foot space on either side of path) across the structure. This provides an appropriate horizontal shy distance from the railing and allows for maneuvering space to avoid conflicts with users stopped on the structure. A 10 foot width is recommended only for low-use areas.

Height from Ground

Path height should be set to allow for small animal movement under the structure, a minimum of 6" above grade.

Railings

Paths less than 30" above grade may not require a railing according to current building standards. Six inch curb rails may be used. Paths higher than 30" above grade require a 42" high rail. It should be noted that AASHTO recommends 42" high railings on any structured path.



| Guidance | Cost |
|---|--|
| AASHTO Guide for the Development of Bicycle Facilities Chapter 2 ADAAG Sections 4 and 15 | Dependent on use of railings, materials, width, height, and anticipated loads. Can vary between \$2.25 and \$4 million per mile for a 10 foot wide path. |


3.1.3 Causeways

Discussion

Causeways or "burm" type path construction may be used to minimize disturbance of water flow in stream environment zones. Paths are elevated above wet ground using a permeable fill material as a base. Path edges incorporate small boulders or a rock riprap to contain the permeable fill. Geotextile mats and other construction materials such as geocells can be incorporated to ensure a stable base on which asphalt or concrete paving may be applied. The path should be built up to an elevation no greater than 30 inches above natural grade.

Design Summary

Design Criteria

Design criteria for causeways should meet AASHTO and Caltrans design recommendations for paved shared-use paths.

Base

Path construction and detailing depends on water table and surface flows through site. A stable base for paving must be established while allowing for water flow under path. Base materials should be designed so as not to be compromised by future water flows. Firm mineral soil, coarse-grained soils or granular material, or small, well-graded angular rocks are needed for fill.

Guidance

- AASHTO Guide for the Development of Bicycle Facilities Chapter 2
- Trail Construction and Maintenance Notebook. 2007ed USFS
- Caltrans Highway Design Manual, Chapter 1000

Cost

Dependent on surface type. Native surface and decomposed granite surfaces are less expensive than paving. Paved applications would include the typical cost of a paved path plus the riprap edge support.

Design Example





| 3.1.4 Lighting | |
|---|----------------|
| Discussion | Design Example |
| Lighting improves the safety of the path user by increasing visibility during non-daylight hours. The fixtures should be installed near benches, drinking fountains, bicycle racks, trailheads, and roadway and path crossings. TRPA recommends lighting in urbanized areas only. Lighting must be downcast to minimize light pollution and must follow the recommendations in the applicable Community Plan or successor document to the Community Plan. | |
| Design Summary | |
| Depending on the location, average maintained horizontal illumination levels of 5 lux to 22 lux should be considered (AASHTO). Where special security problems exist, higher illumination levels may be considered. | |
| Guidance | |
| Lake Tahoe Community Plans Standards and Guidelines AASHTO Guide for the Development of Bicycle Facilities, Chapter 2 | |

3.1.5 Bollards

Discussion

Minimize the use of bollards to avoid creating obstacles for bicyclists. Bollards, particularly solid bollards, have caused serious injury to bicyclists. The California MUTCD explains, "Such devices should be used only where extreme problems are encountered" (Section 9C.101). Instead, design the path entry and use signage to alert drivers that motor vehicles are prohibited.

Flexible bollards and posts are designed to give way on impact and can be used instead of steel or solid posts. These bollards are typically made of plastic that is bolted to the roadway and bend and return to their original position when hit. They are intended to deter access, but allow vehicles through in an emergency.

Bollards are typically installed using one of two methods: 1) The bollard is set into concrete footing in the ground; and 2) the bollard is attached to the surface by mechanical means (mechanical anchoring or chemical anchor).

The TRPA recommends flexible bollards or no bollards as opposed to solid posts.

Design Summary

- Where removable bollards are used, the top of the mount point should be flush with the path's surface so as not to create a hazard or potentially be damaged by snow removal devices when the bollard is not in place. At the time of this publication, flexible bollards that do not leave an anchored mounting device on the path or roadway surface when removed are not commercially available. Posts shall be permanently reflectorized for nighttime visibility and painted a bright color for improved daytime visibility.
- Striping an envelope around the post is recommended.
- When more than one post is used, an odd number of posts at 1.5m (5-foot) spacing is desirable. Wider spacing can allow entry by adult tricycles, wheelchair users and bicycles with trailers.

Guidance

- CA MUTCD
- AASHTO Guide for the Development of Bicycle Facilities Chapter 2

Cost

- Bollard, fixed: \$220 \$800 each
- Bollard, removable: \$680 \$940 each







Source: ferret.com.au Flexible Bollard





| Guidance | Cost |
|--|--|
| MUTCD, Sections 9B.12 and 9C.03 CA MUTCD AASHTO Guide for the Development of Bicycle Facilities, Chapter 2 | Signs, trail regulation: \$150 each Signs, trail wayfinding / information: \$500 - \$2,000 each |

3.1.7 Aggregate Surface Trails

Discussion

Aggregate surface trails are most applicable in non-urban environments and in multi-use areas where a variety of recreational use is anticipated. This includes hiking, biking, mountain biking, and equestrian use. Aggregate surface trails composed of crushed rock using pine tar or other trail stabilization techniques can fit in well with a natural setting and can cost less to construct than an asphalt trail.

Sustainable design must consider these forces – compaction, displacement, and erosion – that are caused by water and trail use. Compaction will deepen the heavily traveled portion of the trail. Displacement deepens the tread and raises the untraveled edges. Erosion follows and further deepens the tread. Understanding the site soils, topography, water movement, and anticipated use patterns should be considered during the trail design.

This type of trail may be considered for both permanent and temporary use. As a temporary facility, future phasing would then include returning to the site and paving the surface. This allows for major grading and stabilization to be completed during the first phase and paving completed during the second phase.

Design Summary

Width

Trail widths vary depending upon anticipated type and volume of use.

Design Example





| Guidance | Cost |
|---|-------------------------------|
| Trail Management Handbook FSH2309.18 Trail Planning, Design, and Development Guidelines. Minnesota Department of Natural Resources Trail Construction and Maintenance Notebook. 2007ed USFS | \$75,000 - \$150,000 per mile |

| 3.1.8 Summary of Coverage Requirements | | | | |
|--|--|--|--|--|
| Discussion | Detailed Guidance | | | |
| Local jurisdictions have asked that all guidance related to coverage be summarized in the Lake Tahoe Bicycle and Pedestrian Plan. Coverage is regulated in Chapter 20 of the TRPA Code of Ordinances. | TRPA Code of Ordinances, Section 20.3.A. Base Land Coverage Requirements This section describes the amount of allowable coverage for different land capability districts. Lower land capability districts, such as wetlands or steep slopes, are allowed only 1% of their area to be covered by impermeable surfaces. | | | |
| Summary | | | | |
| In the Lake Tahoe region, due to the need to maintain the natural filtration function of soils to reduce runoff into the Lake, there are limits on the amounts of new pavement, or "coverage" that may be constructed. Where the coverage limitation on a parcel or project area is exceeded, new coverage must be transferred in, and mitigated by removing other coverage within the same watershed, or by purchasing banked coverage. Depending on the land capability of the project area, new coverage must be mitigated by removing other coverage at a ratio of 1:1 or 1.5:1. Since sidewalks, bicycle paths and bicycle lanes are public service facilities; there is generally no limit on the amount of coverage that may be transferred in, however coverage that exceeds the coverage limit of a parcel must still be mitigated. In certain situations, private property owners will donate or sell easements for implementation of a bicycle path or sidewalk. In this case, any coverage used to construct the path within the easement does not count towards the property owner's total allowable coverage, since the easement area is effectively part of a "project area" that is separate from the parcel. However the property owner will experience a slight reduction in gross allowable coverage based on the fact that his parcel size has effectively been reduced. | The highest land capability districts, where water filtration is the best, may have up to 30% of their area covered by impermeable surfaces. TRPA Code of Ordinances, Section 20.3.B. Transferred Land Coverage Requirements Subsection (4), Linear Public Service Facilities, establishes that this use is eligible for transferring coverage. Bicycle paths, sidewalks, and bicycle lanes are linear public service facilities. TRPA Code of Ordinances, Section 20.3.D(1). Determination of the Project Area Subsection (iv) describes how the project area may be determined for projects not consisting of a single parcel, which generally applies to bicycle paths. TRPA Code of Ordinances, Section 20.4. Prohibition of Additional Land Coverage in Land Capability Districts 1a, 1c, 2 and 3 and 1b (Stream Environment Zones) Subsections 20.4.A(3) and 20.4.B(3) describe the conditions under which additional land coverage may be transferred into the most sensitive land capability districts for linear public service facility projects. TRPA Code of Ordinances, Section 20.4.A(2)(e) This subsection describes the mitigation requirements for any additional use of or a district of a district of a district of district of a district of district of a district of di | | | |
| Guidance | additional coverage in land capability districts 1a, 1c, 2, 3, and 1b. | | | |
| TRPA Code of Ordinances, Chapter 20, Land Coverage Standards. | | | | |

3.2 Pathway Crossings

Shared use paths can intersect with roadways at midblock locations, or as part of a roadway-roadway intersection. Common issues at intersections of shared use paths and roadways include:

- Bicyclists entering or exiting the path may travel against motor vehicle traffic;
- Motorists crossing the shared use path at driveways and intersections may not notice path users coming from their right;
- Stopped motor vehicle traffic or vehicles exiting side streets or driveways may block the path; and
- Motorists may not expect or be able to yield to fast-moving bicyclists at the intersection.

Treatments

Bicycle and pedestrian pathway designers and traffic engineers generally have four options for designing multi-use pathway crossings. These include:

- Option 1 Reroute to the nearest at-grade controlled intersection crossing;
- Option 2 Create a new at-grade midblock crossing with traffic controls where the pathway intersects with the roadway;
- Option 3 Create a new unprotected midblock crossing where the pathway intersects with the roadway; and
- Option 4 Create a grade-separated undercrossing or overcrossing of the roadway where the pathway intersects the roadway.

Given the use characteristics specific to the Tahoe area, it is likely that pathway users would either use the nearest at-grade controlled intersection crossing, a midblock crossing with traffic controls, or use an unprotected midblock crossing. This section addresses treatments at each of these three crossing types.

| 3.2.1 Path Crossing at Intersec | tion |
|---|--|
| Discussion | Design Summary |
| The evaluation of a roadway crossing involves analysis of vehicular traffic and path user travel patterns, including speeds, street width, traffic volumes (average daily traffic, peak hour traffic), line of sight, and path user profile (age distribution and destinations). When engineering judgment determines that the visibility of the intersection is limited on the shared-use path approach, Intersection Warning signs should be used. | A path should cross at a signalized intersection if there is a signalized intersection within 350 feet of the path and the crossroad is crossing a major arterial with a high ADT. Signage Intersection Warning (W2-1 through W2-5) signs may be used on a roadway, street, or shared-use path in advance of an intersection to indicate the presence of an intersection and the possibility of turning or entering traffic. A path-sized stop sign (R1-1) should be placed about 5 feet before the intersection. Traffic Calming Reducing the speed of the conflicting motor vehicle traffic should be considered. Options may include: transverse rumble strips approaching the path crossing; sinusoidal speed humps ¹ (compatible with slow speed snow removal operations). Crosswalk Markings Colored and/or high visibility crosswalks should be considered. Path Speed Control A chicane, or swerve in multi-use path approaching the crossing is recommended to slow bicyclist speed. Path users traveling in different directions should be separated either with physical separation (bollard or raised median) or a centerline. If a centerline is used, it should be striped for the last 100 feet of the approach. |

¹ Humps with a sinusoidal profile are similar to round-top humps but have a shallower initial rise (similar to a sine wave). They were developed to provide a more comfortable ride for cyclists in traffic calmed areas.

Appendix A - Design and Maintenance Recommendations



Note: Clear sight lines should take precedence in determining path proximity to adjacent roadway.



² Crosswalk types are discussed in Section 7.1.

| 3.2.2 Uncontrolled Mid-Block (| Crossing |
|---|--|
| Discussion | Recommended Design |
| The National MUTCD requires yield lines and "Yield Here to Pedestrians" signs at all uncontrolled crossings of a multi- lane roadway. Yield lines are not required by the CA MUTCD. The National MUTCD includes a path crossing sign, shown to the right on the next page (W11-15 and W11- 15P), which may be used where both bicyclists and pedestrians might be crossing the roadway, such as at an intersection with a shared-use path. | |
| The table on the following page is a summary for implementing at-grade roadway crossings in the Tahoe area. The number one (1) indicates a ladder style crosswalk with appropriate signage is warranted. (1/1+) indicates the crossing warrants enhanced treatments such as flashing beacons, or in-pavement flashers. (1+/3) indicates Pedestrian Light Control Activated (Pelican), Puffin, or Hawk signals should be considered. | €1 to 15 m (20 to 50 ft) |
| Design Summary | |
| Placement Mid-block crosswalks should be installed where there is a significant demand for crossing and no nearby existing crosswalks. Yield Lines | 6.1 to 15 (20 to 50 |
| If yield lines are used for vehicles, they shall be placed 20 to 50 feet in advance of the nearest crosswalk line to indicate the point at which the yield is intended or required to be made and 'Yield Here to Pedestrians' signs shall be placed adjacent to the yield line. Where traffic is not heavy, stop or yield signs for pedestrians and bicyclists may suffice. | |
| Warning Signs | |
| The Bicycle Warning (W11-1) sign alerts the road user to unexpected entries into the roadway by bicyclists, and other crossing activities that might cause conflicts. | Source: California MUTCD, Figure 3B-15 |
| Pavement Markings A ladder crosswalk should be used. Warning markings on the path and roadway should be installed. | Note that TRPA recommends ladder-style crosswalks. |
| Other Treatments | YIELD |
| See table on the following page to determine if treatments such as raised median refuges, flashing beacons should be used. | |
| Beacons See Section 3.2.4 of this document | HERE TO PEDESTRIANS |
| | R1-5 R1-5a |
| | |

| Design Example | Recommended Design (continued) |
|----------------|---|
| | W11-1 W16-7p W16-7p W16-7p National MUTCD |
| Guidance | Cost |

(See additional costing details in Section 3.2.1)

- Caltrans Highway Design Manual (Chapter 1000)
- CA MUTCD Parts 2 and 9
- MUTCD Chapter 2 and 9
- AASHTO Guide for the Development of Bicycle Facilities

| Roadway Type | Vehicle ADT ≤ 9,000 | | Vehicle ADT > 9,000 to 12,000 | | Vehicle ADT > 12,000 to 15,000 | | Vehicle ADT > 15,000 | | | | | |
|--|------------------------|---------------|----------------------------------|-------------|-----------------------------------|------------|-------------------------|------------|------------|--------------|------------|------------|
| (Number of Travel Lanes and | | Speed Limit** | | | | | | | | | | |
| Median Type) | ≤ 30 mi/h | 35 mi/h | 40 mi/h | ≤30 mi/h | 35 mi/h | 40 mi/h | ≤ 30 mi/h | 35 mi/h | 40 mi/h | ≤ 30 mi/h | 35 mi/h | 40 mi/h |
| 2 Lanes | 1 | 1 | 1/1+ | 1 | 1 | 1/1+ | 1 | 1 | 1+/3 | 1 | 1/1+ | 1+/3 |
| 3 Lanes | 1 | 1 | 1/1+ | 1 | 1/1+ | 1/1+ | 1/1+ | 1/1+ | 1+/3 | 1/1+ | 1+/3 | 1+/3 |
| Multi-Lane (4 or more lanes) with raised median*** | 1 | 1 | 1/1+ | 1 | 1/1+ | 1+/3 | 1/1+ | 1/1+ | 1+/3 | 1+/3 | 1+/3 | 1+/3 |
| Multi-Lane (4 or more lanes) without raised median | 1 | 1/1+ | 1+/3 | 1/1+ | 1/1+ | 1+/3 | 1+/3 | 1+/3 | 1+/3 | 1+/3 | 1+/3 | 1+/3 |

*General Notes: Crosswalks should not be installed at locations that could present an increased risk to pedestrians, such as where there is poor sight distance, complex or confusing designs, a substantial volume of heavy trucks, or other dangers, without first providing adequate design features and/or traffic control devices. Adding crosswalks alone will not make crossings safer, nor will they necessarily result in more vehicles stopping for pedestrians. Whether or not marked crosswalks are installed, it is important to consider other pedestrian facility enhancements (e.g., raised median, traffic signal, roadway narrowing, enhanced overhead lighting, traffic-calming measures, curb extensions), as needed, to improve the safety of the crossing. These are general recomendations; good engineering judgment should be used in individual cases for deciding which treatment to use. For each trail-roadway crossing, an engineering study is needed to determine the proper location. For each engineering study, a site review may be sufficient at some locations, while a more in-depth study of pedestrian volume, vehicle speed, sight

distance, vehicle mix, etc. may be needed at other sites. **Where the speed limit exceeds 40 mi/h (64.4 km/h), marked crosswalks alone should not be used at unsignalized locations. ***The raised median or crossing island must be at least 4 ft (1.2 m) wide and 6 ft (1.8 m) long to adequately serve as a refuge area for pedestrians in accordance with MUTCD and AASHTO guidelines. A two-way center turn lane is not considered a median.

1= Type 1 Crossings. Ladder-style crosswalks with appropriate signage should be used.

1/1+ = With the higher volumes and speeds, enhanced treatments should be used, including marked ladder style crosswalks, median refuge, flashing beacons, and/or in-pavement flashers. Ensure there are sufficient gaps through signal timing, as well as sight distance.

1+/3 = Carefully analyze signal warrants using a combination of Warrant 2 or 5 (depending on school presence) and EAU factoring. Make sure to project usage based on future potential demand. Consider Pelican, Puffin, or Hawk signals in lieu of full signals. For those intersections not meeting warrants or where engineering judgment or cost recommends against signalization, implement Type 1 enhanced crosswalk markings with marked ladder style crosswalks, median refuge, flashing beacons, and/or in-pavement flashers. Ensure there are sufficient gaps through signal timing, as well as signt distance.



3.2.4 Crossing Beacons

Discussion

Beacons are typically used to supplement advance warning signals or at midblock crosswalks.

Types of Beacons

MUTCD identifies the following types of flashing beacons relevant to shared use path - roadway intersections:

- Intersection control beacon a beacon used only at an intersection to control two or more directions of travel
- Warning beacons a beacon used only to supplement an appropriate warning or regulatory sign or marker
- Stop beacons a beacon used to supplement a STOP sign, a DO NOT ENTER sign, or a WRONG WAY sign

Experimental Treatments

There are other experimental pedestrian beacons that have been shown to have higher yielding rates than the standard flashing beacon. These include:

- The Rectangular-Shaped Rapid Flash LED Beacons, which have been shown to have an 80 to 90 percent compliance rate in the field; and
- The Pedestrian Hybrid Beacon, or High-Intensity Actuated Crosswalk (HAWK), has been incorporated into the National MUTCD, but is still experimental in California. The HAWK has a driver yielding rate of 97 percent and reduces pedestrian-motor vehicle crashes by 58 percent.

TRPA recommends pedestrian-actuated signals such as the HAWK where other methods are infeasible or ineffective.

Any application of experimental treatments within Nevada should follow the Federal Highway Administration (FHWA) approval process (see MUTCD Section 1A.10). The application of experimental treatments within California should follow the California Traffic Control Devices Committee's (CTCDC) approval process (http://www.dot.ca.gov/hq/traffops/signtech/newtech/). Jurisdictions within California can apply to the CTCDC for permission to use experimental treatments. Note that the CTCDC has not approved the HAWK treatment to date. (See CTCDC's October 11, 2007 agenda and meeting minutes available on the Committee's website.)

Recommended Design



HAWK Crossing (This beacon type has not been approved for use in California)

Design Summary

Traffic Control Signal Warrants

MUTCD Section $4\overline{C}$.01 identifies the minimum use and spacing parameters that must be met in order to warrant installation of a beacon.

Overhead flashing pedestrian beacons are governed under Section 4K.03 of the CA MUTCD and Section 4L of the National MUTCD.

In California, CA MUTCD Section 4K.103 (CA) permits flashing beacons at school crosswalks. Section 4C.06 describes warrants (i.e., minimum requirements) for installation of a signal on a route to school.

| Guidance | Cost |
|--|--|
| MUTCD, Sections 4F and 4LCA MUTCD Sections 4K and 4C | Signs, Overhead Beacon: \$15,000-\$55,120 eachDetection, Automated Beacon: \$800 each |
| ITE – Alternative Treatments for At-Grade Pedestrian Crossings | Crossing, Hawk: \$50,000 eachActuated Pedestrian Crossing: \$40,000 each |



| 3.2.6 Path Crossings at Rounda | abouts | | | |
|---|---|--|--|--|
| Discussion | Recommended Design | | | |
| The California MUTCD defines a roundabout as "a circular intersection with yield control of all entering traffic, channelized approaches, and appropriate geometric curvature, such that travel speeds on the circulatory roadway are typically less than 30 mph." Roundabouts provide for higher motor vehicle capacity than a signalized intersection with the same number of approach lanes, and reduce the number of conflict points for motorists. Research has shown single-lane roundabouts to have safety benefits. However, multi-lane roundabouts may not provide the same benefits, and may even increase conflicts for bicyclists. Bicycle lanes should not be provided on the outside of the circulating roadway, as this increases conflicts between bicyclists and motorists. Instead, roundabouts should be designed to encourage bicyclists riding on the roadway to control the lane as they travel through the roundabout. Ways of doing this include limiting the number of lanes, narrowing travel and circulating lanes, and designing the roundabout to operate at speeds close to 20 to 15 miles per hour. | Example of Markings for Approach and Circulator Roadways at a Roundabout Source: MUTCD 2010 Figure 3C-1 | | | |
| Design Summary | | | | |
| Path users should be directed around the roundabout to cross at the crosswalks on the circulating legs. Bicycle ramps may be provided between the approach and exit legs and the path to allow bicyclists on the street to use the path and pedestrian crossings to navigate through the roundabout. Crosswalks shall be marked at roundabouts, including rural locations, on all legs where pedestrians will be crossing. (CA) The preferred type of crosswalk markings at roundabouts on the State Highway system is the "ladder" type. (CA) Ramps should be provided on each end of the crosswalk to connect the crosswalk to other crosswalks around the roundabout and to the sidewalk network. | Notes: 1. Signs shown for only one leg 2. See Section 2D.38 for guide 3. See Chapter 3C for markings 3. See Chapter 3C for markings Example of Regulatory and Warning Signs for a Two- Lane Roundabout with Consecutive Double Lefts Adapted from: MUTCD 2010 Figure 2B-23 | | | |

Guidance

- Caltrans Design Information Bulletin 80-01
- CA MUTCD and MUTCD
- FHWA Roundabouts: An Informational Guide (2006) and forthcoming 2010 edition.

Cost

Not available.

Path and crossings should be constructed as part of the roundabout.

Recommended Design (Continued)



CHAPTER 4 - On-Street Bicycle Facility Design

4.1 Bike Lanes

Bike lanes or Class II bicycle facilities (Caltrans designation) are defined as a portion of the roadway that has been designated by striping, signage, and pavement markings for the preferential or exclusive use of bicyclists. Bike lanes are generally found on major arterial and collector roadways and are 4 to 7 feet wide. Bike lanes can be found in a large variety of configurations, and can even incorporate special characteristics including coloring and placement, if beneficial.

Bike lanes enable bicyclists to ride at their preferred speed without interference from prevailing traffic conditions and facilitate predictable behavior and movements between bicyclists and motorists. Bicyclists may leave the bike lane to pass other bicyclists, make left turns, avoid obstacles or debris, and to avoid other conflicts with other roadway users.

General Design Guidance:

Width:

Varies depending on roadway configuration, see following pages for design examples.

Striping:

| Line separating vehicle lane from bike lane (typically left sideline): | 6 inches |
|--|----------|
| Line separating bike lane from parking lane (if applicable): | 4 inches |

Dashed white stripe when:

- Vehicle merging area
- Delineate conflict area in intersections (optional)

Signing:

Use R3-17 (NV) or R-81 (CA) Bike Lane Sign at:

- Beginning of Bike Lane
- Far side of all intersection crossings
- At approaches and at far side of all arterial crossings
- At major changes in direction
- At intervals not to exceed 1/2 mile

Pavement Markings:

There are four potential variations of pavement markings for bike lanes allowed between the National and the California MUTCD. Most cities nationwide are moving to use the graphic representation of cyclist with directional arrow (pictured right), and as such this stencil is recommended here. This stencil should be used at:

- Beginning of Bike Lane
- Far side of all shared use path crossings
- At approaches and at far side of all arterial crossings
- At major changes in direction
- At intervals not to exceed 1/2 mile
- At beginning and end of bike lane pockets at approach to intersection.



Recommended Bike Lane Stencil



Length of conflict area

Varies

R3-17

R-81 Sign (CA)

| 4.1.1 Bike Lane with No On-St | reet Parking |
|--|---|
| Discussion | Recommended Design |
| Recommended bicycle lane width is 5 feet minimum when adjacent to curb and gutter. Wider bicycle lanes are desirable in certain circumstances such as on higher speed arterials (45 mph+) where a wider bicycle lane can increase separation between passing vehicles and bicyclists. Appropriate signing and stenciling is important with wide bicycle lanes to ensure motorists do not mistake the lane for a vehicle lane or parking lane. Bicycle lanes wider than seven feet are not recommended. Design Summary | R3-17(NV) or R81 (CA) Bike Lane Sign |
| Bike Lane Width: | |
| 4' minimum when no gutter is present (rural road sections) 5' minimum when adjacent to curb and gutter (3' more than the gutter pan width if the gutter pan is greater than 2') Recommended Width: 6' where right-of-way allows | 10-12' 5' min |
| <image/> | |
| Guidance | Cost |
| MUTCD Caltrans Highway Design Manual (Chapter 1000) CA MUTCD AASHTO Guide for the Development of Bicycle Facilities | • Bike Lane: \$5,000-\$500,000 per mile |



4.2 Bike Routes/Signed Shared Roadways

Bike Routes, known also as Signed Shared Roadways (AASHTO) or Class III bicycle facilities (Caltrans) are defined as facilities shared with motor vehicles. They are typically used on roads with low speeds and traffic volumes, however can be used on higher volume roads with wide outside lanes or with shoulders. Bike routes can be established along through routes not served by shared use paths or bike lanes, or to connect discontinuous segments of bikeway. A motor vehicle driver will usually have to cross over into the adjacent travel lane to pass a bicyclist, unless a wide outside lane or shoulder is provided.

Bicycle Routes can employ a large variety of treatments from simple signage to complex treatments including various types of traffic calming and/or pavement stenciling. The level of treatment to be provided for a specific location or corridor depends on several factors.

General Design Guidance:

Signing:

Use D11-1 Bicycle Route Sign at:

- Beginning or end of Bicycle Route (with applicable M4 series sign below)
- Entrance to shared use path optional
- At major changes in direction or at intersections with other bicycle routes (with applicable M7 series sign below)
- At intervals along bicycle routes not to exceed 1/2 mile

Pavement Markings:

Shared Lane Markings may be applied to Bicycle Routes per Section 4.2.3.



D11-1 Sign





| 4.2.3 Shared Lane Markings (SLM) | |
|--|---|
| Discussion | Recommended Design |
| Recently, Shared Lane Marking stencils (also called "Sharrows") have been introduced for use in California as an additional treatment for Bike Route facilities and are currently approved in conjunction with on-street parking. The stencil can serve a number of purposes, such as making motorists aware of the need to share the road with bicyclists, showing bicyclists the direction of travel, and, with proper placement, reminding bicyclists to bike further from parked cars to prevent "dooring" collisions The National and California MUTCD include guidance for placement of the SLM. The City of South Lake Tahoe has installed the SLM on most of its Bike Routes. Though not always possible, placing the SLM markings outside of vehicle tire tracks will increase the life of the markings and the long-term cost of the treatment. Design Summary Door Zone Width: The width of the door zone is generally assumed to be 2.5 feet from the edge of the parking lane. Recommended SLM placement: Minimum of 11.5 feet from edge of curb where on-street parking is present. If parking lane is wider than 7.5 feet the SLM should be moved further out accordingly. | |
| Design Example | Guidance |
| Local Example not incorporating width | MUTCD, Section 9C.07 CA MUTCD , Section 9C.103 Cost Stencils only: \$250 each |
| recommendations | |



The Lake Tahoe Scenic Bike Loop is envisioned to be a bidirectional, AASHTO standard bicycle lane on the highways encircling Lake Tahoe. For highway segments where bicycle lanes on both sides of the roadway are not planned for the near future, and in locations where the full AASHTO width (four feet) is extremely difficult to attain, the loop should provide 3-5 feet of striped shoulder on the lake side where possible, without compromising safety for riders using the mountain side. Due to the wide variety of conditions found on the highways encircling the Lake, there are several guidelines that NDOT, Caltrans, TRPA, and local jurisdictions should work together to follow during routine maintenance of roadways and other, more intensive roadway improvement projects. When following all of the guidelines below, designers must take into consideration that shoulder width may not always be moved from one side to the other based on sight distance, required turning radii, or other design and safety requirements.

- In locations where shoulder width can be moved, preference should be given to moving shoulder width to the lake side, while not compromising the safety of users travelling on the mountain side. For example, if only two feet of shoulder width is available, it should be split evenly between the two sides. If three feet are available, two feet should go to the lake side and 1 foot to the mountain side. If five feet are available, a minimum of three feet should go to the lake side.
- On long, steep downgrades, where bicycle speeds greater than 30 mph are expected, bicycle lanes or a wide shoulder are not always advised. In these locations, unless a swept shoulder width of greater than four feet can be provided on both sides, it is more important to provide shoulder width on the climbing side of the highway. In addition, regardless of whether bicycle lanes are present, "Bikes can use full lane" signage is recommended on the downhill side.
- Where shoulder widening is not possible or is minimal, use "sharrow" stencil.
- Where possible, travel lanes should be narrowed to provide additional width for bicycles.

Other treatments recommended in these design guidelines, such as "bicycles may use full lane" signage, or changeable traffic devices that indicate a cyclist is present, should be considered along very constrained roadway sections. On steep downgrades, bicycle speeds will increase, and the width of a bicycle lane does not provide enough sight distance and maneuverability, particularly where there may be debris in the road.

Detailed descriptions of roadway conditions and the possibilities for widening between Cascade and Rubicon Bay on State Route 89 (south west shore of Lake Tahoe) are provided in the Caltrans report "SR-89 Cascade to Rubicon Bay Bikeway Study".



Manholes & Drainage Grates 4.2.6 Discussion **Recommended Design** Utility infrastructure within the roadway can present *Max. 150 mm (6" spacing) significant hazards to bicyclists. Manholes, water valve covers, drain inlets and other obstructions can present an abrupt change in level, or present a situation where the bicyclist's tire could become stuck, potentially creating an accident. As such, every effort should be made to locate such * 1 hazards outside of the likely travel path of bicyclists on new roadway construction. For existing roadways, the roadway surface can be ground down around the manhole or drainage grate to be no more than half an inch of vertical drop. When roadways undergo overlays, this step is often omitted and significant elevation Direction of travel Direction of travel Direction of trave differences can result in hazardous conditions for bicyclists. В С Α Bicycle drainage grates should not have longitudinal slats **Bicycle Compatible Drainage Grates** that can catch a bicycle tire and potentially cause an accident. Acceptable grate designs are presented (top right) as A: patterned, B: transverse grate, or C: modified longitudinal with no more than 6" between transverse supports). Type C is the least desirable as it could still cause problems with some bicycle tires. The drop in-inlet shown to the right avoids all issues with grates in the bicyclists' line of travel. However, these drainage inlets are less efficient than grate inlets, and therefore require installing more closely spaced inlets, much longer inlets and perhaps supplemental means of capturing runoff. For this reason TRPA does not recommend replacing existing grate inlets with drop-in inlets, and suggests agencies weigh the additional costs of drop-in inlets in new Drop-in inlet flush with in the curb face (Oregon DOT) construction with the possible benefits. (Not approved for use on California Highways) The MUTCD recommends providing a diagonal solid white line for hazards or obstructions in bikeways (see right). Ŵ **Design Summary** Wide solid white line (see MUTCD Section 3A.06) Placement: Pier, abutment, grate or other obstruction* Manholes should be placed outside of any bike lanes. Drainage grates should be of one of the types at right. - Direction of bicycle travel L = WS, where W is the offset in feet and S is bicycle approach speed in mph Guidance * Provide an additional foot of offset for a raised obstruction and use the formula L=(W+1) S for the taper length MUTCD Figure 9C-8B (National MUTCD) Caltrans Highway Design Manual (Chapter 1000) CA MUTCD AASHTO Guide for the Development of Bicycle Facilities Cost Striping: \$2 per linear foot • Drainage grate: \$500

| 4.2.7 Bicycle Access during Construction Activities | |
|--|---|
| Discussion | Recommended Design |
| When construction impedes a bicycle facility, the provision for bicycle access should be developed during the construction project planning. Long detour routing should be avoided because of lack of compliance. Where there is no detour, provide for passage of bicyclists through or adjacent to the construction area, with signage or other indication of where cyclists should go. Advance warning of the detour should be placed at appropriate locations and clear wayfinding should be implemented to enable bicyclists to continue safe operation along travel corridor. Traffic control signs should not be placed within bike lanes or road shoulders. | M4-9a M4-9c National MUTCD |
| Design Summary | |
| Construction Detour Signs | |
| Detours should be adequately marked with standard temporary route and destination signs (M409a and M4-9c). The Pedestrian/Bicycle Detour sign should have an arrow | |
| pointing in the appropriate direction. | |
| Design Example | Guidance |
| | MUTCD (Section 6F.53) CA MUTCD California Highway Design Manual |
| | Cost |
| ALTERNATE BIKE ROUTE | • Sign, regulation: \$150 each |

CHAPTER 5 - Bicycle Intersection Design

Adequately accommodating bicyclists at traffic signals can be challenging for traffic engineers as the needs and characteristics of bicycles and motor vehicles vary so greatly. This chapter contains sections on detection of bicycles at signals, bicycle pavement markings at signals, and bicycle signals.



| Design Example | Guidance |
|---|---|
| Type "C" loop detector in use in California (Pavement stencil shown does not meet CAMUTCD) | MUTCD Caltrans Highway Design Manual (Chapter 1000) Caltrans Standard Plans (1999) ES-5B CA MUTCD AASHTO Guide for the Development of Bicycle Facilities Caltrans Traffic Operation Policy Directive 09-06 |
| | Cost |
| | Bicycle Loop Detector: \$1,000-\$2,500 each |




Bike Lane at Intersection with Right Turn Only Lane 5.1.4 Discussion Recommended Design A bicyclist continuing straight through an intersection from the right of a right turn lane would be inconsistent with normal traffic behavior and would violate the expectations of rightturning motorists. Specific signage, pavement markings and striping are recommended to improve safety for bicyclists and motorists. The appropriate treatment for right-turn only lanes is to place a bike lane pocket between the right-turn lane and the rightmost through lane or, where right-of-way is insufficient, to MUST drop the bike lane entirely approaching the right-turn lane. The design (right) illustrates a bike lane pocket, with signage indicating that motorists should yield to bicyclists through the merge area. • Dropping the bike lane is not recommended, and should Dotted lines only be done when a bike lane pocket cannot be accommodated. • Travel lane reductions may be required to achieve this design. Some communities have experimented with colored bicycle lanes through the weaving zone. See Portland's Blue Bike Lanes: http://www.portlandonline.com/shared/cfm/image.cfm?id=588 42. Where the right turn only lane is separated with a raised island, the island should be designed to allow adequate width to stripe the bike lane up to the intersection. Bike Lane Next to a Right Turn Only Lane **Design Summary Bike Lane Placement** A through bicycle lane shall not be positioned to the right of a right turn only lane. **Bike Lane Width** Bike Lane through merge area should be 4 feet minimum in width (MUTCD); 5 feet is required in California. **Bike Lane Striping** When the right through lane is dropped to become a right turn only lane, the bicycle lane markings should stop at least 100 feet before the beginning of the right turn lane. Through bicycle lane markings should resume to the left of the right turn only lane (MUTCD). Where motorist right turns are permitted, the solid bike lane shall either be dropped entirely, or dashed beginning at a point between 100 and 200 feet in advance of the intersection. Bike Lane Next to a Right Turn Only Lane Separated by a Raised Island

Design Summary (continued) Design Example Signage Refer to MUTCD and CA MUTCD. Image: Continued of the context of the con

CHAPTER 6 - Pedestrian Facility Design

Sidewalk Widths 6.1 Discussion **Recommended Design** Medium to high-density pedestrian zones located in areas with commercial or retail activity provide excellent opportunities to develop an inviting pedestrian environment. The frontage zone in retail and commercial areas may include seating for cafés and restaurants or extensions of retail establishments. The furnishings zone may include seating, transit shelters, newspaper racks, water fountains, utility boxes, lampposts, street trees and other landscaping. Property line The medium to high-density pedestrian zone should provide an interesting and inviting environment for walking and window shopping. **Design Summary** In the Lake Tahoe Region, Community Plans or local jurisdictions provide design guidelines for sidewalk widths. Width Considerations The Institute of Transportation Engineers (ITE), in its 1998 recommended practice publication, "Design and Safety of 6' min 5' min. Pedestrian Facilities," recommends planning sidewalks that Travel Lane or Parking Planter/ are a minimum of 5 feet wide with a planting strip of 2 feet on Furniture local streets and in residential and commercial areas. Zone Typical Sidewalk on Arterial/Major Collector The TRPA recommends all new development provide sidewalks that are at least five feet wide with planter strips that are at least six feet wide to accommodate snow storage with vertical curbs along arterials and major collectors. Guidance operty line • Institute of Transportation Engineers (ITE) "Design and Safety of Pedestrian Facilities" • AASHTO Guide for the Planning, Design, and Operation or Pedestrian Facilities, Section 3.2.3 2' mir 15' min Sidewa Zon Retai *Front setback varies per adiac nt deve standard Typical Commercial Area Sidewalk Cost • Sidewalk, concrete: \$3.50 - \$11.00 per square foot

6.2 Sidewalk Material

Discussion

Sidewalks should be firm and stable, and resistant to slipping. Sidewalks are normally constructed out of Portland cement concrete. Although multi-use pathways may be constructed out of asphalt, asphalt is not suitable for sidewalk construction due to its shorter lifespan and higher maintenance costs.

Asphalt and concrete are the most common surfaces for sidewalks; however, some sidewalks are designed using decorative materials, such as brick or cobblestone. Although these surfaces may improve the aesthetic quality of the sidewalk, they may also present challenges to people with mobility impairments. For example, tiles that are not spaced tightly together can create grooves that catch wheelchair casters. Concrete may not hold up as well under snowy conditions.

Facilities should be designed so that they are easy to maintain. Of particular importance is including an area for snow storage adjacent to sidewalks, on-street facilities and pathways. Currently, Caltrans and NDOT use sidewalks and paths adjacent to roadways as temporary snow storage areas, resulting in degradation and limited access.

Recommended Design



Tahoe City Sidewalk

| Design Summary | Design Example |
|--|------------------------------|
| In the Lake Tahoe Region, some Community Plans or local jurisdictions provide design guidelines for sidewalk materials. For example, the City of South Lake Tahoe City-Wide Design Standards state that sidewalks shall be constructed of asphalt (or concrete subject to City approval). The El Dorado County Transit Authority states that sidewalks should be constructed of an impervious material, such as concrete and that surfaces should be non-slip, stable, firm, and well-drained. Other jurisdictions do not recommend or require a specific material type. Asphalt • Maintenance life: 40 years plus (with no tree root damage) • Cost: \$2.89/sq ft • 20 Year Cost ³ : \$1.44/sq ft Concrete • Maintenance life: 75 years plus (with no tree root damage) (not sure is this is the maintenance life is in areas with heavy snowfall) • Cost: \$3.37/sq ft • 20 Year Cost: \$0.90/sq ft | Sphalt Surfacing (non local) |

Design Summary (continued) Design Example (continued) **Concrete Pavers** Acceptable material for use where aesthetic treatment ٠ is desired. May be best suited for the Furnishings Zone as streetscape accent where pedestrian through travel is not expected. Not recommended for use on sidewalk through-zone. Maintenance life: 20 years plus Cost: \$5.77/sq ft 20 Year Cost: \$5.77/sq ft Guidance • AASHTO Guide for the Planning, Design, and Operation or Pedestrian Facilities, Section 3.2.10

Cost

- Asphalt: \$2.89/sq ft
- Concrete: \$3.37/sq ft
- Concrete pavers: \$5.77/sq ft



Concrete Surfacing (non local)

³ The 20-year cost normalizes the cost by the useful product life.

6.3 Furnishings

Discussion

The furnishings zone is the area between the curb zone and the through passage zone, where pedestrians pass. The furnishings zone creates an important buffer between pedestrians and vehicle travel lanes by providing horizontal separation, and can also be used for snow storage in the winter time.

Design Summary

Width

A minimum width of 24 inches (48 inches if planting trees) is recommended (FHWA). On sidewalks of ten feet or greater, the furnishings zone width should be a minimum of four feet. A wider zone should be provided in areas with large planters and/or seating areas. The TRPA recommends a minimum 6 foot wide landscaped buffer on arterials and major collectors.

Transit Stop/Shelter Placement

BlueGO and Tahoe Area Regional Transit (TART) on the North Shore both have guidelines for transit shelter design and placement, which can be obtained by contacting these agencies.

Street Trees and Plantings

Wherever the sidewalk is wide enough, the furnishings zone should include street trees. In order to maintain line of sight to stop signs or other traffic control devices at intersections, when planning for new trees, care should be taken not to plant street trees within 25 feet of corners of any intersection.

Street Furniture and Amenities

Street furniture should be placed in the furnishings zone to maintain through passage zones for pedestrians and to provide a buffer between the sidewalk and the street.

Guidance

- FHWA Designing Sidewalks and Trails for Access Part II of II: Best Practices Design Guide, Chapter 4
- AASHTO, Guide for Planning, Design and Operation of Pedestrian Facilities, Section 3.2.5
- ADAAG 10.2.1
- El Dorado County Transit Authority Transit Design Manual



Design Example



| Design Summary (continued) | Cost |
|-----------------------------------|---|
| Bicycle Parking See Section 9. | Bus Shelter: \$5,340 - \$10,800 each Bus concrete pad: \$1,200 to \$6,940 each Trees: \$50 - \$880 each |

6.4 Curb Ramps

Discussion

Curb ramps are necessary for people who use wheelchairs to access sidewalks and crosswalks. ADA requires the installation of curb ramps in new sidewalks, as well as retrofitting existing sidewalks. Curb ramps may be placed at each end of the crosswalk (perpendicular curb ramps), or between crosswalks (diagonal curb ramps).

Design Summary

Orientation and Alignment

Perpendicular curb ramps should be used at large intersections. Curb ramps should be aligned with crosswalks, unless they are installed in a retrofitting effort and are located in an area with low vehicular traffic.

Drainage

Adequate drainage should be provided to prevent flooding of curb ramps.

Detectable Warnings

Detectable warnings, consisting of raised truncated domes that visually contrast with the surrounding materials, must be used to assist sight-impaired pedestrians in locating the curb ramp. Certain exemptions apply (see ADAAG Section 4.29 and the ADA Access Board Guidelines on Accessible Public Rights of Way).



Guidance

- AASHTO Guide for Planning, Design and Operation of Pedestrian Facilities, Section 3.3.5
- AASHTO Guide for the Development of Bicycle Facilities
- ADAAG, Section 4.7 Curb Ramps, and Section 4.29.2

Cost

- Curb Ramps, Retrofit (diagonal, per corner): \$800 \$5,340 each
- Curb Ramps, Retrofit (perpendicular, per corner): \$5,340 \$10,000 each

CHAPTER 7 - Pedestrian Intersection Design

Intersections designed for pedestrian activity are a critical element of the pedestrian network. Both California and Nevada law define "crosswalks" as the virtual extension of a sidewalk across an intersection. Crosswalks may be striped—a marked crosswalk—or they may be unstriped—an unmarked crosswalk. Pedestrians are legally allowed to cross at a crosswalk, whether it is unmarked or marked, as long as there are no signs prohibiting crossing.⁴

A well designed intersection with pedestrian elements can reduce potential conflicts between the many users of the intersection. There are several methods used to enhance pedestrian crossings. This chapter provides intersection design guidelines built upon TRPA existing practices, local and national best practices, and state and federal regulations. All designs should conform to the Manual on Uniform Traffic Control Devices (MUTCD) or the CA MUTCD, as appropriate.

Recommended pedestrian intersection designs outlined on the following pages include:

- 1. Crosswalk design
- 2. Crosswalk placement
- 3. Mid-block and uncontrolled crossings
- 4. Pedestrian Refuge Islands
- 5. Signage
- 6. Signalized pedestrian crossings

Beacons may also be appropriate for certain intersections or mid-block crossings (see Section 3.2.4).

⁴ See Nevada Revised Statute Section 484.043 and California Vehicle Code Division 1 Section 275.



| 7.2 Mid Block Crosswalks | |
|--|--|
| Discussion | Recommended Design |
| See Section 3.2.2 for discussion on mid-block crosswalks. | |
| Design Summary | See Section 3.2.2 for recommendations. |
| See Section 3.2.2 for additional information. | |
| Guidance | |
| See Section 3.2.2. | |
| Cost | |
| Crosswalk⁵, Transverse (parallel) Lines: \$320 - \$550 each Crosswalk, Thermoplastic: \$6 per square foot Stop Limit Bars / Yield Teeth: \$210-\$530 each set | |

⁵ Crosswalk types are discussed in Section 7.1.





| Guidance | Cost |
|---|--|
| MUTCD, Chapters 2, 7 and 9 CA MUTCD, Chapters 2, 7 and 9 AASHTO Guide for the Development of Pedestrian Facilities (p. 110) | Signs, High-Visibility: \$430 each Signs, In-Pavement Yield Paddles: \$220 each |

CHAPTER 8 - Design of Interpretive and Wayfinding Signage

| 0 | 1 | |
|---|---|--|
| Ο | | |

Interpretive Signage

Discussion **Design Example** Interpretive signs enhance the trail or bikeway experience by providing information about the history and culture of the area. Signs may discuss local ecology, people, environmental issues, and other educational information. Educational information may be placed at scenic view areas MEADOW or in relation to specific elements being interpreted. They may take on many forms including textual messages, plaques, markers, panels, and demonstrations. **Design Summary** Because interpretive signs need to relate directly to the needs of a site, no specific guidelines have been established for their format. However, interpretive signs should be concise and should be an integral part of an overall area sign plan. Cost • Signs, Path Wayfinding / Information: \$550 - \$2,000 each







CHAPTER 9 - Facilities Provided with New and Existing Development

This chapter provides design guidelines for facilities provided by new and existing development including bicycle parking, lockers, showers, and sidewalks. These facilities enhance the bicycle and pedestrian environment and are important aspects of a complete network.

End of trip bicycle facilities including bicycle parking, lockers and showers are a key element of a bicycle network. Every bicycle trip not only includes travel between destinations, it includes parking at the origin and destination. Shower and locker facilities at large commercial developments encourage bicycling by providing storage space for clothing and an opportunity to freshen up before work. Employees who exercise on their lunch break can also benefit from shower and locker facilities.

Sidewalk provision policies as a condition of development are also key to ensure a complete pedestrian network. Dedicated pedestrian facilities can make the Tahoe region's streets more vibrant and active and thereby encourage people to walk by providing an experience that is safe, comfortable and attractive.

Recommendations in this chapter are based on national best practices, Association of Bicycle and Pedestrian Professionals Draft Bike Parking Guide (2009), and TRPA policies.

Recommended Rates of Bicycle Parking

Design Summary

9.1

- All bicycle parking facilities should be dedicated for the exclusive use of bicycles.
- Short-term bicycle parking serves users who will park for less than two hours, typically for shopping and recreation. This type of parking should be convenient. Short-term parking is typically provided with bicycle racks (see table below).
- Long-term bicycle parking should serve users who park their bicycles for a period longer than two hours. This type of parking should provide a high level of security. Long-term parking is typically provided with bicycle lockers and bicycle cages (see table below).
- The rates below are minimums. Actual use of areas may indicate additional parking capacity is needed. Both short-term and long-term parking should be required.

| Land Use or Location | Physical Location | Short-Term Bicycle Parking Capacity | Long-Term Bicycle Parking Capacity |
|--|---|---|---|
| Multi-Family Residential (with private garage for each unit) | Near building entrance with good visibility | 0.05 spaces for each bedroom (2 spaces minimum for whole complex) | 0 |
| Multi-Family Residential (without private garage for each unit) | Near building entrance with good visibility | 0.05 spaces for each bedroom (2 spaces minimum) | 0.15 spaces for each bedroom (2 spaces minimum) |
| Park | Adjacent to restrooms, picnic areas, fields and other attractions | 8 spaces | 0 |
| Schools | Near office entrance with good visibility | 8 spaces | 2 spaces per 2 classrooms |
| Public Facilities (city hall, libraries, community centers) | Near main entrance with good visibility | 8 spaces | 0 |
| Commercial, retail and industrial developments over 10,000 gross square feet | Near main entrance with good visibility | 8 spaces per 10,000 square feet | 2 locker spaces per 10,000 square feet |
| Shopping Centers over 10,000 gross square feet | Near main entrance with good visibility | 8 spaces per 10,000 square feet | 2 locker spaces per 10,000 square feet |
| Commercial Districts | Near main entrance with good visibility | 4 spaces every 200 feet | 0 |
| Transit Stations | Near platform or security guard | 8 spaces | 2 locker spaces for every 30 parking spaces |
| Discussion | | Recommended Design | |
| Bicycle Parking Manufactures: Palmer: <u>www.bikeparking.cd</u> Dero: <u>www.dero.com</u> Creative Pipe: <u>www.creative</u> Cycle Safe: <u>www.cyclesafe.</u> | om epipe.com .com | See Sections 9.2 and 9.3. | |

| Guidance | Design Example |
|---|---|
| TRPA Driveway and Parking Standards (Code of Ordinances, Chapter 24) TRPA Employer Based Trip Reduction Program (Code of Ordinances, Chapter 97) Association of Bicycle and Pedestrian Professionals Draft Bicycle Parking Guidelines | |
| Cost | |
| Bicycle racks: \$150-\$200 each Bicycle lockers: \$1,350-\$2,000 each | Short-Term and Long-Term Bicycle Parking at the North Hollywood Orange Line transit station. |

9.2 Bicycle Rack Design

Design Summary

- Bicycle racks should be a design that is intuitive and easy to use.
- A standard inverted-U style rack is recommended for Lake Tahoe.
- Bicycle racks should be securely anchored to a surface or structure.
- The rack element (part of the rack that supports the bicycle) should keep the bicycle upright by supporting the frame in two places without the bicycle frame touching the rack. The rack should allow one or both wheels to be secured.
- Avoid use of multiple-capacity "wave" style racks. Users commonly misunderstand how to correctly park at wave racks, placing their bikes parallel to the rack and limiting capacity to 1 or 2 bikes.
- Position racks so there is enough room between parked bicycles. Racks should be situated on 36" minimum centers.
- A five-foot aisle for bicycle maneuvering should be provided and maintained beside or between each row of bicycle racks.
- Empty racks should not pose a tripping hazard for visually impaired pedestrians. Position racks out of the walkway's clear zone.
- For sidewalks with heavy pedestrian traffic, at least seven feet of unobstructed right-of-way is required.
- Racks should be located close to a main building entrance, in a lighted, high-visibility area protected from the elements.

Discussion

Bicycle Parking Manufactures:

- Palmer: <u>www.bikeparking.com</u>
- Dero: <u>www.dero.com</u>
- Creative Pipe: <u>www.creativepipe.com</u>
- Cycle Safe: <u>www.cyclesafe.com</u>







9.4 Showers and Lockers

Design Summary

- Two shower facilities (one per gender) should be provided by employers of 100-200 persons.
- 20 lockers (10 per gender) should be provided by employers of 100-200 persons.
- Four shower facilities (two per gender) should be provided by employers of more than 200 persons. An additional four showers (two per gender) should be provided for every additional 500 employees over the initial 200 employees.
- 40 lockers (20 per gender) should be provided by employers of more than 200 persons. An additional 20 lockers (10 per gender) should be provided for every additional 500 employees over the initial 200 employees.

Discussion

Shower and locker facilities at large commercial developments encourage bicycling by providing storage space for clothing and an opportunity to freshen up before work. Employees who exercise on their lunch break can also benefit from shower and locker facilities.

Guidance

- Association of Bicycle and Pedestrian Professionals Draft Bicycle Parking Guidelines
- City of Oakland, CA Bicycle Parking Standards

Cost

· Costs vary.

Design Example



CHAPTER 10 - Maintenance Standards

Like all roadways, bicycle and pedestrian facilities require regular maintenance. This includes sweeping, re-striping, maintaining a smooth roadway, ensuring that the gutter-to-pavement transition remains relatively flat, and installing bicycle-friendly drainage grates. Shared use paths also require regular plant trimming. The following recommendations are provided as a maintenance guideline for the Tahoe region to consider as it augments and enhances its maintenance capabilities.

Shared Use Path Maintenance Standards

Recommended Standards Summary

| Maintenance Activity | Frequency |
|--|---|
| Surface gap repair | As needed (see additional guidance below) |
| Inspections | Monthly |
| Pavement sweeping/blowing | As needed, weekly in Fall |
| Snow removal | As needed, or as feasible |
| Pavement markings replacement | 1 - 3 years |
| Signage replacement | 1 - 3 years |
| Shoulder plant trimming (weeds, trees, brambles) | Twice a year; middle of growing season and early Fall |
| Tree and shrub plantings, trimming | 1 - 3 years |
| Major damage response (washouts, fallen trees, flooding) | As soon as possible |

SURFACE GAP REPAIR

Path Surface

10.1

• The surface of the pedestrian access route shall be firm, stable and slip resistant (Draft Guidelines for Public Rights of Way, Section R301.5).

Vertical Changes in Level

- Changes in level up to ¼ inch may be vertical and without edge treatment. Changes in level between ¼ inch and ½ inch shall be beveled with a slope no greater than 1:2. Changes in level greater than ½ inch shall be accomplished by means of a ramp that complies with ADAAG Section 4.7 or 4.8 (ADAAG Section 4.5.2).
- Surface discontinuities shall not exceed ½ inch maximum. Vertical discontinuities between ¼ inch and ½ inch maximum shall be beveled at 1:2 minimum. The bevel shall be applied across the entire level change (Draft Guidelines for Public Rights of Way, Section R301.5.2).

Gaps and Elongated Openings

- If gratings are located in walking surfaces, then they shall have spaces no greater than ½ inch wide in one direction. If gratings have elongated openings, then they shall be placed so that the long dimension is perpendicular to the dominant direction of travel (ADAAG Section 4.5.4).
- Walkway Joints and Gratings. Openings shall not permit passage of a sphere more than ½ inch in diameter. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel (Draft Guidelines for Public Rights of Way, Section R301.7.1).

| Discussion | Maintenance Challenges | |
|---|--|--|
| Basic Maintenance Path pavement should be repaired as need to avoid safety issues and to ensure ADA compliance. Paths should be swept regularly. Shoulder vegetation should be cleared and trimmed regularly. Long-Term Maintenance Paths should be slurry sealed, at minimum, 10 years after construction. Paths should receive an overlay, at minimum, 15 years after construction. Agencies or districts with dedicated funding for maintenance generally provide more maintenance activities. Guidance ADAAG | Most agencies pay for sidewalk and path maintenance of their maintenance and operations budget. This funding is generally enough to provide seasonal maintenance, is not enough to fund long-term preventative maintenance, is not enough to fund long-term preventative maintenance. Grant funding is not generally available for maintenance activities. Path use may not be high enough in winter to war clearing snow. If snow is removed from paths, snow must be removed enough back from the pavement so that it does not many paths because they are adjacent to the lake sanding increases costs. Small plows, which have been purchased by some L Tahoe agencies, are not strong enough to clear he snows or densely packed snows. | |
| Draft Guidelines for Public Rights of Way (2005) | | |
| | Design Example | |
| | | |
| Cost | | |
| • \$1,000-14,000 per mile per year | | |

On-Street Facility Maintenance Standards

Recommended Standards Summary

| Maintenance Activity | Frequency |
|--|--|
| Inspections | Seasonal - at beginning and end of Summer |
| Pavement sweeping/blowing | As needed, weekly in Fall |
| Snow removal | As needed, or as feasible |
| Pavement sealing, potholes | 5 - 15 years |
| Culvert and drainage grate inspection | Before Winter and after major storms |
| Pavement markings replacement (including crosswalks) | 1 - 3 years |
| Signage replacement | 1 - 3 years |
| Shoulder plant trimming (weeds, trees, brambles) | Twice a year; middle of growing season and early Fall |
| Tree and shrub plantings, trimming | 1 - 3 years |
| Major damage response (washouts, fallen trees, flooding) | As soon as possible |

NOTE: Caltrans recommends tolerance of surface discontinuities no more than ½ inch wide when parallel to the direction of travel on bike lanes (Class II) and bike routes (Class III).

Discussion

10.2

Basic Maintenance

Bicyclists often avoid shoulders and bike lanes filled with sanding materials, gravel, broken glass and other debris; they will ride in the roadway to avoid these hazards, causing conflicts with motorists. A regularly scheduled inspection and maintenance program helps ensure that roadway debris is regularly picked up or swept. Roadways should also be swept after automobile collisions.

Long-Term Maintenance

Roadway surface is a critical issue for bicyclists' quality. Bicycles are much more sensitive to subtle changes in roadway surface than are motor vehicles. Examine pavement quality and transitions during every roadway project for new construction, maintenance activities, and construction project activities that occur in streets.

Cost

• \$2,000 per mile per year



Street Sweeper

A

AASHTO

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Figure 8: Existing Bicycle and Pedestrian Network Map



Figure 9: Major Trip Generators and Land Uses



Figure 10: Bicycle and Pedestrian Collisions, 2004-2008



Figure 10: Bicycle and Pedestrian Collisions, 2004-2008, East Shore



Figure 10: Bicycle and Pedestrian Collisions, 2004-2008, South Shore



Figure 10: Bicycle and Pedestrian Collisions, 2004-2008, Meyers



Figure 10: Bicycle and Pedestrian Collisions, 2004-2008, Emerald Bay



Figure 10: Bicycle and Pedestrian Collisions, 2004-2008, West Shore



Figure 10: Bicycle and Pedestrian Collisions, 2004-2008, North Shore






Figure 11: Existing and Proposed Bicycle and Pedestrian Network, South Shore Bikeways



Figure 11: Existing and Proposed Bicycle and Pedestrian Network, South Shore Sidewalks



Figure 11: Existing and Proposed Bicycle and Pedestrian Network, Meyers

Figure 11: Existing and Proposed Bicycle and Pedestrian Network, West Shore

Figure 11: Existing and Proposed Bicycle and Pedestrian Network, North Shore

Figure 12: Shared-Use Path Sidewalk Maintenance, South Shore

Figure 12: Shared-Use Path Sidewalk Maintenance, Meyers

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| | Sidewalks Requiring Winter Mainte | enance 💻 | | |
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Figure 12: Shared-Use Path Sidewalk Maintenance, West Shore

| Classification | Location | Segment Name | From | То | Distance in Miles |
|----------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------|
| C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | | COLLEGE AVE | PIONEER TRAIL | 1. |
| C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | COMMUNITY PLAYFIELDS | AL TAHOE BLVD | LAKE TAHOE COMMUNITY COLLEGE | 0. |
| C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | EL DORADO BEACH | FREMONT AVE | | 0.4 |
| C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | LAKE TAHOE COMMUNITY COLLEGE (WEST) | AL TAHOE BLVD | LAKE TAHOE COMMUNITY COLLEGE | 0. |
| C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | LAKE TAHOE COMMUNITY COLLEGE (EAST) | AL TAHOE BLVD | LAKE TAHOE COMMUNITY COLLEGE | 0. |
| C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | LAKE TAHOE COMMUNITY COLLEGE | SOUTH TAHOE PUBLIC UTILITY DISTRICT | LAKE TAHOE COMMUNITY COLLEGE | 0. |
| C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | LINEAR PARK | SKI RUN BLVD | PIONEER TRAIL | 0. |
| C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | LINEAR PARK SPUR | BEHIND MCDONALDS | SKI RUN MARINA | 0. |
| C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | LYONS AVE | RUFUS ALLEN BLVD | US HWY 50 | 0. |
| C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | N.SIDE OFB.ST | PARKING LOT | HELEN AVE | 0.0 |
| C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | N.SIDE OFB.ST | PARKING LOT | SOUTH AVE | 0.0 |
| C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | SKI RUN BLVD (SOUTH SIDE) | US HWY 50 | | 0. |
| C-1/SHARED USE PATH | | SKI RUN BLVD (NORTH SIDE) | | | 0. |
| C-1/SHARED USE PATH | | | | | 0.0 |
| C-1/SHARED USE PATH | | | | | 0.1 |
| C-1/SHARED USE PATH | | | | | 0. |
| C-1/SHARED USE PATH | | | | | 0 |
| C-1/SHARED USE PATH | | | | | 0. |
| | | | | | 0. |
| C-1/SHARED USE PATH | | | | | 0.4 |
| C-1/SHARED USE PATH | | | | | 1. |
| C-1/SHARED USE PATH | | | | | 0. |
| | | | | | 0 |
| | | PAT LOWE (NORTH) | | | 0. |
| | | | | | 1 |
| | | | | | |
| C-1/SHARED USE PATH | | | | HERITAGE WAY (VISITOR CENTER) | 0. |
| C-1/SHARED USE PATH | | | | | 0. |
| C-1/SHARED LISE PATH | | | HERITAGE WAY (VISITOR CENTER) | SPRING CREEK ROAD | 1 |
| C-1/SHARED USE PATH | | | | GENERAL CREEK (SUGAR PINE STATE PAR | / <u></u> 1 |
| C-1/SHARED USE PATH | EL DORADO COUNTY | WEST SHORE BIKE TRAIL | GENERAL CREEK | SUGAR PINE STATE PARK | 0 |
| C-1/SHARED USE PATH | PLACER COUNTY | 64-ACRES | | FANNY BRIDGE | 0. |
| C-1/SHARED USE PATH | PLACER COUNTY | 64-ACRES | 64-ACRES ENTRANCE | FANNY BRIDGE | 0. |
| C-1/SHARED USE PATH | PLACER COUNTY | 64-ACRES | 64-ACRE ENTRANCE | | 0./ |
| C-1/SHARED USE PATH | PLACER COUNTY | | NORTH TAHOF REGIONAL PARK | | 1. |
| C-1/SHARED USE PATH | PLACER COUNTY | SACRAMENTO AVE (HOMEWOOD) | HOMEWOOD PARKING LOT | TAHOE SKI BOWL WAY | 0.4 |
| C-1/SHARED USE PATH | PLACER COUNTY | STATE ROUTE 28 | BURTON CREEK STATE PARK | LAKEFOREST ROAD | 1. |
| C-1/SHARED USE PATH | PLACER COUNTY | STATE ROUTE 28 | LAKEFOREST ROAD | DOLLAR DRIVE | 0. |
| C-1/SHARED USE PATH | PLACER COUNTY | TRUCKEE RIVER TRAIL | TRUCKEE RIVER BRIDGE | BASIN BOUNDARY | 3. |
| C-1/SHARED USE PATH | PLACER COUNTY | TRUCKEE RIVER TRL | TRUCKEE RIVER BRIDGE | FAIRWAY DRIVE | 0. |
| C-1/SHARED USE PATH | PLACER COUNTY | TRUCKEE RIVER TRL | 64-ACRES | STATE ROUTE 89 | 0.0 |
| C-1/SHARED USE PATH | PLACER COUNTY | WEST SHORE BIKE TRAIL | 64-ACRE ENTRANCE | SEQUOIA XING | 1.2 |
| C-1/SHARED USE PATH | PLACER COUNTY | WEST SHORE BIKE TRAIL | SEQUOIA XING | WILLIAM KENT CAMPGROUND | 0. |
| C-1/SHARED USE PATH | PLACER COUNTY | WEST SHORE BIKE TRAIL | WILLIAM KENT CAMPGROUND | Chinquapin Xing | 0.3 |
| C-1/SHARED USE PATH | PLACER COUNTY | WEST SHORE BIKE TRAIL | CHINQUAPIN XING | TIMBERLAND LANE | 0. |
| C-1/SHARED USE PATH | PLACER COUNTY | WEST SHORE BIKE TRAIL | TIMBERLAND LANE | RUBICON AVE | 1. |
| C-1/SHARED USE PATH | PLACER COUNTY | WEST SHORE BIKE TRAIL | RUBICON AVE | CHERRY STREET | 0.1 |
| C-1/SHARED USE PATH | PLACER COUNTY | WEST SHORE BIKE TRAIL | FREMONT WAY | EL DORADO COUNTY LINE | 1.0 |
| C-1/SHARED USE PATH | WASHOE COUNTY | LAKESHORE BLVD | WEST TERMINUS PARK | EAST TERMINUS PARK | 2.9 |
| C-1/SHARED USE PATH | WASHOE COUNTY | MAYS BLVD | LAKESHORE BLVD | ALLEN WAY | 0. |
| C-1/SHARED USE PATH | WASHOE COUNTY | MAYS BLVD | BURNT CEDAR CREEK | SOUTHWOOD BLVD | 0. |
| C-1/SHARED USE PATH | WASHOE COUNTY | | VILLAGE BLVD (NORTH) | MIDBLOCK CROSSING | 0. |
| C-1/SHARED USE PATH | WASHOE COUNTY | NORTHWOOD BLVD | MIDBLOCK CROSSING | STATE ROUTE 28 | 0. |
| C-1/SHARED USE PATH | WASHOE COUNTY | OLD MT ROSE HWY | DIRT PARKING AREA | BASIN BOUNDARY | 2. |
| C-1/SHARED USE PATH | WASHOE COUNTY | SOUTHWOOD BLVD | STATE ROUTE 28-SKATE PARK | INCLINE WAY | 0.0 |
| C-1/SHARED USE PATH | WASHOE COUNTY | SOUTHWOOD BLVD | STATE ROUTE 28 | | 0.4 |
| C-1/SHARED USE PATH | WASHOE COUNTY | SOUTHWOOD BLVD | STATE ROUTE 28 | VILLAGE BLVD (SOUTH) | 0. |
| C-1/SHARED USE PATH | WASHOE COUNTY | SOUTHWOOD BLVD | SOUTHWOOD BLVD | SKATE PARK | 0. |
| C-1/SHARED USE PATH | | VILLAGE BLVD (SOUTH) | | | 0. |
| C-1/SHARED USE PATH | | | | | 0. |
| C-1/SHARED USE PATH | | | | STATE KUUTE 28 | 0. |
| C-1/SHAKED USE PATH | WASHUE COUNTY | VILLAGE BLVD (SOUTH) | STATE KUUTE 28 | 2001HM00D READ | 0.3 |

| Classification | Location | Segment Name | From | То | Distance in Mile: |
|----------------|--------------------------|-----------------------------------|---|-----------------------------------|-------------------|
| C-2/BIKE LANES | CITY OF SOUTH LAKE TAHOE | 15TH STREET | VENICE DRIVE | ELOISE AVE | 0. |
| C-2/BIKE LANE | | B STREET | US HWY 50 | MELBA SOUTH AVE | 0. |
| C-2/BIKE LANES | CITY OF SOUTH LAKE TAHOE | HELEN AVE | SOUTH AVE | WINNEMUCCA AVE | 0 |
| C-2/BIKE LANES | CITY OF SOUTH LAKE TAHOE | JOHNSON LN | FAIRWAY AVE | AL TAHOE BLVD | 0 |
| C-2/BIKE LANES | CITY OF SOUTH LAKE TAHOE | LAKE TAHOE BLVD | GLORENE AVE | D STREET | 0 |
| C-2/BIKE LANES | | LAKEVIEW AVE | US HWY 50 | BERKELEY AVE | 0 |
| C-2/BIKE LANES | | PARK AVE PIONFER ΤRΔΙΙ | US HWY 50 US HWY 50 (SOUTH LAKE TAHOE) | VAN SICKLE ROAD GLEN ROΔD | 0 |
| C-2/BIKE LANES | CITY OF SOUTH LAKE TAHOE | PIONEER TRAIL | GLEN ROAD | BLACK BART | 3 |
| C-2/BIKE LANES | CITY OF SOUTH LAKE TAHOE | SIERRA BLVD | PALMIRA AVE | FOUNTAIN AVE | 0 |
| C-2/BIKE LANES | CITY OF SOUTH LAKE TAHOE | TAHOE KEYS BLVD | ELOISE AVE | VENICE DRIVE | 0, |
| C-2/BIKE LANES | | | | | 0 |
| C-2/BIKELANES | | LENS POINT ROAD | | ANGORA CREEK COURT | 0. |
| C-2/BIKE LANES | EL DORADO COUNTY | NORTH UPPER TRUCKEE | LAKE TAHOE BLVD | US HWY 50 | 2 |
| C-2/BIKE LANES | EL DORADO COUNTY | PIONEER TRAIL | BLACK BART | GLEN EAGLES ROAD | 2. |
| C-2/BIKE LANES | EL DORADO COUNTY | PIONEER TRAIL | GLEN EAGLES ROAD | US HWY 50 (MEYERS) | 1. |
| C-2/BIKE LANES | | | STATE ROUTE 28 | | 0. |
| C-2/BIKE LANES | | STATE ROUTE 267 | SUMMII | U.6 MILES SOUTH OF SUMMIT | 0. |
| C-2/BIKE LANES | WASHOE COUNTY | STATE ROUTE 28 | LAKESHORE BLVD (WEST) | SOUTHWOOD BLVD | 1 |
| C-2/BIKE LANES | WASHOE COUNTY | STATE ROUTE 28 | SOUTHWOOD BLVD | LAKESHORE BLVD (EAST) | 1. |
| C-3/BIKE ROUTE | CITY OF SOUTH LAKE TAHOE | PONDEROSA | SILVER DOLLAR | CLASS I BIKE PATH | 0. |
| C-3/BIKE ROUTE | CITY OF SOUTH LAKE TAHOE | 10TH STREET (WEST) | STATE ROUTE 89 | TAYLOR WAY | 0. |
| | | | | | 0. |
| C-3/BIKE ROUTE | | BLACKWOOD ROAD | PIONEER TRAII | | 0. |
| C-3/BIKE ROUTE | CITY OF SOUTH LAKE TAHOE | ELOISE AVE | SOUTH LAKE TAHOE BIKE PATH NEAR TAH | 15TH STREET | 1. |
| C-3/BIKE ROUTE | CITY OF SOUTH LAKE TAHOE | RIVER DRIVE/WILLIAM STREET | US HWY 50 | SIERRA BLVD | 0 |
| C-3/BIKE ROUTE | CITY OF SOUTH LAKE TAHOE | RUBICON TRAIL | MACKINAW | SUSSEX AVE | 0 |
| C-3/BIKE ROUTE | | | US HWY 50 | LYONS AVE | 0. |
| | | STATE ROUTE 89 (EMERALD BAY ROAD) | | CLASS 1 BIKE DATH | I. 0 |
| C-3/BIKE ROUTE | CITY OF SOUTH LAKE TAHOE | TAHOE ISLAND DRIVE/12 STREET | TAHOE KEYS BLVD | ELOISE AVE | |
| C-3/BIKE ROUTE | CITY OF SOUTH LAKE TAHOE | TAMARACK AVE | PIONEER TRAIL | BLACKWOOD ROAD | 0 |
| C-3/BIKE ROUTE | CITY OF SOUTH LAKE TAHOE | WILLIAM ST/RIVER DRIVE | RIVER DRIVE/US HWY 50 | BLUE LAKE AVE | 0. |
| C-3/BIKE ROUTE | EL DORADO COUNTY | STATE ROUTE 89 | CASCADE ROAD | EMERALD BAY | 3. |
| | | | | STATE ROUTE 89 (NEAR FREMONT WAY) | 0. |
| C-3/BIKE ROUTE | PLACER COUNTY | STATE ROUTE 89 | CHERRY STREET | | |
| C-3/BIKE ROUTE | PLACER COUNTY | STATE ROUTE 89 | TAHOE SKI BOWL WAY | MCKINNEY DRIVE | 0 |
| C-3/BIKE ROUTE | WASHOE COUNTY | MOUNT ROSE HWY | BASIN BOUNDARY | STATE ROUTE 28 | 6 |
| PED | CITY OF SOUTH LAKE TAHOE | AL TAHOE BLVD | US HWY 50 | JOHNSON BLVD | 0. |
| | | | | | 0. |
| PED | CITY OF SOUTH LAKE TAHOE | US HWY 50 (EAST SIDE) | WILDWOOD AVE | MIDWAY ROAD | 0 |
| PED | CITY OF SOUTH LAKE TAHOE | US HWY 50 (EAST SIDE) | PIONEER TRAIL | PARK AVE | 0 |
| PED | CITY OF SOUTH LAKE TAHOE | US HWY 50 (EAST SIDE) | PARK AVE | STATELINE AVE | 0. |
| PED | | US HWY 50 (WEST SIDE) | | | 0 |
| | | US HWY SU (WEST SIDE) | | BIJOU CREEK SOUTH TAHOE "Y" | 0 |
| PED | CITY OF SOUTH LAKE TAHOE | LAKE TAHOE BLVD (WEST SIDE) | SOUTH TAHOE "Y" | D STREET | 0 |
| PED | CITY OF SOUTH LAKE TAHOE | US HWY 50 ("Y" TOWARDS MEYERS) | SOUTH TAHOE "Y" | F STREET | 0. |
| PED | DOUGLAS COUNTY | US HWY 50 | KAHLE DRIVE | KINGSBURY GRADE | 0 |
| PED | DOUGLAS COUNTY | HWY 50 (EAST SIDE) | | | 0 |
| | | KINGSBURY GRADE | LAKE PARKWAT | | 0. |
| | | | TAHOE STATE RECREATION AREA | | 0. |
| PED | PLACER COUNTY | STATE ROUTE 89 | TRUCKEE RIVER OUTLET | BURTON CREEK STATE PARK | 0. |
| PED | WASHOE COUNTY | COUNTRY CLUB DRIVE (WEST SIDE) | STATE ROUTE 28 | INCLINE WAY | 0. |
| PED | | | | | 0 |
| | | | | | 0 |
| PED | WASHOE COUNTY | STATE ROUTE 28 (NORTH SIDE) | NORTHWOOD BLVD | VILLAGE BLVD | 0 |
| PED | WASHOE COUNTY | STATE ROUTE 28 (NORTH SIDE) | VILLAGE BLVD | 3RD CREEK TOWNHOMES | 0 |
| PED | WASHOE COUNTY | STATE ROUTE 28 (SOUTH SIDE) | STONE CIRCLE | VILLAGE BLVD | 0. |
| PED | | STATE ROUTE 28 (SOUTH SIDE) | | | 0. |
| | | STATE KOUTE 28 (SOUTH SIDE) | | | 0 |
| ΤΟΤΔΙ | | TANAULINOT | | | 0 |
| | 1 | | | | |

Table 17. Existing Bicycle and Pedestrian NetworkClass II/Bike LaneClass III/Bike RoutePedestrian Facilities

 Table 18: Proposed Bicycle and Pedestrian Project List, Class I/Shared Use Path
 Notes:

Mileage is calculated from GIS, not mileposts.
 Costs for Caltrans projects use the "Conceptual Unit Cost Estimates". Since these projects are constructed concurrently with water quality work, actual costs of the bicycle or pedestrian component are difficult to extract.

| EIP#/C | Caltrans | | | | _ | | | Cost per mile | | _ |
|--------|---------------------------|----------------------|--------------------------------------|-----------------------------------|--------------------------|-------------------------------|-----------|---------------|--------------------------|-------------------------|
| EA# | Class | Location | Ownership | Name | From | То | Miles (1) | (2) | Total Cost | Status |
| | 766 C-1/SHARED USE PATH | EL DORADO COUNTY | EL DORADO COUNTY | STATE ROUTE 89 | Spring Creek Road | CASCADE ROAD | 0.51 | \$4,000,000 | \$2,048,329 | ; ; ; ; ; |
| | 738 C-1/SHARED USE PATH | EL DORADO COUNTY | EL DORADO COUNTY | | US HWY 50 | SANTA CLAUS DR | 1.48 | \$3.157.687 | \$4.665.000 | |
| | 738 C-1/SHARED USE PATH | EL DORADO COUNTY | EL DORADO COUNTY | VALLEY | SANTA CLAUS DR | PORTAL | 0.95 | \$4.000.000 | \$3.810.534 | |
| | C-1/SHARED USE PATH | EL DORADO COUNTY | EL DORADO COUNTY | US HWY 50 | | SAWMILL BLVD | 1.31 | \$2.000.000 | \$2,628,184 | |
| | C-1/SHARED USE PATH | EL DORADO COUNTY | EL DORADO COUNTY | US HWY 50 - MEYERS PATH EXTENSION | EXISTING CLASS I | NORTH UPPER TRUCKEE ROAD | 0.46 | \$2,000,000 | \$918,604 | |
| 764C | C-1/SHARED USE PATH | EL DORADO COUNTY | TCPUD | WEST SHORE BIKE TRAIL EXTENSION | MEEKS BAY | SUGAR PINE POINT STATE PARK | 0.70 | \$3,000,000 | \$2,099,844 | PRELIMIINARY |
| 764A | C-1/SHARED USE PATH | EL DORADO COUNTY | CA STATE PARKS | WEST SHORE TRAIL | EMERALD BAY SERVICE ROAD | DL BLISS STATE PARK | 0.73 | \$4.000.000 | \$2.914.307 | |
| 764B | C-1/SHARED USE PATH | EL DORADO COUNTY | EL DORADO COUNTY | WEST SHORE TRAIL | DL BLISS NORTH ENTRANCE | RUBICON DRIVE | 1.56 | \$2.000.000 | \$3.112.939 | |
| | C-1/SHARED USE PATH | EL DORADO COUNTY | EL DORADO COUNTY | WEST SHORE TRAIL | MEEKS BAY AVE | NORTH END OF MEEKS BAY | 0.51 | \$2.000.000 | \$1.020.326 | |
| | 752 C-1/SHARED USE PATH | COUNTY/CITY OF SOUTH | CALIFORNIA TAHOE CONSERVANCY | SOUTH TAHOE GREENWAY | SIERRA TRACT | MEYERS | 5.67 | \$2.500.000 | \$14,187,302 | ENVIRONMENTAL REVIEW |
| | 775 C-1/SHARED USE PATH | I PLACER COUNTY | TCPUD | HOMEWOOD MULTI-USE TRAIL | FAWN STREET | CHERRY STREET | 0.85 | \$2.474.462 | \$2.103.293 | PRELIMINARY PLANNING |
| | C-1/SHARED USE PATH | PLACER COUNTY | PLACER COUNTY | LAKE FOREST RD | EXISTING BIKE PATH | LAKE FOREST CAMPGROUND | 0.11 | \$1,000,000 | \$106,900 | FINAL DESIGN |
| | C-1/SHARED USE PATH | PLACER COUNTY | PLACER COUNTY | LAKE FOREST ROAD | SKYLANDIA PARK | STATE ROUTE 28 | 0.18 | \$1.000.000 | \$184.199 | IN CONSTRUCTION |
| | 763 C-1/SHARED USE PATH | I PLACER COUNTY | TCPUD | LAKESIDE TRAIL PHASE 2C | MACKINAW RD | COMMONS BEACH | 0.30 | \$10.000.000 | \$3.000.000 | ENVIRONMENTAL REVIEW |
| | 763 C-1/SHARED USE PATH | I PLACER COUNTY | TCPUD | LAKESIDE TRAIL PHASES V. VI. VII | GROVE STREET | STATE ROUTE 28 | 1.10 | \$4.462.209 | \$4.908.430 | Permit Approved |
| | 10038 C-1/SHARED USE PATH | I PLACER COUNTY | NTPUD | NATIONAL AVENUE | STATE ROUTE 28 | NORTH TAHOE REGIONAL PARK | 0.75 | \$1.000.000 | \$746.373 | |
| | C-1/SHARED USE PATH | I PLACER COUNTY | PLACER COUNTY | NATIONAL AVENUE EAST SIDE | TOYON RD/CONNECTION WITH | EXISTING FOREST SERVICE TRAIL | 0.24 | \$2,000,000 | \$480,000 | |
| | 761 C-1/SHARED USE PATH | I PLACER COUNTY | NTPUD | NORTH TAHOE BIKE PATH | DOLLAR HILL | NORTH TAHOE REGIONAL PARK | 8.00 | \$2.000.000 | \$16.000.000 | ENVIRONMENTAL REVIEW |
| | C-1/SHARED USE PATH | I PLACER COUNTY | PLACER COUNTY | NORTHSTAR TRAIL | BASIN BOUNDARY | STATE ROUTE 28 | 1.78 | \$2.000.000 | \$3.568.113 | |
| | C-1/SHARED USE PATH | I PLACER COUNTY | PLACER COUNTY | NORTHSTAR TRAIL | BASIN BOUNDARY | NORTH TAHOE REGIONAL PARK | 1.82 | \$2.000.000 | \$3.634.733 | |
| | C-1/SHARED USE PATH | I PLACER COUNTY | TCPUD/CALTRANS | SUNNYSIDE TO SEQUOIA TRAIL | SUNNYSIDE RESORT | Lower Sequoia/Sr 89 | 0.65 | \$1,500,000 | \$975,000 | |
| | C-1/SHARED USE PATH | WASHOE COUNTY | WASHOE COUNTY | ALDER AVE | NORTHWOOD BLVD | VILLAGE BLVD | 0.47 | \$1,000,000 | \$467,187 | |
| | 757 C-1/SHARED USE PATH | WASHOE COUNTY | WASHOE COUNTY | INCLINE WAY | SOUTHWOOD BLVD | INCLINE CREEK | 0.37 | \$1.000.000 | \$374.636 | |
| | C-1/SHARED USE PATH | WASHOE COUNTY | NDOT | NV STATELINE TO STATELINE BIKEWAY | STATELINE ROAD | LAKESHORE DRIVE (WEST) | 2.15 | \$4.000.000 | \$8.583.035 | PRELIMINARY PLANNING |
| | 847 C-1/SHARED USE PATH | WASHOE COUNTY | WASHOE COUNTY/NDOT/NV STATE PARKS | NV STATELINE TO STATELINE BIKEWAY | INCLINE VILLAGE | Sand Harbor | 2.49 | \$8.000.000 | \$19.941.899 | PRELIMINARY PLANNING |
| | 846 C-1/SHARED USE PATH | WASHOE COUNTY | DOUGLAS COUNTY | NV STATELINE TO STATELINE BIKEWAY | Sand Harbor | CARSON CITY COUNTY LINE | 2.41 | \$4,000,000 | \$9,643,279 | FEASIBILITY STUDY |
| | 758 C-1/SHARED USE PATH | WASHOE COUNTY | WASHOE COUNTY | NORTHWOOD BLVD | VILLAGE BLVD-EAST | STATE ROUTE 28 | 0.58 | \$2.000.000 | \$1.166.985 | |
| | C-1/SHARED USE PATH | WASHOE COUNTY | WASHOE COUNTY | OLD MT ROSE HWY | DIRT PARKING LOT | BASIN BOUNDARY | 2.54 | \$1.000.000 | \$2,542,848 | |
| | C-1/SHARED USE PATH | WASHOE COUNTY | WASHOE COUNTY | STATE ROUTE 28 (NORTH SIDE) | PRESTON FIELD | NORTHWOOD BLVD | 0.30 | \$2.000.000 | \$591.559 | |
| | C-1/SHARED USE PATH | WASHOE COUNTY | WASHOE COUNTY | TANAGER STREET | ORIOLE WAY | Southwood BLVD | 0.09 | \$1,000,000 | \$89,624 | |
| | C-1/SHARED USE PATH | WASHOE COUNTY | WASHOE COUNTY | VILLAGE GREEN | RECREATION CENTER PATH | Lakeshore BLVD | 0.20 | \$1,000,000 | \$199,8 <mark>4</mark> 2 | |

| EIP#/Cal | trans | | | | | | | Cost per mile | | |
|-----------------|--------------------|--------------------|--------------------------|---------------------------------|----------------------------------|-----------------------|-----------|---------------|--|-----------------|
| EA# | Class | Location | Ownership | Name | From | То | Miles (1) | (2) | Total Cost | Status |
| | | | | LAKE TAHOE SCENIC BIKE LOOP-NSR | | | | | | 1 |
| | WIDE SHOULDER | CARSON CITY | NDOT | 28 | CARSON CITY COUNTY LINE | SPOONER SUMMIT | 5.14 | \$5,000 | \$25,702 | |
| | 1 | CITY OF SOUTH LAKE | | | | | | | | |
| | C-2/BIKE LANE | TAHOE | CITY OF SOUTH LAKE TAHOE | AL TAHOE BLVD | US HWY 50 | PIONEER BLVD | 1.55 | \$500,000 | \$775,061 | |
| | | CITY OF SOUTH LAKE | | | | | | | | |
| | C-2/BIKE LANE | | CITY OF SOUTH LAKE TAHOE | GLENWOOD AVE | BLACKWOOD RD | | 0.25 | \$500,000 | \$125,818 | |
| | | CITY OF SOUTH LAKE | | | | GLORENE INTERSECTION | 0.17 | ¢500.000 | ሰ ዓጋ ⊑11 | |
| | C-2/BIKE LAINE | | CITT OF SOUTH LAKE TAHOE | | | CONNECTOR | 0.17 | \$200,000 | \$02,511 | |
| | C-2/RIKE LANE | | CITY OF SOUTH LAKE ΤΑΗΟΕ | PARK AVE (FAST) | EXISTING BIKE LANE | MONTREAL ROAD | 0.06 | \$500.000 | \$28.026 | |
| | | CITY OF SOUTH LAKE | | | | | 0.00 | \$300,000 | | |
| 1 | 0037 C-2/BIKE LANE | TAHOE | CITY OF SOUTH LAKE TAHOE | PINE BLVD | STATELINE AVE | PARK AVE | 0.37 | \$5,000 | \$1,827 | |
| | | CITY OF SOUTH LAKE | | 1 | | PALMIRA INTERSECTION | - 4 | | | |
| | C-2/BIKE LANE | TAHOE | CITY OF SOUTH LAKE TAHOE | SIERRA BLVD | US HWY 50 | CONNECTOR | 0.50 | \$500,000 | \$250,000 | |
| | | CITY OF SOUTH LAKE | | | | | | | | |
| | C-2/BIKE LANE | TAHOE | CITY OF SOUTH LAKE TAHOE | SKI RUN BLVD | US HWY 50 | PIONEER BLVD | 0.56 | \$500,000 | \$278,513 | |
| 14 (02 | | | | | | | | | | 95% DESIGNCII |
| NA/03- | | CITY OF SOUTH LAKE | | STATE ROUTE 89-EMERALD BAY | | CITY OF SOUTH LAKE | 1.20 | ¢5 000 | ¢C 701 | NEEDS TO BE |
| 1 A842 | C-2/BIKE LANE | | CALTRANS | KUAD | SOUTH TAHOE "Y" | TAHUE CITY LIMITS | 1.36 | \$5,000 | \$6,791 | KEINSTATED HERE |
| NA/03- | | | CALTRANS | | | | 1 90 | ¢4 000 000 | ¢7 572 067 | |
| NA/03- | C-2/ DIKE LAINE | | | | | | 1.09 | \$4,000,000 | \$7,373,007 | 00% DESIGN |
| 1A733 | C-2/BIKE LANE | | CAI TRANS | US HWY 50 (PM 77.3/79.3) | SKI RUN BI VD | TROUT CREEK | 1.95 | \$9.000.000 | \$17.591.210 | 95% DESIGN |
| NA/03- | | CITY OF SOUTH LAKE | | | | | | \$010001000 | <i>•••••••••••••••••••••••••••••••••••••</i> | |
| 1A734 | C-2/BIKE LANE | TAHOE | CALTRANS | US HWY 50 (PM 79.3/80.4) | STATELINE RD | SKI RUN BLVD | 1.15 | \$8,000,000 | \$9,185,518 | |
| | C-2/BIKE LANE | DOUGLAS COUNTY | DOUGLAS COUNTY | KAHLE DRIVE | US HWY 50 | ARTHUR DRIVE | 0.36 | \$500,000 | \$180,000 | |
| | C-2/BIKE LANE | DOUGLAS COUNTY | DOUGLAS COUNTY | LAKE PARKWAY (WEST) | US HWY 50 | STATELINE AVE | 0.45 | \$500,000 | \$226,469 | |
| | 777 C-2/BIKE LANE | DOUGLAS COUNTY | DOUGLAS COUNTY | LAKE PARKWAY EAST (LOOP ROAD) | PARK AVE | US HWY 50 | 0.83 | \$500,000 | \$415,453 | |
| | WIDE SHOULDER | DOUGLAS COUNTY | DOUGLAS COUNTY | | US HWY 50 | | 3.11 | \$5,000,000 | \$15,542,663 | |
| | | | NDOT | | | | 1 50 | ¢5 000 | # 7.005 | |
| | 753 WIDE SHOULDER | DOUGLAS COUNTY | | | | (KUAD) | 1.58 | \$5,000 | \$7,885 | |
| | | | NDOT | | | STATELINE AVE | 0.36 | \$5,000 | ¢1 703 | |
| | | | | | | | 0.30 | \$3,000 | \$1,735 | |
| | 753 WIDE SHOULDER | DOUGLAS COUNTY | NDOT | SKYLAND | GLENBROOK | ELKS POINT ROAD | 7.88 | \$5.000 | \$39.382 | |
| | | | | LAKE TAHOE SCENIC BIKE LOOP- | 1 | | | | | |
| | 753 WIDE SHOULDER | DOUGLAS COUNTY | NDOT | SKYLAND | SPOONER SUMMIT | GLENBROOK | 2.48 | \$5,000 | \$12,401 | |
| | C-2/BIKE LANE | EL DORADO COUNTY | EL DORADO COUNTY | APACHE AVENUE (WEST) | US HWY 50 | MEYERS ELEMENTARY | 0.42 | \$5,000 | \$2,099 | |
| | | | | | | BOULDER MOUNTAIN | | | | |
| | C-2/BIKE LANE | EL DORADO COUNTY | EL DORADO COUNTY | | SAWMILL BLVD | COURT | 0.39 | \$500,000 | \$195,361 | |
| | | | | NORTH UPPER TRUCKEE/LAKE | EXISTING BIKE LANE ON LAKE TAHOE | EXISTING BIKE LANE ON | | | | |
| | C-2/BIKE LANE | EL DORADO COUNTY | EL DORADO COUNTY | TAHOE BLVD | BLVD | NORTH UPPER TRUCKEE | 0.88 | \$50,000 | \$44,182 | |
| 749/03- | - | | | | US HWY 50 AND SR 89 | | | **** | ** * ** *** | |
| 1A841 | C-2/BIKE LANE | EL DORADO COUNTY | CALTRANS | STATE ROUTE 89-MEYERS | INTERSECTION | PORTAL DRIVE | 2.50 | \$500,000 | \$1,249,675 | IN CONSTRUCTION |
| NA/US- | | | | | | | 0.44 | ¢500.000 | ¢210 220 | |
| 1A751 NA703- | C-2/ BIKE LAINE | | CALTRANS | | STATE ROUTE 69 IN METERS | STATE ROLLE 89 IN | 0.44 | \$500,000 | \$210,229 | 00% DESIGN |
| 1Δ731 | | | CALTRANS | | | MEYERS | 0.87 | \$500.000 | \$433.465 | |
| NA/03- | WIDE SHOOLDER | | | | | | 0.07 | \$300,000 | ¥733,703 | |
| 1A732 | C-2/BIKE LANE | EL DORADO COUNTY | CALTRANS | US HWY 50 | SOUTH LAKE TAHOE "Y" | PIONEER TRL IN MEYERS | 3.96 | \$1.000.000 | \$3.955.098 | 60% DESIGN |
| | WIDE SHOULDER | EL DORADO COUNTY | EL DORADO COUNTY | LAKE TAHOE BLVD | D STREET | SAWMILL ROAD | 1.59 | \$500,000 | \$795,191 | |
| NA/03- | | | | 1 | CITY OF SOUTH LAKE TAHOE CITY | | | | | |
| 1A842 | WIDE SHOULDER | EL DORADO COUNTY | CALTRANS | LAKE TAHOE SCENIC BIKE LOOP | LIMITS | CAMP RICHARDSON | 1.70 | \$1,000,000 | \$1,702,159 | 95% DESIGN |
| NA/03- | | | | | | | | | | |
| IA842 | WIDE SHOULDER | EL DORADO COUNTY | CALTRANS | LAKE TAHOE SCENIC BIKE LOOP | CAMP RICHARDSON | SPRING CREEK ROAD | 1.53 | \$1,000,000 | \$1,534,218 | 95% DESIGN |

| FIP#/Caltr | rans | | | | | | | Cost per mile | | |
|------------|-------------------|---------------|------------------------|---------------------------------------|-------------------------------|-----------------------|-----------|--------------------------------------|---|-----------------|
| FΔ# | Class | Location | Ownership | Name | From | То | Miles (1) | (2) | Total Cost | Status |
| NA/03- | 01000 | Location | ownership | LAKE TAHOE SCENIC BIKE LOOP - SK | | | | (=) | | |
| 14845 | | | CALTRANS | 89 | MEEKS BAY | PINE STREET | 2 56 | \$500.000 | \$1 280 000 | PA&FD 12/15/10 |
| NA/03- | | | | LAKE TAHOE SCENIC BIKE LOOP - SR | | | 2.30 | \$300,000 | φ1,200,000 | |
| 14843 | WIDE SHOULDER | | CALTRANS | 89 (PM 13 8/18 0) | SPRING CREEK ROAD | EMERALD BAY | 3 78 | \$4 000 000 | \$15 112 974 | PA&FD 12/15/10 |
| NA/03- | | | | LAKE TAHOE SCENIC BIKE LOOP (PM | | | | <i><i><i>ϕ</i></i> 1,000,000</i> | <i>(</i>() | |
| 14844 | | | CALTRANS | 18 0/24 9) | EMERALD BAY | MEEKS BAY | 7 35 | \$500.000 | \$3 673 878 | 95% DESIGN |
| 749/03- | | | | | | UTHER PASS/BASIN | | \$300,000 | \$3,013,010 | IN CONSTRUCTION |
| 14841 | WIDE SHOULDER | | CALTRANS | STATE ROUTE 89-MEYERS | PORTAL DRIVE | BOUNDARY | 6.00 | \$100 | \$600 | 2010 |
| ., | | | | LAKE TAHOE SCENIC BIKE LOOP - SR | | | | | \$550 | ENVIRONMENTAL |
| | 787 C-2/BIKE LANE | PLACER COUNTY | CALTRANS/PLACER COUNTY | 28 | CSR 267 | CHIPMUNK STREET | 0.93 | \$5,000 | \$4.632 | REVIEW |
| 748/03- | | | | | | | | <i>Q</i> QQQQQQQQQQQQQ | ¢ 1,002 | |
| 1C971 | C-2/BIKE LANE | PLACER COUNTY | CALTRANS | STATE ROUTE 267 | STATE ROUTE 28 IN KINGS BEACH | BROCKWAY SUMMIT | 3.20 | \$500.000 | \$1.599.121 | FINAL DESIGN |
| | | | | | | STATE ROUTE | | | | |
| 762/03- | | | | | | 267/NORTH SHORE | | | | IN CONSTRUCTION |
| PA940 | C-2/BIKE LANE | PLACER COUNTY | CALTRANS | STATE ROUTE 28-DOLLAR HILL | DOLLAR HILL | BI VD | 6.36 | \$100 | \$636 | 10 11 |
| NA/03- | | | | | | | | | | |
| 2A920 | C-2/BIKE LANE | PLACER COUNTY | CALTRANS | STATE ROUTE 89-HOMEWOOD | FAWN STREET | CHERRY STREET | 0.82 | \$50.000 | \$41.141 | 95% DESIGN |
| NA/03- | | | | | 1 | | | | | |
| 2A921 | C-2/BIKE LANE | PLACER COUNTY | CALTRANS | STATE ROUTE 89-TAHOE CITY | TAHOE CITY "Y" | BASIN BOUNDARY | 3.46 | \$500.000 | \$1.730.427 | IN CONSTRUCTION |
| NA/03- | | | | LAKE TAHOE SCENIC BIKE LOOP - SR | | - + | | | | IN CONSTRUCTION |
| 2A940 | WIDE SHOULDER | PLACER COUNTY | CALTRANS | 28 | TAHOE CITY "Y" | DOLLAR DRIVE | 2.85 | \$100 | \$285 | 10 11 |
| NA/03- | | | | LAKE TAHOE SCENIC BIKE LOOP - SR | | | | | | |
| 2A920 | WIDE SHOULDER | PLACER COUNTY | CALTRANS | 89 | CHERRY STREET | TAHOE CITY "Y" | 5.52 | \$5.000 | \$27.601 | 95% DESIGN |
| NA/03- | | | | LAKE TAHOE SCENIC BIKE LOOP - SR | | | | | | |
| 1A845 | WIDE SHOULDER | PLACER COUNTY | CALTRANS | 89 | PINE STREET | FAWN STREET | 2.20 | \$500,000 | \$1,100,000 | PA&ED 12/15/10 |
| NA/03- | | | | · · · · · · · · · · · · · · · · · · · | 1 | | | | | IN CONSTRUCTION |
| 2A940 | WIDE SHOULDER | PLACER COUNTY | CALTRANS | STATE ROUTE 28-TAHOE CITY | TAHOE CITY "Y" | TAHOE STATE PARK | 5.46 | \$500,000 | \$2,731,791 | 2010 |
| | C-2/BIKE LANE | WASHOE COUNTY | WASHOE COUNTY | COUNTRY CLUB DRIVE | STATE ROUTE 28 | INCLINE WAY | 0.32 | \$2,000,000 | \$638,594 | |
| | C-2/BIKE LANE | WASHOE COUNTY | WASHOE COUNTY | COUNTRY CLUB DRIVE | VILLAGE BLVD (NORTH) | STATE ROUTE 28 | 1.45 | \$500,000 | \$726,050 | |
| | C-2/BIKE LANE | WASHOE COUNTY | WASHOE COUNTY | COUNTRY CLUB DRIVE | INCLINE WAY | LAKESHORE BLVD | 0.18 | \$2,000,000 | \$350,741 | |
| | C-2/BIKE LANE | WASHOE COUNTY | WASHOE COUNTY | INCLINE WAY | SOUTHWOOD BLVD | COUNTRY CLUB DRIVE | 0.58 | \$500,000 | \$288,660 | |
| | C-2/BIKE LANE | WASHOE COUNTY | WASHOE COUNTY | SKI WAY | COUNTRY CLUB DRIVE | FAIRVIEW BLVD | 0.81 | \$2,000,000 | \$1,618,913 | |
| | C-2/BIKE LANE | WASHOE COUNTY | NDOT | STATE ROUTE 431 | STATE ROUTE 28 | BASIN BOUNDARY | 6.57 | \$500,000 | \$3,286,737 | |
| | C-2/BIKE LANE | WASHOE COUNTY | WASHOE COUNTY | VILLAGE BLVD | COLLEGE DRIVE | STATE ROUTE 28 | 0.73 | \$500,000 | \$365,481 | |
| | C-2/BIKE LANE | WASHOE COUNTY | WASHOE COUNTY | VILLAGE BLVD | EAGLE DRIVE | COLLEGE DRIVE | 0.48 | \$500,000 | \$242,188 | |
| | C-2/BIKE LANE | WASHOE COUNTY | WASHOE COUNTY | VILLAGE BLVD | STATE ROUTE 28 | LAKESHORE BLVD | 0.67 | \$2,000,000 | \$1,333,959 | |
| | 846 WIDE SHOULDER | WASHOE COUNTY | NDOT | LAKE TAHOE SCENIC BIKE LOOP | SAND HARBOR | CHIMNEY BEACH | 2.63 | \$5,000 | \$13,132 | |
| | | | | LAKE TAHOE SCENIC BIKE LOOP - | | | | | | |
| | WIDE SHOULDER | WASHOE COUNTY | WASHOE COUNTY | LAKESHORE BLVD | STATE ROUTE 28 (WEST) | STATE ROUTE 28 (EAST) | 2.97 | \$2,000,000 | \$5,930,108 | |
| | | | | LAKE TAHOE SCENIC BIKE LOOP - SR | | LAKESHORE BLVD | 1 | | | |
| | 760 WIDE SHOULDER | WASHOE COUNTY | NDOT | 28 | STATELINE ROAD | (WEST) | 2.30 | \$5,000 | \$11,508 | |
| | | | | LAKE TAHOE SCENIC BIKE LOOP - SR | | | | | | |
| | 847 WIDE SHOULDER | WASHOE COUNTY | NDOT | 28 | LAKESHORE BLVD | SAND HARBOR | 2.36 | \$5,000 | \$11,777 | |

| CM Description Point To Mark Point To Mark Number Number Point To Mark Number | EIP#/Caltrans | | | | | | | Co | ost per mile | |
|---|---------------|-----------------|-----------------------------|--------------------------|--|-------------------------------|--|--------------|--------------|------------------|
| CHARGE SOUTH LAR Chr of SOUTH LAR< | EA# | Class | Location | Ownership | Name | From | То | Miles (1) (2 | :) To | otal Cost Status |
| CAMER ROLT CHY OF SOMTHARE CAMER ROLT COT SOUTHART LAND D STRET LUK TAUCE RUN S1997 50. 6.09 50.00 32.497 CAMER ROLT MARCE CAMER ROLT MARCE CAMER ROLT CAMER ROLT < | | C-3/BIKE ROUTE | CITY OF SOUTH LAKE | CITY OF SOUTH LAKE TAHOE | C STREET | US HWY 50 | Melba Drive | 0.08 | \$5,000 | \$393 |
| Construction Construction< | 751 | C-3/BIKE ROUTE | CITY OF SOUTH LAKE | CITY OF SOUTH LAKE TAHOE | D STREET | LAKE TAHOE BLVD | US HWY 50 | 0.69 | \$5.000 | \$3.437 |
| Construction Construction< | | C-3/BIKE ROLITE | CITY OF SOUTH LAKE | ΟΤΥ ΟΕ SOUTH LAKE ΤΑΗΟΕ | E STREET | KYRURZ AVE | | 0.12 | \$5,000 | \$584 |
| C-SARE RULE CHOR SUITI LAKE FARINE AMMAY DRVA DORISON BLVD LLACKMOD ID U.T. State C-SARE RULE CHT OF SUITI LAKE TANGE FAMINA DRVA SIERA BLVD NATTIN AVE 0.27 \$5.500 \$1.365 C-SARE RULE CHT OF SUITI LAKE TANGE FAMINA DRVAE US MY SO NAATON HOSTIAL 0.27 \$5.500 \$1.365 C-SARE RULE CHT OF SUITI LAKE TANGE FAMINA DRVAE US MY SO NAATON HOSTIAL 0.27 \$5.500 \$1.365 C-SARE RULE CHT OF SUITI LAKE TANGE KARE XAF US MY SO \$5.97E1 0.48 \$1.002 C-SARE RULE CHT OF SUITI LAKE TANGE MARLES AVE US MY SO \$5.97E1 0.48 \$1.002 C-SARE RULE CHT OF SUITI LAKE TANGE MARLES AVE US MY SO BRE FATT 0.48 \$1.003 \$5.000 \$1.273 C-SARE RULE CHT OF SUITI LAKE TANGE MARLES AVE US MY SO BRE FATT 0.48 \$5.000 \$1.271 C-SARE RULE CHT OF SUITI LAKE TANGE MARLES AVE US MY SO BRE FATT 0.48 \$5.000 | | | CITY OF SOUTH LAKE | | | | | 0.14 | ¢5,000 | \$200 |
| C-System Route Lift of South Lock Finds FORMAND DOC Lift of South Lock Finds FORMAND DOC Lift of South Lock Finds South | | | CITY OF SOUTH LAKE | | | | BLACKWOOD RD | 0.14 | \$5,000 | \$700 |
| C-2/BER ENUTT TALOF TALOF CONTRALAGE TALOF SUBMAIN AUTION SUBMAIN AUTION CONTRALAGE TALOF TALOF CONTRALAGE TALOF <th< td=""><td></td><td>C-3/BIKE ROUTE</td><td>CITY OF SOUTH LAKE</td><td>CITY OF SOUTH LAKE TAHOE</td><td>FAIRWAY DRIVE</td><td>JOHNSON BLVD</td><td>BLACKWOOD RD</td><td>0.17</td><td>\$5,000</td><td>\$858</td></th<> | | C-3/BIKE ROUTE | CITY OF SOUTH LAKE | CITY OF SOUTH LAKE TAHOE | FAIRWAY DRIVE | JOHNSON BLVD | BLACKWOOD RD | 0.17 | \$5,000 | \$858 |
| C - ZMBE ROUTE FLANDE CLTY OF SOUTH LAKE TANDE LANS SMEET US HWY 30 EARLON HOURALL 0.2.9 \$5,000 \$1,452 C - ZMBE ROUTE CTTO F SOUTH LAKE THO F SOUTH LAKE CHILDE THO F SOUTH LAKE THO F SOUTH LAKE CHILDE LAMS AVE ELOS PROPOSED BKE FARTH 0.4.9 \$5,000 \$5,000 \$5,000 \$5,000 \$5,000 \$5,247 C-37/BE ROUTE THO F SOUTH LAKE TANDE CTTO F SOUTH LAKE TANDE CTTO F SOUTH LAKE TANDE CTTO F SOUTH LAKE TANDE SARSELTS AVE COMAN AVE US HWY 50 NET PATH 0.19 \$5,000 \$5,247 C-37/BE ROUTE THO F SOUTH LAKE TANDE CTTO F SOUTH LAKE TANDE CTTO F SOUTH LAKE TANDE CALE AVE SARSELTS AVE SOUTH AVE SOUTH AVE 0.48 \$5,000 \$1,475 C-37/BE ROUTE THO F SOUTH LAKE TANDE CTTO F SOUTH LAKE TANDE CTTO F SOUTH LAKE TANDE CTTO F SOUTH LAKE TANDE SOUTH AVE SOUTH AVE DARAE SOUTH AVE <td></td> <td>C-3/BIKE ROUTE</td> <td>TAHOE CITY OF SOUTH LAKE</td> <td>CITY OF SOUTH LAKE TAHOE</td> <td>Fountain avenue</td> <td>Sierra Blvd</td> <td>MARTIN AVE</td> <td>0.27</td> <td>\$5,000</td> <td>\$1,365</td> | | C-3/BIKE ROUTE | TAHOE CITY OF SOUTH LAKE | CITY OF SOUTH LAKE TAHOE | Fountain avenue | Sierra Blvd | MARTIN AVE | 0.27 | \$5,000 | \$1,365 |
| C-4/MER, ROUTE TANDE C-3/MER, ROUTE TANDE C-3/MER, ROUTE TANDE C-3/MER, ROUTE CT/O OF SOUTH LAXE, TANDE C-3/MER, ROUTE CT/O OF SOUTH LAXE TANDE CT/O OF SOUTH LAXE T | | C-3/BIKE ROUTE | TAHOE CITY OF SOUTH LAKE | CITY OF SOUTH LAKE TAHOE | THIRD STREET | US HWY 50 | BARTON HOSPITAL | 0.29 | \$5,000 | \$1,457 |
| C-3/MER ROUTE TAMOS CTV OF SUITH LAKE TAMOS LOS ANGELES AVE US HWY 50 E STREET 0.48 \$5,000 \$2,391 C-3/MER ROUTE TAMOS CTV OF SUITH LAKE TAMOS LOS ANGELES AVE OLALAND AVE US HWY 50 ENE FATH 0.19 \$5,000 \$55,247 C-3/MER ROUTE CTV OF SUITH LAKE TAMOS CTV OF SUITH LAKE TAMOS MARTIN KEAKSAT SOUTH AVE SOUTH AVE SOUTH AVE \$5,000 \$5,247 C-3/MER ROUTE CTV OF SUITH LAKE TAMOS CTV OF SUITH LAKE TAMOS SOUTH AVE LAKEVIEW AVE LOS ANGELES AVE 0.44 \$5,000 \$1,268 C-3/MER ROUTE CTV OF SUITH LAKE TAMOS SOUTH AVE LAKEVIEW AVE LOS ANGELES AVE 0.34 \$5,000 \$1,268 C-3/MER ROUTE CTV OF SUITH LAKE TAMOS SOUTH AVE MARTIN KEARCH TAMOS \$1,977 \$5,000 \$1,268 C-3/MER ROUTE CTV OF SUITH LAKE TAMOS SOUTH AVE CLANVOOD ROU RAKE AVE \$2,5500 \$1,261 C-3/MER ROUTE CTV OF SUITH LAKE TAMOS SOUTH AVE SOUTH AVE NE NO \$2,5594 | | C-3/BIKE ROUTE | | CITY OF SOUTH LAKE TAHOE | JAMES AVE | ELOISE | PROPOSED BIKE PATH | 0.60 | \$5,000 | \$3,022 |
| C-J/RKE POUTE THAGE COT OF SOUTH LAKE TANCE OS ANGELES AVE OALAND AVE US HWY 50 BIKE PATH 0.19 \$5,000 \$5,247 C-J/RKE POUTE TANDE CTO SOUTH LAKE TANDE COLUME LAKE TANDE MAILINGELACK BATL FOUNTAN AVE POREHT TABLE 1.05 \$5,200 \$2,247 C-J/RKE POUTE TTHO SOUTH LAKE TANDE CALING AND AVE LAKE VIEW AVE LOS ANGELES AVE 0.48 \$5,000 \$2,247 C-J/RKE POUTE TTHOS COUTH LAKE TANDE CALINA DAVE LAKE VIEW AVE LOS ANGELES AVE 0.48 \$5,000 \$11,715 C-J/RKE POUTE TANDE CTO F SOUTH LAKE TANDE STOTE SOUTH LAKE TANDE \$11,715 C-J/RKE POUTE TANDE CTO F SOUTH LAKE TANDE STOTE SOUTH LAKE TANDE \$11,715 C-J/RKE POUTE TANDE CTO F SOUTH LAKE TANDE STOTE SOUTH LAKE TANDE \$11,715 C-J/RKE POUTE TANDE CTO F SOUTH LAKE TANDE STOTE SOUTH LAKE TANDE \$11,715 C-J/RKE POUTE TANDE CTO F SOUTH LAKE TANDE STOTE SOUTH LAKE TANDE STOTE SOU | | C-3/BIKE ROUTE | | CITY OF SOUTH LAKE TAHOE | KYBURZ AVE | US HWY 50 | E STREET | 0.48 | \$5,000 | \$2,391 |
| C-SURRE ROUTE CAUSE CAUSE CONTRACT FORMAR AVE FORMAR AVE FORMAR AVE CONTRACT CAUSE S5,200 S5,247 C-SURRE ROUTE CTO OF SOUTH LAKE TANDE CTO OF SOUTH LAKE TANDE CAUSE RATE CAUSE RATE SOUTH AVE CAUSE RATE CAUSE RATE </td <td></td> <td>C-3/BIKE ROUTE</td> <td></td> <td>CITY OF SOUTH LAKE TAHOE</td> <td>LOS ANGELES AVE</td> <td>OAKLAND AVE</td> <td>US HWY 50 BIKE PATH</td> <td>0.19</td> <td>\$5,000</td> <td>\$964</td> | | C-3/BIKE ROUTE | | CITY OF SOUTH LAKE TAHOE | LOS ANGELES AVE | OAKLAND AVE | US HWY 50 BIKE PATH | 0.19 | \$5,000 | \$964 |
| G-3/RKE ROUTE C-3/RKE | | C-3/BIKE ROUTE | TAHOE | CITY OF SOUTH LAKE TAHOE | MARTIN/BLACK BART | FOUNTAIN AVE | PIONEER TRAIL | 1.05 | \$5,000 | \$5,247 |
| C.3.PENE ROUTE CTIT OF SOUTH LAKE CTIT OF SOUTH LAKE CALL C.3.PENE ROUTE C.3.PENE | | C-3/BIKE ROUTE | TAHOE | CITY OF SOUTH LAKE TAHOE | MELBA DRIVE | E STREET | SOUTH AVE | 0.48 | \$5,000 | \$2,379 |
| CITY OF SOUTH LAKE CITY OF SOUTH LAKE TANDE SOUTH AVE MELBA DRIVE THRD STREET 0.25 \$5,000 \$1,268 C-37BKE ROUTE TANDE CTY OF SOUTH LAKE TANDE SPOLE AVE GLENWOOD AVE BLACKWOOD RD 0.37 \$5,000 \$1,268 C-37BKE ROUTE TANDE CTY OF SOUTH LAKE TANDE SPOLE AVE GLENWOOD AVE BLACKWOOD RD 0.37 \$5,000 \$2,259 C-37BKE ROUTE TANDE CTY OF SOUTH LAKE TANDE STATELINE AVE PRE BLVD PNE BLVD 0.25 \$5,000 \$1,271 C-37BKE ROUTE TANDE CTY OF SOUTH LAKE TANDE STATELINE AVE TANDE KEVE 0.26 \$5,000 \$1,271 C-37BKE ROUTE TANDE CTY OF SOUTH LAKE TANDE VENCE DRIVE EAST 15TH STREET 0.48 \$50,000 \$440,471 C-37BKE ROUTE TANDE CTY OF SOUTH LAKE TANDE VENCE DRIVE EAST 15TH STREET 0.78 \$5,000 \$35,000 \$35,000 \$35,000 \$35,000 \$35,000 \$35,000 \$35,000 \$35,000 \$35,000 \$35,000 \$35,000 | | C-3/BIKE ROUTE | CITY OF SOUTH LAKE | CITY OF SOUTH LAKE TAHOE | OAKLAND AVE | LAKEVIEW AVE | LOS ANGELES AVE | 0.34 | \$5,000 | \$1,715 |
| C-37BIKE ROUTE CTY OF SOUTH LAKE CAYBIKE ROUTE CTY OF SOUTH LAKE CYT OF SOUTH LAK | | C-3/BIKE ROUTE | CITY OF SOUTH LAKE | CITY OF SOUTH LAKE TAHOE | SOUTH AVE | MELBA DRIVE | THIRD STREET | 0.25 | \$5,000 | \$1,268 |
| CTY OF SOUTH LAKE STATESHORE FILE SUVPARK AVE PINE BLVD PINE BLVD/PARK AVE 0.52 \$5,000 \$2,594 C-3/BKE ROUTE CTY OF SOUTH LAKE CTY OF SOUTH LAKE TAHOE STATELINE RD US HWY 50 PINE BLVD D.25 \$5,000 \$41,271 C-3/BKE ROUTE CTY OF SOUTH LAKE CTY OF SOUTH LAKE CTY OF SOUTH LAKE TAHOE STATELINE RD US HWY 50 PINE BLVD D.25 \$5,000 \$440,471 C-3/BKE ROUTE CTY OF SOUTH LAKE CTY OF SOUTH LAKE CTY OF SOUTH LAKE CTY OF SOUTH LAKE TAHOE VENCE DRIVE TAHOE CTY OF SOUTH LAKE VENCE DRIVE TAHOE US HWY 50 0.13 \$5,000 \$3,895 C-3/BKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY MARKET STREET PROPOSED SHARED USE PATH 207/KINCSBURY GRAPE 0.13 \$5,000 \$3,356 C-3/BKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY BOUGLAS COUNTY BOUGLAS COUNTY BOUGLAS COUNTY DOUGLAS COUNTY | | C-3/BIKE ROUTE | CITY OF SOUTH LAKE | CITY OF SOUTH LAKE TAHOE | SPRUCE AVE | GLENWOOD AVE | BLACKWOOD RD | 0.37 | \$5,000 | \$1,847 |
| C-3/BIKE ROUTE TANOE C-3/BIKE ROUTE TANOE | | C-3/BIKE ROUTE | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | STATELINE AVE/LAKESHORE BLVD/PARK AVE | PINE BLVD | PINE BLVD/PARK AVE | 0.52 | \$5,000 | \$2,594 |
| C-3/BIK PROUTE CANON PARK CAN | | C-3/BIKE ROUTE | CITY OF SOUTH LAKE | CITY OF SOUTH LAKE TAHOE | STATELINE RD | US HWY 50 | PINE BLVD | 0.25 | \$5.000 | \$1.271 |
| C-3/BKE ROUTE TANCE CONVECTOR TO SOUTH LAKE TANCE VENCE DRIVE EAST 15TH STREET POPE BEACH 0.78 \$5,000 \$3,895 C1TY OF SOUTH LAKE TANCE VENCE DRIVE EAST 15TH STREET POPE BEACH 0.78 \$5,000 \$3,895 C-3/BKE ROUTE TANCE CUNTY DOUGLAS COUNTY MARKET STREET PROPOSED SHARED USE PATH 207/KINGSBURY GRADE 0.13 \$5,000 \$951 C-3/BKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY MARKET STREET PROPOSED SHARED USE PATH 207/KINGSBURY GRADE 0.19 \$5,000 \$13,555 C-3/BKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY MARKET STREET PROPOSED SHARED USE PATH 207/KINGSBURY GRADE 0.19 \$5,000 \$13,555 C-3/BKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY MARKET STREET PROPOSED SHARED USE PATH 207/KINGSBURY GRADE 0.19 \$5,000 \$13,555 C-3/BKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY ROUND HILL BKE PATH CONNECTOR KINGSBURY MIDLE SCHOOL ECHO DRIVE 0.12 \$5,000 \$3348 C-3/BKE ROUTE EL DORADO COUNTY EL | | | CITY OF SOUTH LAKE | | | TAHOE KEYS BLVD | 15TH STREET | 0.88 | \$500.000 | \$440 471 |
| C.37BRE ROUTE CHT OF SOUTH LAKE TARDE VENUE DATA First Street POPE EEACH 0.78 \$3,000 \$3,939 C.37BRE ROUTE TAHOE CTY OF SOUTH LAKE TARDE WINNAMUCCA AVE HELEN AVE US HWY 50 0.13 \$5,000 \$3,939 C.37BRE ROUTE DUGLAS COUNTY DOUGLAS COUNTY MARKET STREET PROPOSED SHARED USE PATH 207/KINSBURY GRADE 0.19 \$5,000 \$3,1356 C.37BRE ROUTE DUGLAS COUNTY PONE ROGE DRIVE STATE ROUTE 207 ROUND HILL BKE PATH 0.74 \$3,000 \$3,439 C.37BRE ROUTE DUGLAS COUNTY PONE ROGE DRIVE STATE ROUTE 207 ROUND HILL BKE PATH 0.76 \$5,000 \$3,449 C.37BRE ROUTE DUGLAS COUNTY ROUND HILL BKE PATH CONNECTOR KINSBURY MIDDLE SCHOOL ECH ORXV 0.12 \$5,000 \$3,449 C.37BRE ROUTE EL DORAD COUNTY BUTZEN RADE ZIATE ROUTE 80 NEAR METES SANTA CLAUSE DR 1.53 \$5,000 \$2,113 C.37BRE ROUTE EL DORAD COUNTY EL DORAD COUNTY BLADEAH ROAD ZAME ROAD ROAD SANDER ACREEK DRIVE | | | CITY OF SOUTH LAKE | | | | FUTURE CONNECTION TO | 0.00 | \$500,000 | \$7,905 |
| C-3/BIKE ROUTE TAHOE CITY OF SOUTH LAKE TAHOE WINNAMUCCA AVE HELEN AVE US HWY 50 0.13 \$5,000 \$659 C-3/BIKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY DOUGLAS COUNTY PINE RIDGE DRIVE C-3/BIKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY ROUND HIL BIKE TRATH CONNECTOR C-3/BIKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY ROUND HIL BIKE PATH CONNECTOR C-3/BIKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY ROUND HIL BIKE PATH CONNECTOR C-3/BIKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY ROUND HIL BIKE PATH CONNECTOR C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY BUTZEN RO C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY EL SOLDA ROAD C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY EL SOLDA ROAD C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY EL SOLDA ROAD C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY LAKE TAHOE BL'DO C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY LAKE TAHOE BL'DO C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY LAKE TAHOE BL'DO C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY LAKE TAHOE BL'DO C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY LAKE TAHOE BL'DO C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY LAKE TAHOE BL'DO C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY LAKE TAHOE BL'DO C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNATINE SOUTHERN PINES C-3/BIKE ROUTE EL DORADO COUNTY SAN BERNATINO (VEST) C-3/BIKE ROUTE EL DORADO COUNTY SAN BERNATINO XE C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNATINO XE C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNATINO XE C-3/BIKE ROUTE | | C-3/BIKE ROUTE | CITY OF SOUTH LAKE | CITY OF SOUTH LAKE TAHOE | | ISTH STREET | POPE BEACH | 0.78 | \$5,000 | \$3,895 |
| C-3/BIKE ROUTE DOUGLAS COUNTY MARKET STREET PROPOSED SHARED USE PATH 207/KINSSURY GADE 0.19 \$\$5,000 \$951 C-3/BIKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY PINE RIDGE DRIVE STATE ROUTE 207 ROUND HILL BIKE PATH 0.12 \$\$,000 \$1,356 C-3/BIKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY ROUND HILL BIKE PATH CONNECTOR 2 ROUND HILL BIKE PATH MCRL \$1,366 \$1,366 C-3/BIKE ROUTE EL DORADO COUNTY DOUGLAS COUNTY ROUND HILL BIKE PATH MCRL \$1,20 \$5,000 \$3,48 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY ELKS CLUB ROAD STATE ROUTE 89 NEAR MEYERS SANTA CLAUSE OR 1,53 \$5,000 \$1,661 C-3/BIKE ROUTE EL DORADO COUNTY ELKS CLUB ROAD CAMP RICHADSON BIKE TRAIL OPOE BEACH 0,42 \$5,000 \$2,113 C-3/BIKE ROUTE EL DORADO COUNTY ELKS CLUB ROAD CAMP RICHADSON BIKE TRAIL OPOE BEACH 0,42 \$5,000 \$3,781 C-3/BIKE ROUTE EL DORADO COUNTY ELAS CLUB RADU CAMP RICHADSON BIKE TRAI | | C-3/BIKE ROUTE | TAHOE | CITY OF SOUTH LAKE TAHOE | WINNAMUCCA AVE | HELEN AVE | US HWY 50 STATE ROUTE | 0.13 | \$5,000 | \$659 |
| C-3/BIKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY ROUND HILL BIKE PATH CONVECTOR 2 C-3/BIKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY ROUND HILL BIKE PATH CONNECTOR 2 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY BULTY BULTER DO STATE ROUTE 89 MEAR MEYERS SANTA CLAUSE DR 1.53 \$5,000 \$7,661 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY BULTY BULTER DO STATE ROUTE 89 MEAR MEYERS SANTA CLAUSE DR 1.53 \$5,000 \$4,002 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY BULTY BULTER DO STATE ROUTE 89 MEAR MEYERS SANTA CLAUSE DR 1.53 \$5,000 \$4,002 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY BULTY BULTER DO STATE ROUTE 89 MEAR MEYERS SANTA CLAUSE DR 1.53 \$5,000 \$4,002 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY BULTY SUBMESTINE SO MEACH ROAD CAMP RICHARDSON BIKE TRAIL C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY BULTY DOUT BEACH ROAD CAMP RICHARDSON BIKE TRAIL C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY MEADOW VALE/SOUTHERN PINES BUTTY SO BIKE TRAIL C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY MEADOW VALE/SOUTHERN PINES BUTTY SO PIONEER TRAIL C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY MEADOW VALE/SOUTHERN PINES BUTTY SO POPE BEACH PARKING LOT C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE DO PATH ON SR 89 1.01 \$5,000 \$5,058 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE RD PATH IN SR 89 1.01 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE RD PATH IN SS 5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE RD PATH IN SS 5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH HUPPER TRUCKEE RD PATH IN SS 5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH ATALOR ELEMENTARY SCHOOL TARE PARK 0.21 \$5,000 \$1,2633 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTON RUBER MEAN SCHOOL TARE DUSE SAN SERVADINO AVE | | C-3/BIKE ROUTE | DOUGLAS COUNTY | DOUGLAS COUNTY | MARKET STREET | PROPOSED SHARED USE PATH | 207/KINGSBURY GRADE | 0.19 | \$5,000 | \$951 |
| C-3/BIKE ROUTE DOUGLAS COUNTY DOUGLAS COUNTY ROUND HILL BIKE PATH CONNECTOR KINGSBURY MIDDLE SCHOOL. ECH ORIVE 0.12 \$5,000 \$348 C-3/BIKE ROUTE EL DORADO COUNTY BL DORADO COUNTY | | C-3/BIKE ROUTE | DOUGLAS COUNTY | DOUGLAS COUNTY | PINE RIDGE DRIVE | STATE ROUTE 207 | ROUND HILL BIKE PATH | 0.27 | \$5,000 | \$1,356 |
| C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY EL DORADO COUNTY EL STATE ROTE AND TELES ROL BEACH PART. ROUTE AND TELES ROL BEACH ROAD CAUSE OR 15.3 \$5,000 \$7,661 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY EL SCALUB ROAD CAUP RICHARDSON BIKE TRAIL OPPE BEACH ALL 0.80 \$5,000 \$2,113 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY LAKE TAHOE BLVD ANGCRA CREER NOTE EL DORADO COUNTY EL DORADO COUNTY MEADOW VALE/SOUTHERN PINES US HWY 50 POPE BEACH PARKING LOT FEL DORADO COUNTY EL DORADO COUNTY MEADOW VALE/SOUTHERN PINES US HWY 50 POINCER TRAIL 1.23 \$5,000 \$3,781 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY MEADOW VALE/SOUTHERN PINES US HWY 50 POINCER TRAIL 1.23 \$5,000 \$5,058 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY PORTAL DRIVE PORTAL DRIVE 0.76 \$5,000 \$5,058 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY PORTAL DRIVE STATE ROUTE 89 SOUTH UPPER TRUCKEE 0.16 \$5,000 \$791 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE RD PATH IN STATE PARK 0.39 \$5,000 \$1,064 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE MEYERS ELEMENTARY SCHOOL TAHOE PARDSE PARK 0.21 \$5,000 \$1,064 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE MEYERS ELEMENTARY SCHOOL TAHOE PARDSE PARK 0.21 \$5,000 \$1,064 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION RUBERS AND AVE 2.57 \$5,000 \$1,233 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION RUBERS AND AVE 2.57 \$5,000 \$1,233 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION RUBERS AND AVE 2.57 \$5,000 \$1,233 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION RUBERS AND AVE 2.57 \$5,000 \$1,233 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION RUBERS AND AVE 2.57 \$5,000 \$1,233 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTIO | | C-3/BIKE ROUTE | DOUGLAS COUNTY | DOUGLAS COUNTY | ROUND HILL BIKE PATH CONNECTOR | KINGSBURY MIDDLE SCHOOL | ECHO DRIVE | 0.12 | \$5,000 | \$585 |
| C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY EL CORADO COUNTY ELS CLUE ROAD US HWY 50 C-3/BIKE ROUTE EL DORADO COUNTY USFS JAMESON BEACH ROAD CAMP RICHARDSON BIKE TRAIL 0.80 \$5,000 \$4,002 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY LAKE TAHOE BLVD ANGORA CREEK DRIVE NORTH UPPER TRUCKEE 0.76 \$5,000 \$2,113 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY LAKE TAHOE BLVD ANGORA CREEK DRIVE NORTH UPPER TRUCKEE 0.76 \$5,000 \$3,781 C-3/BIKE ROUTE EL DORADO COUNTY USFS POPE BEACH DRIVE END OF POPE BEACH PARKING LOT PARTIN D'ARABED USE C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY MEADOW VALE/SOUTHERN PINES C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY OF POPE BEACH DRIVE END OF POPE BEACH PARKING LOT PARTING NARAED USE C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE D PARKING LOT PARTIN D'ARABED USE C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE RD PARKING LOT PARTIN STATE ROUTE 85,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE RD PARKING LOT PARTIN STATE ROUTE 85,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE MEYERS ELEMENTARY SCHOOL TAHOE PARKEN 0.21 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE MEYERS ELEMENTARY SCHOOL TAHOE PARKEN 0.21 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE MEYERS ELEMENTARY SCHOOL TAHOE PARSEN C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION NORTH TAHOE RABOS CAMPGOUND 4.87 \$5,000 \$1,263 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION NORTH TAHOE REGIONAL PARK C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION NORTH TAHOE REGIONAL PARK C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION NORTH TAHOE REGIONAL PARK C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION NORTH TAHOE REGIONAL PARK C-3 | | C-3/BIKE ROUTE | DOUGLAS COUNTY | DOUGLAS COUNTY | ROUND HILL BIKE PATH CONNECTOR 2 | ROUND HILL BIKE PATH | MCFAUL WAY | 0.07 | \$5,000 | \$348 |
| C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY ELXS CLUB ROAD US HWY 50 PIONEER TRAIL 0.80 \$5,000 \$4,002 C-3/BIKE ROUTE EL DORADO COUNTY USFS JAMESON BEACH ROAD CAMP RICHARDSON BIKE TRAIL POPE BEACH 0.42 \$5,000 \$3,781 C-3/BIKE ROUTE EL DORADO COUNTY ENTISTIS SHARED USE C-3/BIKE ROUTE EL DORADO COUNTY USFS POPE BEACH DRIVE END OF POPE BEACH PARKING LOT PATH NN SR 89 1.01 \$5,000 \$791 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE END OF POPE BEACH PARKING LOT PATH IN STATE FARK 0.39 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNT | | C-3/BIKE ROUTE | EL DORADO COUNTY | EL DORADO COUNTY | BLITZEN RD | STATE ROUTE 89 NEAR MEYERS | SANTA CLAUSE DR | 1.53 | \$5,000 | \$7,661 |
| C-3/BIKE ROUTE EL DORADO COUNTY USFS JAMESON BEACH ROAD CAMP RICHARDSON BIKE TRAIL PORE BEACH 0.42 \$5,000 \$2,113 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY LAKE TAHOË BLVD ANGORA CREEK DRIVE NORTH UPPER TRUCKEE 0.76 \$5,000 \$5,781 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY MEADOW VALE/SOUTHERN PINES US HWY SO PONTER TRUCKEE 0.76 \$5,000 \$5,058 C-3/BIKE ROUTE EL DORADO COUNTY USFS POPE BEACH DRIVE END OF POPE BEACH PARKING LOT PONTER TRUCKEE 0.10 \$5,000 \$5,058 C-3/BIKE ROUTE EL DORADO COUNTY USFS POPE BEACH DRIVE END OF POPE BEACH PARKING LOT POTH ON SR 89 1.01 \$5,000 \$791 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE RD PATH ON SR 89 1.01 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE MEYERS ELEMENTARY SCHOOL TAHE IN STATE PARK 0.21 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY <t< td=""><td></td><td>C-3/BIKE ROUTE</td><td>EL DORADO COUNTY</td><td>EL DORADO COUNTY</td><td>ELKS CLUB ROAD</td><td>US HWY 50</td><td>PIONEER TRAIL</td><td>0.80</td><td>\$5,000</td><td>\$4,002</td></t<> | | C-3/BIKE ROUTE | EL DORADO COUNTY | EL DORADO COUNTY | ELKS CLUB ROAD | US HWY 50 | PIONEER TRAIL | 0.80 | \$5,000 | \$4,002 |
| C-3/BIKE ROUTE EL DORADO COUNTY US HW' 50 PONEER TRUCKEE 0.76 \$5,000 \$6,130 C-3/BIKE ROUTE EL DORADO COUNTY USFS POPE BEACH DRIVE END OF POPE BEACH PARKING LOT PATH ON SPE DORADO COUNTY EL DORADO COUNTY EL DORADO COUNTY POPTAL DRIVE STATE ROUTE 89 SOUTH UPPER TRUCKEE 0.16 \$5,000 \$7,91 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE RD PATH IN STATE PARK 0.39 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE MEYERS ELEMENTARY SCHOOL TAH POP PARADISE PARK 0.21 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SOUTH UPPER TRUCKEE ROAD US HWY 50 CAMPGROUND | | C-3/BIKE ROUTE | EL DORADO COUNTY | USFS | JAMESON BEACH ROAD | CAMP RICHARDSON BIKE TRAIL | POPE BEACH | 0.42 | \$5,000 | \$2,113 |
| C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY MEADOW VALE/SOUTHERN PINES US HWY 50 PIONEER TRAIL 1.23 \$5,000 \$6,130 C-3/BIKE ROUTE EL DORADO COUNTY USFS POPE BEACH DRIVE END OF POPE BEACH PARKING LOT EXISTING SHARED USE C-3/BIKE ROUTE EL DORADO COUNTY USFS POPE BEACH DRIVE END OF POPE BEACH PARKING LOT EXISTING SHARED USE C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE RD PATH IN STATE PARK 0.39 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE MEYERS ELEMENTARY SCHOOL TAHOE PARADISE PARK 0.21 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE MEYERS ELEMENTARY SCHOOL TAHOE PARADISE PARK 0.21 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SOUTH UPPER TRUCKEE ROAD US HWY 50 CAMPGROUND 4.87 \$5,000 \$1,263 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION RUBICON DRIVE MEEKS BAY AVE <t< td=""><td></td><td>C-3/BIKE ROUTE</td><td>EL DORADO COUNTY</td><td>EL DORADO COUNTY</td><td>LAKE TAHOE BLVD</td><td>ANGORA CREEK DRIVE</td><td>NORTH UPPER TRUCKEE</td><td>0.76</td><td>\$5.000</td><td>\$3,781</td></t<> | | C-3/BIKE ROUTE | EL DORADO COUNTY | EL DORADO COUNTY | LAKE TAHOE BLVD | ANGORA CREEK DRIVE | NORTH UPPER TRUCKEE | 0.76 | \$5.000 | \$3,781 |
| C-3/BIKE ROUTE EL DORADO COUNTY USFS POPE BEACH DRIVE END OF POPE BEACH PARKING LOT PATH ON SR 89 1.01 \$5,000 \$5,058 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE RD PATH IN STATE PARK 0.39 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE RD PATH IN STATE PARK 0.21 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE MEYERS ELEMENTARY SCHOOL TAHOE PARADISE PARK 0.21 \$5,000 \$1,064 LUTHER PASS C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SOUTH UPPER TRUCKEE ROAD US HWY 50 CAMPGROUND 4.87 \$5,000 \$24,332 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION RUBICON DRIVE MEEKS BAY AVE 2.57 \$5,000 \$12,833 NORTH TAHOE REGIONAL PARK C-3/BIKE ROUTE PLACER COUNTY NTPUD DONNER RD ENTRAILCONNECTION RUBICON DRIVE MEEKS BAY AVE 2.57 \$5,000 \$1,123 IN CONSTR C-3/BIKE ROUTE PLACER COUNTY PLACER COUNTY LAKE FOREST ROAD POMIN PARK SKYLANDIA PARK 0.62 \$5,000 \$3,078 09_11 | | C-3/BIKE ROUTE | EL DORADO COUNTY | EL DORADO COUNTY | MEADOW VALE/SOUTHERN PINES | US HWY 50 | PIONEER TRAIL EXISTING SHARED USE | 1.23 | \$5,000 | \$6,130 |
| C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY PORTAL DRIVE STATE ROUTE 89 SOUTH UPPER TRUCKEE 0.16 \$5,000 \$791 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE RD PATH IN STATE PARK 0.39 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE MEYERS ELEMENTARY SCHOOL TAHIO PARADISE PARK 0.21 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE MEYERS ELEMENTARY SCHOOL TAHOP PARADISE PARK 0.21 \$5,000 \$1,064 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SOUTH UPPER TRUCKEE ROAD US HWY 50 CAMPGROUND 4.87 \$5,000 \$24,332 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION RUBICON DRIVE MEEKS BAY AVE 2.57 \$5,000 \$1,283 C-3/BIKE ROUTE PLACER COUNTY NTPUD DONNER RD ENTRANCE PINEDROP TRAIL 0.22 \$5,000 \$1,123 IN C-3/BIKE ROUTE PLACER COUNTY | | C-3/BIKE ROLITE | FL DORADO COUNTY | USES | POPE REACH DRIVE | END OF POPE BEACH PARKING LOT | PATH ON SR 89 | 1 01 | \$5,000 | \$5.058 |
| C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO (WEST) NORTH UPPER TRUCKEE RD PATH IN STATE PARK 0.39 \$5,000 \$1,928 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE MEYERS ELEMENTARY SCHOOL TAHOE PARADISE PARK 0.21 \$5,000 \$1,064 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY EL DORADO COUNTY SOUTH UPPER TRUCKEE ROAD US HWY 50 CAMPGROUND 4.87 \$5,000 \$24,332 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SOUTH UPPER TRUCKEE ROAD US HWY 50 CAMPGROUND 4.87 \$5,000 \$24,332 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SOUTH UPPER TRUCKEE ROAD US HWY 50 CAMPGROUND 4.87 \$5,000 \$1,283 C-3/BIKE ROUTE PLACER COUNTY NTPUD DONNER RD RUBICON DRIVE MEEKS BAY AVE 2.57 \$5,000 \$1,123 IN C-3/BIKE ROUTE PLACER COUNTY NTPUD DONNER RD ENTRANCE PINEDROP TRAIL 0.22 \$5,000 \$1,123 IN C-3/BIKE ROUTE PLACER COUNTY PLACER COUNTY | | C-3/BIKE ROUTE | EL DORADO COUNTY | EL DORADO COUNTY | PORTAL DRIVE | STATE ROUTE 89 | SOUTH UPPER TRUCKEE PROPOSED SHARED USE | 0.16 | \$5,000 | \$791 |
| C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SAN BERNADINO AVE MEYERS ELEMENTARY SCHOOL TAHOE PARADISE PARK 0.21 \$5,000 \$1,064 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SOUTH UPPER TRUCKEE ROAD US HWY 50 CAMPGROUND 4.87 \$5,000 \$24,332 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SOUTH UPPER TRUCKEE ROAD US HWY 50 CAMPGROUND 4.87 \$5,000 \$24,332 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SOUTH UPPER TRUCKEE ROAD US HWY 50 CAMPGROUND 4.87 \$5,000 \$24,332 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION RUBICON DRIVE MEEKS BAY AVE 2.57 \$5,000 \$12,833 C-3/BIKE ROUTE PLACER COUNTY NTPUD DONNER RD ENTRANCE PINEDROP TRAIL 0.22 \$5,000 \$1,123 IN CONSTR UCTION CASE FOREST ROAD POMIN PARK SKYLANDIA PARK 0.62 \$5,000 \$3,078 09_11 | | C-3/BIKE BOUTE | | | SAN BERNADINO (WEST) | | PATH IN STATE PARK | 0.39 | \$5,000 | \$1.928 |
| C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY SOUTH UPPER TRUCKEE ROAD US HWY 50 CAMPGROUND 4.87 \$5,000 \$24,332 C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION RUBICON DRIVE MEEKS BAY AVE 2.57 \$5,000 \$12,833 C-3/BIKE ROUTE PLACER COUNTY NTPUD DONNER RD ENTRANCE PINEDROP TRAIL 0.22 \$5,000 \$1,123 North C-3/BIKE ROUTE PLACER COUNTY NTPUD DONNER RD ENTRANCE PINEDROP TRAIL 0.22 \$5,000 \$1,123 North C-3/BIKE ROUTE PLACER COUNTY NACE CONSTR NORTH | | C-3/BIKE ROUTE | EL DORADO COUNTY | EL DORADO COUNTY | SAN BERNADINO AVE | MEYERS ELEMENTARY SCHOOL | TAHOE PARADISE PARK | 0.21 | \$5,000 | \$1,064 |
| C-3/BIKE ROUTE EL DORADO COUNTY EL DORADO COUNTY WEST SHORE TRAIL CONNECTION RUBICON DRIVE MEEKS BAY AVE 2.57 \$5,000 \$24,332 C-3/BIKE ROUTE PLACER COUNTY NTPUD DONNER RD ENTRANCE PINEDROP TRAIL 0.22 \$5,000 \$1,283 NORTH TAHOE REGIONAL PARK PINEDROP TRAIL 0.22 \$5,000 \$3,078 09_11 | | | | | | | | 1 97 | \$5.000 | \$24.222 |
| C-3/BIKE ROUTE PLACER COUNTY NTPUD DONNER RD DONNER RD ENTRANCE PINEDROP TRAIL 0.22 \$5,000 \$1,123 | | C-3/BIKE ROUTE | EL DORADO COUNTY | EL DORADO COUNTY | WEST SHORE TRAIL CONNECTION | | MEEKS BAY AVE | 2.57 | \$5,000 | \$12,833 |
| IN CONSTR UCTION C-3/BIKE ROUTE PLACER COUNTY PLACER COUNTY LAKE FOREST ROAD POMIN PARK SKYLANDIA PARK 0.62 \$5,000 \$3,078 09_11 | | C-3/BIKE ROUTE | PLACER COUNTY | NTPUD | DONNER RD | ENTRANCE | PINEDROP TRAIL | 0.22 | \$5,000 | \$1,123 |
| C-3/BIKE ROUTE PLACER COUNTY PLACER COUNTY LAKE FOREST ROAD POMIN PARK 0.62 \$5,000 \$3,078 09_11 | | | | | | | | | | CONSTR UCTION |
| | | C-3/BIKE ROUTE | PLACER COUNTY | PLACER COUNTY | LAKE FOREST ROAD | POMIN PARK | SKYLANDIA PARK | 0.62 | \$5,000 | \$3,078 09_11 |

Table 18: Proposed Bicycle and Pedestrian Project List, Class III/ Bike Route

| EA#ClassLocationOwnershipNameFromToPEDCITY OF SOUTH LAKE TAHOECITY OF SOUTH LAKE TAHOEGLENWOOD WAYFAIRWAY AVEBLACKWOOD RD786PEDTAHOECITY OF SOUTH LAKE TAHOEPIONEER TRAILSHEPHERDS DRIVEUS HWY 50786PEDTAHOECITY OF SOUTH LAKE TAHOEPIONEER TRAILSHEPHERDS DRIVEUS HWY 50786PEDTAHOECITY OF SOUTH LAKE TAHOEPIONEER TRAILSHEPHERDS DRIVESHEPHERDS DRIVE | Miles (1) (2) 0.25 \$1,000,000 0.37 \$4,000,000 0.62 \$4,000,000 0.17 \$1,000,000 0.37 \$1,000,000 | Total Cost Status \$251,636 PRELIMIN ARY PLANNIN \$1,487,399 G \$2,480,000 \$166,244 \$373,841 S |
|--|--|--|
| PED CITY OF SOUTH LAKE TAHOE CITY OF SOUTH LAKE CITY OF SOUTH LAKE TAHOE GLENWOOD WAY FAIRWAY AVE BLACKWOOD RD 786 PED TAHOE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SHEPHERDS DRIVE US HWY 50 786 PED TAHOE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SHEPHERDS DRIVE US HWY 50 786 PED TAHOE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SKI RUN BLVD SHEPHERDS DRIVE | 0.25 \$1,000,000 0.37 \$4,000,000 0.62 \$4,000,000 0.17 \$1,000,000 0.37 \$1,000,000 | \$251,636 PRELIMIN ARY PLANNIN \$1,487,399 \$2,480,000 \$166,244 \$373,841 |
| PED TAHOE CITY OF SOUTH LAKE TAHOE GLENWOOD WAY FAIRWAY AVE BLACKWOOD RD 786 PED CITY OF SOUTH LAKE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SHEPHERDS DRIVE US HWY 50 786 PED TAHOE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SHEPHERDS DRIVE US HWY 50 786 PED TAHOE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SHEPHERDS DRIVE SHEPHERDS DRIVE | 0.25 \$1,000,000 0.37 \$4,000,000 0.62 \$4,000,000 0.17 \$1,000,000 0.37 \$1,000,000 |) \$251,636 PRELIMIN ARY PLANNIN \$1,487,399 G \$1,487,399 G \$1,487,399 G \$1,487,399 G \$1,487,399 G \$1,487,399 G \$1,487,399 G \$1,487,399 G |
| 786 PED CITY OF SOUTH LAKE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SHEPHERDS DRIVE US HWY 50 786 PED TAHOE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SHEPHERDS DRIVE US HWY 50 786 PED TAHOE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SHEPHERDS DRIVE SHEPHERDS DRIVE | 0.37 \$4,000,000 0.62 \$4,000,000 0.17 \$1,000,000 0.37 \$1,000,000 | ARY PLANNIN \$1,487,399 G \$2,480,000 \$166,244 \$373,841 |
| 786 PED CITY OF SOUTH LAKE TAHOE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SHEPHERDS DRIVE US HWY 50 786 PED TAHOE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SKI RUN BLVD SHEPHERDS DRIVE | 0.37 \$4,000,000 0.62 \$4,000,000 0.17 \$1,000,000 0.37 \$1,000,000 | PLANNIN \$1,487,399 G \$2,480,000 \$166,244 \$373,841 |
| 786 PED TAHOE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SHEPHERDS DRIVE US HWY 50 786 PED TAHOE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SKI RUN BLVD SHEPHERDS DRIVE 786 PED TAHOE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SKI RUN BLVD SHEPHERDS DRIVE | 0.37 \$4,000,000 0.62 \$4,000,000 0.17 \$1,000,000 0.37 \$1,000,000 | \$1,487,399 G \$2,480,000 \$166,244 \$373,841 |
| 786 PED TAHOE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SKI RUN BLVD SHEPHERDS DRIVE | 0.62 \$4,000,000 0.17 \$1,000,000 0.37 \$1,000,000 | \$2,480,000 \$166,244 \$373,841 |
| 780 PED TAHOE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SKI KUN BLVD SHEPHERDS DRIVE CITY OF SOUTH LAKE CITY OF SOUTH LAKE TAHOE PIONEER TRAIL SKI KUN BLVD SHEPHERDS DRIVE | 0.82 \$4,000,000 0.17 \$1,000,000 0.37 \$1,000,000 | \$2,480,000 \$166,244 \$373,841 |
| | 0.17 \$1,000,000 0.37 \$1,000,000 | \$166,244 \$373,841 |
| PED TAHOE CITY OF SOUTH LAKE TAHOE SOUTH TAHOE HIGH ACCESS ROAD LAKE TAHOE BLVD SOUTH TAHOE HIGH | 0.37 \$1,000,000 | \$373,841 |
| CITY OF SOUTH LAKE | 0.37 \$1,000,000 |) \$373,841 |
| PED TAHOE CITY OF SOUTH LAKE TAHOE SPRUCE AVE GLENWOOD DR BLACKWOOD RD | | 40.0,0 |
| | | \$368 679 |
| CITY OF SOUTH LAKE | 0.57 \$1,000,000 | \$500,075 |
| PED TAHOE CITY OF SOUTH LAKE TAHOE SPRUCE AVENUE (SOUTH SIDE) GLENWOOD WAY BLACKWOOD DRIVE | 0.38 \$1,000,00 | \$380,164 |
| CITY OF SOUTH LAKE | | |
| PED TAHOE CITY OF SOUTH LAKE TAHOE STATELINE AVE US HWY 50 LAKESHORE BLVD | 0.42 \$1,000,000 |) \$420,000 IN |
| | | CONSTR |
| CITY OF SOUTH LAKE | | UCTION |
| PED TAHOE CITY OF SOUTH LAKE TAHOE US HWY 50 STATELINE RD PARK AVE | 0.28 \$8,000,000 | \$2,266,406 HELD UP |
| CITY OF SOUTH LAKE | 1 44 40 000 00 | FINAL |
| PED TAHOE CITY OF SOUTH LAKE TAHOE US HWY 50 PHASE T TROUT CREEK SKI RUN BLVD | 1.44 \$8,000,000 | Σ \$11,519,241 DESIGN FINAL |
| PED TAHOE CITY OF SOUTH LAKE TAHOE US HWY 50 PHASE II FOURTH STREET TROUT CREEK | 2.14 \$8.000.00 | \$17.107.326 DESIGN |
| CITY OF SOUTH LAKE | | FINAL |
| PED TAHOE CITY OF SOUTH LAKE TAHOE US HWY 50 PHASE II SOUTH TAHOE "Y" FOURTH STREET | 0.24 \$8,000,00 | \$1,943,245 DESIGN |
| PED DOUGLAS COUNTY DOUGLAS COUNTY KAHLE DRIVE US HWY 50 LAURA DRIVE | 0.10 \$1,000,000 | 5 \$95,350 FINAL |
| 777 PED DOUGLAS COUNTY DOUGLAS COUNTY LAKE PARKWAY FAST (LOOP ROAD) STATELINE RD US HWY 50 | 0.60 \$4,500.00 | \$2,695,956 DESIGN |
| 778 PED DOUGLAS COUNTY DOUGLAS COUNTY STATELINE BLVD/CASINO CORE US HWY 50 LAKESHORE BLVD | 0.41 \$1,000,000 | \$410,000 |
| KINGSBURY GRADE (STATE ROUTE LAKE PARKWAY (LOOP | | |
| 781 PED DOUGLAS COUNTY DOUGLAS COUNTY US HWY 50 207) ROAD | 0.25 \$400,000 | \$100,860 \$8,543,554 |
| PED DOUGLAS COUNTY DOUGLAS COUNTY OS HWY SU ELK S POINT ROAD KAHLE DRIVE | 1.07 \$8,000,000 | , \$6,543,554 |
| | | ENVIRON |
| | | MENTAL |
| PED PLACER COUNTY PLACER COUNTY BEAR STREET STATE ROUTE 28 TROUT AVE | 0.06 \$317,000 | \$18,489 REVIEW |
| | | FNVIRON |
| | | MENTAL |
| PED PLACER COUNTY PLACER COUNTY COON STREET STATE ROUTE 28 DOLLY VARDEN AVE | 0.39 \$317,000 | \$122,595 REVIEW |
| | | |
| | | |
| PED PLACER COUNTY PLACER COUNTY DEER STREET STATE ROUTE 28 PAST TROUT AVE | 0.04 \$317.00 | \$12 083 REVIEW |
| | | \$ 12,000 N211211 |
| | | ENVIRON |
| FANNY BRIDGE PEDESTRIAN/BICYCLE | 0.01 \$1.200.00 | |
| 854 PED PLACER COUNTY TCPOD MPROVEMENTS TAHOE TAVERN ROAD MACKINAW RD | 0.61 \$1,200,00 | 5735,488 REVIEW |
| | | ENVIRON |
| | | MENTAL |
| PED PLACER COUNTY PLACER COUNTY FOX STREET STATE ROUTE 28 RAINBOW AVE | 0.21 \$317,000 |) \$66,131 REVIEW |
| | | ENVIRON |
| | | MENTAL |
| PED PLACER COUNTY PLACER COUNTY SECLINE STREET STATE ROUTE 28 STEELHEAD AVE | 0.16 \$317,000 | \$51,017 REVIEW |

| EIP#/Caltrans | 3 | | | | | Cost per mile | | | | |
|---------------|---------------------|--------------------|--------------------------|-------------------------------|---------------------------|--------------------|-----------|-------------|--------------|-------------|
| EA# | Class | Location | Ownership | Name | From | То | Miles (1) | (2) | Total Cost | Status |
| | | | | | | | | | | ENVIRONMENT |
| 78 | PED | PLACER COUNTY | PLACER COUNTY | STATE ROUTE 28 | STATE ROUTE 267 | CHIPMUNK STREET | 0.89 | \$2,500,000 | \$2,217,179 | AL REVIEW |
| | PED | PLACER COUNTY | PLACER COUNTY | STATE ROUTE 28 | STATELINE RD | CHIPMUNK STREET | 0.79 | \$8,000,000 | \$6,336,719 | |
| 77. | 5 PED | PLACER COUNTY | TCPUD | STATE ROUTE 89-HOMEWOOD | SILVER STREET | FAWN STREET | 0.55 | \$1,000,000 | \$550,000 | |
| | | | | | | | | | | ENVIRONMENT |
| | PED | PLACER COUNTY | PLACER COUNTY | STEELHEAD AVE | DEER STREET | FOX STREET | 0.41 | \$317,000 | \$130,811 | AL REVIEW |
| | PED | WASHOE COUNTY | WASHOE COUNTY | COUNTRY CLUB DRIVE | VILLAGE BLVD | STATE ROUTE 28 | 1.56 | \$2,000,000 | \$3,113,866 | |
| | PED | WASHOE COUNTY | WASHOE COUNTY | DRIVER WAY | VILLAGE BLVD | COUNTRY CLUB DRIVE | 0.58 | \$1,000,000 | \$579,115 | |
| | PED | WASHOE COUNTY | WASHOE COUNTY | FAIRWAY BLVD | NORTHWOOD BLVD | COUNTRY CLUB DRIVE | 0.44 | \$2,000,000 | \$875,332 | |
| | PED | WASHOE COUNTY | WASHOE COUNTY | GOLFERS PASS ROAD | STATE ROUTE 431 | VILLAGE BLVD | 0.85 | \$1,000,000 | \$847,320 | |
| | PED | WASHOE COUNTY | WASHOE COUNTY | INCLINE WAY | VILLAGE BLVD | SOUTHWOOD BLVD | 0.23 | \$1,000,000 | \$233,843 | |
| | PED | WASHOE COUNTY | WASHOE COUNTY | MCCOURRY BLVD | STATE ROUTE 431 | NORTHWOOD BLVD | 0.46 | \$1,000,000 | \$456,688 | |
| | PED | WASHOE COUNTY | WASHOE COUNTY | SKI WAY | COUNTRY CLUB DRIVE | FIRST GREEN DRIVE | 0.73 | \$2,000,000 | \$1,455,290 | |
| | PED | WASHOE COUNTY | WASHOE COUNTY | STATE ROUTE 28 | LAKESHORE BLVD (WEST END) | NORTHWOOD BLVD | 1.10 | \$2,000,000 | \$2,193,875 | |
| | PED | WASHOE COUNTY | WASHOE COUNTY | VILLAGE BLVD | COUNTRY CLUB DRIVE | COLLEGE DRIVE | 0.52 | \$2,000,000 | \$1,042,160 | |
| | | CITY OF SOUTH LAKE | | | | | | | | |
| | C-1/SHARED USE PATH | TAHOE | CITY OF SOUTH LAKE TAHOE | TROUT CREEK BRIDGE REPAIR | TULARE | MACKINAW | 0.05 | \$2,000,000 | \$100,000 | |
| | | CITY OF SOUTH LAKE | | | | | | | | |
| | C-1/SHARED USE PATH | TAHOE | CITY OF SOUTH LAKE TAHOE | UPPER TRUCKEE BRIDGE REPAIR | PONDEROSA STREET | ELOISE AVE | 0.05 | \$2,000,000 | \$100,000 | |
| | | | | | | | | | | |
| | C-1/SHARED USE PATH | EL DORADO COUNTY | USFS | POPE/BALDWIN PATHUPGRADE | 15TH STREET | SPRING CREEK | 3.30 | \$750,000 | \$2,475,000 | |
| | 4/BIKE FERRY | EL DORADO COUNTY | | BIKE FERRY | CAMP RICHARDSON | MEEK'S BAY | 8.80 | \$1,670,000 | \$14,702,676 | |
| | | | | | | | | | | |
| | C-1/SHARED USE PATH | PLACER COUNTY | TCPUD/CALTRANS | TRUCKEE RIVER TRAIL WIDENING | TAHOE CITY | SQUAW VALLEY | 2.50 | \$750,000 | \$1,875,000 | |
| | | PLACER COUNTY/EL | | | | | | | | |
| 10042/NA | C-1/SHARED USE PATH | DORADO COUNTY | TCPUD | WEST SHORE TRAIL IMPROVEMENTS | SR 28/89 | EMERALD BAY | 12.10 | \$1,000,000 | \$12,100,000 | |

 Table 18: Proposed Bicycle and Pedestrian Project List

Pedestrian Facilities

| PLANNING-LEVEL PR | ROJECTS | |
|----------------------------------|---------------|--|
| Ranking Criteria | Weight | Evaluators should use professional judgement when ranking. Not all situations conform to the criteria below |
| Fixes gap in existing network | 15 | Project that connects two high use facilities that were not linked before, or that links a facility with a high- residential or commercial area = 1 pt Project that connects medium or low use facilities that were not linked before = 0.75 pt Project fixes a section that deterred use, or adds length to an existing facility = 0.5 pt Project upgrades a section not built to current standards = 0.25 pt |
| Estimated use | 40 | Based on the Lake Tahoe Bicycle and Pedestrian User Models. Over 1,500 estimated users per day = 1 pt 1,000 to 1,500 = 0.75 pt 500 to 1,000 = 0.5 pt 100 to 500 = 0.25 pt Less than 100 = 0.1 pt Note: Destination connectivity is incorporated into this criterion through the model calculations. |
| Improves network | 10 | Provides unduplicated, direct link between residences and recreational or commercial area. Facility where no parallel facility exists within 1300 feet (exception: sidewalk or shared-use path next to a line receives 1 pt) = 1 pt Facility that serves different users (such as a bike lane where there is an existing parallel shared-use path), sidewalk across the street from an existing sidewalk = 0.5 The focus of this criterion is on avoiding duplication, not on gap closure or connecting destinations. |
| Multi-modal connectivity | 5 | Provides additional support to existing transit stops and routes. Sidewalk or shared use path directly connecting to a transit stop = 1 pt Bike lane or bike route connecting to a transt stop = 0.5 pt |
| Safety | 10 | Project can address a problem location where there have been reported accidents = 1 pt Addresses a location that the public or planners have identified as a safety hazard = 1 pt |
| Cost benefit | 20 | Cost per annual user served. Less than \$5 per person = 1 pt \$5-\$20 per person = 0.75 pt \$20-\$100 per person = 0.5 pt \$100-\$500 per person = 0.25 pt Over \$500 per person = 0 pt. |
| Environmental Impact | -20 | Greater than 50% of project might result in new SEZ disturbance = 1 pt 25-50% new SEZ disturbance = 0.5 pt 5 - 25% new SEZ disturbance = 0.25 pt Additional strong potential for scenic or wildlife disturbance = 0.5 pts with total points not to surpass 1. Other environmental impacts that don't fit into above categories = up to 1 pt |
| DESIGN-LEVEL PROJ | ECTS | |
| Criteria are the sam | e as for Plan | ning-level projects, with addition of one criterion below. |
| Timeline | 20 | Permitted or Permit Requested = 1 pt Final Design = 0.75 pt Environmental Review = 0.5 pt Preliminary Design or Feasibility Study = 0 Feasibility Study = 0 |

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| EIP#/Caltrans EA | # CLASS | LOCATION | OWNERSHIP | NAME | FROM | то | PROJECT_TYPE |
|------------------|-------------------------------|--------------------------------|------------------------------|--|------------------------|-----------------------------|--------------|
| HIGHEST PRIORIT | Y "DESIGN-LEVEL" PROJECTS (6) | | | | | | 1 |
| 1003 | 3 C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | US HWY 50-EL DORADO BEACH TRAIL | SKI RUN BLVD | EL DORADO BEACH | Design-Level |
| 76 | 3 C-1/SHARED USE PATH | PLACER COUNTY | TCPUD | LAKESIDE TRAIL PHASES V, VI, VII | GROVE STREET | STATE ROUTE 28 | Design-Level |
| | C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | HARRISON AVE | LAKEVIEW AVE | LOS ANGELES AVE | Design-Level |
| 77 | 7 C-1/SHARED USE PATH | DOUGLAS COUNTY | DOUGLAS COUNTY | NV STATELINE TO STATELINE BIKEWAY | KAHLE DRIVE | LAKE PARKWAY | Design-Level |
| | C-1/SHARED USE PATH | DOUGLAS COUNTY | DOUGLAS COUNTY | NV STATELINE TO STATELINE BIKEWAY SOUTH DEMO | ELK'S POINT ROAD | KAHLE DRIVE | Design-Level |
| 76 | 9 C-1/SHARED USE PATH | DOUGLAS COUNTY | DOUGLAS COUNTY | NV STATELINE TO STATELINE BIKEWAY SOUTH DEMO | ROUND HILL PINES BEACH | ELK'S POINT ROAD | Design-Level |
| NA/03-2A920 | C-2/BIKE LANE | PLACER COUNTY | CALTRANS | STATE ROUTE 89-HOMEWOOD | FAWN STREET | CHERRY STREET | Design-Level |
| | | | | | | | |
| NA/03-1A842 | C-2/BIKE LANE | CITY OF SOUTH LAKE TAHOE | CALTRANS | STATE ROUTE 89-EMERALD BAY ROAD | SOUTH TAHOE "Y" | SO. LAKE TAHOE CITY LIMITS | Design-Level |
| 76 | 1 C-1/SHARED USE PATH | PLACER COUNTY | NTPUD | NORTH TAHOE BIKE PATH | DOLLAR HILL | NORTH TAHOE REGIONAL PARK | Design-Level |
| | PED | PLACER COUNTY | PLACER COUNTY | BEAR STREET | STATE ROUTE 28 | TROUT AVE | Design-Level |
| | PED | PLACER COUNTY | PLACER COUNTY | DEER STREET | STATE ROUTE 28 | PAST TROUT AVE | Design-Level |
| 78 | 37 C-2/BIKE LANE | PLACER COUNTY | CALTRANS/PLACER COUNTY | LAKE TAHOE SCENIC BIKE LOOP - STATE ROUTE 28 | CSR 267 | CHIPMUNK STREET | Design-Level |
| | PED | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | US HWY 50 | STATELINE RD | PARK AVE | Design-Level |
| 77 | 7 C-1/SHARED USE PATH | DOUGLAS COUNTY | DOUGLAS COUNTY | LAKE PARKWAY WEST (LOOP ROAD, NV SS) | US HWY 50 | STATELINE AVE | Design-Level |
| | PED | PLACER COUNTY | PLACER COUNTY | COON STREET | STATE ROUTE 28 | DOLLY VARDEN AVE | Design-Level |
| | PED | PLACER COUNTY | PLACER COUNTY | FOX STREET | STATE ROUTE 28 | RAINBOW AVE | Design-Level |
| | C-3/BIKE ROUTE | PLACER COUNTY | PLACER COUNTY | LAKE FOREST ROAD | POMIN PARK | SKYLANDIA PARK | Design-Level |
| | PED | PLACER COUNTY | PLACER COUNTY | SECLINE STREET | STATE ROUTE 28 | STEELHEAD AVE | Design-Level |
| | PED | PLACER COUNTY | PLACER COUNTY | STEELHEAD AVE | DEER STREET | FOX STREET | Design-Level |
| NA/03-3C380 | C-2/BIKE LANE | CITY OF SOUTH LAKE TAHOE | CALTRANS | US HWY 50 (PM 75.4/77.3) | TROUT CREEK | SOUTH TAHOE "Y" | Design-Level |
| 78 | PED | PLACER COUNTY | PLACER COUNTY | STATE ROUTE 28 | STATE ROUTE 267 | CHIPMUNK STREET | Design-Level |
| 77 | '5 C-1/SHARED USE PATH | PLACER COUNTY | TCPUD | HOMEWOOD MULTI-USE TRAIL | FAWN STREET | CHERRY STREET | Design-Level |
| 75 | 2 C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | CALIFORNIA TAHOE CONSERVANCY | SOUTH TAHOE GREENWAY | SKI RUN BLVD | SIERRA TRACT | Design-Level |
| | C-1/SHARED USE PATH | PLACER COUNTY | PLACER COUNTY | LAKE FOREST ROAD | SKYLANDIA PARK | STATE ROUTE 28 | Design-Level |
| 75 | 2 C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | CALIFORNIA TAHOE CONSERVANCY | SOUTH TAHOE GREENWAY | VAN SICKLE STATE PARK | SKI RUN BLVD | Design-Level |
| 76 | 3 C-1/SHARED USE PATH | PLACER COUNTY | TCPUD | LAKESIDE TRAIL PHASE 2C | MACKINAW RD | COMMONS BEACH | Design-Level |
| 78 | B6 PED | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | PIONEER TRAIL | SHEPHARDS ROAD | US HWY 50 | Design-Level |
| 85 | 4 PED | PLACER COUNTY | TCPUD | FANNY BRIDGE PEDESTRIAN/BICYCLE IMPROVEMENTS | TAHOE TAVERN ROAD | MACKINAW RD | Design-Level |
| NA/03-1A733 | C-2/BIKE LANE | CITY OF SOUTH LAKE TAHOE | CALTRANS | US HWY 50 (PM 77.3/79.3) | SKI RUN BLVD | TROUT CREEK | Design-Level |
| 736/10034 | C-1/SHARED USE PATH | EL DORADO COUNTY | EL DORADO COUNTY | SAWMILL 2 PATH | US HWY 50 | LAKE TAHOE BLVD | Design-Level |
| | C-1/SHARED USE PATH | WASHOE COUNTY | NDOT | NV STATELINE TO STATELINE BIKEWAY | STATELINE ROAD | LAKESHORE DRIVE (WEST) | Design-Level |
| | | | | | US HWY 50 AND SR 89 | | |
| 749/03-1A841 | C-2/BIKE LANE | EL DORADO COUNTY | CALTRANS | STATE ROUTE 89-MEYERS | INTERSECTION | PORTAL DRIVE | Design-Level |
| | PED | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | US HWY 50 PHASE I | TROUT CREEK | SKI RUN BLVD | Design-Level |
| | PED | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | US HWY 50 PHASE II | FOURTH STREET | TROUT CREEK | Design-Level |
| | | | | | | LAKE FOREST CAMPGROUND | |
| | C-1/SHARED USE PATH | | PLACER COUNTY | | EXISTING BIKE PATH | ENTRANCE | Design-Level |
| | C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | SIERRA BLVD | US HWY 50 | BARBARA AVE | Design-Level |
| | PED | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | US HWY 50 PHASE II | SOUTH TAHOE "Y" | FOURTH STREET | Design-Level |
| 7.5 | | EL DURADU CUUNTT/CITT UF SUUTH | | | | MEVERC | Decise Level |
| /5 | 2 C-1/SHARED USE PATH | | | SOUTH TAHUE GREENWAY | | | Design-Level |
| 84 | | | | INV STATELINE TO STATELINE BIKEWAY | | SAND HARBOR | Design-Level |
| NA/03-1A844 | 5/SCENIC BIKE LOOP | | | LAKE TAHOE SCENIC BIKE LOOP (PM 18.0/24.9) | | | Design-Level |
| INA/03-2A921 | U-2/BIKE LANE | PLACER COUNTY | CAL I KAINS | STATE KUUTE 89-TAHUE CITY | | | Design-Level |
| NA /02 14942 | | | CALTRANS | | LIMITS | | Design Lovel |
| NA/03-1A842 | | | | WEST SHORE DIVE TRAIL EXTENSION | | | Design Level |
| 1040 | | | | | INIEENS BAT | SUGAR PINE PUINT STATE PARK | Design-Level |
| 1003 | C-1/SHAKED USE PATH | | | LAKE TAHUE BLVD | D SIKEEI | BUULDER MUUNTAIN DRIVE | Design-Level |
| IUIAL | | } | 1 | | 1 | | |

Table 20: Prioritized Project List, Design-Level Projects.

Notes:

1) Mileage is calculated from GIS, not mileposts. 2) From Caltrans SWITRS and Nevada Highway Patrol Databases. 3) Based on the Bike Trail User Model 4) Based on a survey of other regions with snow (172.8 for cleared facilities; 146.5 for non-cleared) (See Bike Trail User Model Tab TK) 5) Costs for Caltrans projects use the "Conceptual Unit Cost Estimates". Since these projects are constructed concurrently with water quality work, actual costs may differ. 6) Any prioritization is dependent on funding, right-of-way availability, and other issues, and the order in which projects are actually completed is based on a variety of factors.7) For full list of project scoring, see web version at www.tahoempo.org.

| MILES (1) | Cost_per_mil E (5) | TOTAL_COST | STATUS | PRIORITIZATIO N_SCORE |
|--------------|-----------------------|---------------|------------------------|--------------------------|
| | | | | |
| 0.69 | \$2,000,000 | \$1,387,449 | FINAL DESIGN | 100 |
| 1.10 | \$4,462,209 | \$4,908,430 | PERMIT APPROVED | 100 |
| 0.28 | \$2,000,000 | \$566,312 | PRELIMINARY PLANNING | 90 |
| 0.89 | \$2,000,000 | \$1,772,420 | ENVIRONMENTAL REVIEW | 88 |
| 0.62 | \$2,000,000 | \$1,231,911 | ENVIRONMENTAL REVIEW | 83 |
| 0.75 | \$2,000,000 | \$1,490,575 | ENVIRONMENTAL REVIEW | 83 |
| 0.82 | \$50,000 | \$41,141 | 95% DESIGN | 83 |
| | | | 95% DESIGNCII NEEDS TO | |
| 1.36 | \$5,000 | \$6,791 | BE REINSTATED HERE | 80 |
| 8.00 | \$2,000,000 | \$16,000,000 | ENVIRONMENTAL REVIEW | 80 |
| 0.06 | \$317,000 | \$18,489 | ENVIRONMENTAL REVIEW | 79 |
| 0.04 | \$317,000 | \$12,083 | ENVIRONMENTAL REVIEW | 79 |
| 0.93 | \$5,000 | \$4,632 | ENVIRONMENTAL REVIEW | 77 |
| 0.28 | \$8,000,000 | \$2,266,406 | IN CONSTRUCTIONHELD UP | 75 |
| 0.44 | \$2,000,000 | \$881,223 | ENVIRONMENTAL REVIEW | 75 |
| 0.39 | \$317,000 | \$122,595 | ENVIRONMENTAL REVIEW | 74 |
| 0.21 | \$317,000 | \$66,131 | ENVIRONMENTAL REVIEW | 74 |
| 0.62 | \$5,000 | \$3,078 | IN CONSTRUCTION 09_11 | 74 |
| 0.16 | \$317,000 | \$51,017 | ENVIRONMENTAL REVIEW | 74 |
| 0.41 | \$317,000 | \$130,811 | ENVIRONMENTAL REVIEW | 74 |
| 1.89 | \$4,000,000 | \$7,573,067 | 60% DESIGN | 70 |
| 0.89 | \$2,500,000 | \$2,217,179 | ENVIRONMENTAL REVIEW | 70 |
| 0.85 | \$2,474,462 | \$2,103,293 | PRELIMINARY PLANNING | 70 |
| 1.50 | \$2,500,000 | \$3,751,598 | ENVIRONMENTAL REVIEW | 69 |
| 0.18 | \$1,000,000 | \$184,199 | IN CONSTRUCTION | 69 |
| 1.33 | \$2,500,000 | \$3,327,520 | ENVIRONMENTAL REVIEW | 68 |
| 0.30 | \$10,000,000 | \$3,000,000 | ENVIRONMENTAL REVIEW | 65 |
| 0.37 | \$4,000,000 | \$1,487,399 | PRELIMINARY PLANNING | 65 |
| 0.61 | \$1,200,000 | \$735,488 | ENVIRONMENTAL REVIEW | 65 |
| 1.95 | \$9,000,000 | \$17,591,210 | 95% DESIGN | 63 |
| 1.86 | \$2,000,000 | \$3,710,012 | FINAL DESIGN | 63 |
| 2.15 | \$4,000,000 | \$8,583,035 | PRELIMINARY PLANNING | 63 |
| | | | | |
| 2.50 | \$500,000 | \$1,249,675 | IN CONSTRUCTION | 60 |
| 1.44 | \$8,000,000 | \$11,519,241 | FINAL DESIGN | 60 |
| 2.14 | \$8,000,000 | \$17,107,326 | FINAL DESIGN | 60 |
| | | | | |
| 0.11 | \$1,000,000 | \$106,900 | FINAL DESIGN | 59 |
| 0.50 | 100000 | \$500,000 | ENVIRONMENTAL REVIEW | 58 |
| 0.24 | \$8,000,000 | \$1,943,245 | FINAL DESIGN | 58 |
| | | | | |
| 5.67 | \$2,500,000 | \$14,187,302 | ENVIRONMENTAL REVIEW | 55 |
| 2.49 | \$8,000,000 | \$19,941,899 | PRELIMINARY PLANNING | 55 |
| 7.35 | \$500,000 | \$3,673,878 | 95% DESIGN | 47 |
| 3.46 | \$500,000 | \$1,730,427 | IN CONSTRUCTION | 45 |
| | | A | | |
| 1.70 | \$1,000,000 | \$1,702,159 | 95% DESIGN | 43 |
| 0.70 | \$3,000,000 | \$2,099,844 | PRELIMIINARY PLANNING | 43 |
| 1.92 | \$2,000,000 | \$3,846,369 | PRELIMINARY PLANNING | 40 |
| 62.2 | | \$164,833,758 | | |

| | | | | | | | | MILES | COST_PER_MIL | | PRIOR | RITIZATIO |
|-------------------|-------------------------------|-------------------------------|--------------------------|--|-------------------------------|----------------------------|----------------|-------|--------------|--------------|------------|-----------|
| EIP#/Caltrans EA# | CLASS | LOCATION | OWNERSHIP | NAME | FROM | то | PROJECT_TYPE | (1) | E (5) | TOTAL_COST | STATUS N_S | SCORE |
| HIGHEST PRIORITY | "PLANNING-LEVEL" PROJECTS (6) |) | | | | | | | | | | |
| | | | | | | | | | | | | |
| 10042/NA | C-1/SHARED USE PATH | PLACER COUNTY/EL DORADO COUNT | TCPUD | WEST SHORE TRAIL IMPROVEMENTS | SR 28/89 | EMERALD BAY | Planning-level | 12.10 | \$1,000,000 | \$12,100,000 | | 90 |
| | C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | US HWY 50 | EXISTING LINEAR PARK TRAIL | PARK AVE | Planning-level | 0.08 | \$4,000,000 | \$320,000 | | 83 |
| | C-1/SHARED USE PATH | PLACER COUNTY | TCPUD/CALTRANS | TRUCKEE RIVER TRAIL WIDENING | TAHOE CITY | SQUAW VALLEY | Planning-level | 2.50 | \$750,000 | \$1,875,000 | | 70 |
| | C-1/SHARED USE PATH | PLACER COUNTY | TCPUD/CALTRANS | SUNNYSIDE TO SEQUOIA TRAIL | SUNNYSIDE RESORT | LOWER SEQUOIA/SR 89 | Planning-level | 0.65 | \$1,500,000 | \$975,000 | | 65 |
| NA/03-1A734 | C-2/BIKE LANE | CITY OF SOUTH LAKE TAHOE | CALTRANS | US HWY 50 (PM 79.3/80.4) | STATELINE RD | SKI RUN BLVD | Planning-level | 1.15 | \$8,000,000 | \$9,185,518 | | 65 |
| | | | | | TOYON RD/CONNECTION WITH | EXISTING FOREST SERVICE | | | | | | |
| | C-1/SHARED USE PATH | PLACER COUNTY | PLACER COUNTY | NATIONAL AVENUE EAST SIDE | PROPOSED NTPUD PATH | PATHS | Planning-level | 0.24 | \$2,000,000 | \$480,000 | | 65 |
| | C-1/SHARED USE PATH | WASHOE COUNTY | WASHOE COUNTY | STATE ROUTE 28 (NORTH SIDE) | PRESTON FIELD | NORTHWOOD BLVD | Planning-level | 0.30 | \$2,000,000 | \$591,559 | | 63 |
| | | | | | | SOUTH LAKE TAHOE BIKE PATH | - | | | | | |
| | C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | PONDEROSA/SUSSEX CONNECTOR TO SIERRA TRACT | US HWY 50 | PONDEROSA SECTION | Planning-level | 0.07 | \$2,000,000 | \$132,849 | | 60 |
| | C-2/BIKE LANE | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | GLENWOOD AVE | BLACKWOOD RD | FAIRWAY DR | Planning-level | 0.25 | \$500,000 | \$125,818 | | 58 |
| | C-1/SHARED USE PATH | DOUGLAS COUNTY | DOUGLAS COUNTY | KINGSBURY CONNECTOR | VAN SICKLE STATE PARK | MARKET STREET | Planning-level | 0.77 | \$2,000,000 | \$1,545,217 | | 58 |
| | C-3/BIKE ROUTE | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | FAIRWAY AVE | GLENWOOD WAY | BLACKWOOD RD | Planning-level | 0.14 | \$5,000 | \$700 | | 55 |
| 778 | PED | DOUGLAS COUNTY | DOUGLAS COUNTY | STATELINE BLVD/CASINO CORE | US HWY 50 | LAKESHORE BLVD | Planning-level | 0.41 | \$1,000,000 | \$410,000 | | 55 |
| | C-1/SHARED USE PATH | WASHOE COUNTY | WASHOE COUNTY | OLD MT ROSE HWY | DIRT PARKING LOT | BASIN BOUNDARY | Planning-level | 2.54 | \$1,000,000 | \$2,542,848 | | 55 |
| | C-1/MULTI-USE PATH | EL DORADO COUNTY | USFS | POPE/BALDWIN PATHUPGRADE | 15TH STREET | SPRING CREEK | Planning-level | 3.30 | \$750,000 | \$2,475,000 | | 54 |
| | C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | TROUT CREEK BRIDGE REPAIR | TULARE | MACKINAW | Planning-level | 0.05 | \$2,000,000 | \$100,000 | | 53 |
| | C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | UPPER TRUCKEE BRIDGE REPAIR | PONDEROSA STREET | ELOISE AVE | Planning-level | 0.05 | \$2,000,000 | \$100,000 | | 53 |
| | C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | JAMES CONNECTOR | JAMES AVE | EXISTING BIKE PATH | Planning-level | 0.03 | \$2,000,000 | \$67,916 | | 53 |
| | | | | | | US HWY 50/END OF LINEAR | | | | | | |
| 10037 | C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | PARK AVE (WEST) | PINE BLVD | PARK TRAIL | Planning-level | 0.21 | \$500,000 | \$103,034 | | 53 |
| | | | | | | CITY OF SOUTH LAKE TAHOE | | | | | | |
| | C-1/SHARED USE PATH | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | US HWY 50 | H STREET | CITY LIMITS | Planning-level | 0.44 | \$2,000,000 | \$884,390 | | 53 |
| | | | | | | STATE ROUTE 207/KINGSBURY | | | | | | |
| | C-3/BIKE ROUTE | DOUGLAS COUNTY | DOUGLAS COUNTY | MARKET STREET | PROPOSED SHARED USE PATH | GRADE | Planning-level | 0.19 | \$5,000 | \$951 | | 53 |
| | | | | | CITY OF SOUTH LAKE TAHOE CITY | (| | | | | | |
| | C-1/SHARED USE PATH | EL DORADO COUNTY | EL DORADO COUNTY | US HWY 50 | LIMITS | SAWMILL BLVD | Planning-level | 1.31 | \$2,000,000 | \$2,628,184 | | 53 |
| | C-3/BIKE ROUTE | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | SOUTH AVE | MELBA DRIVE | THIRD STREET | Planning-level | 0.25 | \$5,000 | \$1,268 | | 52 |
| | C-3/BIKE ROUTE | DOUGLAS COUNTY | DOUGLAS COUNTY | ROUND HILL BIKE PATH CONNECTOR 2 | ROUND HILL BIKE PATH | MCFAUL WAY | Planning-level | 0.07 | \$5,000 | \$348 | | 52 |
| | C-3/BIKE ROUTE | EL DORADO COUNTY | EL DORADO COUNTY | MEADOW VALE/SOUTHERN PINES | US HWY 50 | PIONEER TRAIL | Planning-level | 1.23 | \$5,000 | \$6,130 | | 52 |
| 760 | 5/SCENIC BIKE LOOP | WASHOE COUNTY | NDOT | LAKE TAHOE SCENIC BIKE LOOP - STATE ROUTE 28 | STATELINE ROAD | LAKESHORE BLVD (WEST) | Planning-level | 2.30 | \$5,000 | \$11,508 | | 52 |
| | C-3/BIKE ROUTE | CITY OF SOUTH LAKE TAHOE | CITY OF SOUTH LAKE TAHOE | VENICE DRIVE | TAHOE KEYS BLVD | 15TH STREET | Planning-level | 0.88 | \$500,000 | \$440,471 | | 50 |
| | | | | | KINGSBURY GRADE (STATE ROUTE | E | | | | | | |
| 781 | PED | DOUGLAS COUNTY | DOUGLAS COUNTY | US HWY 50 | 207) | LAKE PARKWAY (LOOP ROAD) | Planning-level | 0.25 | \$400,000 | \$100,860 | | 50 |
| | C-3/BIKE ROUTE | EL DORADO COUNTY | EL DORADO COUNTY | BLITZEN RD | STATE ROUTE 89 NEAR MEYERS | SANTA CLAUSE DR | Planning-level | 1.53 | \$5,000 | \$7,661 | | 50 |
| TOTAL | | | | | | | | 33.30 | | \$37,212,232 | | |

| Location | Segment Name | From | То | Classification | Comments |
|--------------------------|--|----------------------------|----------------------------|-----------------------|--|
| CITY OF SOUTH LAKE TAHOE | UPPER TRUCKEE MEADOW | ELK'S CLUB ROAD | CARROW'S ON US HWY 50 | C-1/SHARED USE PATH | Screened out at this time based on screening criteria #1: duplicative of Greenway and bike routes through Barton neighborhood. Proposed at CSLT Parks and Rec Commission meeting 6-29-09. Follows river from Elk's Club to highway, cross under highway, end near Carrow's. Very difficult with SEZ, property acquisition. |
| CITY OF SOUTH LAKE TAHOE | 56-ACRE CONNECTOR | 56-ACRES | BIJOU PARK | | Design Workshop suggested this, however I can't figure out where it would go. |
| CITY OF SOUTH LAKE TAHOE | GREENWAY TO Y CONNECTOR | SOUTH TAHOE GREENV | SOUTH AVE | C-1/SHARED USE PATH | Screened out based on criteria #6, ROW acquisition. This trail would have to cross private property which at the time of plan development was not available for acquisition. This link has been suggested from multiple public sources. |
| CITY OF SOUTH LAKE TAHOE | BARTON MEADOW | SAN FRANCISCO AVE | VENICE AVE | C-1/SHARED USE PATH | Screened out based on criteria #6, ROW acquisition. This path was suggested at the October open-houses, and has been suggested by other members of the public in the past. CTC asked us to remove it from the bike plan because it is not the preferred alternative for work they are proposing in the Cove East area. |
| EL DORADO COUNTY | EMERALD BAYRAISE WHOLE ROAD AROUND EMERALD BAY TO ADD SPACE FOR BIKE LANE, AND ALLOW ANIMALS AND SNOW TO CROSS UNDER ROAD | | | | Screened out based on criteria #8, meeting design standards. Proposed at Lake Tahoe Bicycle Coalition planning meeting. Slopes of path would be beyond AASHTO standards for much of the route, also low predicted use (approx 150 users per day) would not justify expense. |
| EL DORADO COUNTY | POPE BEACH CONNECTOR | VENICE DRIVE | END OF POPE BEAC | I C-1/SHARED USE PATH | Screened out on criteria #1, duplicate route, and #7, environmental impacts. This direct connection would have to go through waterfowl habitat that was recently restored by the Forest Service. Impact mitigation would be very difficult if not impossible. Also, although it would be direct for people in the Keys who wanted to access the western-most portion of Pope Beach, most other people would not experience significant time savings, particularly as they could visit the more eastern portions of Pope or Jameson Beach. There is a walking trail connecting Venice Drive to Pope Beach during dry periods. |
| EL DORADO COUNTY | SAWMILL ROAD | US HWY 50 | LAKE TAHOE BLVD | C-3/BIKE ROUTE | Screened out on criteria #8meeting design standards. At a Sawmill TAC meeting, it was suggested to sign this CIII until the C-1 is constructed, but this road seems too dangerous to sign as C-III right now. |
| EL DORADO COUNTY | WEST SHORE DL BLISS SERVICE ROAD | DL BLISS SOUTH ENTRANCE | DL BLISS NORTH ENTRANCE | C-3/BIKE ROUTE | Screened out on criteria #8meeting design standards. This alternative was recommended in the SR-89 Cascade to Rubicon Bay Bikeway Study, 2003. However, it seems too steep to be useful as an alternative route to the highway. |
| DOUGLAS COUNTY | PONY EXPRESS TRAIL | VAN SICKLE STATE PARK | TAHOE RIM TRAIL | C-1/SHARED USE PATH | Screened out on criteria #6 (right-of-way) and #8 (meeting design standards). This is currently a mountain bike path and is planned to remain as a mountain bike path. Crosses multiple private properties, is very steep. The Pony Express on the other side of Kingsbury, the Carson Valley side, is planned as a paved path, however. |

APPENDIX C UTILITY PROVIDERS

Utility Providers

Tahoe Water Suppliers Association (TWSA) Contacts

Tahoe Water Suppliers Association http://www.tahoeh2o.org/

Nevada Division of Environmental Protection Contact: Andrea Seifert E-mail: aseifert@ndep.nv.gov Phone:775-687-4670

Lakeside Park Water Supplier (HOA) Contact: Bob Loding E-mail: Docwtr@aol.com Phone:530-542-2314

Kingsbury General Improvement District Contact: Cameron McKay E-mail: cam@kgid.org Phone:775-588-3548

Douglas County - Engineering Dept Contact: Carl Ruschmeyer E-mail: cruschmeyer@co.douglas.nv.us Phone: 775-782-9063

South Tahoe Public Utility District Contact: Dennis Cocking dcocking@stpud.dst.ca.us Phone: 530-544-4964

California State Parks Contact: Graham Payne E-mail: gpayne@parks.ca.gov Phone: 916-653-6995

Round Hill General Improvement District Contact: Greg Reed E-mail: agreed@rhgid.org Phone: 775-588-2571

Incline Village General Improvement District Contact: Harvey Johnson, Joe Pomroy, or Madona Dunbar E-mail: harvey_johnson@ivgid.org; Joe_Pomroy@ivgid.org;mod@ivgid.org Or: Joe Pomroy Phone: 775-832-1100

United States Forest Service Contact: Jim Harris E-mail: jsharris@fs.fed.us Phone: (530) 543-2600

North Tahoe Public Utility district Contact: Lee Schegg E-mail: lschegg@ntpud.org Phone: (530) 546-4212

Sand Harbor E-mail: tahoe@parks.nv.gov Phone: 775-831-0494

Edgewood Contact: Scott Schunter E-mail: scott@edgewoodtahoe.com Phone: 775-588-2787

Tahoe City Public Utility District E-mail: tlaliotis@tcpud.org Phone: (530) 583-3796

APPENDIX D ROADWAY INFORMATION FOR NEVADA FACILITIES

| | | | | | | | Width in | Posted | |
|----------------|--------------|------------------|---------|---------------------|-------|--------------------------|----------|--------|---------|
| Jurisdiction | Segment Name | From | То | | Class | Distance in Miles | Feet | Speed | ADT |
| Carson City | NSR 28 | Chimney Beach | US Hwy | / 50/NSR 28 | P-I | 3.53 | 24 | 45 | 6,000 |
| Douglas County | Loop Rd | US Hwy 50 | El Dora | do County | P-I | 0.52 | 36 | 35 | 3,200 |
| Douglas County | Skyland | US Hwy 50/Nsr 28 | Cave R | ock | P-I | 0.56 | 48 | 45 | 126,000 |
| Douglas County | Us Hwy 50 | Zephyr Cove | Round | Hill/Elks Point Trl | P-I | 1.48 | 48 | 45 | 18,000 |
| Douglas County | Us Hwy 50 | Cave Rock | Zephyr | Cove | P-I | 4.75 | 48 | 45 | 16,000 |
| Douglas County | Stateline | NSR 207 | El Dora | do County | P-I | 1.15 | 36 | 35 | 2,600 |
| Douglas County | Us Hwy 50 | Elks Point Trl | Lake Pl | (y | P-I | 1.58 | 48 | 45 | 25,000 |
| Douglas County | Us Hwy 50 | NSR 28/Us Hwy 50 | Glenbro | ook | P-I | 2.23 | 48 | 45 | 126,000 |
| * This | information | is | only | required | for | the State | e c | of | Nevada |

Roadway Information for Nevada Facilities

APPENDIX E FUNDING MEMORANDUM

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1. Introduction

This memorandum outlines potential federal, state, local, and non-governmental funding opportunities available for Lake Tahoe Basin bicycle and pedestrian facilities. Funding sources can be used for a variety of activities, including planning, design, implementation and maintenance. It should be noted that this memorandum reflects the funding available at the time of writing. The funding amounts, fund cycles, and even the programs themselves are susceptible to change without notice. This memorandum and attached spreadsheet were developed with the dynamics of our times and economy in mind. Both are formatted so that they may be updated and made current as funding changes.

There are a variety of potential funding sources including local, state, regional and federal funding programs as well as private sector funding that can be used to construct and maintain bicycle and pedestrian facilities. Most of the federal, state and regional programs are competitive and involve the completion of extensive applications with clear documentation of the project need, costs and benefits. The following should be noted:

- Funding sources are highly competitive, with many agencies competing for the same "pots" of money.
- Funding is limited; capital funding needs far outstrip available funding every year.
- Applying for funding is a time-consuming and staff-intensive process.
- Grant funds may have time-consuming reporting and administration requirements, and staff time required for grant administration should be considered before an agency pursues a grant.

2. Organization of Memo

Funding for bicycle and pedestrian projects can come from federal, state, regional, local or private sources. Particularly with Federal sources, funding may be administered by a different agency or entity. This memo organizes funding sources based on the agency or entity that administers the funding.

Funding source descriptions include, as available:

- administering agency,
- eligible projects,
- eligible agencies,
- match requirements,
- amount of funding typically available for each project, and
- whether the program is applicable in California, Nevada or both states.

3. Federal Transportation Funding

Bicycle and pedestrian projects are broadly eligible for funding from almost all of the major Federal-aid highway, transit, safety and other programs. For the most part bicycle projects must be "principally for transportation, rather than recreation purposes" and must be designed and located pursuant to the transportation plans required of States and Metropolitan Planning Organizations.

The primary federal source of surface transportation funding—including bicycle and pedestrian facilities—is SAFETEA-LU, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. Also known as the federal transportation bill, the \$286.5 billion SAFETEA-LU bill passed in 2005 and authorizes Federal surface transportation programs for the five-year period between 2005 and 2009. Congress is drafting a new federal transportation bill for reauthorization in 2010, and that bill may significantly change funding available for bicycle and pedestrian facilities.

Administration of federal transportation funding is through the State and regional planning agencies. Most, but not all, of these funding programs are oriented toward transportation (as opposed to strictly recreation purposes), with an emphasis on reducing auto trips and providing inter-modal connections. SAFETEA-LU programs require a local match of between 0% and 20%, based on the funding program. SAFETEA-LU funding is intended for capital improvements and safety and education programs and projects must relate to the surface transportation system.

Specific funding programs under SAFETEA-LU include, but are not limited to:

Congestion Mitigation and Air Quality (CMAQ) – funds projects that contribute to the attainment of maintenance of air quality, specifically ozone, carbon dioxide, and particulate matter. States administer CMAQ funding.

Surface Transportation Program (STP) (23 USC 119) funds may be used for either construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects, such as transit research and development, surface transportation planning programs, and operational costs for traffic monitoring, management and control. Ten percent of each State's annual STP funds are set -aside for Transportation Enhancement Activities (TEAs), which are programs and infrastructure projects that expand transportation choices and enhance the transportation experience. SAFETEA-LU describes twelve eligible categories of TEAs, including provision of facilities or safety and educational activities for bicyclists and pedestrians and preservation of abandoned railway corridors for shared use trails. In California, STP funds are allocated to regions through the Regional Surface Transportation Program, and administered by Regional Transportation Planning Agencies.

Highway Bridge Program (HBP) (23USC 144) funds may be used for the replacement and rehabilitation of deficient highway bridges and to seismically retrofit bridges located on any public road. Funds are allocated to States.

Interstate Maintenance (IM) (23 23 119) funds may be used to resurface, restore, rehabilitate, and reconstruct interstate routes, including pedestrian and bicycle facilities over, under, or along interstate routes. Funds are administered by States.

4. Federally Administered Funds

The following funding programs are administered by federal agencies.

Federal Lands Highway Funds

(California and Nevada)

Federal Lands Highway Funds may be used to plan and construct bicycle and pedestrian facilities in conjunction with roads and parkways at the discretion of the department charged with administration of the funds. The projects must be transportation-related and tied to a plan adopted by the State. Federal Lands Highway funds are 100% federally funded. California's apportionment for FY 1998 through FY 2007 was \$461 million and Nevada's apportionment during the same time frame was \$172 million.

Federal Website: http://flh.fhwa.dot.gov/

Central Federal Lands Website: http://www.cflhd.gov

Transportation, Community and System Preservation (TCSP) Program

(California and Nevada)

The Transportation, Community and System Preservation (TCSP) Program provides federal funding for transit oriented development, traffic calming and other projects that improve the efficiency of the transportation system, reduce the impact on the environment, and provide efficient access to jobs, services and trade centers. The program is intended to provide communities with the resources to explore the integration of their transportation system with community preservation and environmental activities. The program is administered by the Federal Highway Administration. States, MPOs, local governments and tribal agencies are eligible for discretionary grants. TCSP Program funds require a 20% match. Project awards range from about \$100,000 to \$2 million.

Website: http://www.fhwa.dot.gov/tcsp/index.html

National Scenic Byways Program

(California and Nevada)

The National Scenic Byways Program identifies roads with outstanding scenic, historic, and cultural, natural, recreational, and archaeological qualities as National Scenic Byways. The program provides funding for scenic byway projects and for planning, designing, and developing scenic byway programs. There is a 20% match requirement. National Scenic Byways Program can be used to fund on-street and off-street bicycle facilities, pedestrian facilities, intersection improvements, user maps and other publications.

Nationally, \$3 million were available each fiscal year between 2006 and 2009.

Grant applications for National Scenic Byways Programs are forwarded to the FHWA division office by the state or tribal scenic byways coordinator.

Federal Fact Sheet: http://www.fhwa.dot.gov/safetealu/factsheets/scenic.htm

National Scenic Byways Program: http://www.bywaysonline.org/grants/

Rivers, Trails and Conservation Assistance Program

(California and Nevada)

The Rivers, Trails and Conservation Assistance Program (RTCA) is a National Parks Service program which provides technical assistance via direct staff involvement, to establish and restore greenways, rivers, trails, watersheds and open space. The RTCA program provides only for planning assistance—there are no implementation monies available. Projects are prioritized for assistance based upon criteria which include conserving significant community resources, fostering cooperation between agencies, serving a large number of users, encouraging public involvement in planning and implementation and focusing on lasting accomplishments. Eligible applicants include non-profit organizations, community groups, tribes or tribal governments, and local, State, or federal government agencies. Federal agencies may be the lead partner only in collaboration with a nonfederal partner.

This program has provided technical assistance funding for the Silver Saddle Ranch and Carson River Community Vision, Carson City, Nevada planning effort.

National Park Service's Rivers, Trails and Conservation Assistance Program Website: http://www.nps.gov/ncrc/programs/rtca/

The Paul S. Sarbanes Transit in Parks Program

(California and Nevada)

Paul S. Sarbanes Transit in Parks and Public Lands Program, formerly the Alternative Transportation in Parks and Public Lands (ATPPL) Program, funds transportation modes that reduce congestion in parks and public lands. The program funds planning and capital expenses for alternative modes in state and national lands, including bicycle and pedestrian paths. Any local, state, federal agency or tribal group that manages federal lands may apply for funds. Project awards range from \$40,000 to \$3 million.

Website: http://www.fta.dot.gov/funding/grants/grants_financing_6106.html

Highway Bridge Program

(California and Nevada)

The Highway Bridge Program funds the replacement and rehabilitation of deficient highway bridges and to seismically retrofit bridges located on any public road. If a highway bridge deck is replaced or

rehabilitated and bicycles are permitted at each end of the bridge, the bridge project must include safe bicycle accommodations (within reasonable costs). Funds are allocated to the States by the Federal government. The Discretionary Bridge Program, a part of the HBP, is administered by the Federal government, and is eligible for the replacement and rehabilitation of high cost highway bridges or seismic retrofit of highway bridges.

Federal website: http://www.fhwa.dot.gov/bridge/bripro.htm

5. State-Administered Sources

The States of California and Nevada use both federal sources and state budgets to fund bicycle and pedestrian projects. The following program descriptions specify whether it is a program specific to one or both states.

California Bicycle Transportation Account

As California's Department of Transportation, Caltrans is the agency responsible for implementing bicycle and pedestrian facilities. Caltrans funds local facilities through its Bicycle Transportation Account (BTA). The BTA requires applicants to have adopted or updated a bicycle plan within the past five years. The adopted bicycle plan must comply with CA Streets and Highways Code Section 891.2, and include eleven elements, below. California cities and counties, with adoption of this Plan, will be eligible to receive BTA funding.

Eleven elements for BTA eligibility:

- 1. Estimated number of existing and future bicycle commuters;
- 2. Land use and settlement patterns;
- 3. Existing and proposed bikeways;
- 4. Existing and proposed bicycle parking facilities;
- 5. Existing and proposed multi-modal connections;
- 6. Existing and proposed facilities for changing and storing clothes and equipment;
- 7. Bicycle safety and education programs;
- 8. Citizen and community participation;
- 9. Consistency with transportation, air quality, and energy plans;
- 10. Project descriptions and priority listings; and
- 11. Past expenditures and future financial needs.

Grants range between \$10,000 to \$1 million.

California Bicycle Transportation Account website: http://www.dot.ca.gov/hq/LocalPrograms/bta/btawebPage.htm

California Tahoe Conservancy (CTC)

(California)

The California Tahoe Conservancy (Conservancy) is a California state agency with a mission to preserve, protect, restore, enhance, and sustain the unique and significant natural resources and recreational opportunities of the Lake Tahoe Basin. Established in 1984, the Conservancy's jurisdiction extends throughout the California side of the Lake Tahoe Region, as defined in California Government Code Section 66905.5. The Conservancy develops and implements projects to improve water quality, preserve Lake Tahoe's scenic beauty, provide recreational opportunities and public access, preserve wildlife habitat areas, and manage and restore lands to protect the natural environment.

The Conservancy's Public Access and Recreation Program implements projects that are consistent with the Tahoe Region's Environmental Improvement Program (EIP) and has four primary objectives:

- To increase and enhance significant regional public access and public recreational opportunities consistent with natural resource preservation.
- To provide a range of public access opportunities to locations with regionally significant lakefront, riverfront, cultural/historical and natural characteristics.
- To increase regional waterborne and non-motorized transportation and recreation opportunities.
- To support environmental education, interpretation, and wayfinding efforts that promote stewardship, provide information, and lessen confusion for recreationists.

To support the program, the Conservancy allocates funds for projects undertaken by the Conservancy itself as lead agency and for grants to eligible project sponsors. The Conservancy provides grants for three types of public access and recreation projects: site improvement, planning, and acquisition.

The following entities are eligible to apply for grants under the Public Access and Recreation Program:

- Local public agencies, State agencies, and federal agencies;
- Federally recognized Indian tribes, including the Washoe Tribe of Nevada and
- California;
- The Tahoe Transportation District (established under California Government
- Code Section 66801); and
- Eligible nonprofit organizations.

Website: http://www.tahoecons.ca.gov

State Transportation Improvement Program

(California and Nevada)

To be eligible for Federal transportation funds, States are required to develop a State Transportation Improvement Program (STIP) and update it at least every four years. A STIP is a multi-year capital improvement program of transportation projects, and serves to coordinate transportation-related capital improvements of the metropolitan planning organizations and the state.

In California, the STIP includes projects on and off the State Highway System and is funded with revenues from the Transportation Investment Fund and other funding sources. The California STIP is typically updated every two years. To be included in the STIP, projects must be included in the Interregional Transportation Improvement Plan (ITIP), prepared by Caltrans or the Regional Transportation Improvement Plans (RTIPs), prepared by regional agencies. Bicycle and pedestrian projects are eligible for inclusion.

In Nevada, the STIP is updated annually by the Nevada Department of Transportation. The STIP is the instrument used to implement the plans resulting from the statewide transportation planning process

Caltrans STIP website: http://www.dot.ca.gov/hq/LocalPrograms/STIP.htm

Nevada STIP website: http://www.nevadadot.com/traveler/construction_projects/stip/

Highway Safety Improvement Program

(California and Nevada)

The Highway Safety Improvement Program funds are allocated to States as part of SAFETEA-LU. The goal of HSIP funds is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads. As required under the Highway Safety Improvement Program (HSIP) California and Nevada Departments of Transportation have developed and are in the process of implementing a Strategic Highway Safety Plan (SHSP). A portion of the HSIP funds allocated to each state are set aside for construction and operational improvements on high-risk rural roads. If the state has a Strategic Highway Safety Plan, the remainder of the funds may be allocated to other programs, including projects on bicycle and pedestrian pathways or trails and education and enforcement. The local match varies between 0% and 10%. Maximum grant award is \$900,000.

Caltrans issues an annual call for projects for HSIP funding. Projects must meet the goals of the Strategic Highway Safety Plan.

NDOT sets aside \$400,000 of HSIP funding annually for quick action response funding. This funding can be used towards matching local contributions or to augment a district's budget. Safety improvements of \$150,000 or less, such as pedestrian flashers, lighting, or increased signage is made available at the request of a local entity or in response to an event. This funding is available on a first-come, first served basis.

Federal HSIP Website: http://www.fhwa.dot.gov/safetealu/factsheets/hsip.htm

Caltrans HSIP Website: http://www.dot.ca.gov/hq/LocalPrograms/hsip.htm

Nevada SHSP Website: http://www.nevadadot.com/reports_pubs/Safety_Plan/
Recreational Trails Program

(California and Nevada)

The Recreational Trails Program of SAFETEA-LU provides funds to states to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Annually, the Federal Highway Administration distributes funds to each state based on gasoline tax revenue from registered off-road vehicles in the state. Each state administers its Recreational Trails Program, and has different guidelines. Eligible applicants include cities, counties, districts, state and federal agencies, and non-profit organizations responsible for managing public lanes.

Nevada State Parks administers the RTP in Nevada. In FY 2008, Nevada received \$1.3 million in RTP funds in 2009. Nevada's share for 2010 will be announced in fall of 2009. Grant request amounts must be between \$4,000 and \$100,000. A minimum 20% local match is required. In Nevada, funds can be used for:

- Maintenance and restoration of existing trails;
- Purchase and lease of trail construction and maintenance equipment;
- Construction of new trails; including unpaved trails;
- Acquisition of easements or property for trails;
- State administrative costs related to this program (limited to seven percent of a State's funds); and
- Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a State's funds).

In California, the funds are administered by the California Department of Parks and Recreation. California's apportionment was \$1.7 million in 2009 and proposals are due October 1, 2009 for 2010 apportionment funds. A minimum 12% local match is required. Recreational Trails Program funds may be used for acquisition of easements and fee simple title to property for recreational trail corridors, development and rehabilitation of trails, trailside or trailheads and construction of new trails. RTP funding cannot be used for paths and sidewalks along a roadway, trail planning, non-ADA accessible trails, upgrading or facilitating motorized access to non-motorized trails. There is no maximum or minimum limit on grant request amounts.

Federal Website: http://www.fhwa.dot.gov/environment/rectrails/

Nevada Recreational Trails Program Website: http://parks.nv.gov/trail/about.htm

California Recreational Trails Program Website: http://www.parks.ca.gov/?Page_id=24324

Land and Water Conservation Fund

(California and Nevada)

Land and Water Conservation Fund (LWCF) is a federally funded program, run through the National Park Service that provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. The fund is administered by the California Department of Parks and Recreation in California, and the Nevada Division of State Parks in Nevada. The fund has been reauthorized until 2015.

Cities, counties and districts authorized to acquire, develop, operate and maintain park and recreation facilities are eligible to apply. Applicants must fund the entire project, and will be reimbursed for 50 percent of costs. Property acquired or developed under the program must be retained in perpetuity for public recreational use.

On June 3, 2009 Secretary of the Interior Ken Salazar signed the LWCF 2009 Certificate of Apportionment which distributes over \$27 million to the States, Territories, and the District of Columbia. Approximately \$2.3 million is available for projects in California and \$334,000 is available in Nevada. The Nevada Division of State Parks is not holding a funding round in 2009. Funding for 2009 has still not been received and in anticipated to be lower than last year. There will be a combined 2009-2010 announcement for the availability of federal funds the summer of 2010.

National Park Service website: http://www.nps.gov/lwcf/

California LWCF website: http://www.parks.ca.gov/default.asp?page_id=21360

Nevada LWCF website: http://parks.nv.gov/lwcf.htm

Wildlife Conservation Board Public Access Program

(California)

The Wildlife Conservation Board (WCB) is a California State board which provides grants to public agencies and non-profit groups and organizations. The focus of the Board's grant funding program is the acquisition of lands or improvements that preserve wildlife habitat or provide recreational access for hunting, fishing or other wildlife-oriented activities. Up to \$250,000 dollars are available per project. Applications are accepted quarterly. Projects eligible for funding include interpretive trails, river access, and trailhead parking areas. The State of California must have a proprietary interest in the project. Local agencies are generally responsible for the planning and engineering phases of each project.

Wildlife Conservation Board Website: http://www.wcb.ca.gov/

California Conservation Corps

(California)

The California Conservation Corps (CCC) is a public service program which occasionally provides assistance on construction projects. The CCC may be written into grant applications as a project partner. In order to utilize CCC labor, project sites must be public land or be publicly accessible. CCC

labor cannot be used to perform regular maintenance; however, it can perform annual maintenance, such as the opening of trails in the spring.

California Conservation Corps Website: http://www.ccc.ca.gov/

Environmental Enhancement and Mitigation Funds

(California)

The Environmental Enhancement Mitigation Program (EEMP) provides grant opportunities for projects that indirectly mitigate environmental impacts of new transportation facilities. Projects should fall into one of the following three categories: highway landscaping and urban forestry, resource lands projects or roadside recreation facilities. Funds are available for land acquisition and construction. The local Caltrans District must support the project.

Average award amount is \$250,000.

Website: http://resources.ca.gov/eem/

Safe Routes to School

(California and Nevada)

Federal Safe Routes to School

Safe Routes to School programs are intended to increase the number of children walking and bicycling to school by making it safer for them to do so. Federal Safe Routes to School (SRTS) funds are allocated to each state to be administered by their transportation departments. Cities, counties, metropolitan planning organizations or regional transportation planning agencies are eligible for federal SRTS funding. No local match is required. Bicycle and pedestrian infrastructure projects within two miles of a grade school or middle school are eligible, as are education, encouragement and enforcement programs (non-infrastructure programs). Both California and Nevada receive these funds.

California was appropriated \$46 million in federal SRTS funds for Cycle 2 (FY 08/09 and 09/10) Maximum grant awarded for infrastructure is \$1 million, and for non-infrastructure is \$500,000.

http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/srts_guide.htm

Nevada's Safe Routes to School Program was appropriated \$1 million per year through 2009.

http://www.walknevada.com/

California Safe Routes to School

In addition to the federal Safe Routes to School funding source, California has a state-legislated source. This source is eligible to cities and counties only, and can be used for infrastructure projects within the vicinity of a school that serves kindergarten through 12th grade. Applicants must provide a 10% match. The fund is primarily for construction, but up to 10% of the program funds can be used for education, encouragement, enforcement and evaluation activities.

California's State Safe Routes to School program awarded 48.5 million dollars in Cycle 8 (FY 09/10 and 10/11). Maximum grant awarded is \$450,000.

http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm

Office of Traffic Safety (OTS) Grants

(California and Nevada)

Office of Traffic Safety Grants are supported by Federal funding under the National Highway Safety Act and SAFETEA-LU. In California, the grants are administered by the Office of Traffic Safety and in Nevada the grants are administered by the Nevada Department of Public Safety.

Grants are used to establish new traffic safety programs, expand ongoing programs or address deficiencies in current programs. Pedestrian safety is included in the list of traffic safety priority areas. Eligible grantees are: governmental agencies, state colleges, state universities, local city and county government agencies, school districts, fire departments and public emergency services providers. Grant funding cannot replace existing program expenditures, nor can traffic safety funds be used for program maintenance, research, rehabilitation or construction. Grants are awarded on a competitive basis, and priority is given to agencies with the greatest need. Evaluation criteria to assess need include: potential traffic safety impact, collision statistics and rankings, seriousness of problems, and performance on previous OTS grants. The California application deadline is January of each year and the Nevada application deadline is April of each year.

There is no maximum cap to the amount requested, but all items in the proposal must be justified to meet the objectives of the proposal.

California OTS Website: http://www.ots.ca.gov/Grants/default.asp

Nevada OTS Website: http://ots.state.nv.us/OTS_FormsPubs.shtml#grant

Transportation Planning Grant Program

(California)

The Transportation Planning Grant Program, administered by Caltrans, provides two grants that can be used to construct and plan bicycle and pedestrian facilities.

The **Community-Based Transportation Planning Grant** provides funding for projects that exemplify livable community concepts including pedestrian improvement projects. Eligible applicants include local governments, MPO's and RPTA's. A 20% local match is required and projects must demonstrate a transportation component or objective. There is \$3 million available annually statewide.

The **Environmental Justice: Context Sensitive Planning Grants** promote context sensitive planning in diverse communities and funds planning activities that assist low-income, minority and Native American communities to become active participants in transportation planning and project development. Grants are available to transit districts, cities, counties and tribal governments. This grant is funded by the State Highway Account at \$1.5 million annually state-wide. Grants are capped at \$250,000.

http://www.dot.ca.gov/hq/tpp/grants.html

State Highway Operations & Protection Program

(California)

The State Highway Operations and Protection Program (SHOPP) is a Caltrans funding source with the purpose of purpose of maintaining and preserving the investment in the State Highway System and supporting infrastructure. Projects typically fall into the following categories: collision reduction, major damage restoration, bridge preservation, roadway preservation, roadside preservation, mobility enhancement and preservation of other transportation facilities related to the state highway system. In the past, SHOPP funds have been used to construct bicycle and pedestrian projects, including curb ramps, overcrossings, bike paths, sidewalks, signal upgrades to meet ADA requirements. Jurisdictions work with Caltrans' districts to have projects placed on the SHOPP list.

The total amount available for the four-year SHOPP period between 2010/11 and 2013/14 fiscal years is \$6.75 billion, which is a reduction in funding from prior SHOPP programs. Past project awards have ranged from approximately \$140,000 to \$4.68 million.

The American Recovery and Reinvestment Act (ARRA) granted funding to this program in California.

http://www.dot.ca.gov/hq/transprog/shopp.htm

Nevada State Question 1 Bond Act

(Nevada)

The Nevada Department of Conservation and State Lands administers this funding source. Four counties within the Carson River Watershed have been allocated \$10 million in funding (Douglas, Lyon, Carson City and Churchill). Funds must be used in one of four categories: acquire and develop land and water rights, provide recreational facilities, provide parking for and access to and along the river, and to restore the Carson River Corridor. Most bicycle and pedestrian projects funded under this program would fall under the recreation category. Example projects include constructing a footbridge or a trail along the river. A fifty-percent match is required.

Annual allocation is \$2.5 million per county.

Interstate Maintenance

(California and Nevada)

The Interstate Maintenance (IM) program funds resurfacing, restoration, rehabilitation, and reconstruction of interstate routes, including pedestrian and bicycle facilities over, under, or along interstate routes. A State may transfer up to 50% of its IM apportionment to its National Highway System, Surface Transportation, Congestion Mitigation and Air Quality Improvement, Highway Bridge Replacement and Rehabilitation, or Recreational Trails apportionment. Funds are administered by States.

Federal website: http://www.fhwa.dot.gov/safetealu/factsheets/im.htm

Community Development Block Grants

(California and Nevada)

The Community Development Block Grant (CDBG) program funds projects and programs that develop viable urban communities by providing decent housing and a suitable living environment and by expanding economic opportunities, principally for persons of low and moderate income. Federal Community Development Block Grant Grantees may use CDBG funds for activities that include (but are not limited to) acquiring real property; building public facilities and improvements, such as streets, sidewalks, and recreational facilities; and planning and administrative expenses, such as costs related to developing a consolidated plan and managing CDBG funds. The state makes funds available to eligible agencies (cities and counties) through a variety of different grant types. Grantees enter into a contract with the state. Eligible agencies are determined based on a formula, and are listed on the HUD website:

Eligible CDBG Agencies in California: http://www.hud.gov/local/ca/community/cdbg/#state

Eligible CDBG Agencies in Nevada: http://www.hud.gov/local/nv/community/cdbg/#state

http://www.hud.gov/offices/cpd/communitydevelopment/programs/index.cfm

6. Locally-Administered Sources

Local funding sources are generally administered by Metropolitan Planning Organizations, Congestion Management Agencies, Transportation Improvement Authorities or other regional agencies. Counties or cities may administer some funding sources. These funding sources are supported by federal, state or local revenue streams.

Congestion Mitigation and Air Quality Program

(California and Nevada)

Congestion Mitigation and Air Quality (CMAQ) program funds projects that contribute to the attainment or maintenance of National Ambient Air Quality Standards for ozone, carbon monoxide and particulate matter standards. CMAQ projects must be located within an air basin that does not meet National Ambient Air Quality Standards, and as such at Lake Tahoe only jurisdictions located in El Dorado County are eligible for CMAQ funding. Eligible projects must also be included in the RTIP or the Federal Transportation Improvement Plan. Funds may be used for, among other things, construction of bicycle and pedestrian facilities and non-construction projects related to safe bicycle use. Examples of these include brochures and other public education materials. As of October 1, 2009, all CMAQ projects must have a local match of 11.47%.

http://www.tahoempo.org/cmaq.aspx?SelectedIndex=1

http://www.caltrans.ca.gov/hq/transprog/federal/cmaq/Official_CMAQ_Web_Page.htm

Regional Surface Transportation Program

(California)

The Regional Surface Transportation Program (RSTP) was established in California using Surface Transportation Program Funds from the Federal government. RSTP is a block grant program which provides funding for bicycle and pedestrian projects, among many other transportation projects. Under the RSTP, the local MPO or COG prioritizes and approves projects that receive RSTP funds. Agencies can transfer funding from other federal transportation sources to the RSTP program in order to gain more flexibility in the way the monies are allocated. In California, 62.5% of RSTP funds are allocated according to population. The remaining 37.5% is available statewide.

In Lake Tahoe, approximately \$400,000 is available each year through RSTP, and approximately 60% of this is allocated to bicycle and pedestrian projects.

TRPA's explanation of the RSTP: http://www.tahoempo.org/rstp.aspx

Caltrans website: http://www.dot.ca.gov/hq/transprog/federal/rstp/Official_RSTP_Web_Page.htm

Transportation Development Act Article 3

(California)

Transportation Development Act (TDA) Article 3 Local Transportation Funds are administered by TRPA as the Regional Transportation Planning Agency (RTPA). Funds are available for transit, bicycle and pedestrian projects in California. According to the Act, pedestrian and bicycle projects are allocated two percent of the revenue from a ¹/₄ cent of the general state sales tax, unless the transportation planning agency finds that the money could be used to better advantage for elderly and handicapped services and community transit. LTF funds are collected by the State, returned to each county based on sales tax revenues, and typically apportioned to areas within the county based on population. Eligible pedestrian and bicycle projects include construction and engineering for capital projects and

development of comprehensive facilities plans. These funds may be used to meet local match requirements for federal funding sources.

Annually, approximately \$830,000 is available in El Dorado County and \$600,000 in Placer County.

Tahoe Metropolitan Planning Agency website: http://www.tahoempo.org/tda.aspx?SelectedIndex=3

Caltrans website: http://www.dot.ca.gov/hq/MassTrans/State-TDA.html

Mello-Roos Community Facilities Act

(California)

The Mello-Roos Community Facilities Act was passed by the California Legislature in 1982 in response to reduced funding opportunities brought about by the passage of Proposition 13. The Mello-Roos Act allows any county, city, special district, school district, or joint powers of authority to establish a Community Facility District (CFD) for the purpose of selling tax-exempt bonds to fund public improvements within that district. CFDs must be approved by a two-thirds margin of qualified voters in the district. Property owners within the district are responsible for paying back the bonds. Pedestrian facilities are eligible for funding under CFD bonds.

Overview of Mello-Roos: http://mello-roos.com/pdf/mrpdf.pdf

Transient Occupancy Tax

(Placer County, CA and Douglas County, NV)

Transient Occupancy Tax funds are collected by several jurisdictions with the Basin. In Placer County the North Lake Tahoe Resort Association is responsible for their collection and use. A large share has been programmed for transportation purposes, including construction of shared use paths. Local groups or agencies can apply for these funds using the application that is in the back of the NLTRA *Infrastructure and Transportation Development Integrated Work Plan and Long-Range Funding Plan.* In Douglas County, the Tahoe-Douglas Transportation District is responsible for programming TOT revenues and has developed a county-wide five year transportation improvement program.

NLTRA Infrastructure and Transportation Development Integrated Work Plan and Long-Range Funding Plan: http://www.nltra.org/documents/

TRPA Rental Car Mitigation Fund

(California and Nevada)

Each a time a rental car is rented in the Basin, the customer pays a \$4.75 per day fee. The collected funds are placed in an interest-bearing trust account and funds are allocated by the Tahoe Transportation

District for local transportation improvements. There is no formal application process but interested parties may discuss potential projects with the Tahoe Transportation District Staff.

Tahoe Transportation District: http://www.tahoetransportation.org/

Description in Code of Ordinances: http://www.trpa.org/documents/docdwnlds/ordinances/COCh95.pdf

TRPA Air Quality Mitigation Fund

(California and Nevada)

This program is designed to collect fees to offset impacts caused by indirect sources of air pollution in the Basin. These funds are administered by TRPA for distribution to local jurisdictions.

Some facility construction may be paid for by developers.

New Construction

(California and Nevada)

Future construction projects are a means of providing sidewalks and other pedestrian facilities. To ensure that roadway construction projects provide facilities where needed and feasible, it is important that an effective review process be in place so that new roads meet the counties' and cities' standards and guidelines for the development of sidewalks and pedestrian facilities. A developer may also attempt to reduce the number of trips (and hence impacts and cost) by paying for on- and off-site bicycle and pedestrian improvements designed to encourage residents, employees and visitors to the new development to walk rather than drive.

General Funds

(California and Nevada)

One of the local revenue sources of cities, towns, and counties available for use on bicycle and pedestrian improvements are general funds resulting from sales taxes, property taxes, and other miscellaneous taxes and fees. There are generally few restrictions on the use of these funds, which are utilized for a large variety of local budget needs. As such, there is typically high demand for these funds for numerous government services. Design and construction of sidewalks and pathways through use of this funding source usually receives limited support from local governments unless their constituents lobby effectively for such use.

In some cases, a component of local general funds can be dedicated to transportation improvements including the construction and repair of sidewalks.

Special Improvement Districts

(California and Nevada)

Counties and cities may establish special improvement districts to provide funding for specified public improvement projects within the designated district. Property owners in the district are assessed for the improvements and can pay the amount immediately or over a span of 10 to 20 years. Street pavement, curb and gutter, sidewalks, and streetlights are some of the common improvements funded by special improvement districts. Business Improvement Districts and Special Assessment Districts are example of special improvement districts.

Parks and Recreation Funds

(California and Nevada)

Local parks and recreation funds are generally derived from property and sales taxes and some fee revenues, and they are sometimes used directly for pathway or pathway related facilities, including bathrooms, pocket parks, lighting, parking, and landscaping. Parks and recreation funds are also utilized to cover pathway maintenance costs incurred by these departments.

Integration into Larger Projects

(California and Nevada)

The State of California's "Complete Streets" policy requires Caltrans to address the safety and mobility needs of bicyclists, pedestrians, and transit users in all projects. Local jurisdictions can begin to expect that some portion of pedestrian and bicycle project costs, when they are built as part of larger transportation projects, will be covered in project construction budgets.

The Nevada Department of Transportation also has a "Bicycle Facilities Checklist" that it compares against roadway project designs. Roadway projects must incorporate facilities in approved local bicycle and pedestrian plans where feasible.

Bicycle and pedestrian facilities may also be constructed as part of private developments or local projects.

7. Other Sources

Community Action for a Renewed Environment

(Administrator: U.S. EPA)

Community Action for a Renewed Environment (CARE) is a competitive grant program that offers an innovative way for a community to organize and take action to reduce toxic pollution in its local environment. Through CARE, a community creates a partnership that implements solutions to reduce releases of toxic pollutants and minimize people's exposure to them. By providing financial and technical assistance, EPA helps CARE communities get on the path to a renewed environment. Transportation and "smart-growth" types of projects are eligible. Grants range between \$75,000 and \$300,000. In 2010, applications were due in March.

http://www.epa.gov/care/

American Greenways Program

Administered by The Conservation Fund, the American Greenways Program (AMG) provides funding for the planning and design of greenways. AMG awards may be used to fund unpaved trail development. Eligible applicants include local, regional or statewide non-profit organizations and public agencies. The maximum award is \$2,500, but awards typically range from \$500 to \$1,500.

Website: http://www.conservationfund.org/?article=2471

<u>Bikes Belong Grant</u>

Bikes Belong is an organization sponsored by bicycle manufacturers with the intent to increase bicycle riding in the United States. Bikes Belong provides grant opportunities up to \$10,000 with a minimum 50% match to organizations and agencies seeking to support facility and advocacy efforts. Eligible projects include bike paths, trails, and bridges, mountain bike facilities, bike parks, and BMX facilities.

Website: http://www.bikesbelong.org/grants

APPENDIX F TAHOE BIKE TRAIL USER MODEL



TRANSPORTATION PLANNING AND TRAFFIC ENGINEERING CONSULTANTS

2690 Lake Forest Road, Suite C Post Office Box 5875 Tahoe City, California 96145 (530) 583-4053 FAX: (530) 583-5966 info@lsctahoe.com www.lsctahoe.com

Tahoe Region Bicycle and Pedestrian Use Models User Instructions September 30, 2009

As part of the Tahoe Basin Bicycle / Pedestrian Master Plan, LSC Transportation Consultants, Inc. with assistance from Alta Planning has developed linked bicycle and pedestrian use level estimation models for travel corridors in the Tahoe Region. This model is based upon observed facility use levels in the Tahoe Region, data regarding the characteristics of individual facility users, as well as demographic and travel data for the Tahoe region. Note that this model is for relatively urban or inter-community travel corridors, and is not applicable to mountain bike trails.

Use models for both bicycle and pedestrian modes have been developed (other users, such as rollerbladers, are included as pedestrians). Due to the lack of data, bicycle use levels is only estimated for Class I/shared use path and Class II/bike lane facilities, and pedestrian use levels for Class I facilities. Overall, this model identifies the maximum feasible use level along a specific travel corridor assuming a "perfect" condition, and then applies a series of reductions that reflect factors (grade, continuity, congestion, etc.) that would reduce the actual use level from the maximum feasible level.

This memo presents straightforward instructions regarding how to use the model. It is intended to be used with a spreadsheet ("TRPA Region Bike Ped Simplified Model.xls"). If the analyst desires additional understanding as to the model methodology, please refer to a separate memo entitled "Tahoe Region Bicycle and Pedestrian Use Models" (LSC Transportation Consultants, Inc. September 28, 2009) available from either LSC or the TRPA.

Using the Models

The single page to be used by the analyst summarizing the models is shown in Table A. The boxes indicate data that the analyst will need to enter. The analysis should be conducted in the following steps:

- 1. Using the attached Figure A, identify the corridor in which your facility is located. (If you want to consider either a longer facility comprising two or more of these corridors or a specific sub-section of a corridor, please refer to the "Tahoe Region Bicycle and Pedestrian Use Models" memo.)
- 2. From Table B, identify the values for visitor and resident bike-to-trail maximum feasible demand for the specific corridor, and enter them in Table A.

- 3. The potential demand for persons driving to the trail depends on whether you are evaluating an existing facility, or a potential new facility. If your corridor is already served by a Class I/shared use path facility, enter 480 in Cell F19 and 135 in Cell F29. If a potential new facility, enter 240 in Cell F19 and 41 in Cell F29.
- 4. From Table C, identify the values for visitor and resident walk-to-trail maximum feasible demand for the specific corridor, and enter them in Table A.
- 5. Starting from the trail usage generated by a "perfect" trail, identify the reduction in usage expected to occur based on the various factors, for each user type, as presented in Table D. (A "perfect" trail is Class I/shared use path, continual, no street crossings, flat, great maintenance, through an area with high recreation al value (woods, meadows, shoreline), and no trail congestion.) If a specific characteristic of a particular facility lies between (or beyond) the categories shown in Table D, the analyst is encouraged to use these values as a guide in estimating more appropriate values. Enter these volumes in the "Use Factor" boxes in Table A.¹
- 6. After entering these values, the spreadsheet will calculate the daily use estimates for both bicyclists and pedestrians. (If a use estimate for only one mode is desired, zeros should be entered in the "Maximum Feasible Demand" column for the other mode).
- 7. Peak-hour use volumes can then be estimated by applying a peak-hour-to-daily factor. An evaluation of existing Tahoe facility peak hour and daily use levels indicates that this factor averages 0.153 for Class I/shared use path facilities (indicating that 15.3 percent of total daily use occurs during the peak hour) and 0.096 for Class II/bike lane facilities. The appropriate value should be entered into the "Peak Hour Factor" column of Table A.
- 8. Total annual use estimates can also be generated by applying an annual-to-daily factor. For existing Tahoe facilities, these factors were calculated to equal 172.8 for facilities maintained year-round (i.e., cleared of snow and ice) and 146.5 for facilities without snow/ice removal (which are the large majority of Tahoe facilities). The appropriate value should be entered into the "Annual / Daily Factor" column of Table A.
- 9. The resulting figures shown in the bottom line of Table A should be considered to be reasonable planning-level use estimates for total users at the location of highest use, barring special conditions. One such condition that may occur is reduction in use due to an effective restriction on parking availability. If an effective, enforced parking capacity is put in place at a specific location, the degree to which this caps the drive-to-facility use numbers can be calculated as follows:

Maximum Daily Drive-to-Facility Use = Parking Capacity (# of vehicles) X Average Vehicle Occupancy (persons per vehicle) X Turnover Rate (# vehicles per space per day)

¹ You may need to make an initial estimate of the hourly number of trail users as a basis for the "congestion" factor, and then revise this estimate based upon the results of the analysis.

Average vehicle occupancy, per TCORP surveys, averages 2.1 persons per car for bicyclists and 2.5 for pedestrians. Turnover rates for more remote areas (such as the East Shore where visitors tend to stay for the day) have been observed to be roughly 1.33, while more "urban" recreational areas have a turnover rate of approximately 2.5. If the resulting value is less than the total daily bicyclist and pedestrian drive-to-trail use estimate, the daily use estimate should be reduced in the spreadsheet to reflect this cap (total of bicyclists plus pedestrians).

10. Finally, it is important to note that the model estimates total use at a single peak location along each segment. Particularly over the course of a long segment with multiple trip generators along its length, the total number of individual users over the entire corridor can be substantially higher. A simple equation to estimate total corridor use is as follows:

```
Total Corridor Use =
Use at Peak Location X
(Total Corridor Length (miles) / Average Trip Length (miles)) X
(1 + Ratio of Use at Lowest Location to Use at Peak Location) / 2
```

Regionwide TCORP one-way trip length was found to average 2.4 miles for bicycling and 1.5 miles for walking, with detailed values for individual facilities presented in Table C of the Impacts Memo.

As an example, consider a corridor 7.2 miles in length with an average trip length of 2.4 miles, a peak location use estimate of 1,000 bicyclists per day and an estimated use level at the location of lowest use that is 50 percent of that at the peak location. Total bicycle use throughout this facility would be calculated as follows:

| Total Corridor Daily Bicycle Use | = 1,000 X (7.2 / 2.4) X (1 + 0.50) / 2 |
|----------------------------------|--|
| | = 1,000 X 3.0 X 1.5 / 2 |
| | = 2,250 bicyclists per day |

Discussion of Error

Considering both the variation in day-to-day observed trail use and the accuracy of the models when compared to counts, a reasonable error range for any one corridor is considered to be ± 25 percent for the bicycle model and ± 35 percent for the pedestrian model. These ranges are reflected in Table A.

Modifications to the Model

The model can be modified to consider longer segments (combining two or more corridors) or to consider shorter segments. The user is encouraged to refer to the "Tahoe Region Bicycle and Pedestrian Use Models" memo for discussion regarding these modifications (available on the TIIMS website: <u>www.tiiims.org</u>).



| TABLE A: Tahoe At Location of Peak Di | Region Bicycle an emand in Corridor | d Pedestria | n Corrido | or Use I | Model | | | | | | | |
|---|---|--------------------|----------------|---------------|------------|-----------------------------|---------------------------------|-----------------------|-------------------|-------------------|---------------------|-----------------|
| Location Scenario | Dollar Hill to Kings Beach | | | | | | | | | | | |
| Analyst | | | | | | | | | | | | |
| | | Ĵ | se Factor F | Reduction fr | rom Maxin | num (5) | | | | | | |
| | Maximum | | | A | Recre- | | Multi- | : | | Peak Hour | Annual / | Annual |
| Corridor | reasible Demand | Class Grade | Continuity | enance | Value | conges- tion | plicative Total | Lally Use Estimate | Factor (6) | Use Estimate | Daily Factor (7) | Use Estimate |
| BICYCLISTS Resident Bike to Facilit | | 007 1007 | 760 | 700 | 760 | 780 | 1000 | c | | | | |
| Visitor Bike to Facility | 0 Note 1 | 0% 30% | %0 | %0 | %0 | %0 | 30% | 00 | | | | |
| Bicyclists Drive to Faci | lity 0 Note 2 | 0% 30% | %0 | %0 | %0 | %0 | 30% | 0 | | | | |
| Total Best Estimate I High End of Estimate I | Range | | | | | | | 00 | 0.000 | 0 0 | 0.0 | 0 0 |
| Low End of Estimate F | lange | | | | | | | 0 | | 0 | | ò |
| PEDESTRIANS | | | | | | | | | | | | |
| Resident Walk to Facil | ty 0 Note 3 | %0 - | %0 | %0 | %0 | %0 | %0 | 0 | | | | |
| Visitor Walk to Facility Dedectriane Drive to Ev | O Note 3 | - 00 | %0 | %) | %0 | %0 | %0 | 0 0 | | | | |
| Total Best Estimate | | ×0 - | <u>«</u> | 0.0 | % | %0 | %_0 | 0 0 | 0.000 | o | 0.0 | C |
| High End of Estimate I | Range | | | | | | | 0 | | 0 | | 0 |
| Low End of Estimate F | lange | | | | | | | 0 | | 0 | | 0 |
| TOTAL Best Estimate | | | | | | | | 0 | | 0 | | 0 |
| High End of Estimate | Range | | | | | | | 0 | | 0 | | 0 |
| Low End of Estimate F | tange | | | | | | | 0 | | 0 | | 0 |
| Notes | | | | | | | | | | | | |
| 1. From Table B | | : | | | 4, | 5. From Tat | ole D | | | | | |
| 2. 480 for corridors with a 3 From Table C | n existing Class I facility, 240 | for corridors with | out an existir | ng Class I fa | acility. 6 | 3. 0.153 for 7 172 8 for | Class I facili facilitiae ma | ity, 0.096 for C | Class II facility | r facilition with | and coordinate | 10110 |
| 4. 135 for corridors with a | n existing Class I facility, 41 f | or corridors witho | ut an existing | J Class I fac | cility. | | | million your | | ו ומכווותכס אות | | IOVal. |
| LSC Transportation Cons | ultants, Inc. | | | | | | | | | | | |

TABLE A: Tahoo Dowion Diovolo and Dodoofuio

| ΤΑ | BLE B: Potential Bicycling Demand | | | |
|--|--|--|---|---|
| | At Location of Peak Demand in Corridor, Excluding Bi | 1-Way Cyc Peak Sun Resident Bike to | g to Trail list Trips <u>nmer Day</u> Visitor Bike to | - |
| Corr | idor | Facility | Facility | |
| E1 E2 E3 E4 N1 N2 N3 N4 N5 N6 N7 S1 S3 S4 S6 S7 S8 S9 W1 | Incline to Sand Harbor Sand Harbor to Round Hill Round Hill to Stateline Kingsbury Grade Truckee River Corridor Tahoe City to Dollar Hill Dollar Hill to Kings Beach Kings Beach to Brockway Summit Kings Beach to Brockway Summit Kings Beach to Brockway Summit Kings Beach to Crystal Bay Crystal Bay to Incline Incline to Mt. Rose Pioneer Trail Corridor - Stateline to Ski Run Pioneer Trail Corridor - Stateline to Ski Run Pioneer Trail Corridor - Ski Run to Trout Creek Pioneer Trail Corridor - Trout Creek to Meyers Meyers to South Y South Y to Al Tahoe Al Tahoe to Ski Run US 50 Corridor - Ski Run to Stateline South Y to Meyers via Tahoe Paradise South Y to Spring Creek Tahoe City to Meeks Bay | $\begin{array}{c} 1,370\\ 250\\ 390\\ 840\\ 172\\ 570\\ 650\\ 280\\ 410\\ 1,140\\ 1,220\\ 950\\ 360\\ 380\\ 600\\ 1,390\\ 480\\ 1,370\\ 730\\ 710\\ 600\\ \end{array}$ | $\begin{array}{c} 1,260\\ 300\\ 2,130\\ 2,650\\ 258\\ 390\\ 330\\ 150\\ 210\\ 620\\ 960\\ 4,510\\ 140\\ 40\\ 180\\ 470\\ 420\\ 3,550\\ 150\\ 470\\ 420\\ \end{array}$ | |
| W2 | Meeks Bay to Spring Creek | 0 | 60 | |
| TOT | AL REGIONWIDE | 14,862 | 19,668 | |
| | | | | |

| TA | BLE C: Potential Walking Demand At Location of Peak Demand in Corridor, Excluding Pe | edestrians Dri | ving to Trail | |
|-------|---|-------------------------|----------------------------|--|
| | | 1-Way Pede - Peak Su | strian Trips · mmer Day | |
| Corri | dor | Non-Driver Resident | Non Driver Visitor | |
| E1 | Incline to Sand Harbor | 750 | 160 | |
| E2 | Sand Harbor to Round Hill | 110 | 90 | |
| E3 | Round Hill to Stateline | 140 | 370 | |
| E4 | Kingsbury Grade | 120 | 240 | |
| N1 | Truckee River Corridor | 20 | 30 | |
| N2 | Tahoe City to Dollar Hill | 80 | 100 | |
| N3 | Dollar Hill to Kings Beach | 170 | 130 | |
| N4 | Kings Beach to Brockway Summit | 100 | 50 | |
| N5 | Kings Beach to Crystal Bay | 110 | 80 | |
| N6 | Crystal Bay to Incline | 180 | 180 | |
| N7 | Incline to Mt. Rose | 210 | 170 | |
| S1 | Pioneer Trail Corridor - Stateline to Ski Run | 130 | 580 | |
| S2 | Pioneer Trail Corridor - Ski Run to Trout Creek | 220 | 100 | |
| S3 | Pioneer Trail Corridor - Trout Creek to Meyers | 270 | 90 | |
| S4 | Meyers to South Y | 260 | 100 | |
| S5 | South Y to AI Tahoe | 350 | 140 | |
| S6 | Al Tahoe to Ski Run | 220 | 240 | |
| S7 | US 50 Corridor - Ski Run to Stateline | 190 | 710 | |
| S8 | South Y to Meyers via Tahoe Paradise | 290 | 100 | |
| S9 | South Y to Spring Creek | 260 | 140 | |
| W1 | Tahoe City to Meeks Bay | 120 | 180 | |
| W2 | Meeks Bay to Spring Creek | 0 | 50 | |
| TOT/ | AL REGIONWIDE | 4,300 | 4,030 | |
| | | | | |

TABLE D: Bicycle/Pedestrian Facility Use Factors

For use in Tahoe Basin Bicycle Pedestrian Master Plan

Starting from the trail usage that would occur from a "perfect" non-motorized facility (Class I, continual, no street crossings, flat, great maintenance, through an area with high recreational value (woods, shoreline), no trail congestion), the following reductions in usage would be eliminated based upon the following factors, for each user type.

| | | | Bicyclists | | | s | |
|-----------------------|---|-------------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|--|-----------------------------------|
| | | Residents Biking from Home | Visitors Biking from Lodging | Bicyclists Driving to Facility | Residents Walking from Home | Visitors Walking from Lodging | Walkers Driving to Facility |
| | Class 1, attaining AASHTO standards | 0% | 0% | 0% | 0% | 0% | 0% |
| Facility Class | Class 2, attaining standards for lane width | 35% | 55% | 85% | Note 1 | Note 1 | Note 1 |
| | Class 3, on street with acceptable width and traffic volumes | Note 2 | Note 2 | Note 2 | Note 1 | Note 1 | Note 1 |
| | Flat or only short sections of gentle grade <4% | 0% | 0% | 0% | 0% | 0% | 0% |
| Grade | Grades of 4%-8%, extending for no more than a few hundred yards | 10% | 30% | 30% | 10% | 30% | 30% |
| | Long sections of sustained maximum AASHTO grade, with total elevation change exceeding 300 feet | 40% | 60% | 65% | 20% | 36% | 37% |
| | No breaks in trail or cross streets | 0% | 0% | 0% | 0% | 0% | 0% |
| | Infrequent crossings of low volume residential streets and driveways (<4 per mile) | 0% | 0% | 0% | 0% | 0% | 0% |
| Facility | Frequent crossing of low volume residential streets and driveways (>4 per mile) | 10% | 15% | 15% | 4% | 7% | 16% |
| Continuity | Unprotected crossing of busy (ADT > 10,000) street (including crossings with striped crosswalk only) | 22% | 29% | 40% | 17% | 35% | 35% |
| | Protected crossing of busy (ADT >10,000) street (signal or roundabout) | 14% | 16% | 18% | 5% | 10% | 10% |
| | Breaks in facility continuity requiring travel along state highway or other busy street. | 35% | 44% | 49% | 36% | 48% | 54% |
| | High No sand on trail or pavement deformities | 0% | 0% | 0% | 0% | 0% | 0% |
| Maintenance | Medium Condition is an inconvenience, but not a safety hazard | 11% | 10% | 10% | 5% | 5% | 5% |
| | Poor Trail condition reduces safe travel speed | 43% | 41% | 52% | 8% | 7% | 7% |
| | High Shoreline, river corridor, dense woods | 0% | 0% | 0% | 0% | 0% | 0% |
| Recreational Value | Medium Scenery mixed with urban uses | 9% | 18% | 30% | 9% | 24% | 28% |
| | Low Urban corridor | 21% | 33% | 75% | 15% | 36% | 51% |
| | None LOS A (< 40 passing events per hour) | 0% | 0% | 0% | 0% | 0% | 0% |
| Trail | Low LOS B or C (40 to 100 passing events per hour) | 13% | 6% | 4% | 10% | 5% | 5% |
| (Note 2) | Moderate – LOS D or E (100 to 195 passing events per hour) | 26% | 10% | 8% | 23% | 8% | 13% |
| | High LOS F (>195 passing events per hour) | 40% | 19% | 15% | 30% | 8% | 8% |

Note 1: Pedestrian demand only evaluated for Class I facilities.

Note 2: Bicyclist demand only evaluated for Class I and II facilities.

Note 3: See Highway Capacity Manual 2000 Chapter 19: Bicycle Methodology. For example, 40 passenger events per hour reflects that an individual user would overtake, be overtaken, or be passed in the opposing direction by 40 other individuals over the course of an hour (or 1 every 1.5 minutes).

APPENDIX G TAHOE REGION ENVIRONMENTAL FINDINGS



OFFICE 128 Market St. Stateline,NV MAIL PO Box 5310 Stateline, NV 89449-5310 HOURS Monday-Friday 9:00 am - 5:00 pm Accepting Applications Until 4:00 pm

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Print Form

INITIAL ENVIRONMENTAL CHECKLIST FOR DETERMINATION OF ENVIRONMENTAL IMPACT

| I. Assessor's Par | cel Number (APN)/Project Location | | N/A | |
|-------------------|-----------------------------------|-----------------|-------------|-----|
| Project Name | Lake Tahoe Bicycle and Pedest | rian Plan (BPP) | County/City | N/A |

Brief Description of Project:

The project is a Bicycle and Pedestrian Plan which lists potential projects and policies necessary to complete a comprehensive bicycle and pedestrian network and encourage bicycling and walking region-wide.

TRPA--IEC

The following questionnaire will be completed by the applicant based on evidence submitted with the application. All "Yes" and "No, With Mitigation" answers will require further written comments. Use the blank boxes to add any additional information. If more space is required for additional information, please attach separate sheets and reference the question number and letter.

II. ENVIRONMENTAL IMPACTS:

1. Land

Will the proposal result in:

a. Compaction or covering of the soil beyond the limits allowed in the land capability or Individual Parcel Evaluation System (IPES)?

| | | Yes | X | No |
|--|----------|------------------------|---|----------------------|
| | ۲, | No, With Mitigation | [| Data Insufficient |
| b. A change in the topography or ground surface relief featu inconsistent with the natural surrounding conditions? | res of | site | | |
| | Г | Yes | X | No |
| | L | No, With Mitigation | Г | Data Insufficient |
| c. Unstable soil conditions during or after completion of the | propo | sal? | | |
| | Г | Yes | X | No |
| | Г | No, With Mitigation | Γ | Data Insufficient |
| d. Changes in the undisturbed soil or native geologic substrugrading in excess of 5 feet? | ctures | s or | | |
| Individual projects could result in grading in excess of | X | Yes | Γ | No |
| 5 feet, but must make the findings in Code section 64.7. B | Γ., | No, With Mitigation | Г | Data Insufficient |
| e. The continuation of or increase in wind or water erosion of either on or off the site? | f soils, | 1 | | |
| The construction impacts of the projects listed in the | Г | Yes | Γ | No |
| Plan have the potential create soil erosion, however those impacts will be mitigated with the use of BMPs. | X | No, With Mitigation | Γ | Data Insufficient |

| f. Changes in deposition or erosion of beach sand, or c siltation, deposition or erosion, including natural littoral p which may modify the channel of a river or stream or th lake? | hango proces e bed | es in sses, l of a | | |
|---|--------------------------|--------------------------|----|----------------------|
| Individual projects have the potential to modify a | Г | Yes | Γ- | No |
| stream channel. Necessary mitigation measures will be identified as part of individual environmental analyses. | X | No, With Mitigation | L | Data Insufficient |
| g. Exposure of people or property to geologic hazards such a earthquakes, landslides, backshore erosion, avalanches, ground failure, or similar hazards? | as mud | slides, | | |
| : | Γ | Yes | x | No |
| | Г | No, With Mitigation | Г | Data Insufficient |
| 2. Air Quality | | mugation | | mounicidin |
| Will the proposal result in: | | | | |
| a. Substantial air pollutant emissions? | | | | |
| | Г | Yes | X | No |
| · · · · · · · · · · · · · · · · · · · | Г | No, With Mitigation | Γ | Data Insufficient |
| b. Deterioration of ambient (existing) air quality? | | | | |
| | Γ | Yes | X | No |
| | Γ | No, With Mitigation | | Data Insufficient |
| c. The creation of objectionable odors? | | | | |
| | | Yes | X | No |
| | Γ | No, With Mitigation | Γ | Data Insufficient |
| d. Alteration of air movement, moisture or temperature, or an in climate, either locally or regionally? | y cha | nge | | |
| | Ĺ | Yes | X | No |
| | Г | No, With Mitigation | Г | Data Insufficient |

_

e. Increased use of diesel fuel?

| There may be temporary increased use of diesel fuel | | X | Yes | l <u> </u> | No |
|---|---|---|------------------------|------------|----------------------|
| during construction activities. | : | | No, With Mitigation | F . | Data Insufficient |

3. Water Quality

Will the proposal result in:

a. Changes in currents, or the course or direction of water movements?

| | Г | Yes | X | No |
|--|---------------------------|------------------------|---------|----------------------|
|] | Г | No, With Mitigation | Г | Data Insufficient |
| b. Changes in absorption rates, drainage patterns, or the rate amount of surface water runoff so that a 20 yr. 1 hr. stor (approximately 1 inch per hour) cannot be contained on the | e and m rur ne site | ioff ? | | |
| Individual projects have the potential to change runoff | Γ | Yes | | No |
| rates. Necessary mitigation measures will be identified as part of individual environmental analyses. | X | No, With Mitigation | Γ | Data Insufficient |
| c. Alterations to the course or flow of 100-yearflood waters? | , | | | |
| | L. | Yes | X | No |
| | L_ | No, With Mitigation | | Data Insufficient |
| d. Change in the amount of surface water in any water body' | ? | | | |
| | | Yes | X | No |
| | ٣ | No, With Mitigation | Γ | Data Insufficient |
| e. Discharge into surface waters, or in any alteration of surfa quality, including but not limited to temperature, dissolved turbidity? | ce wa d oxy | ter gen or | | |
| Temporary construction activities could result in | Г | Yes | Γ | No |
| discharges. Necessary mitigation measures will be identified as part of individual environmental analyses. | X | No, With Mitigation | Γ | Data Insufficient |

f. Alteration of the direction or rate of flow of ground water?

| ······································ | ☐ Yes | 🕅 No |
|---|----------------------------|-------------------------|
| | ┌── No, With Mitigation | Data Insufficient |
| g. Change in the quantity of groundwater, either through dire- additions or withdrawals, or through interception of an aq or excavations? | ct uifer by cuts | |
| | ☐ Yes | |
| · | No, With Mitigation | Data Insufficient |
| h. Substantial reduction in the amount of water otherwise avai public water supplies? | ilable for | |
| | ┌─ Yes | 🕅 No |
| | ☐ No, With Mitigation | Data Insufficient |
| i. Exposure of people or property to water related hazards flooding and/or wave action from 100-year storm occurs seiches? | such as rence or | |
| | ☐ Yes | X No |
| | ─ No, With Mitigation | Data |
| j. The potential discharge of contaminants to the groundwa alteration of groundwater quality? | ater or any | |
| | ∏ Yes | 🔀 No |
| | ☐ No, With Mitigation | Data Insufficient |
| k. Is the project located within 600 feet of a drining water sou | irce? | |
| | ∏ Yes | X No |
| | └── No, With Mitigation | └─ Data Insufficient |
| | | |

4. Vegetation

Will the proposal result in:

a. Removal of native vegetation in excess of the area utilized for the actual development permitted by the land capability/IPES system?

| | | Yes | × | No |
|---|------------------|------------------------|----|----------------------|
| | | No, With Mitigation | Γ- | Data Insufficient |
| b. Removal of riparian vegetation or other vegetation associa critical wildlife habitat, either through direct removal or in lowering of the groundwater table? | ated v direct | vith | | |
| Individual projects have the potential to remove | Г | Yes | | No |
| vegetation. Necessary mitigation measures will be identified as part of individual environmental analyses. | X | No, With Mitigation | Γ | Data Insufficient |
| c. Introduction of new vegetation that will require excessive water, or will provide a barrier to the normal replenishme species? | ve fer ent of | tilizer or existing | | |
| | Γ | Yes | X | No |
| | Γ | No, With Mitigation | | Data Insufficient |
| d. Change in the diversity or distribution of species, or number species of plants (including trees, shrubs, grass, crops, r and aquatic plants)? | er of a nicro | any flora | | |
| Individual projects have potential to change the | Γ. | Yes | | No |
| number of plants. Mitigation measures will be identified as part of individual environmental analyses. | X | No, With Mitigation | Г | Data Insufficient |
| e. Reduction of the numbers of any unique, rare or endanger of plants? | red sp | ecies | | |
| Individual projects have potential to reduce | Г | Yes | Γ | No |
| endangered plants. Mitigation measures will be identified as part of individual environmental analyses. | X | No, With Mitigation | Γ. | Data Insufficient |

| f. Removal of stream bank and/or backshore vegetation, i woody vegetation such as willows? | nclud | ing | | |
|--|---------------------------|------------------------|----|----------------------|
| Individual projects have the potential to remove | Г | Yes | Г | No |
| vegetation. Necessary mitigation measures will be identified as part of individual environmental analyses. | X | No, With Mitigation | Г | Data Insufficient |
| g. Removal of any native live, dead or dying trees30 inches of in diameter at breast height (dbh) within TRPA's Conserv Recreation land use classifications? | or greation | ater or | | |
| Individual projects may determine the need to remove | Γ | Yes | | No |
| trees 30 inches or greater, but would do so in accordance with TRPA Code section 71.2.A. | X | No, With Mitigation | Γ. | Data Insufficient |
| h. A change in the natural functioning of an old growth ecosys | stem | ? | | |
| Individual projects have the potential to affect old | Г | Yes | Γ. | No |
| growth. Necessary mitigation measures will be identified as part of individual environmental analyses. | X | No, With Mitigation | | Data Insufficient |
| 5. Wildlife | | | | |
| Will the proposal result in: | | | | |
| a. Change in the diversity or distribution of species, or number species of animals (birds, land animals including reptiles, shellfish, benthic organisms, insects, mammals, amphibiar microfauna)? | ers of fish a ns or | any and | | |
| | <u> </u> | Yes | X | No |
| | Г | No, With Mitigation | Γ | Data Insufficient |
| b. Reduction of the number of any unique, rare or endangered of animals? | d spe | cies | | |
| Individual projects have potential to affect endangered | I | Yes | Γ | No |
| species. Necessary mitigation measures will be identified as part of individual environmental analyses. | X | No, With Mitigation | Γ | Data Insufficient |

.....

.

barrier to the migration or movement of animals? X No Γ Yes No, With Data Mitigation Insufficient d. Deterioration of existing fish or wildlife habitat quantity or quality? ☐ No ∏ Yes Individual projects have the potential to affect wildlife habitat. Necessary mitigation measures will be No, With Insufficient Data X identified as part of individual environmental analyses. Mitigation 6. Noise Will the proposal result in: a. Increases in existing Community Noise Equivalency Levels (CNEL) beyond those permitted in the applicable Plan Area Statement, Community Plan or Master Plan? X No Yes ⊢ Data No, With Mitigation Insufficient b. Exposure of people to severe noise levels? Yes X No No, With Data Mitigation Insufficient Single event noise levels greater than those set forth in the TRPA C. Noise Environmental Threshold? X No Yes ☐ Data Insufficient No, With

c. Introduction of new species of animals into an area, or result in a

Mitigation

7. Light and Glare

Will the proposal:

a. Include new or modified sources of exterior lighting?

| | X | Yes | Γ | No |
|--|---|------------------------|---|----------------------|
| Bicycle paths may include lighting in accordance with Community Plan standards. | Г | No, With Mitigation | Г | Data Insufficient |
| | | | | |

b. Create new illumination which is more substantial than other lighting, if any, within the surrounding area?

| | Γ | Yes | X | No |
|---------------------------------------|---|------------------------|---|----------------------|
| · · · · · · · · · · · · · · · · · · · | Г | No, With Mitigation | J | Data Insufficient |

c. Cause light from exterior sources to be cast off -site or onto public lands?

| Γ | Yes | X | No |
|-------|------------------------|---|----------------------|
| Γ | No, With Mitigation | Г | Data Insufficient |

d. Create new sources of glare through the siting of the improvements or through the use of reflective materials?

| Γ | Yes | X | No |
|---|------------------------|----|----------------------|
| | No, With Mitigation | Γ. | Data Insufficient |

8. Land Use

Will the proposal:

a. Include uses which are not listed as permissible uses in the applicable Plan Area Statement, adopted Community Plan, or Master Plan?

| · · · · · · · · · · · · · · · · · · · | Г | Yes | X | No |
|---------------------------------------|---|------------------------|---|----------------------|
| | Г | No, With Mitigation | Г | Data Insufficient |

b. Expand or intensify an existing non-conforming use?

| Individual projects will conduct individual analyses to | Γ | Yes | Г | No |
|--|---|------------------------|---|----------------------|
| determine whether an existing non-conforming use could be intensified, and employ mitigation measures. | X | No, With Mitigation | F | Data Insufficient |

9. Natural Resources

Will the proposal result in:

a. A substantial increase in the rate of use of any natural resources?

| | - I_ | Yes | X | No |
|--|-------------|------------------------|-----------|----------------------|
| | Г | No, With Mitigation | _ | Data Insufficient |
| b. Substantial depletion of any non-renewable natural resou | urce? | | | |
| | - _ | Yes | X | No |
| | Г | No, With Mitigation | Γ | Data Insufficient |
| 10. Risk of Upset | | | | |
| Will the proposal: | | | | |
| a. Involve a risk of an explosion or the release of hazardous substances including, but not limited to, oil, pesticides, or radiation in the event of an accident or upset conditions? | s chemic | als, or | | |
| | | Yes | X | No |
| | Γ | No, With Mitigation | J | Data Insufficient |
| b. Involve possible interference with an emergency evacuat | ion pla | in? | | |
| Individual projects will conduct individual analyses for | - | Yes | ٣ | No |
| possible interference with emergency evacuation plans. | X | No, With Mitigation | J | Data Insufficient |

11. Population

Will the proposal:

a. Alter the location, distribution, density, or growth rate of the human population planned for the Region?

| | | | magadon | | moun |
|------|--|------------------------------------|--|-------------|------------------------|
| b. | Include or result in the temporary or permanent displace residents? | ement o | f | | |
| Γ | | | Yes | X | No |
| | | Γ | No, With Mitigation | Γ | Data Insuffi |
| usin | ng | | | | |
| Wil | II the proposal: | | | | |
| a. | Affect existing housing, or create a demand for addition | nal hous | ing? | | |
| | | | | | |
| (1) | To determine if the proposal will affect existing housin demand for additional housing, please answer the follo questions: Will the proposal decrease the amount of housing in the | ng or cre owing ne Tahoe | ate a | | |
| (1) | To determine if the proposal will affect existing housin demand for additional housing, please answer the follo questions: Will the proposal decrease the amount of housing in the Region? | ng or cre owing ne Tahoe | ate a | Ĩ | Ma |
| (1) | To determine if the proposal will affect existing housin demand for additional housing, please answer the follo questions: Will the proposal decrease the amount of housing in th Region? | ng or cre owing ne Tahoe | ate a Yes | X | No |
| (1) | To determine if the proposal will affect existing housir demand for additional housing, please answer the follo questions: Will the proposal decrease the amount of housing in the Region? | ng or cre owing ne Tahoe | eate a Yes No, With Mitigation | | No Data Insuffic |
| (1) | To determine if the proposal will affect existing housin demand for additional housing, please answer the follo questions: Will the proposal decrease the amount of housing in the Region?) Will the proposal decrease the amount of housing in the Region historically or currently being rented at rates a lower and very-low-income households? | ng or cre owing ne Tahoe | Yes No, With Mitigation e by | | No Data Insuffi |
| (1) | To determine if the proposal will affect existing housin demand for additional housing, please answer the follo questions: Will the proposal decrease the amount of housing in the Region? | ng or cre owing ne Tahoe | Yes No, With Mitigation e by Yes | N N N | No Data Insuffic |

b. Will the proposal result in the loss of housing for lower-income and very-low-income households?

| Image: construction with the proposal result in: a. Generation of 100 or more new Daily Vehicle Trip Ends (DVTE)? Individual projects could result in the generation of new DVTE. Necessary mitigation measures will be identified as part of individual environmental analyses. Image: No, With Witigation b. Changes to existing parking facilities, or demand for new parking, however the plan as a whole is expected to result in a decreased demand for parking overall. Image: No, With Witigation c. Substantial impact upon existing transportation systems, including highway, transit, bicycle or pedestrian facilities? No, With Mitigation c. Alterations to present patterns of circulation or movement of people and/or goods? No, With Mitigation c. Alterations to waterborne, rail or air traffic? Image: Yes Image: No, With Witigation Image: Yes or, With Witigation Image: Yes The plan goals include construction of a comprehensive bicycle and pedestrian network. Image: Yes Image: No, With Witigation Image: Yes An expected outcome of the plan is the reduction in weiting transport from private vehicle to bicycling, transit, and walking. Image: Yes Image: No, With Mitigation Image: Yes No, With Mitigation | 🕅 No |
|--|-------------------------|
| ansportation/Circulation Will the proposal result in: a. Generation of 100 or more new Daily Vehicle Trip Ends (DVTE)? Individual projects could result in the generation of new DVTE. Necessary mitigation measures will be identified as part of individual environmental analyses. \[\no., With Mitigation b. Changes to existing parking facilities, or demand for new parking? \[\no., With mitigation c. Substantial impact upon existing transportation systems, including highway, transit, blocycle or pedestrian facilities? \[\no., With Mitigation \] C. Alterations to present patterns of circulation or movement of people and/or goods? \[No, With Mitigation \] An expected outcome of the plan is the reduction in rivehicle trips and an overall shift in mode share from private vehicle to bicycling, transit, and walking. \[Yes \] No, With Mitigation | └─ Data Insufficien |
| Will the proposal result in: a. Generation of 100 or more new Daily Vehicle Trip Ends (DVTE)? Individual projects could result in the generation of new DVTE. Necessary mitigation measures will be identified as part of individual environmental analyses. | |
| a. Generation of 100 or more new Daily Vehicle Trip Ends (DVTE)? Individual projects could result in the generation of new DVTE. Necessary mitigation measures will be identified as part of individual environmental analyses. | |
| Individual projects could result in the generation of new DVTE. Necessary mitigation measures will be identified as part of individual environmental analyses. | |
| Interview DVTE: Necessary mitigation measures with be No, With identified as part of individual environmental analyses. Image: No, With b. Changes to existing parking facilities, or demand for new parking? Individual projects could result in demand for new parking? Individual projects could result in demand for new parking, however the plan as a whole is expected to result in a decreased demand for parking overall. Image: No, With Mitigation c. Substantial impact upon existing transportation systems, including highway, transit, bicycle or pedestrian facilities? Image: No, With Mitigation c. Substantial impact upon existing transportation systems, including highway, transit, bicycle or pedestrian facilities? Image: No, With Mitigation d. Alterations to present patterns of circulation or movement of people and/or goods? No, With Mitigation d. Alterations to present patterns of circulation or movement of people and/or goods? Image: No, With Mitigation e. Alterations to waterborne, rail or air traffic? No, With Mitigation | ┌── No |
| b. Changes to existing parking facilities, or demand for new parking? Individual projects could result in demand for new parking, however the plan as a whole is expected to result in a decreased demand for parking overall. C. Substantial impact upon existing transportation systems, including highway, transit, bicycle or pedestrian facilities? The plan goals include construction of a comprehensive bicycle and pedestrian network. C. Alterations to present patterns of circulation or movement of people and/or goods? An expected outcome of the plan is the reduction in vehicle trips and an overall shift in mode share from private vehicle to bicycling, transit, and walking. e. Alterations to waterborne, rail or air traffic? Yes | Data |
| Individual projects could result in demand for new parking, however the plan as a whole is expected to result in a decreased demand for parking overall. Image: No, With Mitigation c. Substantial impact upon existing transportation systems, including highway, transit, bicycle or pedestrian facilities? Image: No, With Mitigation The plan goals include construction of a comprehensive bicycle and pedestrian network. Image: No, With Mitigation d. Alterations to present patterns of circulation or movement of people and/or goods? An expected outcome of the plan is the reduction in vehicle trips and an overall shift in mode share from private vehicle to bicycling, transit, and walking. Image: No, With Mitigation e. Alterations to waterborne, rail or air traffic? Image: Yes | |
| parking, however the plan as a whole is expected to result in a decreased demand for parking overall. | ∏ No |
| c. Substantial impact upon existing transportation systems, including highway, transit, bicycle or pedestrian facilities? The plan goals include construction of a comprehensive bicycle and pedestrian network. d. Alterations to present patterns of circulation or movement of people and/or goods? An expected outcome of the plan is the reduction in vehicle trips and an overall shift in mode share from private vehicle to bicycling, transit, and walking. e. Alterations to waterborne, rail or air traffic? Yes | Data Insufficier |
| Image: The plan goals include construction of a comprehensive bicycle and pedestrian network. Image: Yes Image: The plan goals include construction of a comprehensive bicycle and pedestrian network. Image: No, With Mitigation Image: Comprehensive bicycle and pedestrian network. Image: No, With Mitigation Image: Comprehensive bicycle and pedestrian network. Image: No, With Mitigation Image: Comprehensive bicycle and pedestrian network. Image: No, With Mitigation Image: Comprehensive bicycle and pedestrian network. Image: No, With Mitigation Image: Comprehensive bicycle and an overall shift in mode share from private vehicle to bicycling, transit, and walking. Image: No, With Mitigation e. Alterations to waterborne, rail or air traffic? Image: Yes | |
| Image: Interview of the plan is the reduction or movement of people and/or goods? No, With Mitigation Image: An expected outcome of the plan is the reduction in vehicle trips and an overall shift in mode share from private vehicle to bicycling, transit, and walking. Image: No, With Mitigation Image: e. Alterations to waterborne, rail or air traffic? Image: Yes | ∏ No |
| d. Alterations to present patterns of circulation or movement of people and/or goods? An expected outcome of the plan is the reduction in vehicle trips and an overall shift in mode share from private vehicle to bicycling, transit, and walking. e. Alterations to waterborne, rail or air traffic? Yes | └── Data Insufficier |
| An expected outcome of the plan is the reduction in vehicle trips and an overall shift in mode share from private vehicle to bicycling, transit, and walking. Image: No, With Mitigation e. Alterations to waterborne, rail or air traffic? Image: Yes | |
| vehicle trips and an overall shift in mode share from private vehicle to bicycling, transit, and walking. | ∏ No |
| e. Alterations to waterborne, rail or air traffic? | Data Insufficier |
| ☐ Yes | |
| | 🕅 No |
| – No, With | ⊢ Data |

f. Increase in traffic hazards to motor vehicles, bicyclists, or pedestrians?

| | Γ | Yes | X | No |
|--|---|------------------------|---|----------------------|
| | Γ | No, With Mitigation | ŗ | Data Insufficient |

14. Public Services

Will the proposal have an unplanned effect upon, or result in a need for new or altered governmental services in any of the following areas?

| a. | Fire | protection? |
|----|------|-------------|
|----|------|-------------|

| · · · · · · · · · · · · · · · · · · · | Г | Yes | X | No |
|--|----|------------------------|----|----------------------|
| ····· | r | No, With Mitigation | Γ | Data Insufficient |
| b. Police protection? | | | | |
| | Г | Yes | X | No |
| | Г | No, With Mitigation | | Data Insufficient |
| c. Schools? | | | | |
| | Г | Yes | X | No |
| | Г | No, With Mitigation | Г | Data Insufficient |
| d. Parks or other recreational facilities? | | | | |
| Individual projects have the potential to increase use of | Γ | Yes | Γ, | No |
| recreation areas. Mitigation measures will be identified as part of individual environmental analysis. | | No, With Mitigation | Γ | Data Insufficient |
| e. Maintenance of public facilities, including roads? | | | | |
| | X | Yes | Γ. | No |
| bicycle and pedestrian facilities. | Γ. | No, With Mitigation | | Data Insufficient |

f. Other governmental services?

| | | <u> </u> |
|--|---|--|
| | ☐ Yes | X No |
| | No, With Mitigation | Data Insufficie |
| rgy | | |
| Will the proposal result in: | | |
| a. Use of substantial amounts of fuel or energy? | | |
| | └ Yes | X No |
| | ┌── No, With Mitigation | Data Insufficie |
| b. Substantial increase in demand upon existing sour require the development of new sources of energy | irces of energy, or y? | |
| | └ Yes | X No |
| | ⊢ No, With Mitigation | Data Insufficie |
| 1 | | |
| l ties | | |
| I ties Except for planned improvements, will the proposal | result in a need for | |
| I ties Except for planned improvements, will the proposal new systems, or substantial alterations to the follow | result in a need for ing utilities: | |
| I ties Except for planned improvements, will the proposal new systems, or substantial alterations to the follow a. Power or natural gas? | result in a need for ing utilities: | |
| I ties Except for planned improvements, will the proposal new systems, or substantial alterations to the follow a. Power or natural gas? | result in a need for ing utilities: Yes | 🔀 No |
| I ties Except for planned improvements, will the proposal new systems, or substantial alterations to the follow a. Power or natural gas? | result in a need for ing utilities: Yes No, With Mitigation | IX No □ Data Insufficie |
| ties Except for planned improvements, will the proposal new systems, or substantial alterations to the follow a. Power or natural gas? b. Communication systems? | result in a need for ing utilities: Yes No, With Mitigation | ⊠ No Data Insufficie |
| I ties Except for planned improvements, will the proposal new systems, or substantial alterations to the follow a. Power or natural gas? b. Communication systems? | result in a need for ing utilities: Yes No, With Mitigation | IX No □ Data Insufficie IX No |
| ties Except for planned improvements, will the proposal new systems, or substantial alterations to the follow a. Power or natural gas? b. Communication systems? | result in a need for ing utilities: Yes No, With Mitigation Yes No, With Mitigation | IX No □ Data Insufficie IX No □ Data Insufficie |
| I ties Except for planned improvements, will the proposal in new systems, or substantial alterations to the follow a. Power or natural gas? b. Communication systems? c. Utilize additional water which amount will exceed permitted capacity of the service provider? | result in a need for ing utilities: Yes No, With Mitigation Yes No, With Mitigation ed the maximum | IX No Data Insufficie IX No □ Data Insufficie |
| I ties Except for planned improvements, will the proposal new systems, or substantial alterations to the follow a. Power or natural gas? b. Communication systems? c. Utilize additional water which amount will exceed permitted capacity of the service provider? | result in a need for ing utilities: Yes No, With Mitigation Yes No, With Mitigation ed the maximum | IX No IX No IX No □ Data Insufficie INSUFFICIE |
| ties Except for planned improvements, will the proposal new systems, or substantial alterations to the follow a. Power or natural gas? b. Communication systems? c. Utilize additional water which amount will exceed permitted capacity of the service provider? | result in a need for ing utilities: Yes No, With Mitigation Yes No, With Mitigation ed the maximum Yes No, With | Image: No Data Insufficie Image: No Image: Data Insufficie Image: No Image: No Image: Data |

exceed the maximum permitted capacity of the sewage treatment provider? Yes X No No, With Data Mitigation Insufficient e. Storm water drainage? ☐ Yes No No Individual projects treat stormwater runoff through No, With the use of Best Management Practices. - Data X Insufficient Mitigation f. Solid waste and disposal? Yes ∏ No Individual projects may require the installation of outhouses or toilets. Project implementers will be No, With - Data $\overline{\mathbf{X}}$ responsible for identifying appropriate disposal means. Mitigation Insufficient 17. Human Health Will the proposal result in: a. Creation of any health hazard or potential health hazard (excluding mental health)? ☐ Yes X No No, With Data Mitigation Insufficient b. Exposure of people to potential health hazards? X No Yes No, With Data Γ Mitigation Insufficient

d. Utilize additional sewage treatment capacity which amount will
18. Scenic Resources/Community Design

Will the proposal:

a. Be visible from any state or federal highway, Pioneer Trail or from Lake Tahoe?

| Individual projects have the potential to be visible. Necessary mitigation measures will be identified as part | | Yes | Г | No |
|--|--------|------------------------|---------|----------------------|
| of individual environmental analysis. | X | Mitigation | Г | Insufficient |
| b. Be visible from any public recreation area or TRPA design bicycle trail? | ated | | | |
| Individual projects have the potential to be visible. Necessary mitigation measures will be identified as part of individual environmental analysis. | | Yes | Γ_ | No |
| | | No, With Mitigation | | Data Insufficient |
| c. Block or modify an existing view of Lake Tahoe or other seen from a public road or other public area? | sceni | ic vista | | |
| Individual projects have the potential to block views. | Г | Yes | Γ | No |
| Necessary mitigation measures will be identified as part of individual environmental analysis. | X | No, With Mitigation | | Data Insufficient |
| d. Be inconsistent with the height and design standards requ applicable ordinance or Community Plan? | ired b | y the | | |
| | Γ | Yes | X | No |
| | | No, With Mitigation | Γ | Data Insufficient |
| e. Be inconsistent with the TRPA Scenic Quality Improvement (SQIP) or Design Review Guidelines? | nt Pro | gram | | |
| | Г | Yes | X | No |
| | Ē | No, With Mitigation | | Data Insufficient |

19. Recreation

Does the proposal:

a. Create additional demand for recreation facilities?

| | _ | | | |
|---|--------------------|------------------------|------------|----------------------|
| Individual projects have potential to create additional | ; F | Yes | l | No |
| identified as part of individual environmental analysis. | F | No, With Mitigation | [| Data Insufficient |
| b. Create additional recreation capacity? | | | | |
| | x | Yes | | No |
| Bicycle paths provide recreation capacity. | | No, With Mitigation | [: | Data Insufficient |
| c. Have the potential to create conflicts between recreatio existing or proposed? | n use: | s, either | | |
| Conflicts between different types of path users can | Γ | Yes | | No |
| occur. Path widths will be designed for the anticipated use and signage techniques will be employed. | X | No, With Mitigation | | Data Insufficient |
| Result in a decrease or loss of public access to any lake, or public lands? | waten | way, | | |
| | Γ | Yes | X | No |
| | | No, With Mitigation | L | Data Insufficient |
| aeological/Historical | | | | |
| a. Will the proposal result in an alteration of or adverse phys aesthetic effect to a significant archaeological or historic structure, object or building? | ical or al site | | | |
| Individual projects could have the potential to impact a | Ē | Yes | | No |
| historical or archaeological site. Each project will complete its own cultural resources inventory. | | No, With Mitigation | 1 1 | Data Insufficient |

b. Is the proposed project located on a property with any known cultural, historical, and/or archaeological resources, including resources on TRPA or other regulatory official maps or records? Mo No Yes Individual projects could be located on known cultural sites. Each project will complete its own cultural No, With Data Mitigation Insufficient resources inventory. c. Is the property associated with any historically significant events and/or sites or persons? □ No Yes Individual projects could be located on such properties. Each project will complete its own research and take No, With Data Insufficient Mitigation appropriate measures to respect these events. d. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values? └── No Yes One project in the plan has the potential to conflict with Washoe values associated with Cave Rock. The No, With Data X Washoe Tribe is closely involved in project planning. Mitigation Insufficient e. Will the proposal restrict historic or pre-historic religious or sacred uses within the potential impact area? X No Yes No, With Data Mitigation Insufficient 21. Findings of Significance. a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California or Nevada history or prehistory? ☐ No Yes No, With Data Mitigation Insufficient

- b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time, while long-term impacts will endure well into the future.) Yes X No Г No, With Data Mitigation Insufficient c. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environmental is significant?) ☐ No Yes No, With Mitigation Data $\overline{\mathbf{X}}$ Insufficient d. Does the project have environmental impacts which will cause substantial adverse effects on human being, either directly or indirectly? X No Yes
 - No, With Mitigation Data Insufficient

DECLARATION:

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this initial evaluation to the best ofmy ability, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Signature: (Original signature

required.) erson Preparing Application

At Douglas County Date: June 1, 2010

Applicant Written Comments: (Attach additional sheets if necessary)

Print Form

| FOR | OFF | CE | USE | ONL | Y |
|-----|-----|----|-----|-----|---|
|-----|-----|----|-----|-----|---|

| ate Received | :By: |
|--------------|---|
| Determinatio | n: |
| On | the basis of this evaluation: |
| a. | The proposed project could not have a significant effect on the environment and a finding of no significant effect shall be prepared in accordance with TRPA's Rules of Procedure. |
| | , TYes X No |
| b. | The proposed project could have a significant effect on the environment, but due to the listed mitigation measures which have been added to the project, could have no significant effect on the environment and a mitigated finding of no significant effect shall be prepared in accordance with TRPA's Rules and Procedures. |
| | X Yes No |
| C. | The proposed project may have a significant effect on the environment and an environmental impact statement shall be prepared in accordance with this chapter and TRPA's Rules of Procedure |
| | ☐ Yes 🕅 No |
| | Mich Ham Date: 6/1/10 Signature of Evaluator |
| TRA | ISPORTATION TEAM LEADER |
| | Title of Evaluator |
| | |
| | |
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CEQA NOTICE OF EXEMPTION

| To: Office of Planning and Research 1400 -10th Street, Room 121 Sacramento, CA 95814 | From: Tahoe Regional Planning Agency (RTPA for CA) P.O. Box 5310 Stateline, NV 89449 |
|---|---|
| PROJECT INFORMATION: | |
| Project Title: | Lake Tahoe Region Bicycle and Pedestrian Plan |
| Project Location – Specific: | The entire region of the Lake Tahoe Basin, encompassing parts of two states and five counties. The boundaries are the jurisdictional boundaries of the Tahoe Regional Planning Agency as set forth in the Tahoe Regional Planning Agency Compact |
| Project Location – City: | N/A |
| Description of Nature, Purpose and Beneficiaries of Project: | The project is a Bicycle and Pedestrian Plan (BPP) which lists goals and policies which will facilitate completion of a comprehensive bicycle and pedestrian network and encourage bicycling and walking region-wide. The BPP identifies potential bicycle and pedestrian projects, which are conceptual only, and which will undergo individual environmental analysis prior to construction. Beneficiaries of the BPP are the general public who would benefit from improved bicycling and walking conditions in Lake Tahoe. |
| Name of Public Agency Approving Project: | Tahoe Regional Planning Agency as the Regional Transportation Planning Agency (RTPA) for the State of California |
| Name of Person or Agency Carrying Out Project: | Tahoe Metropolitan Planning Agency, Tahoe Regional Planning Agency |
| Exempt Status: | Ministerial (Sec. 15073) Declared Emergency (Sec. 15071 (a)) Emergency Project (Sec. 15071 (b) and (c)) Categorical Exemption X_Statutory Exemption, section 15262 (planning and feasibility studies) |
| Reasons Why Project is Exempt | The project involves adoption of a plan which identifies potential projects, programs and policies for possible future actions. The plan is exempt because the RTPA has not approved, adopted, or funded these possible future actions. The plan is for planning purposes only and does not involve a commitment to any specific project. |
| Contact Person: Telephone: | Karen Fink (775) 589-5204 |
| Date Received for Filing at OPR: | |

<u>&/2S/10</u> Date



Tahoe Metropolitan Planning Organization.

P.O. Box 5310 128 Market Street Stateline, Nevada 89449 (775) 588-4547 ◆ Fax (775) 588-4527

May 12, 2010

Documentation of Categorical Exclusion for the Tahoe Metropolitan Planning Organization Lake Tahoe Region Bicycle and Pedestrian Plan under the National Environmental Policy Act

The Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) Regulations give federal agencies the authority and discretion to determine which of their own activities should be categorically excluded from NEPA depending on circumstances and valid justification. Furthermore, if a proposed activity falls under this section of the CFR, no further NEPA approvals are required by the Federal Highway Administration.

Under 23 Code of Federal Regulations (CFR) Section 771.117(c) "the following actions meet the criteria for Categorical Exclusions (CE's) in the Council on Environmental Quality (CEQ) regulation (section 1508.4) and 771.117 (a) of this regulation and normally do not require any further NEPA approvals by the Administration:

(1) Activities which do not involve or lead directly to construction, such as planning and technical studies.

The Tahoe Metropolitan Planning Organization (TMPO) Bicycle and Pedestrian Plan identifies numerous goals and policies as they relate to the creation of a region-wide bicycle and pedestrian system. Within the plan are identified projects such as: shared use paths, bicycle lanes, sidewalks and support facilities. While these projects and objectives are included in the plan, it is the understanding of the TMPO that each individual project will undergo environmental review and documentation as the project proceeds from the planning phase to the design and construction phases. For this reason, the Tahoe Metropolitan Planning Organization has declared the Lake Tahoe Region Bicycle and Pedestrian Plan as categorically excluded from the National Environmental Policy Act.

Nick Haven Principal Transportation Planner

Karen Fink Senior Transportation Planner

APPENDICES H-L AVAILABLE ONLINE AT http://www.tahoempo.org